

# WEEKLY WEATHER AND CROP BULLETIN

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

U.S. DEPARTMENT OF AGRICULTURE  
Statistical Reporting Service  
and World Agricultural Outlook Board

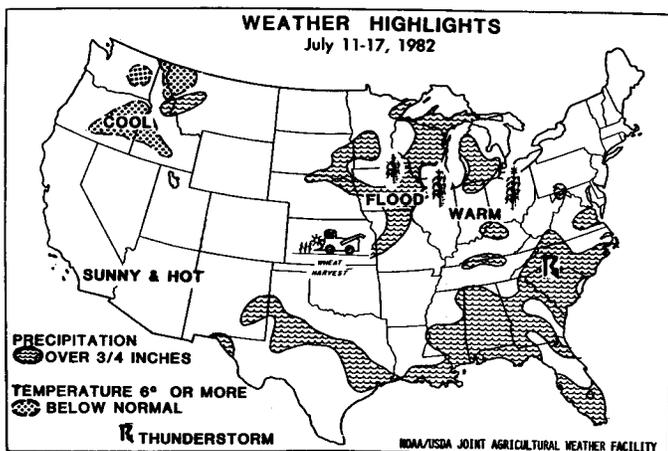
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July 20, 1982

## National Weather Summary

July 11-17



**HIGHLIGHTS:** Several days of heavy rain in southern and eastern Iowa caused severe flooding in that area. Warm weather--high in the low nineties and low in the seventies--late in the week through the Corn Belt spurred development of crops. Light rain in most of the winter wheat area of the central Plains allowed the harvest to progress. Beneficial rains fell on portions of the Southeast that were getting too dry. Locally severe weather in the Southeast did some damage.

**SUNDAY...**Thunderstorms produced isolated heavy downpours early in the day in the western Great Lakes region, resulting in severe local flooding. Later, thunderstorms spread eastward and developed through the Appalachians, the East Coast States, and across the South to Louisiana. Thunderstorms over the eastern slopes of the Rockies became severe in western Texas and produced hail, high wind, and heavy rain. Cool morning temperatures covered the northern Plains but warmed to the eighties by the afternoon.

**MONDAY...**Showers and thunderstorms moved through New England but persisted in the Southeastern Coast States and along the Gulf of Mexico coast to southeastern Texas. The mass of thunderstorms moved out of western Texas into central Texas and Oklahoma. More isolated storms scattered throughout the central and northern Plains and to the western Great Lakes region. Temperatures remained cool over the northeastern quarter of the Nation but reached at least to the nineties in the South and west of the Mississippi River.

**TUESDAY...**Scattered showers and thunderstorms covered the area from southern Virginia through Flori-

da and along the gulf coast to southeastern Texas. Thunderstorms scattered throughout the central and southern Plains, but heavy rains concentrated in the area from the Texas Panhandle to southeastern Iowa. Light showers fell over the High Plains and the Pacific Northwest. The record low of 39° at Sault Ste. Maria in northern Michigan highlighted cool temperatures in the northern Great Lakes region.

**WEDNESDAY...**A near stationary cold front from Maryland to Georgia and across the South triggered thunderstorms throughout the southeast coast and the eastern Gulf Coast States. Isolated heavy rains fell from central Alabama through South Carolina. Widely scattered thunderstorms covered the area in the central and northern Plains but concentrated in the area from northeastern Nebraska through eastern South Dakota where some heavy downpours occurred.

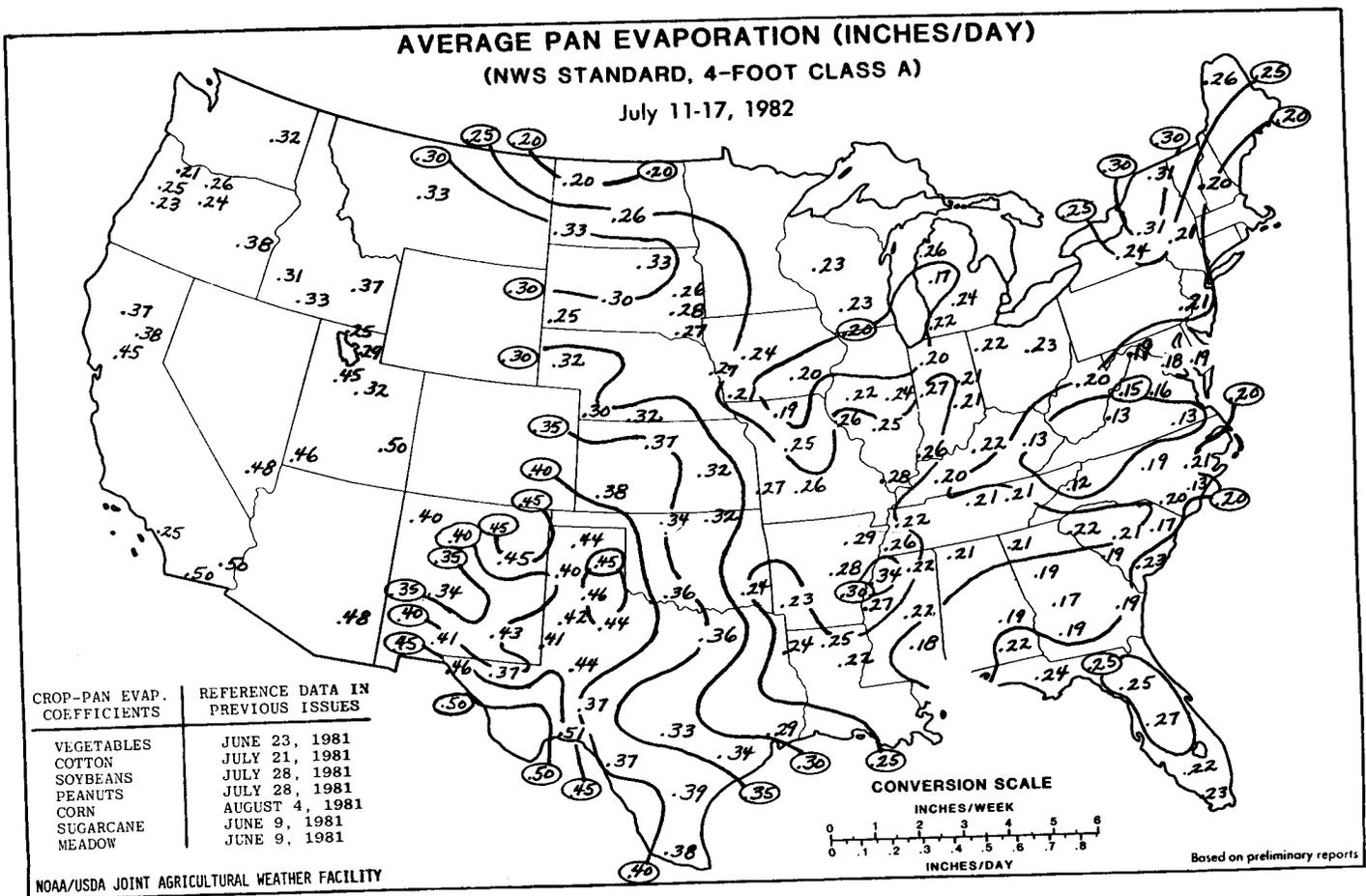
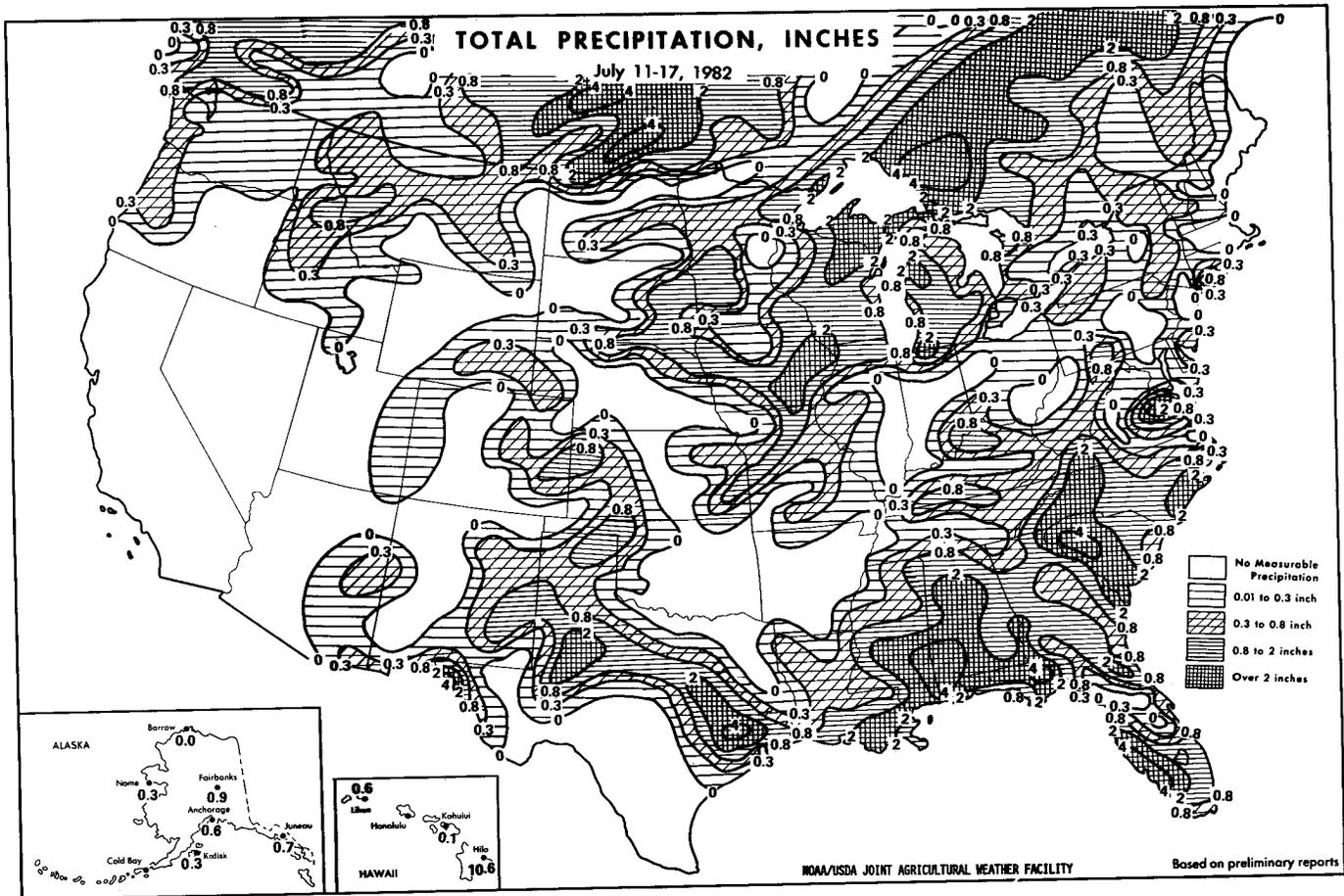
**THURSDAY...**Scattered thunderstorms peppered the area through the northern Plains. Widespread, occasionally heavy thunderstorms shook the area from northeastern Kansas, across northern Missouri, and through eastern Iowa and western Wisconsin. The latter area reported tornadoes and hail. Showers or thundershowers blanketed the east coast and throughout the coastal States south of North Carolina and over the southern part of the eastern Gulf States. Cool morning temperatures covered the area through the Lakes, the Ohio Valley, and the Northeast, but afternoon highs reached the high nineties in most of the Plains States.

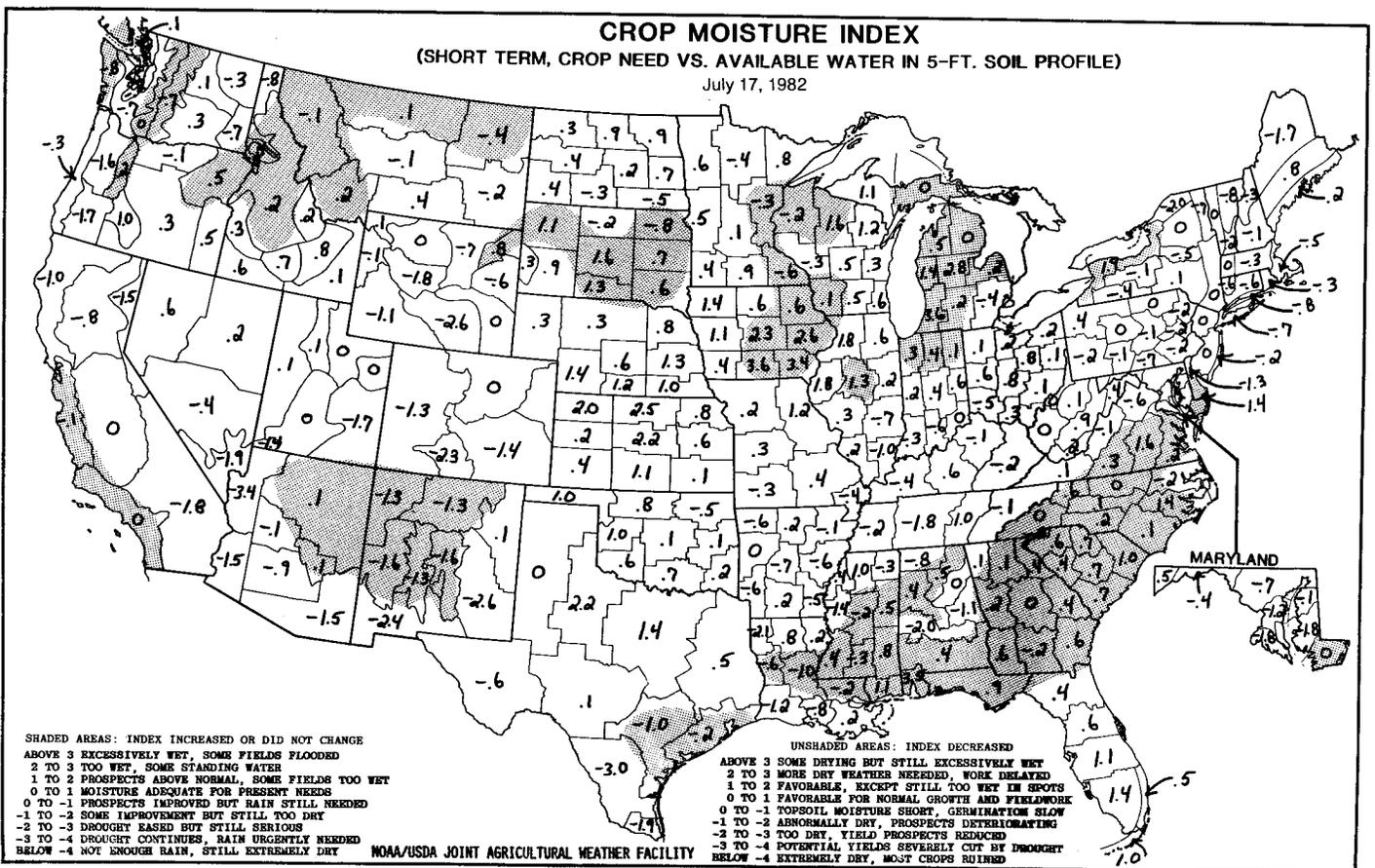
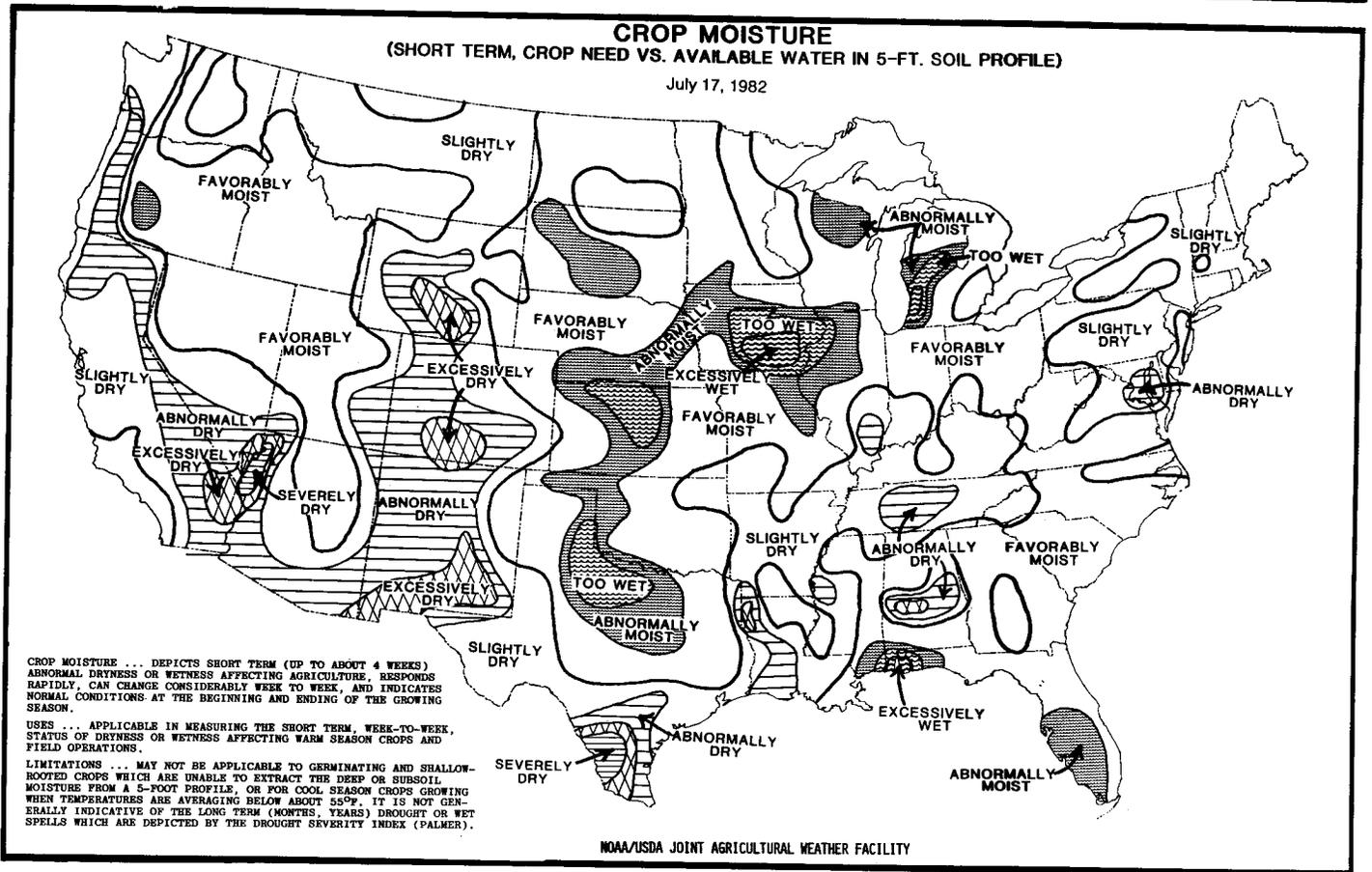
**FRIDAY...**A few showers and thunderstorms lingered over southeastern Iowa and extended into southern Michigan. Flooding was extensive in south-central

