

WEEKLY WEATHER AND CROP BULLETIN

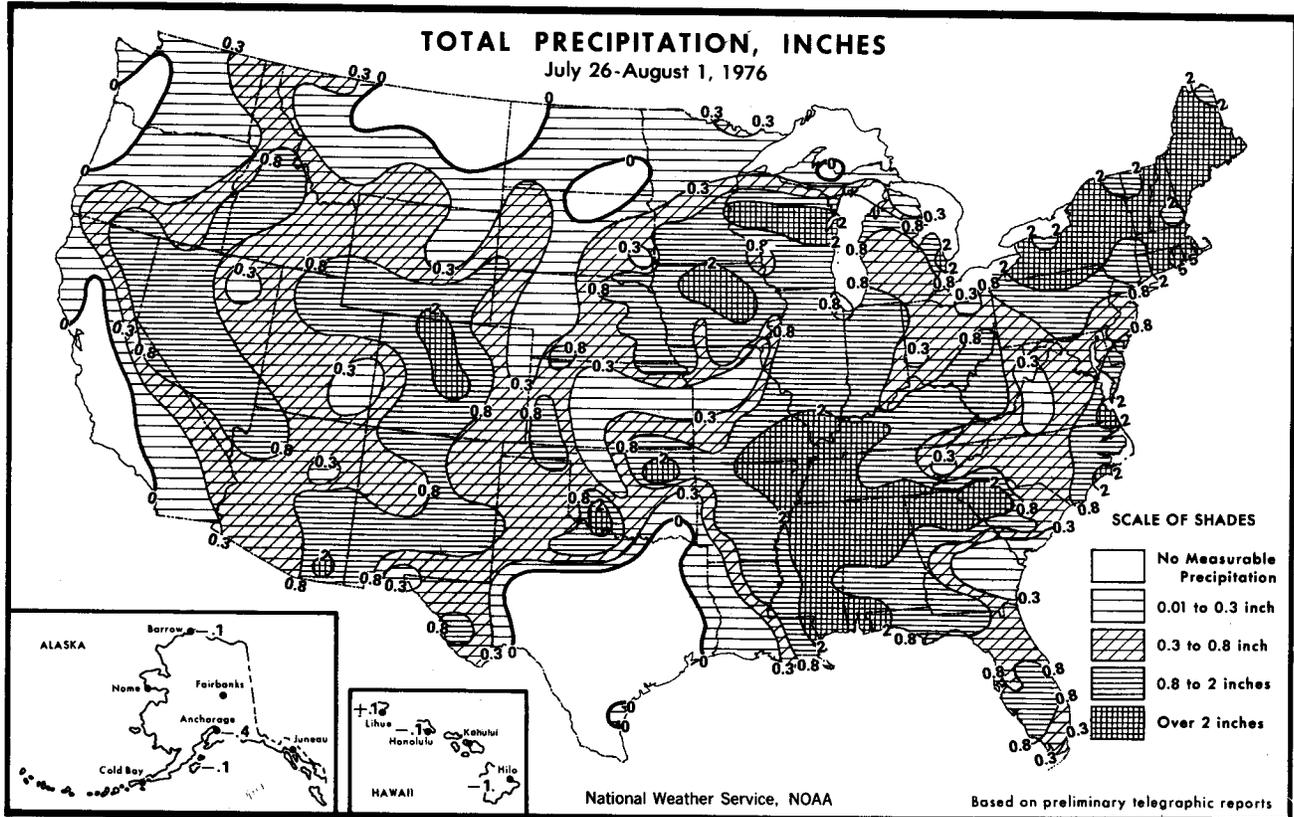
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National Weather Summary

For the week of July 26 - August 1

HIGHLIGHTS: A seasonable cycle of heat, showers, thundershowers, and thunderstorms stretched over a major portion of the Nation during the week. Record-breaking high temperatures baked Alaska, while the Northeast cooled down to record-breaking low readings. Heavy rains, in the wake of thunderstorm activity, deluged Colorado and created extensive flooding, loss of life, and land and property damage.

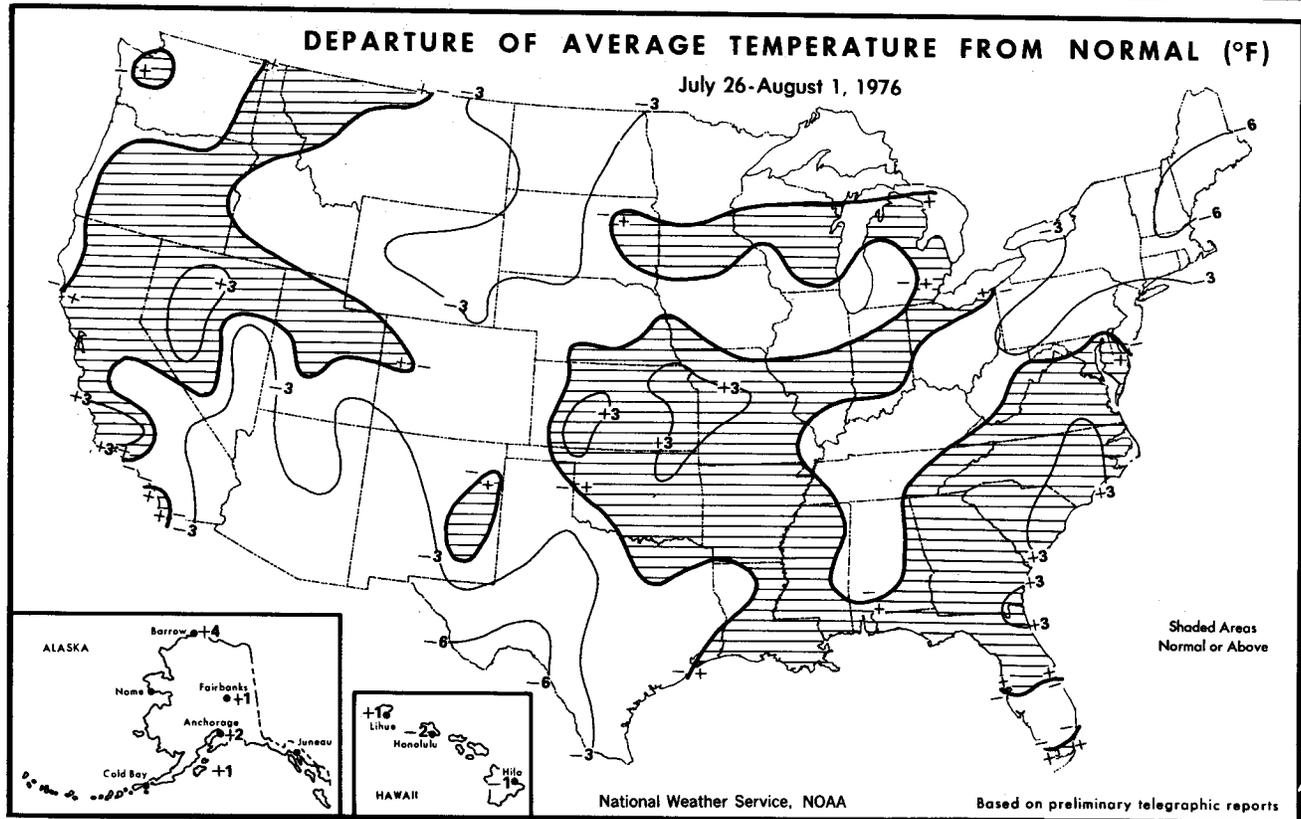
Very cool temperatures dominated the Northeast; early Monday, while warm readings existed again in the Plains States. A large sprawling, high-pressure system with chilly air, clear skies, and light winds combined to produce record low temperatures through much of Pennsylvania and sections of New York and New England. The mercury plunged to lows of 39° in Concord, N.H.; 45° in Portland, Maine, and Burlington, Vt.; 47° in Scranton; 48°

in Allentown, Pa.; and 49° in Syracuse, N.Y.

Morning temperatures across the Plains States surged above the readings registered in Florida, as the mercury ascended rapidly in the Northeast. As the day progressed, hot characterized the weather picture over the Great Plains, while the Pacific Northwest listed a cool 50 degree range.

Showers and thundershowers preceded a cold front through Iowa, southern Minnesota and across Wisconsin, into upper Michigan, and over the High Plains. Showers and thundershowers developed over the Gulf Coast States and were isolated over the southern Rockies, through parts of Arizona and southern California.

Tuesday morning found showers and thundershowers over the southern Rockies, the southern Plateau Region, and the upper Mississippi Valley. Showers and thunderstorms roared across the southern two-thirds of the Mississippi Valley through



the Ohio Valley and New England, and south through central Florida and North Carolina.

Mild temperatures lingered over the desert Southwest and through western Texas. Mercury marks hovered around the 80 degree range over much of the country. Parts of Kansas, Oklahoma, Missouri, the desert Southwest, and the California interior measured highs around the 100 degree range.

Thundershowers and showers increased, following the usual daily cycle, in the western Dakotas, from Nebraska across Iowa and Illinois, and into Kentucky, and southern Indiana. Heavy rain poured more than 4 inches of moisture over an area southwest of Peoria, Ill.

The main area of showers and thundershowers rumbled through the Texas Panhandle, across the Kansas Plains into Wisconsin and northern Illinois early Wednesday. The heaviest precipitation fell in northeastern Iowa with almost 2 1/4 inches at Waterloo in 6 hours and 3 1/2 inches at Shell Rock in a 24-hour period.

Maximum temperatures over the Nation remained generally seasonable, except in Oklahoma where the mercury soared to near 100 degrees. Oregon readings measured in the 90 degree range.

Corn farmers in southern Illinois, southern Indiana, and western Kentucky welcomed heavy rains on Thursday. Approximately 4 1/2 inches of rain flooded Detroit, Mich. streets and freeways. Thunderstorms also dumped over 1/2 inch of rain in parts of southern Arizona and southern New Mexico.

Flood watches mushroomed in portions of southeast Missouri and western and south central New York after extensive rainfall. Isolated thunderstorms lingered from the northern half of the Pacific Coast Region into Idaho and northern Utah, and into the southern sections of Arizona and New Mexico.

Severe weather pummeled portions of Arkansas and Tennessee with high winds, hail, and tornadoes. Winds gusted to almost 80 mph at Baker Airport, near Memphis, Tenn., while golf-ball sized hail pelted an area near Little Rock, Ark. Strong winds buffeted Las Vegas, Nev. at about 75 mph, while St. Cloud, Minn. received golf-ball sized hail.

Widely scattered thunderstorms dotted the weather map on Friday. Nebraska's weather included baseball sized hail in southern areas and a tornado and 2 inches of rain at Scottsbluff, Neb. In Minnesota, baseball sized hail pounded Willmar, and wind gusts of more than 60 mph swept across Rochester. Late in the afternoon, 1/2 inch of rain soaked Richfield, Utah in 12 minutes.

The week ended as rains saturated the northern Colorado Mountains and foothills with 10 to 14 inches of precipitation. The increased moisture forced the Big Thompson and Cache La Poudre Rivers out of their banks and caused extensive flooding.

Thunderstorms continued Sunday afternoon over portions of eastern Colorado. Denver received about 3 inches of rain in 1 hour, while around 2 1/2 inches covered the Colorado Springs area.

Later on Sunday, the thunderstorm activity shifted from the southern and central Rockies into the Great Plains and Oklahoma. Some showers and thundershowers continued in the northern Rockies and northern California, while thunderstorms besieged the Carolinas, along the Gulf Coast, the lower Mississippi Valley, extreme western Texas, and extreme southern New Mexico.

While clear and unseasonably cool weather gripped the northern tier of States from Minnesota through New England, the mercury in Fairbanks, Alaska soared to a record high of 88°.

National Agricultural Summary

For the Week of July 26-August 1

HIGHLIGHTS: Much of the Nation's farmland remained short of soil moisture supplies. Only the Northeast and a few eastern North Central States received adequate to surplus soil moisture. Rains aided crop development in some parts of the Midwest, but the precipitation did not replenish low soil moisture reserves. Crops remained in fair to good condition except in the dry areas of the North Central States where some poor crops existed.

