

Weekly Weather & Crop Bulletin

U. S. DEPARTMENT OF COMMERCE
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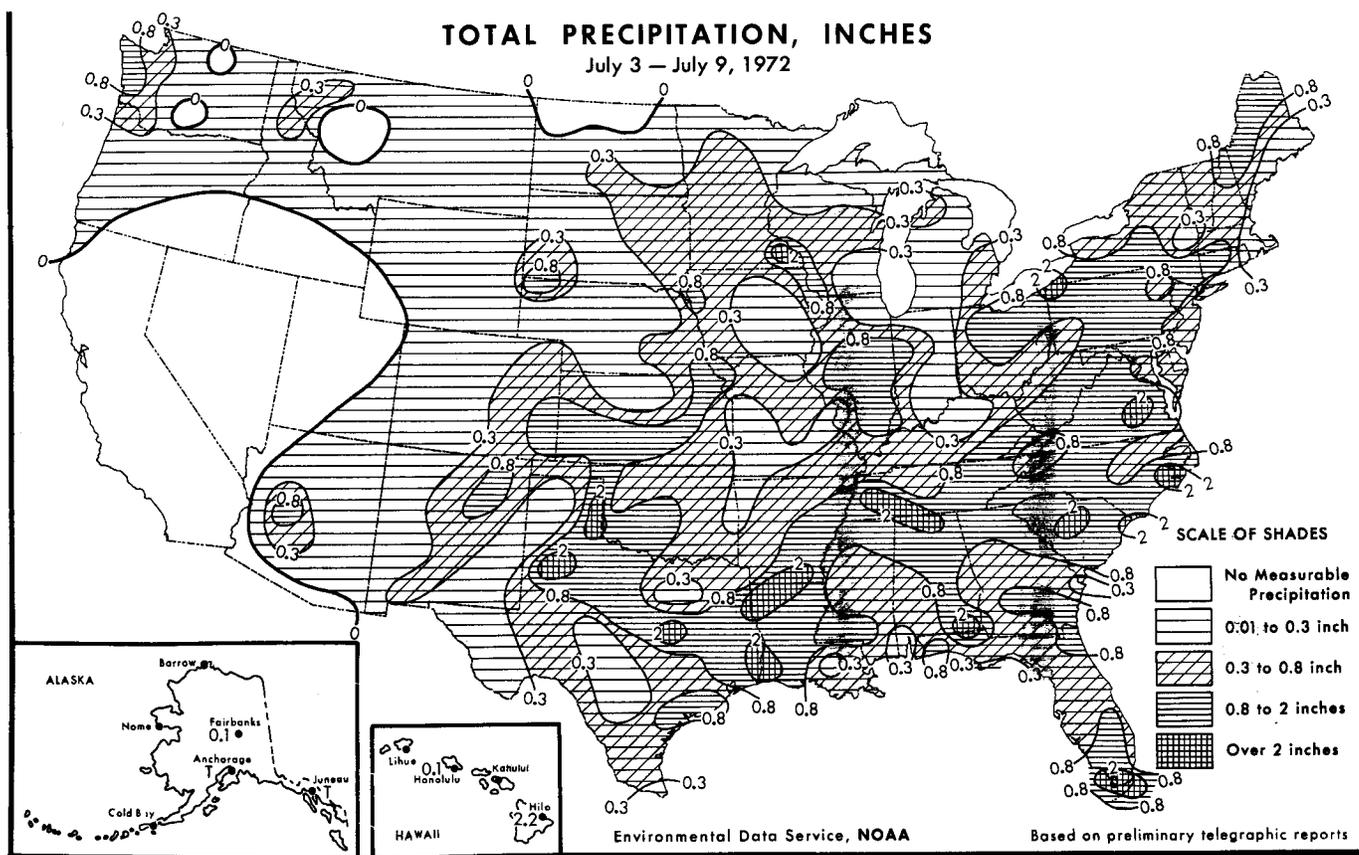
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Edited by Lucius W. Dye

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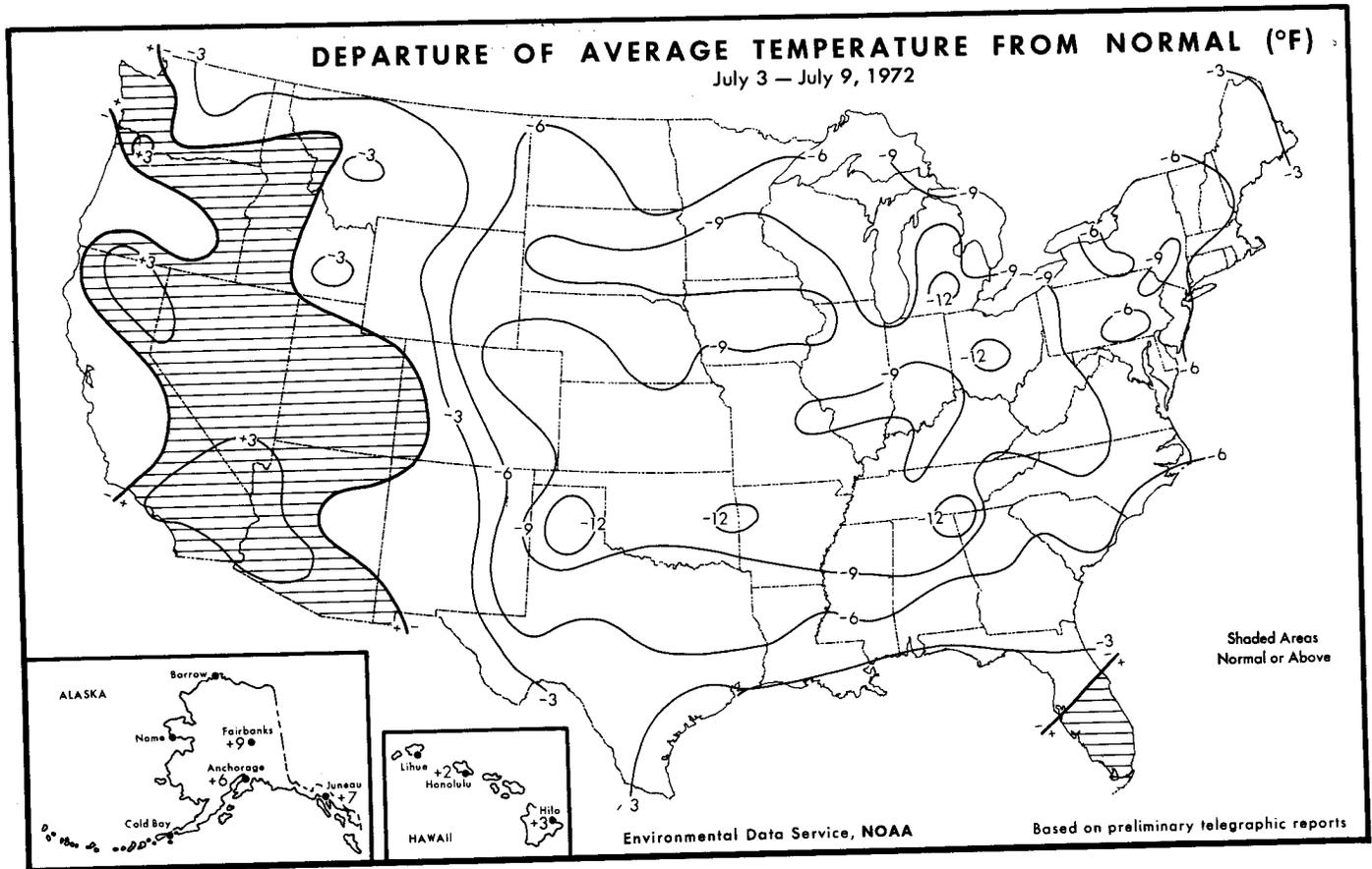
NATIONAL WEATHER SUMMARY

HIGHLIGHTS: Citizens in many eastern locations experienced the coolest Fourth of July in their lives. The cooling trend continued due to a High centered over mid-America. Summer heat prevailed over the Southwestern Deserts with the mercury soaring to 110° to 120° daily. Local thunderstorms brought most of the rain.

PRECIPITATION: On Monday, July 3, a long front stretched from Maine through the Texas Panhandle to northern Utah. Lows were centered along the front in eastern Ohio and western Oklahoma. Thunderstorms developed along the front where the cold air battled with the warm air. Thunderstorms also erupted in the humid air that lay over the central and southern Great Plains and the mid-

dle and southern Mississippi River Valley. Heavy local rains also fell in the Northeast, in parts of Pennsylvania, New York, New England, West Virginia, and Maryland.

A large Arctic High over mid-America at mid-week brought blue skies to the northern States and scattered showers along the leading edge of the cool air from Texas to the Ohio River. Showers also occurred over the Deep South. Showers fell from Florida to Pennsylvania late in the week and from the central Great Plains to southern New England over the weekend. Hail from weekend thunderstorms damaged sugar beets in northeastern Colorado. No rain or only widely scattered light sprinkles fell from the Pacific Ocean to the central Rocky Mountains.



TEMPERATURE: Cold air pushed into the northern Great Plains north of a front which early in the week stretched from northern New England through the Texas Panhandle to northern Utah. Early morning temperatures north of the front were in the 30's and 40's. Casper, Wyo., registered 30° Tuesday morning. Maximums were in the 60's. These temperatures are 15° to 20° cooler than normal for early July. Warm humid air drifted northward south of the front. Temperatures averaged about 30° warmer than in the cool air. Summer heat continued in the Desert Southwest. Furnace Creek, Death Valley, Calif., warmed to 120° Monday and 121° Wednesday.

A large High centered over Nebraska Wednesday

helped to hold afternoon temperatures in the 60's and 70's over much of the East while warming the West. Havre, Mont., warmed to 86° Wednesday afternoon. This was 10° warmer than Birmingham, Ala. A number of cities had never been so cool in July as on Thursday morning. The 40's were common as far south as the Ohio River. Parkersburg, W. Va., on the Ohio River, recorded 45°.

Sunday brought warmer temperatures to most of the Nation. Worland, Wyo., warmed to 100° Sunday afternoon. The Northeast warmed to the low 80's, 85° at Houlton, Maine. Much of the East averaged 6° to 12° below normal.

L. W. Dye

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Plant growth and harvest progress still slow from Virginia to New England. * Cool weather slowed crop growth and development. * Small grain harvest pushing Northward.

SMALL GRAINS: Winter wheat, barley and oats harvesting neared the homeward drive across the Nation's southern half. Combining is over for this year in many States -- only a small number of fields remain to be cut in others. Kansas, the Country's Number 1 wheat producing State has 87 percent of its acreage combined. This is 2 percent slower than last year, but 1 percent ahead of average. Cool temperatures and high moisture content delayed harvesting in Colorado. Combining is pushing northward and should start this week in South Dakota and Michigan -- high winds caused considerable lodging in both States. Winter wheat is ripening in North Dakota. Crop prospects are poor in the dry eastern area. The eastern Montana wheat crop is in good to excellent condition, but is poor to good elsewhere in the State. Dry weather and normal temperatures were favorable for combining in the Pacific Northwest. Fields were ripening rapidly and combining increased daily.

Grain farmers from Virginia to New Jersey are still plagued by wet weather. Some barley was harvested, but progress is slow and field losses heavy. Virginia grain harvesting is making its slowest progress since records began in 1943.

CORN: Record breaking cold slowed corn growth in the Corn Belt. Temperatures were 8 to 10 degrees below normal for the week -- new low temperature readings were set or "tied" in many States. Frost occurred July 4 in northern Wisconsin and North Dakota. No crop injury is expected. With the exception of Ohio, the rest of the Corn Belt received less than 1 inch of rain. The average height and development of this year's crop is well behind last year and generally behind normal. Minnesota corn is staying ahead of the normal growth rate. Soils are drying in Nebraska and growers are irrigating cornfields.

A welcome rain fell over much of the South. The needed moisture was welcomed especially by corn growers in Arkansas, Louisiana, Tennessee, and Kentucky where soils were getting dry. Much of the Southern acreage is already silked, with some early fields in southern Alabama in the dough stage.

Cold wet weather continues to be unfavorable for corn in the path of Tropical Storm Agnes. Growth has been extremely slow and warmer weather is needed to stimulate growth and dry out fields to allow cultivating to resume. Some acreage remains to be planted from Virginia to New England.

COTTON: Texas cotton is making good to excellent growth and was aided by widespread rainfall. Rains also were well received in the South -- especially Louisiana, Arkansas, and Tennessee where soils were on the dry side. Cotton is squaring freely with bolls forming in many fields. Insects are increasing and growers are stepping up spray schedules. Cotton in the Southeast (Georgia and the Carolinas') is still in fair to good condition -- with some fields on the poor side. Sunshine and warmer temperatures are needed to boost the crop.

Cotton made good progress under normal weather from California to New Mexico. Cotton is fruiting very well. Pink bollworms are increasing in California and Arizona -- the control program is in effect.

SOYBEANS: Prospects continue bright for this year's soybean crop. Most of the Nation's acreage is in good to excellent shape. Height of this year's crop is behind that of a year ago. Blooming has started -- some early seeded Illinois acreage has started to form pods. Double-cropped soybeans are still being planted following small grain harvest in the South. Many Southern fields are very grassy. Rains in Arkansas greatly improved the soybean situation.

Dry weather is retarding the Missouri crop and prospects are generally only fair to good.

OTHER CROPS: Cool temperatures slowed growth of most crops throughout the Nation. Haying is well behind schedule in the Northeast. Many West Virginia farmers have lost their entire crop. Some 1st crop hay was also dumped in New England. Rains improved Texas sorghum prospects. Harvesting gained momentum in southern Texas -- 10 percent of the crop is cut. The crop started heading in southeast Kansas. Tobacco growth is slow in Kentucky. The North Carolina flue-cured crop is fair to good--Virginia flue-cured growers are getting barns ready for the harvest season. Georgia and Alabama peanuts made outstanding progress and prospects are excellent. Virginia peanuts are poor and 2 to 3 weeks behind schedule. A small amount of sugar beet acreage was wiped out by hail in northeast Colorado. Rains slowed potato digging in the Sand Mountain Alabama area.