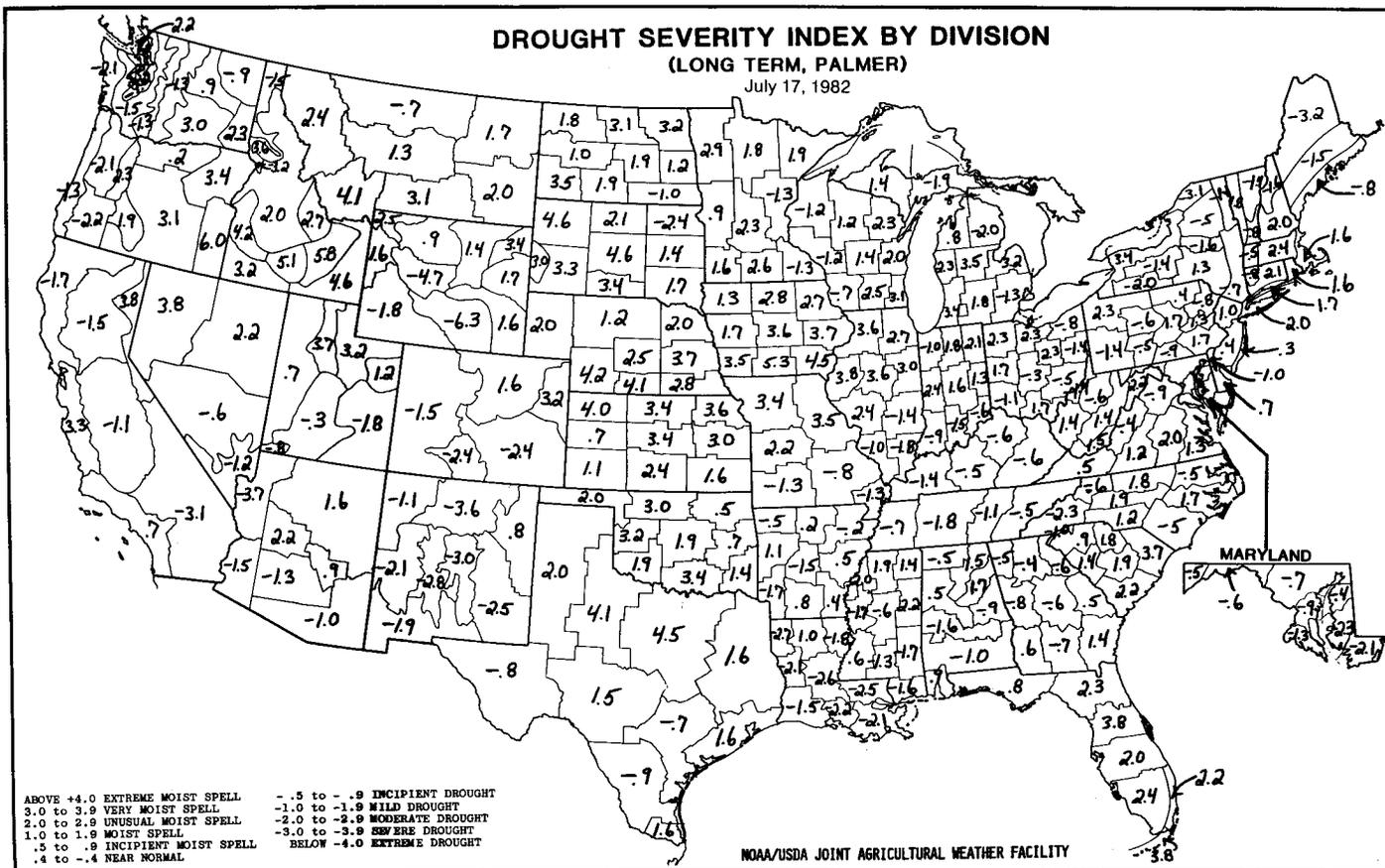
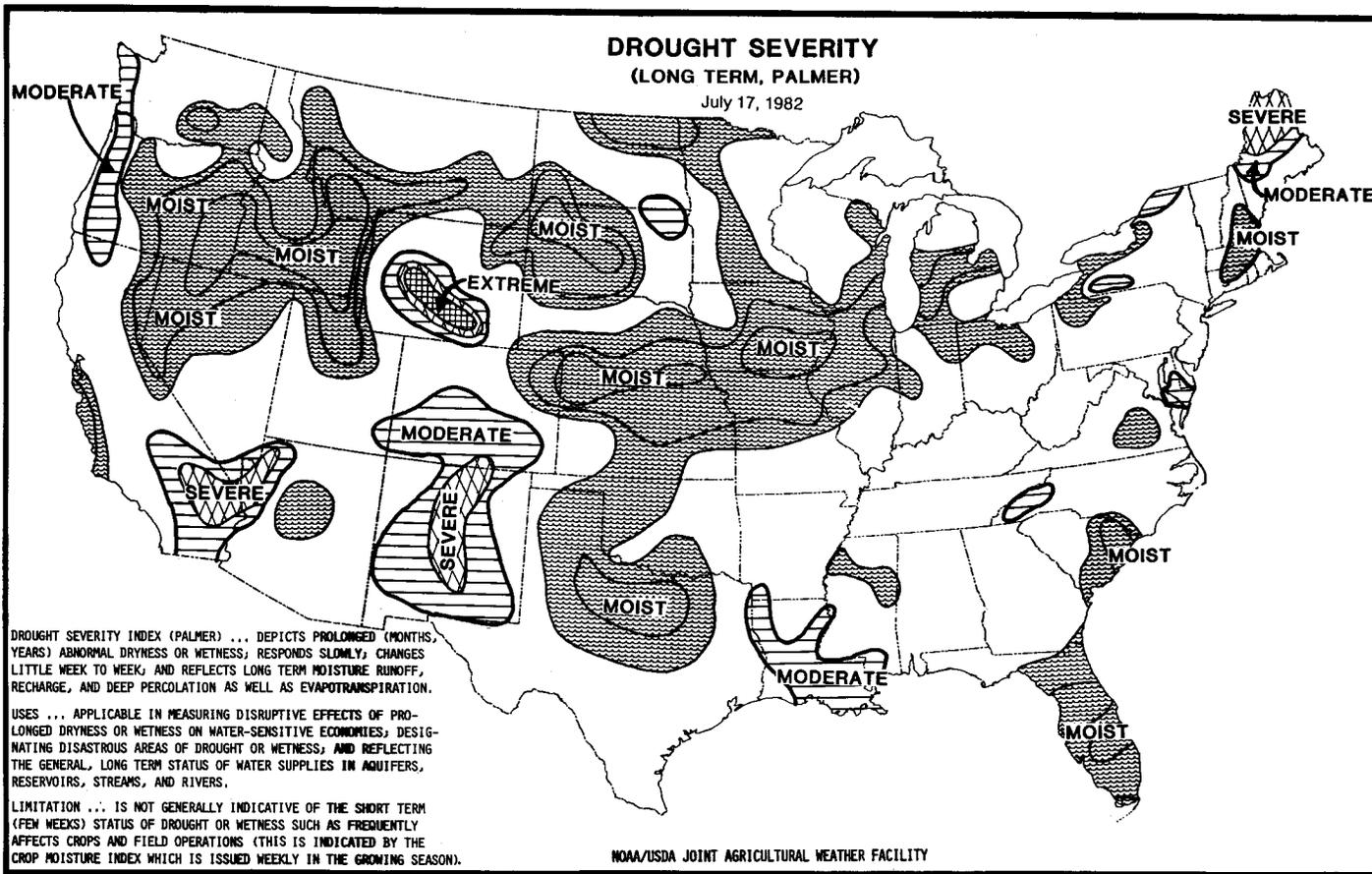
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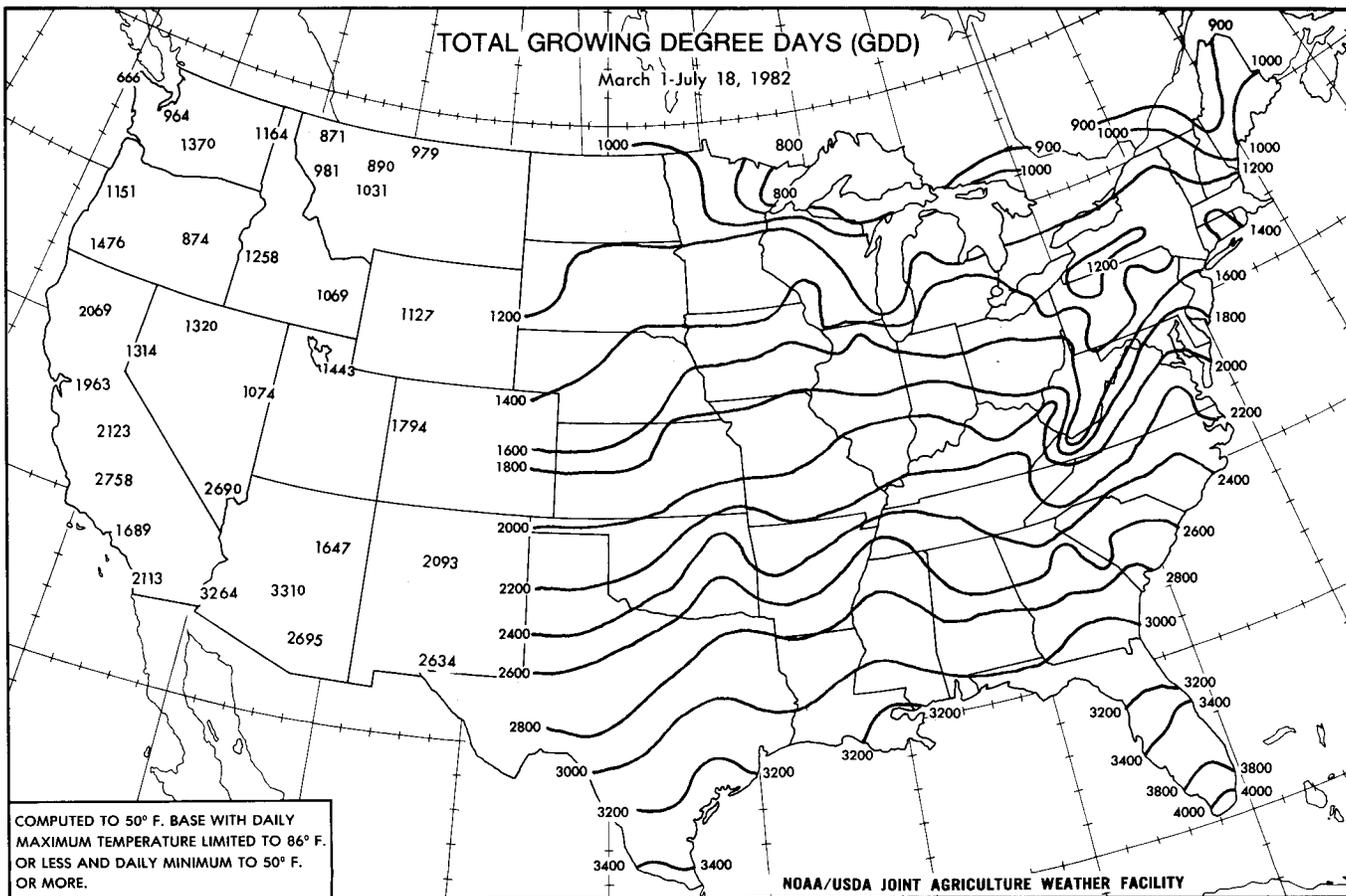
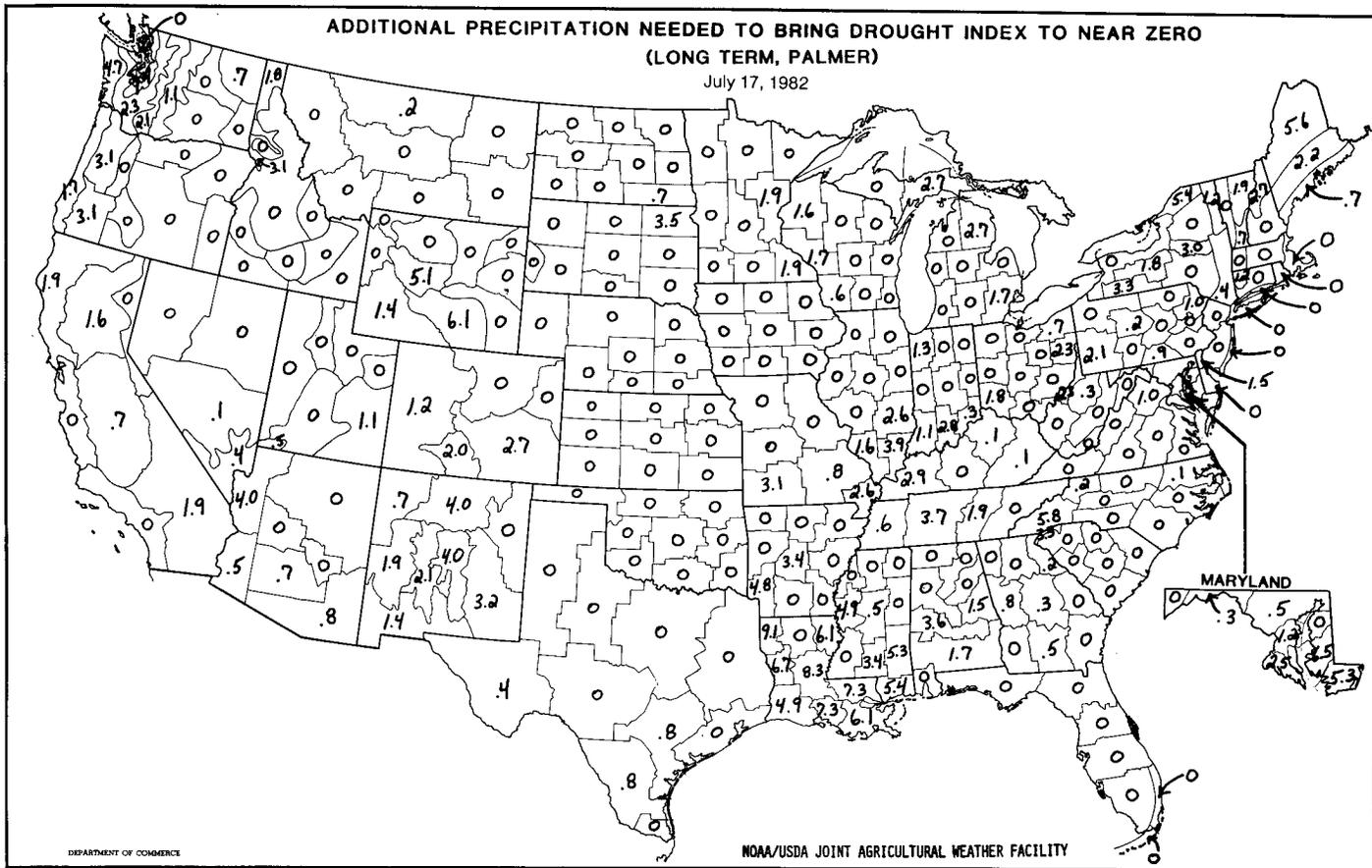
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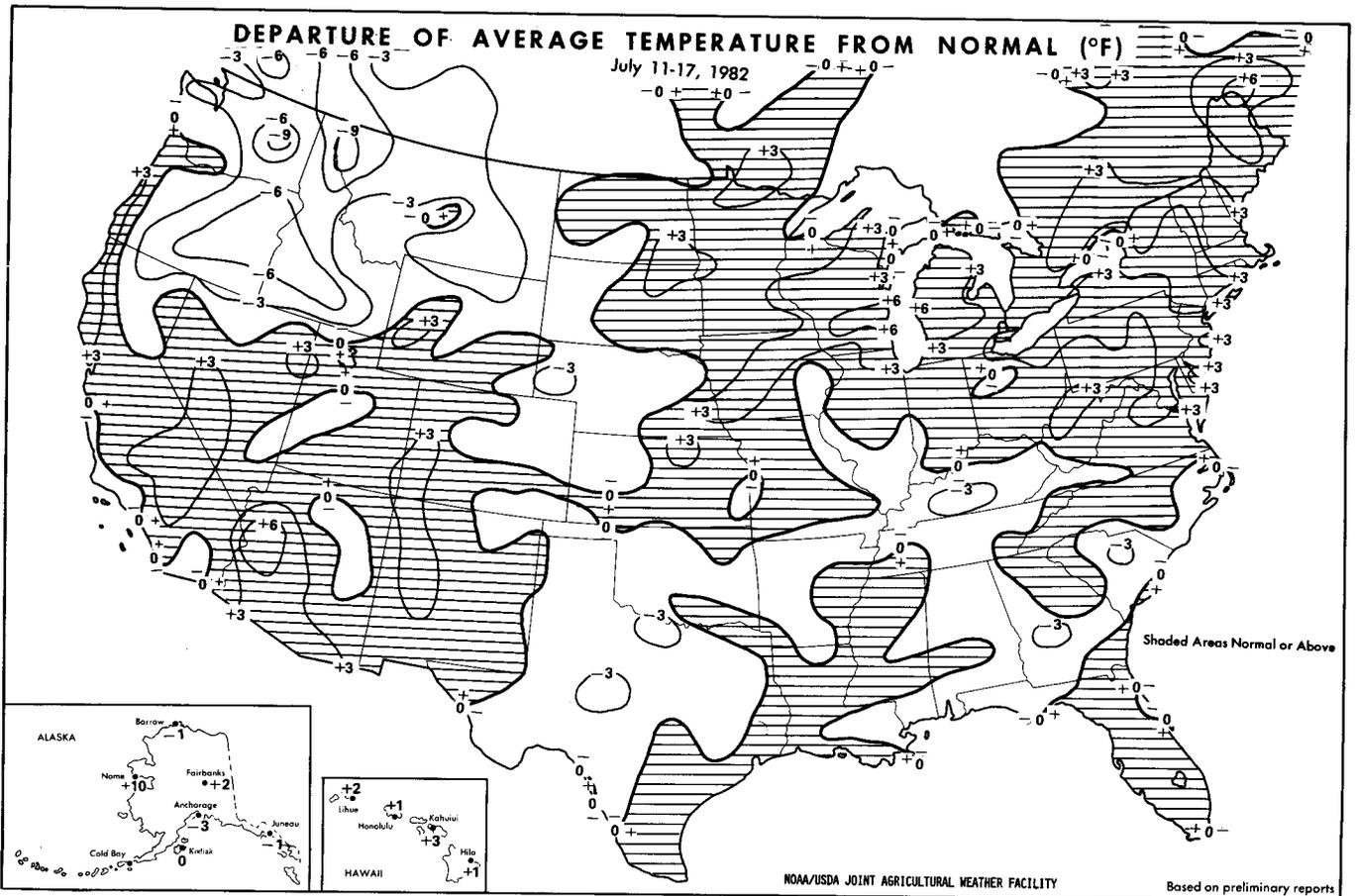
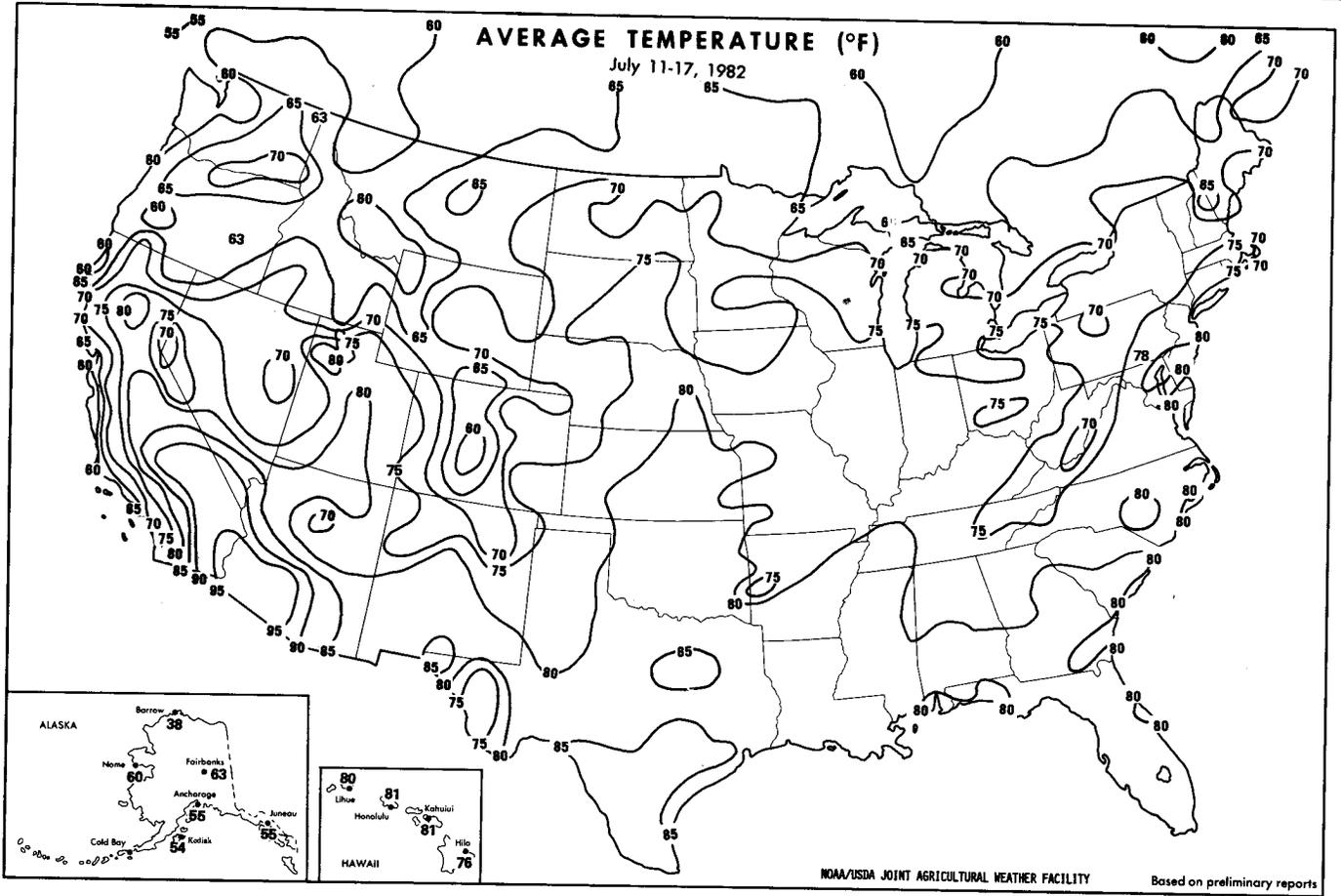
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Weather Data for the Week Ending July 17, 1982

