

Weekly Weather & Crop Bulletin

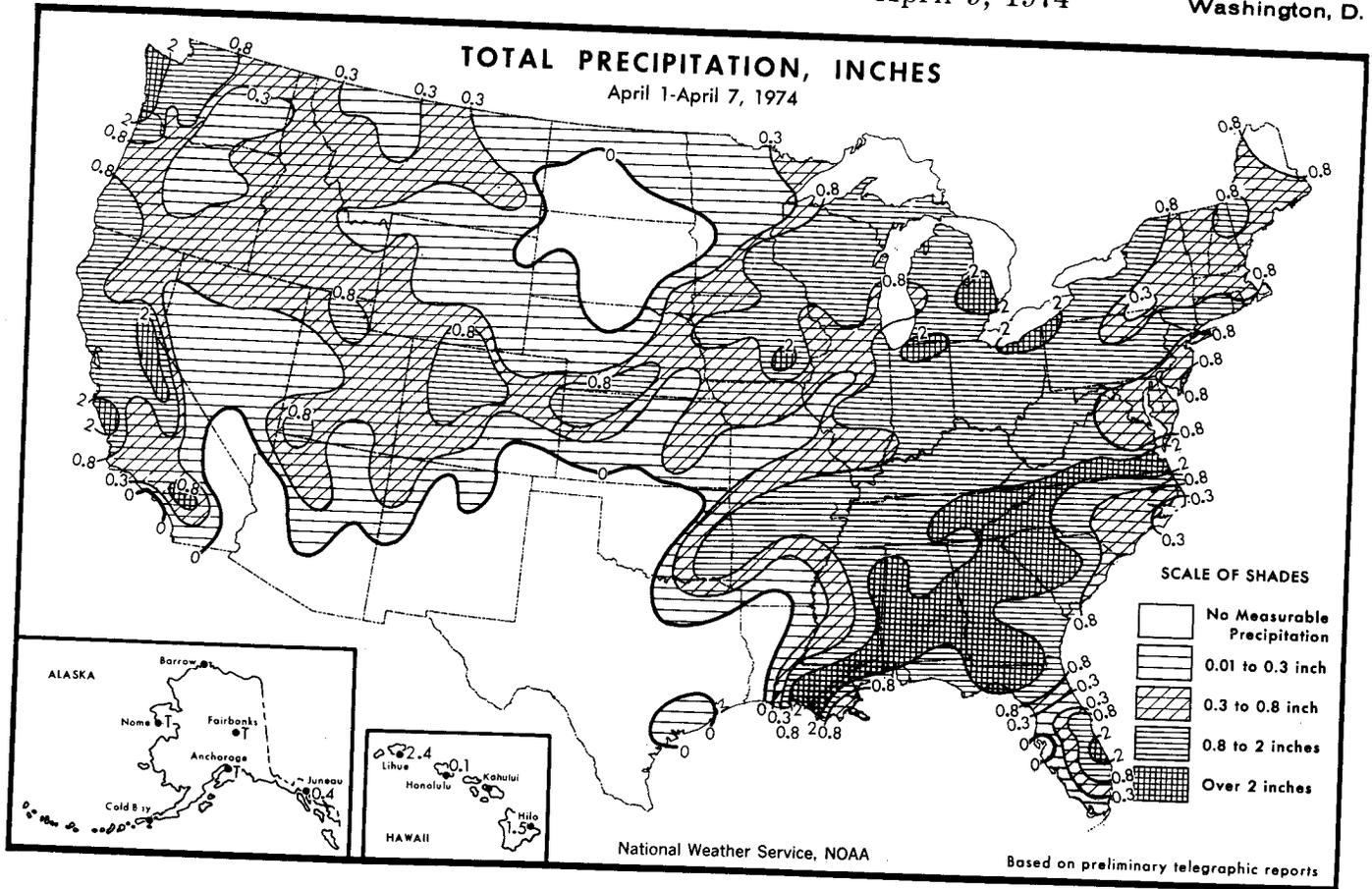
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NATIONAL WEATHER SUMMARY

HIGHLIGHTS: Nearly 100 devastating tornadoes roared through 11 States in an area extending from Georgia to Canada last week claiming over 320 lives. Thousands were left homeless and millions of dollars in property destroyed, as an unusually deep low pressure system triggered the worst tornadoes in 49 years.

Meanwhile, the southwestern sections of the Country remained dry as Texas, Oklahoma, New Mexico and Arizona received only traces of precipitation during the week.

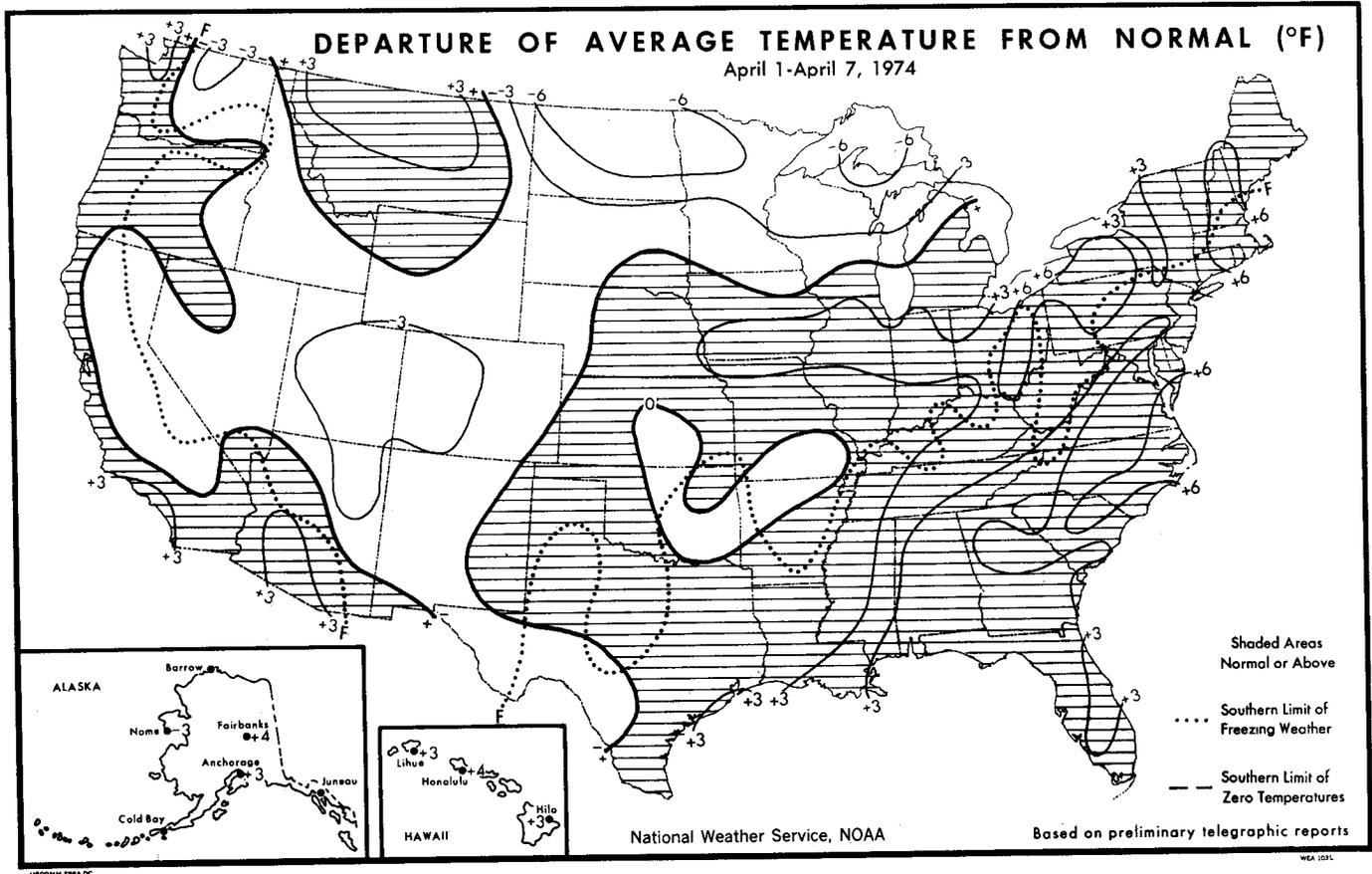
Most of the Nation enjoyed mild temperatures with the Eastern Seaboard States recording temperatures over 5° above normal for the week, while North Dakota averaged as much as 6° below normal.

PRECIPITATION: Heavy precipitation accompanied severe thunderstorms and tornadoes drenching the entire Southeast. Tallahassee, Fla., recorded 3.39

in. of precipitation; Knoxville, Tenn., got 3.42 in. of precipitation during the week. Sections of the Pacific Northwest received heavy showers: Port Angeles, Wash., 4.28 in.

Early in the week a low pressure center moving eastward across the Mississippi Valley pumped moisture northward triggering widespread precipitation, followed by severe thunderstorms over the lower Mississippi Valley and along the mid-Atlantic Coast. Rainfall totals included: Vero Beach, Fla., 2.02 in. and Cocoa Beach, 1.34 on Tuesday, and 28 tornadoes swirled through the Ohio Valley to Central Gulf States.

Midweek, a very intense low pressure center moved northwest into Missouri. Ahead of the low, thunderstorms spread from Illinois and the Ohio Valley into Tennessee and northern Alabama. Behind the low, winds gusted to 50 mph whipping snow and blowing snow across the western portions of the



central Plains causing near blizzard conditions locally.

The intense thunderstorms spawned over 80 destructive tornadoes stretching from the Ohio Valley to the Central Gulf States Wednesday and early Thursday, demolishing everything in its path and causing numerous casualties. Along with the thunderstorms over 3.00 in. of rain soaked the southern and central Appalachian mountain range.

By the end of the week, the storm that triggered the devastating storms on Wednesday continued to cause some severe weather from Alabama to Florida into Virginia. But by Friday the severe weather subsided in the Southeastern U.S., with only mild thunderstorms continuing from the middle Atlantic Coast to the eastern Gulf Coast. However, rains of 3.00 to 4.00 in. caused flooding on some rivers in North Carolina.

Meanwhile, as the cold front moved off the East Coast a new system entered the Pacific Northwest producing scattered showers as far inland as the northern Rockies.

During the weekend, a storm system in the Central Rockies spread showers and snow from the upper Rockies into the upper Plains. And a low over Lake Superior trailed a cold front into the upper Plains bringing scattered showers to the Mississippi Valley and central Great Lakes.

Finally by Sunday, precipitation fell along a broad band from northern New England between the Great Lakes and the Ohio River to the Mississippi Valley and continuing between the Missouri River and the Rocky Mountains.

TEMPERATURE: Near normal temperatures were experienced in the northern third of the Country, with readings milder than expected elsewhere. Early week temperatures continued to be warm for the season in the South with many spots in the southern Plains reaching the 70° mark following last week's exceptionally warm weather.

Midweek, as a cold front passed through the middle Mississippi Valley heading toward the southern Plains, temperatures fell sharply. But ahead of the front, pleasant temperatures prevailed along most of the Atlantic Coast. Daytona Beach, Fla., set a new record high for the date with a mid-summerlike 93°.

Meanwhile, most of the Nation's midsection experienced cooler temperatures. Even southern Texas only reached the 70's when only a few days earlier the readings were in the 90's. Thursday night, freezing temperatures reached as far south as the southwestern Plains.

On Saturday morning, an unseasonably cold air mass covered the Gulf Coast region. In Brownsville, Tex., the thermometer dipped to 47° and Fort Myers, Fla., recorded only 56°. And an invasion of cold air in the northern Plains kept temperatures below freezing in North Dakota.

Early Sunday morning, frost and freezing temperatures gripped portions of West Virginia, Maryland and Virginia.

Meanwhile, a cold air mass sliding off the southern Atlantic Coast produced early morning frost in portions of Dixie. Record lows were recorded at Charleston, S.C., 34° and Tallahassee, Fla., 33°.

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Cold, snowy weather slowed winter wheat growth in Kansas. Rain and wet fields restricted fieldwork east of the Mississippi River. Tornadoes damaged farm buildings and killed livestock in many eastern States.

SMALL GRAINS: Cold, snowy weather slowed winter wheat growth in Kansas as the crop remained in good condition with adequate to surplus topsoil and subsoil moisture supplies. Kansas wheat development is about average with 10% of the acreage jointing. Army cutworms are reported in southwest Kansas but are no major threat.

In Oklahoma, small grains showed good growth, and are rated good, but most areas will need rain in the next two weeks. About 60% of the wheat crop and 30% of the spring oats are jointing in Oklahoma, which is the same as last year. Texas wheat and oat prospects are fair to good; irrigated wheat shows excellent progress, but nonirrigated acreage in western areas continues to deteriorate.

Winter wheat in Nebraska is stooling in good condition with adequate soil moisture. Colorado winter wheat and barley are rated in good to excellent condition with some improvement noted from recent moisture and warmer temperatures. Precipitation in South Dakota has been subnormal since January 1 and more moisture would help boost spring small grain planting now in early stages with spring wheat at 4% seeded, slightly behind last year and normal progress.

From Missouri to Ohio, wheat is in fair to good condition and spring oat seeding ranges from 10% complete in Ohio to 30% in Illinois and 63% done in Missouri. Recent freezing weather damaged winter wheat in some areas.

In Montana, winter wheat is rated fair to good with sufficient soil moisture in the northwest part, but short to adequate elsewhere. Winter wheat in Washington is in good shape with ideal soil moisture conditions. In Oregon, winter wheat conditions vary from fair in the west to good in the east where little winter-kill occurred.

OTHER CROPS: Wet weather and boggy fields restricted fieldwork east of the Mississippi River, especially in the Southeast where heavy rains further delayed field preparations and spring planting. In addition, tornadoes and thunderstorms caused considerable damage to farm buildings throughout the East.

Cotton planting made excellent progress in Texas, but only a few fields of cotton were planted in the Southeast. Planting was very active in Arizona, but rain interrupted cotton planting in California, earlier planted fields have emerged.