Fruits and Nuts: Favorable weather aided growth and development of California fruit and nut crops. Apple picking is underway. Texas peach prospects increased as picking continues. The volume of Georgia peaches is ahead of last year, but South Carolina yields are down due to small size. Cool, dry weather is also slowing fruiting in Michigan. On the other hand, cool wet weather is plaguing fruit development and cherry picking in the Northeast.

Vegetables: Vegetable crops are erratic from Virginia to New England--some losses are occurring from harvest delays. Light supplies of sweet corn and tomatoes are coming from New Jersey. Record-setting low temperatures stunted growth in northern areas. Harvesting is at volume levels through most of the South. Fields dried and onion pulling resumed on the Texas High Plains. Watermelon harvest gained momentum in Texas and Oklahoma. California lettuce is in good volume from both the Salinas and Santa Maria areas.

PASTURES AND LIVESTOCK: Rains improved pastures from Louisiana to Kentucky. Virginia pastures are the best on record for this time of year. Dry soils are hurting Wisconsin pastures. Recent rains sparked grass growth on the Great Plains. Range conditions vary in the West, but showers have improved the outlook in the Southwest.

Florida ranchers are marketing calves at lighter than usual weights in response to favorable prices.

Steve J. Pscodna
Agricultural Statistician

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., JULY 9, 1972

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 . . .	72	-10	1.1	-.1	New Orleans . . .	79	-2	.4	-1.1	OKLA, Okla. City . . .	72	-10	1.6	+1.0
Mobile . . .	80	-3	T	-2.0	Shreveport . . .	76	-8	2.1	+1.2	Tulsa . . .	72	-10	.8	+ .1
Montgomery . . .	76	-5	.8	-.5	MAINE, Caribou . . .	61	-3	1.5	+ .6	OREG, Astoria . . .	60	0	.7	+ .4
ALASKA, Anchorage . . .	63	+6	T	-.4	Portland . . .	62	-5	T	-.7	Burns . . .	67	-1	T	-.1
Barrow . . .	---	---	---	---	MD, Baltimore . . .	69	-8	.9	0	Medford . . .	74	+3	0	-.1
Fairbanks . . .	69	+9	.1	-.3	MASS, Boston . . .	68	-4	.1	-.6	Pendleton . . .	74	+1	T	-.1
Juneau . . .	62	+7	T	-1.0	Chatham . . .	62	---	T	---	Portland . . .	69	+3	.3	+ .2
Nome . . .	---	---	---	---	MICH, Alpena . . .	58	-8	.1	-.6	Salem . . .	64	-1	1.1	0
ARIZ, Flagstaff . . .	65	0	.1	-.3	Detroit . . .	63	-10	.4	-.3	PA, Allentown . . .	67	-7	1.0	0
Phoenix . . .	94	+4	.4	+ .2	Flint . . .	62	-8	.3	-.3	Erie . . .	59	-9	2.2	+1.4
Tucson . . .	88	+2	T	-.4	Grand Rapids . . .	63	-9	.1	-.6	Harrisburg . . .	71	-5	1.0	+ .2
Winslow . . .	78	-2	.1	-.1	Houghton Lake . . .	58	-9	.2	-.5	Philadelphia . . .	76	+1	.4	-.5
Yuma . . .	95	+3	0	0	Laings . . .	59	-13	.1	-.5	Pittsburgh . . .	63	-9	.7	-.2
ARK, Fort Smith . . .	71	-12	.2	-.4	Marquette . . .	58	-8	.2	-.6	Scranton . . .	62	-10	.6	-.5
Little Rock . . .	72	-10	1.3	+ .5	Muskegon . . .	61	-10	.4	-.2	R. I, Providence . . .	66	-5	T	-.7
CALIF, Bakersfield . . .	84	0	0	0	S. Ste. Marie . . .	53	-11	.3	-.3	S. C, Charleston . . .	75	-6	1.5	0
Eureka . . .	56	0	T	0	MINN, Duluth . . .	56	-8	.3	-.5	Columbia . . .	75	-7	2.7	+1.4
Fresno . . .	80	-1	0	0	Internatl Falls . . .	62	-3	T	-.8	Greenville . . .	72	-8	1.7	+ .7
Los Angeles . . .	76	+4	0	0	Minneapolis . . .	62	-10	.4	-.4	S. DAK, Aberdeen . . .	66	-6	.8	+ .2
Red Bluff . . .	80	-4	0	0	Rochester . . .	61	-11	2.2	+1.3	Huron . . .	65	-9	.6	+ .2
San Diego . . .	67	-3	T	0	St. Cloud . . .	61	-9	.8	0	Rapid City . . .	62	-11	.3	-.2
San Francisco . . .	61	-1	0	0	MISS, Jackson . . .	76	-6	.3	-.8	Sioux Falls . . .	64	-10	.5	-.2
Stockton . . .	76	-2	0	0	Meridian . . .	75	-7	.5	-.9	TENN, Chattanooga . . .	69	-12	1.3	+ .1
COLO, Denver . . .	64	-9	.1	-.3	MO, Columbia . . .	68	-9	.4	-.4	Knoxville . . .	70	-8	1.2	+ .2
Grand Junction . . .	79	+1	T	-.1	Kansas City . . .	71	-10	.3	-.6	Memphis . . .	72	-10	1.7	+ .9
Pueblo . . .	68	-8	.4	0	St. Louis . . .	70	-8	.2	-.7	Nashville . . .	72	-9	.4	-.4
CONN, Bridgeport . . .	67	-5	.5	-.3	Springfield . . .	68	-10	.1	-.9	TEX, Abilene . . .	76	-7	1.0	+ .4
Hartford . . .	67	-5	1.3	+ .5	MONT, Billings . . .	68	-6	.2	-.1	Amarillo . . .	68	-13	.3	-.3
D. C, Washington . . .	71	-7	.4	-.5	Glasgow . . .	65	-5	.1	-.2	Austin . . .	80	-5	.7	+ .1
FLA, Apalachicola . . .	80	-1	.1	-1.6	Great Falls . . .	67	-1	T	-.3	Beaumont . . .	78	-4	.9	-.4
Ft. Myers . . .	83	+1	2.5	+ .4	Havre . . .	66	-3	.1	-.2	Brownsville . . .	82	-2	.3	-.1
Jacksonville . . .	79	+4	1.9	+ .1	Helena . . .	63	-4	T	-.2	Corpus Christi . . .	83	-1	.5	-.1
Key West . . .	84	+1	.6	-.3	Kalispell . . .	64	-1	.6	+ .4	Dallas . . .	79	-6	.2	-.3
Lakeland . . .	82	+1	.7	-1.4	Miles City . . .	69	-5	.1	-.2	Del Rio . . .	82	-4	.6	+ .3
Miami . . .	82	+1	.5	-1.1	Missoula . . .	69	+3	T	-.2	El Paso . . .	82	-1	T	-.2
Orlando . . .	83	0	.6	-1.3	NEBR, Grand Island . . .	72	-7	.1	-.7	Fort Worth . . .	78	-7	.2	-.2
Tallahassee . . .	78	-4	.8	-1.0	Lincoln . . .	72	-7	.1	-.7	Galveston . . .	81	-2	.4	-.7
Tampa . . .	82	0	.4	-1.5	Norfolk . . .	69	-8	T	-.7	Houston . . .	79	-3	.4	-.6
GA, Atlanta . . .	73	-6	.5	-.6	North Platte . . .	65	-10	T	-.6	Lubbock . . .	71	-9	2.3	+1.8
Augusta . . .	76	-5	1.0	0	Omaha . . .	68	-9	.8	0	Midland . . .	76	-7	.5	+ .1
Macon . . .	76	-6	.4	-.9	Valentine . . .	67	-7	T	-.6	San Angelo . . .	80	-5	T	-.3
Savannah . . .	77	-4	.2	-1.3	NEV, Ely . . .	68	+2	0	-.2	San Antonio . . .	81	-3	T	-.5
HAWAII, Hilo . . .	78	+3	2.2	+ .2	Las Vegas . . .	95	+5	0	-1	Victoria . . .	82	-1	.8	0
Honolulu . . .	81	+2	.1	0	Reno . . .	69	+3	T	0	Waco . . .	78	-7	2.6	+2.1
Kahului . . .	---	---	---	---	Winnemucca . . .	77	+7	0	-1	Wichita Falls . . .	77	-8	1.1	+ .6
Lihue . . .	---	---	---	---	N. H, Concord . . .	62	-7	.4	-.4	UTAH, Blanding . . .	73	+2	T	-.2
IDAHO, Boise . . .	75	+1	0	-.1	N. J, Atlantic City . . .	68	-6	.7	-1	Salt Lake City . . .	76	+1	T	-.1
Lewiston . . .	74	+1	.3	+ .2	Trenton . . .	69	-7	.3	-.6	VT, Burlington . . .	61	-8	.6	-.3
Pocatello . . .	67	-5	0	-.2	N. MEX, Albuquerque . . .	77	-2	.5	+ .2	VA, Lynchburg . . .	70	-7	.8	-.1
ILL, Cairo . . .	71	-10	.3	-.4	Roswell . . .	70	-9	.9	+ .5	Norfolk . . .	72	-7	.9	-.4
Chicago . . .	66	-9	.2	-.5	N. Y, Albany . . .	63	-9	.1	-.7	Richmond . . .	71	-7	2.2	+1.0
Moline . . .	68	-8	.6	-.2	Binghamton . . .	62	-6	1.1	+ .2	Roanoke . . .	67	-10	2.0	+1.1
Peoria . . .	66	-10	.9	+ .1	Buffalo . . .	63	-7	.5	-.1	WASH, Colville . . .	64	-3	.3	+ .2
Rockford . . .	64	-10	T	-.9	New York . . .	68	-8	.4	-.4	Omak . . .	66	-4	T	-.1
Springfield . . .	68	-10	1.0	+ .1	Rochester . . .	66	-5	.3	-.4	Quillayute . . .	60	+1	1.1	+ .5
IND, Evansville . . .	69	-10	.8	0	Syracuse . . .	64	-8	1.1	+ .4	Seattle-Tacoma . . .	66	+2	.4	+ .2
Fort Wayne . . .	64	-10	.2	-.6	N. C, Asheville . . .	66	-8	.8	-.1	Spokane . . .	68	-2	.2	+ .1
Indianapolis . . .	67	-8	.1	-.7	Charlotte . . .	72	-7	1.7	+ .7	Walla Walla . . .	75	0	T	-.1
South Bend . . .	64	-9	.2	-.6	Greensboro . . .	66	-11	.8	-.2	Yakima . . .	68	-3	T	-.1
IOWA, Burlington . . .	66	-11	.1	-.7	Hatteras . . .	72	-6	1.1	-.1	W. VA, Beckley . . .	60	-10	1.0	0
Des Moines . . .	68	-8	T	-.8	Raleigh . . .	71	-7	.7	-.5	Charleston . . .	65	-10	.8	-.4
Dubuque . . .	64	-8	1.1	+ .3	Wilmington . . .	75	-5	.8	-1.0	Huntington . . .	67	-8	.6	-.5
Sioux City . . .	69	-7	.9	+ .2	N. DAK, Bismarck . . .	63	-8	.4	-.2	Parkersburg . . .	66	-10	.6	-.4
KANS, Concordia . . .	71	-9	.2	-.4	Fargo . . .	66	-5	.2	-.5	WIS, Green Bay . . .	62	-8	.4	-.2
Dodge City . . .	69	-10	1.3	+ .7	Williston . . .	64	-7	T	-.5	La Crosse . . .	64	-9	.9	+ .1
Goodland . . .	67	-7	.9	+ .3	OHIO, Akron-Canton . . .	62	-11	1.9	+1.1	Madison . . .	61	-10	.2	-.7
Topeka . . .	68	-11	1.6	+ .7	Cincinnati . . .	67	-8	.3	-.6	Milwaukee . . .	61	-7	.2	-.5
Wichita . . .	70	-11	.8	-.1	Cleveland . . .	61	-11	1.2	+ .4	WYO, Casper . . .	63	-7	T	-.2
WYO, Casper . . .	67	-10	.3	-.6	Columbus . . .	63	-12	.9	0	Cheyenne . . .	59	-10	.1	-.4
Dayton . . .	70	-7	.2	-.6	Dayton . . .	65	-10	.5	-.4	Lander . . .	66	-3	T	-.2
LA, Baton Rouge . . .	80	-3	.1	-.7	Toledo . . .	63	-10	.5	-.2	Sheridan . . .	63	-7	.2	-.1
Lake Charles . . .	78	-4	3.0	+1.2	Youngstown . . .	59	-11	1.3	+ .3	P. R. San Juan . . .	84	-4	.5	-.8

* Departures are from 30-year means (1931-60). Based on preliminary reports

CONDENSED STATE SUMMARIES

These summaries provide brief descriptions of condition and activities important on a national scale. Detailed reports of crop and weather conditions during the growing season are contained in State issues of Weekly Weather and Crop Bulletins published by field offices of the Statistical Reporting Service, U.S.D.A. in cooperation with NOAA Climatologists.

ALABAMA: Unusually strong cold front for summer moved across State Wednesday. Scattered showers north Monday and Tuesday, south Tuesday and Wednesday, but generally fair, cool, and dry thereafter. Temperatures at midweek as much as 10° below normal Statewide with record lows many sections. Extremes for week: 96° at Mobile, 53° at Muscle Shoals. Crops made excellent development. Rains early week beneficial, but slowed fieldwork. Cotton squaring freely with small bolls forming many fields. Insect counts building up. Control measures being taken where scout reports indicate needed. Most corn tasseling with early fields dough stage south and central. Peanuts made outstanding progress--prospect for crop excellent. Additional acres soybeans planted--generally following small grains. Earliest plantings made good development with few fields blooming. Weeds becoming problem many fields. Harvest Irish potatoes Sand Mountain slowed by rain. Quality and yield potatoes harvested good. Tomato harvest about over Dothan-Geneva area and getting underway Blount and St. Clair Counties. Hay crops made excellent growth--very little saved due wet weather. Grazing adequate most pastures.