SMALL GRAINS: The 1976 U. S. winter wheat harvest was finished in most States except the Canadian border States. In Montana, harvest hit 10%, the same as the average, but at this time last year farmers had only started to combine the winter wheat crop. Farmers plowed wheat stubble in preparation for fall plantings. In Oklahoma, farmers worked most winter wheat ground. Indiana farmers plowed 15% of the winter wheat land, the same as last year and average. In Illinois, farmers plowed 25% of the wheat land, ahead of 1975's 19% and the 16% average.

Less than 5% of the Montana spring wheat crop was combined. About 20% of the crop ripened far in advance of the 5% in 1975 and average. In Minnesota farmers combined 33% of the spring wheat, compared with 8% for 1975 and the normal. Harvest accelerated in North Dakota with 10% of the spring wheat combined compared with the normal 2%.

CORN: Soil moisture remained short for the corn crop in the important North Central States except in Ohio and Indiana. Rain provided temporary relief in some areas, notably Iowa, Minnesota, and Wisconsin. Generally the U. S. corn crop rated fair to good, but poor conditions reigned in Missouri, South Dakota, and Wisconsin. In South Dakota some fields began to turn brown. Corn condition also declined along the Atlantic Coast.

Harvest advanced in Florida and Texas, where farmers harvested 13% of the crop, compared with 5% in 1975 and 7% average. Almost half of the Louisiana crop reached maturity and 54% of the Alabama crop advanced to the dent stage. Only 29% of the Mississippi corn crop was dented, 4 points less than last year. In the North Central States from 60 to 90% of the corn crop moved to the silked stage or beyond, slightly behind the 1975 development but well ahead of the average. About 20 to 30% of the Minnesota and Iowa corn crops achieved the milk stage. In Ohio, 15% of the crop attained the dough stage compared with 25% last year and 10% average. In Illinois, 38% of the corn advanced to the dough stage, lagging 1975's 56% but surpassing the 26% average.

COTTON: Fair to good condition dominated the Nation's cotton crop, but some Missouri cotton only rated poor. Development lagged last year and the average. Harvest continued slowly in the Texas Lower Rio Grande Valley and Coastal Bend, behind the 1% in 1975 and the 2% average. Squaring neared completion. Setting bolls in the Delta States ranged from 35 to 55% behind the 34 to 75% in 1975 and 70 to 82% average. Along the Atlantic Coast 78 to 93% of the cotton was setting bolls, compared with 88 to 92% in 1975.

SOYBEANS: Fair to good condition described the U. S. soybean crop. The crop condition improved in Wisconsin but deteriorated in the Middle Atlantic States. Development of the crop lingered behind recent years. In the North Central States blooming ranged from a low 30% to a high 86%. At this time last year blooming ranged from 45 to 92%. At this time normally the bloom reaches 54 to 90%. From 10 to 64% of the crop was setting pods, compared with 20 to 64% in 1975 and 35 to 43% average. In the South Central States over half of the crop bloomed ahead of last year, but pod set remained at 15%, slightly behind 1975.

OTHER CROPS: The Nation's sorghum crop condition was good. In Texas, harvest reached 26% complete, compared with 37% in 1975 and 33% average. Elsewhere, in the major producing States, heading advanced to 50% in Nebraska, 15% in Kansas, and 40% in Oklahoma. Overall this rate of development lagged last year and the average.

Good characterized the U. S. rice crop condition. In Arkansas evaporation rates required almost continuous irrigation to maintain water levels. About 32% of Louisiana's rice crop reached the ripe stage, and farmers harvested 8%. In Texas, hot dry weather aided harvest progress, which reached 26% complete, ahead of 21% in 1975 and 24% average.

Peanuts remained in good condition but required rain in Virginia. Harvest started in Florida. In Georgia, blooming advanced to virtually complete; pegging advanced to 96% compared with 98% last year. In Oklahoma, 20% of the crop reached the pegging stage.

In North Carolina flue-cured farmers achieved 39% harvest, ahead of 28% in 1975 and 30% average. Virginia's flue-cured harvest advanced to 15% complete, almost twice the 8% average. Kentucky listed 50% of its burley crop in bloom and 20% topped. In Tennessee 30% of the crop topped.

FRUITS AND NUTS: Peach harvest neared completion in Georgia and the Carolinas, ahead of last year and average. Peach picking continued in the Northeast and the Northwest and was 5% complete in Michigan. The tart cherry harvest neared completion. Early varieties of apples moved to market. Apricot picking continued active along the West Coast.

VEGETABLES: Harvest of summer vegetable crops remained active in the Northeastern States, Texas, and the Pacific Coast States. In New Jersey, growers planted fall crops. Florida's vegetable producers prepared seedbeds, laid plastic mulch, and planted squash, cucumbers, and eggplant. In Texas, growers planted fall crops in the Lower Rio Grande Valley.

PASTURE AND LIVESTOCK: Pastures remained in poor condition throughout most of the North Central States, the Middle Atlantic States, and parts of the West. Rainfall improved grasslands in Iowa, but Nebraska producers fed hay to cattle, and South Dakota cattle sales increased as pastures deteriorated. California cattlemen continued to cull herds.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., August 1, 1976

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
ALA. Birmingham . . .	79	-1	3.1	+1.9	La. Baton Rouge . . .	84	+2	.2	-1.2	Youngstown . . .	70	-1	.7	-.1
Mobile . . .	85	+3	2.7	+ .8	Lake Charles . . .	84	+1	.1	-1.3	OKLA. Okla. City . . .	84	+2	.2	-.3
Montgomery . . .	80	-1	1.8	+ .8	New Orleans . . .	84	+2	1.6	+ .2	Tulsa . . .	86	+3	2.7	+2.0
ALASKA. Anchorage . . .	60	+2	.1	-.4	Shreveport . . .	83	-1	.1	-.5	OREG. Astoria . . .	80	-1	T	-.2
Barrow . . .	43	+4	.1	-.1	MAINE. Caribou . . .	61	-4	1.0	+ .1	Burns . . .	70	+1	.3	+ .2
Fairbanks . . .	62	+1	.7	+ .2	Portland . . .	62	-7	4.1	+3.5	Medford . . .	74	+1	.7	+ .6
Juneau . . .	---	---	---	---	MD. Baltimore . . .	77	0	.4	-.6	Pendleton . . .	74	0	.2	+ .2
Kodiak . . .	56	+1	.7	-.1	MASS. Boston . . .	70	-4	2.8	+2.1	Portland . . .	67	-1	0	-.1
Nome . . .	---	---	---	---	Chatham . . .	67	---	2.3	---	Salem . . .	67	0	0	0
ARIZ. Flagstaff . . .	64	-2	.5	-.2	MICH. Alpena . . .	67	+1	T	-.6	PA. Allentown . . .	72	-2	.5	-.1
Phoenix . . .	88	-3	.4	+ .2	Detroit . . .	73	0	.3	-.4	Erie . . .	68	-1	1.0	+ .5
Tucson . . .	81	-5	.2	-.4	Flint . . .	71	+1	.4	-.3	Harrisburg . . .	74	-2	1.0	+ .2
Winslow . . .	77	-2	.1	-.3	Grand Rapids . . .	71	-1	.2	-.4	Philadelphia . . .	77	0	.7	-.3
Yuma . . .	91	+4	.2	+ .1	Houghton Lake . . .	67	0	.7	+ .1	Pittsburgh . . .	68	-4	.6	-.6
ARK. Fort Smith . . .	84	+1	T	-.7	Lansing . . .	69	-2	.4	-.2	Scranton . . .	69	-3	1.2	+ .3
Little Rock . . .	84	+2	.9	+ .2	Marquette . . .	65	-2	T	-.6	R. I. Providence . . .	68	-5	5.1	+4.3
CALIF. Bakersfield . . .	88	+4	0	0	Muskegon . . .	70	-1	.7	+ .1	S. C. Charleston . . .	84	+3	.1	-1.7
Eureka . . .	56	-1	T	-.1	S. Ste. Marie . . .	62	-3	.1	-.5	Columbia . . .	83	+2	.6	-.7
Fresno . . .	80	-1	0	0	MINN. Duluth . . .	66	-1	.2	-.5	Greenville . . .	80	+1	3.8	+2.9
Los Angeles . . .	72	-2	0	0	Internatl Falls . . .	64	-2	.3	-.5	S. D. Aberdeen . . .	73	0	0	-.5
Red Bluff . . .	84	+1	0	0	Minneapolis . . .	75	+2	1.1	+ .3	Huron . . .	75	0	.5	+ .1
San Diego . . .	72	+1	T	0	Rochester . . .	73	+2	1.3	+ .5	Rapid City . . .	71	-3	.4	0
San Francisco . . .	64	+1	0	0	St. Cloud . . .	69	-2	.4	-.3	Sioux Falls . . .	75	+1	.1	-.5
Stockton . . .	79	+2	0	0	MISS. Jackson . . .	84	+2	1.9	+ .9	TENN. Chattanooga . . .	80	+1	3.4	+2.4
COLO. Denver . . .	74	0	1.7	+1.3	Meridian . . .	80	-2	1.6	+ .5	Knoxville . . .	79	0	.2	-.8
Grand Junction . . .	79	0	.2	0	MO. Columbia . . .	81	+3	.1	-.7	Memphis . . .	83	+1	2.1	+1.3
Pueblo . . .	76	-1	.9	+ .4	Kansas City . . .	83	+3	T	-.9	Nashville . . .	79	-1	1.1	+ .3
CONN. Bridgeport . . .	71	-3	1.6	+ .8	St. Louis . . .	80	+1	1.3	+ .6	TEX. Abilene . . .	80	-5	0	-.5
Hartford . . .	70	-3	1.9	+1.1	Springfield . . .	81	+2	.7	0	Amarillo . . .	78	-1	.4	-.3
D. C. Washington . . .	79	0	.7	-.3	MONT. Billings . . .	72	-1	.4	+ .3	Austin . . .	83	-2	0	-.4
FLA. Apalachicola . . .	82	0	.1	-1.7	Glasgow . . .	69	-3	0	-.3	Beaumont . . .	83	0	T	-1.3
Daytona Beach . . .	81	0	.5	-1.0	Great Falls . . .	70	-1	T	-.2	Brownsville . . .	83	-2	0	-.3
Ft. Myers . . .	80	-3	1.8	0	Havre . . .	72	+1	0	-.2	Corpus Christi . . .	83	-2	.1	-.3
Jacksonville . . .	84	+3	.5	-1.2	Helena . . .	67	-2	.2	+ .1	Dallas . . .	---	---	---	---
Key West . . .	85	0	.2	-.6	Kalispell . . .	67	+2	.1	-.1	Del Rio . . .	81	-6	T	-.1
Lakeland . . .	83	+1	.7	-1.1	Miles City . . .	75	-1	0	-.2	El Paso . . .	78	-4	T	-.4
Miami . . .	83	0	.3	-1.1	Missoula . . .	69	+1	.1	0	Fort Worth . . .	86	0	0	-.4
Orlando . . .	83	+1	.8	-.9	NEBR. Grand Island . . .	76	-1	.5	-.1	Galveston . . .	84	0	0	-.9
Tallahassee . . .	83	+1	1.6	-.3	Lincoln . . .	78	0	.6	-.1	Houston . . .	82	-2	T	-.9
Tampa . . .	82	0	1.4	-.5	Norfolk . . .	75	-1	.7	+ .1	Lubbock . . .	79	-1	.7	+ .3
W. Palm Beach . . .	81	-1	.5	-.8	N. Platte . . .	75	0	.3	-.3	Midland . . .	79	-4	T	-.4
GA. Atlanta . . .	78	0	1.5	+ .5	Omaha . . .	77	+1	1.2	+ .4	San Angelo . . .	81	-5	0	-.2
Augusta . . .	83	+2	.4	-.7	Valentine . . .	72	-3	.3	-.2	San Antonio . . .	83	-2	0	-.4
Macon . . .	84	+2	.2	-.8	NEV. Ely . . .	65	-4	.6	+ .5	Victoria . . .	83	-2	0	-.6
Savannah . . .	84	+2	T	-1.7	Las Vegas . . .	86	-4	.5	+ .4	Waco . . .	86	0	0	-.3
HAWAII. Hilo . . .	75	-1	.7	-1.8	Reno . . .	72	+2	.8	+ .8	Wichita Falls . . .	85	-2	1.3	+ .9
Honolulu . . .	79	-2	.1	-.1	Winnemucca . . .	76	+4	.8	+ .8	UTAH. Blanding . . .	71	-3	.2	-.1
Kahului . . .	---	---	---	---	N. H. Concord . . .	62	-8	1.6	+ .9	Salt Lake City . . .	79	+1	.8	+ .6
Lihue . . .	80	+1	.6	+ .1	N. J. Atlantic City . . .	74	-1	.8	-.3	VT. Burlington . . .	66	-4	1.6	+ .8
IDAHO. Boise . . .	75	-1	.9	+ .9	Trenton . . .	75	-1	.7	-.4	VA. Lynchburg . . .	77	+1	.1	-.9
Lewiston . . .	76	+2	.1	0	N. MEX. Albuquerque . . .	76	-3	.4	0	Norfolk . . .	79	+1	2.6	+1.2
Pocatello . . .	72	-1	.6	+ .5	Roswell . . .	82	+2	1.5	+1.1	Richmond . . .	80	+2	.6	-.7
ILL. Cairo . . .	79	-2	2.3	+1.6	N. Y. Albany . . .	68	-4	1.6	+ .9	Roanoke . . .	76	0	.3	-.6
Chicago . . .	73	-2	.4	-.4	Binghamton . . .	66	-3	2.9	+2.1	WASH. Colville . . .	69	0	.7	+ .6
Moline . . .	75	0	.6	-.3	Buffalo . . .	69	-1	2.6	+1.9	Omak . . .	69	-2	T	-.1
Peoria . . .	74	-1	1.8	+1.0	New York . . .	76	-1	.1	-.9	Quillayute . . .	58	-1	.1	-.4
Rockford . . .	72	-1	1.4	+ .5	Rochester . . .	70	-1	1.6	+ .9	Seattle-Tacoma . . .	66	+1	0	-.1
Springfield . . .	77	+1	1.4	+ .7	Syracuse . . .	67	-5	2.5	+1.8	Spokane . . .	71	0	.6	+ .5
IND. Evansville . . .	77	-1	1.4	+ .6	N. C. Asheville . . .	74	0	.8	-.3	Walla Walla . . .	76	-1	.2	+ .1
Ft. Wayne . . .	73	0	1.9	+1.1	Charlotte . . .	80	+1	.1	-.9	Yakima . . .	70	-1	.1	+ .1
Indianapolis . . .	75	0	1.8	+1.1	Greensboro . . .	79	+2	.5	-.5	W. Va. Beckley . . .	70	0	1.1	+ .2
South Bend . . .	72	-1	1.2	+ .4	Hatteras . . .	79	+1	.9	-.5	Charleston . . .	74	-1	.8	-.3
IOWA. Burlington . . .	74	-2	.1	-.7	Raleigh . . .	81	+3	.5	-.7	Huntington . . .	74	-1	1.4	+ .5
Des Moines . . .	75	-1	.6	-.1	Wilmington . . .	84	+3	1.1	-.7	Parkersburg . . .	74	-1	.9	0
Dubuque . . .	71	-1	.9	0	N. DAK. Bismarck . . .	69	-3	T	-.4	WIS. Green Bay . . .	70	0	2.2	+1.6
Sioux City . . .	74	-2	1.3	+ .7	Fargo . . .	70	-2	T	-.7	La Crosse . . .	73	-1	.4	-.3
KANS. Concordia . . .	81	+2	.3	-.3	Williston . . .	68	-3	T	-.4	Madison . . .	72	+1	1.3	+ .6
Dodge City . . .	84	+4	.3	-.4	OHIO. Akron-Canton . . .	70	-2	.4	-.4	Milwaukee . . .	72	+1	1.5	+ .8
Goodland . . .	76	-1	.3	-.3	Cincinnati . . .	75	-1	.7	-.1	WYO. Casper . . .	70	-3	.2	+ .1
Topeka . . .	82	+3	.3	-.6	Cleveland . . .	73	+2	.1	-.7	Cheyenne . . .	67	-3	.8	+ .4
Wichita . . .	83	+1	.7	-.1	Columbus . . .	73	-1	.4	-.4	Lander . . .	69	-3	.4	+ .3
KY. Lexington . . .	75	-1	1.6	+ .6	Dayton . . .	74	-1	.1	-.6	Sheridan . . .	71	-1	.5	-.4
Louisville . . .	77	0	.7	-.1	Toledo . . .	73	+1	.3	-.4	P. R. San Juan . . .	82	+2	.8	-.7