Corn in Georgia is 12% planted, near normal

for this time of year. South Carolina corn planting at 23% complete is ahead of last year's 9%. Planting progress was slow in Alabama with only about 5% of the crop planted, while progress was fair in Louisiana at 30% planted. Texas corn planting made excellent progress.

Tobacco beds in Virginia are in good to excellent condition. Flue-cured tobacco transplanting is underway in the coastal plains of North Carolina. Transplanting at 57% complete in Georgia is above normal.

Potato and sugarbeet planting is underway in eastern Washington but rain halted sugarbeet planting in the San Joaquin Valley of California.

FRUITS AND NUTS: Rains benefitted central Florida citrus areas, but more is needed everywhere. Citrus trees are in all stages of bloom there. Citrus harvesting is in final stages in Texas. Navel orange harvesting in California moved closer to final stages with granulation still a problem. Valencia picking is underway with good to excellent quality.

North Carolina's peach crop is in good shape with limited hail damage.

It is becoming more apparent that peach buds were hard hit by freezing weather in the Ohio and Mississippi River Valleys.

Apple bloom is just starting on some varieties in California as growers applied scab control sprays.

VEGETABLES: Tomatoes replaced cabbage as a volume leader in shipments from Florida. Cucumbers increased while peppers, sweet corn, celery, and snap beans remained steady. Good supplies of carrots, Chinese cabbage, eggplant, and squash were available. Watermelon harvesting got underway.

In the Texas Lower Rio Grande Valley onion harvesting continued strong and moderate supplies of carrots and cabbage were available.

In California, carrot digging continued in desert areas; celery supplies increased in the south. Lettuce cutting decreased at Palo Verde, but increased at Oxnard and started at Westside and Santa Maria.

PASTURES AND LIVESTOCK: Pastures in most areas of the South Central and South Atlantic Region are in good to excellent shape and providing ample grazing. In the North Central Region, pastures are mostly good in the southern portion and furnishing nearly a third of livestock roughage needs. Most pastures in the northern portion remain dormant. Most western ranges and pastures are greening up in good shape.

Cold weather increased stress to young livestock last week in the Central Rockies and northern Plains. Most livestock are in good condition Nationwide with supplemental feeding continuing in many areas.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., April 7, 1974

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 . . .	62	+ 2	1.9	+ .7	La.Baton Rouge . . .	68	+ 3	2.6	+1.1	Youngstown . . .	48	+ 5	.8	0
Mobile . . .	67	+ 2	1.9	+ .4	Lake Charles . . .	67	+ 1	T	-.9	OKLA.Okla. City . . .	56	0	T	-.7
Montgomery . . .	60	- 2	2.5	+1.3	New Orleans . . .	69	+ 3	.4	-.7	Tulsa . . .	57	+ 1	T	-.8
ALASKA.Anchorage . . .	34	+ 3	T	-.1	Shreveport . . .	65	+ 2	0	-1.1	OREG.Astoria . . .	47	+ 1	2.2	+ .9
Barrow . . .	---	---	---	---	MAINE.Caribou . . .	36	+ 4	1.2	+ .7	Burns . . .	41	0	.4	+ .3
Fairbanks . . .	25	+ 4	T	-.1	Portland . . .	42	+ 5	.7	-.1	Medford . . .	48	0	.8	+ .5
Juneau . . .	36	0	.4	-.3	MD.Baltimore . . .	53	+ 3	.5	-.3	Pendleton . . .	49	+ 1	.5	+ .3
Kodiak . . .	---	---	---	---	MASS.Boston . . .	51	+ 7	.6	-.2	Portland . . .	49	+ 1	.8	+ .2
Nome . . .	10	- 3	T	-.2	Chatham . . .	40	---	1.9	---	Salem . . .	49	+ 1	.7	0
ARIZ.Flagstaff . . .	40	+ 1	.6	+ .2	MICH.Alpena . . .	35	0	1.0	+ .5	PA.Allentown . . .	51	+ 5	1.6	+ .8
Phoenix . . .	68	+ 4	T	-.1	Detroit . . .	44	+ 1	1.7	+1.0	Erie . . .	46	+ 6	2.6	+1.8
Tucson . . .	64	+ 2	T	-.1	Flint . . .	43	+ 2	2.3	+1.7	Harrisburg . . .	53	+ 4	1.4	+ .7
Winslow . . .	46	- 4	T	-.1	Grand Rapids . . .	43	+ 1	1.2	+ .4	Philadelphia . . .	52	+ 3	.7	-.1
Yuma . . .	69	+ 1	0	-.1	Houghton Lake . . .	36	0	1.2	+ .7	Pittsburgh . . .	50	+ 4	1.5	+ .7
ARK.Fort Smith . . .	57	- 1	.9	-.1	Lansing . . .	43	+ 1	1.3	+ .7	Scranton . . .	47	+ 3	1.0	+ .3
Little Rock . . .	59	+ 1	.3	-.9	Marquette . . .	30	- 6	1.8	+1.2	R.I.Providence . . .	49	+ 6	.7	-.2
CALIF.Bakersfield . . .	59	+ 1	.4	+ .2	Muskegon . . .	41	0	.7	0	S.C.Charleston . . .	64	+ 2	.4	-.4
Eureka . . .	50	+ 1	1.8	1.0	S. Ste. Marie . . .	29	- 4	1.1	+ .7	Columbia . . .	67	+ 7	2.4	+1.5
Fresno . . .	57	- 1	.4	0	MINN.Duluth . . .	29	- 4	.3	-.3	Greenville . . .	59	+ 2	2.1	+1.0
Los Angeles . . .	66	+ 5	0	-.4	Internat'l Falls . . .	28	- 4	.3	0	S.D.Aberdeen . . .	37	- 1	T	-.4
Red Bluff . . .	54	- 3	.6	+ .1	Minneapolis . . .	36	- 3	1.1	+ .7	Huron . . .	40	0	T	-.4
San Diego . . .	63	+ 3	T	-.3	Rochester . . .	38	- 1	1.7	+1.2	Rapid City . . .	38	- 1	.1	-.3
San Francisco . . .	55	+ 1	1.2	+ .7	St. Cloud . . .	35	- 2	.2	-.2	Sioux Falls . . .	40	0	.4	-.1
Stockton . . .	55	- 1	1.4	+1.0	MISS.Jackson . . .	63	+ 1	.4	-.8	TENN.Chattanooga . . .	58	+ 1	.9	-.2
COLO.Denver . . .	40	- 3	.9	+ .5	Meridian . . .	65	+ 3	1.9	+ .6	Knoxville . . .	60	+ 3	3.4	+2.5
Grand Junction . . .	44	- 3	.8	+ .6	MO.Columbia . . .	51	+ 1	.3	-.5	Memphis . . .	60	+ 2	.9	-.4
Pueblo . . .	45	- 2	T	-.3	Kansas City . . .	51	+ 1	.3	-.5	Nashville . . .	59	+ 3	1.4	+ .4
CONN.Bridgeport . . .	49	+ 5	.8	0	St. Louis . . .	52	0	.7	-.2	TEX.Abilene . . .	62	+ 1	0	-.4
Hartford . . .	49	+ 6	.8	-.1	Springfield . . .	52	0	.6	-.3	Amarillo . . .	54	+ 2	T	-.2
D.C.Washington . . .	56	+ 4	.3	-.4	MONT.Billings . . .	42	+ 2	1.1	-.2	Austin . . .	67	+ 2	0	-.6
FLA.Apalachicola . . .	67	+ 2	1.3	+ .3	Glasgow . . .	39	+ 3	T	-.1	Beaumont . . .	67	+ 1	T	-.8
Daytona Beach . . .	72	+ 4	.2	+ .5	Great Falls . . .	42	+ 4	.1	-.1	Brownsville . . .	74	+ 2	0	-.2
Ft. Myers . . .	75	+ 3	.1	-.4	Havre . . .	42	+ 5	.4	+ .2	Corpus Christi . . .	71	+ 1	0	-.4
Jacksonville . . .	68	+ 2	1.0	+ .2	Helena . . .	41	+ 3	.4	+ .2	Del Rio . . .	69	0	0	-.3
Key West . . .	77	0	.2	-.3	Kalispell . . .	41	+ 4	.3	+ .1	El Paso . . .	60	0	0	-.1
Lakeland . . .	72	+ 2	.2	-.5	Miles City . . .	41	+ 1	.4	+ .2	Fort Worth . . .	63	+ 1	.1	-.8
Miami . . .	76	+ 2	.2	-.5	Missoula . . .	42	+ 2	.3	+ .1	Galveston . . .	70	+ 4	0	-.6
Orlando . . .	72	+ 3	.9	+ .2	NEBR.Grand Island . . .	46	+ 2	.8	+ .3	Houston . . .	64	- 2	T	-.7
Tallahassee . . .	65	0	3.4	+2.3	Lincoln . . .	46	0	.2	-.3	Lubbock . . .	58	+ 2	T	-.1
Tampa . . .	72	+ 2	T	-.7	Norfolk . . .	44	+ 1	.6	+ .2	Midland . . .	62	+ 1	0	-.1
W.Palm Beach . . .	73	+ 1	.9	+ .1	N.Platte . . .	43	0	.1	-.3	San Angelo . . .	64	0	0	-.3
GA.Atlanta . . .	62	+ 5	2.5	+1.3	Omaha . . .	47	+ 3	.4	-.2	San Antonio . . .	66	0	0	-.5
Augusta . . .	63	+ 3	2.5	+1.6	Valentine . . .	40	0	T	-.3	Victoria . . .	70	+ 2	T	-.8
Macon . . .	65	+ 3	1.8	+ .9	NEV.Ely . . .	36	- 2	.1	-.1	Waco . . .	67	+ 3	0	-.5
Savannah . . .	66	+ 3	.8	0	Las Vegas . . .	61	+ 1	T	-.1	Wichita Falls . . .	61	+ 1	T	-.6
HAWAII.Hilo . . .	75	+ 3	1.5	-1.6	Reno . . .	43	- 1	.1	0	UTAH.Blanding . . .	41	- 3	.3	+ .1
Honolulu . . .	78	+ 4	.1	-.4	Winnemucca . . .	44	+ 2	.3	+ .2	Salt Lake City . . .	42	- 3	.9	+ .4
Kahului . . .	76	+ 3	.2	-.2	N.H.Concord . . .	46	+ 6	.6	0	VT.Burlington . . .	43	+ 5	.5	-.1
Lihue . . .	76	+ 3	2.4	+1.5	N.J.Atlantic City . . .	52	+ 4	.9	+ .1	VA.Lynchburg . . .	57	+ 4	2.4	+1.7
IDAHO.Boise . . .	45	- 1	.4	+ .2	Trenton . . .	53	+ 5	.5	-.3	Norfolk . . .	62	+ 8	2.4	+1.8
Lewiston . . .	47	0	.6	+ .4	N.MEX.Albuquerque . . .	51	- 1	T	-.1	Richmond . . .	59	+ 5	.5	-.2
Pocatello . . .	40	- 1	.4	+ .2	Roswell . . .	57	+ 1	0	-.1	Roanoke . . .	53	+ 1	1.4	+ .7
ILL.Cairo . . .	56	0	1.0	0	N.Y.Albany . . .	46	+ 4	.6	0	WASH.Colville . . .	42	- 1	.5	+ .3
Chicago . . .	47	+ 2	1.2	+ .4	Binghamton . . .	46	+ 6	.3	-.4	Omak . . .	42	- 3	.6	+ .4
Moline . . .	50	+ 5	.4	-.4	Buffalo . . .	44	+ 4	1.5	+ .8	Quillayute . . .	45	+ 1	4.3	+2.1
Peoria . . .	49	+ 3	.2	-.8	New York . . .	53	+ 5	.7	-.2	Seattle-Tacoma . . .	49	+ 3	1.4	+ .7
Rockford . . .	46	+ 3	.4	-.5	Rochester . . .	47	+ 6	1.2	+ .6	Spokane . . .	42	- 1	.2	-.1
Springfield . . .	50	+ 2	.9	0	Syracuse . . .	45	+ 3	1.1	+ .4	Walla Walla . . .	50	0	.4	+ .1
IND.Evansville . . .	54	+ 2	.8	-.2	N.C.Asheville . . .	54	+ 2	3.2	+2.3	Yakima . . .	45	- 1	.1	0
Ft. Wayne . . .	47	+ 2	1.6	+ .8	Charlotte . . .	60	+ 3	1.9	+1.0	W.Va.Beckley . . .	53	+ 5	1.1	+ .3
Indianapolis . . .	53	+ 5	1.7	+ .8	Greensboro . . .	58	+ 3	.9	+ .1	Charleston . . .	56	+ 4	1.7	+ .9
South Bend . . .	47	+ 3	2.2	+1.3	Hatteras . . .	64	+ 8	.1	-.7	Huntington . . .	58	+ 6	1.2	+ .4
IOWA.Burlington . . .	49	+ 3	.5	-.4	Raleigh . . .	60	+ 4	.6	-.2	Parkersburg . . .	55	+ 5	1.3	+ .5
Des Moines . . .	47	+ 3	.6	0	Wilmington . . .	65	+ 5	.5	-.2	WIS.Green Bay . . .	36	- 3	1.0	+ .4
Dubuque . . .	42	0	.6	-.3	N.DAK.Bismarck . . .	31	- 6	T	-.3	La Crosse . . .	40	- 2	.9	+ .3
Sioux City . . .	45	+ 1	.8	+ .4	Fargo . . .	30	- 6	.1	-.3	Madison . . .	42	+ 2	1.2	+ .6
KANS.Concordia . . .	49	+ 1	.3	-.1	Williston . . .	30	- 6	1.1	-.2	Milwaukee . . .	41	+ 1	.4	-.2
Dodge City . . .	51	+ 2	.2	-.1	OHIO.Akron-Canton . . .	50	+ 6	1.2	+ .4	WYO.Casper . . .	37	- 1	.2	-.1
Goodland . . .	44	0	1.0	+ .7	Cincinnati . . .	52	+ 2	1.9	+1.0	Cheyenne . . .	36	- 2	.2	-.1
Topeka . . .	52	+ 2	.5	-.3	Cleveland . . .	50	+ 6	2.1	+1.3	Lander . . .	38	0	.1	-.4
Wichita . . .	51	- 1	.3	-.3	Columbus . . .	52	+ 5	.9	+ .1	Sheridan . . .	41	+ 2	.1	-.3
KY.Lexington . . .	54	+ 3	1.6	+ .6	Dayton . . .	51	+ 4	1.1	+ .3	P.R.San Juan . . .	79	+ 2	.4	-.2
Louisville . . .	54	+ 2	1.5	+ .5	Toledo . . .	45	+ 1	1.4	+ .7					

Based on 1941-70 normals.