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 May 30	PCT. NORMAL SINCE May 30	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	94	72	95	70	83	0	.1	-.6	.1	2.0	38	16.4	63	97	47	7	0	1	0	0
ME CARIBOU	81	55	93	39	68	3	T	-.9	T	3.2	54	15.0	89	84	38	1	0	0	0	0
ME PORTLAND	82	56	92	46	69	1	-.6	-.6	0	7.5	160	25.1	120	84	39	1	0	0	0	0
MD BALTIMORE	86	65	94	56	75	-1	.5	-.4	.5	7.1	116	23.0	108	89	50	3	0	2	0	1
MD SALISBURY	85	64	93	51	75	-2	.6	-.3	.6	6.5	108	22.7	102	97	52	2	0	1	1	1
MA BOSTON	84	64	95	57	74	1	0	-.6	0	13.9	284	29.3	132	76	36	2	0	0	0	0
MA CHATHAM	72	61	78	55	67	1	0	-.1	0	5.5	11	23.3	10	90	71	0	0	0	0	0
MI ALPENA	84	56	92	42	70	5	.1	-.5	.1	3.9	89	11.4	84	92	42	1	0	2	0	0
MI DETROIT	84	60	91	55	72	0	.4	-.3	.4	5.5	104	17.6	103	94	51	1	0	1	1	1
MI FLINT	84	61	89	53	73	3	.6	-.1	.6	4.7	89	12.1	78	90	49	0	0	1	1	1
MI GRAND RAPIDS	85	63	91	55	74	3	.8	0	.5	5.1	93	17.1	102	89	50	1	0	2	1	1
MI HOUGHTON LAKE	81	60	86	52	71	5	1.3	-.5	.9	6.5	118	16.8	117	89	49	0	0	3	1	1
MI LANSING	82	62	90	53	72	2	.3	-.4	.3	4.7	89	12.7	76	96	57	1	0	2	0	0
MI MARQUETTE	79	54	86	47	67	3	.8	-.1	.6	3.0	45	16.4	94	96	54	0	0	5	1	1
MI MUSKEGON	82	62	89	54	72	3	.8	-.3	.5	4.9	120	17.7	115	91	52	0	0	3	1	1
MI SAULT STE. MARIE	78	50	86	41	64	1	.1	-.5	.1	1.9	38	15.3	105	90	48	0	0	3	0	0
MN ALEXANDRIA	80	61	93	56	71	1	2.7	2.0	.7	8.9	144	18.3	138	93	56	2	0	4	4	4
MN DULUTH	72	53	90	49	62	-2	2.7	1.8	1.4	7.9	116	18.7	120	89	59	1	0	5	2	2
MN INT'L FALLS	77	58	90	51	68	2	1.0	-.1	.8	5.1	78	12.6	96	98	53	1	0	3	1	1
MN MINNEAPOLIS	87	65	100	54	76	5	.7	-.2	.4	3.3	50	14.6	104	83	45	2	0	2	0	0
MN ROCHESTER	84	62	97	53	73	4	.8	-.1	.5	3.8	52	17.8	115	91	51	2	0	3	1	1
MS GREENWOOD	92	73	95	71	83	1	.5	-.4	.5	7.2	122	31.7	115	94	59	7	0	1	1	1
MS JACKSON	93	73	94	71	83	2	1.8	-.9	1.7	10.3	175	32.1	115	97	54	7	0	2	1	1
MS MERIDIAN	95	71	97	69	83	2	.3	-.9	.2	5.2	75	28.7	98	92	49	7	0	2	0	0
MO CAPE GIRARDEAU	92	73	98	70	83	4	1.2	.5	.4	9.2	153	32.2	135	95	51	6	0	3	0	0
MO COLUMBIA	88	70	92	65	79	2	2.3	1.4	1.5	11.5	162	25.7	129	98	63	3	0	3	2	2
MO KANSAS CITY	88	70	94	63	79	2	.4	-.7	.4	10.4	122	26.1	130	90	54	3	0	3	0	0
MO SAINT LOUIS	89	72	97	70	81	3	6.5	5.5	3.4	21.2	299	36.9	179	90	53	3	0	3	2	2
MO SPRINGFIELD	91	70	95	68	81	4	.3	-.6	.2	7.5	103	22.0	100	93	56	5	0	4	0	0
MT BILLINGS	77	54	86	50	66	-5	.9	-.6	.8	6.6	200	13.6	151	81	38	0	0	2	1	1
MT GLASGOW	80	53	86	49	66	-3	T	-.3	T	1.2	34	7.0	113	81	32	0	0	1	0	0
MT GREAT FALLS	73	50	80	44	62	-6	.3	-.1	.3	3.7	88	12.4	124	79	36	0	0	1	0	0
MT HAVRE	75	51	81	46	63	-6	.2	-.2	.1	1.2	34	9.0	123	81	33	0	0	3	0	0
MT HELENA	74	51	81	47	63	-4	.1	-.3	T	3.1	89	8.4	115	73	31	0	0	2	0	0
MT KALISPELL	68	46	77	42	57	-6	.1	-.2	T	4.8	150	12.1	138	97	53	0	0	3	0	0
MT MILES CITY	80	56	88	51	68	-5	.2	-.3	.1	5.6	124	10.2	115	86	34	0	0	4	0	0
MT MISSOULA	71	50	80	46	60	-5	.2	0	.2	2.7	100	11.0	149	96	47	0	0	4	0	0
NE GRAND ISLAND	87	64	95	56	75	0	.4	-.4	.3	5.8	88	21.1	145	90	44	3	0	2	0	0
NE LINCOLN	89	67	95	59	78	2	2.9	2.1	2.1	12.4	172	24.6	155	93	47	3	0	3	2	2
NE NORFOLK	86	65	98	58	75	1	1.6	.8	1.2	5.6	79	17.9	120	85	43	2	0	4	1	1
NE NORTH PLATTE	86	59	99	50	73	-1	1.5	.7	1.2	5.6	95	14.3	118	89	37	1	0	2	1	1
NE OMAHA	87	66	97	59	77	2	1.8	.9	.7	8.1	109	23.4	140	88	51	3	0	4	2	2
NE SCOTTSDLUFF	81	56	92	51	69	-4	.4	-.1	.2	7.6	185	12.0	126	81	28	1	0	3	0	0
NE VALENTINE	86	60	104	52	73	0	1.0	.4	.7	4.3	84	13.1	124	80	33	2	0	3	1	1
NV ELY	75	41	85	37	58	-7	.4	-.2	.2	.8	57	6.5	127	84	29	0	0	3	0	0
NV LAS VEGAS	97	71	103	67	84	-5	T	-.1	T	0	0	1.8	90	34	13	7	0	0	0	0
NV RENO	84	49	95	41	66	-2	0	-.1	0	1.0	200	4.2	98	68	21	2	0	0	0	0
NV WINNEMUCCA	82	49	91	42	65	-4	T	-.1	T	2.3	177	4.6	85	69	18	1	0	2	0	0
NH CONCORD	84	52	90	41	68	-1	0	-.8	0	8.0	145	22.3	122	84	34	2	0	0	0	0
NJ ATLANTIC CITY	85	64	93	53	74	0	0	-.9	0	4.2	72	18.4	81	93	53	2	0	0	0	0
NM ALBUQUERQUE	92	63	96	58	77	-1	T	-.3	T	.1	7	2.0	57	43	13	5	0	1	0	0
NM CLOVIS	89	65	92	62	77	0	.6	0	.6	4.0	95	6.9	81	33	4	0	1	1	1	1
NM ROSWELL	93	67	96	62	80	1	.1	-.4	T	1.0	37	2.6	44	79	28	6	0	2	0	0
NY ALBANY	83	55	88	44	69	-3	T	-.7	T	6.6	135	20.0	120	91	43	0	0	0	0	0
NY BINGHAMTON	81	58	86	47	69	1	T	-.8	T	8.1	142	21.6	113	82	42	0	0	0	0	0
NY BUFFALO	84	61	91	53	73	3	0	-.6	0	3.4	89	20.0	116	90	42	2	0	0	0	0
NY NEW YORK	83	65	93	57	74	-2	T	-.8	T	4.7	92	20.3	98	79	43	1	0	0	0	0
NY ROCHESTER	85	60	95	49	72	1	.4	-.3	.4	4.8	109	15.1	93	86	43	1	0	1	0	0
NY SYRACUSE	84	59	91	46	71	0	1.2	.6	1.2	7.4	154	19.1	103	92	46	1	0	1	1	1
NC ASHEVILLE	85	64	89	59	74	1	.1	-.1	.1	4.6	67	25.9	107	98	57	0	0	2	0	0
NC CHARLOTTE	87	69	91	68	78	0	.6	-.4	.6	6.0	113	25.1	111	91	54	1	0	1	1	1
NC GREENSBORO	85	67	90	64	76	-1	.2	-.8	.2	9.6	145	28.7	131	98	66	1	0	2	0	0
NC HATTERAS	84	72	87	70	78	0	2.1	.9	1.2	9.7	120	35.4	140	100	76	0	0	4	2	2
NC NEW BERN	87	70	91	68	78	-1	.4	-.1	.3	6.5	65	24.4	87	90	58	2	0	2	0	0
NC RALEIGH	88	69	94	64	79	-2	.6	-.5	.4	10.3	156	28.6	130	91	55	3	0	3	0	0
NC WILMINGTON	88	70	92	64	79	-1	1.0	-.8	1.0	9.6	91	29.6	110	88	53	3	0	2	1	1
ND BISMARCK	80	58	88	52	69	-1	1.0	.4	.7	4.0	78	10.7	109	84	47	0	0	3	1	1
ND FARGO	81	60	94	56	71	1	1.5	.7	1.1	4.9	91	10.1	92	88	49	2	0	2	1	1
ND GRAND FORKS	77	58	84	56	68	0	.9	-.2	.7	5.2	100	11.1	106	95	58	0	0	3	1	1
ND WILLISTON	80	58	88	52	69	0	.4	-.1	.3	3.7	79	9.6	104	78	41	0	0	3	0	0
OH AKRON-CANTON	84	65	89	61	75	4	.7	-.3	.6	6.9	108	21.4	106	89	55	0	0	2	1	1
OH CINCINNATI	88	71	91	67	79	4	.3	-.7	.1	5.4	83	24.6	105	81	46	3	0	3	0	0
OH CLEVELAND	85	64	91	60	75	4	0	-.8	0	6.1	113	19.4	102	90	54	1	0	0	0	0
OH COLUMBUS	86	66	90	62	76	3	2.5	1.5	1.9	8.7	130	25.5	115	97	58	2	0	3	2	2