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State Summaries of Weather and Agriculture

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

ALABAMA: Temperature relief and widespread showers. Temperatures moderated dropping from 4° above normal on 26th to normal on 1st. Abundant rain fell in scattered showers. Soil moisture adequate to short. Fieldwork: 4.0 days favorable. Cotton fair to good condition, 55% setting bolls, 68% last year. Corn good condition, 54% dented. Soybeans good condition, 41% blooming, 57% last year. Peanuts good condition.

ALASKA: Tanana Valley cool and very wet with over 2.00 in. rain in places. Latter half period dry and hot. Greater than normal precipitation and warmer than normal temperatures. Matanuska Valley spotty precipitation occurred beginning and end of week, otherwise mild dry conditions prevailed. Temperatures just above seasonal normal while rainfall below normal. Kenai Peninsula temperatures slightly above normal. Rainfall below normal. Very light rain mostly in southern area. Kodiak Island wet and mild. Temperatures just below seasonal levels as was rainfall.

Hay harvest made good progress in Tanana and Matanuska Valleys. Grain averaging about 28 in. in main producing areas. Ground moisture adequate in Fairbanks area but short in the rest of railbelt.

ARIZONA: Scattered thundershowers, rainfall under 0.10 in. Colorado River Valley to over 2.00 in. western mountains. Temperatures 2 to 5° below normal.

Field operations for cotton slow because of rainy weather. Rain beneficial but increased insect problems. Pink bollworm and weeds problem in late planted fields. Extensive replanting, late planting after wheat. Cotton looks good, very productive. Setting fruit near normal. Sorghum various stages development. Early planting heading, turning color. Cutting, baling alfalfa slow, rainy weather. Commercial harvest fruits, vegetables, melons complete except few remaining grapefruit, valencia oranges. Land preparations for fall crops. Desert ranges some improvement. Higher elevation ranges mostly good condition. Cattle, calves higher elevations mostly good, lower desert mostly fair.

ARKANSAS: Temperatures 1 to 3° above normal. Extremes: 103 and 65°.

Early soybeans blooming heavily, needing rain. Condition fair to good. Cotton shedding some squares. Growth below normal. Rice in good condition, almost continuous irrigation. Corn and sorghum needing moisture, fair to good condition overall. Sorghum heading well. Hay and pasture yields down, short to adequate forage. Livestock being fed hay in a few areas.

CALIFORNIA: Temperatures above normal except desert areas near normal. Sacramento and San Joaquin Valleys above normal with 100° plus temperatures. Westward moving moisture dropped varying amounts of rainfall over low deserts. Thunderstorms over High Sierra and lower daytime temperatures marked north and central by week's end.

Small grain harvest about complete. Crops making good progress. Insect spraying in most

crops continues. Almond hull split, San Joaquin Valley. Apricots for canning lost due to cannery strike, placed at 35,000 tons. Table grape harvest active. Lemon harvest past peak. Valencia orange harvest active. Cling peach harvest at standstill, approximately 140,000 tons lost due to strike. Fresh market peach harvest active, quality good. Pear harvest gaining momentum. Walnut prospect good. Vegetable conditions good, growth good. Harvests of melons, fresh and processing tomatoes, celery, and sweet corn good. Other vegetables in light to moderate supply. Large volume of potatoes and dry onions from desert valleys depressing prices. Ranges remain dry. Threat range fires prevail many areas. Ranchers reduce herd sizes. Stock water supplies extremely low. Harvested grain used for feed in some areas.

COLORADO: Widely scattered thunderstorms, warming trend continued with highs upper 80's to low 90's. Heavy thunderstorms south and eastern portions, 30th. Flash flood warnings along front range and High Plains. Heavy thunderstorms continued 1st mainly east.

Winter wheat harvest 91% complete, 90% last year, 91% average. Corn height 67 in., last year 63 in.; tasseled 65%. Last year 64%, average 65%. Spring planted crops good condition. Sorghum condition stable and fair. Dry bean condition fair, flowering 41%, last year 38%. Range and pasture conditions fair. Live-stock good.

FLORIDA: Normal summertime weather with daily thundershowers. Rainfall generally light to moderate averaging 0.25 to over 3.00 in.

Soil moisture short. Corn and hay harvest active. Tobacco harvest nearing completion. Peanut harvest increasing. Soybeans and sugarcane good condition. Pastures maintaining good to excellent growth. Forage condition very good. Cattle, calves generally good condition. Citrus grove condition excellent, moisture adequate, cover crops growing well. New crop fruit progressing very well. Fall vegetable cropland preparation active. Growers preparing beds; laying plastic mulch. Eggplant, squash, cucumber plantings underway.

GEORGIA: Hot with averages 1 to 3° above normal. Isolated thundershowers most afternoons, amounts highly variable averaging 0.25 to 0.50 in., except in excess 1.00 in. extreme northwest. Weekend hot with isolated thundershowers.

Soil moisture extremely variable, very short to adequate. Fieldwork: 5.0 days suitable. Hot, dry conditions lowered crop prospects. Cotton weaker, fair to good, 93% setting bolls, last year 92%. Peanuts slightly weaker, fair to mostly good, 99% blooming and 96% pegging, last year 99 and 98% respectively, spraying active. Soybeans fair to mostly good, slightly lower. Corn considerably lower, fair to mostly good, early harvest active south. Tobacco 87% harvested, last year 80%, average 76%. Marketing active. Watermelons lower, mostly fair to good, 89% harvested, last year 86%. Peaches 97% harvested, last year 97%, average 91%. Apple condition slipped, fair to mostly good, 4% harvested, volume increasing. Haying very active, condition weaker, fair to mostly good. Cattle con-

dition dropped but still good. Hogs good. Pastures need moisture, fair to mostly good.

HAWAII: Weather favorable. Skies generally clear to partly cloudy. Some showers mainly in windward areas and higher elevations.

Irrigation and spraying frequent to maintain fair to good crop growth. Vegetable supplies adequate. Banana harvesting steady. Papaya supplies light to moderate. Pineapple active and peak harvest. Sugar harvesting steady. Leeward pastures dry. Light showers windward area keeping grass growth fair to good.

IDAHO: Temperature 4° below normal. Extremes: 101 and 40°. Few light scattered showers.

Ideal growing conditions. Farm activities: Irrigation, hay harvest, small grain harvest. Frost of one month ago showing up in grain harvest in southeast. Bluegrass harvest in full swing, also mint, onions, dry peas, peaches and apricot harvest. Most crops 10 days to 2 weeks behind last year. Pasture, excellent high elevations, fair low elevations. Livestock in good condition.

ILLINOIS: Temperatures near normal. Precipitation 0.10 in. west, up to 2.00 in. elsewhere.

Corn good to fair; 92% silked, 100% 1975, 79% average; 38% in dough, 56% 1975, 26% average. Soybeans good to fair; 84% bloomed, 88% 1975, 67% average; 47% setting pods, 64% 1975, 36% average. Oats 90% combined, 100% 1975, 87% average. Second crop alfalfa hay mostly fair to good; 90% cut, 83% 1975, 75% average. Winter wheat acreages 25% plowed, 19% 1975, 16% average. Pastures mostly poor to fair. Soil moisture short to adequate. Fieldwork: 5.0 days suitable.

INDIANA: Good showers and moderate temperatures. Rainfall averaged 0.70 in. southeast to 2.10 in. northwest, elsewhere 1.00 to 1.50 in. Temperatures ranged from 48 to 92°, and averaged near normal. Evaporation and sunshine near normal.

Fieldwork: 5.0 days suitable. Topsoil moisture adequate, subsoil moisture short to mostly adequate. Oats 85% combined, 1975 90%, average 70%. Wheat land 15% plowed, 1975 15%, average 15%. Corn 85% silked, 1975 85%, average 60%. Corn 20% in dough stage. Soybeans 40% setting pods, 1975 55%. Apples 15% picked. Peaches 45% picked. Cantaloups 50% and tomatoes 10% picked once. Alfalfa hay 85% cut second time, 1975 80%, average 70%. Pastures mostly fair to good.