ARIZONA: Temperatures above normal early in week but fell to near normal on weekend. Scattered showers nearly all parts of State except Yuma County; however, weekly precipitation totals somewhat below normal for this time of year. Strong winds and blowing dust most agricultural sections during week. Cotton crop makes good progress, and fruiting very well. Pink bollworms found, control programs in effect. Wheat and barley harvest virtually complete. Grain sorghum planting continues. Early-planted fields mature. Crop making good progress. Safflower harvest started. Sugar beets being harvested central areas. Progressing satisfactorily southeast. Alfalfa hay harvest 3d and 4th cuttings most areas. Cantaloupe harvest nearing completion Yuma area. Yields, quality satisfactory. Cantaloupe and watermelon harvest active Salt River Valley, central Arizona. Grapefruit, valencia orange harvest Salt River Valley and Yuma. Citrus groves Yuma good. Ranges remain generally fair. Ranges continue to improve along southeastern borders as light rainfall received. Soil moisture and stockwater about normal. Moderate supplemental feeding continues. Cattle and calves remain fair to good. Sheep and lambs remain generally fair. Scattered predator problems continue. Screwworm fly problems continue southeastern.

ARKANSAS: Unseasonably cool most of week with mean temperatures ranging from 7° to 12° below normal. Pronounced cooling early in week with a return to more seasonable temperatures on weekend. A number of stations had new record lows for particular dates. Little Rock recorded a low of 54° on 7th, a new record low for July. Coldest in State at Fayetteville in northwest on 6th with 45°. Showers mainly in week gave amounts of rainfall in excess of 2.00 inches in a few locations mainly in south-central part of State and in a few locations in east-central and northeast portions. Northwest, west-central, and extreme northeast sections generally driest with amounts

averaging less than 0.50 inch. Elsewhere amounts ranged from about 0.50 inch to over 1.50 inches. Crop growth good. More rain needed western half, but soil too wet number eastern Delta Counties. Cotton growing rapidly and fruiting well. Blooming increasing. Insect activity increased, but no major problem. Rice prospects good. Mid-season nitrogen being applied. Soybean situation greatly improved by rains. Early acreage good. Final plantings underway. Much corn silking and tasseling. Early acreage roasting ear stage. Early sorghums heading out. Limited late planting continues. Hay crops improved, but very little harvest during week. Fruits and vegetables moving to market in volume. This includes peaches, tomatoes, cucumbers, melons, and okra. Grazing improved all areas, but many pastures still below normal west. Livestock generally making satisfactory weight gains.

CALIFORNIA: Dry. Average temperature from 2° below normal Sacramento Valley to 12° above normal Mojave Desert. Maximum temperatures above 100° at Desert stations, reaching 121° at Furnace Creek. Field corn, milo, dry beans, sugar beets continue good growth. Small grain harvest active central, north. Barley, wheat, oats for hay harvest nearing completion Sacramento Valley, virtually complete San Joaquin Valley. Alfalfa hay cutting various stages. Spraying for mite control Sacramento, San Joaquin Valleys. Early-planted safflower past full bloom. Cotton making rapid growth. Pink bollworm counts increasing southern areas. Rice continues good growth. Favorable weather aided growth and development fruit and nut crops. Apricot harvest final stages. Apple harvest underway, picking Gravensteins started. Harvest nectarines, plums, and freestone peaches continues. Harvest clingstone peaches increasing. Walnuts and almonds developing normally, good crops expected. Pear harvest underway Sacramento River Delta. Harvest grapes fresh market continues Kern County. Fruit quality good, but crop light. Thompson crop developing normally, but March frost lowered crop prospects. Broccoli cauliflower Salinas, Santa Maria active. Cantaloupes: Kern, practically complete, Westside increasing sharply. Carrots moderate Salinas, San Joaquin Valley. Celery central coast increasing. Oxnard and Orange nearly complete. Sweet corn southern California, Kern active. Lettuce Salinas, Santa Maria good volume. Merced, southern California tomatoes increasing. Range and pasture outlook deteriorates. Supplemental feeding maintaining livestock. Fire danger high. Some fires occurred--none significant.

COLORADO: Record cool temperatures prevailed over eastern 1/2 of State during 1st part of week. Weekly averages for region were 5° to 10° below normal. Western high country was seasonably warm and dry with a few light showers. Moderate shower activity on eastern plains with a few severe thunderstorms and some light hail. Cool temperatures and high grain moisture delayed fall grain harvest. Light to moderate hail damage scattered areas eastern plains. Winter wheat 75% mature, harvest 29% complete. Winter barley 66% mature, harvest 22% complete. Condition spring oats and barley very good to excellent. Sorghum very good.

Corn excellent--78% laid-by. Limited acreage tasseled. Harvest 1st cutting alfalfa 90% complete--2d 16%. Condition sugar beets very good to excellent--limited acreage northeast severely damaged by hail. Range and pastures very good to excellent east and northeast. Conditions fair other areas--growth limited.

FLORIDA: Temperatures near normal as daily highs in upper 90's early part of week were offset by cooler temperatures latter part of week. One reported temperature of 101°. Scattered showers most of State with rainfall totals averaging 0.50 inch to 1.00 inch except for widely scattered showers Lower East Coast and Keys. Field crops good condition. Tobacco harvest active. Sugar-cane making good growth. Most pastures and live-stock good, but moisture short some areas. Calves being marketed at lighter than usual weights in response to favorable prices. Most citrus groves excellent. Adequate moisture from recent rains. Abundance new growth. New crop fruit drop minimal. Watermelons declining volume through most of June. Sweet corn should finish this week Zellwood. Eggplant in moderate supply.

GEORGIA: Rainfall variable in showers and thunderstorms 1st part of week. Amounts ranged from less than 0.10 inch to over 2.00 inches but were mostly 0.50 to 1.50 inches. Little or no rain after Wednesday. Warm early in week but cooler air moved into north Wednesday and over remainder of State Thursday. Highs in 70's and 80's and lows in 50's and 60's last half of week. Averages ranged from 3° to 7° cooler than normal. Soil moisture mostly adequate with few local areas southeast beginning to need additional supplies. Condition most crops good, except old corn damaged by drought earlier. Showers slowed hay harvest. Cotton condition mostly good with nearly 2/3 setting bolls. Weevil infestation 9%. Cool nights slowing development crop. Tobacco harvest continuing. Most corn acreage tasseling and silking. Peanut condition good. Land plaster being applied and most acreages being sprayed for insects and leafspot. Small grain harvest practically complete. Soybeans and sorghum planting about finished. Pastures, hay crops, and livestock mostly good. Volume peaches inspected through July 6, above year ago. Melon harvest at peak.

HAWAII: Growing conditions generally favorable. Warm with light scattered showers. Soil moisture ample. Sugarcane and pineapple harvesting active. Supplies papayas ample, light for bananas. Harvesting watermelons declining. Most vegetables adequate supply. Pasture and cattle continued fair to good condition. Dry weather affecting growth range grasses lowland pastures.

IDAHO: Temperatures averaged near normal with highest temperatures near end. Very little precipitation. Isolated showers brought normal precipitation to points in northern Panhandle and northeastern valleys. High temperatures causing grains to mature rapidly. Weather ideal for hay harvest. Grasshopper program underway--damage so far mainly to range lands. Potatoes in bloom stage and small grains turning color. First cutting alfalfa over 3/4 done. Crop development very good. Timely irrigation proving to be critical due heat and rapid growth.

ILLINOIS: Cool with showers on 2 or 3 days ranging from 0.01 to 1.50 inches. Partly cloudy with low humidities and winds out of north much

of time. Daily highs in 50's or 60's north, 70's or 80's south. No 90's except in west-central on 9th. Corn tasseling many areas, 5% silked, last year 20%. Soybeans 20% blooming and 3% podded. Wheat harvest 85% complete, year ago complete. Oats 60% turned yellow, 20% ripe, about 5% combined. Second cutting alfalfa 45% complete. Red clover hay 95% cut. Six days suitable fieldwork. Soil moisture short 50%, adequate 49%, surplus 1%.

INDIANA: Cool dry week. Temperatures averaged 8° below normal. At Lafayette temperature of 42° on July 5-6 tied the previous record low July temperature. Showers of only 0.01 to 0.08 inch in scattered areas early and late in week. Below-normal precipitation past 4 weeks in north-central and southeast. Five days suitable. Topsoil and subsoil moisture short to mostly adequate with deficiencies persisting both northern and southern sections. Wheat 65% ripe and 25% combined, 30% combined average. Oats 5% combined, same as average. Barley 30% and rye 20% combined. Corn and soybean growth lagging 1971 by 10 days. Corn 32 inches high, soybeans 9 inches high. Corn beginning to silk south. Alfalfa hay 20% cut 2d time. Pastures declined to mostly fair.

IOWA: A cool dry week. Coolest 39° at Sibley and Carroll 5th. Precipitation very light southeast and south-central, elsewhere light to occasionally moderate. Condition corn and soybeans mostly good, ranging from fair to excellent. Corn tasseling, with about 5% fields 75% or more silked, somewhat behind last 2 years. Soybean fields 20% blooming, year ago over 30%. Oats harvest started--5% completed, normal for this date. Oats condition mostly good to excellent. Winter wheat harvest over 20% complete. Second cutting alfalfa 20% complete; clover hay 1st cutting over 80%. Condition hay crops and pastures mostly good to excellent. Almost 6 days suitable fieldwork. Topsoil moisture 70% adequate, 26% short, and 4% surplus.

KANSAS: Unseasonably cool. Mean temperatures average 9° to 12° below seasonal. Maxima in 50's to 70's early in week. Warming to 90's by 9th. Minima of 43° at Topeka and 51° at Wichita on 5th. are new record readings for July for these localities. Significant rainfall most west-central, northwest, and northeast. Generally 0.50 to 1.50 inches those areas. Variable precipitation elsewhere ranging from none at some localities to over 3.00 inches in others. Except for 4 counties in extreme southwest Kansas, most of southwest had 0.50 to 1.25 inches. Wheat harvest moved ahead northwest Kansas and near completion elsewhere. State 87% harvested compared 89% last year and 10-year average 86%. Row crops generally good progress, but growth slowed by cool temperatures. Sorghums beginning to head southeast areas, but still some planting forage sorghums and re-planting fields damaged by green bugs or washing. Corn crop growing well, 15% tasseled compared 27% last year and average 22%. Soybeans beginning to pod. Second cutting alfalfa 2/3 harvested and prairie hay baling underway. Livestock doing well on good pastures and range feed with marketing picking up following wheat harvest.

KENTUCKY: Cool week, temperatures averaging 6° to 10° below normal. Rainfall variable about 0.40 inch to about 2.50 inches. Showers most areas first 2 days, mostly sunny balance except for a few showers 5th and 9th. Afternoon temperatures in upper 60's or low 70's 4th to 6th. Early-morning

readings 40's and low 50's 6th and 7th, records for dates at a number of locations. 47° at Lexington on 7th tied record for the coldest July date. Recent rains brought relief from near drought conditions developing western Kentucky. Soil moisture statewide 18% short, 68% adequate, 14% surplus; with most shorts central areas. Corn 15% tasseling, 41% last year and 33% 1970. Soybeans 12 inches, slightly less than last year and average. Some double-cropped beans still being planted. Late-planted soybeans showing spotty stands. Tobacco growth somewhat slow--but approximately 2/3 tobacco reached foot or more in height. Black shank, blue mold, root rot, and manganese toxicity affecting tobacco. Pastures fair to good, showing improvement western Kentucky since recent rains.

LOUISIANA: Sharply cooler than normal last of week as massive polar airmass dominated weather. Weekly averages ranged 2° to 8° below normal and 4° to 9° below last week. Temperature extremes: 96° at 5 stations last Monday, 54° at 3 stations Friday. The 58° reading at Shreveport on Friday was lowest July temperature there in a 100-year record. Locally heavy thundershowers accompanied the advance of cool air early in week and some convective showers occurred late in week. Weekly rain totals 1.00 to more than 3.00 inches many places in north and west and at some points in southeast. Greatest 1-day rain, 3.22 inches measured at Winnfield Tuesday morning. Fieldwork generally active, but interrupted by showers early week. Additional moisture beneficial to crops, but excessive northeast. Southern parishes need more moisture. Cultivation and layby row crops continued. Soybean planting virtually completed--crop mostly good, but some fields getting grassy. Cotton growing rapidly and mostly good condition. About 75% crop fruiting--insect control measures becoming active. Rice heading, yield prospects good to excellent. Harvest getting underway. Sugarcane good condition, but needs more moisture--corn fair to good--some maturing. Sweetpotatoes fair to good. Harvest peaches and watermelons active. Second cutting hay being made--yields mostly light. Pastures improving.

MARYLAND AND DELAWARE: Temperatures averaged 5° to 8° below normal as cool wet weather continues. Extremes: 90's, 50's. Rainfall from thunderstorms and showers on as many as 5 days, ranged mostly from 0.50 inch to 1.50 inches. Repeated showers limited fieldwork. Some barley combined drier fields. Wheat ripe, but little harvested. Corn good, except low areas, tassels starting south. Soybean seeding awaiting grain harvest. Tobacco setting pushed, 95% done. Vegetable crops erratic, some losses from harvest delays. Early peaches and apples being picked.