CONDENSED STATE SUMMARIES

The Bulletin capsulizes nationally important weather and crop conditions. Every Monday SRS publishes more detailed data in State Weekly Weather and Crop Bulletins in cooperation with the National Weather Service, NOAA. Voluntary weather observers, crop reporters, and county extension agents contribute weekly observations for these reports.

ALABAMA: Numerous thunderstorms, heavy rains, and hail over State and deadly tornadoes in north marked past week's weather as one of most destructive in State history. Rainfall generally exceeded 2.00 most areas with local totals of over 5.00 in. Warm early week with temperatures 12° to 14° above normal through Wednesday. Sunny and cool weekend.

Heavy rains halted fieldwork most areas. Many barns and poultry houses suffered considerable tornado damage in north but full extent poultry, livestock losses not known. Few fields cotton planted south. Planting will gain momentum when ground dries more. Corn planting slow south and central. Only about 5% corn acreage planted. Small grains 10% headed, prospects favorable even though rust plaguing several wheat fields in south half. Stockmen busy with pasture improvements, mostly fertilizing.

ARIZONA: Precipitation over most sections, some snow on Mogollon Rim, White Mountains. Precipitation 0.50 to 0.75 in. north, central high country, near 0.25 in. White Mountains. South, west areas only widely scattered light showers, higher elevations. Strong winds on 2d. Cooling early in week, frost in southwest on 4th. By weekend, temperatures 5° to 10° above normal.

Excellent growing conditions past week. Small grains good progress all areas. Cotton planting reaching full scale. Much of crop Yuma area seeded except where following small grains. Little planting of sorghum. Haying picking up warmer desert areas. Many areas well into first cutting. Lettuce harvest continued Yuma, neared completion. Harvest Salt River Valley heavy volume, harvest to start soon Pima, Pinal Counties. Carrot harvest beginning Yuma. Cantaloups, watermelons good progress. Vine turning and thinning Yuma.

Harvest Valencia oranges, grapefruit limited basis. Most groves very good condition, full bloom. Ranges poor to fair, Some greening. Most areas dry, supplemental feeding, water hauling. Southeast ranchers say driest spring in many years. Cattle, sheep mostly fair to good. Livestock losses numerous many areas due to predators. Sheep moving into higher mountain ranges.

ARKANSAS: Temperatures near normal. Warm first of week, highs 80's. Midweek colder lows mostly 30's. Warmer end of week. Southwest dry, remainder scattered showers first and last of week. Generally less than 1.00 in.

Cool soil temperatures delayed planting. Land preparation continued for cotton, rice, soybeans. Soil moisture adequate except central and southwest. Fuel supplies adequate. Fertilizer supplies tight. Fertilization, application of pre-emergence herbicides on cotton land continued. Rice land leveled and smoothed, wet soils hindered fieldwork. Planting began, no rice up. Small grains growing very well. Seedbed preparation underway for soybeans, corn, and sorghum. Alfalfa first cutting underway south. Pastures supplying adequate to surplus forage. Livestock excellent. Peach crop difficult to assess, half a normal crop expected. Few tomatoes transplanted.

CALIFORNIA: Storms early week and again on Friday brought precipitation to all areas except southeast interior. Over 5.00 in. precipitation fell in some north mountain areas and along Sierra Nevada. Temperatures dipped below freezing midweek under clear skies in some lower valleys north and central. Average temperatures mostly below normal north and central and above normal south.

Small grains made excellent growth, very small loss due to flooding, many fields heading out, lodging in few fields. Sugar beet digging in Imperial Valley. Digging and planting in San Joaquin Valley halted by rains. Cotton planting expected to resume shortly, some replanting will take place, earlier planted fields emerged. Alfalfa continued good growth.

Recent rains put damper on orchard and vineyard activities. Wet grounds halted ground spraying in some areas, aerial spraying noted. Frost protection practices reported in cooler areas. Deciduous orchards sprayed. Grape vines continue to leaf out, growers spraying for cut worms. Pears in bloom. Apple bloom just starting to about over depending on variety, area, scab control sprays applied. Prune bloom, past full. Navel orange harvest moved toward final stages, granulation still a problem. Valencia picking underway, quality good to excellent. Grapefruit, lemon and avocado harvesting slow.

Asparagus desert neared completion, other areas continued. Broccoli moderate Salinas. Cauliflower production good Santa Maria; rains disrupted Salinas schedules. Carrot digging continued desert areas. Celery slightly heavier south. Palo Verde lettuce decreased, cutting Okrand increased, light harvest started Westside, Santa Maria. Strawberry increased south, cool weather slowed crop development. Planting processing tomatoes disrupted by rains San Joaquin, Sacramento Valleys. Ranges, pastures very good statewide. Excessive soil moisture problem some areas. Bee hive losses, north Sacramento Valley result orchards flooded. Lambing. Calving declining. Livestock good to excellent.

COLORADO: Weekly precipitation totals ranged from under 0.25 in. over eastern plains and San Luis Valley to generally 0.50 to 1.25 in. elsewhere. Major spring storm April 2 to 3. Blizzard conditions east. Weekly mean temperatures averaged 2° above normal in Lower Arkansas River Basin and mostly 1° to 6° subnormal elsewhere. Highs in low 80's parts southeast on 6th. Coldest weather on 3d, highs in 20's and 30's.

Wet, cool spring weather delayed field activity midweek. Planting early seeded crops and soil preparation progressed early week. Oats and spring barley 27% seeded. Oats 8% emerged, spring barley 15% emerged. Sugar beets 13% seeded, 8% emerged. Summer potatoes 7% seeded, none emerged. Winter wheat, barley good to excellent. Livestock good. Ranges, pastures improved due spring moisture and warmer weather.

FLORIDA: Warm during week with a sunny, but cool weekend. Temperatures averaged slightly above normal. Rainfall totals in excess of 2.00 in. in panhandle and northern peninsula to light at iso-

lated locations in central and south.

Soil moisture adequate in panhandle and north counties, generally short to adequate in central and very short in south. Fieldwork active. Corn made good growth, planting continued. Shade and flue-cured tobacco made growth, but insects, other pests bothersome. Small grains heading, however mildew and other diseases reduced yield prospects. Sugarcane harvest neared completion. Young plant cane and stubble cane made good growth. Pastures poor to good. Cattle, calves fair to good.

Rains fell central growing areas, more needed everywhere. Irrigation continued on citrus, bloom still active in all stages. Tomatoes replaced cabbage as volume leader. Potatoes increased last week, expected about steady. Cucumbers increased. Peppers, sweet corn, celery, snap beans, steady. Lettuce, escarole down some as Everglades begins phasing out. Good supplies carrots, Chinese cabbage, eggplant, squash available. Strawberries declining. Watermelon harvest underway.

GEORGIA: Week marked by worst outbreak of tornadoes since Gainesville tornado of 1936. Wednesday evening's tornadoes left 16 dead, hundreds homeless, many injured, and several millions in property damage. Temperatures averaged 5° to 10° above normal. Rainfall 1.00 to 3.00 in., less on coast, to locally in excess of 4.00 in. at Columbus and Blairsville. Weekend fair and cool.

Soil moisture mostly surplus to adequate. Field work and spring planting further delayed. Tornadoes, high winds and thunderstorms damaged buildings, trees, and crops some areas. Flooding some areas. Tobacco transplanting slightly above normal at 57% complete. Corn 12% planted, near normal. Cotton 1% planted. Small grains mostly fair to good, disease problems continued. Pastures and cattle good.

HAWAII: Weather favorable and crop progress fair to good throughout State. Irrigation in frequent use to maintain good crop growth. Banana production at seasonal low. Papaya production increased. Both head and Chinese cabbage plentiful supply. Other vegetable supply increased. Pastures good with adequate forage. Cattle good. Sugar plantations idle because of strike. Most pineapple plantations also idle because of strike.

IDAHO: Recurring Pacific fronts gave cold, wet and windy weather most of period. Precipitation as rain or snow much above normal, heaviest reported in north. St. Maries got 2.22 in. Temperatures averaged in upper 30's east and 40's elsewhere.

Spring fieldwork limited by wet soil, but starting east and north; slowed by cool, wet weather southcentral; full swing southwest. Fall grains showing excellent stooling south. Aerial application of fertilizers and herbicides active north. Calving and lambing neared completion most areas. Livestock good. Feedlot placements light. Movement to summer grazing areas starting. Range, pasture forage growth slowed by cool weather. Soil moisture supplies ample all areas. Branding, de-horning and preparing calf crop for spring range turn-out.

ILLINOIS: Temperatures 2° to 5° above normal. Warmest day 3d, temperatures 60's north, 80's south. Cold nighttime south 4th and 5th, lows in 30's. Precipitation variable, east heavier amounts. Heaviest rainfall with severe weather 3d.

Winter wheat some areas damaged by spring freeze, condition excellent 17%, good 57%, fair 25%, poor 1%. Fruit trees incurred extensive damage due to spring freeze, especially south where peach crop

virtually wiped out. Apple damage not as extensive. Livestock good. Pastures mostly good, supplying nearly 35% roughage needs. Soil moisture adequate 25%, surplus 75%. Land 65% plowed for corn and soybeans, 30% year ago. Oats 30% seeded, 25% in 1973. Fuel supplies adequate but probable shortages in fertilizer. Little spring fieldwork due to wet field conditions: 1.5 days suitable.

INDIANA: Numerous tornadoes moved through State killing over 50 people, injured hundreds, and destroyed property valued in the millions of dollars. Many farmers were busy repairing or cleaning up after the loss of buildings and stored grain. Poultry losses were high. Rainfall exceeded 3.00 in. in southeast.

Fields soggy. Less than half a day suitable for fieldwork. Topsoil moisture surplus. Subsoil moisture adequate to surplus. Vegetative growth 1 day early. Wheat 5 in. tall, 4 in. in 1973. Pastures fair. Fieldwork about usual. Spring planted cropland 50% plowed last fall. Little progress since. Oats 5% seeded, same as 1973, well behind average. Peach buds less than 20% alive. Fertilizer supplies short most areas, especially nitrogen and phosphate.

IOWA: Temperatures averaged normal to 3° below. Extremes: 79° at Missouri Valley on 2d, 21° at Waterloo on 7th. Heavy precipitation fell 3d and 4th, also 2 in. snow northwest, and rain elsewhere. Knoxville had 1.97 in. and Rockwell City 1.91 in. Many places received 1.00 in. or more. Blustery winds much of week.

Fieldwork underway but impeded at midweek by rain and snow: Over 2 days suitable. Plowing, fall and spring, 62% complete, 28% in 1973, 51% 1968-72 average. Oat seeding 20% complete, 14% 1973, 24% 1968-72 average. Other farm activities: Discing, shredding stalks, fertilizing, corn shelling, repairing machinery and livestock care. Topsoil moisture supplies 57% adequate, 42% surplus, 1% short. Subsoil moisture 76% adequate, 23% surplus, 1% short. Supply of fertilizer materials expected short of needs.

KANSAS: Temperatures averaged 4° above normal northeast to 1° below normal southcentral. Midweek major storm caused near blizzard conditions northwest and northcentral. Snow in northwest accumulated to as much as 7 in. Storm during weekend brought precipitation to most of State.

Winter wheat growth slowed by cold and snow. Condition good, but slightly behind normal. Little or no freeze damage. Wheat acreage jointing 10%, about average. Army cutworms reported southwest but currently no major threat. Corn 5% seeded, 5% 10-year average. Spring barley acreage 75% planted, 65% average. Spring oats acreage 80% planted, 70% 10-year average. Many reports of alfalfa weevil larvae, no significant damage. Topsoil and subsoil moisture supplies adequate to surplus. Newborn calves under stress from recent adverse weather. More cattle moving off wheat pasture.

KENTUCKY: Shower activity and fair weather alternated almost daily with severe storms and tornadoes causing hundreds of injuries, 72 deaths, and extensive property damage midweek. Rainfall averaged 1.50 to 2.00 in. with locally heavier amounts. Temperatures averaged a little above normal, lows in 30's, highs in 80's.

Tornadoes, storms and rain inflicted severe damage and loss to homes, barns, equipment and livestock. Recovery has begun but will take months. Two days suitable fieldwork. Soil moisture 86%

surplus. Plowing 55% complete, 31% year ago. Tobacco plant beds 85% seeded, 82% year ago, 30% with plants up. Some storm damage. Growth small grains 1 to 2 in. more than year ago. Peach crop 75% lost, apples 25% loss due to freeze.

LOUISIANA: Temperatures averaged normal to 4° above. Warm first of week, highs in 80's. Slightly cooler last part. Extremes: 88° Shreveport and Hammond 3d and 32° Ashland 5th. Precipitation widespread with thundershowers on 1st. Little rain during week until thundershowers Sunday night. Weekly totals none portions northwest to more than 2.50 in. portions south and southeast.

Fertilizing and weed control chemicals applied to cotton land. Most ready to plant. Soybean land preparation active lighter soils. Fieldwork restricted by rains southeast. Soil moisture surplus southeast and northeast corner, adequate elsewhere. Fieldwork: 3.7 days favorable. Corn planting fair progress, 30% planted, Poor stands some areas. Rice seeding full swing, 33% seeded, good stand early seeded rice. Sugarcane stands improving. Tomato transplanting complete northeast. Strawberry harvest active. Peppers fair growth. Pastures average. Cattle fair to good.