IOWA: Temperatures slightly below normal. Variable precipitation moderate to locally heavy northeast, parts of north central, southwest.

Favorable weather, rainfall and cool temperatures beneficial to crops. Fieldwork: 5.0 days suitable. Corn improved, condition 22% excellent, 48% good, 27% fair, 3% poor. Corn all tasseled; 91% corn fields 75% or more silked, 84% last year, 86% average. Corn 30% in or past milk stage, 33% last year. Soybean condition improved, 12% excellent, 64% good, 21% fair, 3% poor. Soybeans nearly recovered from early herbicide damage. Bean fields 75% or more blooming, 86%, 77% last year, 80% average. Soybeans setting pods 64%, 56% 1975, 43% average. Oat, winter wheat harvest nearly complete. Hay growth, condition improved. Second cutting alfalfa virtually complete, 81% 1975, 76% average. Second crop clover hay 59% harvested, 49% last year, 45% average. Topsoil moisture short to ade-

quate, much improved. Subsoil moisture short to adequate. Livestock good. Pastures improving, less need for supplemental feeding of hay.

KANSAS: Temperatures 80° northwest to 82 to 84° elsewhere and from 1° above normal south central to 5° above normal east central. Precipitation limited but most significant southwest, southeast and north central where many sections received from 0.50 to over 1.00 in. and locally more than 2.00 in.

Dry weather caused slight deterioration corn, soybean and sorghum. Topsoil and subsoil moisture short. Good rains needed to prevent substantial deterioration. Sorghum 15% headed, 20% last year and average. Corn 80% tasseled, 75% last year, 80% average. Soybeans 10% pod, 20% last year, 35% average. Second cutting alfalfa 95% complete, same as last year and average. Third cutting 40% complete, 20% last year, 30% average. Greenbugs in sorghum. Corn leaf aphid, grasshoppers in corn. Fall armyworm in corn southern one-third and west central. Spider mites in corn western one-third. Pastures dry.

KENTUCKY: Warm and humid. Temperatures slightly below normal. Scattered showers and thunderstorms totaled 0.25 in. to near 3.00 in.

Fieldwork: 4.5 days favorable. Soil moisture adequate to short but no crops suffering seriously. Corn advancing rapidly, about 60% in milk or dough stage, 40% not yet in milk. Soybeans 39% blooming or podding. Half burley crop reached bloom stage, 20% topped. Dark types a little more advanced. Chemical sucker control used on 85 - 90% of crops. Third cutting alfalfa about 25% harvested. All crops except tobacco in better than average condition.

LOUISIANA: Temperatures 1 to 2° above normal. Extremes: 100 and 66°. Soil moisture short to adequate.

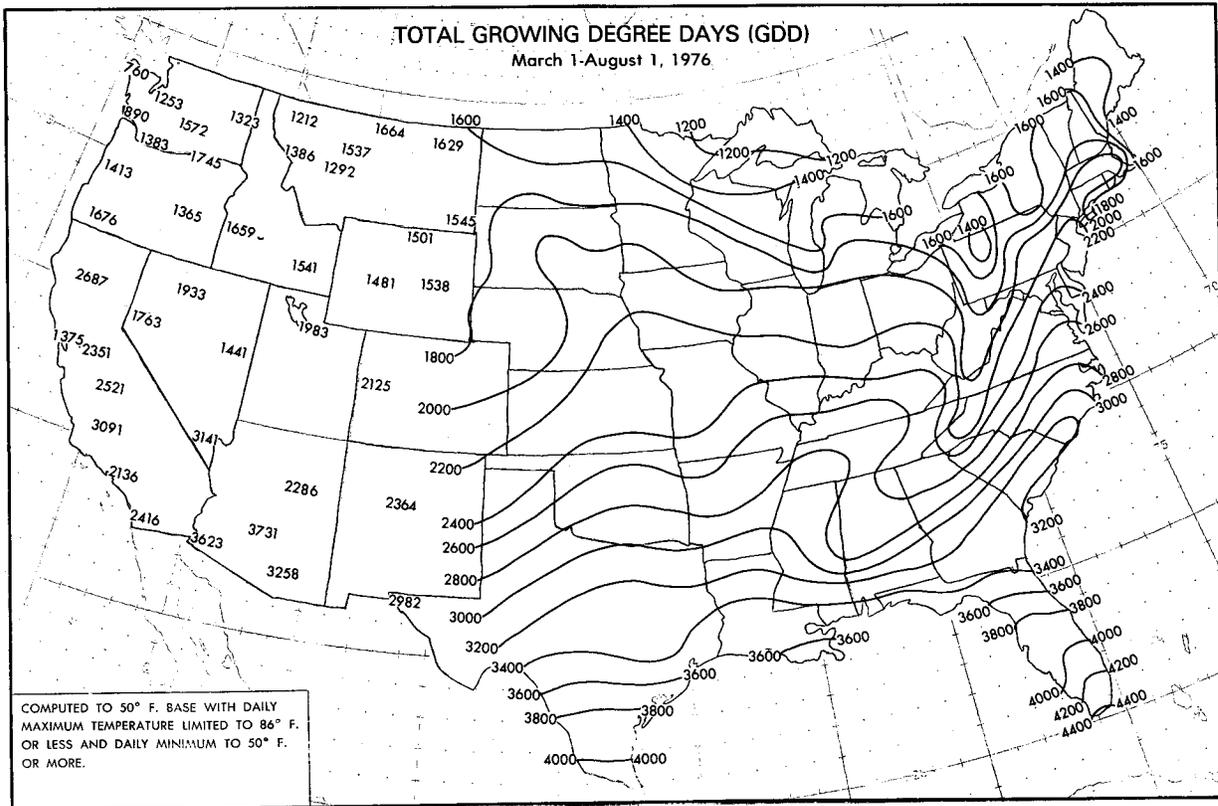
Fieldwork: 5.0 days suitable. Cotton needs rain, 85% setting bolls, 67% year ago. Rice 32% ripe; 8% harvested. Soybeans good, 69% blooming. Rain needed. Corn good, 91% dough stage, 49% mature. Sorghum good, 68% headed. Sugarcane good. Sweetpotatoes good, harvest increasing. Livestock, cattle good.

MARYLAND & DELAWARE: Temperatures slightly below normal. Extremes: mid-90's and mid-40's. Precipitation ranged 0.07 to 1.67 in. Weekend sunny and warm.

Soil moisture short. Pastures supplying below average feed. Need rain. Corn crop 80% silked, 75% 1975, 75% average. Soybeans 35% bloomed, 35% 1975, 27% average. Tobacco growers cultivating, spraying, topping crop. Some tobacco harvested. Third cutting alfalfa 65% completed, second cutting other hay 70%. Vegetable harvest active. Apple, peach harvest continues. Peach varieties 7 to 10 days earlier than normal.

MICHIGAN: Temperatures ranged from 91° south to 38° extreme north. Precipitation averaged 0.15 in. Upper Peninsula to 1.07 in. southwest.

General rains benefited crop growth over Lower Peninsula, while Upper Peninsula remains dry. Soil moisture: Mostly adequate lower one-third, mostly short elsewhere. Corn 65% silked, 60% 1975, 45% normal. Over 2% in dough. Wheat 95% harvested, 80% 1975, 70% normal. Oat harvest 20% complete, equal to 1975, 15% normal. Dry beans 20% setting pods. Soybeans 30% blooming, 45% 1975. Soybeans setting pods 15%, 25% 1975. Second crop hay over half cut, 45% 1975,



35% normal. Pasture feed supplies below average to average. Tart cherry harvest virtually complete. Summer apples 15%, peach 5%. Cabbage cutting 20%.

MINNESOTA: Temperatures ranging 2° below normal northeast to 1° above normal southwest. Extremes: 108 and 35°. Precipitation over the northern half and extreme southwest averaging 0.33 in. or less to over 1.50 in. central and southeast. Growing season moisture departure ranging from less than 1.00 in. extreme north to 4.00 to 7.00 in. elsewhere, except less than 3.00 in. extreme southeast corner.

Rains aided row crop development in northern south central and southeastern areas, minimal help elsewhere. Severe stress during pollination hurt some corn fields prior to rain. Soybean development also helped, but slowed by prior stress. Small grain harvest nearing completion south, active central, well underway Red River Valley. Yields extremely variable. Corn 95% tasseled, 1975 84%, normal 87%; in milk 21%, 1975 13%, normal 10%. Soybeans 89% blooming 1975 92%, normal 90%; setting pods 41%, 1975 48%, normal 40%. Combined: Spring wheat 33%, 1975 8%, normal 8%; oats 58%, 1975 24%, normal 24%; barley 43%, 1975 18%, normal 19%; winter wheat 85%, 1975 50%, normal 40%; rye 91%, 1975 65%, normal 49%; flax 6%, 1975 0%, normal 0%.

MISSISSIPPI: Temperatures 1 to 2° above normal. Extremes: 67 and 102°.

Soil moisture short to adequate. Fieldwork: 5.3 days suitable. Cotton 97% squaring, 96% 1975, 98% average; 78% blooming, 78% 1975; 35% setting bolls, 54% 1975, 82% average. Soybeans 61% blooming, 36% 1975; 14% podding, 17% 1975. Rice 29% headed, 7% 1975. Corn 95% silked, 78%

1975, 82% average; 71% in dough stage, 48% 1975; 29% dented, 33% 1975. Sorghums 59% headed, 42% 1975. Hay crops 60% harvested, 49% 1975, 55% average. Watermelons 69% harvested, 58% 1975, 56% average. Peaches 85% harvested, 85% 1975, 84% average. Cucumbers 94% harvested, 92% 1975. Cotton in fair to good condition. Other crops in good condition.

MISSOURI: Temperatures 1° above normal northeast and northwest prairie to 5° above normal in the west Ozarks. Precipitation 0.25 in. north, 1.00 in. to 1.75 in. west and south.

Fieldwork: 5.7 days suitable. Soybeans blooming 57%, 1975 69%, normal 54%. Corn silked 81%, 1975 88%, normal 78%. Grain sorghum headed 40%, normal 45%. Second cutting alfalfa hay 94% harvested. Third cutting alfalfa hay 20% harvested. Clover-timothy mixtures 93% harvested. Cotton squared 86%, 1975 99%, normal 94%. Cotton setting bolls 38%. Corn condition poor to good with 50% in fair condition. Soybeans fair to good with 75% in fair condition. Cotton condition poor to fair. Soil moisture short. Severe shortages all areas except south central and southeast.

MONTANA: Temperatures near normal. Cooler temperatures week's end. Dry except latter part in west and central where showers became more numerous, some locally heavy.

Winter wheat harvest 10% complete, last year just starting, normal about 10%. About 55% winter wheat ripe, 5% last year and normal 30%. Oats and barley harvest 5% done. Spring wheat less than 5%. About 20% spring wheat, oats, and barley ripe, last year 5% ripe. Normal 5% for oats and spring wheat, 10% for barley. Soil moisture short south, short to adequate elsewhere. Irrigation water adequate. First cutting

alfalfa done, 10% second cutting. Grazing prospects late summer ranges fair to good. Grass-hopper damage light, some moderate north central.

NEBRASKA: Temperatures 1 to 3° below normal. Rainfall north and west with little rainfall elsewhere. Some local hail damage accompanied rain.

Dryland crops need more rain. Topsoil moisture short to adequate. Subsoil moisture short. Irrigated corn good condition, 85% silked, 80% 1975. Dryland corn fair condition, 75% silked, 75% 1975. Sorghum and soybeans good condition. Sorghum 50% headed, 40% normal and 50% 1975. Soybeans 40% podded, 40% normal and 45% 1975. Alfalfa and wild hay fair to good condition. Second cutting alfalfa 90% completed. Pasture and range feed supplies short. Supplemental feeding.

NEVADA: Wet weather continued. Greatest amount 2.53 in. Temperatures near normal. Extremes: 38 and 106°.

Small grain harvest full swing, delayed by showers. Hay quality lowered by precipitation. Fire danger to ranges reduced by rains.

NEW ENGLAND: Cool, record lows 26th, mid-40's north, near 50° south. Temperature 5 to 10° below normal. Northern areas received 0.50 to 0.80 in. rain 26th to 27th. Rain, 29th to 31st averaged 1.00 to 1.75 in. north, 1.50 to 2.00 south.