MICHIGAN: Record cold south, dry early, light showers and slow warming as period ended. Minimum temperatures upper 30's to low 40's common in southern Michigan established new lows for July at Lansing, 37°, and Detroit, 42°. Spotty light frost and subfreezing temperatures occurred in interior Upper Peninsula. Temperature averages: 5° to 10° below normal Upper Peninsula; 7° to 13° below normal Lower Peninsula with largest departures interior. Precipitation totals: 0.10 to 0.50 inch except locally over 1.50 inches Thumb area. Cool cloudy weather and dry soils limited crop growth. Soil moisture short to adequate. State averaged 5.6 days suitable fieldwork. About 75% wheat turned yellow, 5% ripe. Considerable lodging wheat. Oats

over 70% headed, but dry soils limiting development many areas. Cool cloudy weather slow corn and dry bean growth. Average corn height 25 inches. Some dry bean acreage not yet planted. Sugar beets developing well. Soybeans late, but stands good. About 80% 1st cutting hay made. Pasture feed supplies below average. Cool weather and dry soils slowing fruit sizing. Sweet cherry harvest underway southwest and west-central. Strawberry picking about finished southwest, at peak Upper Peninsula. Vegetable growth slowed by cool cloudy weather.

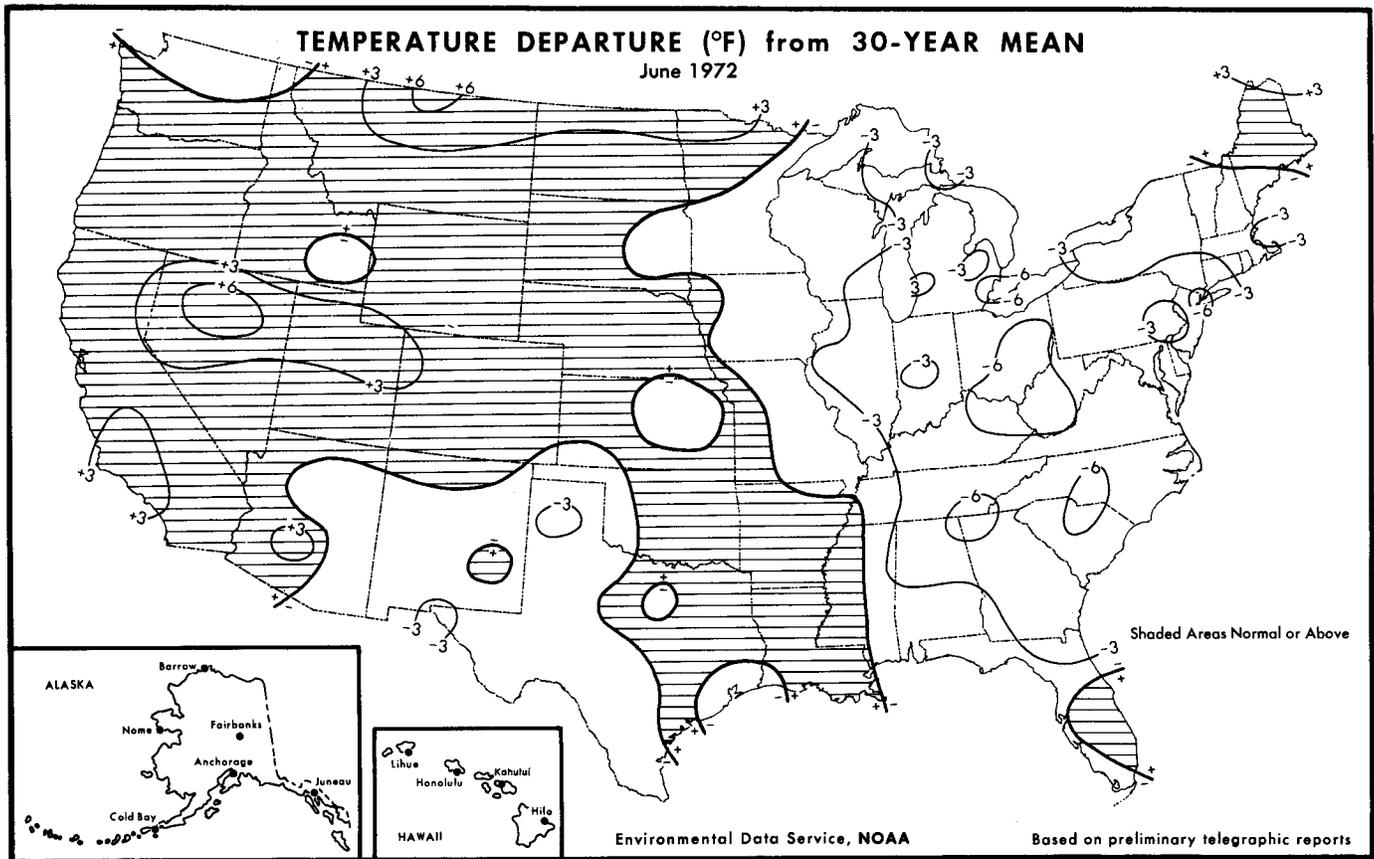
MINNESOTA: Temperatures below normal; the northwest and north-central part of State temperatures generally 3° to 5° below normal. Rest of State was very cold, 8° to 11° below normal. Extremes 90°, 32°. Precipitation: 0.25 inch northern half of State; southern half generally 0.50 to 0.75 inch except 1.00 inch to near 3.00 inches of rain fell on 8th along a 50-mile wide line from Ortonville-Mankato-Grand Meadow into northeast Iowa. Crops good to excellent condition south, fair north. Moisture adequate south; short north; critically short areas northwest. Some corn beginning to tassel; average height 35 inches, normal 29. Soybeans 12 inches, normal 11; 16% blooming, normal 15%. Flax 11% blooming, normal 45%. Percent heading; spring wheat 68, normal 64; oats 72, normal 75; barley 66, normal 67. Percent turning ripe; winter wheat 38, normal 34; rye 47, normal 53.

MISSISSIPPI: Thunderstorms on 1st, 2d, and 3d scattered locations across State. McComb Airport reported damages estimated under \$100,000. Weekly rainfall totals varied from under 1.00 inch to over 2.50 inches. Temperature averages were 4° to 6° below normal. Extremes: 98° and 50°. Cool Friday. Over weekend: Little or no rain and gradually warmer. Soil moisture adequate to mostly surplus north 2/3 and short to adequate south. Average 2.8 days suitable for fieldwork. Peaches 50%, potatoes 93%, and hay about 45% harvested. Cotton acreage 80% squaring and 43% setting bolls. Corn acreage 53% silked. Corn, sorghum, hay, soybeans, rice, sweetpotatoes, pastures, and livestock good condition. Cotton fair to good.

MISSOURI: Recordbreaking cold midweek with lowest 41° at St. Joseph. Temperatures rose to near normal by weekend. Temperatures averaged 6° to 8° below normal. Rainfall heavy in southern and eastern Ozarks and Bootheel. Amounts ranged from 1.00 to 3.00 inches. Unofficial amounts of 4.00 to 8.00 inches in Bootheel. Five days suitable for fieldwork. Corn and soybeans fair to good. Corn 19% silked, soybeans 9% blooming, wheat 90% harvested, same as last year. Oats 41% harvested. Cotton mostly good condition, 76% squaring. Alfalfa 2d cutting 60% and clover timothy hay 79% harvested. Soil moisture short all but southeast which is adequate.

MONTANA: Cool at the beginning and end, warm midweek. Temperatures averaged from near normal western mountains to 5° below normal eastern plains. Only scattered light showers. Topsoil moisture short except extreme east and portions southwest and northwest tip. Growth and condition winter wheat good to excellent eastern 1/3, generally poor to good elsewhere. Conditions extremely variable north-central. Some fields headed out with short straw, nearby fields have long straw. Winter wheat 5% boot, 70% headed,

(Continued on page 10)



WEATHER - JUNE 1972

TEMPERATURE: June temperatures averaged within a few degrees of normal over most of the Nation. Most of the East, southeastern Arizona, southern New Mexico, and western Texas averaged 1° or 2° cooler than normal. Most of the rest of the Nation averaged 1° or 2° warmer than normal.

A warming trend occurred over the Great Plains early in June. Temperatures climbed to the 90's over the central and southern Great Plains and summer weather continued over much of that area until after midmonth. Cool air moved into the northern Great Plains shortly after midmonth dropping afternoon temperatures about 20°.

The Southwestern Deserts continued hot through most of the month, typical for June. Maximums in the warmest localities exceeded 100° on most afternoons. Furnace Creek, Calif., registered 124° on June 29. This is 10° cooler than the all-time record for California (and the United States), 134°, recorded at Greenland Ranch, Calif., July 10, 1913.

PRECIPITATION: Almost the entire area from Oregon to the Continental Divide and southward to the Mexican Border received less than 1.00 inch of rain in June. Most stations in that large dry area received less than 0.50 inch. Elsewhere over the Nation, the rainfall was very unevenly distributed and ranged widely. A large area from central New York to central Virginia received 8.00 to more than 12.00 inches most of which fell from Tropical Storm Agnes in the week ending June 25.

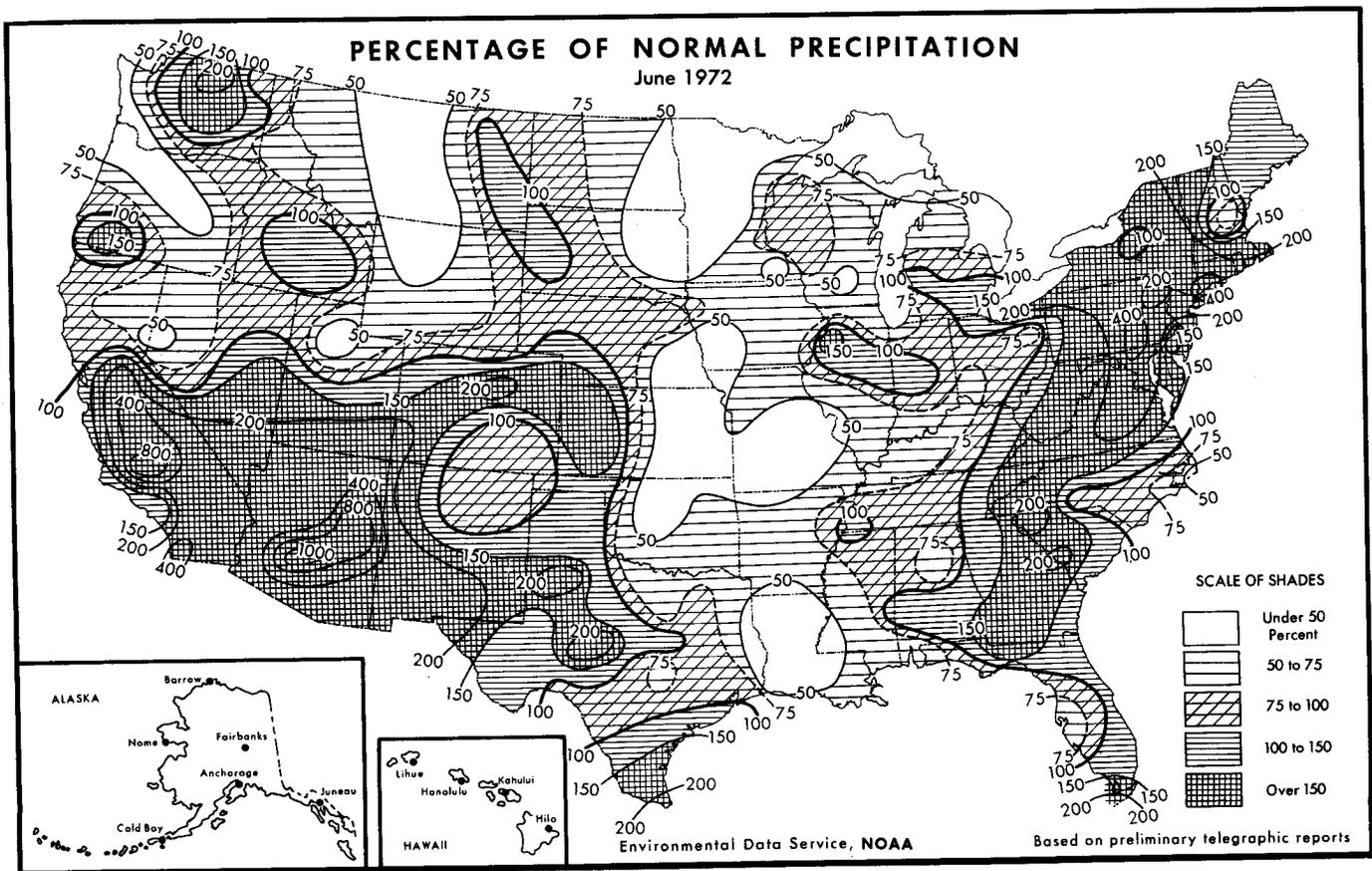
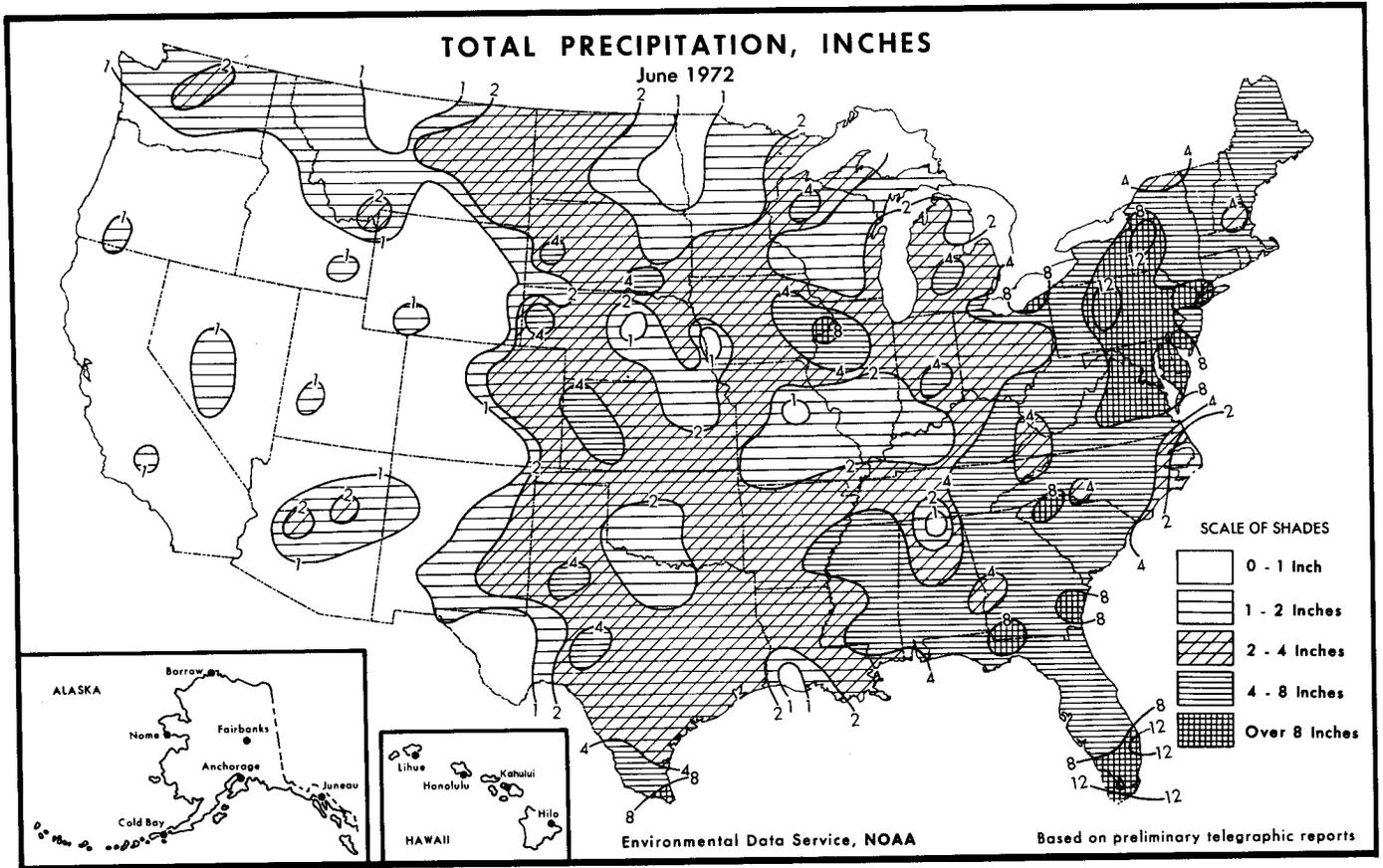
Afternoon thundershowers in the first week of June dotted the dry Southwest--the Mountains and the Deserts. The 0.06-inch rain at Phoenix on the

