

WEEKLY WEATHER AND CROP BULLETIN

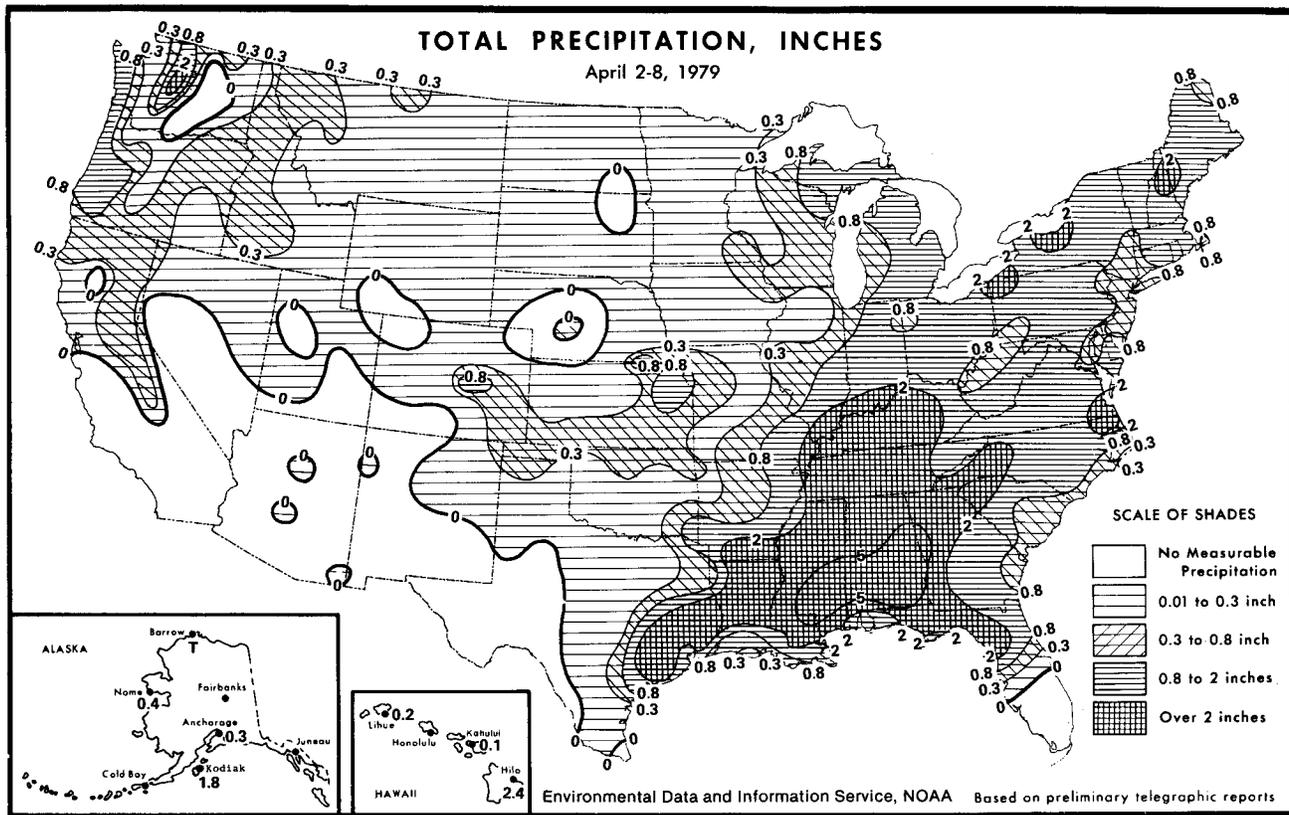
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National Weather Summary

April 2 - 8

HIGHLIGHTS: A series of low pressure systems formed in the midlands and moved northeastward bringing cool weather southward through the Plains, then eastward. Warm, moist Gulf air swept in, combined with the cool air, and produced moderate-to-heavy rains, including thunderstorms, high winds, and tornadoes. A deep low pressure center rushed through the eastern Great Lakes causing some damage. Most temperatures ranged below normal east of the Rockies. The extreme northern Plains dipped 12 to 15 degrees colder than normal.

On Monday, thunderstorms covered an area from the Deep South to the Ohio Valley. An inch and

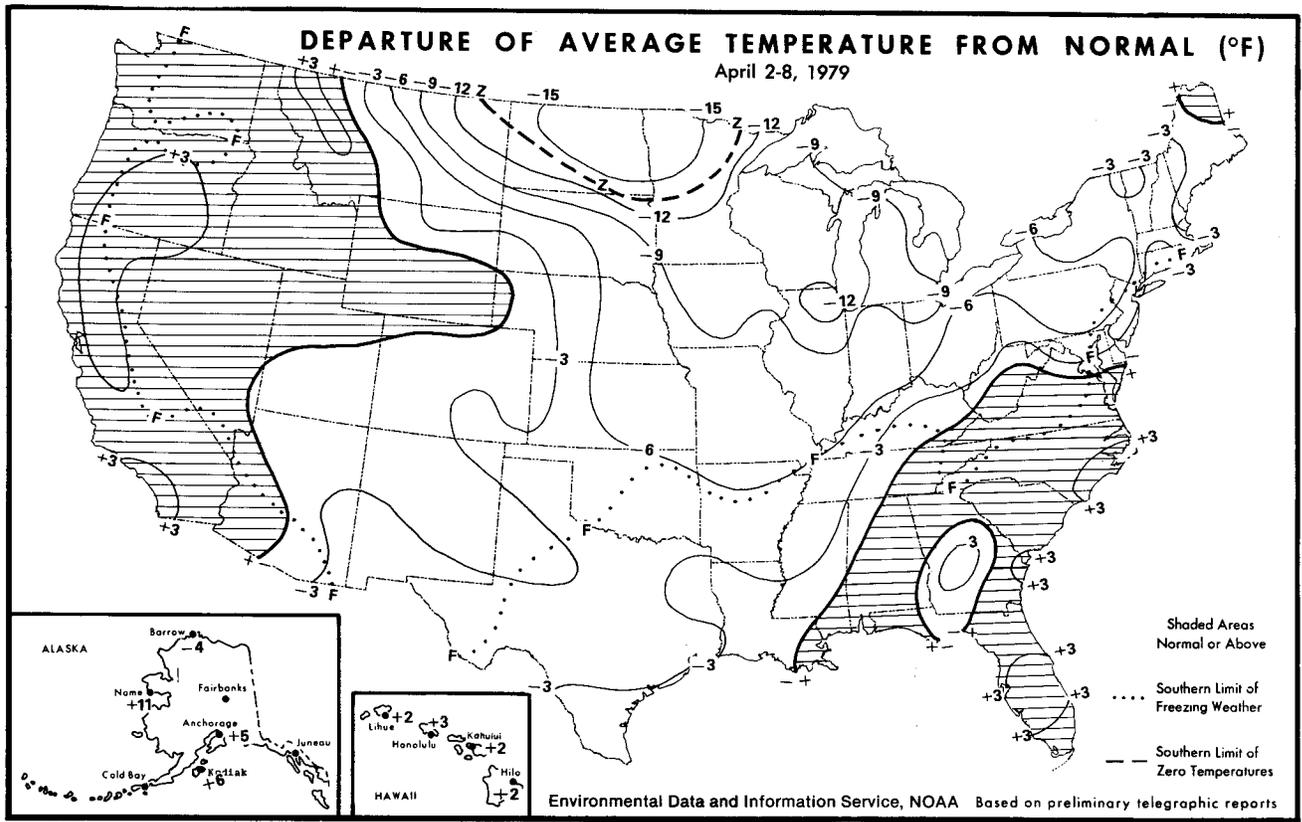
one-half of rain drenched Nashville, while Muscle Shoals, northwestern Alabama, scored an inch and a quarter.

Snow whitened a section from the west-central Plains to the upper Midwest. As much as 8 inches blanketed eastern Colorado; Des Moines collected 7 inches.

By afternoon, storms, some severe, hit portions of Texas and the South. Houston gathered 1.19 in. of rain; Birmingham, Ala., notched 1.16 in.; and Meridian, east central Mississippi, measured 1.1 inches. A tornado touched down near Baton Rouge, La. Scattered showers dampened northern New England.

Temperatures reached the eighties along parts of the Atlantic Coast; Cape Hatteras, N.C., reported a record high of 75°.

Unsettled weather again stretched over the Deep South on Tuesday. Heavy rains fell from Louisiana eastward to Florida and northward to the Carolinas. The most severe storms, however, centered on



Mississippi, Louisiana, and southeastern Texas. Two to 3 inches of rain soaked a three-county area of Texas; more than three and a half inches covered Hattiesburg, southern Mississippi. At least four tornadoes clipped Louisiana; some were reported in North Carolina; and a twister was sighted outside Macon, central Georgia.

Meantime, snow spread from New Mexico across the Texas and Oklahoma panhandles to the central Plains; totals approached 5 inches in the Plains by day's end.

Heavy rain continued to plague the Deep South on Wednesday; Hattiesburg's two-day rain total ran past 9 inches triggering extensive flooding. Two-inch-plus rains soaked portions of several Gulf States. Four tornadoes blitzed Florida. One-half to one inch of rain moistened other States from the Ohio Valley across the Appalachians to the middle Atlantic Coast. Light snow whitened the northern tier of States from the Rockies to the Lakes.

Freezing weather chilled parts of West Texas; El Paso called in a record low of 28°.

On Thursday, rain persisted but slackened in the South, while very cold air, high winds, and snow surged into the north-central section of the country.

One-half to three-quarters inch of rain dampened points in Florida and Georgia. Up to 4 inches of snow and winds of 70 mph rushed through the North. High winds and hail struck the Indianapolis and South Bend vicinities.

In Minnesota, St. Cloud, at 9°, set a new record, and Minneapolis/ St. Paul, at 14°, tied the 1926 low mark.

Intense low pressure continued to produce near hurricane-force winds and snow in the Lakes area on Friday. Some northern Michigan stations collected 7 inches of snow. By day's end, the winds and snow had extended to New York State and New England.

Many record low temperatures spanned an area from the Dakotas to Ohio. A sampling showed zero at Fargo, N.Dak., the coldest reading there this late in spring; 19° at Des Moines; 23° at Springfield, Ill.; and Cincinnati's 24°.

Light showers dotted the Pacific Northwest and northern Plateau Region.

Snow fell lightly in the Northeast on Saturday. Fair skies dominated much of the Nation.

Record low readings chilled the country from Wisconsin to Ohio. Records included Milwaukee's 17°, 11° at Traverse City, northern Michigan, and record-tying readings of 19° at Fort Wayne, Ind., and 22° at Columbus, Ohio.

On Sunday, a strong cold front swept over the central and southern United States setting off severe storms. Especially hard hit were Arkansas and northern Louisiana; nine tornadoes and large hail battered the area. Up to an inch and one-half of rain drenched the Deep South again.

Rain fell in the Ohio and Tennessee Valleys, and farther north, snow stretched from the Great Lakes to New England. Snow also whitened the northern Plains, while nearly an inch of rain fell on eastern Kansas and western Missouri.



National Agricultural Summary

April 2 - 8

HIGHLIGHTS: Temperatures plunged 12 to 16 degrees below normal in the northern Great Plains and the western Corn Belt with subnormal readings of less severity reaching deep into Texas. Although temperatures in the southern States dropped only 3 to 5 degrees below normal, they were enough to damage some of the Texas peach crop. Heavy rains in the South and some snow in the Northeast continued to delay planting and land preparations in most of the eastern part of the Nation. Many States had less than a day suitable for fieldwork, and most were held to three days or less. Plowing stood at 50 percent complete in Iowa, 60 percent in Missouri, and 70 percent in Illinois and Ohio, most of which was accomplished last fall with very little progress registered this spring. Progress generally exceeds both last year and the average in the Corn Belt States. Plowing lagged last year and the average in the south central States because of the recurring rains and wet soils. Winter wheat rated fair to mostly good with adequate soil moisture in most areas but needing higher temperatures to promote vigorous growth. Wheat began heading in extreme southern areas. Spring small grain seeding moved slowly curbed by low temperatures and saturated soils. Most cotton planting remained confined to the Southwest where more favorable weather prevailed. Corn planting advanced rapidly in the Southeast but lagged in the south central States; no corn was planted in the north central area. Only a few soybeans were seeded in the Southeast. Rice seeding fell far behind most recent years. Texas was the only major State seeding sorghum; progress there dropped far behind last year and the average. Low temperatures damaged fruit blooms in the South, notably Texas and Tennessee. Trees remained dormant in northern production areas and survived the cold snap with minimal damage.

SMALL GRAINS: Winter wheat rated fair to mostly good throughout the Nation. Great Plains States reported very little wind damage. A few States found more winterkill when the crop began growth. Heaving occurred from the suddenly changing temperatures. Early stands headed in the South.

Kansas winter wheat had adequate soil moisture but needed warmth for faster growth; one percent reached the joint stage---well behind recent years. Nebraska noted more winterkill and crown rot than previously observed. Oklahoma's wheat rated good when 55 percent advanced to the joint stage, which is about on schedule. Texas wheat made excellent growth; jointing reached as far north as the Low Plains. Insects presented no problems on the southern Plains this early in the season. Pacific Northwest growers reseeded large acreages where winterkill took its toll.

Spring small grains seeding advanced at a very slow pace. Iowa oats seeding stood at less than one percent complete, compared with 14 percent in 1978 and the 34 percent average. South Dakota oats, barley, and spring wheat seeding tallied less than one percent---the same as last year, but normally 8 percent of the oats, 6 percent of the barley, and 9 percent of the spring wheat would be seeded. Idaho small grain seeding stayed on schedule with 20 percent of the spring wheat and 15 percent of the barley planted.

OTHER CROPS: Cotton planting moved slowly, barred from faster progress by adverse weather and wet soils. Most of the Delta lay too saturated to plant. Some progress was made in the Southeast where Georgia growers reached 18 percent and South Carolina 3 percent. Texas progress stood at 11 percent, equalling the average but 3 points below 1978. Most Texas growers waited for soils to dry, but High Plains producers applied preplant irrigation while lower Valley farmers watered late seedings. Cold soils limited New Mexico planting. California growers planted 17 percent of the cotton.

Corn planting equalled or exceeded the average in all the southeastern States, and, on the strength of the Georgia progress, surpassed last year for the region. Elsewhere, planting lagged previous years in the South. Early plantings emerged to good stands across the South. None of the crop was planted in the major Corn Belt States.

Farmers planted few soybeans in the Southeast, but the Delta was too wet for an early start.

Rice seeding also advanced slowly---less than half the usual progress expected in the Delta. Arkansas reached 4 percent, Louisiana 27 percent, and Texas 26 percent. California growers continued preplant activities.