Crops look good. Cool weather slowed growth and development. Aroostook County potatoes full bloom. Southeastern pastures and other crops helped by rains. First cutting hay nearing completion south, 80% north, second cutting 20% north, 30% south.

NEW JERSEY: Temperatures 3° below normal. Extremes: 43 and 92°. Rainfall averaged 0.79 in. north, 0.46 in. central and 0.48 in. south. Soil moisture in percent of field capacity: 61% north, 44% central and 54% south. Soil temperatures averaged: 73° north and 76° south.

Recent showers beneficial but need more rain. Summer vegetable harvest advancing. Fall vegetable crop planting beginning. Summer apple harvest continues. Peach supplies moderate. Field corn and soybeans need rain. Oat harvest nearing completion. Other small grain combining complete. Second cutting hay 90% complete.

NEW MEXICO: Recurring showers with totals mostly moderate around 1.00 in. but ranging from none to more than 2.00 in. Temperatures averaged 4° below normal south central and elsewhere very near normal.

Topsoil and subsoil moisture short to adequate. Cotton fair to good 95% squaring, 50% setting bolls, well ahead of normal. Alfalfa good, second cutting virtually complete, third cutting 40% complete. Irrigated grain sorghum good, 20% heading in southeast. Corn good, 95% tasseling in south. Apples, pecans, potatoes good. Chili, onions, ranges fair to good. Cattle and sheep good.

NEW YORK: Temperatures below normal. Extremes: 90 and 29°. Precipitation varied from few hundredths to nearly 3.00 in.

Field activity slowed by showers. Clover-timothy harvest 80% complete. Second cutting alfalfa 30% while some first cutting continues. Wheat harvest underway. Corn crop fair to good condition, some tasseling. Early potatoes harvested.

Onion harvest nearly complete. Tomatoes beginning to ripen. Apple prospects good. Early peaches being picked. Grapes sizing well, mildew increasing - need sunshine.

NORTH CAROLINA: Temperatures above normal. Precipitation below normal except for above normal in some eastern areas.

Fieldwork: 5.7 days suitable. Soil moisture very short to short. Lack of rainfall causing a deterioration in most crops. Flue-cured tobacco fair to good; 39% harvested, 1975 28%, average 30%. Corn fair to good. Soybeans fair to good. Peanuts fair to good. Cotton fair to good. Hay and pasture poor to good but mostly fair. Sweet potatoes good. Peaches 94% harvested, 1975 73%, average 62%. Apples mostly fair, good in major producing area.

NORTH DAKOTA: Temperatures above or near normal. Extremes: 39 and 104°. Precipitation 0.06 in. below normal north central to 0.73 in. below normal central. Weekend fair, no precipitation.

Harvesting continues to gain momentum. About 10% hard spring wheat combining completed, 3% durum, 20% barley and oats. Normal 2%, 1% and 3%, respectively. Conditions dry. Row crops and pastures need rain.

OHIO: Temperatures near normal with highs mostly in 80's and lows in 60's. Precipitation ranged from 0.05 in. northeast to 1.37 in. southwest. Showers and thunderstorms produced precipitation 27th to 31st.

Harvest completion: Oats, 80%, 85% 1975 and 65% normal; potatoes 5%, 10% 1975 and normal; 2d cutting alfalfa 85%, 85% 1975 and 70% normal; 2d cutting clo-tim 60%, 60% 1975 and 45% normal. Corn 90% silked, 95% 1975 and 70% normal. Corn 15% in dough stage, 25% 1975 and 10% normal. Soybeans 85% setting pods, 85% 1975 and 55% normal. Soybean pods 15% set, 20% 1975 and 10% normal. Corn and soybean condition good to excellent. Soil moisture adequate to surplus. Fieldwork: 4.0 days suitable.

OKLAHOMA: Temperatures from 1° below normal southwest to 3° above normal north central and northeast. Precipitation 0.04 in. north central to 1.26 in. northeast. Weekend hot with scattered rain northern half.

Warm weather and only scattered rains slowed fieldwork and dropped crop condition slightly, range and grass conditions quite rapidly. Topsoil moisture short. Most wheat ground worked, about average for date. Some preplant fertilizer applied. Corn only 20% in dough compared with near 40% average. Condition good. Ensiling corn south central area. Sorghums mostly good but with 40% headed or past, behind year ago and average of near 53%. Insect problems widespread. Cotton made good growth, near 25% acreage now setting bolls and over 75% acreage squaring or past. Most dryland acres need rain to improve condition. Peanuts mostly good with 20% spiking. Soybeans good except late planted acres in stubble where ground very dry. Soybeans late with only 25% acreage now blooming. Over 50% 3d cutting. Seed crop varies but rated fair to good, with 25% to 33% acreage for seed at or near maturity. Ranges showing effects of dry weather as condition drops, but cattle in good condition.

OREGON: Temperatures near normal along coast and northeast section, elsewhere 3 to 8° above normal. Extremes: high 90's, low 40's west; 101 and 34° east. Precipitation light and scattered in south central and southeastern sections. Rainfall

0.10 in. or less. Northeast area wettest with 0.33 to 0.50 in.

Grains harvested. Second crop hay being cut. Sugarbeets, hops and mint harvests soon. Apples and pears being thinned. Early and mid-season peaches being harvested. Apricots nearly 50% harvested. Filberts and walnuts sizing well. Snap bean harvest begun. Sweet corn tasseling. Onion and potato harvests begun. Livestock in good condition. Pastures drying. Feed situation good.

PENNSYLVANIA: Cool, sunny and dry beginning and end; warm, partly cloudy and humid with scattered showers and thunderstorms mid-period. Temperatures mostly in 60 to 85° range with extremes 91 and 34°. Rainfall from shower activity totaled from less than 0.50 in. south central to nearly 3.00 in. parts of northeast and southeast. Elsewhere mostly 0.75 to 1.25 in.

Soil moisture adequate to surplus. Fieldwork: 4.0 days suitable. Activities: Combining wheat and oats; making hay; baling straw; picking sweet corn, tomatoes, potatoes for fresh market; early apple and peach picking. Corn height 69 in., 70 in. 1975. Wheat 71% harvested - last year 60% harvested. Oats 37% harvested - 27% harvested last year. Alfalfa first cut 99% complete, second cut 62%. Clo-tim 94% done. Hay quality fair. Feed from pastures average.

PUERTO RICO: Island rainfall 1.19 or 0.36 in. below normal. Temperatures about 81° on coasts and 75° interior divisions. Average monthly temp 83°. Total monthly rainfall 2.48.

SOUTH CAROLINA: Temperatures warmer than usual averaged 1 to 2° above normal. Extremes: 98 and 66°. Widely scattered showers, some areas received locally heavy rains. Rainfall below normal.

Soil moisture short. Activities included applying pesticides, harvest tobacco, late peaches, and early corn. Bollworms, boll weevils, active in cotton. Bollworm egg count high. Crop conditions: Fair--watermelons; fair to good--cotton, tobacco, soybeans, pastures, grapes; good--corn, peaches. Cotton setting bolls 78% 1976, 88% 1975, 80% average. Soybeans blooming 24%. Tobacco harvested 68% 1976, 60% 1975, 64% average. Peaches harvested 89% 1976, 80% 1975, 76% average. Watermelons harvested 76% 1976, 86% 1975, 82% average.

SOUTH DAKOTA: Light precipitation, mostly southwest. Few amounts over 0.50 in. Deficits in east range up to 10.0 below normal for growing season. Temperatures near normal. Extremes: 40 and 111°.

Small grain harvest nearing completion except in north. Most yields very low, but quality and test weight good. Grain harvested. Winter wheat 98%, 1975 93%, normal 84%; rye 99%, 1975 83%, normal 82%; oats 93%, 1975 62%, normal 61%; barley 92%, 1975 67%, normal 66%. Row crops deteriorating due to continued drought. Corn condition poor to fair, many fields beginning to turn brown. Some corn being green chopped. Other row crops at standstill, need moisture to develop further. Drought continues to force cattle sales. Pastures and ranges poor, stock water short to critically short over eastern 67%, western 33% adequate. Fly and pinkeye problems.

TENNESSEE: Thundershowers---some locally heavy in west and south---occurred all areas. Temperatures near normal, but cooler over weekend.

Rains improved prospects for soybeans, cotton, corn, tobacco and hay. Fieldwork: 5.0 days suit-

able. Snapbean harvest in progress. Soil moisture short to adequate. Haying, cultivating and spraying except main activities. Corn excellent condition except Middle. Corn 85% silked, 85% last year, 88% average. Corn 40% dough, 50% last year, 50% average. Cotton 95% squared, 99% last year, 97% average. Cotton condition and development much improved but still 1 to 2 weeks behind normal with stands uneven. Cotton 55% setting bolls, 75% last year, 70% average. Soybeans 50% blooming, 55% last year, 60% average. Soybeans 15% setting pods, 20% last year, 15% average. Growth and development varies greatly. Tobacco good condition, diseases cutting yields. Tobacco 30% topped. Pastures fair, rains should improve growth.

TEXAS: Near normal temperatures, below normal rainfall prevailed. Temperatures averaged 70's in west and northwest to low and mid-80's elsewhere. In west, northwest, these temperatures 3 to 5° below normal, elsewhere 1 to 2° below normal. Precipitation scarce, little or none received all of south. Northwest received 0.25 to 0.50 in., remainder ranges from less than 0.50 in. north to over 1.00 in. extreme southeast.

Hot dry weather allowed sorghum, corn, rice harvesting to progress rapidly. Insects a problem in cotton, sorghum although hot dry weather and control programs having effect. Sorghum: Harvesting progressing rapidly 26% complete, 37% 1975, 33% average. Planting fall sorghum in Lower Rio Grande Valley. Cotton harvesting in Lower Rio Grande Valley and Coastal Bend areas slowly beginning; will accelerate as fields dry. Boll weevils active in north and on Low Plains, but less severe than previously expected. Fields on northern High Plains squaring. Corn harvesting advanced rapidly; now 13% complete, well ahead of last year, when only 5% had been harvested, and 7% average. Rice harvesting, aided by hot dry made excellent progress, 26% complete, 21% 1975, 24% average. Peanuts made excellent progress. Minor leaf spot damage north, south.

Peas, watermelon, peach harvests nearing completion. Pecan prospects poor. Potato, cucumber, onion harvest continues but prices off. Citrus satisfactory progress.

Ranges good. Northern High Plains, however, have not received adequate moisture, ranges remain poor. Some ranchers that area doing some supplementary feeding. Herds other areas are generally good, although insect problems continue south.

UTAH: Recurring shower and thunderstorm activity latter part. Locally moderate to heavy accumulations with some local flash flooding. Temperatures ranged from near normal to 7° above.

Farm activities included irrigating and harvesting second crop hay, winter wheat, spring wheat, oats, barley, sour cherries, apricots, and sugarbeet seed. Early potatoes ready for harvest. Crops good and progress of harvest generally good. Cattle and sheep continue fair to good condition although feed on many ranges dry.

VIRGINIA: Hot and humid. Temperature slightly above normal. Extremes: 98 and 47°. Rainfall moderate. Average about 0.75 in.

Fieldwork: 5.5 days suitable. Topsoil moisture short. Crop conditions declined. Rain needed. Corn 82% normal. Yield prospects declining. Soybeans 83% of normal, decline from 88% previous week. Soybeans sprayed for weeks. Peanuts unchanged from previous week at 93% normal. Need rain. Flue-cured harvest 15% complete, ahead of 8% average. Irrigating where possible. Minor

disease problems in burley. Haying active but yields short. Pasture condition declining. Hay fed to livestock. Harvest peaches and early apples. Vegetables and melons harvested. Planting fall cucumbers.

WASHINGTON: West: Temperatures within a degree of normal and precipitation at only Forks, Bellingham, and Stampede Pass, all much below normal.

Seed potatoes and carrots doing well. Cucumber harvest one week away, pea harvest continues. Hay 75% complete. Cattle and pastures doing well. Field and sweet corn being in growth.

East: Temperatures within one degree of normal; precipitation much below normal with none reported except northern and northeastern section, reporting 0.23 in. above normal.

Apricot and peach harvest in full swing. Cherry harvest nearing completion. Apple growers done thinning. Mint cutting starts. Wheat harvest in full swing at low elevations, some damages from diseases, good yields expected. Barley, above average yields, 20-30% harvested. Grass seed combining continues with good yields.