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending July 17, 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 May 30	PCT. NORMAL SINCE May 30	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	
DAYTON	87	67	92	62	77	3	.8	0	.6	6.1	98	26.0	126	92	57	2	0	4	1	
TOLEDO	85	60	90	55	73	1	.5	0	.5	4.0	73	16.4	97	52	1	0	0	1	1	
YOUNGSTOWN	83	62	87	55	72	2	.2	.2	.5	4.0	73	16.4	96	52	1	0	0	1	1	
OK OKLAHOMA CITY	90	69	94	66	79	-1	1.2	.6	.8	7.4	121	26.9	149	95	53	0	0	0	0	
TULSA	92	74	97	70	83	2	1.0	.2	.0	6.5	93	21.6	104	83	44	6	0	3	1	
OR ASTORIA	68	50	73	44	59	0	.1	.2	.1	1.5	47	40.4	123	91	53	0	0	3	1	
BURNS	77	47	77	48	62	-5	.1	0	.1	1.3	118	6.3	95	56	35	0	0	2	0	
MEDFORD	82	52	91	49	67	-4	.1	.1	.1	1.0	83	9.2	87	84	30	1	0	2	0	
PENDLETON	79	55	87	49	67	-6	.1	.1	.1	1.9	100	20.6	110	85	36	0	0	0	0	
PORTLAND	77	55	85	52	66	0	.1	.1	.1	1.6	94	21.1	100	90	35	0	0	2	0	
SALEM	78	50	87	46	64	-2	.1	.1	.1	1.6	94	21.1	100	90	35	0	0	2	0	
PA ALLENTOWN	83	60	89	53	72	-2	.0	0	.0	8.5	137	24.7	112	94	48	0	0	0	0	
ERIE	82	62	92	55	72	4	.7	.2	.7	7.8	132	21.2	112	82	53	1	0	1	1	
HARRISBURG	83	64	86	55	73	-2	.1	.8	.1	8.2	98	24.4	107	97	53	0	0	1	0	
PHILADELPHIA	85	65	91	56	75	-2	.0	.9	.1	8.2	98	24.4	107	97	53	0	0	1	0	
PITTSBURGH	83	63	87	60	73	1	.3	.6	.2	6.8	111	27.0	133	93	48	2	0	0	0	
SCRANTON	82	58	87	50	70	-2	.0	.9	.0	7.4	77	20.0	98	97	59	0	0	2	0	
RI PROVIDENCE	83	60	90	51	72	0	.1	.5	.1	11.7	272	29.8	143	84	37	1	0	1	0	
SC CHARLESTON	88	72	96	71	80	0	3.1	1.2	1.6	16.0	140	32.6	119	92	61	2	0	7	2	
COLUMBIA	90	69	97	68	80	-1	1.2	0	.6	7.6	106	25.9	104	92	51	4	0	4	1	
FLORENCE	88	70	92	67	79	-1	.2	1.2	.2	6.9	83	24.3	103	98	55	2	0	1	0	
GREENVILLE	86	69	92	67	78	0	4.5	3.5	2.7	13.4	203	37.1	139	90	55	1	0	3	2	
SD ABERDEEN	85	65	98	59	75	4	.2	.4	.2	2.6	48	10.7	92	87	48	2	0	0	0	
HURON	86	64	100	57	75	3	.2	.4	.2	2.6	48	10.7	92	87	48	2	0	0	0	
RAPID CITY	80	56	88	49	68	-3	.2	.4	.2	3.5	66	12.8	109	84	44	0	0	4	0	
SIoux FALLS	85	63	102	59	74	2	3.1	2.4	2.3	8.5	135	16.1	112	87	49	2	0	3	2	
TN CHATTANOOGA	91	70	96	68	80	2	.7	.5	.7	4.3	62	29.2	99	92	47	5	0	1	1	
KNOXVILLE	86	68	88	66	77	-1	2.0	.9	1.9	8.2	122	34.3	129	97	60	0	0	2	1	
MEMPHIS	94	78	96	76	86	5	2.0	1.1	1.9	11.2	190	38.2	133	83	54	7	0	2	1	
NASHVILLE	91	71	93	69	81	2	.2	.7	.2	3.6	62	26.5	100	96	55	5	0	3	0	
TX ABILENE	93	74	97	72	84	1	.4	.6	.3	3.9	89	13.8	105	77	42	6	0	0	0	
AMARILLO	91	66	95	61	78	0	.4	.3	.3	5.4	106	8.9	86	87	32	5	0	2	0	
AUSTIN	95	75	96	73	85	1	.0	.5	0	3.0	67	15.9	90	87	40	7	0	0	0	
BEAUMONT	91	74	93	73	83	0	.1	1.2	.1	9.6	114	33.3	121	93	61	7	0	1	0	
BROWNSVILLE	96	78	96	75	87	3	.0	.3	0	.2	5	14.4	138	85	45	7	0	0	0	
CORPUS CHRISTI	93	75	93	71	84	0	.0	.4	0	.8	21	14.6	111	97	54	7	0	0	0	
DEL RIO	93	74	98	71	83	-3	.6	.3	.6	3.7	132	8.5	94	82	44	6	0	1	1	
EL PASO	97	70	103	64	84	1	.1	.3	.1	.4	24	1.5	44	63	18	6	0	1	0	
FORT WORTH	92	73	95	68	82	-2	2.2	1.7	2.2	8.7	202	30.9	167	86	46	6	0	2	1	
GALVESTON	87	79	89	75	83	0	0	1.1	0	4.5	64	16.7	84	85	67	0	0	0	0	
HOUSTON	97	74	98	73	86	3	.3	.9	.3	1.1	15	15.2	63	87	40	7	0	0	0	
LUBBOCK	91	68	95	67	80	1	.3	.3	.3	5.8	129	13.8	134	85	38	5	0	2	0	
MIDLAND	96	70	98	69	83	1	.6	.2	.3	2.8	108	7.6	110	87	32	7	0	3	0	
SAN ANGELO	92	72	96	68	82	-2	.1	.2	.3	6.5	224	14.5	154	84	42	6	0	2	0	
SAN ANTONIO	96	74	97	71	85	1	.0	.4	0	1.4	35	11.7	84	88	36	7	0	0	0	
VICTORIA	95	75	96	72	85	1	.0	.6	.1	1.4	35	11.7	84	88	36	7	0	0	0	
WACO	94	76	96	74	85	0	.0	.6	.1	1.4	35	11.7	84	88	36	7	0	0	0	
WICHITA FALLS	94	69	97	65	82	-3	.1	.5	.1	4.0	103	19.1	106	85	45	7	0	0	0	
UT Blanding	83	51	90	43	67	-5	.0	.2	0	.1	10	4.7	90	54	19	1	0	0	0	
CEDAR CITY	82	49	91	40	66	-7	.1	.1	.1	.5	56	7.2	150	61	21	1	0	1	0	
SALT LAKE CITY	80	55	89	50	68	-7	1.0	.8	.4	2.7	150	10.2	115	78	28	0	0	4	0	
VT BURLINGTON	82	57	87	43	70	0	.0	.8	.0	5.3	91	16.3	101	86	38	0	0	0	0	
VA NORFOLK	83	69	93	66	76	-2	1.3	.1	1.1	8.2	117	24.9	114	91	55	2	0	3	1	
RICHMOND	87	68	94	60	78	-1	1.4	.2	1.3	8.8	126	24.4	113	94	56	3	0	3	1	
ROANOKE	85	65	88	60	75	0	1.8	1.0	.9	9.1	160	26.6	132	96	59	0	0	3	2	
WA COLVILLE	73	53	83	50	63	-4	.2	0	.1	2.9	132	11.2	124	85	60	0	0	3	0	
QUILLAYUTE	66	47	70	42	57	-2	.2	.4	.2	3.1	61	63.4	121	96	54	0	0	1	0	
SEATTLE-TACOMA	73	53	79	51	63	-1	.2	.0	.2	1.6	76	21.0	110	78	37	0	0	1	0	
SPOKANE	75	52	84	48	64	-5	.2	.1	.1	1.9	112	9.1	97	90	38	0	0	4	0	
WY YAKIMA	79	51	87	45	65	-5	.2	.1	.1	1.8	180	4.9	109	85	30	0	0	0	0	
BECKLEY	79	61	81	56	70	0	2.0	1.0	1.2	8.9	131	25.1	105	97	67	0	0	4	1	
CHARLESTON	86	67	90	64	76	1	.4	.7	.4	9.0	141	27.0	119	97	63	1	0	2	0	
HUNTINGTON	85	66	87	61	75	0	1.6	.6	.9	9.1	149	26.9	120	99	68	0	0	3	2	
PARKERSBURG	86	67	88	65	76	2	1.3	.3	1.1	7.9	108	22.7	92	97	50	0	0	3	1	
WI GREEN BAY	83	61	91	54	72	3	1.2	.5	1.1	5.1	94	13.9	99	96	58	1	0	3	1	
LA CROSSE	87	64	96	55	76	3	.4	.5	.3	2.1	32	10.7	67	98	52	2	0	3	0	
MADISON	83	61	90	51	72	3	.7	.2	.4	4.9	73	16.2	102	92	55	1	0	2	0	
MILWAUKEE	81	63	90	57	72	3	1.4	.5	.7	6.1	102	19.7	124	93	57	1	0	3	2	
WAUSAU	81	61	90	52	71	3	1.6	.7	1.2	10.5	150	21.2	129	92	55	1	0	2	0	
WY CASPER	82	51	94	44	66	-3	.1	.1	.1	4.4	200	9.1	128	76	24	1	0	3	1	
CHEYENNE	76	51	83	46	64	-4	.7	.3	.6	5.8	171	10.5	119	79	33	0	0	4	1	
LANDER	79	51	86	44	65	-4	.7	.3	.6	5.8	171	10.5	119	79	33	0	0	4	1	
SHERIDAN	78	49	88	45	64	-5	.2	.1	.2	1.4	56	4.9	53	60	22	0	0	1	0	
PR SAN JUAN	88	76	90	75	82	1	.4	1.0	.3	6.3	67	27.8	106	87	59	1	0	4	0	

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending July 17, 1982

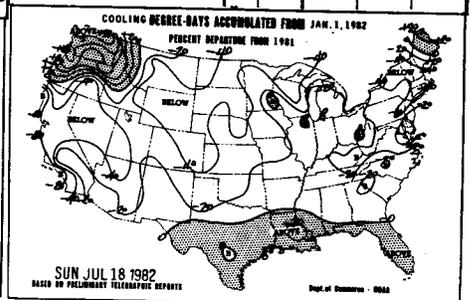
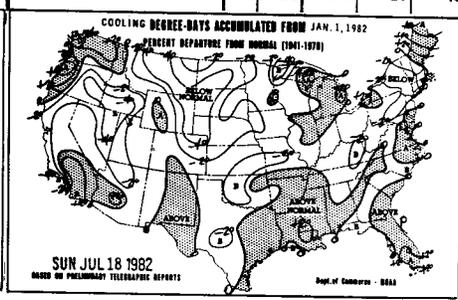
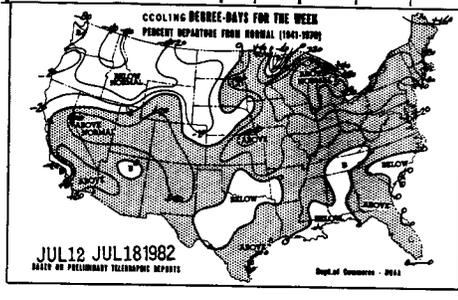
STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE May 30	PCT. NORMAL SINCE May 30	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	91	71	94	68	81	1	T	-1.2	T	9.9	138	36.2	120	96	52	7	0	0	0
MOBILE	91	73	95	70	82	1	1.0	-1.0	.5	13.4	118	38.1	106	92	54	4	0	4	0
MONTGOMERY	91	73	96	72	82	1	1.7	.5	1.7	8.4	115	38.5	138	83	48	5	0	1	0
AK ANCHORAGE	66	49	74	45	57	-1	-1	.3	-1	1.8	78	3.7	69	75	48	0	0	2	0
BARROW	42	33	56	31	37	-1	.2	.6	.2	.6	100	2.2	129	99	80	0	4	1	0
FAIRBANKS	81	58	87	53	70	0	.3	.7	.2	2.7	104	5.7	114	75	34	0	0	4	0
JUNEAU	68	50	75	46	59	0	.3	.7	.1	2.7	47	20.8	95	76	50	0	0	3	0
KODIAK	55	47	58	39	51	-2	1.5	.7	1.3	12.3	192	34.8	129	98	81	0	0	5	1
NOME	68	50	77	42	59	9	.4	0	.3	2.6	130	8.2	141	82	47	0	0	3	0
AZ PHOENIX	101	78	109	74	89	-1	.2	.1	.2	.4	100	3.7	132	54	18	7	0	2	0
PRESCOTT	87	59	98	52	73	-2	.2	.4	.2	.4	19	6.8	87	55	18	2	0	1	0
TUCSON	95	69	103	66	82	-4	.5	.1	.5	1.1	85	4.5	110	67	22	5	0	1	0
YUMA	102	76	108	74	89	-3	0	0	0	0	+100	1.6	160	48	18	7	0	0	0
AR FORT SMITH	89	72	93	70	80	-1	2.6	1.9	2.6	10.3	172	30.0	122	93	57	4	0	2	1
LITTLE ROCK	94	74	97	72	84	3	T	.7	T	5.8	114	30.6	112	85	51	7	0	1	0
CA BAKERSFIELD	95	69	100	63	82	-1	0	0	0	0	+100	4.3	116	49	19	6	0	0	0
EUREKA	66	52	69	48	59	3	T	0	T	.8	114	24.4	110	85	62	0	0	0	0
FRESNO	92	62	97	57	77	-3	0	0	0	.3	300	8.6	137	69	20	5	0	0	0
LOS ANGELES	74	60	78	59	67	-1	0	0	0	0	+100	8.6	115	86	59	0	0	0	0
RED BLUFF	88	61	96	55	74	-7	0	0	0	1.8	360	12.8	99	75	26	2	0	0	0
SACRAMENTO	86	54	92	50	70	-4	0	0	0	.1	100	18.1	156	98	38	2	0	0	0
SAN DIEGO	75	65	80	63	70	1	0	0	0	0	+100	9.0	161	81	56	0	0	0	0
SAN FRANCISCO	70	54	77	52	62	0	0	0	0	.1	100	22.6	200	83	54	0	0	0	0
CO DENVER	82	56	91	50	69	-3	.1	.3	.1	3.1	103	7.3	79	67	21	1	0	1	0
GRAND JUNCTION	86	57	93	46	72	-6	.2	.1	.2	.6	100	2.9	73	66	16	2	0	2	0
PUEBLO	90	60	97	56	75	-1	0	.4	0	2.5	104	5.5	85	71	19	4	0	0	0
CT BRIDGEPORT	82	60	90	53	71	-2	0	.7	0	11.1	247	28.5	147	83	48	1	0	0	0
HARTFORD	86	58	93	50	72	0	0	.8	0	13.7	249	30.9	143	83	37	2	0	0	0
DC WASHINGTON	87	70	95	64	79	1	T	.9	T	6.9	115	22.3	112	82	48	3	0	1	0
FL APALACHICOLA	87	75	91	72	81	0	1.0	.8	.9	7.7	76	29.1	109	95	72	2	0	2	1
DAYTONA BEACH	88	70	92	68	79	-2	T	1.5	T	10.0	97	29.0	128	94	63	2	0	1	0
JACKSONVILLE	92	72	98	68	82	1	2.1	.5	1.7	13.6	128	28.4	110	97	58	5	0	4	1
KEY WEST	90	80	91	75	85	1	.8	.2	.5	10.9	149	23.7	145	82	60	5	0	5	0
MIAMI	90	78	94	75	84	2	.9	.8	.6	15.4	115	36.8	131	87	54	3	0	5	1
ORLANDO	91	73	92	69	82	1	.7	1.3	.5	13.7	109	30.6	119	92	54	6	0	6	0
TALLAHASSEE	89	71	95	70	80	-1	3.4	1.3	1.5	14.8	121	35.4	107	100	65	3	0	6	4
TAMPA	90	73	91	70	81	-1	4.7	2.8	3.4	21.3	187	32.8	136	95	61	5	0	4	2
WEST PALM BEACH	89	77	92	73	83	1	.7	.9	.6	11.9	96	46.8	165	83	57	4	0	2	1
GA ATLANTA	88	70	92	67	79	1	1.8	.7	.9	9.8	146	33.9	119	93	48	2	0	6	1
AUGUSTA	92	72	100	70	82	2	.8	.3	.4	5.4	81	23.3	96	88	53	5	0	3	0
MACON	91	71	99	69	81	0	1.3	.2	.6	5.4	79	28.4	111	94	54	4	0	4	1
SAVANNAH	90	72	98	71	81	0	2.0	.2	.7	15.9	146	31.7	117	93	57	4	0	7	2
HI HILO	82	70	83	68	76	1	4.1	2.2	1.1	17.1	144	98.9	149	81	65	0	0	7	4
HONOLULU	88	73	88	72	80	1	.1	.1	.1	.8	89	20.9	166	77	51	0	0	1	0
KAHULUI	86	73	89	73	80	2	.1	0	.1	.6	100	21.0	193	74	56	0	0	1	0
LIHUE	86	75	88	73	81	3	1.0	.6	.6	3.9	150	42.0	192	88	65	0	0	5	1
ID BOISE	77	52	89	46	65	-8	.4	.3	.4	1.9	136	7.4	100	85	31	0	0	1	0
LEWISTON	79	55	90	49	67	-5	.2	0	.2	1.3	57	6.7	89	86	37	1	0	2	0
POCATELLO	75	46	84	40	61	-9	.3	.2	.1	1.1	69	7.5	109	92	36	0	0	3	0
IL CHICAGO	86	63	95	57	75	3	2.2	1.3	1.3	7.6	117	20.3	113	96	50	2	0	3	2
MOLINE	86	67	92	63	77	3	4.6	3.4	3.6	13.7	180	28.2	148	93	47	2	0	2	2
PEORIA	87	68	92	65	78	3	1.2	.3	.9	8.6	137	25.7	132	91	56	2	0	3	1
QUINCY	84	69	87	65	76	-2	.4	.6	.3	10.1	138	25.1	—	98	69	0	0	2	0
ROCKFORD	86	67	91	63	76	4	2.6	1.5	1.8	10.0	141	23.1	119	92	59	1	0	3	2
SPRINGFIELD	90	68	93	63	79	3	.2	.7	.2	4.8	73	20.8	110	93	60	3	0	1	0
IN EVANSVILLE	91	73	94	72	82	5	.6	.3	.5	5.9	95	28.4	115	91	50	4	0	2	1
FORT WAYNE	86	64	91	55	75	2	.4	.5	.4	7.1	113	25.3	125	91	50	1	0	1	0
INDIANAPOLIS	87	69	90	64	78	3	.6	.4	.5	7.8	113	27.5	123	88	56	2	0	2	1
SOUTH BEND	84	65	90	56	75	3	1.6	.7	1.1	7.9	130	23.2	123	92	53	1	0	2	2
IA DES MOINES	87	68	94	63	78	3	2.5	1.6	1.9	7.8	105	25.3	141	77	47	2	0	3	1
SIoux CITY	87	65	98	59	76	1	2.2	1.4	1.4	7.0	103	17.4	114	88	52	2	0	4	2
WATERLOO	85	64	96	59	75	3	1.8	.7	1.3	8.0	100	21.6	118	86	51	2	0	3	1
KS CONCORDIA	90	69	97	62	79	2	2.9	2.1	1.7	17.8	247	30.8	193	79	41	2	0	3	2
DODGE CITY	90	66	96	62	78	0	2.9	2.2	2.4	9.2	180	14.8	130	78	33	5	0	2	1
GOOBLAND	85	56	95	46	70	-4	1.2	.6	.5	12.4	282	19.0	200	82	33	2	0	3	0
TOPEKA	89	69	96	61	79	2	2.0	.9	1.8	13.7	156	26.8	136	87	49	3	0	3	1
WICHITA	91	69	97	64	80	0	.3	.7	.3	9.5	132	21.9	135	75	40	5	0	1	0
KY BOWLING GREEN	88	70	91	65	79	0	1.0	.1	.7	4.7	75	24.9	88	98	63	3	0	3	1
LEXINGTON	88	69	91	68	79	3	1.5	.4	1.2	6.9	96	22.7	88	89	52	2	0	3	1
LOUISVILLE	88	70	92	68	79	2	.8	.1	.5	6.2	94	24.3	95	90	57	3	0	2	1
LA ALEXANDRIA	94	74	95	72	84	1	T	1.1	T	6.3	90								

COOLING DEGREE DAYS (BASE 65°) FOR WEEK ENDING JUL. 18, 1982.

BASED ON 1941-70 NORMALS.

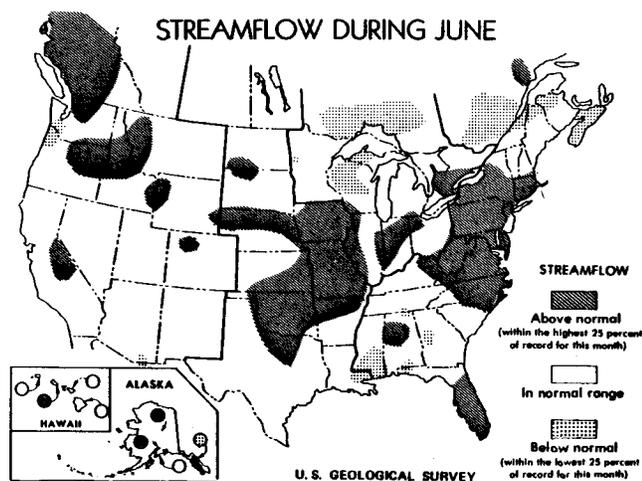
+ ACCUMULATION FROM JAN. 1, 1982

Table with columns for STATES AND STATIONS, WEEKLY DEPARTURE\*, WEEKLY TOTAL, SEASONAL ACCUMULATION +, and DEPARTURE FROM 1981. Rows list various states and cities such as ALA., ARIZ., CALIF., COLO., CONN., DEL., D.C., FLA., GA., IDAHO, ILL., IND., IOWA, KANS., KY., LA., MAINE, MD., MASS., MICH., MINN., MISS., MO., MONT., NEBR., NEV., N.H., N.J., N.MEX., N.Y., N.C., N.DAK., OHIO, OKLA., OREG., PA., S.C., S.DAK., TENN., TEXAS., UTAH, VT., VA., WASH., W.VA., WIS., and WYO.



## WET JUNE FOR NATION'S STREAMS

U.S. GEOLOGICAL SURVEY



Streamflow for June was well-above normal throughout much of the East and Midwest because of heavy precipitation during the first half of the month, according to the U.S. Geological Survey (USGS), U.S. Department of Interior. The moisture caused scattered regional and local flooding in New England, Arkansas, Iowa, Missouri, and Nebraska.

According to USGS, 90 percent of the 164 key index gaging stations across the country reported normal to well-above-normal streamflow conditions during June. More than half of those gaging stations reporting well-above-normal conditions are located in the eastern half of the Nation.