FRUITS AND NUTS: Low temperatures caught peach trees in full bloom in parts of Texas causing considerable damage in the northern part of the State. The cold did not affect peaches in the eastern production areas of the Nation, where bloom advanced into the Carolinas. The Virginia peach bloom was delayed by the low temperatures but not damaged. Most trees in the north central States remained dormant and escaped damage from the cold. Apple bloom advanced into South Carolina. Virginia apples stood in the tight cluster to pink stage. Pecan trees leafed out from central Texas southward. New Mexico pecans began budding. Utah apricots bloomed. Oregon deciduous trees bloomed in various stages. California deciduous fruit and nut trees leafed out as bloom declined.

Florida citrus rated good to excellent depending on moisture supplies. Florida citrus bloom declined. Valencias grew in very good condition.

VEGETABLES: Subnormal temperatures slowed growth, and wet soils delayed planting in the eastern part of the Nation with the exception of Florida. In Florida, warm weather speeded plant growth with fruit set and sizing improved. Shipments increased 9 percent from the previous week; only cauliflower, lettuce, and okra shipments declined. Texas vegetables grew well. Central and eastern areas contended with rain and wet conditions when planting melons and vegetables. Harvests of carrots, cabbage, and onions continued. California growers shipped asparagus, broccoli, carrots, cauliflower, lettuce, and spinach. Tomatoes and strawberries improved with warmer and drier weather.

PASTURES AND LIVESTOCK: Grasslands rated fair to good, although wet conditions limited grazing in the South and low temperatures did the same in the North. Only a few States in the extreme North continued to supply supplemental feed to cattle. Calving and lambing continued with the normal death rate of newborn.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., April 8, 1979

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	+ 1	2.6	+ 1.4	LA. Baton Rouge . . .	64	- 2	1.5	+ .3	Youngstown . . .	39	- 5	1.4	+ .6
Mobile . . .	67	+ 2	1.3	- .2	Lake Charles . . .	63	- 3	.4	- .5	OKLA. Okla. City . . .	52	- 5	.1	- .6
Montgomery . . .	64	+ 2	5.7	+ 4.5	New Orleans . . .	67	+ 1	1.5	+ .4	Tulsa . . .	53	- 4	.1	- .7
ALASKA Anchorage . . .	36	+ 5	.3	+ .2	Shreveport . . .	61	- 2	.7	- .5	OREG. Astoria . . .	48	+ 2	.8	- .4
Barrow . . .	-11	- 4	T	- .1	MAINE. Caribou . . .	33	+ 1	.8	+ .3	Burns . . .	44	+ 3	.2	+ .1
Fairbanks . . .	--	--	--	--	Portland . . .	37	- 2	1.4	+ .6	Medford . . .	51	+ 3	.7	+ .4
Juneau . . .	--	--	--	--	MD. Baltimore . . .	46	- 4	.6	- .2	Pendleton . . .	50	+ 2	.3	+ .1
Kodiak . . .	41	+ 6	1.8	+ 1.0	MASS. Boston . . .	43	- 2	1.1	+ .3	Portland . . .	51	+ 2	.2	- .4
Nome . . .	25	+11	.4	+ .2	Chatham . . .	41	- 1	.6	- .1	Salem . . .	49	+ 1	.3	- .4
ARIZ. Flagstaff . . .	37	- 2	.1	- .3	MICH. Alpena . . .	32	- 4	1.0	+ .5	PA. Allentown . . .	41	- 5	.8	0
Phoenix . . .	66	+ 1	T	- .1	Detroit . . .	35	- 9	1.2	+ .5	Erie . . .	35	- 6	2.3	+ 1.5
Tucson . . .	48	- 2	T	- .1	Flint . . .	34	- 8	.9	+ .3	Harrisburg . . .	42	- 7	1.3	+ .6
Winslow . . .	61	- 2	T	- .1	Grand Rapids . . .	33	- 9	.7	- .1	Philadelphia . . .	45	- 4	.7	- .1
Yuma . . .	69	+ 1	0	- .1	Houghton Lake . . .	28	- 9	1.2	+ .7	Pittsburgh . . .	42	- 4	.7	- .1
ARK. Fort Smith . . .	53	- 5	.1	- .9	Lansing . . .	33	- 9	1.2	+ .6	Scranton . . .	37	- 7	.7	0
Little Rock . . .	53	- 5	.6	- .6	Marquette . . .	24	- 8	1.2	+ .6	R.I. Providence . . .	41	- 3	.9	0
CALIF. Bakersfield . . .	61	+ 1	0	- .2	Muskegon . . .	31	-10	.6	- .1	S.C. Charleston . . .	63	+ 1	.3	- .5
Eureka . . .	51	+ 2	.3	- .5	S. Ste. Marie . . .	27	- 7	1.6	+ 1.1	Columbia . . .	62	+ 1	.7	- .2
Fresno . . .	61	+ 3	0	- .4	MINN. Duluth . . .	23	-11	.2	- .4	Greenville . . .	59	+ 1	2.8	+ 1.7
Los Angeles . . .	64	+ 3	0	- .4	Internatl Falls . . .	19	-14	.1	- .2	S.D. Aberdeen . . .	30	- 9	T	- .4
Red Bluff . . .	60	+ 3	T	- .5	Minneapolis . . .	31	- 9	T	- .4	Huron . . .	34	- 7	T	- .4
San Diego . . .	64	+ 4	T	- .3	Rochester . . .	30	- 9	.4	- .1	Rapid City . . .	39	- 1	.1	- .3
San Francisco . . .	55	+ 1	T	- .5	St. Cloud . . .	25	-13	T	- .5	Sioux Falls . . .	34	- 7	.2	- .3
Stockton . . .	60	+ 4	.4	0	MISS. Jackson . . .	60	- 3	4.0	+ 2.9	TENN. Chattanooga . . .	59	+ 2	2.1	+ 1.0
COLO. Denver . . .	42	- 2	.2	- .2	Meridian . . .	61	- 1	5.4	+ 4.1	Knoxville . . .	57	0	1.8	+ .9
Grand Junction . . .	47	- 1	.1	- .1	MO. Columbia . . .	45	- 6	.2	- .6	Memphis . . .	56	- 3	1.2	- .1
Pueblo . . .	44	- 4	.1	- .2	Kansas City . . .	43	- 7	.4	- .4	Nashville . . .	54	- 2	3.0	+ 2.0
CONN. Bridgeport . . .	43	- 2	.6	- .2	St. Louis . . .	45	- 7	.6	- .3	TEX. Abilene . . .	60	- 2	T	- .4
Hartford . . .	42	- 2	.9	0	Springfield . . .	44	- 8	.4	- .5	Amarillo . . .	49	- 4	.1	- .1
D.C. Washington . . .	50	- 3	.7	0	MONT. Billings . . .	38	- 2	T	- .3	Austin . . .	61	- 5	.2	- .5
FLA. Apalachicola . . .	66	0	1.3	+ .3	Glasgow . . .	25	-12	.2	+ .1	Beaumont . . .	64	- 2	.6	- .2
Daytona Beach . . .	70	+ 2	.3	- .3	Great Falls . . .	36	- 3	.1	- .1	Brownsville . . .	72	- 1	T	- .2
Ft. Myers . . .	75	+ 3	0	- .5	Havre . . .	32	- 6	.4	+ .2	Corpus Christi . . .	69	- 1	.1	- .3
Jacksonville . . .	67	+ 1	1.5	+ .7	Helena . . .	42	+ 4	.1	- .1	Del Rio . . .	66	- 3	T	- .3
Key West . . .	78	+ 1	T	- .5	Kalispell . . .	42	+ 4	.3	+ .1	El Paso . . .	56	- 5	0	- .1
Lakeland . . .	--	--	--	--	Miles City . . .	33	- 7	.1	- .1	Fort Worth . . .	58	- 4	.1	- .8
Miami . . .	76	+ 2	T	- .7	Missoula . . .	41	+ 1	T	- .2	Galveston . . .	64	- 2	.1	- .5
Orlando . . .	72	+ 3	T	- .7	NEBR. Grand Island . . .	38	- 7	T	- .5	Houston . . .	62	- 5	1.9	+ 1.2
Tallahassee . . .	63	- 2	3.2	+ 2.1	Lincoln . . .	40	- 6	T	- .5	Lubbock . . .	56	0	.1	0
Tampa . . .	72	+ 2	.1	- .5	Norfolk . . .	36	- 7	.1	- .3	Midland . . .	57	- 4	0	- .1
W. Palm Beach . . .	74	+ 1	T	- .8	N. Platte . . .	40	- 3	.1	- .3	San Angelo . . .	61	- 3	T	- .3
GA. Atlanta . . .	61	+ 3	3.3	+ 2.1	Omaha . . .	38	- 7	.1	- .5	San Antonio . . .	64	- 3	.2	- .3
Augusta . . .	63	+ 2	1.3	+ .4	Valentine . . .	37	- 4	T	- .3	Victoria . . .	65	- 3	1.1	+ .6
Macon . . .	59	- 4	1.6	+ .7	NEV. Ely . . .	39	+ 1	.1	- .1	Waco . . .	61	- 3	T	- .8
Savannah . . .	68	+ 5	.3	- .5	Las Vegas . . .	62	+ 2	T	- .1	Wichita Falls . . .	56	- 5	T	- .6
HAWAII. Hilo . . .	74	+ 2	2.4	- .7	Reno . . .	45	+ 1	T	- .1	UTAH. Blanding . . .	--	--	--	--
Honolulu . . .	77	+ 3	T	- .5	Winnemucca . . .	44	+ 2	.1	0	Salt Lake City . . .	49	+ 3	T	- .5
Kahului . . .	75	+ 2	.1	- .3	N.H. Concord . . .	37	- 3	1.1	+ .5	VT. Burlington . . .	36	- 2	1.0	+ .4
Lihue . . .	75	+ 2	.2	- .7	N.J. Atlantic City . . .	47	- 1	.6	- .2	VA. Lynchburg . . .	53	0	1.2	+ .5
IDAHO. Boise . . .	47	+ 1	.7	+ .5	Trenton . . .	43	- 6	.4	- .4	Norfolk . . .	56	+ 1	2.4	+ 1.8
Lewiston . . .	47	0	.7	+ .5	N.MEX. Albuquerque . . .	51	- 1	T	- .1	Richmond . . .	55	+ 1	1.4	+ .8
Pocatello . . .	42	0	.1	- .1	Roswell . . .	55	- 1	0	- .1	Roanoke . . .	52	0	1.0	+ .3
ILL. Cairo . . .	50	- 6	2.2	+ 1.2	N.Y. Albany . . .	37	- 6	.6	0	WASH. Colville . . .	44	+ 1	T	- .2
Chicago . . .	34	-12	.5	- .3	Binghamton . . .	34	- 6	1.0	+ .3	Omak . . .	45	0	T	- .3
Moline . . .	38	- 8	.1	- .8	Buffalo . . .	35	- 6	1.7	+ 1.0	Quillayute . . .	46	+ 2	1.8	- .3
Peoria . . .	39	- 8	.1	- .9	New York . . .	43	- 5	.6	- .2	Seattle-Tacoma . . .	49	+ 2	.2	- .5
Rockford . . .	32	-12	.2	- .7	Rochester . . .	37	- 5	2.1	+ 1.5	Spokane . . .	44	+ 1	T	- .3
Springfield . . .	42	- 7	.8	- .1	Syracuse . . .	38	- 4	1.8	+ 1.1	Walla Walla . . .	51	+ 1	.4	+ .1
IND. Evansville . . .	46	- 7	2.3	+ 1.3	N.C. Asheville . . .	54	+ 1	2.6	+ 1.7	Yakima . . .	50	+ 3	T	- .1
Ft. Wayne . . .	38	- 7	.6	- .2	Charlotte . . .	58	+ 1	1.6	+ .7	W.VA. Beckley . . .	48	0	.8	0
Indianapolis . . .	40	- 8	.8	- .1	Greensboro . . .	56	+ 1	1.0	+ .2	Charleston . . .	52	0	1.2	+ .4
South Bend . . .	36	- 8	1.7	+ .8	Hatteras . . .	59	+ 3	.2	- .6	Huntington . . .	50	- 2	.6	- .2
IOWA. Burlington . . .	39	- 8	.3	- .6	Raleigh . . .	58	+ 2	1.4	+ .6	Parkersburg . . .	47	- 4	.4	- .4
Des Moines . . .	36	- 9	.2	- .4	Wilmington . . .	65	+ 5	.7	0	WISC. Green Bay . . .	29	-10	.5	- .1
Dubuque . . .	33	-10	.4	- .5	N.DAK. Bismarck . . .	23	-14	T	- .3	La Crosse . . .	34	- 8	.2	- .4
Sioux City . . .	36	- 8	.1	- .3	Fargo . . .	21	-16	.2	- .2	Madison . . .	31	- 9	.5	- .1
KANS. Concordia . . .	42	- 6	.1	- .3	Williston . . .	24	-13	.2	- .1	Milwaukee . . .	32	- 9	.5	- .1
Dodge City . . .	45	- 5	.4	+ .1	OHIO. Akron-Canton . . .	39	- 5	1.5	+ .7	WYO. Casper . . .	39	+ 1	.2	- .1
Goodland . . .	43	- 1	.1	- .2	Cincinnati . . .	43	- 7	1.7	+ .8	Cheyenne . . .	40	+ 2	.1	- .2
Topeka . . .	43	- 7	1.1	+ .3	Cleveland . . .	40	- 4	1.2	+ .4	Lander . . .	39	0	T	- .5
Wichita . . .	46	- 6	.4	- .2	Columbus . . .	43	- 4	1.4	+ .6	Sheridan . . .	35	- 4	.2	- .2
KY. Lexington . . .	49	- 2	2.3	+ 1.3	Dayton . . .	41	- 6	1.2	+ .4	P.R. San Juan . . .	78	+ 1	T	- .6
Louisville . . .	48	- 4	2.7	+ 1.7	Toledo . . .	35	- 9	1.4	+ .7					

Based on 1941-70 normals

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State Summaries of Weather and Agriculture

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

ALABAMA: Temperatures 1° above normal. Heavy rains widespread early week, amounts up to 11.00 in. Thunderstorms 8th.

Fieldwork: 1.8 days suitable. Soil moisture mostly surplus. Rains curtailed fieldwork. Plowing 55% complete. Corn 33% planted, 30% last year. Wheat headed 5%, 8% last year. Wheat in fair condition. Pastures fair, graze short. Livestock fair condition.

ARIZONA: Temperatures near normal. Scattered, light showers mainly eastern half.