WEST VIRGINIA: Temperatures and precipitation below normal. Extremes: 91 and 37°.

Fieldwork: 4.2 days suitable. Soil moisture adequate. Small grain harvest: Wheat 94%, 1975 83%, average 78%; barley 99%, 1975 81%, average 88%; oats 60%, 1975 49%, average 41%. Hay: First cutting, 96% complete, 2nd cutting 20%, 1975 30%, average 27%. Tobacco mostly fair. Potato digging:

10%, 1975 13%, average 10%. Corn fair to good, improved by rain. Pastures fair to good.

WISCONSIN: Temperatures near normal. Highs 80's and 90's, cooler weekend. Significant rainfall except extreme northwest. Heaviest rain 27th to 28th central and southwest, 30th southeast and east central in severe storms. Rainfall exceeded 1.50 in. except north and west where less than 1.00 in.

Crops improved with rainfall. Considerable variation in corn, good on heavier soils, poor on sand. Corn 60% silked, 1975 70%, normal 50%. Harvesting small grains. Oats 30% harvested, 1975 10%, normal 15%. Winter wheat yields good. Second crop haying 45% done, 1975 40%, normal 25%. Rains improved third crop hay prospects. Pasture conditions below normal. Soybeans better with recent moisture. Tobacco crop boosted by rains but some stands spotty and uneven. Irrigated potatoes and vegetables good. Rains helped un-irrigated acreage. Cherry pack ending. Soil moisture short.

WYOMING: Temperatures above normal west of Divide, east well below normal. Precipitation below normal with few exceptions.

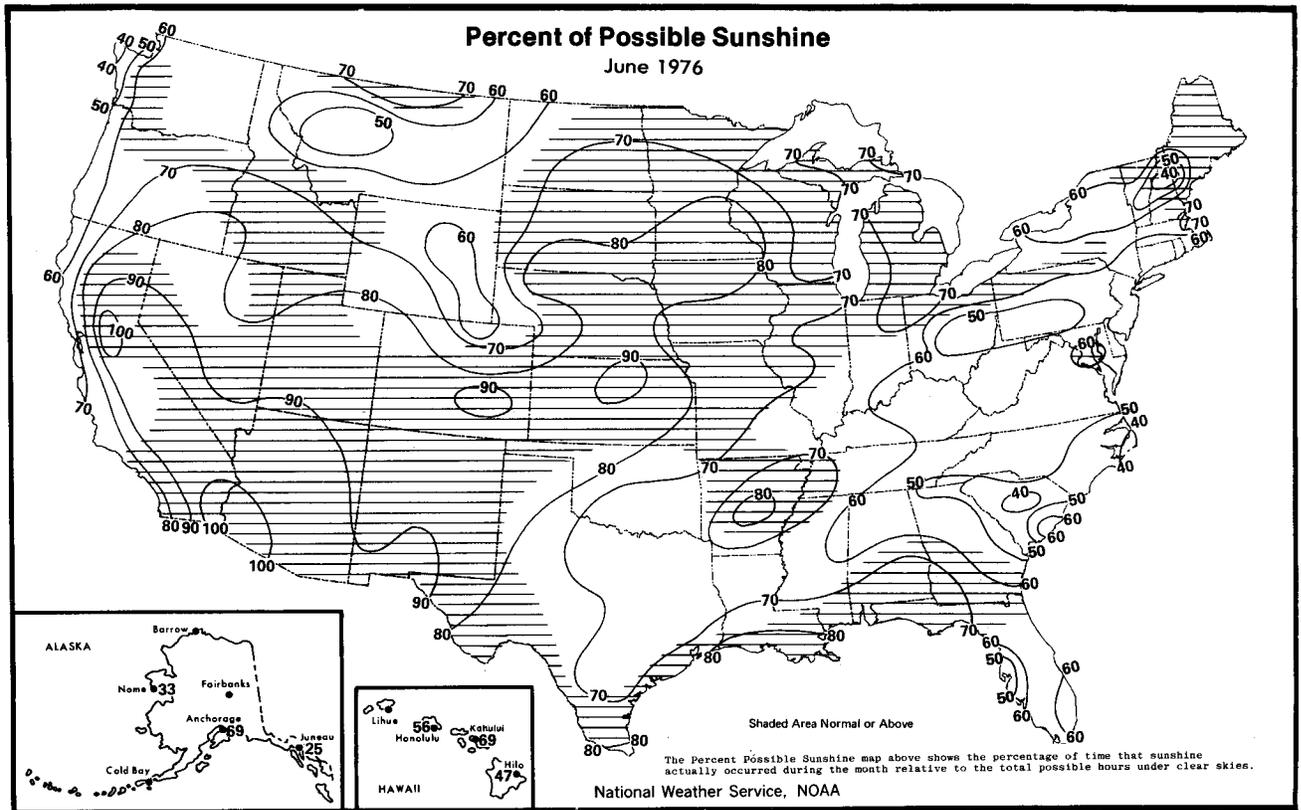
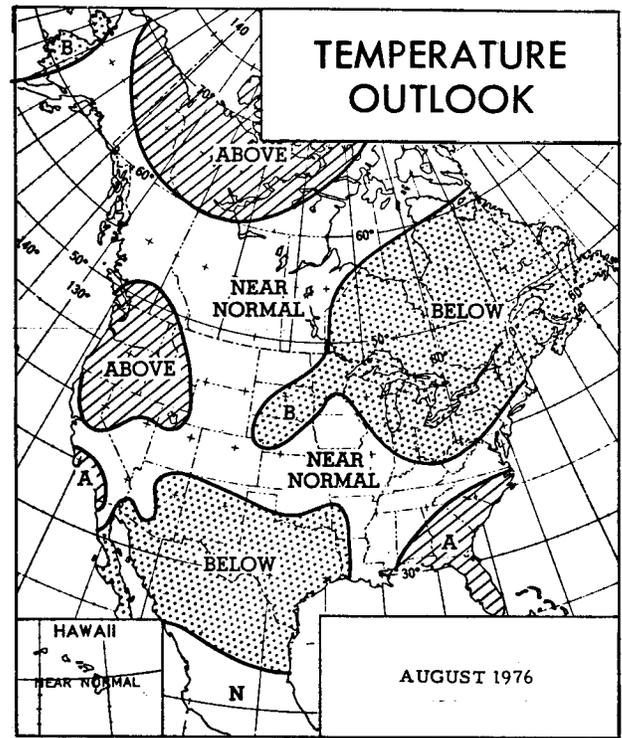
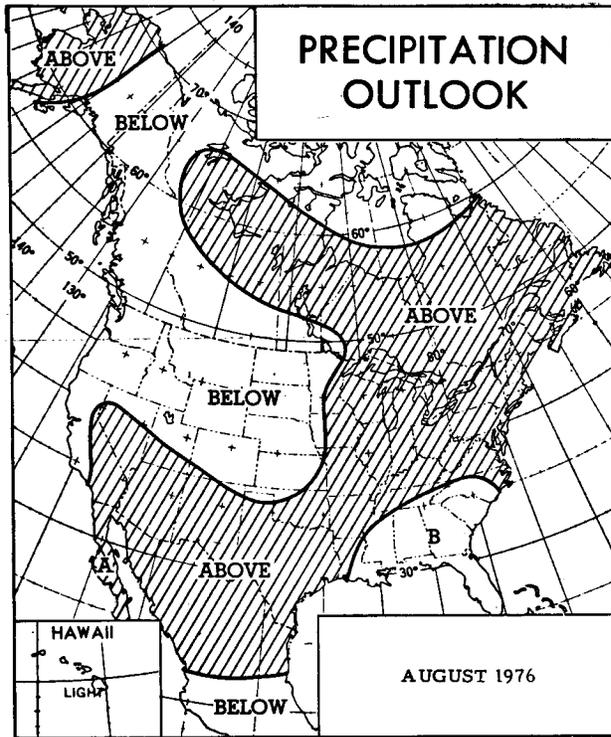
Harvest oats, barley and spring wheat begun. Winter wheat 62% harvested. Soil moisture short to adequate. Dry beans and potatoes 70% and 66% in bloom respectively. Alfalfa first cut complete, 13% second cut finished. Other hay 45% harvested.

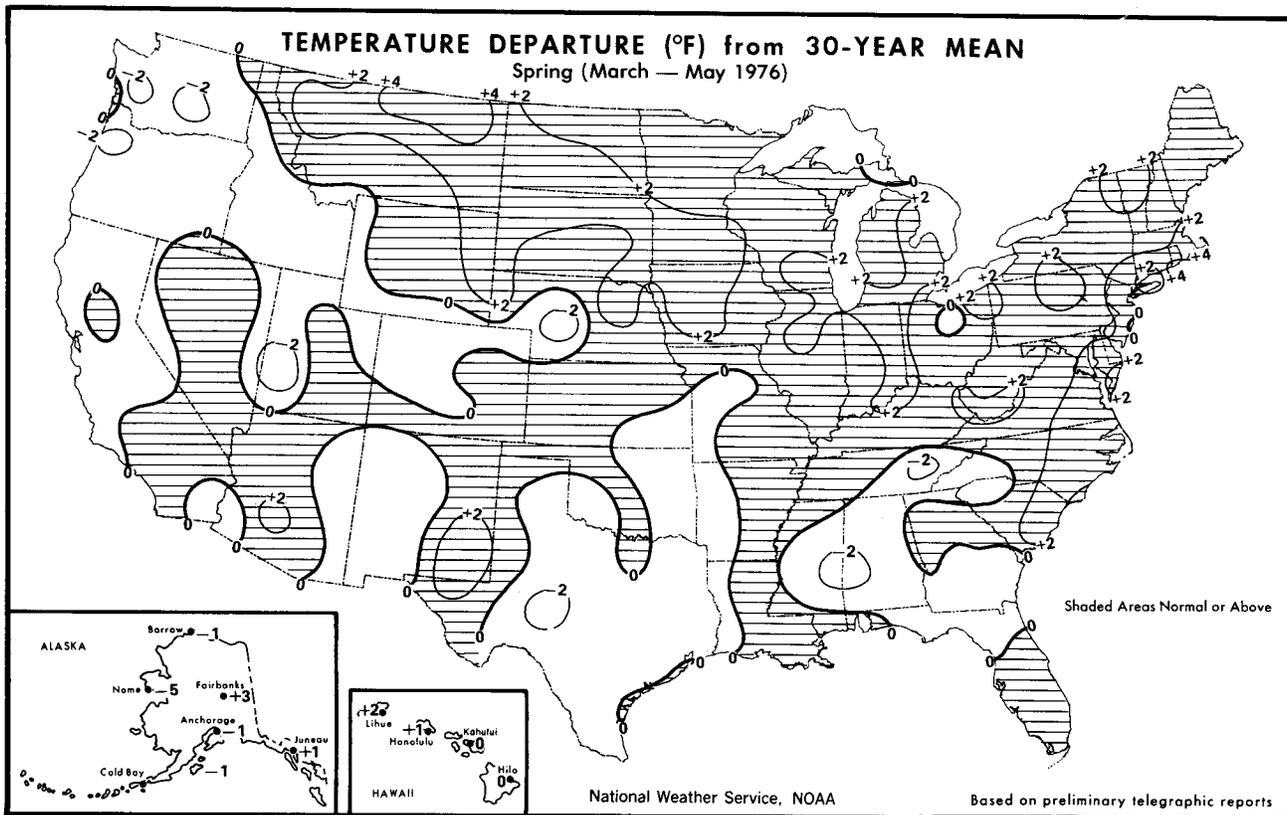
Heating Degree Days (Base 65° F.)
July 1976