In New England, the rains in early June produced near-record floods on many streams in Connecticut, Massachusetts, and Rhode Island. Flow of the Pawcatuck River at Westerly, R.I., reached a peak discharge of about 3 million gallons per minute on June 6. The recurrence interval of a flood of this magnitude is greater than 100 years.

In contrast to the near-record-breaking floods in New England, gaging stations in parts of Louisiana and Wisconsin reported well-below-normal streamflow for June. Flow of the Saline Bayou near Lucky, La., reached a new record low of 3.5 million gallons a day (mgd) on June 10.

Following the general wet trend in much of the country, combined flow of the Nation's "Big Five" rivers--Mississippi, Columbia, St. Lawrence, Missouri, and Ohio--averaged 1,383 billion gallons a day (bgd) during June, almost 50 percent above normal for this time of year.

The "Big Five," which together drain more than half of the conterminous United States, provide a quick, useful check on the Nation's water-resources conditions.

USGS, in cooperation with Federal, State, and local officials across the country, compiled the following highlights of water-resources conditions during June:

\*"Big Five"--Individual flows: Mississippi River at Vicksburg, Miss., 563 bgd, 65 percent above normal and 40 percent above May's flow; Columbia River at The Dalles, Ore., 403 bgd, 30 percent above normal and 40 percent above May's flow; St. Lawrence River near Massena, N.Y., 187 bgd, 3 percent above normal and 1 percent above May's flow; Missouri River at Hermann, Mo., 144 bgd, 159 percent above normal and 78 percent above May's flow; and the Ohio River at Louisville, Ky., 86 bgd, 111 percent above normal and 142 percent above May's flow.

\*East Coast States--Heavy precipitation boosted streamflow into the well-above-normal range throughout much of the east coast from Connecticut, south to North Carolina. More than half of the 43 key index gaging stations reporting during June showed above-normal flow. Flow of the Susquehanna River at Conklin, N.Y., averaged 2.2 bgd, more than 100 percent above normal and a decided upturn from May's figure when flow was well-below normal. Ground-water levels were unseasonably high in much of New England. More than 50 percent of the key index wells in Rhode Island, Massachusetts, New Hampshire, Vermont, and Connecticut set new high June levels for the period of record. The water level in the key index well near Charleston, R.I., was about 12.3 feet below the land surface on June 26, nearly 5 feet above the normal level for June and the highest level ever recorded for June in 36 years.

\*Midwestern States--Heavy rainfall in the Midwest boosted streamflow to well-above-normal levels and caused flooding in Iowa, Nebraska, Arkansas, and Missouri. Streamflow was well above normal in northern Arkansas in June, and severe local flooding occurred on the Illinois River near Savoy and on the White River near Fayetteville in northwest Arkansas. Ground-water levels in Arkansas are generally below normal for this time of year. Most rivers and streams in Missouri were at or above flood stage during the first half of June on the northern and central parts of the State. Storage contents in most reservoirs in Missouri were up 1 to 3 feet during June. In June, heavy precipitation caused flooding again in Nebraska, following a very wet May. The flooded areas included Salt Creek, Weeping Water Creek, and Big Blue River basins in the eastern part of the State, with 10- to 50-year recurrence intervals. Streamflow in northwest Wisconsin was below normal during June. Flow of the Jump River at Sheldon, Wis., averaged 147 mgd, about 50 percent below normal for this time of year. Combined storage in the reservoirs of the Mississippi River Headwater System averaged 10 percent below normal and 35 percent of full capacity at the end of June. Flow of the Mississippi River at St. Paul, Minn., averaged 13 bgd, about 20 percent above normal for the month. Further downstream at Vicksburg, Miss., flow of the Mississippi averaged 563 bgd, 65 percent above normal.

\*Southern States--Streamflow in Georgia showed a seasonable downward trend during June, and average flows were below normal in the north and well-below normal in the central part of the State. Ground-water levels in the coastal area around Savannah were about 5 to 9 feet higher than the levels at this time last year. Much of the South was experiencing extremely dry conditions during June 1981. In contrast, more than 90 percent of the 22 key index stations from Virginia to Florida reported normal to above-normal levels during June 1982. Thunderstorm activity during June throughout much of Mississippi somewhat relieved the potentially serious dry conditions in the State. Streamflow conditions in the southeastern part of the State, however, are still below normal. Flow of the Pascagoula River at Merrill, Miss., averaged 1.3 bgd, 38 percent below normal and the second lowest June flow in 53 years of record.

(continued on back page)

## National Agricultural Summary

July 12-18

**HIGHLIGHTS:** Clear weather during much of the week allowed the winter wheat harvest to advance rapidly. This year's harvest continues behind last year and average, even though it has moved ahead rapidly during the past 2 weeks. Warm weather during the week promoted good growth of crops and helped push small grains and vegetables to maturity. Farmers had 4 to 7 days suitable for fieldwork in all regions of the Nation, except in parts of the Southeast where only 3 days were suitable due to rain and wet fields. The west-north-central States and parts of the Southeast reported adequate to surplus soil moisture supplies. Elsewhere, supplies were short to mostly adequate, although hot, dry weather caused moisture shortages in many areas. Additional rain is needed. Winter wheat was 66% combined, about 10 points behind last year and the average. Spring wheat was 76% headed and in fair to good condition. Corn was in mostly good condition; 28% of the acreage was silking. Limited harvests were underway in the Southeast. Soybeans were in fair to mostly good condition; plants on 27% of the acreage were blooming. Early-planted fields began setting pods. Sorghum heading stretched northward into Kansas; 27% was heading in the 7 major States. The Texas harvest was 28% complete. Cotton was in fair to good condition; 68% was squaring and 29% was setting bolls. Tobacco harvesting gained momentum. Summer vegetable harvests became more widespread. Peach harvests moved northward; volume increased in New Jersey. Pastures and ranges were in fair to mostly good condition. Livestock were rated in good condition.

**SMALL GRAINS:** Winter wheat harvest advanced to 66%, about 10 points behind last year and the average. Even though rapid harvesting progress was made during the open weather of the past 2 weeks, this year's harvest still lagged last year and average in many States. Progress was 44 percentage points behind normal in Colorado, 40 points behind in South Dakota, and 35 points behind in Nebraska. Producers in Ohio combined 60% of their acreage during the week; Indiana, 40%; Nebraska, 30%; Missouri, 25%; and Illinois, 20%. Harvest neared completion in Texas.

Spring wheat was 76% headed, compared with 89% in 1981 and the average of 85%. Heading ranged from 55% in Montana to 100% in South Dakota. The crop continued in fair to good condition.

**CORN:** Corn was in good to excellent condition in parts of the eastern Corn Belt and Southeast. It was in fair to mostly good condition in other regions. In the 17 major producing States, 28% of the acreage was silking. Progress was still slightly behind last year and average. Across the South, most fields were in the dough stage and many were denting. Harvest started in Florida, Georgia, and South Carolina on a limited basis.

**SOYBEANS:** Only a limited acreage of soybeans remained to be planted. In the 18 major producing States, 27% of the acreage was blooming, 3 points behind 1981 and 11 points slower than average.

Many early-seeded fields were beginning to set pods. In Illinois, 20% of the acreage was setting pods. Plants were in fair to mostly good condition.

**SORGHUM:** Sorghum planting was virtually finished, although some replanting was underway in Kansas where stands were poor. In the 7 major producing States, 27% of the acreage was heading, 2 points behind last year. Heading had not yet started in Nebraska and South Dakota, but reached 70% in Texas. In Texas, harvesting was 28% finished. It was becoming more active in south-central Texas and in the southern Blacklands.

**COTTON:** In the 14 major producing States, 68% of the cotton acreage was squaring and 29% was setting bolls. A year ago, 83% was squaring and 44% was setting bolls. Most replanting in Texas was completed. Defoliation started in the Coastal Bend and Rio Grande Valley areas. Limited harvesting started in early-planted fields.

**OTHER CROPS:** Peanut planting was nearly finished in Texas. Moisture supplies were adequate in the Cross Timbers area, but south Texas needed rain. In the Southeast, the crop was pegging.

Tobacco harvests became more widespread. The Georgia crop was 50% harvested, and the South Carolina crop was 35% harvested. The flue-cured harvest in North Carolina was 18% complete while the Virginia crop reached 10%.

**VEGETABLES:** Summer vegetable harvests picked up in northern areas as warmer weather pushed crops to maturity. The market volume of most crops increased seasonally. Spring vegetable harvest was essentially finished in Florida. Fieldwork centered around land preparation for planting summer and fall crops. A wide variety of crops continued to be harvested in California. In Texas, harvesting was still active, but a few growers began preparing land for fall vegetable planting.

**FRUITS AND NUTS:** In New Jersey, harvesting of peaches gained momentum. The Georgia crop was 80% picked and the West Virginia crop was 15% harvested. High winds and heavy rain caused damage to fruit in western and northern Michigan. Florida's citrus groves were in good condition, and new crop fruit made excellent progress. In Texas, citrus developed well, although irrigation was necessary in most groves. Grape harvests started in the San Joaquin Valley of California. Growers also picked grapefruit, avocados, apricots, figs, lemons, nectarines, Valencia oranges, Freestone peaches, pears, and plums. Almond hulls were splitting. Growers sprayed for the Navel orange worm. Some walnuts show the effect of blight.

**PASTURES AND LIVESTOCK:** Pastures and ranges were in fair to good condition, although grasses were becoming brown in some areas as soils dried. Livestock were in mostly good condition.



normal ranged from +1 to -3°. Most rainfall 0.90 in., least zero.

Seven days available for fieldwork. Soil moisture becoming short. Crop growth moderate. Crops in good condition but late planted fields began to suffer from lack of moisture. Soybeans virtually all emerged, same as last two years; blooming 9%, 13% 1981, average 17%. Podding just beginning. Rice heading 6%, 8% 1981, average 7%. Cotton setting bolls 65%, 53% 1981, 59% average. Sorghum heading. Pastures declining. Cattle good condition.

**CALIFORNIA:** Temperatures were a mixed bag. Weekly means ranged a few degrees either side of seasonal normals. The north coast showed the largest area departure. While there was no reported precipitation, a weather system at the end of the week dropped maximum temperatures several degrees over the northern two thirds of the State.

Warmer temperatures were beneficial for field crop development. Winter wheat 82% harvested, 93% last year. Rice growing well, but remains behind normal years. Most varieties at boot and tillering stages. Fertilizer application and weed control remain active. Cotton showing improved signs of growth with higher temperatures; 60% of fields squared, 80% last year. Boll set in 30% of fields, 45 for last year. Late harvest of overwintered beets continues. Field corn, milo and dry beans growing well. Alfalfa haying remains active in all areas. Apple harvest start soon. Apricots near completion. Avacados 80% complete. Figs continue. Grape harvest beginning in San Joaquin Valley. High acid, low sugar reported. Mildew, insect treatment active. Other area grapefruit harvest active. Poor to fair lemons picked. Fantasia, Independence, Early Sun Grand, Firebrite nectarines moving. Valencia oranges harvested, good quality. Cling peach harvest begun. More than normal brown rot, split pit. Good quality Redtop, Suncrest, Flavorcrest, Regina, June Lady Freestone peaches moving. Pear harvest begun. Friar plum harvest starting, El Dorado, Santa Rosa winding down. Almond hulls splitting, spraying for Navel Orange Worm. Some walnuts suffering blight. Contaminated pollen reportedly a factor. Green bean harvest active. Broccoli harvest fairly heavy Central Coast. Melon harvest complete Desert heavy San Joaquin Valley. Carrot harvest moderate Kern District, Salinas Valley. Cauliflower moderate supply. Celery harvest increasing Central Coast. Sweet corn, cucumber harvest active most areas. Lettuce harvest moderate Central Coast. Onion volume moderate. Spring potato harvest winding down Kern District. Market tomato harvest active South Coast, San Joaquin Valley. Processing tomato harvest increasing San Joaquin Valley, started Sacramento Valley. Range cattle making good gains summer pastures. Feed conditions good. Stock water supplies adequate.

**COLORADO:** Showers and thunderstorms on most days, severest weather on 16th and 18th included funnel clouds, tornados, and hail. Precipitation from 0.20 to 1.20 in.; greatest on east-central plains. Temperatures 1 to 3° below normal.

Recent moisture slowed winter wheat harvest, but benefited most other crops. Spring grains progressing normally. Barley, 84% headed, 45% turning color, 8% ripe; last year, 89% headed, 47% turning color, 13% ripe, sugarbeets, 99% thinned. Dry beans, 14% flowered; last year, 9% flowered. Corn progressing well, average height 34 in. versus 40 in. in 1981 and average of 44 in.; 1% silked. Sorghum, 88% emerged, 2%

headed: last year, 93% emerged: average, 96% emerged. First cut of alfalfa hay 92% complete; last year, 87% completed. Winter wheat in fair to good condition, 92% turning color, 47% ripe, and 9% harvested: last year, 93% turning color, 74% ripe, 41% harvested: averages, 93% turning color, 81% ripe, 53% harvested. Moisture adequate. Five days suitable for fieldwork. Livestock in very good condition.

**FLORIDA:** Normal summertime weather. Highs in the 90's nearly every day. Lows almost 70° or above. Scattered afternoon and evening thunderstorms brought widely varying amounts of rainfall. Most areas had 1.00 to 3.00 in. for the period.

Soil moisture mostly adequate to excessive. Corn harvest increasing. Tobacco harvest nearing completion in a few areas. Harvest of green peanuts underway. Hay making slow progress due to frequent showers. Soybeans good condition. A few fields grassy. Planting of beans about complete. Sugarcane good to excellent condition. Pastures good to excellent condition and providing above normal grazing. Some low areas remain under water. Cattle continue to be in good condition. Citrus groves had normal summer weather last week, scattered rain all areas, moisture adequate, new crop fruit excellent progress. Severe infestations of melonose in groves with dead wood. Season complete essentially all spring vegetables. Limited supply of watermelons remains for harvest. Fieldwork centered around land preparation for summer and fall vegetables.

**GEORGIA:** Total rainfall quite heavy, amounts averaging around 2.00 in. except for the extreme northwest portion, where amounts averaged about 0.50 in. Temperatures slightly cooler than normal, averaging 1 to 2° below normal. The 17th and 18th also quite wet with scattered thundershowers each day. Amounts averaged from 0.25 to 0.50 in. in the north and central portions and from 0.50 to 1.00 in. in the south. Temperatures near normal.

Soil moisture 10% short, 55% adequate, 34% surplus. Surplus moisture mainly in southeast. Three days suitable for fieldwork. Spraying for weeds, disease and insects, and haymaking main activities. Corn 23% fair, 60% good, 16% excellent, 98% silked, 99% last year and average, 86% dough stage, 90% last year, dent stage 65%, last year 75%, 30% mature, 44% last year, harvest 2%, 4% last year, 3% average. Cotton 3% poor, 24% fair, 62% good, 11% excellent, 97% squaring, 95% last year, 96% average, 71% setting bolls, 84% last year, 87% average. Sorghum 93% planted, 97% last year, 92% average. Peanuts 14% fair, 68% good, 18% excellent, 97% blooming this year and average, 98% last year, 89% pegging this year and average, 90% last year. Spraying for southern corn rootworm, white mold and weeds in peanuts. Soybeans 12% fair, 79% good, 8% excellent, 98% planted, 100% last year, 99% average, 30% blooming, 25% last year. Tobacco 3% poor, 25% fair, 65% good, 7% excellent, 50% harvested, 33% last year and average. Watermelons 7% poor, 44% fair, 46% good, 3% excellent, 80% harvested, 75% last year, 72% average. Apples 6% very poor, 6% poor, 49% fair, 39% good, 3% harvested, 9% last year, 8% average. Peaches 6% very poor, 14% poor, 26% fair, 48% good, 6% excellent, 80% harvested, 73% last year, 78% average. Pecans 37% fair, 60% good. Insect and disease pressure in pecans. Hay crops 5% poor, 16% fair, 73% good, 6% excellent. Pastures 14% fair, 76% good, 10% excellent. Cattle and hogs good.

**HAWAII:** Weather variable. Some areas dry. Most windward areas wet. Heavy rains drenched the east coast, Island of Hawaii, slowed crop progress. Spraying frequent to control disease, insect damage. Vegetables: Head cabbage, Romaine, green onion production heavy. More watermelon supplies expected seasonally. Bananas: Rains beneficial. Supplies light. Papayas: Picking continue light. More spraying necessary to control diseases as weather turns wet. Pineapples: Harvesting very active. Sugar: Wet weather, Island of Hawaii, slowed harvesting. Pastures: Rains beneficial to some pastures.

**IDAHO:** High pressure brought above normal temperatures and minimum amounts of precipitation the first part of the week. The last half of the week brought below normal temperatures and increased precipitation. The highest temperature recorded was 97° at Grandview while the low was 33° at Powell and Elk City. The most precipitation was recorded in the north, with Grangeville recording 1.02 in. Generally the north and southwest were near to a little above normal while the southeast was 0.10 to 0.20 in. below normal.

Exceptionally cool weather has lowered irrigation demands. Most crops in good to excellent condition. Fruit crops short of last year's harvest. Alfalfa hay first cut reached 89%, second cut 5%. Rain has drenched most of the first cut hay. Potatoes 59% closed the middles, 45% on last year's frost delayed crop. Winter wheat 48% turned color, 50% in 1981. Spring wheat 23% turned, 27% last year. Barley 20% turned color. Onion crop in good condition, hand cultivation in progress. Ranges and cattle in excellent condition.

**ILLINOIS:** Temperatures 2 to 4° above normal. Precipitation heavy in the north and central (1.00 to 3.00 in.), light in the south (0.35 to 0.75 in.).

Winter wheat 95% combined, 95% 1981, 96% average. Corn 39% excellent, 56% good, 5% fair. Corn 70% silked; 10% dough. Soybeans 18% excellent, 68% good, 14% fair. Soybeans 60% blooming; 20% setting pods. Alfalfa 60% second crop cut. Oats 90% turning yellow; 45% ripe; 25% combined. Pastures 39% excellent, 56% good, 5% fair. Soil moisture 1% short, 73% adequate, 26% surplus.

**INDIANA:** Fieldwork averaged 5 days. Topsoil and subsoil moisture adequate. Wheat 80% combined, 1981 90%, average 85%. Wheat 100% ripe, 1981 100%. Oats 15% combined, 1981 40%, average 30%. Rye 50% combined, 1981 75%, average 70%. Corn 55% silked, 1981 15%, average 35%. Soybeans 55% in bloom, 1981 15%, average 40%. Soybeans 5% setting pods, 1981 0%, average 5%. Corn and soybeans good condition. Alfalfa hay 45% cut second time, 1981 50%, average 60%. Pastures fair to mostly good.

**IOWA:** A hot, humid week. Heavy rains fell upon the south central, central, and most of the east. Spotty showers were reported west and north central.