Cotton planting resumed, almost finished western areas; statewide planting 25% complete, 10% last year. Planting corn, milo, safflower underway; good progress. Small grains growing well, heads filling earlier fields, later fields catching up. Sugarbeets good development. Second cutting alfalfa underway west. First cutting nearing completion central areas, just underway southeast. Lettuce harvest seasonal progress; later plantings good growth. Mixed vegetable harvest normal progress. Thinning, weeding, vine turning melons. Grape vines excellent growth, shoot thinning in progress. Deciduous fruit thinning underway. Valencia orange harvest full swing, grapefruit seasonally slow. Most groves approaching full bloom. Adequate soil moisture, stock water. Cool temperatures impeding forage growth. Cattle, calves excellent condition. Calving full swing. Some movement range cattle.

ARKANSAS: Cool, wet. Temperatures reached to 9° subnormal. Extremes: 26 and 83°. Precipitation ranged from 0.13 to 4.69 in.

Land preparation limited in central and northern areas due to rains. Fieldwork: 2.2 days available. Soil moisture surplus. Soybean, cotton, rice fieldwork limited by wet soils. Rice 4% seeded, 7% 1978, average 7%. Corn and sorghum crop conditions fair to good. Corn planting 5% completed, 15% 1978. Sorghum planting 1% completed, 5% 1978. Small grains, crop conditions and plant growth fair to good. Oats in east central area 30 to 40% winter kill. Wheat stooling. Fruit trees good condition; little to no frost damage. Peaches full bloom. Apple buds breaking. Strawberries fair to excellent condition. Grapes excellent condition. Tomato plantings underway. Hay and pastures plant growth good. Pastures average condition. Alfalfa growth excellent. Cattle showing gains as pastures improved.

CALIFORNIA: Fair mild weather prevailed but weak cold front moved through latter part of period bringing light precipitation to northern third. Largest amount 0.90 in. in northern Sierra. Light snow fell in northern Sierra. Temperatures little above normal with considerable sunshine. Highest temperatures latter part of period when upper 80's reached in southern deserts. Minimum temperatures a little below normal first part of period.

Small grains good growth Sacramento Valley. Sacramento Valley, desert areas grains boot stage. Weed control active central coast, Sacramento Valley. Alfalfa good growth San Joaquin Valley; weevil control active. Harvesting alfalfa underway San Joaquin Valley. Corn planting continued San Joaquin Valley. Corn emerged San Joaquin Valley. Planting sugarbeet continued desert area.

Harvesting sugarbeets continue San Joaquin Valley. Cotton planting active; 17% planted. Rice, pre-planting land preparation continued Sacramento, San Joaquin Valleys. Rain affected fieldwork. Planting safflower active Sacramento, San Joaquin Valleys. Deciduous fruit, nut trees leafed out, bloom declined. Apricots thinned. Grapevines showed good growth. Citrus quality variable. Almonds dropped. Artichoke supply increasing, quality good. Asparagus harvest winds down desert, increases other areas. Broccoli supply heavy central coast. Carrot harvest active Imperial and Coachella Valleys. Cauliflower harvest slowed. Lettuce harvest continued Palo Verde Valley; will increase in Santa Maria-Oceano area. Good harvest progress in San Joaquin Valley. Melon planting continued. Onions cultivated, sprayed for mildew. Spinach still harvested for freezer San Joaquin Valley. Strawberries improved. Tomatoes respond to good weather. Grasses doing well, warmer weather, very good soil moisture. Feed strengthening, supplementing reduced. New crop lambs to market. Shearing continued.

COLORADO: Frequent storms early week brought precipitation to most sections. Heaviest amounts in east central. Last few days dry. Temperatures 2 to 11° below normal with sharp warming trend.

Winter wheat good condition. Very little wind damage. Wheat pastured 8%. Oats seeded 4%, 34% 1978, 31% average. Onions seeded 18%. Seeding of other spring crops delayed two to three weeks. Calving 58% complete. Lambing 41% complete. Death losses near average. Ranges and pastures fair condition. Livestock good condition.

FLORIDA: Cold front moved from northwest Panhandle bringing spotty very heavy rainfall. Significant rainfall confined north, Panhandle. Low temperatures behind front 30's 6th and 40's 7th. Dry with mild to warm readings and plenty of sunshine 7th and 8th. Temperatures near or above normal with lows in 60's and 70's, and highs in 70's and upper 80's.

Soil moisture mostly short Peninsula; adequate to slightly excessive Panhandle. Corn mostly planted, early planted corn good progress. Tobacco transplanting nearing completion, crop fair condition. Planting peanuts increasing. Harvest of sugarcane virtually complete. Small grains very good condition. Pasture condition declined most areas. Moisture stress prevalent north to south, mostly poor to fair condition. Small grain mostly good in Panhandle. Cattle, fair to good condition. Good to excellent citrus tree condition depending on moisture. Light rain some areas, more rain needed all areas. Bloom ending this week, remaining Valencias very good condition. Overall vegetable crop condition fair to mostly very good. Strong winds whipped plants, scarred some fruit. Plant growth rapid as warmer weather very beneficial. Fruit set, size improved. Fruit sizing well. Quality, yield generally good. Plant wilt evident on high, dry spots few fields. Irrigation very active. Planting, other field work active. Harvest increasing; shipments up 9% from previous week. Supplies eggplant up considerably. Harvest snap beans, cabbage, sweet corn, cucumbers, escarole, parsley, radishes, squash, strawberries, tomatoes increased while carrots, celery, chinese

cabbage, peppers, potatoes held steady. Cauliflower, lettuce, okra shipments decreased. Strawberry crop condition mostly good; volume near peak, quality, size good. Watermelon crop condition fair to mostly good. Growth, progress good; improving. Bloom, fruit set increasing. Few melons ready for harvest around 15th southwest area. Plantings about complete north, Panhandle areas. Acreage up, making good progress.

GEORGIA: Much needed rains midweek; amounts 0.50 in. southeast, but 1.00 to 3.00 in. remainder. Temperatures 2 to 6° above normal ranging from near 50° extreme north to upper 50's extreme south. Near freezing on 6th, mountains. Warmer on 7th and 8th with thundershowers late 8th.

Soil moisture mostly adequate to surplus. Fieldwork: 3 days suitable. Field activities delayed last half week. Corn good; 74% planted, last year 54%, average 42%. Tobacco fair to good; 76% transplanted, last year 44%, average 64%. Watermelons fair to good; 74% planted, same last year. Cotton fair to good; 18% planted, last year 12%, average 9%. Soybeans 1% planted, last year and average 0. Peanuts fair to good, 4% planted, last year 4%, average 3%. Sorghum 4% planted, last year 5%. Small grains good. Peaches and apples good; spraying. Vegetables mostly fair to good. Warm days and cool nights slowed growth. Pastures good. Cattle and hogs good.

HAWAII: Favorable weather continued. Light showers mainly windward areas and higher elevations.

Crop progress improving. Farm activities increasing. Spraying frequent; disease, insect control. Vegetable supplies increasing. Banana supplies light, seasonally low. Papaya supplies light. Pineapple harvesting steady. Sugar harvesting active. Pastures generally fair to good.

IDAHO: Temperatures below normal. Scattered rain and snow, heaviest in Panhandle and mountain areas, but generally below normal.

Farmers southwest continue to dominate field activity. Cool, wet weather delayed fieldwork elsewhere. Spring wheat 20% seeded, last year 20%, average 15%. Spring barley 15% planted slightly behind last year. Nearly half onions planted and about 15% sugarbeets. Some reseeding of winter wheat. Calving and lambing continue.

ILLINOIS: Temperatures 6 to 11° below normal. Precipitation 0.10 to 0.75 in. north, central sections, 1.00 to 3.50 in. south.

Soil moisture surplus. Winter wheat good. Oat seeding 10% complete, 7% 1978, 41% average. Alfalfa good. Plowing for corn, soybeans 70% complete, 45% 1978, 63% average; little progress from last fall. Apples 90% light or no winter damage; peaches 60% light or no winter damage. Pastures good.

INDIANA: Cool, wet, and cloudy. Temperatures 7° below normal and ranged from 16 to 73°. Precipitation ranged from 0.60 in. northwest to 1.80 in. southwest. Soil temperatures low 40's north to 50's south. High winds on 5th caused some damage in central and north.

Fieldwork nil. Topsoil moisture surplus. Subsoil moisture adequate to mostly surplus. Spring planted cropland 55% plowed, unchanged from previous fall; 1978 45%, average 55%. Oats 5% seeded, 1978 5%, average 30%. Clover 45% seeded, 1978 25%. Wheat fair to good condition; 3 in. high, 1978 3 in., average 4 in.; wheat 5% jointed, 1978 0%. Apple buds 65% alive, 1978 75%. Peach buds 60% alive, 1978 55%. Date first peach bloom April 9.

IOWA: Cold, cloudy with little precipitation. Temperatures 10° subnormal. Morning of 6th, with most low readings in teens, record or near record-low temperatures reported. Rapid temperature recovery on 7th drove highs into 50's and 60's excepting 40's northeast.

Soils cold and wet. Stream flows continue high. Mud in abundance. Topsoil moisture surplus. Subsoil moisture adequate to surplus. Plowing: 50% complete, last year 39%, normal 59%. Oats acreage planted: Less than 1%, last year 14%, normal 34%. Fieldwork: Less than 1 day suitable. Livestock fair condition.

KANSAS: Precipitation 0.50 to 0.75 in. statewide first of week and east central and extreme east 7th. Temperatures 43° northwest to 49° southeast or from 2° below normal northwest to 7° below normal east central.

Wheat has plenty of moisture, needs warm temperatures to expedite growth. Wheat 1% jointing, last year 5%, average 10%. Corn planting not yet underway. Oat seeding 35% complete, last year 50%, average 65%. Barley seeding 45%, last year 70%, average 65%. Fieldwork: 0.5 day suitable. Feedlots muddy, cattle moving to pasture.

KENTUCKY: Temperatures averaged 40's and 50's. Precipitation heavy and averaged 1.50 in. east and 3.50 in. west.

Fieldwork: 1.0 days suitable. Heavy rains continued. Lowlands under water. Very little progress in either plowing or tobacco bed seeding. Plowing 37% complete, average 48%. Tobacco beds 67% seeded, average 81%. Pastures in good condition but too wet to graze. Winter wheat making good growth where spring nitrogen applied. Some fruit losses reported extreme north.

LOUISIANA: Temperatures normal to 2° below normal. Extremes: 82 and 34°. Showers statewide.

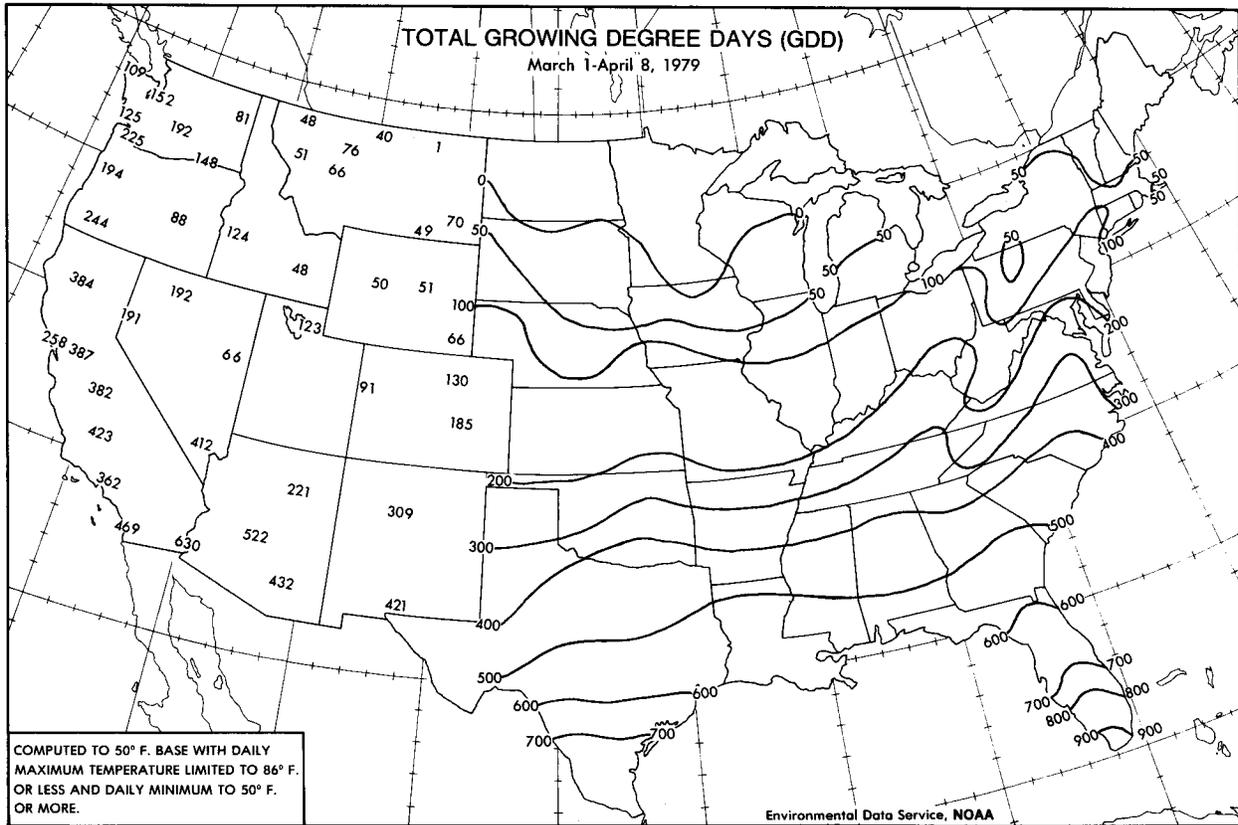
Fieldwork: 2.0 days suitable. Soil moisture adequate to surplus. Seedbed preparation, planting limited. Rice 27% planted, 57% last year, 42% average; 10% emerged. Corn 39% planted, 60% last year, 46% average; 14% emerged. Sugarcane weed control. Pruning and staking tomatoes. Strawberry harvest underway. Small grains and cattle fair to good. Pastures average.

MARYLAND & DELAWARE: Temperatures 5° above normal. Highs in mid to upper 60's and lows in 40's. Precipitation 1.00 in. Variable cloudiness and cold 7th. Showers followed by mostly cloudy skies 8th.

MICHIGAN: Temperatures 4 to 10° below normal. Mean temperatures varied from mid-20's to mid-30's. Maximum temperatures generally near 50° over Lower to near 40° over Upper. Minimum temperatures mainly in teens. Precipitation varied from 0.25 in. to around 1.50 in. Major period of precipitation occurred during midweek resulting in 5 to 10 in. snow over Upper. This also resulted in very strong damaging winds with near blizzard conditions over Upper.

Fruit crop damage minimal as trees remained dormant. Farm activities included feeding livestock.

MINNESOTA: Temperatures from 7° below normal southeast to 22° below normal northwest. Extremes 46 and -7°. Precipitation near normal northwest, 0.25 to 0.47 in. below normal elsewhere. Precipitation totals less than 0.25 in. except locally to 0.44 in. southeast. Snowfall 1 to 4 in. north half, less than 1 in. south half except locally to 4 in. southeast. Snow depth none south to 23 in. north.