7th was important because it ended a 160-day period of no rain or only very light sprinkles. Heavy thundershowers at the end of the 1st week of June in west-central Iowa, 3.00 to 5.00 inches in spots, flooded roads and stalled traffic.

Torrential rains in northern and eastern Black Hills on the evening of June 9, caused the worst natural disaster in South Dakota history. The 3.00- to 5.00-inch rains flooded portions of the Keystone, Sturgis, and Rapid City areas.

About 200 persons were drowned. Hundreds were left homeless. Many bridges and many miles of roads and railroad tracks were destroyed. Property damage was in the neighborhood of \$100 million. Widespread thundershowers occurred over much of the central and eastern portions of the Nation about midmonth. Generous rains soaked a large area from northeastern Texas to western Indiana where May rainfall was generally less than 50% of normal. Many citizens in parts of Rapid City, S. Dak., left their homes on the 17th after 2.00 to 3.00 inches of rain fell in the area accompanied by winds gusting to 50 m.p.h. Hurricane Agnes played the star roll in the weather news in the 4th week of June. Details of Agnes are on page 15. Phoenix, Ariz., received a heavy shower, 1.64 inches, on June 21 and 22. This is more rain than ever fell in the month of June at Phoenix. A locality a few miles north of Phoenix Airport received 4.20 inches of rain in 2 1/2 hours. This is one of the vagaries of desert climate--the wettest June of record can follow the driest 5-month period in weather history. The month ended as heavy thunderstorms rumbled across

(Continued on page 10)



Heating Degree Days (Base 65° F.)

JUNE 1972

ALA, Birmingham	7	MAINE, Caribou	134	OKLA, Okla. City	0
Mobile	0	Portland	155	Tulsa	0
Montgomery	0	MD, Baltimore	42	OREG, Astoria	196
ALASKA, Anchorage	384	MASS, Boston	54	Burns	114
Barrow	968	Chatham	177	Medford	54
Fairbanks	205	MICH, Alpena	232	Pendleton	61
Juneau	437	Flint	91	Portland	61
Nome	555	Flint	17	Salem	--
ARIZ, Flagstaff	220	Grand Rapids	102	PA, Allentown	54
Phoenix	0	Houghton Lake	191	Erie	184
Tucson	0	Lansing	142	Harrisburg	44
Winslow	2	Marquette	257	Philadelphia	26
Yuma	0	S. Ste. Marie	232	Pittsburgh	96
ARK, Fort Smith	--	MINN, Duluth	211	Scranton	109
Little Rock	0	International Falls	109	R.I. Providence	55
CALIF, Bakersfield	0	Minneapolis	73	S.C, Charleston	0
Eureka	0	Rochester	88	Columbia	1
Fresno	0	St. Cloud	96	Greenville	14
Los Angeles	0	MISS, Jackson	0	S. DAK, Aberdeen	39
Red Bluff	12	Meridian	0	Buron	57
Stockton	0	Vicksburg	--	Rapid City	74
San Diego	0	MO, Columbia	12	Sioux Falls	50
San Francisco	145	Kansas City	0	TENN, Chattanooga	10
COLO, Denver	4	St. Louis	--	Knoxville	11
Grand Junction	0	Springfield	2	Memphis	0
Pueblo	0	MONT, Billings	36	Nashville	6
CONN, Bridgeport	33	Glasgow	55	TEX, Abilene	0
Hartford	50	Great Falls	77	Amarillo	0
D. C, Washington	21	Houston	32	Austin	0
FLA, Apalachicola	0	Helena	120	Beaumont	0
Ft. Myers	--	KallsPELL	28	Brownsville	0
Jacksonville	0	Miles City	25	Corpus Christi	0
Key West	0	Missoula	133	Dallas	0
Lakeland	0	NEBR, Grand Island	19	Del Rio	0
Miami	0	Lincoln	14	El Paso	0
Orlando	0	Norfolk	25	Fort Worth	0
Pensacola	--	North Platte	--	Galveston	0
Tallahassee	0	Omaha	21	Houston	0
Tampa	0	Valentine	--	Lubbock	0
GA, Atlanta	5	NEV, Rly	102	Midland	0
Augusta	2	St. Yagaz	0	San Angelo	0
Macon	0	Reno	54	San Antonio	0
Savannah	0	Winemucca	37	Victoria	0
IDAH, Boise	45	N. H. Concord	112	Waco	0
Lewiston	46	N. J, Atlantic City	44	Wichita Falls	0
Pocatello	101	Trenton	31	UTAH, Blanding	--
ILL, Cairo	--	N. MEX, Albuquerque	0	Salt Lake City	2
Chicago	78	Roswell	0	VT, Burlington	113
Moline	25	N. Y, Albany	97	Warrensburg	36
Peoria	42	Binghamton	116	Norfolk	0
Rockford	--	Buffalo	117	Richmond	21
Springfield	--	New York	43	Roanoke	--
IND, Evansville	16	Rochester	78	WASH, Colville	141
Fort Wayne	66	Syracuse	84	Omak	81
Indianapolis	35	N. C, Asheville	35	Quillayute	269
South Bend	109	Charlotte	13	Seattle-Tacoma	144
IOWA, Burlington	38	Greensboro	30	Spokane	127
Des Moines	23	Hattiesburg	17	Walla Walla	35
Dubuque	63	Raleigh	16	Yakima	55
Sioux City	16	Wilmington	4	W. VA, Beckley	--
KANS, Concordia	12	N. DAK, Bismarck	65	Charleston	--
Dodge City	3	Fargo	60	Huntington	60
Goodland	10	Williston	--	Parkersburg	74
Topeka	10	OHIO, Akron-Canton	110	WIS, Green Bay	42
Wichita	0	Cincinnati	64	Madison	117
KY, Lexington	47	Cleveland	124	Milwaukee	--
Louisville	19	Columbus	101	WYO, Casper	48
LA, Baton Rouge	--	Dayton	67	Cheyenne	--
Lake Charles	0	Toledo	95	Lander	63
New Orleans	0	Youngstown	157	Sheridan	--
Shreveport	--				

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

(WEATHER - June 1972 continued from page 8)
the South, large hail fell in Oklahoma and Missouri, and tornadoes occurred in scattered parts of the Great Plains.

L. W. Dye

(MONTANA continued from page 7)

25% turning. Sugar beets and potatoes mostly good condition, sugar beet thinning virtually complete. First cutting alfalfa 60% complete, wild hay 30% complete. Grazing feed supplies short to adequate, some surplus eastern 1/3. Cattle and sheep continue to do well. Grass-hopper activity light, spraying alfalfa weevils underway scattered areas.

NEBRASKA: Except southwest on 1st, temperatures 1st through 5th averaged 10° to 20° subnormal. Record or near-record low temperatures on 4th and 5th. Temperatures began to warm slowly beginning the 6th. Rainfall spotty and generally under 0.50 inch, although rainfall totals in excess of 1.00 inch in a few spots. Portions of the southeast are becoming rather dry. The weekend of the eighth saw typical summer weather across the state with maximum climbing back into the 90s. Wheat harvested slowed slightly by

rain, crops 62% ripe and 32% harvested, normal 65% ripe and 35% harvested. Few local areas reported hail damage to crops. Irrigation corn, beets and dry beans active. Second hay crop cut. Occasional spraying green bugs sorghum reported. Livestock condition good to excellent.

NEVADA: Continued warm and dry. Temperatures averaged 3° to 6° above normal. Spotty traces of precipitation north. None elsewhere. Alfalfa 1st cutting underway northwest. About 3/4 complete western part State. Weevil infestation bad some areas. Alfalfa 3d cutting underway southern valley with good yields reported. Small gains good condition with harvesting progress south. Livestock fair to good. Cattle deaths about normal, but coyotes inflicted high kills some sheep flocks.

NEW ENGLAND: Week cool entire region with weekly mean temperatures 4° to 8° below normal with 5th being especially cool. Scattered showers and thunderstorms July 3, 5, 6, 8, and 9 but more widespread on 3d. Weekly precipitation was variable with amounts 0.50 to 3.50 inches except a trace to 0.50 inch amounts southeast Connecticut, much of Rhode Island, coastal Massachusetts and coastal Maine. Some heavy thunderstorms July 3 and 8 with locally damaging large hail in northeast Connecticut on 8th. Some hay put in barns toward end of period. Quality poor due over maturity. Some 1st crop being dumped. Planting silage corn generally complete. Pastures remain good. Conditions remain favorable for potato crop Aroostook County, Maine. Seasonal vegetables moving to market in moderate volume. Fruit growers continue rigid pest control program. Cranberries full bloom and looking good. Tobacco in Connecticut Valley showing some yellow. Growers sidedressing. Strawberry harvest continues with noticeable amount soft berries.

NEW JERSEY: Very cool week with temperatures averaging from 6° to 10° below normal. Readings varied from low 90's to upper 40's. This was 3d consecutive week with below-normal temperatures. Rainfall averaged around 0.70 inch throughout State with station totals ranging from 0.25 inch at Trenton to 1.64 inches at East Millstone. Small hail north of Freehold on afternoon of 8th. No damage reports received. Soil moisture continues adequate to excessive. Frequent rain interrupting harvest some crops. Light supplies sweet corn and tomatoes available. Scattered harvest dry onions started. Snap bean and cucumber movement good. Some early summer apples available. Blueberry volume increasing. Barley harvest advancing as weather permits. Haymaking well behind schedule. Most field corn and soybean fields weedy--growers cultivating. Some corn and soybeans yet to be planted.

NEW MEXICO: Daily scattered showers most widespread midweek. Precipitation totaled light in west but locally more than 1.00 inch in southeast and more than 2.00 inches in northern mountains. Cooling then warming. Temperatures averaged above normal in west and much below normal east. Warmest in west early in week and elsewhere on weekend. Coolest midweek. Soil moisture conditions range from very short to adequate. Rains very spotted. Wheat and barley harvest nearing completion, sorghum grain good conditions. Cotton fruiting stage southern areas. Alfalfa good condition. Onion harvest still active. Range condition varies. Livestock generally good.