Topsoil moisture: 39% surplus, 59% adequate, 2% short. Subsoil moisture: 33% surplus, 67% adequate. Corn tasselled: 20%, last year 69%, normal 62%. Oats harvested: 6%, last year 69%, normal 50%. Wheat harvested: 27%, last year 86%, normal 73%. Second crop alfalfa hay harvested: 33%, last year 72%, normal 64%. First crop clover harvested: 95%, last year 100%, normal 100%. Fieldwork: 4.0 days suitable. Crop conditions: Corn and soybeans, fair to good;

pasture, wheat, oats and hay mostly good. Livestock in good condition.

**KANSAS:** Rainfall spotty but locally very heavy. Moisture averaged 0.15 in. central, 1.09 in. northeast, 0.25 to 0.50 in. elsewhere. Temperatures averaged 78° northwest, 81 to 84° elsewhere; 1 to 3° above normal west and south, 3 to 5° above normal northeast.

Wheat 85% harvested, 97% last year, 95% average. Weeds making harvest difficult. Sorghum 95% planted, 98% last year; 1% headed, 3% last year, 5% average. Some replanting of sorghum because of poor stands. Soybeans 95% planted, 96% last year; 5% blooming, 15% last year, 20% average; 1% podding, 1% last year, 5% average. Corn 25% silked, 25% last year, 35% average; 4% dough stage, 4% last year, 5% average. Alfalfa hay 2nd cutting 65% complete, 90% last year, 85% average; 3rd cutting 5% complete, 15% last year and average. Crop conditions generally good to excellent, except some fair southwest, south central, northeast; very poor to fair east central. Pasture and range good to excellent. Soil moisture adequate all areas except adequate to surplus north and east. Fieldwork: 4.5 days suitable.

**KENTUCKY:** Temperatures averaged 1 to 2° above normal with below normals beginning week and above normals end. Maximum temperatures over weekend were in upper 80's to low 90's. Rainfall was in form of scattered thunderstorms. Some areas measured 1.00 to 1.50 in. rain, but many places received 1.00 in. or less.

Days suitable for fieldwork averaged 5. Soil moisture 35% short, 63% adequate, 2% surplus. Moisture supplies highly variable, ranging short to adequate within counties. Corn condition good to excellent. Acreage 65% silking or beyond, 40% last year, 53% average; 15% in milk stage. Soybean development well ahead of last year and average; 32% blooming, 10% last year, 19% average. Tobacco good to fair condition, yield prospects rated average. Plant height 25% under 2 feet tall, 51% 2 to 3 feet tall and 24% over 3 feet; 14% burley acreage blooming, but some prematurely. Dark-types also 14% blooming. Disease and insect problems moderate. Hay harvest active, but interrupted by thunderstorms. Quality below normal. Pastures need rain, in good to fair condition.

**LOUISIANA:** Rainfall averaged 0.24 to 2.43 in. Temperatures near normal. Extremes: 62 and 96°.

Soil moisture adequate. Days suitable: 4.8. Corn mature 47%, 54% 1981, 32% average. Harvested 10%, 12% 1981. Condition good. Rice headed 52%, 62% 1981; and average. Condition good. Cotton squaring 97%, 94% 1981, 93% average; setting bolls 50%, 58% 1981, 57% average. Condition good. Soybeans flowering 30%, 37% 1981, 36% average; setting pods 8%, 16% 1981. Condition fair to good. Sorghum heading 67%, 74% 1981, 61% average; turning color 18%, 37% 1981. Condition fair to good. Sugarcane and sweetpotato condition good. Peach harvest 80% complete, 88% 1981. Pecans and vegetables were fair to good. Both pasture and livestock rated good.

**MARYLAND AND DELAWARE:** Temperatures 3° above normal. Highs in upper 80's to low 90's. Lows in low to mid 70's. Greatest precipitation at Georgetown, Delaware with 3.62 in. The 17th and 18th had highs in the mid 90's and lows in the low 70's, no rain either day.

Maryland: Farmers concentrated on harvesting rye, oats and wheat. Rye 75% harvested; 95% last year. Oats 40% harvested this year and

last. Wheat 80% combined; 90% last year. Tomatoes 5% picked; 10% last year. Snap beans 75% harvested; 55% last year. Cucumbers 35% picked; 45% last year. Sweet corn 25% harvested; 30% last year. Alfalfa hay 65% second cutting; 80% last year. Third cutting alfalfa hay 10% out. Second cutting of other hay 70% complete; 25% last year. Corn silked 50%, equal to last year. Scattered showers during the week, topsoil moisture in short supply except where localized showers fell on heavier soil types. Subsoil moisture in short supply mostly in the northern counties. Japanese beetles heavy. Light infestations of Mexican bean beetle. Angular leaf spot reported on tobacco. Six days suitable for fieldwork.

Delaware: Rye 75% harvested; 80% last year. Wheat 90% combined, 100% last year. Tomatoes 10% harvested this year and last. Snapbeans, cucumbers 75% harvested; 55% and 78% respectively harvested last year. Sweet corn 10% harvested; 35% last year. Second cutting alfalfa hay 100% cut; 90% last year. Third cutting of alfalfa hay 10% cut. Other hay 35% cut second time; 45% cut last year. Corn silked 45%; 55% last year. Japanese beetles severe. Topsoil moisture in short supply. Six days suitable for fieldwork.

MICHIGAN: Temperatures averaged normal to 6° above normal. Low temperatures ranged from near 40 to mid 50's in the north sections and 50 to 60° south. Highs reached mid 60's to low 90's. Rainfall was heaviest in the southwest where 10.69 in. fell in west central. Five inches or more fell over other areas of the southwest and central parts of the State.

The weekend brought high winds and localized heavy rains to western fruit area and caused damage to crops in the western and northern parts of the State. Five days were suitable for fieldwork. Corn silked averaged 15%, 15% last year and 18% average. Winter wheat ripe 35%, last year 85% and 75% average. Some early fields have been harvested. Oats continuing to mature with 25% turned color, 60% last year and average. The dry bean crop 5% bloomed, last year 25% and 20% average. Soybeans blooming advanced to 20%, last year 15% and an average of 17%. Virtually all first cutting hay complete. Second cutting hay 15%, 20% last year and 25% average. Sweet and tart cherry harvest made good progress.

MINNESOTA: Warm and humid except for along the north shore of Lake Superior, it was cool and cloudy. Temperatures averaged from the mid 50's extreme northeast and generally from the upper 60's to mid 70's elsewhere and were from 1 to 5° above normal. The highest reported temperature was 91° at several locations while the coldest was 44° at Grand Marais. Rainfall was scattered and some areas recorded heavy amounts of thunderstorms. The northwest and southwest both averaged slightly over 1.00 in. and the southeast, west central, and northeast averaged nearly 1.00 in. The remainder of the State averaged about 0.25 to 0.75 in. The largest reported amount total was 3.07 in. at Warroad. Although unofficial amounts of up to 5.00 in. were observed in portions of the west central, Cambridge and Minneapolis reported no measurable rainfall.

Growth and development of crops made very good progress. Crops continue to show improvement. Nearly ideal weather with just enough rain accompanied by plenty of warm temperatures and sunshine. Topsoil moisture 10% short, 77% adequate, and 13% surplus. Heading: Spring wheat 86%, 1981 99%, normal 94%; oats 94%, 1981 99%, normal 96%; barley 90%, 1981 99%, normal 95%. Turning ripe: Spring wheat 8%, 1981 56%, normal 46%; oats 16%, 1981

68%, normal 58%; barley 25%, 1981 71%, normal 56%. Height: Field corn 45 in., 1981 57 in., normal 59 in.; soybeans 16 in., 1981 18 in., normal 21 in.; sunflowers 19 in., 1981 40 in., normal 37 in. Tasseling: Field corn 3%, 1981 32%, normal 45%. Blooming: Soybeans 19%, 1981 41%, normal 55%; sunflowers 1%, 1981 9%, normal 12%.

MISSISSIPPI: Temperatures averaged slightly below normal. Extremes: 61 and 97°. Thunderstorms more plentiful southern and central counties. Greatest 24-hour rainfall 2.40 in.

Soil moisture mostly adequate. Fieldwork: 4.8 days. Weed and insect control measures continue as main farm activity. Cotton 82% blooming, 85% last year, 73% average; 47% setting bolls, 60% last year, 44% average; condition good. Soybeans 25% blooming, 41% last year, 35% average; condition good to fair. Rice 12% headed, 23% last year, 14% average; condition good. Corn 56% in dough stage; condition good. Sorghum 34% headed, 45% last year. Hay 62% harvested, peaches 62% and watermelons 50%. Pasture condition good.

MISSOURI: Temperatures were near normal. Precipitation was spotty and generally light.

Fieldwork: 4.2 days suitable. Corn 53% tasseled, last year 60%. Corn 39% silking, last year 45%, normal 46%. Grain sorghum 28% headed, last year 14%, normal 14%. Double crop soybeans 93% planted, last year 76%. Soybeans 24% blooming, last year 17%, normal 28%. Wheat 85% harvested, last year 77%, normal 91%. Oats 55% harvested, last year 67%, normal 69%. Alfalfa hay-2nd cutting 66% harvested, last year 75%, normal 72%; 3rd cutting 11% harvested. Other hay 77% harvested, last year 76%. Cotton 71% setting bolls, last year 42%, normal 40%. Condition of cotton, grain sorghum and soybeans fair to good. Condition of corn and pastures mostly good. Topsoil moisture supply mostly adequate.

MONTANA: Wet week over most of State with precipitation totals mostly 0.25 to 1.00 in. Snow fell over higher mountains of west late in the week. Temperatures quite cool and ranged 2 to 5° below normal. Warm first of week but much cooler by midweek. Some temperatures below 32° over southwest at end of week.

Topsoil and subsoil moisture adequate. Six days suitable for fieldwork. Condition all crops generally good, except corn fair to good. Crop progress compared with last year and normal; percent headed-winter wheat 75, 15, 15; spring wheat 55, 60, 60; barley 60, 55, 60; oats 50, 55, 60; turning color--winter wheat 25, 70, 70; spring wheat 0, 25, 15; barley 0, 30, 25; oats 0, 30, 25; first cutting alfalfa 65, 90, 85; wild hay 40, 60, 50. Irrigation water supplies adequate.

NEBRASKA: Precipitation: Thunderstorms provided less than 1.00 in. in Panhandle and south central to over 1.50 in. in east central and southeast. Temperatures: Seasonal across State with southeast warmest.

Wheat harvested 40%, 90% last year, 75% normal. Ripe 75%, 100% last year, 95% normal. Marketing slowed by concern over diseased and scab-infested wheat in eastern areas. Corn mostly good to fair; silking 75%, 25% last year, 30% normal. Soybeans mostly good to fair; blooming 10%, 40% last year. Sorghum condition mostly good to fair; heading not begun, 7% last year, 9% normal. Alfalfa mostly good; second cutting 40% complete, 75% last year, 70% normal. Pasture and range feed mostly adequate to surplus. Topsoil moisture mostly adequate. Subsoil moisture mostly adequate to surplus. Days suitable: 5.3.

NEVADA: Typical summer weather. Warm and generally sunny, dry weather covered all areas. A few thundershowers did develop over north and northeast. Due to dryness of air, only light amounts of rain reached the surface. Temperatures were close to slightly above seasonal normals. Extremes: 109 and 34°.

Lack of measurable precipitation ideal for alfalfa hay and small grain harvesting. Higher night temperatures helping most row crops. Hot, dry weather beginning to affect ranges and pastures.

NEW ENGLAND: Temperatures averaged up to 6° above normal. Near normal start of week, then warming as week progressed. Precipitation below normal. Isolated showers and thunderstorms. Amounts averaged between 0.03 and 0.10 in.

Hay harvest: 1st crop 90%, 1981 88%; 2nd crop 18%, 1981 24%. Maine potatoes: Variable plant size, some moisture stress, crop prospects promising. Cranberries: Early varieties past peak bloom, setting well; later varieties approaching peak bloom. Cranberry growers irrigating. Excellent crop prospects. Warm weather helping crop development, a few areas of moisture stress.

NEW JERSEY: Temperatures averaged 4 to 5° above normal. Extremes: 98° at Toms River and Canoe Brook on 18th and 55° at Charlotteburg on the 13th. Rainfall averaged 0 in. north, 0.23 in. central and 0.57 in. south. Heaviest 24 hour total 1.46 in. at Hammonton on 15th to 16th. Estimated soil moisture, in percent on field capacity, averaged 67% north, 49% central and 50% south. Four inch soil temperature averaged 74° north and 77° central and south.

Fieldwork: 6.3 days suitable. Above normal temperatures drying soils and advancing crop maturity. Summer vegetable volume continues to increase. White potato digging continues light. Blueberry harvest at peak. Peach volume increasing. Summer apple volume continues light. Wheat harvest active. Oat harvest about to begin. Hay making continues active. Field corn and soybean growth good. Pastures browning due to high temperatures.

NEW MEXICO: Average temperatures were slightly above normal.

Soil moisture in short to adequate supply. Scattered showers continue to occur causing some delay in fieldwork. Cotton in good condition. A lot of acreage was lost in the previous hail storm. Alfalfa fields in good condition. The second cutting about 80% complete and the third cutting about 10% complete. Harvest of wheat and barley about 98% complete. Irrigated grain sorghum in fair condition and the dryland crop in fair condition. Corn in good condition. Pecans in good condition and progressing well. Peanuts and potatoes mostly in good condition and showing good growth. Chile and onions continue in good condition with the mid-season onion harvest continuing. Ranges continue in fair condition but showing improvement due to recent rains. Cattle and sheep in good condition. Supplemental feeding limited to the drier areas. Cotton squaring 80%, 90% 1981. Cotton setting bolls 5%, 12% 1981, 23% average.

NEW YORK: Warm, dry week. Good fieldwork conditions. Earliest corn tasseling. Oats ripening. Wheat harvest starting. Good haying progress. First cutting alfalfa 88% done, 86% 1981, 88% average. Clover-timothy

hay 74% done, 76% 1981, 77% average. Grass silage harvest 92% done, 92% 1981, 93% average. Second cutting started. Early variety peach harvest beginning in Columbia County. Onion growers spraying for downy mildew. Long Island vegetable crop growth good, irrigation continues.

NORTH CAROLINA: Temperatures: Near normal. Precipitation: Ranged from 0.20 in. at Siler City to over 3.50 in. at Hickory and Kerr Scott Reservoir.

Fieldwork: 4.3 days suitable. Soil moisture: 1% very short, 6% short, 64% adequate, and 29% surplus. Conditions: Pasture, cotton, soybeans, sweetpotatoes, and truck crops mostly good; tobacco, peanuts, and hay fair to mostly good; corn good to mostly excellent; apples poor to fair. Harvests: Irish potatoes 84%, 89% average; flue-cured tobacco 18%, 1981 14%, 12% average; wheat 98%, 1981 100%, 99% average; hay 67%, 1981 69%, 72% average. Phenological stages: Cotton squared 95%, 1981 88%; cotton setting bolls 41%, 1981 57%; corn silked 91%, 1981 92%; corn dough stage 59%, 1981 67%; corn dent stage 23%, 1981 35%; soybeans bloomed 12%, 1981 18%. Major farm activities: Harvesting flue-cured tobacco, spraying soybeans, and vegetable harvest.

NORTH DAKOTA: Temperatures averaged near normal. Extremes: 42° northwest to 99° south central. Precipitation was 0.10 to 0.38 in. above normal with remainder of the State averaging 0.11 to 0.47 in. below normal. Wind gusts up to 95 mph and hail to 1.50 in. were reported southwest. Large hail fell in the northwest and north central.

Warm humid weather with additional moisture pushed crop development closer to normal, but still behind. Hard red spring wheat about 6 days behind normal and sunflower about 7 days. Moisture stress showing on crops in areas in need of rain which are southwest, south central and southeast. Overall, crop condition mostly good. Hail damage and lodging by strong winds in isolated areas reported across the State. The percent of acreage heading or beyond with last year and average was: hard red spring wheat 69, 92, 85; durum 61, 86, 78; barley 79, 95, 87; and oats 67, 93, 85. Average height of row crops with last year and average was: sunflower 23, 28, 31; corn 28, 31, 37; and soybeans 13, 14, 17. Percent bloom or beyond with last year and average was: potatoes 9, 56, 64; flax 20, 43, 35; and dry beans 11, 37, 39.

OHIO: Temperatures averaged 2 to 6° above normal. Highs mid to upper 80's and nights cooling only to mid or upper 60's. Growing degree days above normal by 10 to 38 and accumulations from 169 to 185, north to south. Precipitation lighter than normal. Amounts from none to 1.00 in. with scattered coverage; and average less than 0.25 in. Heaviest showers in central sections. Humidities higher than usual. Evaporative losses exceeded 1.50 in. Most areas had net soil moisture loss as rainfall departures from normal were generally minus 0.40 to 0.80 in.

Farm activities: Spreading manure, harvesting raspberries, cherries, and early apples, picking sweet corn, combining wheat and baling hay. Corn crops ahead of normal, in good condition. Some soybean fields being sprayed for Mexican Bean Beetles. Hay fields being sprayed for leafhopper and blotch leaf miner. Lodging of small grains has not been a problem. Corn silked 50%, 10% 1981, 30% average. Soybeans blooming 50%, 15% 1981, 30% average. Wheat harvested 75%, 80% 1981, 65% average. Oats ripe 20%, 50% 1981, 35% average. Oats harvested 5%, 15% 1981, 10% average. Alfalfa-2nd cutting

55%, 35% 1981, 50% average. Other hay-2nd cutting 30%, 15% 1981, 25% average. Days favorable: 6.5. Pasture condition good. Soil moisture 44% short, 56% adequate.

**OKLAHOMA:** Rainfall averages ranged from 0 in the northeast to 0.57 in. in the Panhandle. Temperatures ranged from 2° above normal in the northeast to 2° below normal in the southwest.

Wheat harvest nearly complete. Progress on all crops lagging behind average. Wheat harvesting: 95% 1982; 100% 1981, 100% average. Sorghum heading: 10% 1982; 25% 1981, 20% average. Cotton squaring: 5% 1982, 45% 1981, 40% average. Days suitable for fieldwork: 5.6.

**OREGON:** Highs from 75 to 90°; lows 40 to 60°. Average temperatures near normal. Rainfall in northern sections up to 0.10 in.; coastal and Willamette Valley up to 0.40 in.; none to traces elsewhere.

Soil moisture short to mostly adequate. Winter wheat harvest underway; 4% complete; 3% 1981. Yields good; some shrivel in west. Barley and hay harvest continues between showers. Grass seed harvest slowed by rain; yields seen low. Mint and corn good. Sweet cherry harvest winding down. Strawberries virtually over. Cane and bushberry harvest in full swing. Peaches approaching maturity. Some potatoes being dug; most fields good shape. Green pea harvest winding down. Some early snap beans being harvested in quantity. Livestock condition good. Range and pastures fair to good. Rain improved western pastures.