MISSISSIPPI: Temperatures near normal. Extremes: 31 and 87°. Heavy rains early week and weekend.

Soil moisture surplus. Fieldwork: 1.2 days suitable. Wet soils continued to hamper land preparation. Acreage plowed 46%, 68% 1978, 56% average. Corn 30% planted, 36% 1978, 27% average. Irish potatoes 70% planted, 84% 1978. Winter wheat fair to good condition; 51% jointing, 53% 1978. Watermelons 62% planted. Pastures fair condition. Livestock fair condition.

MISSOURI: Cool temperatures ranged from 10 to 11° below normal north to 6° below normal Bootheel. Over 5.00 in. rain Bootheel, 1.00 to 2.00 in. Ozarks, 0.50 in. or less elsewhere.

Fieldwork: 0.4 days suitable. Plowing 60% completed, last year 20%, normal 50%. Oats 15% sown, last year 10%, normal 59%. Winter wheat and pasture in mostly fair to good condition. Soil moisture supplies adequate to surplus.

MONTANA: Pleasant weather; temperatures rose into 60's and 70's 6th. Northeast remained cool as temperatures averaged about 10° below normal. Southeast and north central, temperatures 7° below normal. Central and south central had temperatures slightly below normal; west and southwest slightly above normal. Precipitation spotty and generally light to moderate.

Soil moisture adequate. Fieldwork not started. Winter wheat good condition and greening. Calving and lambing 55% complete. Shearing 50% complete. Losses of newborn livestock near normal. Most livestock on supplemental feed as ranges dormant.

NEBRASKA: Temperatures 1° above normal Panhandle; 5° below normal elsewhere. Precipitation early week averaged 0.33 in.

Winter wheat condition fair to good. Areas of winter kill and crown rot more evident. Oats

planting 5% complete, year ago 25%, normal 45%. Barley seeding 5% complete, year ago 15%, normal 45%. Fieldwork: 1.6 days suitable.

NEVADA: Cool, warm then more cool weather. Slight precipitation about 0.10 in. north. Temperatures ranged from 83 to 12°.

Irrigation water resources improved. Average or above except Lake Tahoe and Rye Patch which are in short supply. Fieldwork gaining momentum. New growth slow. Calving and lambing continued.

NEW ENGLAND: Temperatures 5 to 10° above normal down to 5 to 10° subnormal at weekend in Maine. Elsewhere normal readings prevailed. Frequent precipitation occurring as rain south and snow north. Daily amounts ranged from 0 to 0.60 in.

NEW JERSEY: Temperatures 4 to 7° below normal. Extremes: 20 and 62°. Rainfall 0.87 in. north, 0.49 in. central and 0.67 in. south. Soil moisture, in percent of field capacity, 100% north, 98% central and 96% south. Soil temperature 39° north, 46° central and south. Wind speeds in excess of 50 mph on 6th.

Cold, rainy, windy weather slowed crop progress and caused some crop damage. Fieldwork being delayed. Orchard spraying progressing as weather conditions permit. Fall planted grains good. Pastures beginning to make growth.

NEW MEXICO: Temperatures 5 to 10° subnormal northern and western mountains and 1 to 5° subnormal elsewhere.

Moisture adequate. Open weather favorable for outdoor activities. Land preparation and pre-planting irrigation in progress. Limited planting in progress, but cold nights and cool soil temperatures delaying planting, especially cotton. Wheat and barley good. Some being grazed out.

Little oats, corn, and barley planted. Alfalfa fields greening. Lettuce and onions good. Potatoes and sugarbeet planting about completed. Pecan trees budding. Ranges fair, livestock good. Calving and lambing in progress, shearing winding down.

NEW YORK: Temperatures 5° below normal, mainly in 30's. The extreme low temperature reported by Stillwater Reservoir was 3 above zero on Sunday morning. Precipitation below normal in Hudson Valley to Long Island area with less than 0.75 in.; elsewhere 1.00 to 3.00 in., well above normal. Snow of 1 to 5 in. reported late week in higher elevations and to lee of Great Lakes.

NORTH CAROLINA: Temperatures 15° above normal. Precipitation east, less than 1.00 in.; west, greater than 1.50 in.

Fieldwork: 2.9 days suitable. Soil moisture adequate to surplus. Condition of small grains, pastures, and tobacco plantbeds fair to mostly good. Irish potatoes mostly fair to good. Truck crops fair to good. Apples and peaches good. Plantings: Corn 12%, 1978 24%, average 12%. Flue-cured tobacco, sorghum and soybeans just getting underway.

NORTH DAKOTA: Temperatures from mid-50's to -15°. Near blizzard midweek over northern and eastern portions. Snow all areas. Temperatures generally below normal, but near normal over weekend south. Precipitation north above normal with 0.52 in. north central; precipitation south below normal. Snow depths trace southwest to above 20 in. east and north.

No farming activity yet. Calving and lambing underway, no serious problems.

OHIO: Cloudy, cool, and wet weather continued. Temperatures 4 to 7° below normal. High 60° southwest, low, mid-20's north. Precipitation widespread, frequent and heavy; 1.00 in. southeast, 2.00 in. central.

Wheat condition good, more than normal heaving, some low spots flooded. Freezing temperatures slowed fruit tree blooming, no damage reported. Land plowed (spring and fall) 70%, 55% 1978, 60% average. Oats planted 15%, 5% 1978, 20% average. Sugarbeets planted 0%, 0% 1978, 5% average. Tobacco beds sown 40%, 45% 1978, 50% average. Fieldwork: 0.5 days favorable. Pasture condition good. Soil moisture surplus.

OKLAHOMA: Temperatures below normal ranging 3° below normal southwest and south central to 8° below normal Panhandle. Precipitation statewide; largest average 0.48 in. southeast. Snow accumulations of 8 in. northwest and north central, but damage to crops insignificant.

Wheat good condition with 55% jointing, 50% 1978, 65% average. Armyworm infestations and soil borne mosaic reported but damage minor so far. Winter and spring grasses providing limited grazing.

OREGON: Temperatures near normal. Maximum temperatures ranged from mid-60's to mid-70's. Minimum temperatures in 30's west, 20's east. Rainfall below seasonal normal with 0.75 in. along coast; 0.40 in. western interior valleys; 0.20 in. or less elsewhere.

Soil moisture adequate. Much acreage of fall seeded crops in Columbia River Valley being reseeded because of winter damage. Spring planting and fertilizing well underway. Caneberries show winter damage. Onion planting virtually complete in west. Most tree fruits in bloom stages. Livestock in good condition. Feed supplies adequate. Pastures

good condition west; slow to grow in east because of cool weather.

PENNSYLVANIA: Cool, cloudy, and wet through 5th with a return to more of same 8th. Partly sunny but cold and very windy 6th and 7th. Wind gusts reached 50 to 60 mph. Temperatures 5 to 10° below normal. Extremes: 63 and 10°. Precipitation from 0.50 in. extreme southeast to 2.50 in. extreme northwest, elsewhere 1.00 to 1.50 in. Up to 4 in. new snow measured north central mountains. Fieldwork limited by wet soils.

PUERTO RICO: Island average rainfall 0.12 in. or 0.57 in. below normal. Temperatures averaged about 76° on coasts and 69° interior. Extremes: 92 and 52°.

SOUTH CAROLINA: Temperatures well above normal, some locations 80° or higher. Rainfall above normal.

Soil moisture adequate. Fieldwork: 3 to 4 days available. Acreage plowed 67%. Tobacco plant supply adequate to plentiful; good condition; 18% transplanted with ideal weather, 10% last year, 32% average. Cotton 3% planted, delayed due to wet conditions, 9% 1978. Corn condition fair to good, 56% planted, 65% last year, 47% average. Small grains good condition except oats fair to good. Peach bloom completed, apples reaching full bloom, grapes leafing; conditions good. Snap beans, all cucumbers, tomatoes conditions good, 76 to 83% planted. Cantaloup planting 19% completed.

SOUTH DAKOTA: Temperatures cold early week but warmed later. Readings 6 to 9° below normal. Precipitation of trace to 0.53 in. fell as light snow and rain. Below normal most areas.

Topsoil and subsoil moisture adequate to surplus except in band extending from southwest to northeast. Cold, damp weather delayed fieldwork. Less than 1% spring seedings completed, same as last year. Average for oats 8%, barley 6%, spring wheat 9%. Winter wheat and rye fair to good condition.

TENNESSEE: Rainy, amounts up to 7.00 in. west, 5.00 in. east. Temperatures near normal.

Soil moisture surplus. Fieldwork: 1.0 day suitable. Spring plowing 43% completed, 1978 53%, average 56%. Tobacco planting 80% seeded, 1978 87%, average 92%; beds fair. Wheat and oats fair. Corn planting begun few areas. Pastures fair. Cattle off supplemental feed. Frost hurt fruit tree blossoms. Vegetable planting halted.

TEXAS: Low early week; mostly cloudy with scattered showers. Snow observed in upper Panhandle. Pacific front produced showers southeast at weekend. Rainfall below normal from Low Plains into Trans-Pecos. Rainfall below normal south and lower Valley; above normal elsewhere. Temperatures near normal Trans-Pecos, Edwards Plateau, south, lower Valley; ranged 2 to 6° below normal elsewhere. Temperatures upper 50's Panhandle and northwest, low 60's north and east, mid-60's central and west, 70° south and coast. Soil continued cool.

Planting at standstill except sugarbeets High Plains, rice in Coastal Bend. Wet conditions delayed fieldwork in central, east. Land preparation continued in west but irrigation observed High Plains, Trans-Pecos, lower Rio Grande Valley. Subfreezing temperatures, snow hit portions of High Plains at midweek. Cotton planting halted as farmers await drier conditions. Some replanting required lower Blacklands, Gulf Coast where cool, wet conditions prevented good stands. Conversely, pre-plant irrigation occurred on High Plains while water was applied on late planted cotton in lower

Rio Grande Valley. Sorghum planting made little progress although land preparation continued in drier areas. Plantings will begin in earnest on Plains as soil temperatures rise. Farmers in central, south awaiting drier conditions. Corn plantings began on Plains; elsewhere fields damaged by rains, need replanting. Good stands observed from Rio Grande Valley northward to Blacklands. Wheat continued excellent growth; other than isolated infestations of armyworms, wireworms on Plains, insects presented no problems. Rust problem in parts of the lower Valley where much wheat headed. Jointing observed as far north as Low Plains. Rice planting lagged as wet, cool soils hampered fieldwork. Bird infestations posed problem on earlier fields along upper Coast. Peanut planting moved at snail's pace due to cool soil, wet conditions. Sugarbeet plantings surged on High Plains with over half of crop in ground. Oats and barley making good growth. Corn planted 26%, 29% 1978, 35% average. Cotton planted 11%, 14% 1978, 11% average. Peanuts planted 3%, 7% 1978, 11% average. Rice planted 26%, 68% 1978, 62% average. Sorghum planted 35%, 59% 1978, 53% average. Sugarbeets planted 53%, 41% 1978, 40% average.

Lower Rio Grande Valley spring onion harvest continued; seed stems prevalent some early fields. Tomatoes, melons making good progress. Light movement cabbage, carrots. Coastal Bend cucumber planting continued. Watermelons progressing well. San Antonio-Winter Garden seed stem problem many onion fields. Watermelons making fair growth; some fields damaged by high winds and hail. Carrot harvest continued. East Texas rain, wet conditions delayed land preparation and planting. Watermelons planted where conditions permitted. Central Texas wet conditions, cool nighttime temperatures delayed most vegetable plantings. High Plains onion, potato planting continued. Cutworm problem some onion fields. Trans-Pecos onion transplanting continued Pecos and Van Horn. Cantaloup planting underway. Peach trees North and High Plains hit hard by mid-week frost and freezing temperatures. Extent of damage not known for several weeks. Gaines County freezing temperatures caused considerable loss to blooming trees. North frost caught trees in full bloom. Light frost in east also damaged trees. Trees central petal to shuck split. South trees continued good fruit set. Pecan trees leafing out from central southward; most trees late this year because of cool spring. Some trees south forming catkins.

Pastures, ranges continued green-up response to warmer temperatures, good moisture conditions; native ranges Panhandle still short. Ryegrass, oat pastures furnishing good grazing central, east. Cool temperatures delaying pasture growth south. High Plains cattle on wheat pastures making good gains, although bloat a problem. Some livestock north on supplemental feed.

UTAH: Scattered rain or snow forepart of period. Amounts generally light to moderate. Warming trend but slight cooling trend northwest weekend.

Fieldwork: 7 days available. Land preparation and small grain planting in progress. Winter wheat growing. Apricot trees beginning to blossom. Most livestock still at home being fed in north. Southern ranges providing some feed. Sheep shearing in progress.

VIRGINIA: Temperatures gave way to cooler air but averaged slightly above normal. Extremes: mid-20's to mid-80's. Quite windy 6th. Rainfall moderate to heavy on 2d and 4th averaging 1.33 in.

Topsoil moisture adequate to surplus. Fieldwork: 2.1 days suitable. Wet soils delayed land preparation and spring seedings. Corn 4% planted, 9% 1978, 4% average. Potatoes 40% seeded, nearing completion Eastern Shore. Condition of pastures, wheat, tobacco plantbeds good. Cool, wet conditions favoring small grain growth. Peaches good, early bloom north, full bloom southwest. Apples in tight cluster southwest, pink north. Fruit escaped weekend freeze damage. Gentle rainfall, moderate temperatures favoring effectiveness of fertilizer. Seeding spring oats, hauling manure, spraying orchards, seeding burley tobacco southwest.

WASHINGTON: West: Temperatures 1° below to 1° above normal. Precipitation 0.60 in. below normal to near normal.

Spring seeding of green peas, lettuce and other vegetables active. Planting raspberry and strawberry fields continued. Field rhubarb harvest underway. Planting new pasture, hay, silage active. Grass making good growth. Cattle out on pasture in many areas.

East: Temperatures 2 to 5° below normal. Precipitation 0.10 to 0.30 in. below normal.

Potato, green pea, radish, carrot, lettuce, spinach seeding active. Irrigation systems being turned on. Installing wind machines, spraying, some pruning, are orchard activities. Working summerfallow, seeding spring grains, and reseeding winter injured fall grain continue. Early seeded spring grains emerging. Some alfalfa fields showing winterkill. Pastures and lentils being seeded. Calving slowing; lambing near complete.

WEST VIRGINIA: Temperatures below normal northwest, north central and southwest, above normal elsewhere. Extremes: 14 and 78°. Precipitation near normal northwest, above normal elsewhere.

Fieldwork: 2.1 days suitable. Soil moisture adequate to surplus. Hay and grain supplies adequate to surplus. Fall sown grains and meadows starting spring growth. Wet ground delaying early plowing.