ALA. Birmingham . . .	0	MAINE. Caribou . . .	84	OKLA. Okla. City . . .	0
Mobile . . .	0	Portland . . .	45	Tulsa . . .	0
Montgomery . . .	0	MD. Baltimore . . .	0	ORIG. Astoria . . .	117
ALASKA. Anchorage . . .	784	MASS. Boston . . .	1	Burns U.	25
Barrow . . .	---	Chasestown . . .	1	Medford	9
Fairbanks . . .	116	MICH. Alpena . . .	27	Pendleton	4
Juneau . . .	279	Detroit	1	Portland	15
Nome	---	Flint	1	Salem	43
ARIZ. Flagstaff . . .	17	Grand Rapids . . .	0	PA. Allentown . . .	1
Phoenix	0	Houghton Lake . . .	24	Erie	28
Tucson	0	Lansing	4	Harrisburg	0
Winslow	0	Marquette U.	92	Philadelphia	0
Yuma	0	S. Ste. Marie . . .	76	Pittsburgh	15
ARK. Fort Smith . . .	0	MINN. Duluth	35	Scranton	8
Little Rock	0	International Falls .	40	R.I. Providence . . .	2
CALIF. Bakersfield . .	0	Minneapolis	0	S.C. Charleston . . .	0
Eureka U.	226	Rochester	1	Columbia	0
Fresno	0	St. Cloud	7	Greenville	0
Los Angeles U.	0	MISS. Jackson	0	S. DAK. Aberdeen . .	3
Red Bluff	0	Meridian	0	Huron	8
Stockton	0	MO. Columbia	0	Rapid City	3
San Diego	0	Kansas City	1	Sioux Falls	1
San Francisco	72	St. Louis	0	TENN. Chattanooga . .	2
COLO. Denver	0	Springfield	0	Knoxville	0
Grand Junction	0	WONT. Billings	0	Memphis	0
Pueblo	0	GLASGOW	0	Nashville	0
CONN. Bridgeport . . .	0	Great Falls	3	TEX. Amarillo	0
Hartford	0	Havre	4	Austin	0
D.C. Washington . . .	0	Helena	15	Beaumont	0
FLA. Apalachicola . .	0	Kalisopolis	64	Brownsville	0
Ft. Myers	0	Miles City	1	Corpus Christi . . .	0
Jacksonville	0	Missoula	25	Del Rio	0
Key West	0	NEBR. Grand Island . .	0	El Paso	0
Lakeland U.	0	Norfolk	0	Fort Worth	0
Miami	0	North Platte	0	Galveston U.	0
Orlando	0	Omaha	0	Houston	0
Daytona Beach	0	Valentine	0	Lubbock	0
Tallahassee	0	NEW. Ely	25	Midland	0
Tampa	0	Las Vegas	0	San Angelo	0
GA. Atlanta	0	Renon	15	San Antonio	0
Augusta	0	Winemucca	8	Victoria	0
Macon	0	W. H. Concord	37	Waco	0
Savannah	0	N. Atlantic City . . .	0	Wichita Falls	0
IDAHO. Boise	3	Trenton U.	0	UTAH. Blanding R. . .	---
Lewiston	0	N. MEX. Albuquerque . .	0	Salt Lake City	0
Pocatello	1	Roswell	0	VT. Burlington	21
ILL. Cairo U.	0	N. Y. Albany	7	VA. Lynchburg	0
Chicago	0	Binghamton	31	Norfolk	0
Moline	0	Buffalo	15	Richmond	0
Peoria	0	New York	0	Romoke	0
Rockford	0	Rochester	11	WASH. Colville	42
Springfield	2	Syracuse	24	Omak	---
South Bend	0	W. C. Asheville	2	Quilleyute	196
IOWA. Burlington . . .	0	Charlotte	0	Seattle-Tacoma	24
Des Moines	0	Greensboro	0	Spokane	20
Dubuque	0	Hatteras R.	0	Walla Walla U.	3
Sioux City	1	Raleigh	0	Yakima	26
IND. Evansville	0	Wilmington	0	W. VA. Beckley	24
Fort Wayne	0	N. DAK. Bismarck . . .	11	Charleston	0
Indianapolis	0	Fargo	13	Huntington	0
South Bend	0	Wilmington U.	10	Parkersburg U.	2
IOWA. Burlington . . .	0	OHIO. Akron-Canton . .	15	WIS. Green Bay	0
Des Moines	0	Cincinnati U.	0	Madison	4
Dubuque	0	Cleveland	0	Milwaukee	2
Sioux City	1	Columbus	1	WYO. Casper	3
KANS. Concordia	0	Dayton	0	Cheyenne	11
Dodge City	0	Toledo	1	Lander	1
Goodland	0	Youngstown	18	Sheridan	1
Topeka	0				
Wichita	0				
KY. Lexington	0				
Louisville	0				
LA. Baton Rouge	0				
Lake Charles	0				
New Orleans	0				
Shreveport	0				

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

Average Monthly Weather Outlook





Spring Weather Review

March, April, May.

HIGHLIGHTS: The spring season's warmer than normal temperature extended from Montana to New England and southward to the middle Eastern States. Although crops in these areas got off to an early start, below normal temperatures in May retarded growth and damaged some plants. Precipitation dropped below normal from Arkansas to Ohio, in eastern U.S. from eastern New England to North Carolina, in South Dakota and Minnesota, from western Texas through eastern Colorado, and throughout the West from southern California to Montana. Less than half the normal amount of rain fell in parts of South Dakota and Minnesota.

The month of March registered normal readings in nearly all of the area east of the Continental Divide. Cooler than normal temperatures prevailed in a small area in the northern Plains near the Canadian border and most of the western U.S. The Mississippi and Ohio River Valleys boasted the warmest readings, which ranged from 6 to 8° above normal.

Green pastures hinted at an early spring. The demand for moisture increased as plants began to grow. The central Plains to the Appalachians reported above normal to normal precipitation, but rainfall slipped below normal in the western Plains, the Southwest, and along the East Coast. The Ohio River Valley also measured less than normal rain. A dry winter heightened crop moisture needs of winter wheat in the western Plains. Although some rain fell in California and the Sierra Nevada mountains, the water supply remained critically low.

The moisture-starved Plains States of Kansas,

Oklahoma and Texas, accrued more than 4 inches of rain in April. The replenished soil moisture rapidly improved the surviving grain and created excellent sowing conditions for spring grain. Above normal rainfall in the south and north partially relieved the California dry spell.

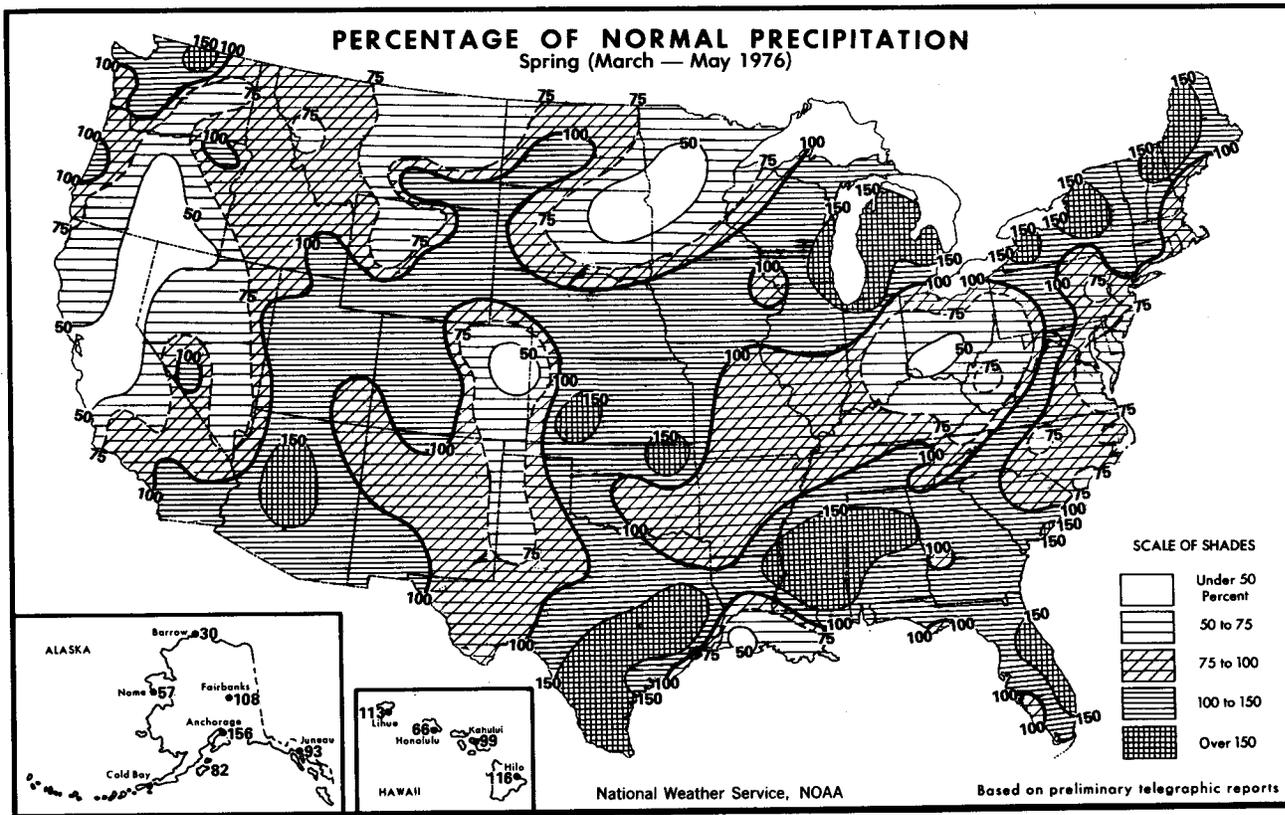
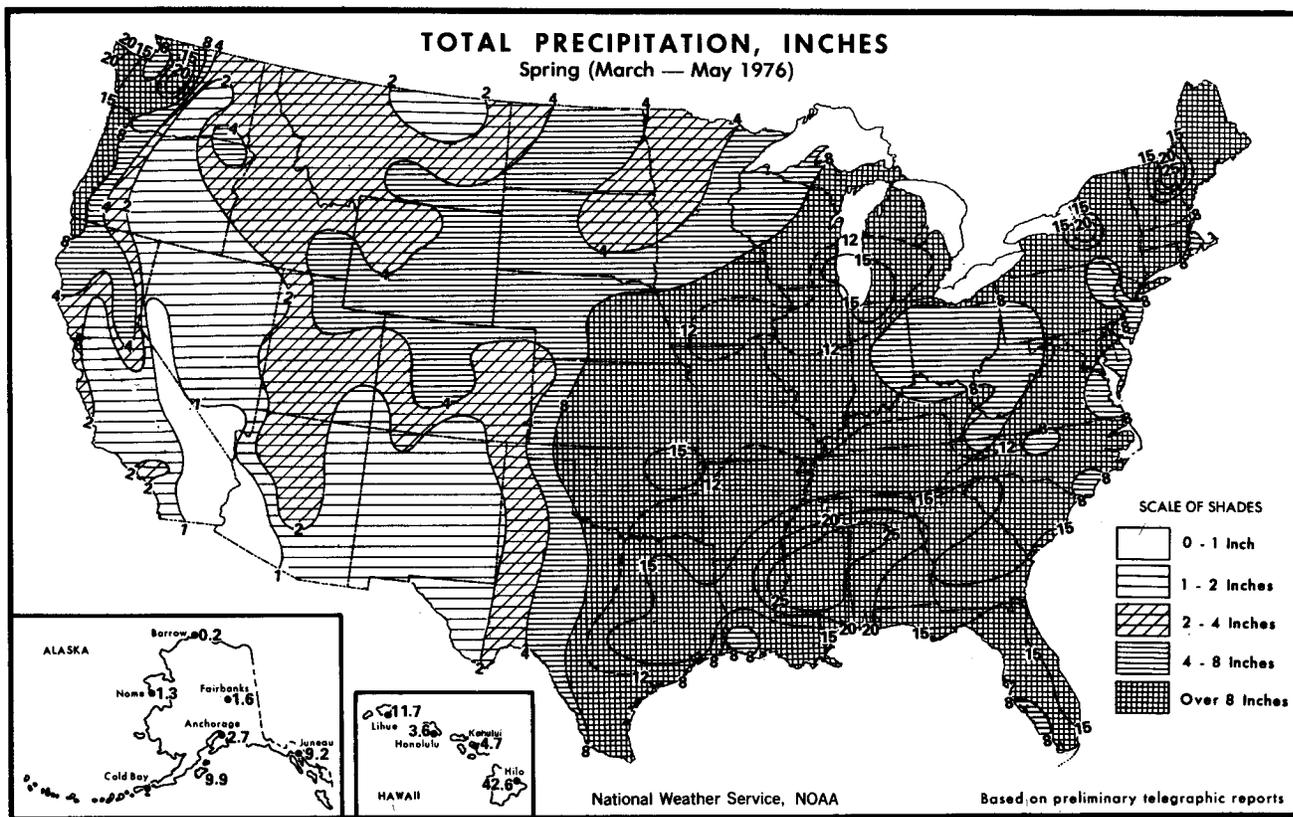
Temperatures around the Nation during April rose generally above normal. Readings in the northern Plains soared as much as 6° above normal, while near normal to slightly cooler weather prevailed in the Southeast and most of the West.