(Continued on page 12)

Temperature and Precipitation Data for JUNE 1972

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 . . .	74	- 5	2.7	-1.3	New Orleans . . .	81	+ 1	3.1	-1.3	OKLA,Okla. City . .	79	+ 1	1.4	-3.1
Mobile . . .	81	- 1	3.7	-2.5	Shreveport . . .	77	- 1	2.2	-1.1	Tulsa . . .	80	+ 3	2.7	-2.0
Montgomery . . .	78	- 1	5.5	+1.3	MAINE,Caribou . . .	62	+ 3	5.0	+ .9	OREG,Astoria . . .	58	+ 2	.9	-2.1
ALASKA,Anchorage . .	52	- 3	6.1	+5.1	Portland . . .	60	- 2	4.2	+1.0	Burns . . .	62	+ 2	.4	- .5
Barrow . . .	33	0	.1	- .3	MD,Baltimore . . .	69	- 4	10.0	+6.7	Medford . . .	65	+ 1	1.6	+ .6
Fairbanks . . .	59	+ 1	.6	- .8	MASS,Boston . . .	65	- 3	6.8	+3.3	Pendleton . . .	61	- 1	1.4	- .5
Juneau . . .	50	- 2	4.0	+ .6	Chatham . . .	59	- 1	6.1	---	Portland . . .	64	+ 2	.7	-1.0
Nome . . .	46	0	1.4	+ .5	MICH,Alpena . . .	57	- 4	1.4	-1.3	Salem . . .	67	- 2	8.6	+4.5
ARIZ,Flagstaff . . .	58	- 2	1.9	+1.2	Detroit . . .	64	- 6	3.3	+ .5	PA,Allentown . . .	60	- 7	7.5	+4.4
Phoenix . . .	88	+ 4	1.7	+1.6	Flint . . .	63	- 3	3.1	0	Erie . . .	68	- 3	18.6	+15.2
Tucson . . .	82	- 1	.7	+ .4	Grand Rapids . . .	64	- 3	4.6	+1.3	Harrisburg . . .	69	- 2	5.8	+1.7
Winslow . . .	72	- 2	3.2	+2.9	Houghton Lake . .	60	- 4	2.0	-1.1	Philadelphia . . .	64	- 4	5.8	+2.0
Yuma . . .	88	+ 2	.3	+ .3	Lansing . . .	62	- 5	3.3	0	Pittsburgh . . .	63	- 5	7.0	+3.1
ARK,Fort Smith . . .	79	0	2.6	-1.0	Marquette . . .	57	- 3	1.7	-1.8	Scranton . . .	65	- 1	6.8	+4.0
Little Rock . . .	80	+ 3	1.1	+1.0	Muskegon . . .	62	- 5	3.3	+ .6	R.I,Providence . . .	74	- 5	5.3	+ .3
CALIF,Bakersfield . .	80	+ 3	1.1	+1.0	S.Ste.Marie . . .	57	- 2	1.3	-2.0	S.C,Charleston . . .	74	- 6	6.1	+2.2
Eureka . . .	78	+ 3	.6	+ .5	MINN,Duluth . . .	58	- 1	3.7	- .6	Columbia . . .	71	- 5	8.2	+5.3
Fresno . . .	72	+ 4	1.1	0	Internat'l Falls . .	63	+ 3	1.5	-2.4	Greenville . . .	67	0	1.8	-2.0
Los Angeles . . .	78	+ 2	.3	- .2	Minneapolis . . .	66	- 1	1.1	-3.4	S.DAK,Aberdeen . . .	66	- 2	1.3	-1.8
Red Bluff . . .	67	+ 1	.4	+ .3	Rochester . . .	64	- 1	1.9	-2.6	Huron . . .	65	0	4.1	+1.0
San Diego . . .	61	0	.1	0	St. Cloud . . .	80	+ 1	2.0	-1.9	Rapid City . . .	67	0	2.1	-2.3
San Francisco . . .	74	+ 1	2.9	+1.5	MISS,Jackson . . .	78	- 2	4.2	+ .1	Sioux Falls . . .	70	- 8	4.0	+ .3
Stockton . . .	68	+ 1	.2	+ .1	Meridian . . .	73	- 1	.7	-3.6	TENN,Chattanooga . .	71	- 5	5.0	+1.7
COLO,Denver . . .	74	+ 3	.6	+ .2	MO,Columbia . . .	77	+ 1	2.7	-1.9	Knoxville . . .	78	+ 1	5.5	+1.8
Grand Junction . . .	73	+ 2	1.0	- .2	Kansas City . . .	73	- 1	1.2	-3.1	Memphis . . .	73	- 4	2.5	- .8
Pueblo . . .	64	- 4	17.7	+14.3	St. Louis . . .	74	0	1.6	-3.4	Nashville . . .	81	+ 1	3.7	+1.0
CONN,Bridgeport . . .	66	- 3	9.7	+6.0	Springfield . . .	67	+ 2	.9	-1.7	TEX,Abilene . . .	74	- 3	3.9	+1.0
Hartford . . .	70	- 4	11.5	+ 8.3	MONT,Billings . . .	66	+ 4	3.8	+ .8	Amarillo . . .	82	0	2.2	-1.0
D.C,Washington . . .	79	- 1	5.2	- .1	Glasgow . . .	65	+ 5	.9	-2.0	Austin . . .	81	- 2	3.4	-1.0
FLA,Apalachicola . .	76	- 5	6.8	+ .5	Great Falls . . .	67	+ 6	.5	-2.2	Beaumont . . .	81	- 2	8.5	+5.5
Ft. Myers . . .	81	- 1	14.4	+10.4	Havre . . .	62	+ 2	1.1	-1.1	Brownsville . . .	82	0	3.7	+1.3
Jacksonville . . .	80	0	10.9	+3.5	Helena . . .	69	+ 3	3.6	+ .9	Corpus Christi . . .	82	+ 1	2.8	- .4
Key West . . .	82	+ 1	6.3	- .7	Kalispell . . .	62	+ 3	1.4	- .5	Dallas . . .	82	+ 2	1.8	- .5
Lakeland . . .	78	- 2	11.3	+4.8	Miles City . . .	73	+ 2	1.9	-1.9	Del Rio . . .	78	- 3	1.6	+ .9
Miami . . .	81	0	5.2	-2.1	Missoula . . .	74	+ 1	2.2	-2.3	El Paso . . .	81	- 1	1.5	-1.5
Orlando . . .	72	- 5	4.4	+ .6	NEBR,Grand Island .	71	+ 1	3.7	- .6	Fort Worth . . .	80	- 2	2.9	+ .2
Tallahassee . . .	74	- 5	6.3	+3.3	Lincoln . . .	68	- 3	6.1	+2.5	Galveston . . .	81	- 1	3.0	- .7
Tampa . . .	76	- 5	6.2	+2.9	Norfolk . . .	71	+ 1	3.7	- .6	Houston . . .	77	- 1	5.4	+2.9
GA,Atlanta . . .	75	+ 1	4.6	-2.2	North Platte . . .	71	0	1.0	-3.6	Lubbock . . .	79	- 2	1.7	+ .1
Augusta . . .	79	+ 1	.8	+ .5	Omaha . . .	62	+ 3	.8	+ .3	Midland . . .	81	- 2	4.2	+2.4
Macon . . .	76	- 4	6.5	+ .9	Valentine . . .	85	+ 2	.3	+ .3	San Angelo . . .	80	- 2	2.9	- .1
Savannah . . .	75	+ 1	1.7	+ .2	NEV,Ely . . .	68	+ 6	.6	- .2	San Antonio . . .	82	+ 1	3.2	+ .2
HAWAII,Hilo . . .	78	+ 1	1.7	+ .2	Las Vegas . . .	65	+ 5	.2	- .2	Victoria . . .	83	+ 1	3.0	+ .3
Honolulu . . .	76	- 1	.3	+ .1	Reno . . .	68	+ 6	.6	- .2	Waco . . .	82	0	1.8	-1.4
Kahului . . .	78	+ 1	1.7	+ .2	Winnemucca . . .	63	- 2	3.5	- .3	Wichita Falls . . .	82	0	1.8	-1.4
Lihue . . .	68	+ 2	.9	0	N.H,Concord . . .	66	- 4	4.8	+2.0	UTAH,Blanding . . .	72	+ 5	.2	- .8
IDAHO,Boise . . .	67	+ 2	.9	- .8	N.J,Atlantic City . .	68	- 3	6.1	+2.5	Salt Lake City . . .	63	- 1	6.5	+3.0
Lewiston . . .	62	- 1	1.3	+ .3	Trenton . . .	74	- 1	.6	0	VT,Burlington . . .	68	- 5	8.6	+4.5
Pocatello . . .	66	- 5	2.8	-1.3	N.MEX,Albuquerque . .	78	+ 1	2.1	+1.0	VA,Lynchburg . . .	71	- 5	4.9	+1.3
ILL,Cairo . . .	69	- 2	8.7	+4.3	Roswell . . .	64	- 3	6.8	+3.5	Norfolk . . .	70	- 5	10.9	+7.1
Chicago . . .	68	- 4	6.0	+1.9	N.Y,Albany . . .	62	- 3	9.2	+5.3	Richmond . . .	70	- 5	10.9	+7.1
Moline . . .	68	- 4	6.0	+1.9	Binghamton . . .	63	- 2	6.1	+3.6	Roanoke . . .	60	- 1	1.5	- .2
Peoria . . .	66	- 2	2.5	-1.7	Buffalo . . .	66	- 6	8.2	+4.8	WASH,Colville . . .	63	- 2	3.2	+1.7
Rockford . . .	65	- 2	12.3	+9.3	New York . . .	65	- 2	6.6	+4.0	Omak . . .	56	0	1.5	-1.9
Springfield . . .	67	- 5	6.5	+3.0	Rochester . . .	65	- 2	12.3	+9.3	Quillayute . . .	60	0	1.8	+ .2
IND,Evansville . . .	71	- 5	1.9	-1.8	Syracuse . . .	67	- 5	6.5	+3.0	Seattle-Tacoma . . .	62	0	1.6	+ .1
Fort Wayne . . .	69	- 2	6.0	+1.4	N.C,Asheville . . .	71	- 6	3.0	- .6	Spokane . . .	68	+ 1	1.1	- .1
Indianapolis . . .	64	- 5	2.7	- .9	Charlotte . . .	69	- 6	6.4	+2.9	Walla Walla . . .	66	+ 2	1.5	+ .7
South Bend . . .	69	- 3	4.8	- .2	Greensboro . . .	72	- 3	1.8	-2.3	Yakima . . .	65	- 7	4.3	+ .6
IOWA,Burlington . . .	70	- 1	2.6	-2.1	Hatteras . . .	70	- 5	4.2	+ .5	W.VA,Beckley . . .	66	- 6	4.4	+ .3
Des Moines . . .	66	- 2	2.5	-1.7	Raleigh . . .	73	- 5	3.5	- .8	Charleston . . .	66	- 7	5.4	+1.1
Dubuque . . .	72	+ 1	3.8	- .5	Wilmington . . .	65	0	1.8	-1.6	Huntington . . .	66	- 7	5.4	+1.1
Sioux City . . .	73	- 1	1.7	-2.5	N.DAK,Bismarck . . .	67	+ 2	.6	-2.4	Parkersburg . . .	64	- 2	2.3	-1.1
KANS,Concordia . . .	74	0	5.9	+2.9	Fargo . . .	63	- 6	3.2	-1.1	WIS,Green Bay . . .	67	- 2	3.8	- .4
Dodge City . . .	71	+ 1	4.8	+2.1	Williston . . .	67	- 5	2.5	-1.7	La Crosse . . .	63	- 3	1.7	-2.3
Goodland . . .	74	- 1	1.1	-3.4	OHIO,Akron-Canton . .	63	- 6	3.2	-1.1	Madison . . .	65	+ 2	.8	- .5
Topeka . . .	77	0	2.0	-2.2	Cincinnati . . .	63	- 5	9.1	+5.7	Milwaukee . . .	63	0	1.7	- .4
Wichita . . .	68	- 6	3.6	-1.1	Cleveland . . .	64	- 7	4.0	- .2	WYO,Casper . . .	64	+ 2	.7	- .7
Wichita . . .	71	- 2	1.1	-2.9	Columbus . . .	67	- 5	3.0	-1.1	Cheyenne . . .	64	+ 2	.7	- .7
LA,Baton Rouge . . .	81	0	.9	-3.8	Dayton . . .	64	- 4	4.1	+ .3	Lander . . .	64	+ 2	.7	- .7
Lake Charles . . .	81	0	.9	-3.8	Toledo . . .	61	- 6	4.4	+ .8	Sheridan . . .	64	+ 2	.7	- .7
					Youngstown . . .	61	- 6	4.4	+ .8	P.R. San Juan . . .	64	+ 2	.7	- .7

* Departures are from 30-year means (1931-60).

Based on preliminary reports

(Continued from page 10)

NEW YORK: Temperatures below normal for 5th week. Very cool through 5th. Then gradual warming latter half of period. Maximums 60° to 65° 1 or 2 days early week warming to 77° to low 80's on 8th and 9th. Nights cool through midweek. Minimums in low 40's northern valleys and in low 50's southern Upstate 2 or 3 nights around 6th. Weekly precipitation through 7th totaled mostly 0.90 to 1.40 inches except near Lake Erie and extreme southeast where 0.30 to 0.60 inches. Scattered light to locally moderate showers on 8th and 9th. Field crops showing ill effects extreme cool weather and saturated wet conditions. Corn growing slowly, poor color and condition. Weed control problem. Early oats heading on short straw, many wet spots and some lodging. Dry beans poor to fair as many stands have been in water and growth slow. Only 50% 1st cutting hay made and that is very poor quality--poor progress. Pastures good condition, though wet. Wheat beginning to ripen. Acreage losses potatoes heavy Steuben, Livingston Counties and muckland areas Elba and Savannah. Long Island potatoes remain good. Lettuce harvest underway--Oswego, quality fair. Onion potential reduced, lost acreage and poor stands. Tomatoes fair condition--set light. Transplanting cabbage delayed. Sweet cherry harvest delayed. Peaches and pears good. Apples sizing nicely. Grapes near lake remain in bloom Chautauqua--Erie area.

NORTH CAROLINA: Showers 4th through 6th. Total amounts 0.25 inch to 3.00 inches averaging 1.00 inch. Hot at first with highs in 90's and lows near 70° turning cool latter part of period with some near-record lows in 40's and low 50's. Average temperatures below normal. Soil moisture mostly adequate. Farm activities; planting soybeans, cultivating crops, harvesting peaches, potatoes small grains, and flue-cured tobacco. Average 3.6 days fieldwork. Some improvement crop conditions. Corn, peanuts, soybeans, pastures, hays, Irish and sweetpotatoes mostly good. Flue-cured tobacco fair to good, burley mostly good. Cotton poor to mostly fair, few reports good. Apples fair to good. Peaches mostly fair.