WISCONSIN: Temperatures and precipitation below normal. Generally cloudy and cold. Snow except extreme northwest on 2d and amounts of 3 to 7 in. fell on band southwest to east central. Scattered showers and snow flurries midweek but no significant precipitation. Intense storm system 5th. Gale force winds 50 to 60 mph battered State with numerous reports of down trees, power lines, and property damage. Temperatures fell to record levels by 6th with lows near zero in far north and teens in south. Cloudy cold weather held through weekend.

WYOMING: Relatively dry with most stations below normal. Temperatures also below normal. Highs mostly in 50's and 60's while lows ranged from one digit numbers to low 20's.

Topsoil and subsoil moisture adequate. Wet fields and snow slowing land preparation and planting. Acreage planted: Spring wheat 12%, oats 8%; sugarbeets 5%; barley 13%. Winter wheat prospects mostly good; little wind damage. Fieldwork: 3 days suitable. Spring calves born 52%. Range ewes lambed 25%. Farm flock ewes lambed 62%. Range sheep shorn 34%. Farm flock sheep shorn 54%. Spring grazing prospects mostly good. Feed supplies adequate.

World Weather and Crop Update

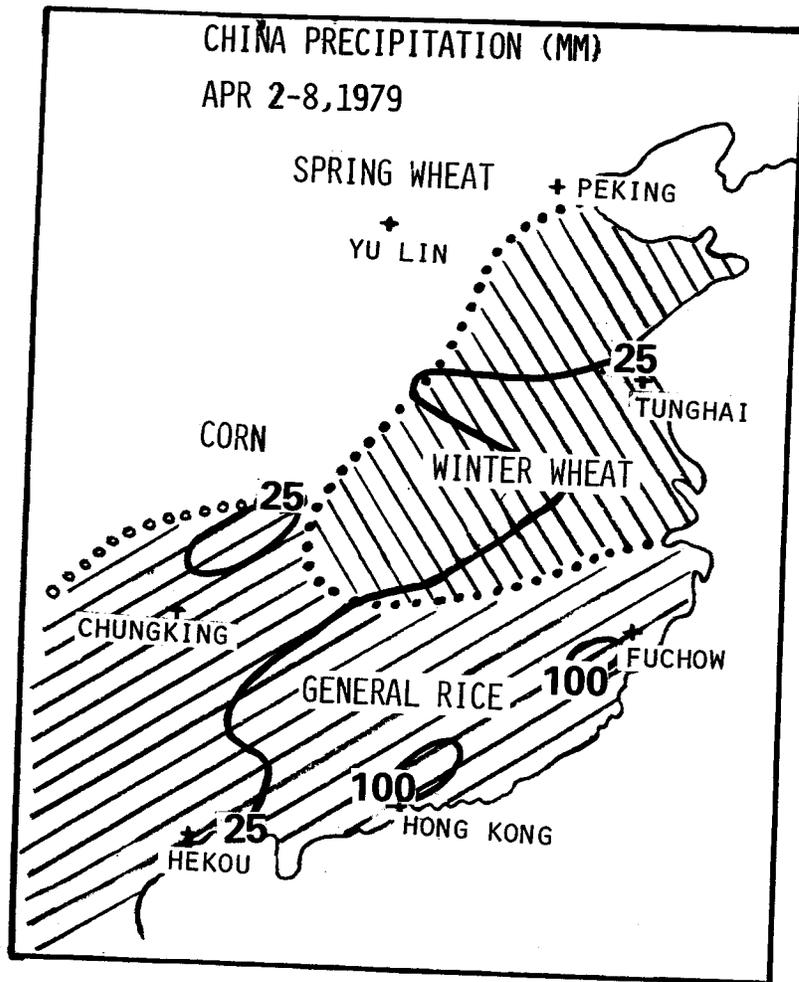
April 2 - 8

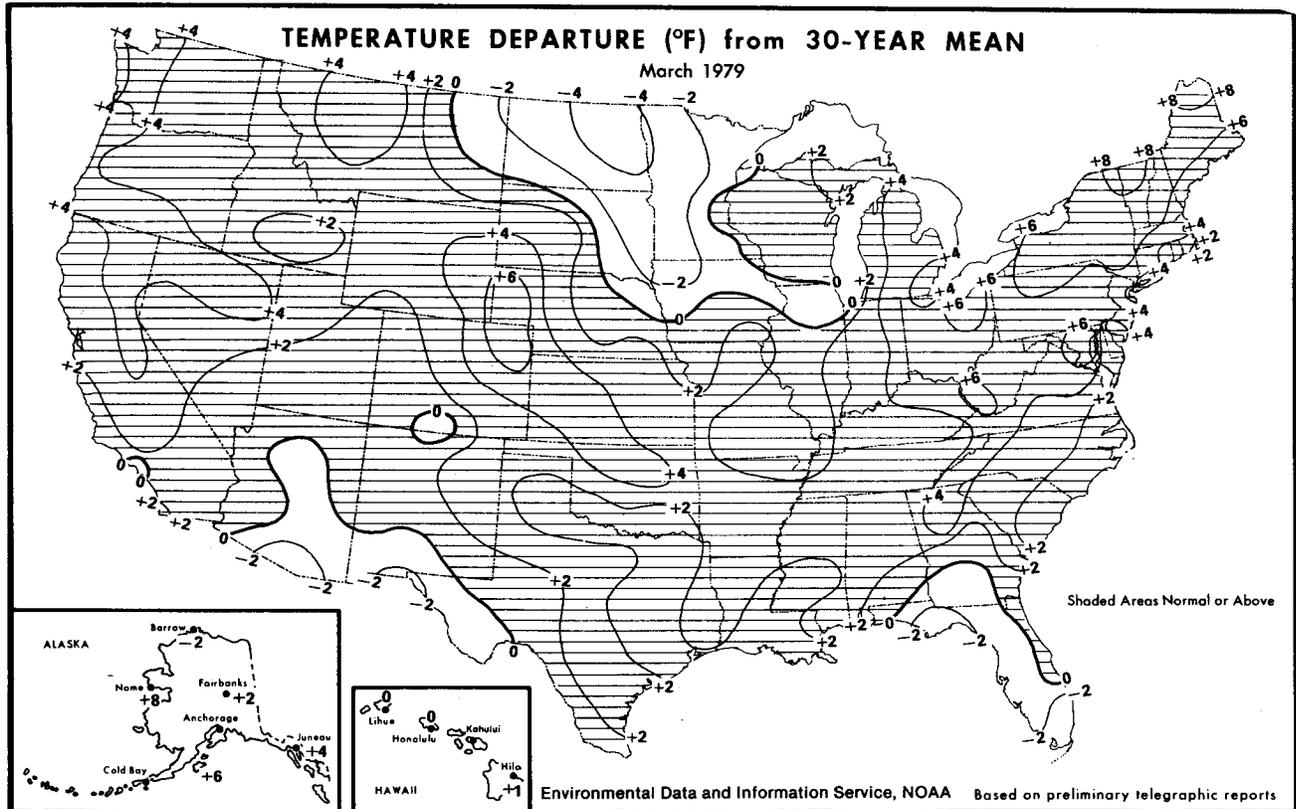
USSR. The winter grain area of European USSR received above-normal precipitation with amounts of 25 mm or more quite common. The only exceptions occurred in southeastern areas such as Krasnodor Kray, where the wheat is already actively growing; less than 10 mm fell there. Soils over much of the winter grain areas already were reported to be very wet. Temperatures over the entire area dropped to normal or below-normal levels for the first time in several weeks. Although of no concern to the winter grain crop, which is breaking dormancy, the combination of wet and cold will continue to slow soil warming and drying. This will delay the start of fieldwork. In the New Lands area, good rainfall also occurred throughout with amounts ranging from 10 to 50 mm. The heaviest amounts fell just south of the Urals. Only light scattered amounts fell over the southern cotton producing areas, but the good moisture from the previous week should have provided good field conditions for planting.

CHINA. The southern and eastern portions of the winter wheat belt of China received 10 to 40 mm of moisture this past week after heavy rains the week before, while northern areas received little or no precipitation. The Yangtze Valley area was again the area of heaviest moisture. Rain fell nearly every day over the rice producing areas of the south and southeast with more than 100 mm common, which is well above normal.

AUSTRALIA. Most of the country remained dry with only light amounts along the southern coast. As indicated last week, this is a transition period with "summer" crops at or near maturity and winter wheat planting a few weeks away.

INDIA - SOUTHEAST ASIA. India was seasonally hot and dry with only light scattered thundershowers, mostly in northern States. Most of Southeast Asia was also dry with little or no precipitation except only along southern portions of the Malaysian peninsula.





March Weather Summary

HIGHLIGHTS: Well above normal precipitation prevailed over central and southern California, the southern Plateau, and central and northern Rockies during March. Some areas in southern California accumulated more than 5 inches. Elsewhere, nearly all of the Great Plains, the western Great Lakes, New England, the central East Coast, and parts of the South recorded more than their normal amounts of precipitation. Local flooding occurred in some areas where melting snow mixed with heavy rain. Average temperatures for the month were generally warmer than normal except in the northern Plains.

Severe weather during the first four days of March dominated the lower Mississippi Valley and the area from southern Alabama into the Appalachians to western North Carolina. Heavy rain, thunderstorms with hail, and tornadoes moved from west to east in the area. Temperatures ranged cooler than normal in the northern Plains, near normal in the West, and warmer in the East.

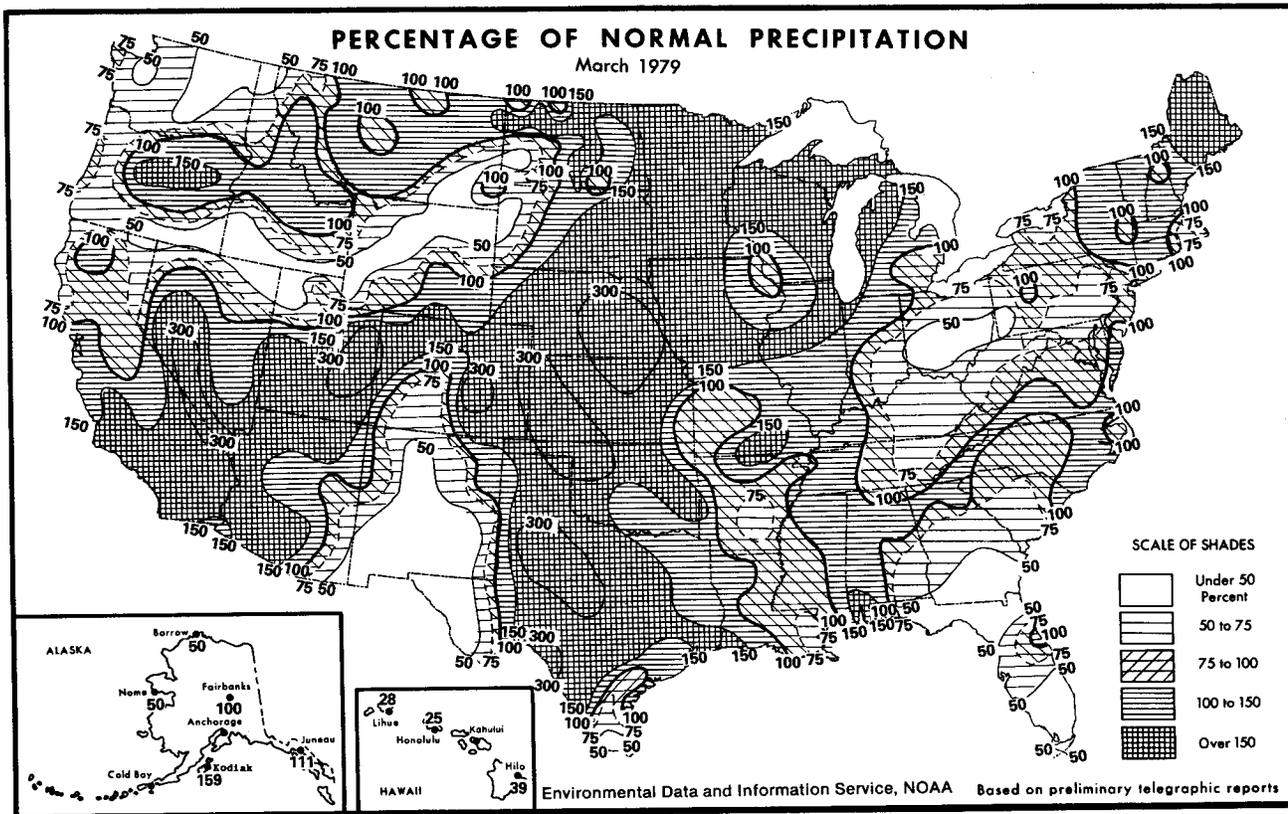
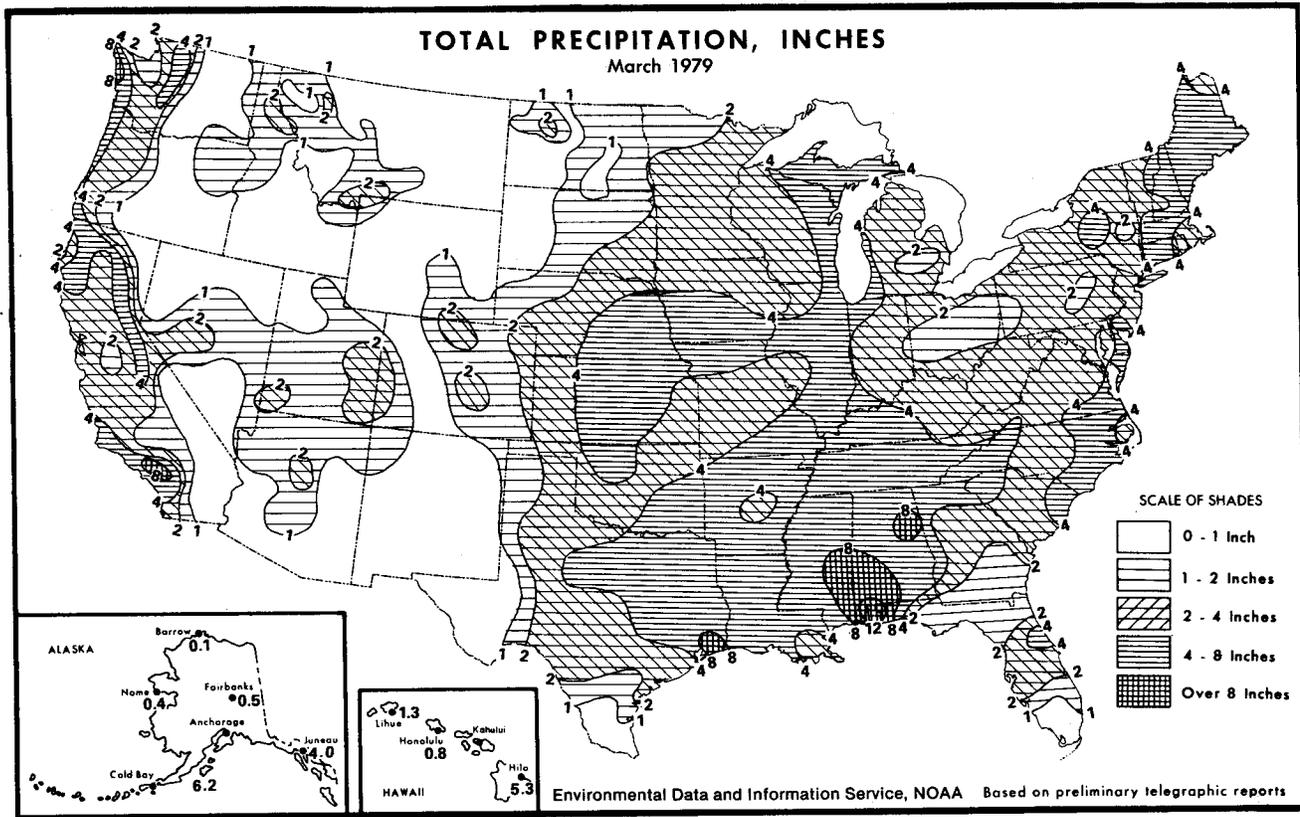
The heavy rain area moved off the East Coast early in the week of March 5 - 11. More than two inches of rain fell along most of the East Coast and into central Florida. An arctic front brought cool air into the Rockies and Plains, and then spread eastward later in the week. Freezing temperatures dipped as far south as the Florida Panhandle. Light rain accompanied the system east of the Mississippi River. Average temperatures for the week were much warmer than normal in the West and Northeast. Northern California averaged 12 degrees above normal, and northern Maine reached 15 degrees over the normal mark. The Mississippi River Valley averaged near or cooler than normal.