MARYLAND AND DELAWARE: Temperatures averaged 3° to 7° above normal. Highs ranged low 70's to 80°, lows mid-20's to 40°. Rainfall over two States ranged from 1.50 to nearly 4.50 in., heaviest in northcentral Maryland.

Fieldwork slowed by rains and wet soils. Pastures starting to green but new growth limited by low temperatures and cloudy days.

MICHIGAN: Most precipitation fell over weekend and totaled from about 0.50 in. north lower to over 2.00 in. some south lower areas. Snowed nearly daily west upper, rain and snow elsewhere. Heavy thunderstorms and funnel clouds Monday south lower with large hail, heavy rain and strong winds in some communities. Flooding reported midweek. A tornado occurred at Hillsdale Wednesday evening causing several fatalities. Other tornadoes and funnel clouds observed in other southeast areas.

Temperatures averaged 2° to 6° subnormal upper to 3° above normal lower. Highest in 60's midweek lower, lowest from slightly above zero to teens in upper over weekend.

MINNESOTA: Temperatures averaged 1° to 6° below normal, overnight lows 10° to 20° north, 20° to 32° south and afternoon highs in 30's north to 40's and some lower 50's south. Precipitation of 1.00 to 1.75 in. south third was much above normal as heavy snow and rain fell on 3d. Elsewhere moisture only half of normal. Minor flooding southeast over weekend.

Winter returned late March and early April to delay start of fieldwork in all areas. North covered by "old" and "new" snow and ground frozen. In south, land thawing out but wet. Soil moisture short westcentral and southwest before recent precipitation but now moisture adequate to surplus all areas. Fall seeded crops, hay, pastures dormant. Farm work limited to winter care of livestock, seed cleaning, and readying machinery for field operations. Livestock good but feeding hampered by muddy feedlots.

MISSISSIPPI: A tornado the 3rd caused \$150,000 damage in Jones County. Last week mostly partly cloudy and rather warm. Many counties experienced more than 20° of cooling following cold front

the 4th. Temperatures averaged about 6° warmer than usual. Extremes: 90° at Meridian and Yazoo City the 31st, 31° at Winona and Tupelo the 5th. Rainfall of 3.52 in. reported in Newton County on 2d. Weekend partly cloudy except for widely scattered showers Sunday night. Unseasonably cool Saturday followed by warming.

Soil moisture mostly adequate to surplus, excessive central and northeast. Fieldwork averaged 2.5 days suitable. Land preparations for spring crops 62% complete. Irish potatoes fair to good, planting virtually complete. Winter wheat, oats fair to good, 85% jointing. Corn planting underway, 15% planted, mostly central and south. Peach conditions very poor to good. Truck crops poor to good, mostly fair. Pastures poor to excellent. Livestock mostly fair to good. About 83% of respondents indicate tractor fuel supplies adequate, 72% indicate fertilizer supplies short for current needs.

MISSOURI: Temperatures averaged near to a few degrees above normal. Showers and thunderstorms 3d and 4th, total rainfall generally under 0.50 in., some areas got over 1.00 in. Eastcentral had high winds with hail as big as golfballs and baseballs, damaged buildings and automobiles estimated around 20 million dollars. Most damage reported was in south St. Louis. Cold air then moved in pushing temperatures down to low 30's and upper 20's.

Fieldwork averaged 4 days suitable. Plowing 46% complete, 11% 1973, 45% normal. Oats seeding 63% complete, 38% normal. Wheat crop condition 1% poor, 34% fair, 63% good, 2% excellent. Soil moisture supplies 1% short, 77% adequate, 22% surplus. Fertilizer supplies generally short.

MONTANA: Mild, showery week. Temperatures near to 5° above normal. Highs reached 50's and lower 60's. Lows dropped into 20's. Most divisions reporting stations got well above normal precipitation for week except southwest averaged below normal.

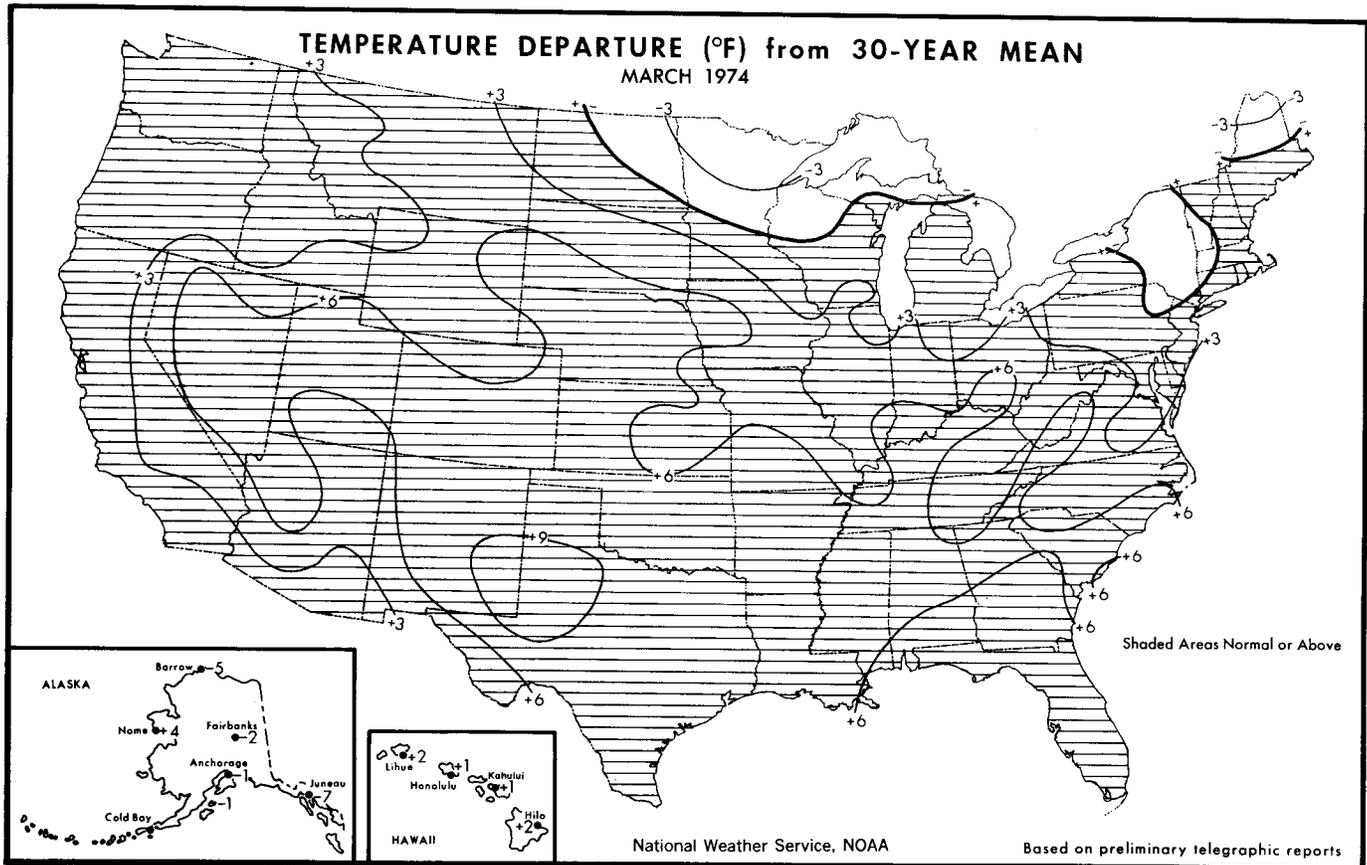
Soil moisture sufficient northwest, short to adequate elsewhere. Winter wheat fair to good. Field tillage underway southcentral, slowed by rains elsewhere. Sugarbeet planting 10% complete, other spring planting just starting. Stockwater adequate. About 95% range livestock receiving supplemental feed. Calf, lamb losses about normal. Calving 55% complete. Lambing 50% complete. Shearing 45% complete.

NEBRASKA: Temperatures near normal. Freezing temperatures occasional at night. Precipitation light. Amounts variable throughout State, 0.33 to 0.50 in. seemed most common amounts.

Fieldwork progressed well until midweek when stormy weather, including near blizzard, set in; 4 days suitable most areas. Oats, barley nearly 50% seeded. Sugarbeet planting making good progress. Winter wheat, alfalfa and wild hay good. Wheat stooling. Soil moisture supplies generally adequate. Range, pasture supplies 22% short and 78% adequate or better. Livestock generally good. Calving continued at good rate. Main farm activities: Shredding stalks, discing, plowing, fertilizing.

NEVADA: Temperatures averaged 1° below normal. Extremes: 84° Logandale to 6° Mountain City. Precipitation light southcentral and extreme south. Heaviest 1.40 in. Mountain City and 1.30 in. McDermitt. Reno received 0.11 in. No snow

(Continued on Page 11)



MARCH WEATHER

HIGHLIGHTS: A warm month everywhere with considerable moisture in the Northeast, Northwest, and central Great Plains. The Southeast and Southwest were much drier than usual.

PRECIPITATION: Patterns of precipitation amounts were highly variable during March. Unusually heavy precipitation was limited to the Pacific Northwest and southern Texas. As much as 21 in. of rain fell along the Washington Coast.

The month began on a wild and wet note. A cold front stretching from a Low over eastern Canada to Texas collided with warm tropical air and brought 25 to 45 mph winds to the Great Lakes area and generated thunderstorms and heavy rain. Hail lashed the Country's midsection. In addition, a vigorous storm drenched sections of California and Arizona with 2.00 in. of precipitation at the end of the first decade.

The second full week of the month was marked by heavy rain and violent weather in many parts of the Country. The Pacific Coast received an additional 2.00 to 7.00 in. rain. Southern Florida also received some heavy rains: West Palm Beach, 2.40 in.; Miami, 2.20 in. Thunderstorms dumped much needed rain over southcentral Texas. Violent weather associated with a Low over Tennessee dropped hail the size of eggs in Bristol, Tenn., while tornadoes touched down near Charleston, S.C., and Greenville, Ga.

During the week ending the 24th, the major weather was associated with a Low that formed over Texas and gradually moved up through New England. While over Texas, it stirred up tornadoes, high winds, hail and heavy rains along the Gulf Coast States. As the Low moved into Pennsylvania, heavy

rains fell in sections of the mid-Atlantic States and snow in the Northeast. The storm drenched Boston, Mass., with 1.50 in. rain, and dumped 15 in. of snow on Limestone, Me., before drifting into Canada.