NORTH DAKOTA: Cool first of week followed by warming trend. Frost in few western and central locations Tuesday morning. Temperatures averaged 5° to 8° below normal. Highs 90° or above in west and central areas Sunday. Sunny except for widely scattered showers. Rainfall very light most areas with totals none to 0.71 inch. Unofficial reports of over 1.00 inch. Hail damage in Cass and Richland Counties Thursday. Condition small grain ranges generally good west to poor in driest eastern localities. Over half hard spring wheat headed. About 1/5 winter wheat turning. Haying, working summerfallow and cultivating row crops major farm activities.

Ohio: Another wet and cool week in Ohio. On 9th, two people were killed by lightning near Lake Erie shore. On 4th to 7th maximum temperatures did not get out of 70's. Akron-Canton's 58° on 5th was coldest maximum temperature ever recorded on that date. Many new minimum temperatures mark were set on 5th to 7th. On 6th, a new all time monthly low was set at Dayton (44°) and equaled at Toledo (43°). Rain on everyday this past week. On 3d, many stations reported over 1.00 inch of rain. The 1.63 inches at Celina was the highest amount. Mother nature continues to limit number days favorable for fieldwork. Since April 1st, only 51 favorable days recorded compared 80 days same period last year. Soil moisture supplies 53%

adequate, 45% surplus and 2% short. Average height corn 30 inches, 20 inches below average height last year and 6 inches below 1967-71 average. Average height soybeans 9 inches, 6 inches below year ago, and 3 inches below average. Haymaking continues to experience difficulty due wet weather. Less than 95% 1st cutting alfalfa up while 2d cutting started few areas. Wheat about 40% ripe over State, slightly behind last year. Barley 15% harvested, last year 45% was in bin. Oat crop 10% ripe, 30% last year.

OKLAHOMA: Precipitation ranged from 0.20 inch east-central to 1.30 inches southeast. Temperatures averaged from 9° below normal in Panhandle, southwest, and south-central to 12° below normal north-central. Locally heavy rains portions Woodward County Saturday, 8th, with unofficial amounts up to 10.00 inches causing some flash flooding. Surface moisture improved substantially, now rated 55% adequate. Subsoil 40% adequate. Growth row crops very favorable. Cultivation general. Over 1/2 corn crop tasseling, 1/5 dough, somewhat ahead year earlier. Nearly 1/5 sorghum grain heading. Some scattered late plantings continue. Cotton 1/4 squaring, sharply ahead year ago. Some flea hopper damage reported. Over 25% peanut crop and 10% soybean crop flowering. Second cutting alfalfa hay over 90% completed, 3d cutting underway several areas. Growth improving following recent rains. Wheat harvest completed. Pecans poor to fair. Early watermelon and cantaloupe harvest continues. Native grasses making good response to recent rains. Pasture and range conditions good to fair. Livestock continues to make steady gains.

OREGON: Hot sunny weather entire state except mostly cloudy south coast with 1 - 2 hot days north coast, weekly temperatures averaged most 3° - 9° above normal, minima 31°-55°, maxima 78° - 103°. 1 - 2 days of light showers totaling up to 0.07 inch limited north coast and scattered locations northeast quadrant. Strawberry harvest completed. Sweet cherry picking continuing Hood River and Grants Pass, starting at La Grande, finished other areas. Grain harvest becoming more active daily. Limited amount wheat being cut Columbia Basin. Barley harvest continues. Grass seed being wind-rowed and combining underway most producing areas. Green pea harvest moving into late production areas. Broccoli harvest underway and bush bean harvest rapidly approaching.

PENNSYLVANIA: Third consecutive cool week state-wide; 7th straight cool week many sections. Warm early in week southeast, otherwise cool throughout. Wednesday maxima 20° to 25° below normal. Weekly values 6° to 10° below normal. Extremes: 90°, 39°. Frequent showers and thunderstorms. Some severe with hail and strong winds west and central sections Sunday. Weekly totals 1.00 to 2.00 inches central and northwest, 0.50 to 1.00 inch southwest and northeast, less than 0.50 inch southeast corner. Weather unfavorable for crop development and harvest. Corn planting slow progress, growth slow and color pale. Barley harvest hindered by wet ground. Limited hay baled, poor quality. Damaged tobacco re-transplanted. Tart cherry harvest slowed, rotting and cracking. Peach sizing good, some rot. Some scab on apples. Some farmers changing intentions to meet forage requirements.

PUERTO RICO: Rainfall averaged 0.94 inch or 0.24 inch below normal. Heaviest showers western-interior and along west coast with weekly totals of 2.00 to 4.00 inches. Highest weekly total

4.34 inches on West Coast. Good showers of 1.00 to 2.50 inches in eastern-interior. Dry belt of little or no rain south-central coast through central-interior to northwest coast. Agricultural drought this area remained serious. Temperatures averaged a near normal 81° to 82° on coast and 76° to 77° interior with mean departure of only 0.2° below normal. Highest maximum 95°, lowest minimum 58°. Rains sugarcane zones helped development young plants and also with cultivating and other fieldwork. Dry weather retarding coffee bean development. Harvest preparations now underway. Tobacco zones report 2d crop seriously affected by drought. Some pasture zones improved by rains, but south-central and interior zones still suffering lack sufficient crop moisture. Some minor crop zones also improved by rains, but others still under agricultural drought conditions. Some plantain crops drought areas failed to yield fruit. Mangos in abundance west coast.

SOUTH CAROLINA: Showers 3d through 5th with cold front passing late on 5th. Most rainfall totals between 1.00 and 2.00 inches. Less than 1.00 inch from Antreville to Union and from Augusta to Manning. A small area of over 3.00 inches from Newberry to Camden. Temperatures averaged 4° to 5° below normal except only 1° below normal in south. This is 11th straight week of below-normal temperatures. Weeds, insects increasing problem. Tobacco good condition--18% harvested, 13% year ago. Corn good to excellent. Cotton fair to good. Pastures good to excellent. Wheat harvest 95% complete, oats 98%, compared 92% and 98% year earlier. Barley harvested. Soybean planting 94% complete. Stands good. Sorghum 90% planted, 93% last year. Peaches fair to good. Yields down result small size. Harvest 27% complete, 23% year ago. Grapes good to excellent. Tomato harvest complete Charleston Area. Watermelons good condition.

SOUTH DAKOTA: Temperatures averaged from 4° to 8° below normal. Extremes ranged from 35° at Shade-hill Dam on 4th to 103° at Philip on 9th. Precipitation fell as showers and thundershowers scattered through week with large variations in amounts. Lemmon reported only 0.01 inch while Milbank reported 1.99 inches. Scattered areas of hail midweek with some of greatest damage occurring in north-central part of State where up to 100% damage reported. Damaging wind and hail occurred at Pierre end of week with winds about 80 m.p.h. and hail that caused up to 100% damage. Crop prospects continue good, but insects, particularly green bugs and English grain aphids remain problem many areas. High winds that accompanied hail storms caused some lodging winter grains. Weevils holding back 2d cutting alfalfa some areas. Harvest early winter wheat expected to begin this week with major harvest winter wheat and rye beginning next week. Early small spring grains turning color. Corn height ranges from just starting to over 4 feet tall. Soil moisture shortages developing--not critical most areas. Livestock, pasture, and range condition generally good to excellent. Flies bothersome and few reports pink-eye received.

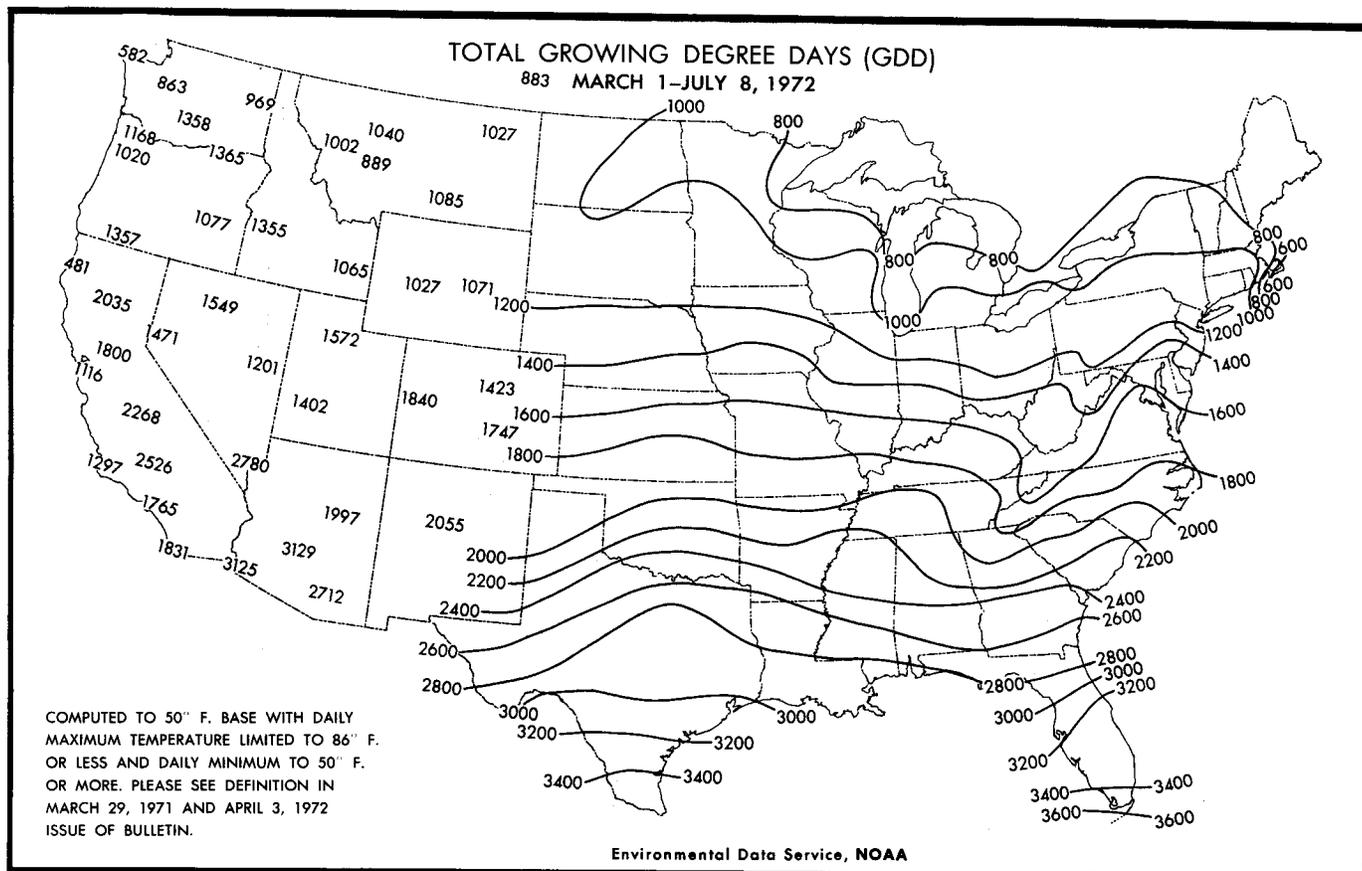
TENNESSEE: Unseasonable cool nights at midweek, with numerous new record low temperatures. Days warm beginning and end of period, but mild to cool all week Cumberland Plateau and eastern mountains. Temperatures averaged 7° to 11° below normal. Scattered showers and thundershowers early week. Totals generally 0.50 to 1.50 inches with 3.00 to over 4.00 inches parts of south-central. Favorable weather conditions stimulated rapid

growth and development. Grain and hay harvest, pasture clipping and rowcrop cultivation major activities. Wheat harvest 90% complete, oats 75%, and barley 85%. Over 10% soybeans began to bloom. Nearly 80% cotton squaring. About 35% corn silked. Tobacco growing well. Soil moisture; 73% adequate, 21% surplus, 6% short.

TEXAS: Cold front first of week brought scattered thundershowers and cooler temperatures to most sections of State. Thundershowers were again numerous on southern High Plains Saturday, but more widely scattered elsewhere. Temperatures returned to near normal over weekend. Cotton, corn, sorghum, peanuts making good to excellent progress. Rains provided excellent moisture to finish planting sorghum, peanuts, soybeans. Harvest sorghum gaining momentum south and south-central Texas. Nearing completion lower Rio Grande Valley. Yield prospects excellent. Wheat harvest nearing completion northern High Plains. Wheat yields and test weights exceed early season expectations. Percent harvested major crops; wheat 97, 100 last year; sorghum 10, 6 last year; rice 1, 0 last year. On High Plains, onion, potato harvest underway again after being delayed because wet fields. Extremely early fall cucumber harvest getting underway. Trans-Pecos cantaloupe harvest remains active. Knox-Haskell area Irish potato digging complete. North Texas cantaloupe harvest underway. Central and East Texas watermelon harvest gaining momentum. Tomato harvest continues. San Antonio-Winter Garden carrot harvest nearing completion with high temperatures affecting quality. At Laredo watermelon harvest nearing completion. Texas peach prospects continue to increase as picking continues. Peach trees have good to heavy nut set. Next years citrus crop continues satisfactory.

UTAH: Few isolated thunderstorms past week but accumulated amounts moisture very small--generally less than 0.10 inch. Most stations none. Average temperatures ranged from near normal to 6° above. Combination of high temperatures and lack of moisture intensified already serious drought conditions. Accumulation of growing degree days continues well above normal. Soil temperatures at 4-inch depth ranged from upper 70's Cache Valley to near 80° Salt Lake City and Richfield and mid-90's at St. George. Feed on ranges now in use rated poor to fair all areas. Winter wheat harvest completed Washington County, started within last 5 days Salt Lake, Utah, and San Juan Counties. Will start this week Box Elder, Juab, and Millard Counties. Yield prospects non-irrigated land poor to fair. Potatoes, sugar beets, and corn doing well. Yield prospects good. Cattle and sheep still good condition, but deer flies and other insects bothersome. Stockwater short some areas and feed getting scarce.