Most of the Nation received some measurable precipitation in the week of March 12 - 18. The

heaviest amounts fell in the southern and central Plains where thunderstorms rumbled frequently. The major winter wheat areas of the central Plains, where wheat had begun to break dormancy, welcomed the wetting. Some areas in Texas, Oklahoma, and Kansas totaled more than two inches. Elsewhere, moderate rain fell along the West Coast with snow in the higher elevations of the Cascades, the Sierras, and the Plateau. The additional snowpack was helpful, building the water table. It was warmer than normal everywhere but the Appalachians and eastward where temperatures cooled slightly.

A series of storms moved into the Southwest during the third week of March (March 19 - 25). The storm systems brought unwanted rain to southern California and rain or snow to the southern Plateau and central and southern Rockies. The storms moved slowly eastward and into warm, moist air moving northward from the Gulf of Mexico. This situation produced some heavy precipitation from Texas to the western Great Lakes, eastward to the Appalachians and into New England. Thunderstorms were again frequent in the southern States. Warm weather continued over most of the Nation. Only the Southwest was cooler than normal.

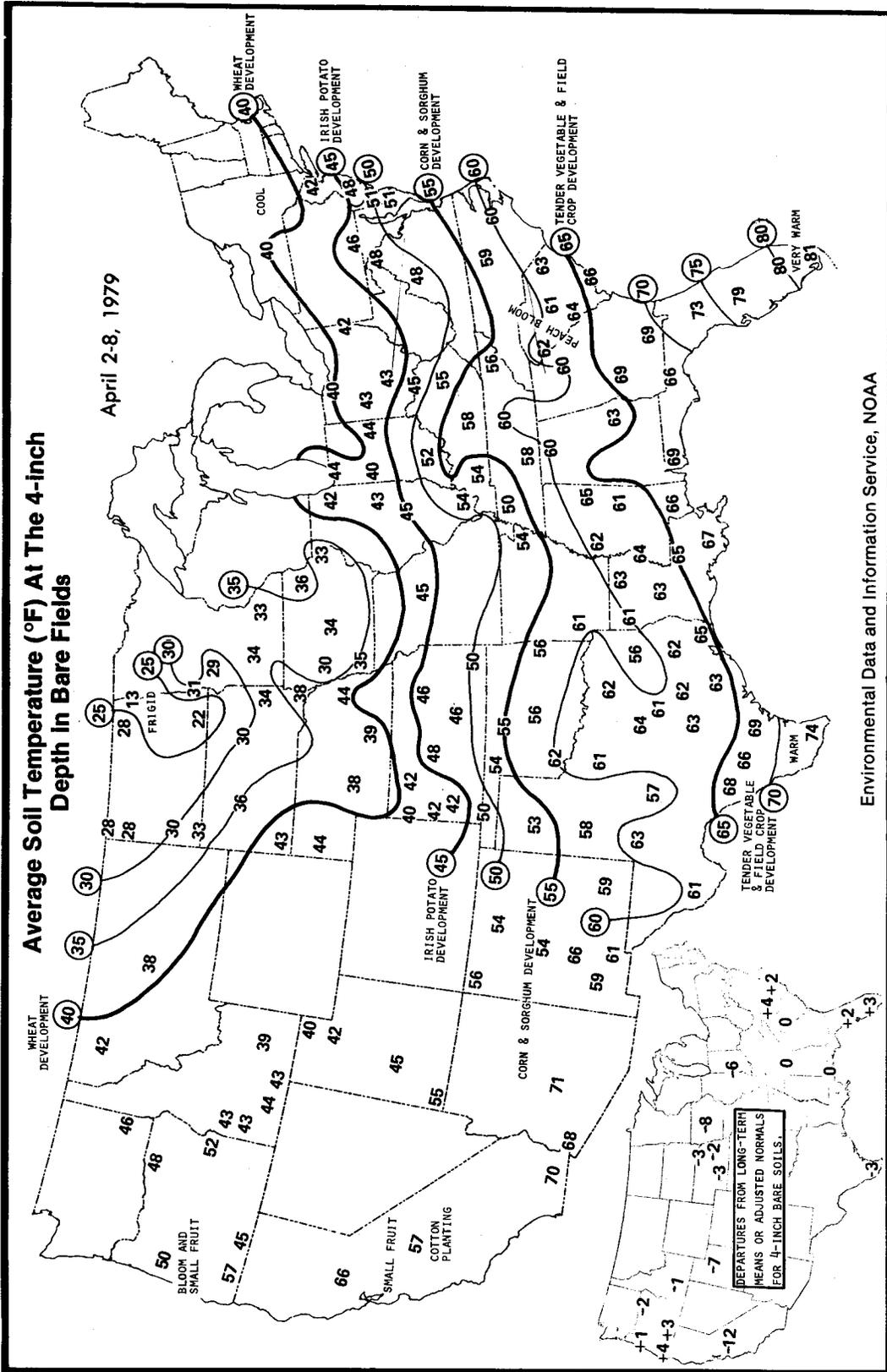
The last week of March was similar to the previous week. A series of weather disturbances moved down the West Coast, headed into the Southwest, and edged eastward. Moderate to heavy rain fell along the entire coast and snow---some heavy---in the mountains and Plateau. Heavy rain hit the strawberry area of southern California. Snow covered the ground in the northern Plains, and rain fell in the central Plains. Thunderstorms with heavy rain occurred from central Texas into the Ohio Valley. The Southeast remained dry. Cooler air moved into the northern Plains, the Rockies, and the Plateau.



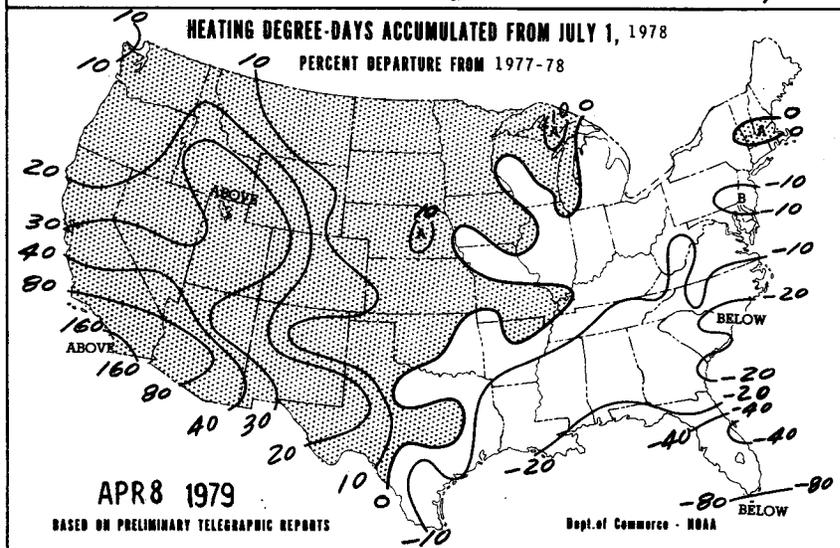
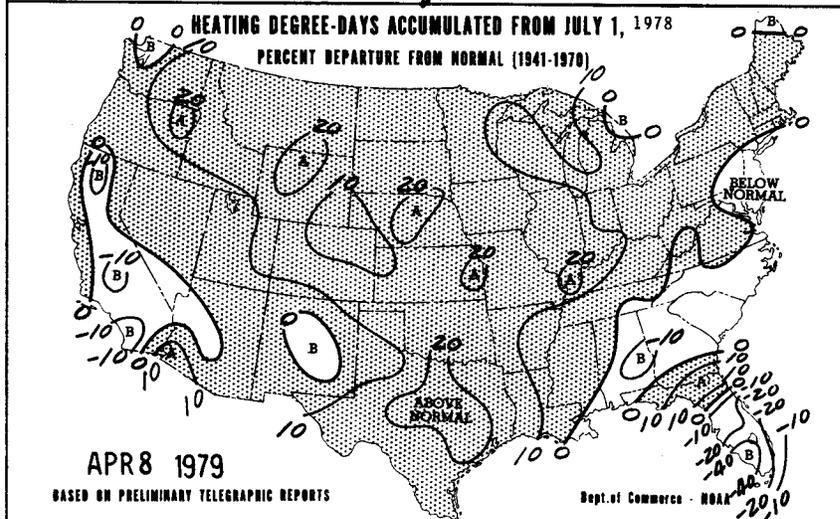
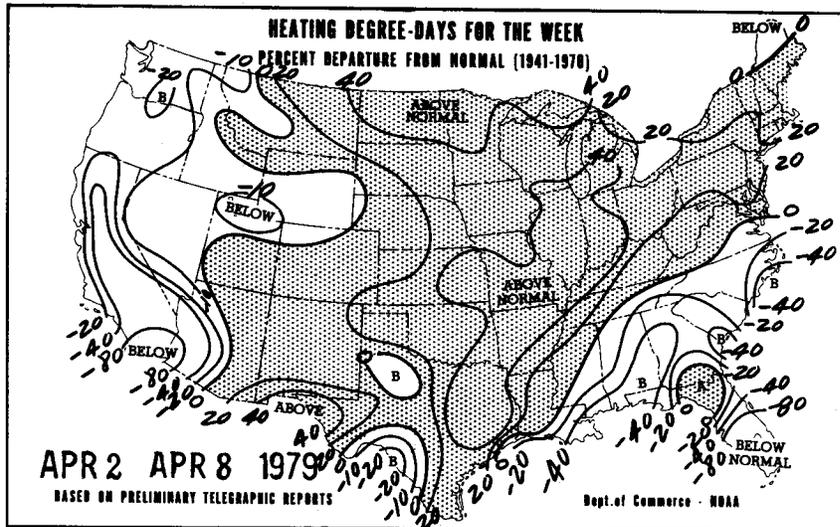
Temperature and Precipitation Data for March 1979