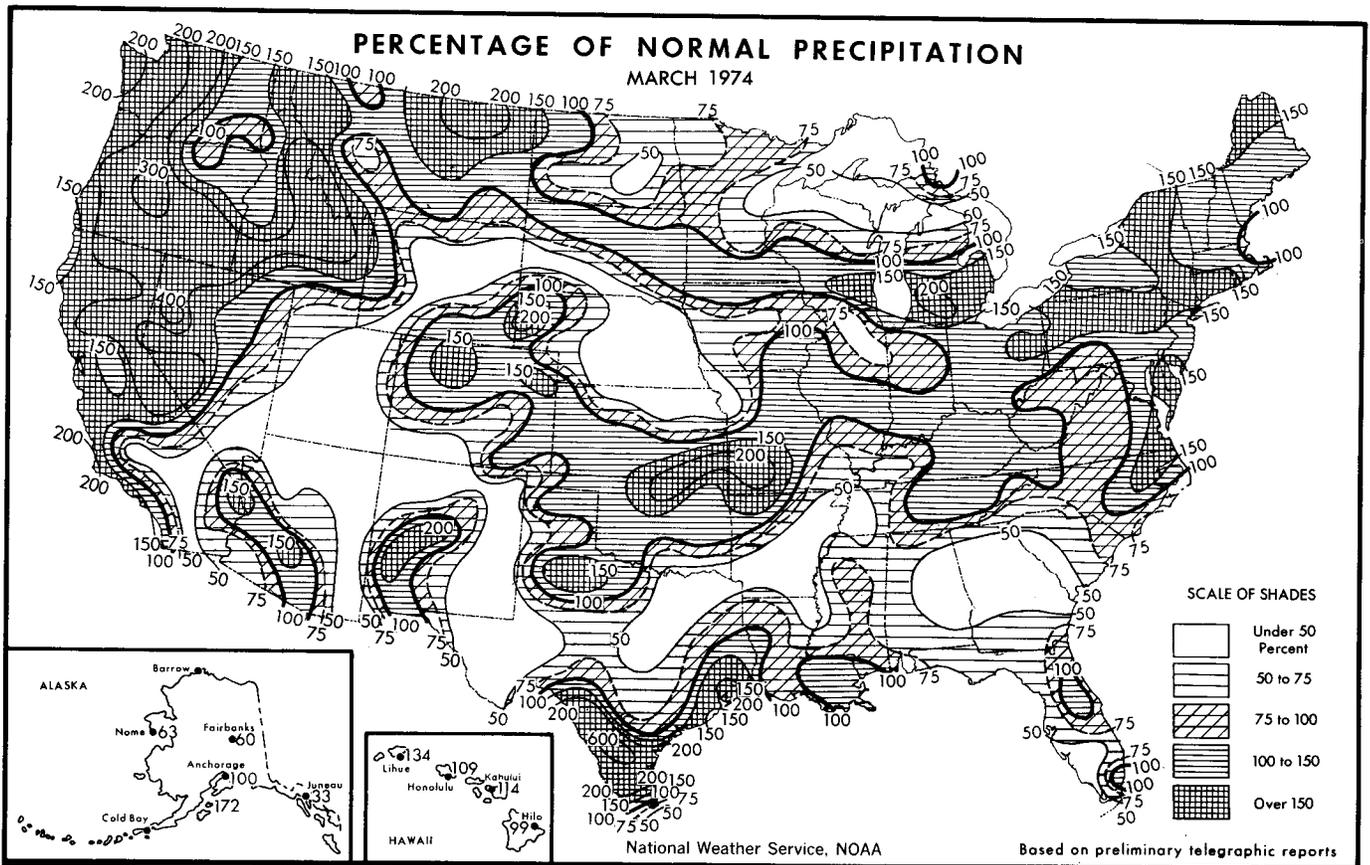
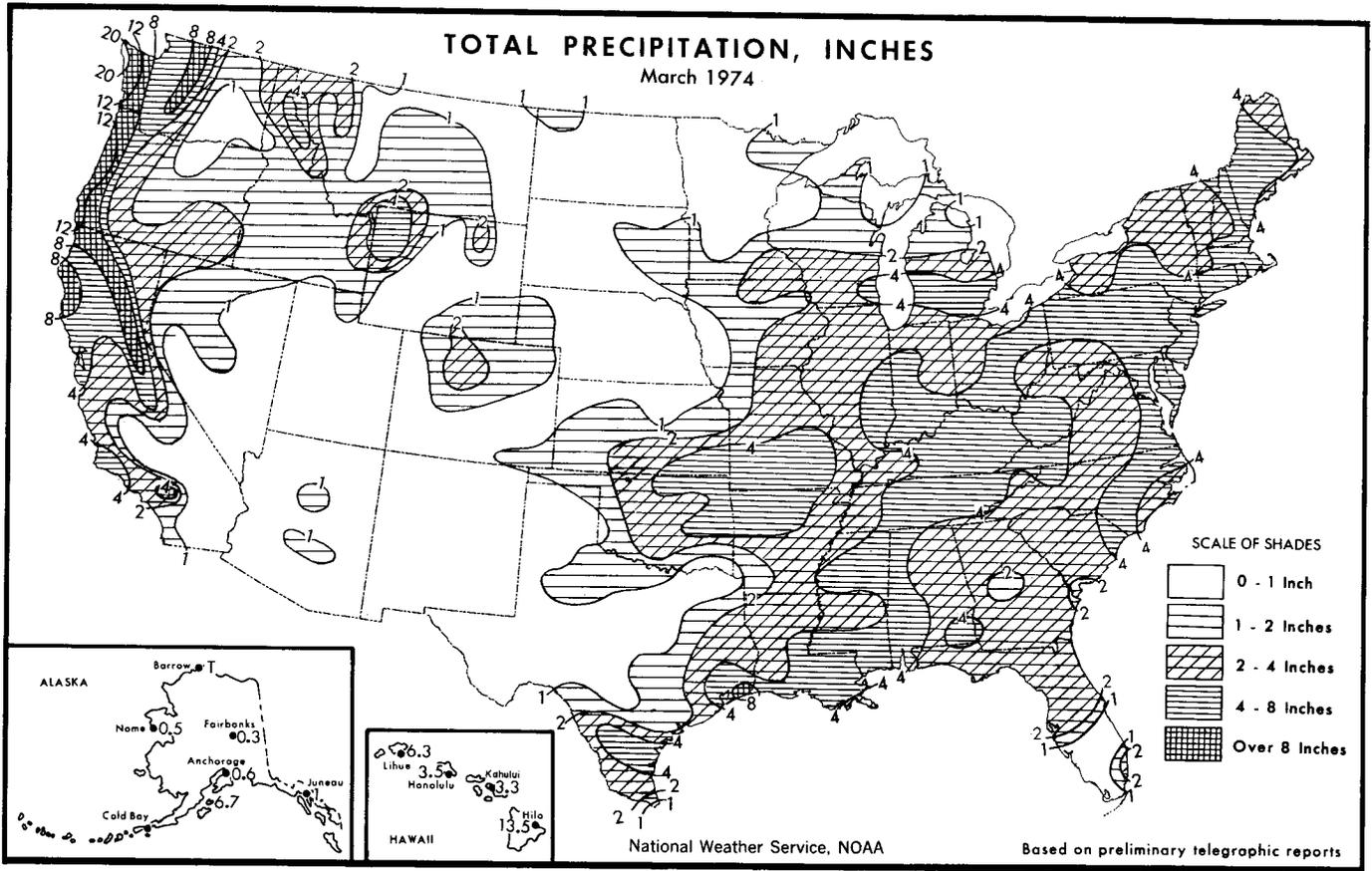
The final week of March was extremely wet along the Pacific and Gulf Coasts. Weekly totals in the West included Astoria, Ore., 2.45 in.; Eureka, Calif., 4.47 in.; San Francisco, 2.07 in. Throughout the week heavy precipitation, hail, high winds and fog plagued the Gulf Coast. Over 5.00 in. fell at New Orleans, La., and Pensicola, Fla. Gusts up to 65 mph were reported near Galveston, Tex.

TEMPERATURE: Except for North Dakota, the upper Great Lakes area and portions of New England, the entire Nation was warmer than normal.

The first half of the month was much warmer than usual except in the western tier of States and in New England during the second full week. On the 2d, temperatures reached into the 70's across South Dakota and Iowa.

At midmonth a cold front invaded much of the Nation, sending temperatures to record lows for the first week in spring. The only areas remaining much above normal were along the coasts. On the 24th record lows were recorded: Kansas City, Mo., 15°; Dubuque, Ia., -4°; and Duluth, Minn., -17°.

Temperatures warmed back to well above normal during the last week except across the northern Plains, the Great Lakes area and the Northeast. The month ended with the extreme Northeast clear and cold, while record warmth reached into the southern Plains.



Temperature and Precipitation Data for March 1974

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 . . .	61	+ 8	2.4	-3.8	La. Baton Rouge . . .	67	+ 7	5.7	+ .6	Youngstown . . .	37	+ 2	4.5	+1.3
Mobile . . .	64	+ 5	6.2	- .9	Lake Charles . . .	66	+ 6	3.4	- .4	OKLA. Okla. City . . .	55	+ 7	3.1	+1.0
Montgomery . . .	62	+ 5	2.7	-3.3	New Orleans . . .	67	+ 6	6.6	+1.1	Tulsa . . .	55	+ 7	2.6	+ .1
ALASKA. Anchorage . . .	23	- 1	.6	0	Shreveport . . .	64	+ 7	3.6	- .5	OREG. Astoria . . .	45	+ 1	10.7	+4.1
Barrow . . .	-20	- 5	.1	- .2	MAINE. Caribou . . .	21	- 3	3.6	+1.4	Burns . . .	37	+ 1	2.4	+1.5
Fairbanks . . .	8	- 2	.3	- .2	Portland . . .	34	+ 2	3.8	+ .2	Medford . . .	45	+ 0	3.3	+1.7
Juneau . . .	25	- 7	1.2	-2.4	MD. Baltimore . . .	45	+ 2	4.1	+ .4	Pendleton . . .	46	+ 2	.8	- .2
Kodiak . . .	31	- 1	6.7	+2.8	MASS. Boston . . .	39	+ 1	4.0	0	Portland . . .	47	+ 1	5.7	+2.1
Nome . . .	11	+ 4	.5	- .3	Chatham . . .	37	-	1.8	-	Salem . . .	46	+ 1	8.0	+3.7
ARIZ. Flagstaff . . .	40	+ 6	1.0	- .8	MICH. Alpena . . .	28	+ 2	.6	-1.3	PA. Allentown . . .	40	+ 2	5.4	+1.8
Phoenix . . .	65	+ 5	1.4	+ .6	Detroit . . .	36	+ 1	4.2	+1.7	Erie . . .	35	+ 2	5.0	+2.2
Tucson . . .	60	+ 2	.6	0	Flint . . .	35	+ 2	3.6	+1.5	Harrisburg . . .	43	+ 2	4.6	+1.4
Winslow . . .	49	+ 4	.2	- .2	Grand Rapids . . .	34	+ 1	5.1	+2.6	Philadelphia . . .	43	+ 1	4.9	+1.2
Yuma . . .	65	+ 1	.1	- .1	Houghton Lake . . .	27	0	1.4	- .3	Pittsburgh . . .	41	+ 3	3.7	+ .1
ARK. Fort Smith . . .	56	+ 6	4.1	+ .5	Lansing . . .	34	+ 1	4.4	+2.0	Scranton . . .	35	- 2	4.8	+2.2
Little Rock . . .	58	+ 8	2.1	-2.8	Marquette . . .	27	0	.6	-1.3	R.I. Providence . . .	39	+ 2	4.5	+ .5
CALIF. Bakersfield . . .	60	+ 3	.2	- .6	Muskegon . . .	33	0	4.3	+1.9	S.C. Charleston . . .	62	+ 5	3.0	-1.8
Eureka . . .	50	+ 2	7.0	+2.2	S. Ste. Marie . . .	22	- 2	1.7	0	Columbia . . .	62	+ 8	2.4	-2.3
Fresno . . .	56	+ 2	2.6	+1.0	MINN. Duluth . . .	21	- 3	.8	-1.0	Greenville . . .	56	+ 5	3.3	-2.0
Los Angeles . . .	60	+ 1	3.7	+1.5	Internatl Falls . . .	17	- 4	1.0	- .1	S.D. Aberdeen . . .	31	+ 4	.7	- .2
Red Bluff . . .	54	+ 1	4.5	+2.0	Minneapolis . . .	30	+ 2	1.0	- .7	Huron . . .	34	+ 5	1.6	+ .5
San Diego . . .	59	+ 1	1.7	+ .1	Rochester . . .	29	+ 1	2.4	+ .7	Rapid City . . .	38	+ 7	.3	- .7
San Francisco . . .	53	0	4.2	+1.7	St. Cloud . . .	25	- 1	.9	- .4	Sioux Falls . . .	35	+ 5	1.7	+ .3
Stockton . . .	55	+ 2	2.6	+ .6	MISS. Jackson . . .	62	+ 6	3.5	-2.1	TENN. Chattanooga . . .	54	+ 4	3.4	-2.2
COLO. Denver . . .	43	+ 6	1.3	+ .1	Meridian . . .	64	+ 8	3.7	-2.5	Knoxville . . .	55	+ 5	6.2	+1.3
Grand Junction . . .	48	+ 7	.8	0	MO. Columbia . . .	47	+ 5	3.0	+ .4	Memphis . . .	59	+ 8	3.4	-1.7
Pueblo . . .	47	+ 7	.5	- .2	Kansas City . . .	47	+ 6	1.2	-1.4	Nashville . . .	55	+ 6	5.3	+ .3
CONN. Bridgeport . . .	40	+ 2	6.1	+2.6	St. Louis . . .	48	+ 5	2.6	- .4	TEX. Abilene . . .	63	+ 8	.7	- .3
Hartford . . .	37	+ 1	4.5	+ .7	Springfield . . .	51	+ 7	7.2	+4.2	Amarillo . . .	53	+ 7	.6	- .2
D.C. Washington . . .	49	+ 4	4.2	+ .9	MONT. Billings . . .	36	+ 3	1.2	+ .2	Austin . . .	67	+ 7	1.3	- .6
FLA. Apalachicola . . .	65	+ 4	2.4	-2.3	Glasgow . . .	30	+ 5	.9	+ .5	Beaumont . . .	66	+ 6	8.8	+5.7
Daytona Beach . . .	69	+ 5	3.2	- .2	Great Falls . . .	33	+ 2	1.1	+ .1	Brownsville . . .	73	+ 5	.2	- .5
Ft. Myers . . .	72	+ 3	T	-3.1	Havre . . .	31	+ 5	.8	+ .3	Corpus Christi . . .	71	+ 7	4.8	+3.7
Jacksonville . . .	65	+ 4	3.5	- .1	Helena . . .	34	+ 3	.4	- .3	Del Rio . . .	69	+ 6	1.4	+ .0
Key West . . .	76	+ 1	.3	-1.3	Kalispell . . .	34	+ 3	1.4	+ .5	El Paso . . .	60	+ 8	.8	- .0
Lakeland . . .	71	+ 5	2.4	-1.6	Miles City . . .	34	+ 4	.7	0	Fort Worth . . .	63	+ 8	.8	-1.2
Miami . . .	76	+ 5	2.3	+ .2	Missoula . . .	35	+ 2	1.3	+ .6	Galveston . . .	66	+ 6	2.8	+ .3
Orlando . . .	70	+ 4	3.7	+ .2	NEBR. Grand Island . . .	42	+ 6	.5	- .7	Houston . . .	67	+ 6	4.0	+1.3
Tallahassee . . .	64	+ 4	3.0	-2.9	Lincoln . . .	42	+ 5	.7	- .8	Lubbock . . .	59	+10	1.0	+ .7
Tampa . . .	71	+ 5	2.4	-1.5	Norfolk . . .	40	+ 7	.5	- .9	Midland . . .	63	+ 9	.3	- .4
W. Palm Beach . . .	74	+ 4	2.4	- .9	N. Platte . . .	40	+ 6	.4	- .6	San Angelo . . .	65	+ 8	.5	- .4
GA. Atlanta . . .	58	+ 7	2.4	-3.4	Omaha . . .	42	+ 7	.8	- .8	San Antonio . . .	68	+ 7	.9	- .6
Augusta . . .	59	+ 4	2.3	-2.4	Valentine . . .	37	+ 6	.6	- .2	Victoria . . .	69	+ 7	1.8	- .1
Macon . . .	62	+ 5	1.8	-3.4	NEV. Ely . . .	39	+ 6	.7	- .2	Waco . . .	65	+ 8	.6	-1.8
Savannah . . .	64	+ 6	1.9	-2.5	Las Vegas . . .	60	+ 5	.2	- .1	Wichita Falls . . .	61	+ 8	1.7	+ .1
HAWAII. Hilo . . .	73	+ 2	13.5	- .2	Reno . . .	43	+ 3	1.2	+ .5	UTAH. Blanding . . .	43	+ 5	.3	- .6
Honolulu . . .	74	+ 1	3.5	+ .3	Winnemucca . . .	44	+ 6	1.1	+ .4	Salt Lake City . . .	46	+ 6	1.0	- .6
Kahului . . .	73	+ 1	3.3	+ .4	N.H. Concord . . .	32	0	4.0	+1.2	VT. Burlington . . .	29	0	2.7	+ .8
Lihue . . .	74	+ 2	6.3	+1.6	N.J. Atlantic City . . .	44	+ 3	4.6	+ .3	VA. Lynchburg . . .	49	+ 3	2.9	- .6
IDAHO. Boise . . .	43	+ 2	1.5	+ .5	Trenton . . .	42	+ 1	5.2	+1.4	Norfolk . . .	53	+ 5	5.2	+1.8
Lewiston . . .	44	+ 1	.7	- .3	N.MEX. Albuquerque . . .	53	+ 7	.9	+ .4	Richmond . . .	50	+ 3	3.8	+ .4
Pocatello . . .	39	+ 4	1.7	+ .8	Roswell . . .	58	+ 9	.1	- .4	Roanoke . . .	51	+ 6	3.1	- .2
ILL. Cairo . . .	52	+ 4	3.2	-1.5	N.Y. Albany . . .	32	- 1	3.1	+ .5	WASH. Colville . . .	39	+ 2	1.5	+ .4
Chicago . . .	39	+ 2	2.9	+ .2	Binghamton . . .	32	+ 1	4.1	+1.2	Omak . . .	40	+ 1	1.6	+ .8
Moline . . .	39	+ 3	2.9	+ .3	Buffalo . . .	33	+ 1	3.2	+ .3	Quillayute . . .	42	0	21.9	+11.1
Peoria . . .	41	+ 4	2.7	- .1	New York . . .	42	+ 1	4.5	+ .5	Seattle-Tacoma . . .	46	+ 2	5.8	+2.2
Rockford . . .	36	+ 2	2.0	- .7	Rochester . . .	33	0	3.6	+1.0	Spokane . . .	39	+ 1	2.2	+ .7
Springfield . . .	44	+ 5	3.4	+ .7	Syracuse . . .	32	- 1	4.3	+1.3	Walla Walla . . .	47	+ 1	1.6	+ .2
IND. Evansville . . .	50	+ 6	4.5	- .2	N.C. Asheville . . .	51	+ 5	3.2	-1.5	Yakima . . .	44	+ 2	1.2	+ .6
Ft. Wayne . . .	39	+ 2	2.9	0	Charlotte . . .	55	+ 4	3.3	-1.3	W.Va. Beckley . . .	46	+ 6	4.9	+ .7
Indianapolis . . .	45	+ 5	3.6	- .2	Greensboro . . .	52	+ 4	3.3	- .4	Charleston . . .	49	+ 4	4.5	+ .5
South Bend . . .	40	+ 5	2.8	0	Hatteras . . .	56	+ 5	3.5	- .3	Huntington . . .	49	+ 5	4.5	+ .4
IOWA. Burlington . . .	41	+ 4	3.3	+ .6	Raleigh . . .	54	+ 5	3.3	- .1	Parkersburg . . .	47	+ 4	2.9	- .9
Des Moines . . .	40	+ 6	2.0	- .3	Wilmington . . .	60	+ 6	2.3	-1.8	WIS. Green Bay . . .	30	+ 1	1.1	- .6
Dubuque . . .	34	+ 2	2.6	- .4	N.DAK. Bismarck . . .	27	+ 2	.4	- .3	La Crosse . . .	32	+ 1	2.1	+ .1
Sioux City . . .	40	+ 7	.7	- .8	Fargo . . .	23	- 1	.7	- .1	Madison . . .	33	+ 3	3.4	+1.5
KANS. Concordia . . .	45	+ 6	.7	- .9	Williston . . .	26	+ 1	.9	+ .3	Milwaukee . . .	34	+ 3	4.3	+2.1
Dodge City . . .	48	+ 7	1.4	+ .3	OHIO. Akron-Canton . . .	39	+ 3	5.7	+2.5	WYO. Casper . . .	36	+ 5	.4	- .5
Goodland . . .	42	+ 6	1.0	+ .1	Cincinnati . . .	46	+ 4	4.4	+ .3	Cheyenne . . .	37	+ 5	1.2	+ .1
Topeka . . .	47	+ 6	1.2	-1.0	Cleveland . . .	40	+ 4	3.9	+ .8	Lander . . .	36	+ 5	.6	- .6
Wichita . . .	48	+ 4	2.4	+ .6	Columbus . . .	45	+ 6	4.4	+1.0	Sheridan . . .	36	+ 5	1.0	- .2
KY. Lexington . . .	49	+ 5	5.9	+1.1	Dayton . . .	43	+ 4	3.6	+ .4	P.R. San Juan . . .	78	+ 2	1.9	- .3
Louisville . . .	50	+ 6	5.4	+ .3	Toledo . . .	36	0	2.9	+ .4					