**PENNSYLVANIA:** Cool frontal passage 12th followed by pleasant sunny summertime conditions 13th and 14th with warming trend and higher humidity remainder of period. Hazy hot and extremely humid weekend. Hottest week of year with temperatures averaging 1 to 4° above normal. Extremes: 95 and 48°. Scattered showers and thunderstorms 12th and 15th through 18th produced only traces of rain lower Susquehanna Valley and southwest but up to 1.50 to 2.50 in. parts of northern counties. Elsewhere 0.10 to 0.50 in. most places.

Six days suitable. Moisture adequate to short. Activities: Spraying; baling straw; making hay; and harvesting barley, wheat, rye, cherries, peaches, early apples, snap beans, cabbage, tomatoes, and sweet corn. Barley 86% ripe and 69% harvested, last year 87% ripe and 73% harvested. Wheat 73% ripe and 30% harvested, last year 79% ripe and 41% harvested. Oats 49% turning yellow and 5% ripe, last year 45% turning yellow and 18% ripe. Average corn height 48 in., last year 53 in. Harvest of first crop alfalfa virtually complete, about a week later than last year. Second crop alfalfa 30% harvested, last year 56%. First crop clo-tim 92% harvested, last year virtually all harvested at this time. Quality of hay made good to fair. Feed from pastures mostly average.

**PUERTO RICO:** Island average rainfall 0.69 in. or 0.53 in. below normal. Highest weekly total 2.34 in. Temperatures averaged about 82° on Coasts and 78° Interior Divisions. Extremes: 93 and 65°.

**SOUTH CAROLINA:** Warm, humid regularly with average 1 to 2° below normal. Cloudy and showers or thunderstorms - some daily.

Soil moisture adequate to surplus with 3 days suitable for outdoor work. Corn good to excellent condition with favoring weather, 83% dough stage, 90 last year, 74 average; 22% mature, 31 last year, 25 average; 1% harvested ahead of

last year, average. Cotton 100% squared, 88% setting bolls, 95 year ago, 77 average; condition fair to good, spraying. Soybeans good condition, weeds gaining due to wet weather; 8% blooming, 13 year ago, 12 average; 1% setting pods ahead of year ago, average. Tobacco fair to good, 95% topped, 99 last year, rapid harvesting at 35%, 33 year ago, 27 average. Peach volume down seasonally, Blakes size, quality excellent. Apple conditions poor due to freezes devastating Piedmont. Watermelon conditions good, some growers not picking due to low price.

**SOUTH DAKOTA:** Temperatures averaged near normal. Extremes: 102 and 42°. Precipitation heaviest in east up to 4.00 in. Rest of State mostly under 1.00 in.

Topsoil moisture critically short parts of north central and northeast. Short over most of west, balance of north central and parts of central and northeast. Adequate or surplus elsewhere. Five days suitable. Haying, cultivating, and preparing machinery major activities. Hail and wind damage in east. Mostly light damage with localized heavy damage. Crops in good condition. Rain needed in west and north. Corn tasseling in south. Small grain harvest just getting started. Range and pastures good to excellent. Flax acreage blooming 68%, 1981 86%, average 85%. Soybeans acreage blooming 19%, 1981 38%, average 51%. Corn height (inches) 32%, 1981 39%, average 37%. Corn acreage cultivated once 97%, 1981 100%, average 100%. Corn cultivated twice 77%, 1981 93%, average 92%. Winter wheat acreage turning color 92%, 1981 100%, average 98%. Winter rye acreage turning color 91%, 1981 100%, average 96%. Spring wheat acreage turning color 36%, 1981 81%, average 64%. Oats acreage turning color 51%, 1981 90%, average 78%. Barley acreage turning color 61%, 1981 91%, average 81%. Alfalfa acreage cut once 94%, 1981 96%, average 97%. Winter wheat ripe 41%, 1981 94%, average 77%. Winter rye ripe 50%, 1981 90%, average 78%.

**TENNESSEE:** Crops in good condition and progressing well. Average of 5.2 days available for fieldwork. Soil moisture 50% short, 47% adequate, 3% surplus. Soybeans 20% blooming, 19% 1981, 27% average. Soybeans setting pods 3%, 1981 3%, average 5%. Cotton squaring 100%, 1981 92%, average 86%. Cotton setting bolls 22%, 1981 18%, average 26%. Small grain harvest virtually complete. Alfalfa 2nd cutting 97% complete, 1981 91%, average 87%. Corn silking 65%, 1981 70%, average 64%. Corn dough stage 11%, 1981 21%, average 15%. Cattle in good condition.

**TEXAS:** Weak summertime pressure systems predominated over State. Stationary front caused few thundershowers 12th. While scattered afternoon and evening thundershowers numerous over southeast Texas and upper coastal plains, majority of Texas remained under sunny skies. A few thundershowers occurred late in week over northern Panhandle. Normal temperatures.

Crops: Fieldwork active as farmers hastily completed replanting acreage lost from storm damage. Replanted crops emerging and prospects improved with return to hot weather. Harvest of remaining wheat neared completion. Harvest of sorghum, corn and rice picking up in southern areas. Cotton is very late. In Coastal Bend and Rio Grande Valley, defoliation has begun. Sorghum harvest more active in South Central Texas and southern Blacklands. Some sorghum falling. In North Texas, midge and head worms have become more common. Most corn continued to make good recovery from storm damage on

Plains where it was silking and tasseling. In Blacklands, corn in hard dough stage and drying quickly. Wheat harvest neared completion as growers were anxious to get remaining wheat out of field. Rice harvest underway in several counties along coast. Water continues to be drained off fields. Peanut planting nears completion in Cross-Timbers. Moisture supplies generally adequate in Cross-Timbers but South Texas needs rain. Soybean planting continued on High Plains to replace cotton acreage. Upper Coast soybeans need rain. Second cuttings hay crops underway. Cotton squaring 67%, 78% 1981. Cotton setting bolls 15%, 38% 1981. Cotton open bolls 2%, 3% 1981. Rice headed 97%, 93% 1981. Rice turning color 61%, 62% 1981. Rice harvested 1%, 4% 1981. Sorghum headed 70%, 73% 1981. Sorghum turning color 66%, 69% 1981. Sorghum mature 38%, 37% 1981. Sorghum harvested for grain 28%, 16% 1981, 26% average. Wheat harvested for grain 98%, 99% 1981, 100% average. Oats harvested 96%, 98% 1981, 100% average. Peanuts planted 100%, 99% 1981, 100% average. Soybeans planted 95%, 91% 1981, 98% average. Sunflowers planted 94%, 92% 1981, 98% average. Cotton harvest getting underway. On Plains, most replanting of cotton completed.

Commercial Vegetables: Rio Grande Valley vegetable harvest continues steady although movement through markets slowed. Citrus development good but irrigation necessary most groves. In San Antonio-Winter Garden area harvest carrots virtually complete. Watermelon harvest continues; only light volumes shipped. Cantaloup harvest continues. In East Texas, application herbicides continues as weed problems persist melon and sweetpotato fields. Fall vegetable preparation underway. In Trans-Pecos region onion and potato harvest winding down. Cantaloup harvest underway soon. On High Plains some onions plowed up due hail damage. Quality harvested onions fair and volume light. Cucumber and potato harvest continues. Peach harvest steady pace with droppage and crop expected light.

Range and pasture: Range and pasture conditions remained good, with portions of South Central and South Texas beginning to show effects of high temperatures and little rain. Livestock good condition with grazing ample, but becoming limited in southern areas with rain needed to revive dry forage. Hay cutting and baling active. Insect problems minor but grasshoppers problem.

UTAH: Scattered areas afternoon shower and thunderstorm activity. Accumulated amounts moisture generally light to moderate. Average temperatures ranged from 4° below to 4° above. Pan evaporation increased over previous week ranging between 1.75 and a little over 3.50 in.

Farm work active. Major projects included irrigation, weed and insect control, and caring for livestock. Crops and pastures in fair-to-good condition. Livestock in good condition. Harvest of second crop hay and fall seeded grains beginning in lower valleys. Statewide, small grains more than 90% headed, and nearly 66% turning color. Corn behind normal, but making good growth. Irrigation water in good supply over most of State.

VIRGINIA: Typical summertime weather continues. Warm and humid with scattered showers and thunderstorms. Temperatures averaged 1° above normal. Average rainfall 1.20 in. Sixty-four mph wind gust in severe thunderstorm central Virginia on 12th.

Fieldwork consisted mostly of small grain harvest, haying, spraying and some fruit and

vegetable harvesting. Topsoil moisture rated 21% short, 66% adequate and 13% surplus. Days suitable for fieldwork: 4.1. Haying active though high humidity lengthening curing time. Corn: Excellent condition, 63% silked, 65% 1981; 20% dough, 19% 1981. Flue-cured tobacco: 10% harvested, 12% 1981, 3% average. Tobacco topping and suckering active. Wheat: 98% harvested, 100% 1981, 90% average. Potatoes: 53% harvested. Soybeans and peanuts rated excellent, apples good to excellent, peaches poor to fair. Harvest of cucumbers, tomatoes, sweet corn and other vegetables continues. Livestock doing well.

WASHINGTON: The week started out as a near normal July week, but a cold front swept into the State at mid-week. The freezing level at Quillayute lowered about 6,000 feet in 24 hours to 5,400 feet on morning of 14th. This system brought cool unseasonable temperatures and above normal precipitation to west and along the eastern border. A ridge of high pressure was building in the eastern Pacific 15th and a dry, warming trend was underway 16th.

West: Cauliflower, broccoli, turnips, green peas, cabbage, lettuce, and other vegetables were harvested. Sweet corn beginning to tassel. Strawberry harvest about complete. Raspberries and blueberries being picked. Livestock and pastures in good condition. Feed supply adequate.

East: Wheat and barley harvests just beginning. Yields good average. Growers also working summerfallow. First and second cutting of alfalfa hay continued, though slowed by cool weather. Field corn tasseling. Other spring crops in good condition. Potato digging should begin this week. Grass seed harvest also beginning. Vegetable harvest continued. Some early sweet corn and tomatoes should be harvested this week. The cherry harvest virtually completed. Severe rain damage occurred in late maturing districts. Peaches and apricots were harvested in Franklin County. Peach picking might start in Yakima County this week. Other tree fruits look good. Livestock and pastures in good condition with adequate feed supplies. Winter wheat harvested 4%, 3% 1981, 3% average.

WEST VIRGINIA: Temperatures averaged 2° above normal. High 94°, low 50°. Precipitation averaged above normal in northeast and below normal elsewhere.

Soil moisture adequate to short. Days worked averaged 6.3. Main activities hay harvesting, gardening. Wheat fair to good condition: 38% harvested, 55% in 1981. Barley fair to good condition: 59% harvested; 77% in 1981. Oats good to fair condition: 19% harvested; 26% in 1981. Corn good to fair condition. Hay fair to good condition; 1st cutting 86% complete, 76% of normal; 85% and 79% in 1981; 2nd cutting 23% complete and 68% of normal; 25% and 83% in 1981. Pastures good to fair condition. Tobacco fair to good condition. Peaches poor to fair condition: 15% harvested, 38% of normal; 4% and 55% in 1981. Apples good to fair condition. Gardens good to fair condition.

WISCONSIN: Temperatures averaged 3° above normal. Temperatures ranged from a high of 95° at Mount Mary College on the 17th to a low of 51° in Rhinelander on the 12th. Showers occurred everyday somewhere in the State. The north central district reported the most precipitation with most districts reporting 2 in. or more.

Fieldwork: 5 days suitable. Favorable weather pushed the corn crop. Average corn height 43 in., 68 in. 1981, 50 in. average. Corn just beginning to tassel, 20% 1981, 25% average. Some farmers were completing the first crop harvest, others were harvesting second crop. Currently 14% of the second crop has been harvested, 21% 1981, 15% average. Pastures continue to look good and rated at 85% of normal, 78% 1981, 77% average. Small grains maturing. Harvesting progress being made on canning peas. Some early varieties of potatoes have been harvested. Topsoil moisture supplies were rated 11% short, 72% adequate and 17% surplus. Some areas of the west central district in need of precipitation.

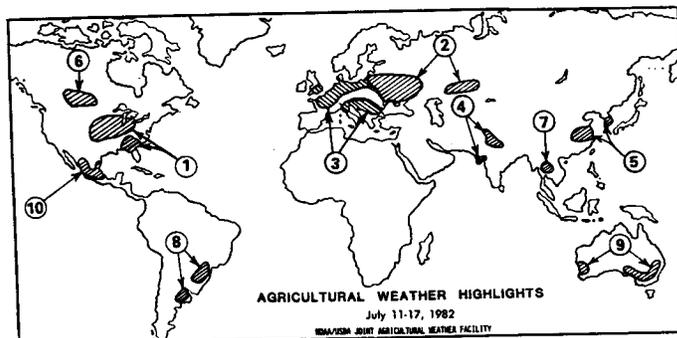
WYOMING: Mostly dry, warm days and cool nights. Afternoon temperatures warm but cool overnight lows kept averages about normal. Precipitation light most stations normal to about 0.33 in. below. Central part mostly dry. Topsoil moisture short 55% State. Average 6 days suitable fieldwork. Maturity of small grains slow. Winter wheat: 15% mature; normal 70%. None harvested. Spring wheat turning color; 20%, year ago 60%, normal 55%. Oats headed: 50%, normal 85%. Barley headed: 75%, year ago 80%, normal 90%. Crops fair to good condition. Alfalfa hay harvested: 65%, year ago 85%, normal 85%. Other hay harvested: 20%, year ago and normal 40%. Dry beans: blooming, 10%, year ago 30%, normal 35%. Stock water adequate.

Heating Degree Days June 1982

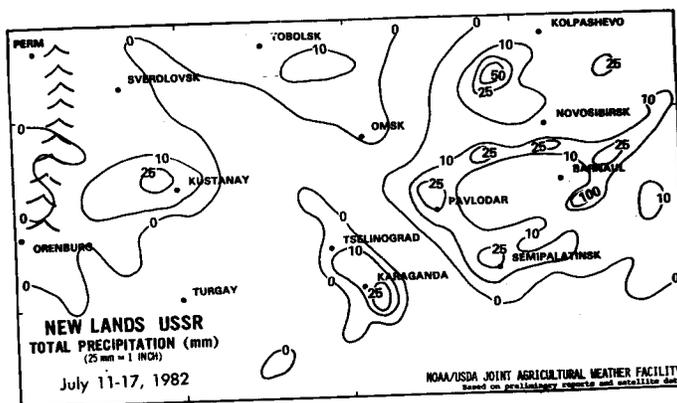
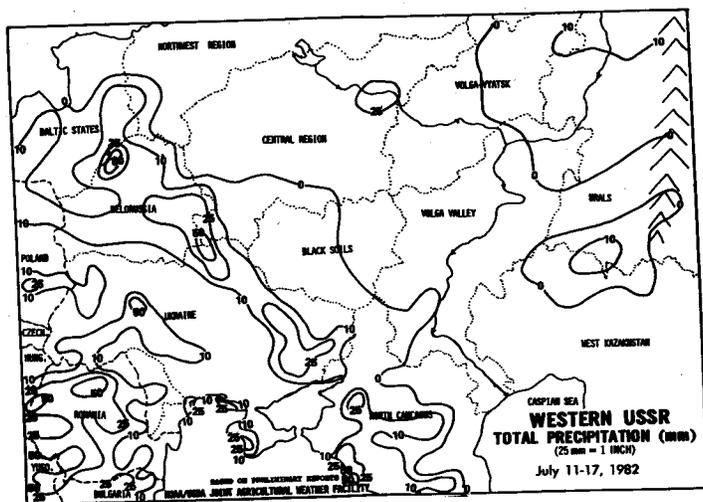
ALA. Birmingham	0	MAINE, Caribou	143	OKLA. Okla. City	13
Mobile	0	Portland	198	Tulsa	5
Montgomery	0	MD. Baltimore	20	OREG. Astoria	212
ALASKA, Anchorage	356	MASS. Boston	113	Burns U.	224
Barrow	930	Milton	141	Medford	63
Fairbanks	216	MICH. Alpena	249	Pendleton	74
Juneau	-	Detroit	70	Portland	71
Nome	476	Flint	91	Salem	85
ARIZ. Flagstaff	230	Grand Rapids	98	PA. Allentown	50
Phoenix	0	Houghton Lake	224	Erie	123
Tucson	0	Lansing	113	Harrisburg	61
Winslow	4	Marquette U.	326	Philadelphia	25
Yuma	0	S. Ste. Marie	393	Pittsburgh	67
ARK. Fort Smith	4	MINN. Duluth	303	Scranton	68
Little Rock	0	Internatl Falls	256	R. I. Providence	91
CALIF. Bakersfield	0	Minneapolis	71	S. C. Charleston	0
Eureka U.	258	Rochester	129	Columbia	0
Fresno	4	St. Cloud	168	Greenville	0
Los Angeles U.	45	MISS. Jackson	0	S. DAK. Aberdeen	-
Red Bluff	6	Meridian	0	Huron	85
Stockton	13	Vicksburg U.	0	Rapid City	170
San Diego	2	MO. Columbia	25	Sioux Falls	105
San Francisco	154	Kansas City	32	TENN. Chattanooga	0
COLO. Denver	92	St. Louis	11	Knoxville	0
Grand Junction	6	Springfield	25	Memphis	0
Pueblo	-	MONT. Billings	142	Nashville	0
CONN. Bridgeport	72	Glasgow	121	TEX. Abilene	0
Hartford	64	Great Falls	161	Amarillo	2
D.C. Washington	3	Havre	112	Austin	0
FLA. Apalachicola	0	Helena	136	Beaumont	0
Ft. Myers	0	Kalispell	154	Brownsville	0
Jacksonville	0	Miles City	107	Corpus Christi	0
Key West	0	Missoula	108	Dallas	-
Lakeland U.	-	NEBR. Grand Island	59	Del Rio	0
Miami	0	Lincoln	52	El Paso	0
Orlando	0	Norfolk	60	Fort Worth	0
W. Palm Beach	0	North Platte	111	Galveston U.	0
Tallahassee	0	Omaha	50	Houston	0
Tampa	0	Valentine	108	Lubbock	0
GA. Atlanta	0	NEV. Ely	230	Midland	0
Augusta	0	Las Vegas	0	San Angelo	0
Macon	0	Reno	133	San Antonio	0
Savannah	0	Winnemucca	124	Victoria	0
IDAHO, Boise	87	N. H. Concord	136	Waco	0
Lewiston	57	N. J. Atlantic City	13	Wichita Falls	0
Pocatello	139	Trenton U.	-	UTAH, Milford	98
ILL. Cairo U.	0	N. MEX. Albuquerque	0	Salt Lake City	62
Chicago	118	Roswell	-	VT. Burlington	133
Moline	35	N. Y. Albany	87	VA. Lynchburg	1
Peoria	28	Binghamton	102	Norfolk	0
Rockford	61	Buffalo	95	Richmond	1
Springfield	20	New York	35	Roanoke	3
IND. Evansville	0	Rochester	67	WASH. Colville	-
Fort Wayne	50	Syracuse	79	Omak	-
Indianapolis	18	N. C. Asheville	0	Quillayute	257
South Bend	72	Charlotte	0	Seattle-Tacoma	103
IOWA, Burlington	-	Greensboro	0	Spokane	76
Des Moines	30	Hatteras R.	0	Walla Walla U.	42
Dubuque	-	Raleigh	0	Yakima	72
Sioux City	61	Wilmington	0	W. VA. Beckley	43
KANS. Concordia	27	N. DAK. Bismarck	176	Charleston	2
Dodge City	26	Fargo	129	Huntington	8
Goodland	73	Williston U.	79	Parkersburg U.	-
Topeka	32	OHIO. Akron-Canton	53	WIS. Green Bay	178
Wichita	17	Cincinnati U.	19	Madison	172
KY. Lexington	9	Cleveland	75	Milwaukee	172
Louisville	3	Columbus	33	WYO. Casper	173
LA. Baton Rouge	0	Dayton	22	Cheyenne	227
Lake Charles	0	Toledo	76	Lander	164
New Orleans	0	Youngstown	99	Sheridan	186
Shreveport	0				