States and Stations	Temperature of		Precipitation Inches		States and Stations	Temperature of		Precipitation Inches		States and Stations	Temperature of		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
ALA. Birmingham	55	+ 2	5.7	- .5	LA. Baton Rouge	61	+ 1	4.3	- .8	Youngstown	40	+ 5	1.9	- 1.3
Mobile	61	+ 2	8.4	+ 1.3	Lake Charles	61	+ 1	6.0	+ 2.2	OKLA. Okla. City	51	+ 3	2.7	+ .6
Montgomery	59	+ 2	4.2	- 1.8	New Orleans	63	+ 2	3.3	- 2.2	Tulsa	52	+ 4	4.0	+ 1.5
ALASKA. Anchorage	-	-	-	-	Shreveport	59	+ 2	5.7	+ 1.6	OREG. Astoria	47	+ 3	4.5	- 2.1
Barrow	-17	- 2	.1	- .1	MAINE. Caribou	32	+ 8	3.7	+ 1.5	Burns	39	+ 3	1.0	+ .1
Fairbanks	12	+ 2	.5	0	Portland	36	+ 4	4.2	+ .6	Medford	49	+ 4	.8	- .8
Juneau	36	+ 4	4.0	+ .4	MD. Baltimore	49	+ 6	2.1	- 1.6	Pendleton	46	+ 2	1.2	+ .2
Kodiak	38	+ 6	6.2	+ 2.3	MASS. Boston	43	+ 5	3.0	- 1.0	Portland	51	+ 5	2.5	- 1.1
Nome	15	+ 8	.3	- .4	Chatham	39	+ 5	2.7	- .1	Salem	49	+ 4	2.2	- 2.1
ARIZ. Flagstaff	32	- 2	2.5	+ .7	MICH. Alpena	31	+ 5	2.1	+ .2	PA. Allentown	44	+ 6	2.4	- 1.2
Phoenix	60	0	1.8	+ 1.0	Detroit	38	+ 3	2.4	- .1	Erie	37	+ 4	2.5	- .3
Tucson	56	- 2	.6	0	Flint	38	+ 5	1.6	- .5	Harrisburg	45	+ 4	1.9	- 1.3
Winslow	44	- 1	.4	0	Grand Rapids	37	+ 4	3.7	+ 1.2	Philadelphia	47	+ 5	2.4	- 1.3
Yuma	64	0	.2	0	Houghton Lake	31	+ 4	3.1	+ 1.4	Pittsburgh	43	+ 5	1.3	- 2.3
ARK. Fort Smith	52	+ 2	5.7	+ 2.1	Lansing	38	+ 5	1.8	- .6	Scranton	41	+ 4	1.5	- 1.1
Little Rock	53	+ 3	2.9	- 2.0	Marquette	24	+ 2	6.1	+ 4.0	R.I. Providence	40	+ 3	2.2	- 1.8
CALIF. Bakersfield	59	+ 2	2.0	+ 1.2	Muskegon	35	+ 1	4.0	+ 1.6	S.C. Charleston	57	0	3.0	- 1.8
Eureka	50	+ 2	1.7	+ 3.1	S. Ste. Marie	27	+ 3	4.6	+ 2.9	Columbia	56	+ 2	3.5	- 1.2
Fresno	57	+ 3	2.3	+ .7	MINN. Duluth	23	- 1	3.6	+ 1.8	Greenville	54	+ 3	4.2	- 1.1
Los Angeles	58	- 1	5.9	+ 3.7	Internatl Falls	20	- 1	1.7	+ .6	S.D. Aberdeen	25	- 2	1.6	+ .7
Red Bluff	57	+ 4	2.4	- .1	Minneapolis	29	+ 1	2.6	+ .9	Huron	28	- 1	2.0	+ .9
San Diego	60	+ 2	3.8	+ 2.2	Rochester	27	- 1	2.5	+ .8	Rapid City	35	+ 4	.5	- .5
San Francisco	55	+ 2	2.7	+ .2	St. Cloud	24	- 2	3.0	+ 1.7	Sioux Falls	28	- 2	3.5	+ 2.1
Stockton	56	+ 3	1.2	- .8	MISS. Jackson	57	+ 1	4.7	- .9	TENN. Chattanooga	52	+ 2	4.8	- .8
COLO. Denver	41	+ 4	1.3	+ .1	Meridian	57	+ 1	8.4	+ 2.2	Knoxville	53	+ 3	4.2	- .7
Grand Junction	41	0	2.0	+ 1.2	MO. Columbia	44	+ 2	2.9	+ .3	Memphis	54	+ 3	6.6	+ 1.5
Pueblo	43	+ 3	2.3	1.8	Kansas City	42	+ 1	3.0	+ .4	Nashville	51	+ 2	4.9	- .1
CONN. Bridgeport	43	+ 5	3.7	+ .2	St. Louis	44	+ 1	3.6	+ .6	TEX. Abilene	57	+ 2	5.2	+ 4.2
Hartford	41	+ 5	4.3	+ .5	Springfield	45	+ 1	2.9	- .1	Amarillo	47	+ 1	1.5	+ .7
D.C. Washington	52	+ 7	2.5	- .8	MONT. Billings	36	+ 3	1.1	+ .1	Austin	61	+ 1	3.8	+ 1.9
FLA. Apalachicola	58	- 3	1.5	- 3.2	Glasgow	24	- 1	.4	0	Beaumont	62	+ 2	9.4	+ 6.3
Daytona Beach	64	0	4.1	+ .7	Great Falls	35	+ 4	1.0	0	Brownsville	69	+ 1	1.1	- .6
Ft. Myers	68	- 1	4.4	- 2.7	Havre	32	+ 5	.6	+ .1	Corpus Christi	68	+ 3	1.6	+ .5
Jacksonville	61	0	1.0	- 2.6	Helena	35	+ 4	1.3	+ .6	Del Rio	63	0	2.7	+ 2.0
Key West	73	- 2	1.0	- .6	Kalispell	34	+ 3	.9	0	El Paso	53	- 2	T	- .4
Lakeland	-	-	-	-	Miles City	30	0	3	- .4	Fort Worth	57	+ 2	6.3	+ 3.8
Miami	69	- 2	.3	- 1.8	Missoula	36	+ 3	1.2	+ .5	Galveston	62	+ 1	3.3	+ .7
Orlando	65	- 1	3.2	- .3	NEBR. Grand Island	37	+ 1	5.6	+ 4.4	Houston	62	+ 1	2.9	+ .2
Tallahassee	58	- 2	1.9	- 4.0	Lincoln	39	+ 2	4.9	+ 3.4	Lubbock	53	+ 4	2.9	+ 2.0
Tampa	65	- 1	2.4	- 1.5	Norfolk	33	0	4.5	+ 3.1	Midland	55	+ 1	.8	+ .2
W. Palm Beach	68	- 2	1.1	- 2.2	N. Platte	37	+ 3	2.8	+ 1.8	San Angelo	57	0	2.3	+ 1.4
GA. Atlanta	56	+ 5	3.2	- 2.6	Omaha	35	0	4.1	+ 2.5	San Antonio	63	+ 2	3.6	+ 2.1
Augusta	57	+ 2	2.5	- 2.2	Valentine	33	+ 2	1.8	+ 1.0	Victoria	65	+ 3	1.7	- .2
Macon	58	+ 1	3.7	- 1.5	NEV. Ely	35	+ 2	1.1	+ .2	Waco	58	+ 1	4.3	+ 1.9
Savannah	60	+ 2	2.4	- 2.0	Las Vegas	56	+ 1	1.0	+ .7	Wichita Falls	54	+ 1	3.4	+ 1.8
HAWAII. Hilo	72	+ 1	5.3	- 8.4	Reno	42	+ 2	.5	- .2	UTAH. Blanding	38	0	2.3	+ 1.4
Honolulu	73	0	.8	- 2.4	Winnemucca	42	+ 4	1.0	+ .3	Salt Lake City	43	+ 3	.8	- .8
Kahului	-	-	-	-	N.H. Concord	38	+ 6	2.9	+ .1	VT. Burlington	37	+ 8	2.2	+ .3
Lihue	72	0	1.3	- 3.4	N.J. Atlantic City	45	+ 4	3.6	- .7	VA. Lynchburg	49	+ 3	3.8	+ .3
IDAHO. Boise	43	+ 2	.5	- .5	Trenton	46	+ 5	3.0	- .8	Norfolk	49	+ 1	5.1	+ 1.7
Lewiston	46	+ 3	.7	- .3	N.MEX. Albuquerque	48	+ 2	.1	- .4	Richmond	51	+ 4	2.6	- .8
Pocatello	36	+ 1	.8	- .1	Roswell	50	+ 1	.1	- .4	Roanoke	49	+ 4	3.9	+ .6
ILL. Cairo	48	0	6.2	+ 1.5	N.Y. Albany	39	+ 6	1.8	- .8	WASH. Colville	40	+ 3	.4	- .7
Chicago	35	- 2	4.3	+ 1.6	Binghamton	38	+ 7	2.7	- .2	Omak	42	+ 3	T	- .8
Moline	36	0	2.8	+ .2	Buffalo	38	+ 5	2.5	- .4	Quillayute	45	+ 3	8.4	- 2.4
Peoria	38	+ 1	4.4	+ 1.6	New York	44	+ 3	3.8	- .2	Seattle-Tacoma	49	+ 5	1.6	- 2.0
Rockford	32	- 2	3.7	+ 1.0	Rochester	39	+ 6	1.8	- .8	Spokane	40	+ 2	1.0	- .5
Springfield	40	+ 1	3.8	+ 1.1	Syracuse	39	+ 6	2.6	- .4	Walla Walla	48	+ 2	1.6	+ .2
IND. Evansville	47	+ 3	6.3	+ 1.6	N.C. Asheville	50	+ 4	5.7	+ 1.0	Yakima	44	+ 2	.2	- .4
Ft. Wayne	41	+ 4	3.1	+ .2	Charlotte	54	+ 3	3.8	- .7	W.VA. Beckley	46	+ 6	2.6	- 1.6
Indianapolis	43	+ 3	2.4	- 1.4	Greensboro	51	+ 3	3.0	- .7	Charleston	51	+ 6	3.0	- 1.0
South Bend	39	+ 4	4.0	+ 1.2	Hatteras	51	0	3.0	- .8	Huntington	50	+ 6	2.2	- 1.9
IOWA. Burlington	39	+ 2	4.3	+ 1.6	Raleigh	52	+ 3	2.7	- .7	Parkersburg	46	+ 4	2.0	- 1.8
Des Moines	35	+ 1	4.2	+ 1.9	Wilmington	54	0	4.8	+ .7	WISC. Green Bay	29	0	4.5	+ 2.8
Dubuque	31	- 1	2.5	- .5	N. DAK. Bismarck	22	- 3	1.2	+ .5	La Crosse	33	+ 2	2.0	0
Sioux City	31	- 2	3.3	+ 1.8	Fargo	20	- 4	2.0	+ 1.2	Madison	32	+ 2	2.7	+ .8
KANS. Concordia	42	+ 3	5.1	+ 3.5	Williston	23	- 2	1.0	+ .4	Milwaukee	33	+ 2	4.2	+ 2.0
Dodge City	45	+ 4	3.9	+ 2.8	OHIO. Akron-Canton	42	+ 6	1.7	- 1.5	WYO. Casper	35	+ 4	1.3	+ .4
Goodland	42	+ 6	3.1	+ 2.2	Cincinnati	47	+ 5	2.1	- 2.0	Cheyenne	36	+ 4	1.3	+ .2
Topeka	43	+ 2	4.0	+ 1.8	Cleveland	43	+ 7	2.3	- .8	Lander	34	+ 3	.6	- .6
Wichita	47	+ 3	4.5	+ 2.7	Columbus	44	+ 5	1.0	- 2.4	Sheridan	33	+ 2	.6	- .6
KY. Lexington	48	+ 4	3.2	- 1.6	Dayton	44	+ 5	1.4	- 1.8	P.R. San Juan	78	+ 2	2.3	+ .2
Louisville	48	+ 4	2.7	- 2.4	Toledo	39	+ 3	2.6	+ .1					

Based on 1941-70 normals



Environmental Data and Information Service, NOAA



HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING APR. 8, 1979.

STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +		
	TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1977-78		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1977-78		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1977-78
ALA. BIRMINGHAM.....	33	11	2747	113	548	MAINE CARIBOU.....	21	16	828	124	200	OKLA. OKLAHOMA CITY.....	24	35	5950	168	341
MOBILE.....	15	11	1617	103	509	PORTLAND.....	20	15	668	133	54	TULSA.....	22	22	4081	526	105
MONTGOMERY.....	16	15	1975	247	438	MD. BALTIMORE.....	132	28	4326	73	289	OREG. ASTORIA.....	14	14	45	82	1
ARIZ. FLAGSTAFF.....	197	16	6467	305	1340	MASS. BOSTON.....	154	14	5167	122	94	BURNS.....	14	14	45	82	1
PHOENIX.....	133	13	1416	100	660	MICH. ALPENA.....	226	22	7277	126	367	HEDFORD.....	14	14	45	82	1
TUCSON.....	133	13	1808	100	660	DETROIT.....	226	22	6273	126	367	PENDLETON.....	14	14	45	82	1
MINSLOW.....	133	13	4601	100	660	FLINT.....	226	22	6273	126	367	PORTLAND.....	14	14	45	82	1
YUMA.....	133	13	1154	100	660	GRAND RAPIDS.....	226	22	6273	126	367	SALEM.....	14	14	45	82	1
ARK. FORT SMITH.....	85	33	3828	580	608	HOUGHTON LAKE.....	226	22	6273	126	367	PA. ALLENTON.....	7	7	37	26	6
LITTLE ROCK.....	85	33	3497	241	10	LANSING.....	226	22	6273	126	367	EARL.....	7	7	37	26	6
CALIF. BAKERSFIELD.....	25	18	1788	28	572	MARQUETTE.....	226	22	6273	126	367	HARRISBURG.....	7	7	37	26	6
EUREKA.....	25	18	3821	174	59	MUSKOGEE.....	226	22	6273	126	367	PHILADELPHIA.....	7	7	37	26	6
FRESNO.....	25	18	2293	174	59	ST. MARIE.....	226	22	6273	126	367	PITTSBURGH.....	7	7	37	26	6
LOS ANGELES.....	25	18	1302	111	227	MINN. DULUTH.....	295	77	9196	659	386	SCRANTON.....	7	7	37	26	6
RED BLUFF.....	25	18	2223	174	59	INTERNAT. FALLS.....	219	31	7094	1007	523	R. I. PROVIDENCE.....	169	20	5564	246	74
SAN DIEGO.....	25	18	1086	223	446	MINNEAPOLIS.....	237	61	8433	464	464	S. C. CHARLESTON.....	27	27	163	173	399
SAN FRANCISCO.....	69	7	12630	12	586	ROCHESTER.....	244	115	8610	1159	52	COLUMBIA.....	27	27	335	188	8
STOCKTON.....	31	33	2450	128	92	ST. CLOUD.....	244	84	8903	885	406	GREENVILLE.....	40	14	3061	7	320
COLO. DENVER.....	15	13	5755	424	792	MISS. JACKSON.....	31	31	2435	178	449	TEXAS. ABERDEEN.....	25	25	8873	1064	136
GRAND JUNCTION.....	15	13	6178	162	84	HEROIAN.....	30	30	2502	162	304	HURON.....	25	25	8873	1064	136
PUEBLO.....	15	13	5620	664	84	MD. COLUMBIA.....	138	33	5276	523	108	RAPID CITY.....	25	25	3396	334	314
CONN. BRIDGEPORT.....	15	10	4851	27	262	KANSAS CITY.....	138	33	5276	523	108	SIoux FALLS.....	25	25	8160	1018	218
HARTFORD.....	15	10	6016	262	194	ST. LOUIS.....	138	33	5276	523	108	TENN. CHATTANOOGA.....	37	21	3271	86	439
DEL. WILMINGTON.....	14	28	4664	101	552	SPRINGFIELD.....	142	42	5010	711	1	KNOXVILLE.....	57	11	3446	116	368
D.C. WASHINGTON.....	103	16	3741	234	311	MONT. BILLINGS.....	137	14	7628	1239	414	MEMPHIS.....	57	11	3170	210	190
FLA. APALACHICOLA.....	11	11	1401	516	182	GLASSBORO.....	137	14	7628	1239	414	NASHVILLE.....	57	11	3759	210	441
DAYTONA BEACH.....	11	11	2241	516	182	GREAT FALLS.....	137	14	7628	1239	414	TEXAS. ABILENE.....	40	40	2810	268	65
FORT MYERS.....	11	11	2655	516	182	HAVRE.....	137	14	7628	1239	414	AMARILLO.....	40	40	2810	268	65
JACKSONVILLE.....	11	11	1524	200	200	HAYWARD.....	137	14	7628	1239	414	AUSTIN.....	40	40	2810	268	65
KEY WEST.....	11	11	1524	200	200	HILLSDALE.....	137	14	7628	1239	414	BEAUMONT.....	40	40	2810	268	65
LAKELAND.....	11	11	545	133	33	MILLSVILLE.....	137	14	7628	1239	414	BROWNSVILLE.....	40	40	2810	268	65
MIAMI.....	11	11	1985	121	121	MISSOULA.....	137	14	7628	1239	414	CORPUS CHRISTI.....	40	40	2810	268	65
ORLANDO.....	11	11	1985	121	121	NEBR. GRAND ISLAND.....	184	43	7076	717	709	DEL RIO.....	40	40	2810	268	65
TALLAHASSEE.....	11	11	1505	150	150	LINCOLN.....	184	43	6726	717	709	EL PASO.....	40	40	2810	268	65
TAMPA.....	11	11	248	470	197	NORFOLK.....	184	43	6726	717	709	FORT WORTH.....	40	40	2810	268	65
WEST PALM BEACH.....	11	11	248	470	197	NORTH PLATTE.....	184	43	7388	1291	640	HOUSTON.....	40	40	2810	268	65
GA. ATLANTA.....	33	24	2711	270	521	OMAHA.....	184	43	6248	1291	640	LUBBOCK.....	40	40	2810	268	65
AUGUSTA.....	33	24	2711	270	521	VALENTINE.....	184	43	7688	1113	310	MIDLAND.....	40	40	2810	268	65
Macon.....	33	24	2711	270	521	NEV. ELI.....	178	11	7009	400	1259	SAN ANGELO.....	40	40	2810	268	65
Savannah.....	33	24	1744	17	496	LAS VEGAS.....	178	19	2487	764	764	SAN ANTONIO.....	40	40	2810	268	65
IDAHO. BOISE.....	11	11	5755	598	1350	RENO.....	178	19	5433	262	1159	VICTORIA.....	40	40	2810	268	65
LEHISTON.....	11	11	714	1049	710	WINNEMUCCA.....	178	15	5740	31	1159	WICHITA FALLS.....	40	40	2810	268	65
POCATELLO.....	11	11	689	1636	1636	N. H. CONCORD.....	197	23	6876	313	386	UTAH. SALT LAKE CITY.....	113	22	5341	1	1251
ILL. CAIRO.....	109	44	4471	776	68	N. J. ATLANTIC CITY.....	129	10	4853	309	27	VT. BURLINGTON.....	201	15	7284	248	146
CHICAGO.....	109	44	6446	178	19	TRENTON.....	145	30	4610	49	345	VA. LYNCHBURG.....	84	100	4140	154	281
MOLINE.....	109	44	6979	178	19	N. MEX. ALBUQUERQUE.....	94	33	3903	154	784	NORFOLK.....	65	65	3304	312	312
PEORIA.....	109	44	7779	178	19	ROSMELL.....	69	35	3516	52	784	RICHMOND.....	65	65	3304	312	312
ROCKFORD.....	109	44	9046	178	19	N. Y. ALBANY.....	94	33	6507	267	71	ROANOKE.....	65	65	3304	312	312
SPRINGFIELD.....	109	44	9046	178	19	BINGHAMTON.....	94	33	6507	267	71	WASH. GUILLYVUTE.....	170	17	4917	102	308
IND. EVANSVILLE.....	129	43	4863	497	284	BUFFALO.....	94	33	6301	163	201	SEATTLE-TACOMA.....	111	11	4181	126	433
FORT WAYNE.....	129	43	6037	497	284	NEW YORK.....	94	33	6301	163	201	SPOKANE.....	111	11	7057	1082	1077
INDIANAPOLIS.....	129	43	6066	497	284	ROCHESTER.....	94	33	6301	163	201	HALLS HALL.....	85	16	4889	528	644
SOUTH BEND.....	129	43	6066	497	284	SYRACUSE.....	94	33	6301	163	201	YAKIMA.....	101	101	6006	648	941
IOWA. BURLINGTON.....	179	51	6694	1000	195	N. C. ASHEVILLE.....	78	100	3748	196	515	W. VA. BECKLEY.....	110	110	4898	192	608
DES MOINES.....	179	51	6854	654	185	CHARLOTTE.....	78	100	3678	177	304	CHARLESTON.....	110	110	4898	192	608
DUBUQUE.....	179	51	7506	1269	629	GREENSBORO.....	78	100	3678	177	304	HUNTINGTON.....	110	110	4898	192	608
SIoux CITY.....	179	51	7724	1269	629	HATTERAS.....	78	100	3678	177	304	PARKERSBURG.....	110	110	4898	192	608
KANS. CONCORDIA.....	152	33	6013	807	270	RALEIGH.....	78	100	3678	177	304	WIS. GREEN BAY.....	94	94	7058	714	190
DODGE CITY.....	152	33	5355	656	420	WILMINGTON.....	78	100	3678	177	304	LACROSSE.....	94	94	7111	526	556
GOODLAND.....	152	33	5842	315	58	N. DAK. BISMARCK.....	94	100	9376	1229	439	MADISON.....	94	94	7111	526	556
GOODLAND.....	152	33	5842	315	58	FARGO.....	94	100	9376	1229	439	MILWAUKEE.....	94	94	6919	325	10
TOPEKA.....	152	33	5209	783	350	HILLISTON.....	94	100	9376	1229	439	WYO. CASPER.....	179	179	7551	928	407
WICHITA.....	152	33	5209	783	350	OHIO AKRON-CANTON.....	181	37	5852	224	392	CHEYENNE.....	179	179	8222	1171	745
KY. LEXINGTON.....	113	18	4694	271	392	CINCINNATI.....	154	37	5161	457	457	LANDER.....	179	179	8222	1171	745
LOUISVILLE.....	121	30	4464	109	417	CLEVELAND.....	181	37	5503	39	528	SHERIDAN.....	179	179	8222	1171	745
LA. BATON ROUGE.....	11	11	1744	87	341	COLUMBUS.....	181	37	5503	39	528						
LAKE CHARLES.....	11	11	1744	87	341	DAYTON.....	181	37	5503	39	528						
MONROE.....	11	11	1744	87	341	TOLEDO.....	181	37	5503	39	528						
SHREVEPORT.....	11	11	1744	87	341												