Based on 1941-70 normals.

(Continued from Page 7)

on ground other than mountain areas.

Seedbed preparation progressed north. Preparation cotton planting Pahrump Valley underway. Harvesting green onions and radishes full swing. Cutting first crop alfalfa hay and green chop valleys extreme south. Livestock mostly good. Range, pasture feed poor to fair extreme northwest, good to excellent elsewhere.

NEW ENGLAND: Relatively cool early week, low temperatures 20's to mid-30's and highs 30's to mid-40's north to 50's south. Midweek warm, highs in 60's and low 70's except holding in 40's northern Maine. Weekend brought cooling with lows again mostly 20's to mid-30's and highs from near 40° far north to upper 40's and low 50's south. Precipitation frequently, on Tuesday and again Thursday night and Friday, amounts averaged from 0.25 to 0.50 in.

NEW JERSEY: Temperatures averaged 4° to 5° above normal. Extremes: 76° at Flemington on 4th, 25° at Pemberton on morning of 6th. Weekly precipitation averaged 1.20 in. north, 0.70 in. central and southern interior, and 0.50 in. coast. Highest weekly total was 1.70 in. at Long Valley.

Wet, cool weather delayed crop progress. Peaches beginning to bloom. Soil preparation continued between rains. Few acres of potatoes planted. Lime and fertilizer applied to pastures and grain crops.

NEW MEXICO: Violent winds most of State Tuesday followed by sharp cooling northern areas Wednesday and Thursday. Subfreezing temperatures at all except extreme southeast Friday morning. Strong warming Friday afternoon and Saturday with cooling again Sunday. Showers and snows most north and west mountain sections midweek with moisture amounts ranging to near 0.50 in.

Very little rainfall. Ranges mostly poor to fair. Livestock fair, some supplemental feeding, moisture short. Winter wheat mostly fair. Winter barley fair to good. Alfalfa good. Cotton planting next week. Lettuce, onions, apples good.

NEW YORK: Temperatures averaged above normal. Extremes: 83° at Rochester on 4th, 14° on 7th at Saranac Lake. On 4th, highs upper 60's north mountains, 70's and low 80's elsewhere.

Precipitation frequent and averaged above normal in St. Lawrence Valley and from the Great Lakes eastward to the Mohawk Valley. Elsewhere amounts varied around normal. About 2 to 4 in. new snow fell over portions of central late Sunday. Significant snow depths limited to higher terrain of northeast.

NORTH CAROLINA: Violent rapidly changing spring weather. Rainfall well above normal. Quite windy most of week. Tornado caused 5 deaths, many injuries, extensive damage in southwest mountains Wednesday night. Many localities reported hail several days. Flash flooding in mountains from rainfall 2.00 to 5.00 in.

Farm operations limited to 2.1 days fieldwork. High winds, heavy rains caused extensive property damage, flooding, soil erosion west part. Corn about 5% planted, ahead of 1973. Flue-cured tobacco transplanting getting underway coastal plains, 3% complete. Small grains good. Irish potatoes, truck crops fair to good. Peach crop good shape, limited hail damage during week. Pastures improving, providing good grazing.

NORTH DAKOTA: Temperatures remained cool and mild throughout week all divisions. Extremes: 60° at Ft. Yates on 5th, 3° at Westhope on 4th. All divisions below normal. Precipitation scarce with most divisions below normal.

Greatest amount recorded at Fortuna with 0.50 in. on 1st. Weekend remained mild with little precipitation. Pembina recorded Nation's low of 2° below zero on 7th. Spring fieldwork slow to start because of continued cold weather. Some tillage south counties may start late this week with warmer temperatures. Herbicide sprays supplies anticipated short. Some livestock on pastures, calving and lambing full swing.

OHIO: Storm moved across State evening of 1st with hail and heavy rains. Tornadoes on 3d devastated Xenia and Central State College and caused some damage in eastern Cincinnati, London and New Albany. Strong winds and rain prevailed on 4th. Some flooding occurred midweek northeast and central. Early week high temperature in 80's changed to subfreezing temperatures by end of week with a low of 26° at Mansfield. Near normal readings during weekend.

Cold and wet weather has caused some browning of wheat. Farm activities limited to building and machinery repair and securing fertilizer. Oat seeding 10% complete. Tornadoes reported to have killed approximately 100 head of cattle, and 500 head of hogs in Green County area, extensive debris also reported in other areas.

OKLAHOMA: Temperatures ranged from normal to 6° above normal. Precipitation mostly light and ranged from traces to about 0.50 in. Weekend mild and mostly dry except few showers east-central and northeast.

Small grains showed good growth across State but most areas will need rain next 2 weeks. About 60% wheat crop, 30% spring oats, barley jointing, same as last year. Small grains mostly good. Little or no grazing-out of wheat most areas. Seedbeds 60% prepared for corn, 10% planted. Land about 80% plowed, 20% seedbeds ready for sorghum, cotton, peanuts. Soybeans 50% land plowed, 10% seedbeds prepared. Vegetables and home gardens not killed by late March freeze showed good growth. Pastures and ranges furnishing mostly good forage east half, some supplemental feeding needed elsewhere. Livestock good.

OREGON: Light rains occurred during week. High temperatures in 50's and 60's. North Bend warmest with 71°. Low temperatures occurred latter part of week, in 30's, lower 40's west, mid-20's and 30's east.

Wet weather limited growth, progress of fieldwork west of Cascades. Fall wheat fair west, good east. Little winterkill or reseeding necessary east. Spring seeding underway, some recrop, summer-fallow area. Potato planting half completed Columbia Basin, starting Ontario. Onion seeding nearly complete east. Planting processing green peas underway warmer, dryer soils. Peaches past full bloom. Cherries bud to bloom stages. Pears pink to popcorn stage. Brown rot sprays applied. Livestock fair to good. Pastures, range slow to green, too soft to turn stock out.

PENNSYLVANIA: Warm, rather wet week. Temperatures averaged 2° to 4° above normal northcentral, 4° to 8° above elsewhere. Warmest week since October. Highs 60's and 70's midweek, 30's and

40's Saturday for the coldest day. Lows 40's and 50's midweek and 20's to low 30's weekend. Extremes: 80°, 17°.

Frequent precipitation. Some severe thunderstorms, hail, and strong winds Monday. Showers and thunderstorms continued sporadically through Friday with heaviest showers many areas early Thursday. Snow flurries most sections Saturday with light accumulation northwest. Weekly precipitation ranged from over 2.00 in. south-central and northwest to less than 0.25 in. north-central.

PUERTO RICO: Island average rainfall 0.51 in. or 0.18 in. subnormal. Highest weekly total 2.80 in. at Pico Del Esteluzillo. Highest 24-hour total 1.17 in. at Corozal. Temperatures averaged about 77° on coasts and 71° interior. Extremes: 93°, 50°.

Dry weather favored sugarcane harvesting and preparing soil for planting. Scattered showers helped development of new plantings most sections. Drying of coffee bean continued normally but dry weather retarded development of new plantings. Dry weather benefited tobacco drying in shed but rainfall delayed harvest and hindered drying operations other zones. Lack of rain seriously affecting pastures south coast. Food crops hurt by lack of rain most localities although recent rains helped in some areas east-interior and west-interior. Citrus, bananas, plantains, and vegetables harvested in west-interior zones.

SOUTH CAROLINA: Temperatures averaged normal, 12° to 18° above normal early week, 5° to 10° below normal end of week. Scattered frost over weekend. Rainfall 2.00 to 3.00 in. northwest to less than 1.00 in. along coast, most falling on 4th. Unstable weather persisted during week. Some wind, hail damage 4th, 5th.

Soil moisture adequate most areas, surplus in mountains, most of northwest. Cotton planting very limited. Corn fair, 23% planted, 9% in 1973. Tobacco good, 32% planted, 6% 1973. Problems with bluemold, cutworms, some wind damage. Applied insecticides, fungicides. Small grains fair to good. Powdery mildew damage to wheat, leaf spot on oats. Pastures, peaches good. Spring vegetables good, some wind damage to tomatoes causing replanting. Watermelons 36% planted, about same as 1973.

SOUTH DAKOTA: Temperatures averaged within a degree or so normal. Highs 50's and 60's, lows dropping into upper teens or low 20's. Extremes: 73° at Winner on 6th, 13° at Kennebec on 5th. Rain Monday, snow midweek. Heaviest moisture east, some areas more than 0.50 in. State precipitation since January 1 below normal.

Cold and wind limited fieldwork. Oats 3% seeded. Barley 4% seeded, about normal, equal 1973. Spring wheat 4% planted, slightly behind 1973 and normal. Spring plowing 6% complete underway west two-thirds, not yet started most areas east third. Spraying for army cutworms underway some southcentral areas. Livestock good. Weather stressed young animals, but losses remain low. Moisture needed for grass growth, stockwater and to promote fieldwork.