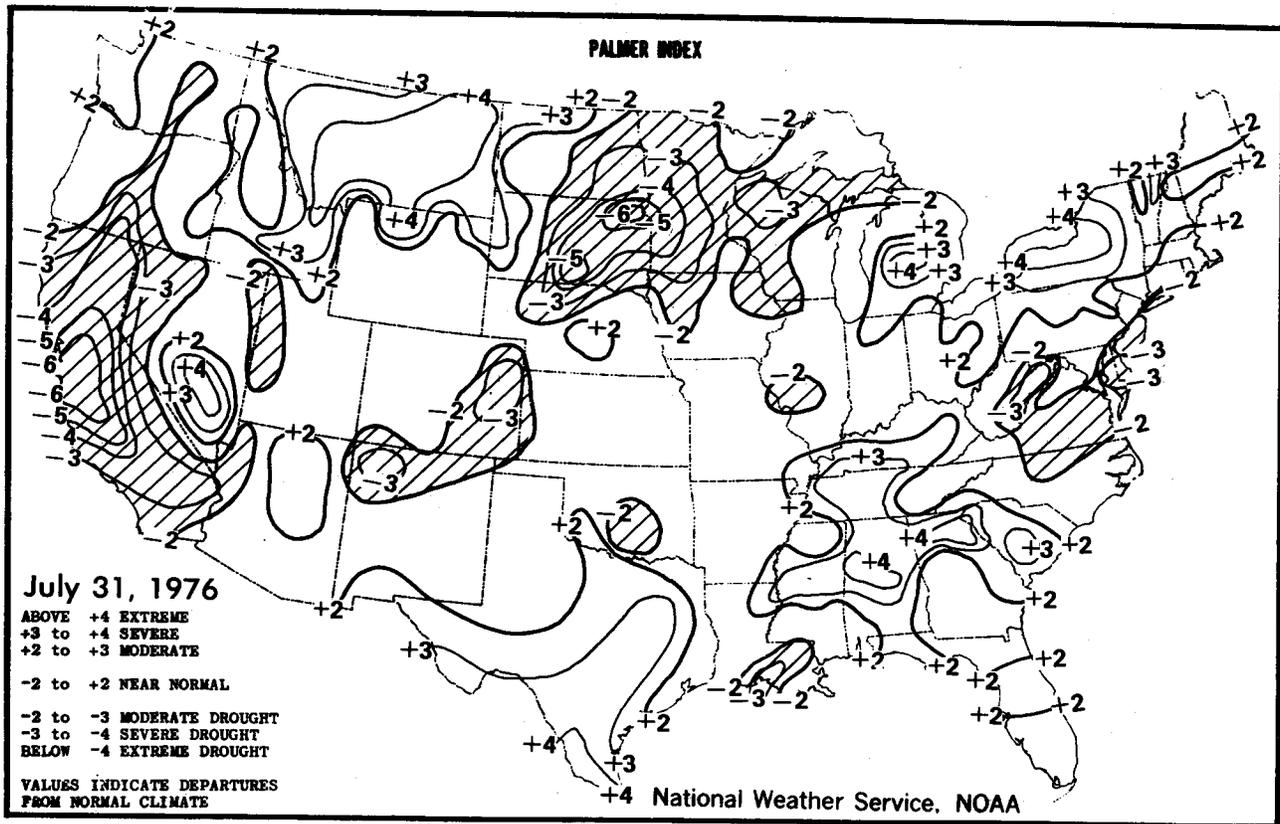
The usual thunderstorm activity dominated the weather picture, accounting for precipitation from Texas to the Great Lakes region and through New England.

Comparatively dry April weather lingered over the Southeastern States, except Georgia and Florida, and along the East Coast from New Jersey through the Carolinas.

In May a succession of cooler air masses moved into north central U.S. from Canada and spread over the eastern part of the Nation. Temperatures averaged 6 to 8° lower than normal in the central Plains and the midsouth. Frost retarded crop growth and nipped some early blooming fruits.

Precipitation concentrated on the Southeast, the Southwest, the vicinity of Lake Michigan, and New England, while less than half the normal amount fell in the northern Plains. The eastern Dakotas and Minnesota led the Plains in dryness and recorded just 1/2 the normal amount of moisture. Only light showers fell in southern California, but moderate precipitation covered the southern Plateau and supplemented water storage in the area.





Using the Palmer and Crop Moisture Indexes

The Palmer Index (PI) evaluates the scope, severity, and frequency of prolonged periods of abnormally wet or dry weather. For this purpose it works reasonably well. However, it does not measure the current status of agricultural drought, such as the effects of short periods of dry weather. For this reason the Crop Moisture Index (CMI) was developed to respond rapidly to changes in the soil moisture situation and to reflect only those moisture factors that affect vegetation and field operations.

The Palmer Index best evaluates the overall soil moisture situation, since it reflects the effects of the weather over weeks and even months. The Crop Moisture Index is the most useful in determining the availability of moisture to meet current demands. For example, a recent rain may replenish the soil enough to meet current demands. But if the Palmer Index value is highly negative, the overall soil moisture situation could still be very poor.

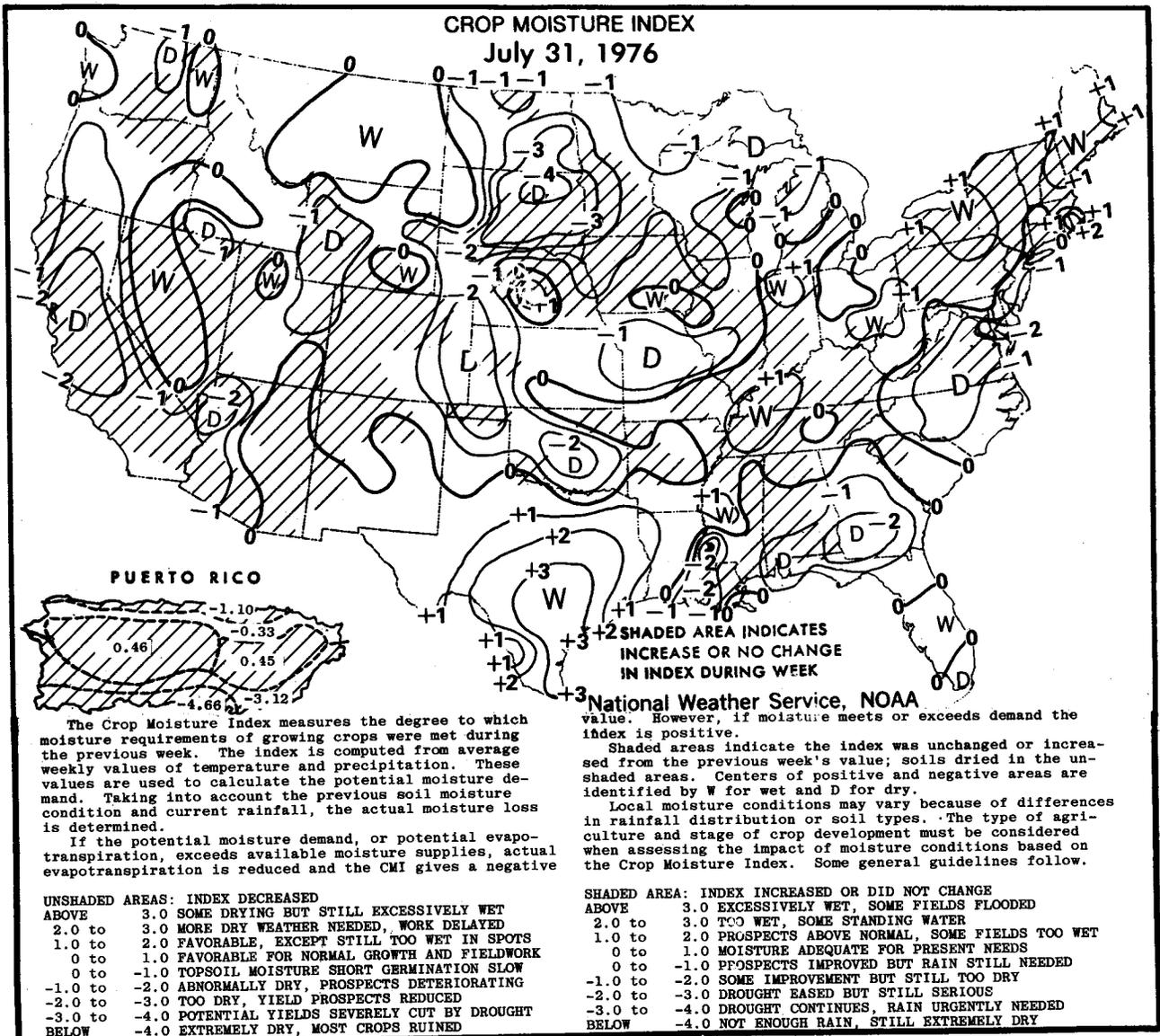
Negative CMI values mean that the demand for moisture, or the potential evapotranspiration, ex-

ceeded available supplies, and so reduced actual transpiration. On the other hand, positive CMI values mean either that actual evapotranspiration was greater than expected, or that recent rainfall exceeded crop moisture requirements and additional moisture went into the soil or was regarded as runoff.

Negative Palmer Index values imply negative abnormalities of evapotranspiration, moisture stored in or added to the soil, runoff, or a combination of all these types of moisture shortages. In other words, negative PI values indicate abnormally dry weather but do not show the effect of the dryness.

Positive PI values indicate that the moisture supply either from current or previous rainfalls, exceeded the amount needed to sustain soil moisture at a level considered normal for the climate of the area.

Palmer Index values are based on all aspects of the moisture situation, but Crop Moisture values refer only to current moisture requirements. While PI values show long-term moisture conditions, CMI values are more responsive to recent rainfall or its absence.





FIRST CLASS MAIL

World Weather and Crop Update

Capricious weather last week ravaged some places with floods, others with drought.

Heavy rains flooded crop lands of Punjab in Pakistan while drought persisted in Sri Lanka, much of Australia, and parts of Argentina, Portugal, France, and England.

On the whole India benefitted from an active monsoon and a diminished area of crop stress. Drought damaged about 60% of Sri Lanka's Yala rice crop (spring planted-summer harvested) which is dependent on summertime southwest monsoon rains.

Thailand reports indicated the early summer dry spell reduced corn prospects 22% and hurt rice seedbeds in the northeast. Rainfall improved after the first week of July.

Although the rainy season lagged behind in precipitation for much of the People's Republic of China, rains soaked the North China and Manchurian Plains and particularly favored stressed crops in Manchuria. Remnants of tropical storm Violet lingered in the southeast to harass the early rice harvest. Earthquake damage to agriculture remained speculative but the magnitude of the quakes and area involved suggested some loss at least of agricultural chemicals production.

A little rain in several south coastal areas of Australia benefited pastures, yet insignificant amounts fell in the south and southeast winter wheat regions. Winter grain prospects declined

in step with the advancing calendar.

Drought in the U.S. northern Great Plains extended into southern Manitoba where July measured one of the driest in over a century. End-of-month showers relieved some spots such as Winnipeg; however, dry July's tend not to make bumper spring wheat crops. More seasonal weather aided crop development in Alberta and Saskatchewan.

Rains, freezing rain, and snow spotted Argentina's wheat region. Little or no precipitation fell in much of northern Argentina and followed the pattern set since April. Planting, long delayed in the dry areas, resumed where moisture improved.

Once again, weekend rains raised hopes of fading the drought in central and eastern Europe. Crop conditions improved over much of the region, although rains bypassed severely stressed areas of southeast England, Portugal, western France, and parts of Spain.

In the European USSR, showers pestered grain harvest in the Ukraine and Volga regions but enhanced most other crop prospects. Sparse shower activity occurred in Kazakhstan and western Siberia where inadequate moisture stressed pockets of crops. Somewhat erratic rains this season aided soybeans and other crops in the Amur Valley of the USSR's far eastern section.