BASED ON 1941-70 NORMALS.

+ ACCUMULATION FROM JULY 1, 1978.

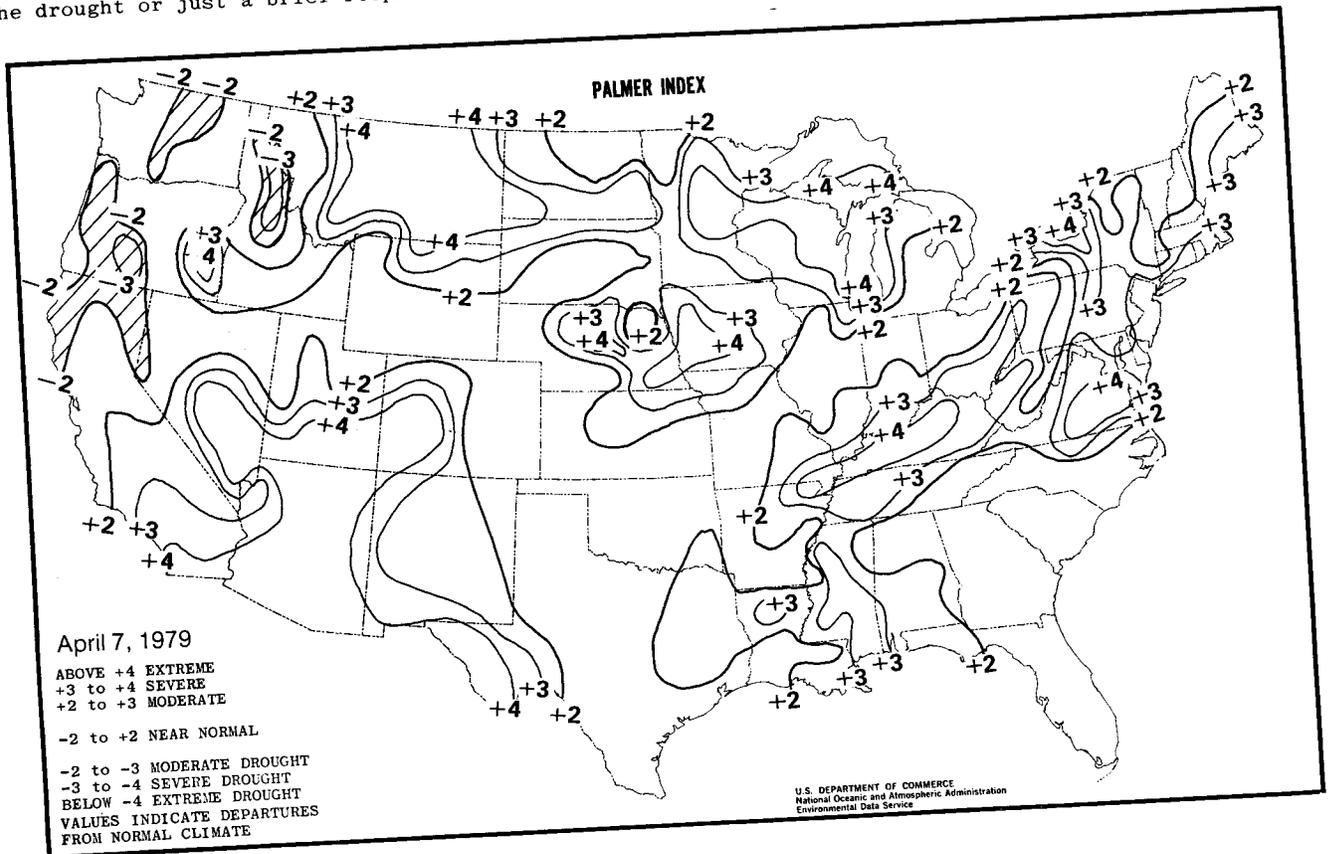
The Palmer Index

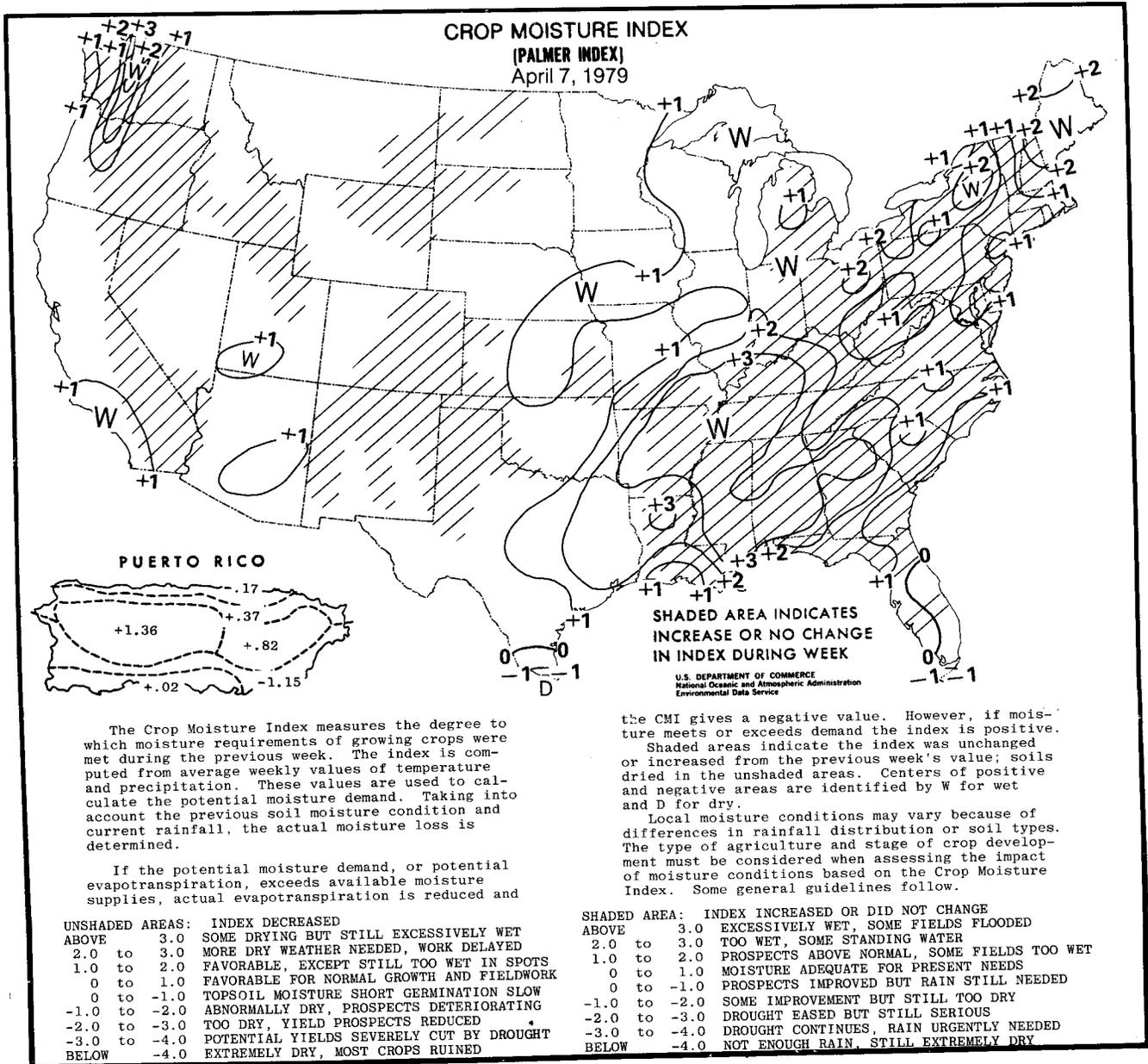
The Palmer Index is an index of meteorological drought, which may be defined as a prolonged and abnormal moisture deficiency. The general concept is one of supply and demand. Supply is represented by precipitation and stored soil moisture. Demand is the combination of potential evapotranspiration, the amount needed to recharge the soil moisture, and the runoff needed to keep the rivers, lakes, and reservoirs at a normal level. The results of this water balance accounting produce a positive or negative anomaly which is then weighted by a climate factor. The final product is an index that expresses the abnormality for that particular place for the period of time being computed. This manipulation allows the index to have a reasonably comparable local significance in space and time, that is, a certain index value obtained for a division in New York would have the same local significance as a like value in the more arid areas of western Kansas. This monthly increment is added to a portion of the previous month's index to include the duration of the anomaly in the final index.

The Palmer Index was designed as a climatological indicator of the scope and severity of past droughts. Using the Palmer Index on a real-time basis presents difficulties. A day or so of normal or better rainfall is certainly welcome in an area that has experienced a long drought, but one cannot know whether it indicates the end of the drought or just a brief respite. In order to

make the program have some real-time value, a system of computing a "probability" that a weather spell has ended was devised. This is not entirely satisfactory, but does allow one to assign a definite index value at times when there may be some doubt as to whether it should be positive (wet) or negative (dry).

Another aspect of using the Palmer Index is that one must remember that the demand part of the computations includes three parameters---potential evapotranspiration, recharge of soil moisture, and runoff, any one of which may produce a negative index. For instance if only enough rain fell to satisfy most of the expected evapotranspiration, but not enough to supply the expected recharge and runoff, then a negative index would result. If such a situation continued then one might find that agriculture was progressing at a near normal pace but the Palmer Index would be indicating a worsening drought. In this situation the drought would cause shallow wells and springs to go dry and the levels of rivers, lakes and reservoirs to fall below normal and, if this odd situation continued long enough, would cause serious economic stress to the livestock industry and eventually to other industries and cities. Then if rainfall fell below the minimum needed for agriculture, crops would suffer drastic and rapid decline because there would be no reserve water in the soil. Such a situation, to some extent, occurred during the Northeast drought in the 1960's when New York City almost ran out of water.





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