TENNESSEE: Severe thunderstorms and some tornado activity over mid and east 3d and 4th followed by fair skies and below normal temperatures 5th and 6th. Temperatures for week averaged above normal. Another cold front on weekend brought scattered thunderstorms to west areas. Rains and wet fields continued to delay field-

work. Few fields of corn planted in Delta area. Damage from tornadoes minor to field crops but a few hundred head of cattle killed. Wheat, oats and barley fair to good with rank growth. Wet weather diseases such as rust and yellow dwarf virus evident statewide. Pasture growth above normal. Alfalfa weevils becoming common. Tobacco beds over 90% set, about average. Nitrogen, phosphate, and potash all in short supply, high analysis nitrogen especially difficult to obtain. Unfavorable weather for fertilizer application has spread out use and kept shortage from becoming critical. Fuel supplies improved slightly but short in some localities.

TEXAS: Dry air across most of State during week. Brief rain isolated areas central and south. Rainfall below normal. Houston and Dallas-Fort Worth areas only portions measurable precipitation. Temperatures normal across State. Extremes: 101° Del Rio, 24° Dalhart.

Wheat, oat prospects across State fair to good. Irrigated wheat excellent progress. Both dry-land wheat, oats continued to deteriorate. Planting cotton, corn, sorghum, peanuts, rice excellent progress. Some replanting necessary following recent cold, wet weather. Seedbed preparation underway most areas.

Lower Rio Grande Valley: Onion harvest continued strong, daily shipments in excess of 100 cars. Moderate supplies carrots, cabbage. Potatoes progressing well. Cantaloups blooming in Starr County. Laredo: Spring onions show good growth, harvest expected mid-April. Carrot digging continued. San Antonio-Winter Garden: Watermelon planting complete. Potatoes good start Frio County. Carrots harvested in Dimmitt and LaSalle counties, limited spinach harvest. Strawberries in good supply in Atascosa County. Coastal Bend: Watermelons, cucumbers vining and blooming. Central and East Texas: Tomatoes and green peppers field set. Cold weather and winds damaged crop some localities. Land preparation for sweet potatoes and watermelon planting continued. Trans-Pecos: Lettuce and onions good development. High Plains: Potato planting about complete, early planted fields up. Onion, cabbage planting continued. Greenhouse tomatoes harvested Oldham County. Land preparation underway for cucumbers, other warm-season vegetable crops.

Peaches in Gillespie County show good development. Much of peach crop lost in north Texas. Pecans leafing-out south and central and blooming south. Buds are forming and beginning to split throughout the northern counties. Citrus harvest continued in final stages with harvest expected near complete by month's end. Ranges generally poor over State due dry weather. Grazing short most of high, low plains, Edwards Plateau, Cross-Timbers areas. Eastern small grain, native pastures furnishing adequate, good grazing. Livestock good. Supplemental feeding still active many areas. Goat shearing about complete, sheep shearing excellent progress.

UTAH: Scattered areas of rain or snow throughout period, totals locally moderate to heavy, very light few localities west. Average temperatures 2° to 6° below normal. Soil temperatures 4-inch depth ranged from low 40's Cache Valley to mid-40's Salt Lake City and Richfield, low 60's St. George.

Tempo of spring fieldwork increased. Land preparation and some early planting started lower valleys. Apricots in bloom. No freeze loss yet. Soil moisture good most areas. Irriga-

tion water stored in 27 major reservoirs best ever for April 1, 1974 except for slightly higher amount May 1, 1971. Sheep shearing started west desert and some range lambing underway. Range calving over half completed.

VIRGINIA: Temperatures averaged about 5° above normal. Extremes: 87°, 27°. Precipitation moderate to heavy, averaged around 1.00 in. mostly during showers and thunderstorms midweek. Damaging winds in some areas on 4th.

Soil moisture supply over 60% surplus, remainder adequate. Fieldwork averaged 2.3 days, mainly early week. Corn planting beginning, expected to increase as soil condition permits. Tobacco beds, small grains mostly good to excellent. Some spraying for aphids in barley. Pasture fertilizing, overseeding active, mostly in excellent condition. Potato planting Eastern Shore continued. Sweetpotato land and bed preparation increased. Peach damage generally severe in south and east, less elsewhere. Apples generally good. Current supplies nitrogen and mixed fertilizer tight in most counties. About 20% indicated adequate supplies with remainder having delivery problems or shortages. Many farms with on-farm storage able to obtain their needs earlier.

WASHINGTON: West: Average temperatures about normal. Highs 50's, lows 40's. Precipitation above normal, total amounts 0.30 to over 4.00 in. Farm operations behind schedule because of wet conditions. Harvest forced rhubarb nearly complete. Field rhubarb to begin this week. New planting of raspberries almost finished. Growth of raspberries, strawberries slow. Pastures soggy, short. Green chopping of winter rye begun. East: Average temperatures near normal. Highs 50's, some 60's and 70's, lows 30's. Precipitation throughout week, total amounts ranging 0.10 to over 1.00 in. Many fields too wet to work. Soil moisture ideal for pastures, grass hay. Planting potatoes, sugarbeets, asparagus. Apricots in full bloom. Fruit trees showing green leaves, buds. Grape, tree fruit pruning, trellis work, heating, sprinkler installa-

tion. Calving, lambing proceeding. Winter wheat in good shape. Farmers topdressing, spraying, testing for nitrates. Cattle on some pastures. Grass greening slowly. Feed supplies tight.

WEST VIRGINIA: Temperatures above normal, record breaking highs in several locations. Monday's highs in upper 80's and low 90's. Tornado winds caused damage in scattered areas south. Precipitation above normal and fairly evenly distributed over State.

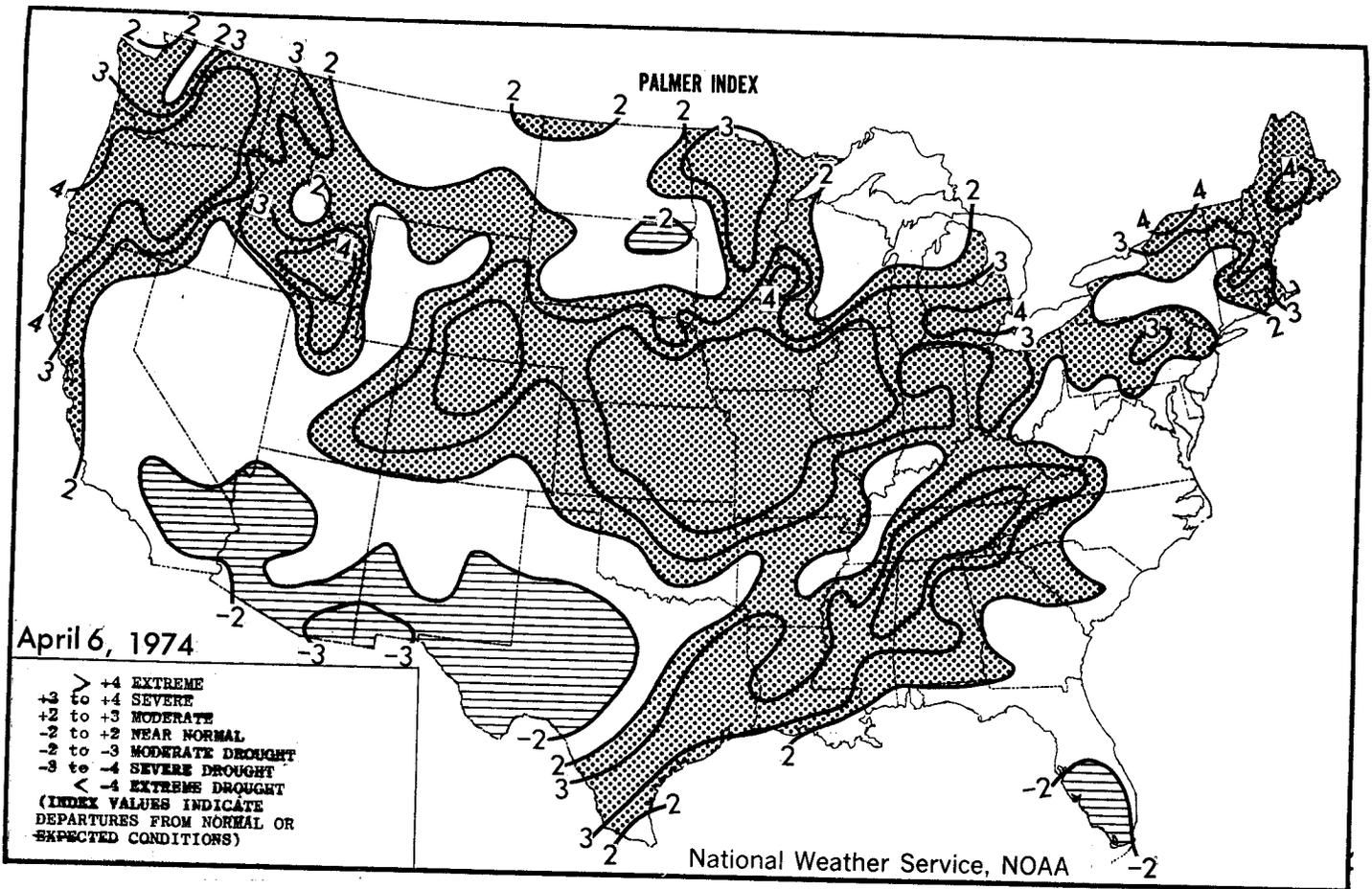
Rain slowed preparation of gardens but helped grass grow. Sporadic warm weather brought some garden seed up 3 or 4 weeks ago. Grazing becoming plentiful at lower elevations.

WISCONSIN: Temperatures averaged only 1° or 2° subnormal result of heavy cloudiness in north. South temperatures varied widely, reaching 70° on 2d and 60° on 6th but 20° to 30° colder on 4th and 7th.

Precipitation amounts locally heavy, 3 to 7 in. snow northwest 1st and 4 to 12 in. snow north 3d. Precipitation south mostly rain, over 1.00 in. some areas 3d from spring thunderstorms.

WYOMING: Precipitation widespread, most stations received some. Largest amounts: Laramie 1.14 in. and Horse Creek 1.13 in. Temperatures little below normal south to little above normal north. Highs 50's and 60's, lows mostly teens to mid-20's. Extremes: 70° at Basin, 10° below zero at Horse Creek. Weather favorable for fieldwork and livestock. Topsoil, subsoil moisture supplies mostly adequate. Irrigation water prospects plentiful most areas. Seedbed preparation and small grain seeding in progress. Oats, spring wheat about 10% seeded. Sugar beet planting underway. Barley about 25% seeded. Winter wheat prospects favorable, winds caused some soil erosion. Calving about 40% completed. Farm flock lambing 60% done. Range lambing underway. Sheep shearing in progress.

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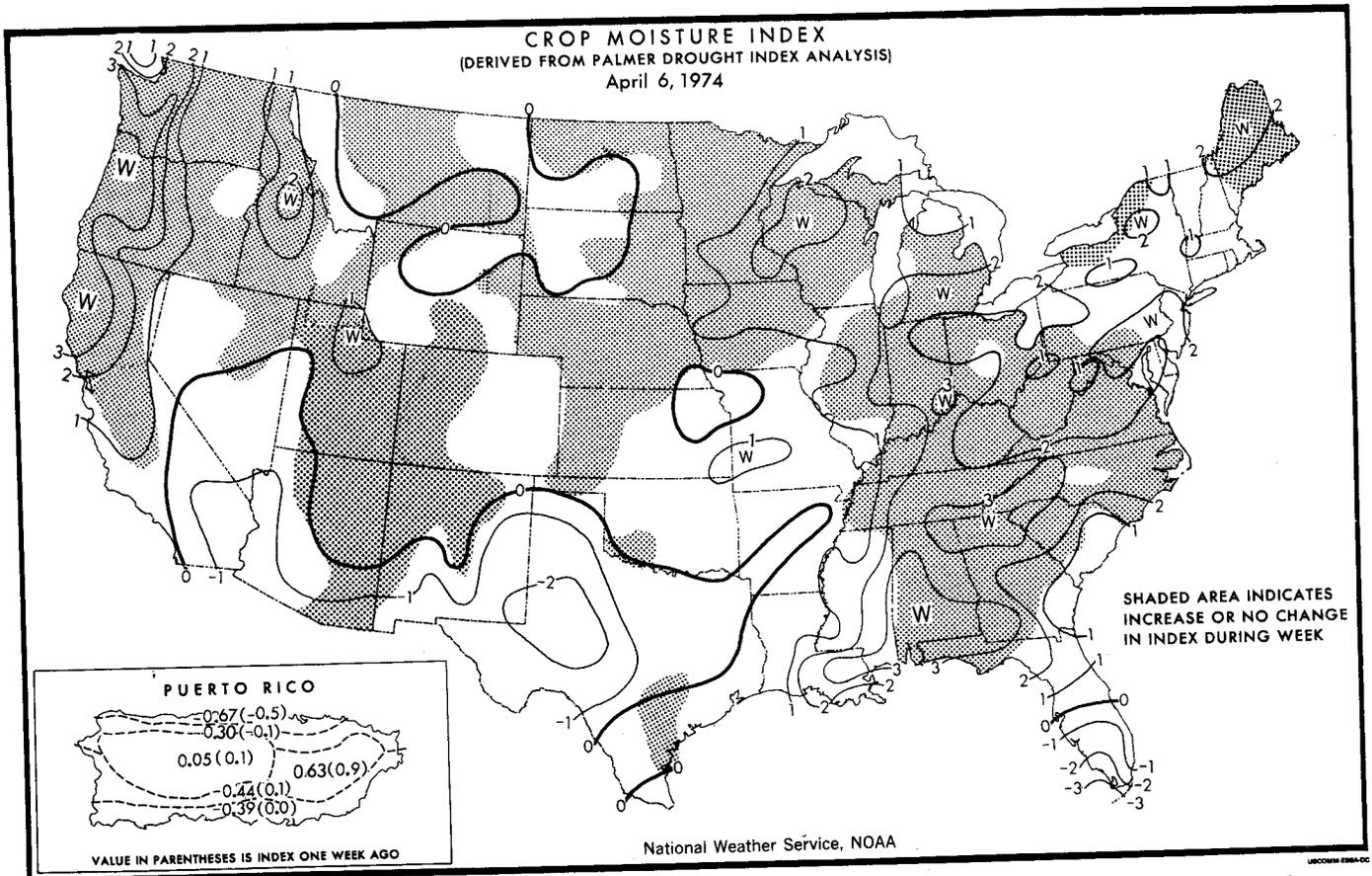
THE PALMER INDEX

The Palmer Index map will be published in the Bulletin in the first issue of each month during the season from April through October. The Crop Moisture Index map will appear each week during the same period. The latter chart will be described in detail next week.