VIRGINIA: Temperatures below to much below normal after warm beginning. Precipitation generally heavy with showers and thundershowers first half. Two thirds State surplus supply soil moisture. Corn improved, but warmer weather needed. Some growers replanting fields destroyed by Agnes. Small grain harvest active early period, stopped by rain Wednesday. Wheat harvest 35%, barley 60%, oats 40%. Lowest progress since records started 1943, yields disappointing, field losses heavy. Planting soybeans behind small grains active. Peanut growth improved, but crops still 2 to 3 weeks behind schedule. Tobacco growth irregular. Flue-cured growers getting barns ready for har-



vest. Pasture condition at highest point of record. On Eastern Shore most of week favorable for digging potatoes, picking snap beans and cucumbers.

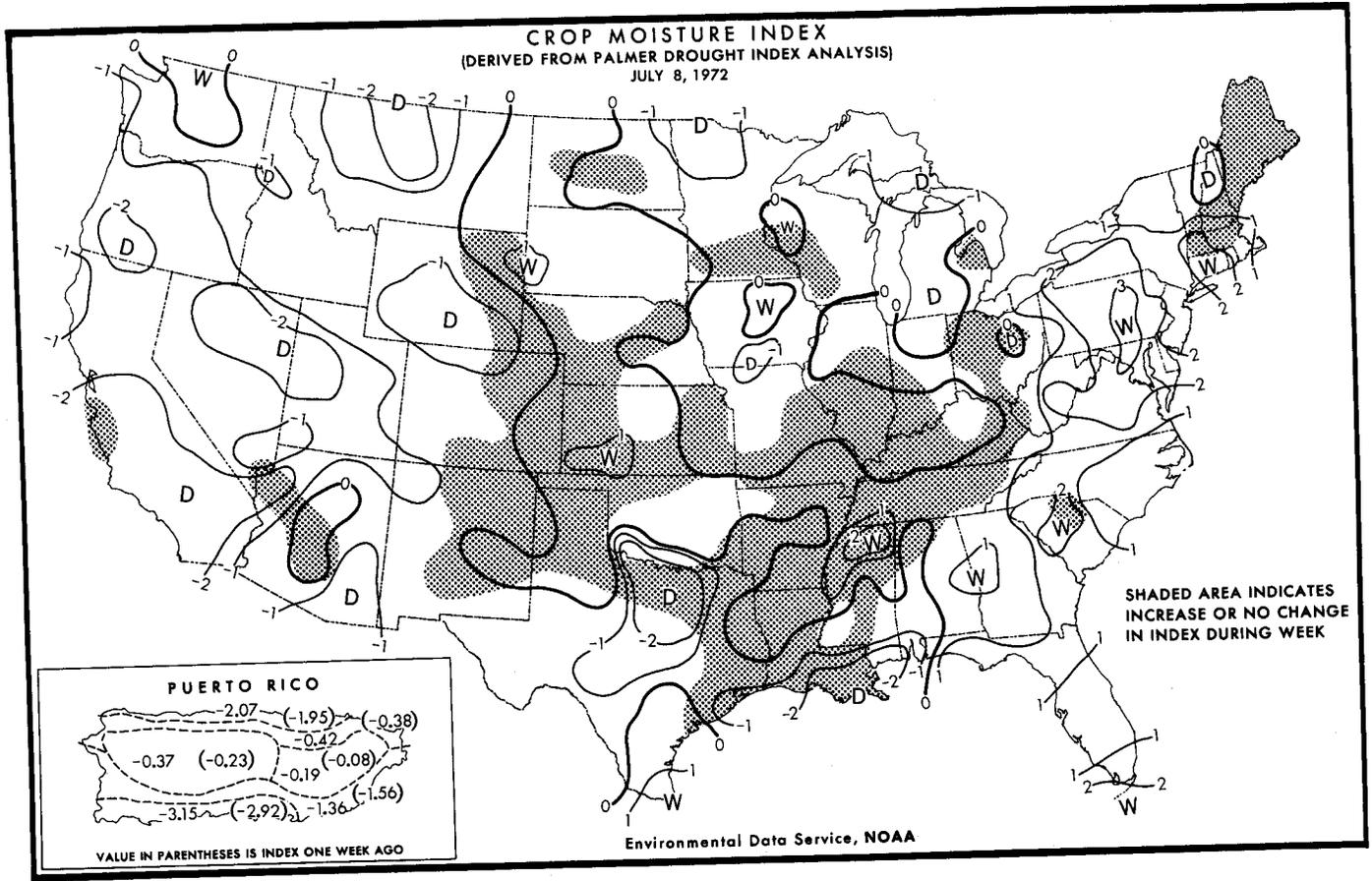
WASHINGTON: Western Washington: Holiday warm but temperatures averaged about normal for period. Few scattered showers north coast. Green pea harvest just started northern counties and cherry harvest full swing south. Strawberry picking concluding and raspberry harvest picking up. Range and pasture feed adequate. Eastern Washington: Warmer temperatures increased need for irrigation. Just few scattered rain showers extreme eastern counties. Sweet and field corn made good growth as did most other row crops. Haying general activity with 2d cutting 1/4 to 1/2 completed many areas. Green pea and cherry harvests continued. Carrot and cucumber harvest started around Walla Walla. Grasshoppers common topic southern half. Most problems occurring green fields bordering dry areas and emergency control measures necessary for many farms.

WEST VIRGINIA: Continued cool and damp with temperatures much below normal. Coldest July 7, with many readings in 30's and 40's. Rainfall heaviest July 3 and 5. Fieldwork 2 days because excessive rain. Soil moisture 83% surplus and 17% adequate. Wheat and barley ripening fast with some barley combined. Many farmers lost entire hay crop because of weather. Livestock good.

WISCONSIN: Very cool for first week of July. Scattered frost in northern areas on 4th. Showery across State Thursday and Saturday. Most stations received less than 0.50 inch. Soil

moisture remains short over half State. Corn reached average height 30 inches. Dry and cool weather slowed growth. Early corn mostly very good, while late planted corn quite variable. Very few disease problems this year. Oats 3/4 headed on short straw. Crop rated mostly fair. Winter wheat changing color. Soybeans good. Pea harvest continuing. Recent cooler weather boosted quality. Potatoes good. Strawberry harvest almost over. Short crop most areas. Apple set good. Hayfields and pastures fair to poor. Some farmers starting 2d cutting hay. Unproductive pastures and supplementary feeding cutting into feed supplies. Some oats being cut for silage. Soil moisture 1/2 short, 1/2 adequate.

WYOMING: Eastern half of Wyoming received moderate precipitation, western half scattered light snow in higher elevations. Dull Center reported most moisture with 1.19 inches. Temperatures averaged near normal west of Divide, 3° to 12° below normal east as very cool air persisted from Sunday through Tuesday. Areas of light frost, damage minimal. Casper reported lowest ever July temperature of 30°. Maxima mostly 80's with a few 90's southeast and north-central. Minima were mostly 30's. Temperature extremes: 94° at Torrington and 20° at Foxpark. Agricultural activities included haying, cultivation row crops, irrigation, and summer fallowing. Most winter wheat soft dough or hard dough stage with small amount mature. Oats 75% and most spring wheat headed. Three fourths 1st crop alfalfa and 50% other hays harvested. Subsoil moisture short to adequate most areas. Livestock to summer pastures complete, prospects for late summer and early fall grazing very good.



INDEX DECREASED DURING WEEK
(Unshaded Areas)

INDEX INCREASED OR DID NOT CHANGE DURING WEEK
(Shaded areas)

INDEX

- ABOVE 3.0 SOME DRYING, BUT STILL EXCESSIVELY WET.
- 2.0 to 3.0 MORE DRY WEATHER NEEDED, WORK DELAYED.
- 1.0 to 2.0 FAVORABLE, EXCEPT STILL TOO WET IN SPOTS.
- 0 to 1.0 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK.
- 0 to -1.0 TOPSOIL MOISTURE SHORT, GERMINATION SLOW.
- 1.0 to -2.0 ABNORMALLY DRY, PROSPECTS DETERIORATING.
- 2.0 to -3.0 TOO DRY, YIELD PROSPECTS REDUCED.
- 3.0 to -4.0 POTENTIAL YIELDS SEVERELY CUT BY DROUGHT.
- BELOW -4.0 EXCEPTIONALLY DRY, MOST CROPS ABOUT RUINED

INDEX

- ABOVE 3.0 EXCESSIVELY WET, SOME FIELDS FLOODED.
- 2.0 to 3.0 TOO WET, SOME STANDING WATER.
- 1.0 to 2.0 PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET.
- 0 to 1.0 MOISTURE ADEQUATE FOR PRESENT NORMAL NEEDS.
- 0 to -1.0 PROSPECTS IMPROVED, BUT RAIN STILL NEEDED.
- 1.0 to -2.0 SOME IMPROVEMENT, BUT STILL TOO DRY.
- 2.0 to -3.0 DROUGHT EASED, BUT STILL SERIOUS.
- 3.0 to -4.0 DROUGHT CONTINUES, RAIN URGENTLY NEEDED.
- BELOW -4.0 NOT ENOUGH RAIN, STILL EXCEPTIONALLY DRY.

HURRICANE AGNES

The rains of Agnes triggered some of the most devastating floods in the nation's history across the eastern United States during the week of the 20th. Hardest hit were Virginia, Maryland, District of Columbia, West Virginia, Delaware, New Jersey, New York, Pennsylvania and Ohio. The Florida panhandle was also hit hard initially by winds and storm tides. Total damage estimates have already passed the \$2 billion mark and the present death toll stands at 116.

The stage for Agnes was being set in the mid-Atlantic States while she was developing off the Yucatan Peninsula during the week of the 13th. Frontal activity in the east was responsible for soaking rains from western New York and southern New England to southeastern Virginia. Totals for the week averaged 1 to 3 inches in general with local totals exceeding 4 inches; these rains were

particularly prevalent late in the week. In addition atmospheric moisture aloft remained plentiful.

During the week of the 13th Agnes organized slowly and headed toward the Florida panhandle. By early on the 18th she was a full-fledged hurricane generating 75-m.p.h. winds near her center, which was north of western Cuba. Late in the day her circulation covered most of the Gulf of Mexico and all of Florida. The central pressure reached a low of 978 mb. that night. Agnes made landfall near Panama City about noon on Monday the 19th. Storm tides up to 6 feet battered St. Petersburg and other Gulf coast beaches. Rainfall amounts averaged 3 to 7 inches. Rain was mostly beneficial to Florida as it was throughout Alabama, Georgia and the Carolinas. They had been in the throes of a dry spell. Agnes moved northeastward



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through Georgia, South Carolina and eastern North Carolina on the 20th and 21st. Rains in eastern Alabama, Georgia, and the Carolinas generally measured 2 to 8 inches with heavier totals along the east slopes of the Blue Ridge Mountains. Some flooding was reported in western North Carolina. Agnes had been downgraded to a tropical storm shortly after crossing the coast and maximum sustained winds were around 25 m.p.h. close to the center and 35 to 40 m.p.h. on the east coast. Gusts ranged from 35 to 60 m.p.h. The storm was considered a depression as it moved from Georgia to eastern North Carolina.

As Agnes reached eastern North Carolina Wednesday afternoon she reintensified to tropical storm strength. By this time reports of 10 inches of rain were already in from Big Meadows, Virginia--and it was still raining heavily there. Some reports indicated rainfall intensities of more than 1 inch per hour. Heavy rains continued most of the night throughout Virginia and Maryland and totals ranged from 6 to 13 inches triggering widespread flooding of streams and creeks. Maryland's Westminster measured 14.68 inches over a 3-day period while Dulles Airport in Northern Virginia recorded 13.65 inches. In the Washington suburb of Alexandria, Va., the highly volatile Four-Mile-Run quickly flooded and residents of the area were evacuated--a procedure they know from experience.

Meanwhile Agnes was moving slowly northeastward spreading her heavy rains into Pennsylvania, New York, New Jersey, and Delaware. By noon on Thursday (22d) she was off the Delaware coast. Flooding of major rivers was beginning to occur in her wake. Heavy rains continued to beat down Thursday night over Pennsylvania, New York and West Virginia where many streams had already overflowed their banks and rivers were starting to build toward record crests. Agnes took an unexpected turn westward across southeastern New York and central

Pennsylvania, where she merged with a non-tropical system on the 23d. The system meandered, prolonging the rains and increasing the flooding. By noon on Saturday the storm's remnants were weakening over western New York and drifting slowly northeastward.

Most of the recordbreaking river crests occurred on the 23d and 24th. The James River, Virginia's largest and longest, swamped a 200 block area of downtown Richmond in what appears to be the worst flood in Richmond's history. The James crested at 36.5 feet at the City Locks on the 23d; this topped the old mark of 28.6 feet set just 3 years ago in the disastrous floods of Camille. The Potomac River crested early on the 24th at 22.0 feet at Little Falls and a few hours later at 16.8 feet at Wisconsin Avenue, in downtown Washington. The Monocacy River, a tributary of the Potomac, broke an 82-year record at Fredrick, Md., when it crested at 33.7 feet on the 23d.

At Wilkes-Barre, Pa., on the east branch of the Susquehanna, the river crested at 40.6 feet during the evening of the 24th. The city was deserted since it had been underwater since the night before. This crest topped a previous high of 33.1 feet that occurred during the famous floods of 1936. Flooding had also inundated Harrisburg on the main branch on Thursday, but the river crested there at 32.8 feet on the 24th; this was well above the previous record of 29.2 feet in 1936. The Ohio River, which had isolated sections of downtown Pittsburgh, crested at 35.8 feet early on the 24th. The Allegheny River crested at 23.6 feet at Olean, New York, early on the 23d. This broke the record of 21.3 feet set in 1942. These crests are all based on preliminary data and are just a small indication of the widespread flooding that occurred during Agnes.

Richard M. DeAngelis