# International Weather and Crop Summary

July 11-17

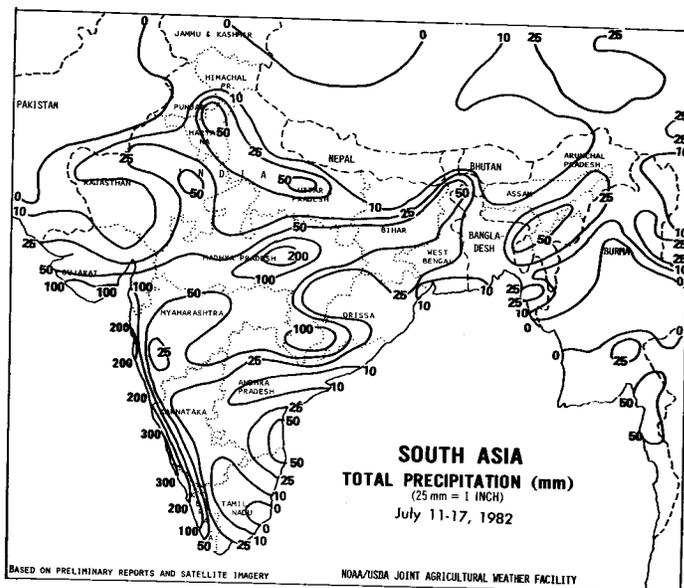
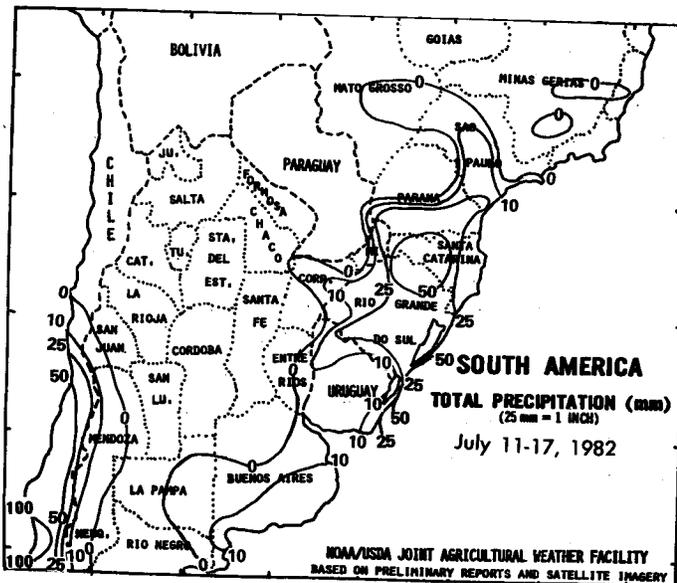


1. **UNITED STATES:** Warm temperatures promote rapid development of corn and soybeans in eastern sections of the Corn Belt. Severe weather and heavy rains cause isolated crop damage in western parts. Continued hot, sunny weather speeds harvest of winter wheat in the central plains. Heavy rains over the Southeast moisten soils which were becoming too dry.
2. **USSR:** Scattered showers cause no significant delay in winter grain harvest; some beneficial rain aids spring grains in limited areas of New Lands.
3. **EUROPE:** Mostly favorable weather for spring crop growth and winter grain harvest.
4. **SOUTH ASIA:** Monsoon advances into Gujarat, Haryana, and Uttar Pradesh; Punjab still dry.
5. **EASTERN ASIA:** Rainfall improves spring crop conditions in South Korea and southern parts of the North China Plain.
6. **CANADA:** Crops in mostly good to excellent condition in Prairies; in Saskatchewan, locally excessive rain in east but still too dry in southeast.
7. **SOUTHEAST ASIA:** Rains benefit rainfed rice in eastern Thailand, while some corn areas remain too dry.
8. **SOUTH AMERICA:** Drier weather in Brazil aids coffee harvest; beneficial showers in wheat areas of Argentina.
9. **AUSTRALIA:** Drought intensifies over eastern crop areas; beneficial showers in west and south for newly emerged wheat.
10. **MEXICO:** Rainy season shifts into high gear over parts of the south and the western mountains, reviving crops and increasing irrigation supplies. Northeastern rainfed citrus suffers from heat and lack of moisture.



**USSR:** Scattered showers covered the western half of the European USSR, while eastern portions were mostly dry. The winter grain harvest had only temporary delays in the Ukraine where some locally heavy showers interfered with fieldwork. Otherwise, most areas had generally favorable harvest weather. Above-average temperatures and dry weather aided rapid development of spring grains in the North Caucasus and Lower Volga Valley. Corn should be in the reproductive stage, with mostly adequate moisture for current usage.

In the New Lands, scattered showers fell in numerous areas, but persistent dryness continued over much of the central spring grains area. Beneficial showers fell around Orenburg and Kustanay in the west, south of Tselinograd and Karaganda in the south, and in a narrow band extending northwestward from Semipalatinsk to Pavlodar, then eastward between Novosibirsk and Barnaul. The moisture aided crop development, but the limited distribution of showers left many areas without needed rainfall. Spring grains are in the heading period. Temperatures were generally favorable for crop growth.

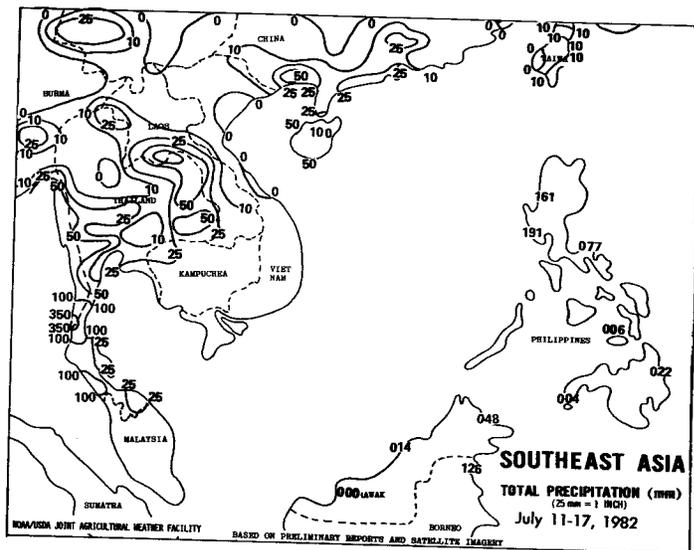


**SOUTH AMERICA:** Showers persisted over southern Brazil, producing weekly rainfall totals in excess of 50 mm in northern Rio Grande do Sul and Santa Catarina. Several days of relatively dry weather allowed some fieldwork, but the persistent wetness likely has promoted weed growth which would compete with the newly emerging wheat crop. Somewhat drier weather in coffee areas was beneficial for harvesting. Reports indicate that recent heavy rains in coffee areas of Parana and Sao Paulo may have reduced the quality of the harvest. In Argentina, showers fell as a storm system passed through the wheat area. Minimum temperatures remained above freezing throughout the crop area of Argentina. Thus, the rainfall aided wheat growth during this semidormant period.

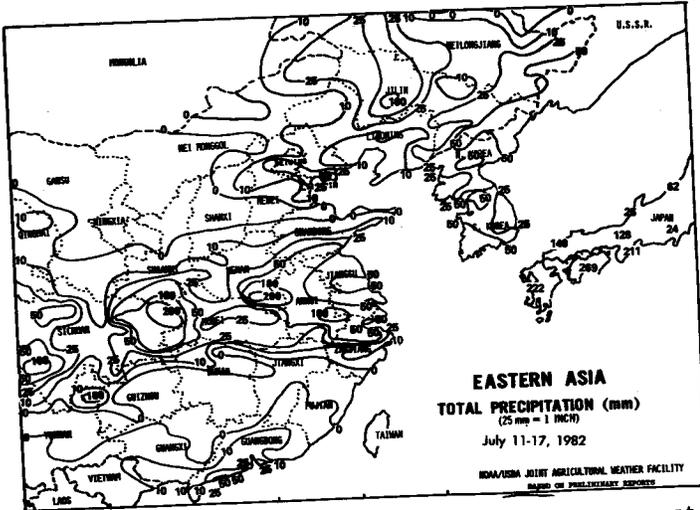
**SOUTH ASIA:** Renewed monsoon rains continued over most of India, with rainfall pushing into Gujarat and eastern Punjab. The moisture allowed planting of traditional crops in Gujarat more than 4 weeks later than normal. Drought-tolerant crops likely were planted on many fields before the late monsoon arrival. In the surplus rice areas of northwestern India, the moisture benefited rainfed crops the most. Irrigation supplies should have been much better than normal at this time of year in that area. If rice was adequately irrigated during this dry spell prior the monsoon's late arrival, the recent onset of rains should alleviate conditions with only relatively minor yield losses. However, most of the Punjab of India and Pakistan remained dry.



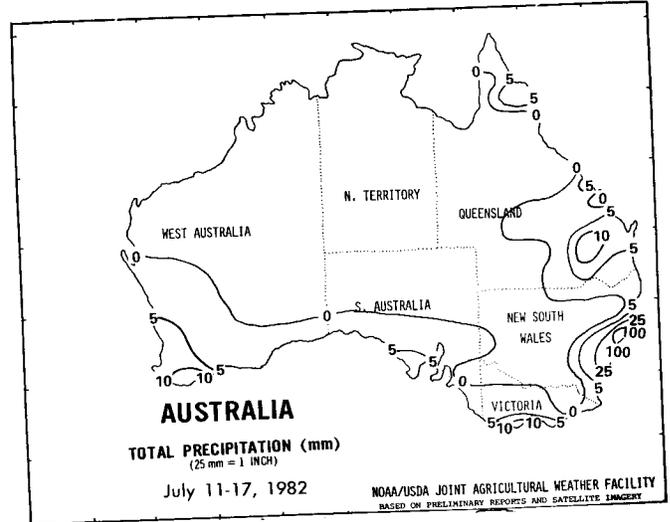
**MEXICO:** The rainy season shifted into high gear over parts of the south and the western mountains, reviving crops and increasing irrigation supplies. Most of the southern Plateau's cornbelt had over 25 mm, but the rains may have arrived too late for some of the early corn. Major crop production areas in the northern half of the country were dry, aiding harvesting but stressing immature crops. The sunny pattern was particularly favorable for harvesting sorghum and corn and for development of irrigated cotton and soybeans. However, rained northeastern citrus continued to suffer from the lack of moisture which was aggravated further by hot temperatures.



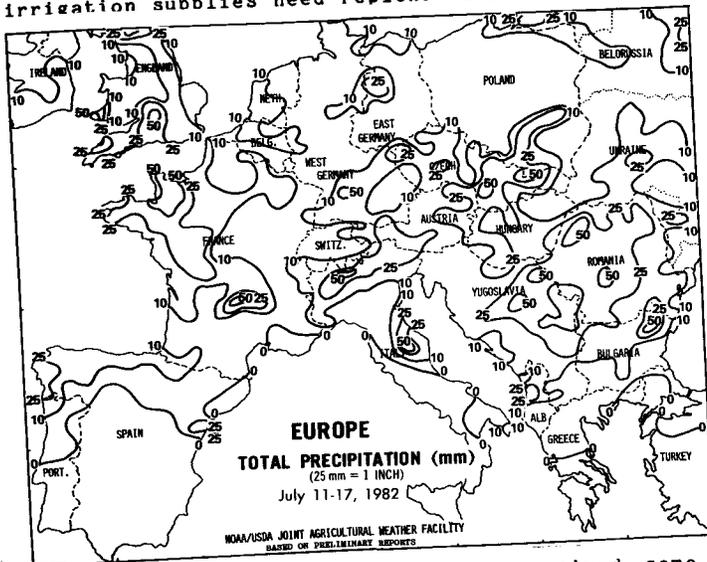
**SOUTHEAST ASIA:** Near-normal rainfall benefited nonirrigated rice in eastern Thailand. The Central Plains had somewhat below-normal rainfall, but irrigation supplies were adequate. Generally below-normal rain fell in the corn-growing areas. Some parts reported only slightly below-normal totals, but other areas had little rain. Early-planted corn should be nearly mature now, but later-planted fields will need more moisture to complete filling. Satellite imagery indicated that rainfall in Kampuchea, Vietnam, and Laos was similar to that of eastern Thailand.



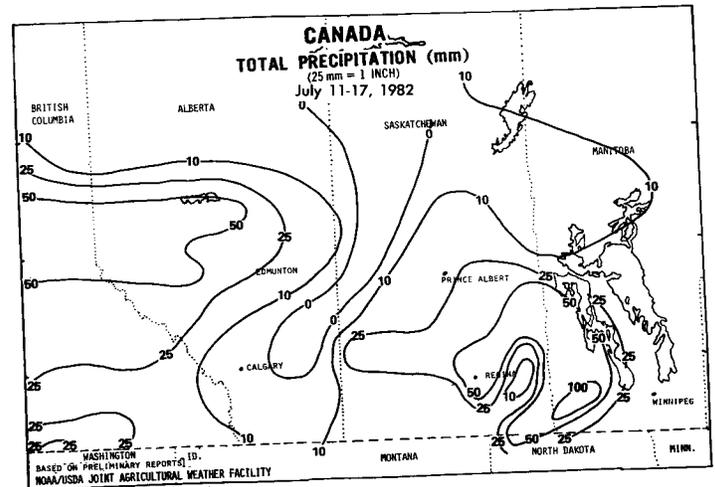
**EASTERN ASIA:** Above-normal rains fell across most southern parts of the North China Plain. The moisture alleviated dry conditions persisting over portions of that area since the beginning of the rainy season. Mostly dry weather south of the Yangtze River favored crops, and harvesting of early rice along the southern coast continued under favorably drier conditions. Parts of Hebei benefited from moderate rainfall. Above-normal rains fell over much of northeastern China, but many important agricultural areas received less-than-normal amounts. Growing conditions for spring crops remained unfavorable, with periods of hot, dry weather stressing moisture-deficient crops. In South Korea, increasing rainfall further improved rice-growing conditions; however, irrigation supplies need replenishing.



**AUSTRALIA:** Cloudless skies dominated the weather pattern over the wheat belt until late in the week when showers developed over Western Australia. The moisture dampened topsoils for the newly emerged wheat. Light showers also fell over South Australia and southern Victoria, but the drought intensified over major growing areas of Victoria and New South Wales. Conditions continue to deteriorate in eastern crop areas where substantial rains have not fallen in months. Thus, prospects for the wheat crop remain grim since moisture is not available to support emergence and growth. An unusual weather disturbance produced some showers over southeastern Queensland, but additional widespread rains are needed for crops.



**EUROPE:** Most European crop areas received some moisture which benefited crops in the reproductive and filling stages. England and France reported a locally heavy thunderstorms early in the week as a frontal system passed through the region. Weekly rainfall amounts were generally light elsewhere, except over the Balkan States where widespread showers produced over 25 mm of weekly rainfall. The Mediterranean region was seasonably dry. Reports indicate that prolonged dryness over southern and north-central Italy has seriously damaged agricultural productivity. Temperatures were generally seasonal to slightly above average throughout Europe. The winter grain harvest progressed with only temporary delays due to local shower activity.



**CANADA:** Widespread showers in the Prairies produced locally heavy rain in eastern Saskatchewan and southwestern Manitoba. Rainfall amounts in excess of 50 mm during midweek may have caused some lodging in crops which are in reproductive development. However, most Prairie wheat areas did benefit from significant weekly rainfall as the crop advanced through heading. Light showers over much of Alberta sustained good to excellent growing conditions in the western portion of the grain belt. Elsewhere, crops are rated mostly good, except in southeastern Saskatchewan where insufficient moisture has stressed crop growth. Additional rain is needed soon in this area since the majority of the wheat crop is in the moisture sensitive heading stage. Moisture supplies are generally adequate for rapeseed which was mostly in the flowering stage.



# FIRST CLASS MAIL

## National Weather Summary

(continued from front page)

and southeastern Iowa. Scattered showers spread over the northern Plains, and severe weather developed late in the day through eastern North Dakota. A warm, moist flow from the Gulf of Mexico spread over the southeastern United States, triggering widespread thunderstorm activity from Louisiana to Virginia. High temperatures in the low nineties reached into the central Corn Belt as warmer temperatures began spreading eastward.

**SATURDAY...** Heavy thunderstorms broke out again through Iowa, exacerbating an already severe flood condition. Heavy rains also fell in western lower Michigan, and showers covered the Ohio Valley, New York, and New England. Showers and thunderstorms continued in the Southeast from Louisiana to North Carolina. Warmer weather spread over the entire Corn Belt. Temperatures above 90° pushed into Michigan and New England.

## STREAMFLOW DURING JUNE

(continued from page 11)

**\*Western States--** Streamflow was normal to above normal throughout California. Flow of the Sacramento River at Verona, Calif., averaged about 12.4 bgd, 69 percent above average for June. Combined storage contents of the key index reservoirs in northern and central parts of the State increased during June and were 23 percent above normal for the month and 26 percent above the levels of this time last year. Streamflow in Nevada remained at above-normal levels on the Walker, Humboldt, and Virgin Rivers because of snowmelt during June. Groundwater levels in the State varied, with the level in the key index well near Steptoe, Nev., 10.6 feet below the land surface, about 2.5 feet above average. The level in the key index well at Las Vegas was 77.7 feet below the land surface, about 56.2 feet below average for June. Storage in the major reservoirs in Arizona declined somewhat during June. Combined contents of Mead and Mohave Lakes were 18 percent above normal and about 86 percent of their full usable capacity. Contents of the San Carlos Reservoir was 9 percent above normal but only 22 percent of its full usable capacity.

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