There has been much misconception and misinterpretation of the Palmer Index. The index was originally devised as a climatological index of drought severity. The word "drought" is used here to describe prolonged periods of abnormally dry weather.

Just as the negative values of the index depict the degree of severity of prolonged periods of dry weather, the positive values depict the degree of severity of prolonged periods of wet weather. However, when an excessive amount of precipitation falls, the positive index may rise to much higher values than the negative index because precipitation is bounded by zero on the lower end but is unbounded on the upper end. Therefore, it may take longer to indicate the end of a wet spell than to end a dry spell.

The Crop Moisture Index should be used to see current moisture conditions and the Palmer Index for the long-term conditions.



SHADED AREAS: Index increased or did not change last week

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 good, 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
- Below -4.0 Not enough rain, still extremely dry

UNSHADED AREAS: Index decreased last week

Index

- Above 3.0 Some drying, but still excessively wet
- 2.0 to 3.0 More drying weather needed, work delayed
- 1.0 to 2.0 Favorable, except still too wet in spots
- 0 to 1.0 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 Extremely dry, most crops near ruin

The map gives a general picture of how wet or dry the Nation was last week. It shows areas where abnormal wetness or dryness have hindered crops and areas where moisture conditions have favored them.

The lines show the crop-moisture situation according to an index computed from values of temperature and precipitation by areas...350 climatological divisions, which correspond roughly to SRS's crop reporting districts. Previous weekly computations of soil moisture account for the effects of prior weather.

Shaded areas are those where precipitation increased the index last week or where soils did not dry. Unshaded areas dried last week.

The centers of wet or dry areas are marked: W=wet; D=dry. The map lines mark off crop situations. Use the legend to interpret.

Local variations caused by isolated rain or by soil differences are not shown. While shallow rooted crops in poor soils may suffer more than the map shows, conditions may be better where soils are good. Also, legends apply to growing rather than mature plants. Any map interpretation must consider both the growth stage and moisture status and trend. In irrigated regions, the index values reflect only departures from ordinary irrigation requirements.

IMMEDIATE - U. S. Weather Report

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Heating Degree Days (Base 65°) For Week Ending April 7, 1974

States and Stations	Weekly			Seasonal + Accumulation			States and Stations	Weekly			Seasonal + Accumulation			States and Stations	Weekly			Seasonal + Accumulation		
	TOTAL	Departure*	From 1972-73	TOTAL	Departure*	From 1972-73		TOTAL	Departure*	From 1972-73	TOTAL	Departure*	From 1972-73		TOTAL	Departure*	From 1972-73			
ALA. Birmingham . . .	43	-4	2034	-721	-805		Portland . . .	180	-24	6037	-489	-452	Tulsa . . .	52	-16	3221	-323	-637		
Mobile . . .	21	0	1009	-656	-539		MD. Baltimore . . .	86	-20	4918	-387	-146	OREG. Astoria . . .	124	-8	4437	175	230		
Montgomery . . .	36	3	1575	-643	-521		MASS. Boston . . .	100	-42	4669	-357	-263	Burns . . .	188	19	5918	-231	-434		
ARIZ. Flagstaff . . .	172	-11	5602	-535	-1410		MICH. Alpena . . .	208	-1	7090	-285	-19	Burlington . . .	127	6	3880	-383	-397		
Phoenix . . .	4	19	1092	-423	-441		Detroit . . .	146	-7	5593	-187	-38	Pendleton . . .	87	-33	4186	-461	-934		
Tucson . . .	18	-12	1621	-40	-660		Flint . . .	149	-17	5887	-376	-34	Portland . . .	110	-6	3777	-307	-87		
Winslow . . .	135	30	4394	42	65		Grand Rapids . . .	153	-10	5959	-136	-57	Salem . . .	111	-10	4102	13	-274		
Yuma . . .	0	-10	904	-87	-276		Houghton Lake . . .	204	4	7085	-259	-59	PA. Allentown . . .	99	-37	4737	-562	-326		
ARK. Fort Smith . . .	55	0	2931	-311	-774		Lansing . . .	151	-12	6064	-122	-200	PA. Harrisburg . . .	130	-42	5407	-594	-268		
Little Rock . . .	53	-3	2535	-715	-587		Marquette . . .	235	30	7136	-38	-110	Harrisburg . . .	86	-29	4304	-537	-277		
CALIF. Bakersfield . . .	38	-6	1706	-361	-453		Muskegon . . .	165	-5	6037	-52	192	Philadelphia . . .	88	-25	4109	-380	-156		
Eureka . . .	101	-11	3674	24	96		S. Ste. Marie . . .	249	26	8020	104	387	Pittsburgh . . .	104	-30	4724	-669	-221		
Fresno . . .	57	0	2275	-190	-477		MINN. Duluth . . .	246	24	8732	224	-58	Scranton . . .	122	-25	5592	-98	-126		
Los Angeles . . .	27	-26	1205	-285	0		Internat. Falls . . .	261	31	9299	-44	431	R. I. Providence . . .	109	-43	4860	-438	-174		
Red Bluff . . .	74	9	2532	69	-441		Minneapolis . . .	197	12	7222	-300	17	S. C. Charleston . . .	15	-17	1294	-810	-556		
San Diego . . .	17	-25	963	-311	-86		Rochester . . .	189	4	7283	-144	-135	Columbia . . .	26	-11	1519	-1021	-821		
San Francisco . . .	71	-3	2525	28	-77		St. Cloud . . .	212	16	7951	-41	11	Greenville . . .	44	-12	2569	-477	-382		
Stockton . . .	0	-3	525	-236	-329		MISS. Jackson . . .	41	8	1672	-581	-606	S. DAK. Aberdeen . . .	194	6	7821	36	672		
COLO. Denver . . .	173	20	5235	-76	-453		Meridian . . .	31	-3	1492	-844	-680	Huron . . .	172	-3	6964	-345	82		
Grand Junction . . .	145	22	5526	355	-480		Kansas City . . .	96	-5	4528	-212	-381	Rapid City . . .	185	-5	6132	-307	-482		
Pueblo . . .	141	14	4720	-220	-749		St. Louis . . .	87	-6	4341	-117	-217	TENN. Chattanooga . . .	170	-3	6781	-339	-187		
COON. Bridgeport . . .	107	-38	4380	-479	-602		Springfield . . .	87	-6	3801	-486	-590	Knoxville . . .	46	-17	2689	-632	-596		
Hartford . . .	111	-42	5216	-518	-167		MONT. Billings . . .	158	-19	5941	-425	-777	Memphis . . .	49	-6	2401	-728	-939		
DEL. Wilmington . . .	88	-29	3998	-350	-43		Glasgow . . .	180	-21	7642	-367	169	Nashville . . .	55	-11	2778	-763	-503		
D. C. Washington . . .	66	-24	3163	-801	-427		Great Falls . . .	159	-29	6439	-224	-210	TEX. Abilene . . .	30	-12	2492	-495	-1122		
FLA. Apalachicola . . .	13	-3	776	-571	-364		Havre . . .	164	-27	6788	-329	-935	Austin . . .	21	-2	1295	-421	-758		
Daytona Beach . . .	11	1	502	-388	-217		Helena . . .	164	-27	6788	-329	-935	Brownsville . . .	4	4	697	-233	-515		
Ft. Myers . . .	1	1	234	-223	-110		Kalispell . . .	171	-22	6713	-658	-470	Corpus Christi . . .	4	4	697	-233	-515		
Jacksonville . . .	0	0	41	-43	-20		Miles City . . .	166	-12	6512	-559	-395	Del Rio . . .	8	-3	1060	-458	-643		
Key West . . .	0	0	381	-295	-227		MISSOULA . . .	158	-18	6383	-493	-438	El Paso . . .	31	-7	2245	-382	-554		
Lakeland . . .	0	-1	131	-75	-7		NEBR. Grand Island . . .	134	-11	5790	-90	-246	Fort Worth . . .	23	-15	1807	-525	-777		
Miami . . .	0	0	131	-75	-7		Lincoln . . .	135	1	5800	54	-119	Galveston . . .	12	-4	1109	-318	-725		
Orlando . . .	7	0	407	-295	-93		Norfolk . . .	145	-12	6049	-343	-332	Houston . . .	12	-4	1109	-318	-725		
Tallahassee . . .	32	15	1049	-497	-395		North Platte . . .	147	-11	6141	65	-386	Lubbock . . .	45	-25	2551	-845	-1358		
Tampa . . .	8	1	414	-302	-190		Omaha . . .	131	-14	5821	-245	-241	Midland . . .	26	-16	1976	-589	-1220		
W. Palm Beach . . .	2	-2	174	-125	-9		Valentine . . .	174	0	6194	-358	-485	Beaumont . . .	14	-5	1085	-419	-750		
GA. Atlanta . . .	40	-16	2190	-790	-581		NEV. Ely . . .	197	-6	6424	-159	-718	San Angelo . . .	24	-8	1608	-590	-1019		
Augusta . . .	36	-3	1869	-617	-380		N. H. Concord . . .	35	-10	2371	-139	-579	San Antonio . . .	17	-1	1205	-352	-399		
Macon . . .	34	3	1517	-682	-451		N. J. Atlantic City . . .	144	-19	5025	-662	-979	Victoria . . .	8	3	833	-390	-650		
Savannah . . .	24	-4	1225	-692	-303		Trenton . . .	134	-42	6485	-54	-516	Waco . . .	21	-8	1595	-436	-966		
IDAHO. Boise . . .	138	3	4663	-476	-543		N. MEX. Albuquerque . . .	87	-34	3993	-535	-118	Wichita Falls . . .	28	-20	2219	-608	-1038		
Lewiston . . .	174	8	5981	183	-691		N. H. Concord . . .	81	-37	4147	-399	-150	UTAH. Salt Lake C . . .	156	18	5056	-266	-639		
Pocatello . . .	69	1	3288	-399	-438		Roswell . . .	96	3	4047	2	-475	VT. Burlington . . .	152	-37	6810	-201	-265		
ILL. Cairo . . .	122	-16	5359	-219	-85		N. Y. Albany . . .	136	-15	2917	-643	-663	VA. Lynchburg . . .	60	-27	3434	-541	-385		
Moline . . .	107	-31	5661	-232	48		Binghamton . . .	133	-44	5965	-493	-393	Richmond . . .	41	-36	2332	-754	-466		
Peoria . . .	107	-24	5341	-275	-226		Buffalo . . .	145	-28	5816	-299	-7	Roanoke . . .	59	-32	3324	-690	-492		
Rockford . . .	135	-17	5905	-326	-8		New York . . .	84	-38	4086	-401	-357	WASH. Quillayute . . .	136	-12	5036	241	157		
Springfield . . .	105	-12	4787	-381	-325		Cleveland . . .	128	-38	5641	-347	24	Seattle-Tacoma . . .	113	-17	4049	-297	-305		
IND. Evansville . . .	105	-12	4787	-381	-325		Buffalo . . .	145	-28	5816	-299	-7	Spokane . . .	153	-4	5774	-180	-26		
Fort Wayne . . .	122	-20	5359	-282	-29		New York . . .	84	-38	4086	-401	-357	Wala Wala . . .	106	0	3953	-394	-364		
Indianapolis . . .	86	-35	4470	-671	-358		Syracuse . . .	141	-22	5890	-74	-391	Yakima . . .	135	4	5015	-327	-308		
South Bend . . .	120	-30	5087	-740	-206		N. C. Asheville . . .	75	-14	3151	-792	-391	W. VA. Beckley . . .	79	-41	4188	-876	-523		
IOWA. Burlington . . .	115	-17	5363	-314	-221		Hatteras . . .	26	-40	1737	-825	-430	Charleston . . .	62	-31	3592	-681	-428		
Des Moines . . .	125	-23	5660	-521	-453		Charlotte . . .	41	-15	2609	-486	-527	Huntington . . .	56	-38	3555	-744	-603		
Dubuque . . .	162	-11	5426	-190	-40		Greensboro . . .	48	-25	3160	-476	-502	Parkersburg . . .	66	-36	3878	-593	-278		
Sioux City . . .	137	-13	5883	-524	-287		Wilmington . . .	42	-23	2613	-738	-585	WIS. Green Bay . . .	200	15	6934	284	201		
KANS. Concordia . . .	109	-12	4987	-204	-353		N. Dak. Bismarck . . .	235	37	8448	327	813	LaCrosse . . .	177	15	6583	-205	-45		
Dodge City . . .	96	-18	4374	-306	-866		Fargo . . .	241	38	8732	370	600	Madison . . .	163	-13	6603	-343	53		
Goodland . . .	146	-3	5386	-122	-572		Williston . . .	244	41	8305	99	408	Milwaukee . . .	192	-12	6090	-481	-172		
Topeka . . .	89	-22	4703	-190	-298		OHIO. Akron-Canton . . .	106	-41	4911	-698	-129	WYO. Casper . . .	162	2	6512	-29	-723		
Wichita . . .	89	-22	4703	-190	-298		Cleveland . . .	104	-44	4801	-722	-309	Cheyenne . . .	201	12	6119	-106	-803		
KY. Lexington . . .	80	-18	3669	-742	-299		Columbus . . .	91	-35	4462	-759	-283	Lander . . .	188	1	6677	-184	-1617		
Louisville . . .	75	-19	3515	-828	-404		Cincinnati . . .	91	-17	4238	-452	-306	Sheridan . . .	166	-18	6443	-264	-548		
LA. Baton Rouge . . .	15	-3	1037	-618	-550		Dayton . . .	99	-28	4678	-498	-205				</				