

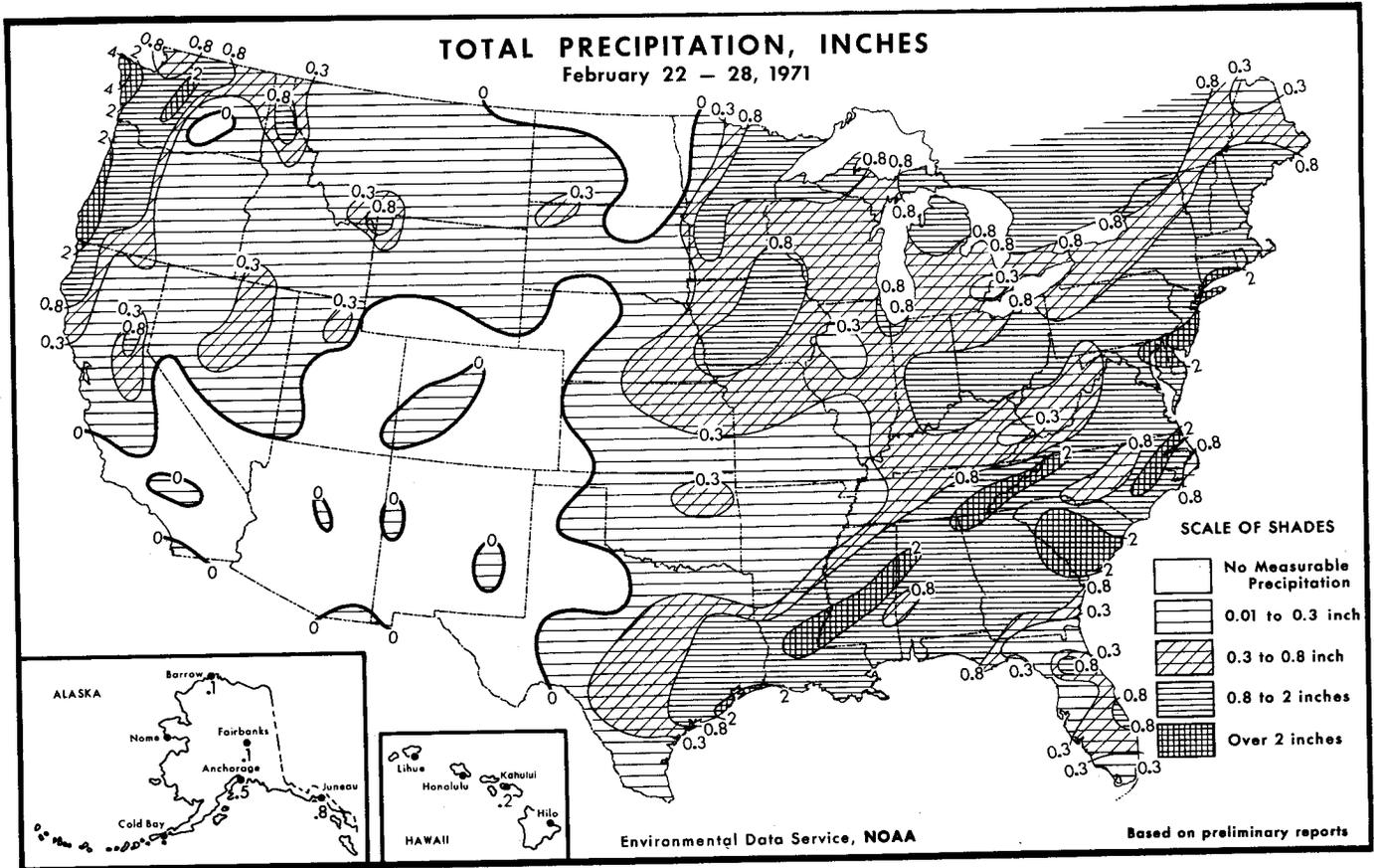
Weekly Weather & Crop Bulletin

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Edited by Lucius W. Dye

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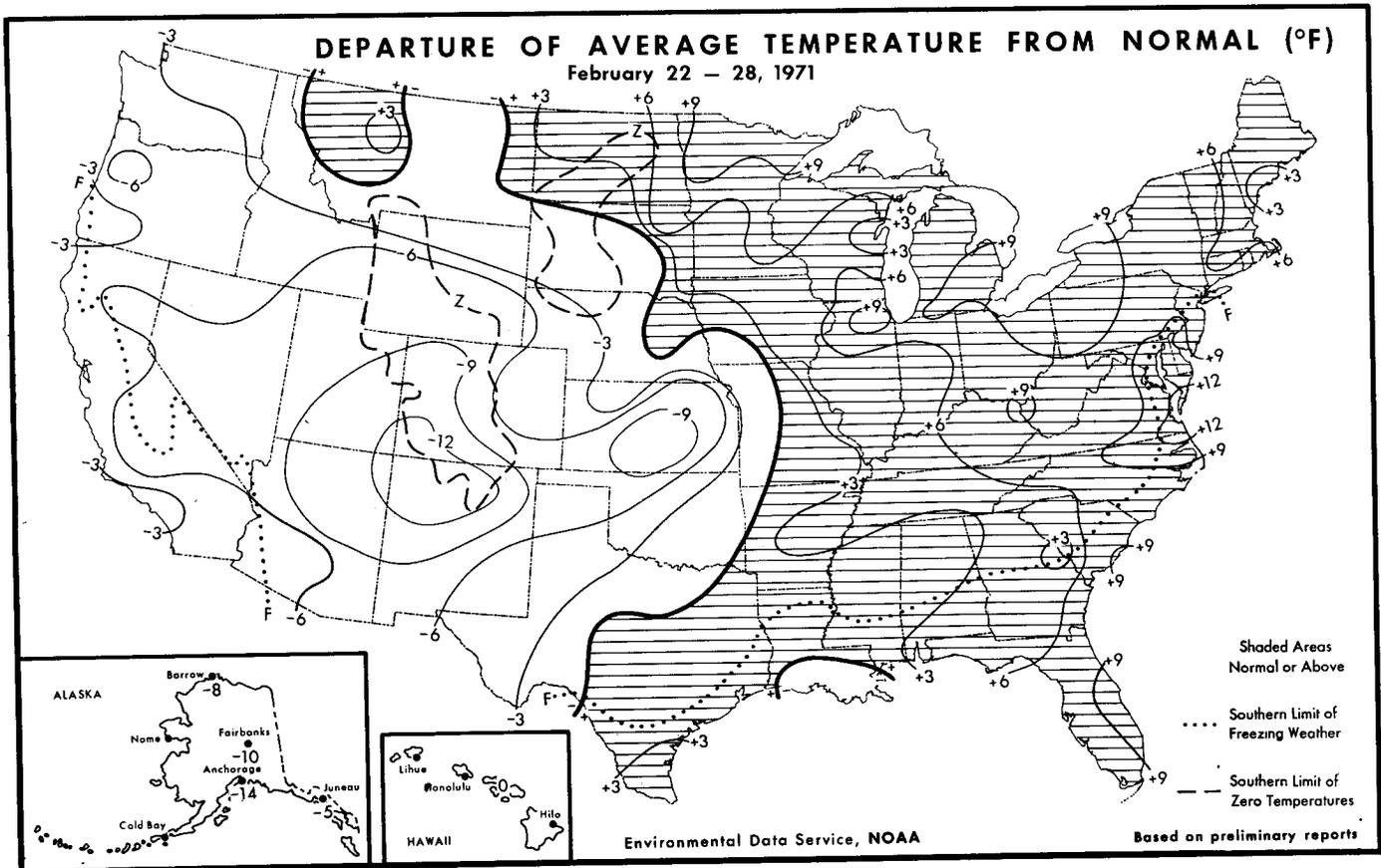
NATIONAL WEATHER SUMMARY

HIGHLIGHTS: Cold weather came to the West. Mild temperatures continued over the East. Stormy weather prevailed early and late in the week with a brief tranquil spell at midweek.

PRECIPITATION: A massive storm centered over Missouri and Arkansas Monday moved to New England and the Atlantic Ocean by midweek. It dumped heavy snow along most of its path, more than 2 feet at Gage, Okla., 1 foot or more elsewhere in northwestern Oklahoma, much of Kansas, eastern Nebraska, and several inches from Illinois to Michigan and eastward to Maine. The snowpack increased to 3 or 4 feet over parts of northern New England, 5 feet at Greenville, Maine. Deep snow drifts and blizzards halted highway travel. Ahead of the storm mixtures of snow and freezing rain iced the highways and made highway travel risky. Farther ahead of the storm, violent

thunderstorms and tornadoes occurred from the Ohio River Valley to the Carolinas and Georgia.

Wednesday was a fairly decent day over most of the Nation. The big storm had moved out over the Atlantic Ocean, a few flurries continued in Maine and some thunderstorm activity was noted in southern Florida, but the touch of spring was short-lived. By midmorning a new front was producing rain in the Pacific Northwest. Scattered snow fell in the northern Rockies with gales at some localities. Livingston, Mont., measured gusts to 60 m.p.h. By Thursday, the new storm was moving into the northern Great Plains spreading cloudy skies and mixtures of rain and snow as it advanced. By evening, snow and blowing snow were common over the West and were spreading eastward and southward. Winds at Winslow, Ariz., gusted to 74 m.p.h. picking up sand and dust and reducing the visibility to about 200 yards. Again



severe weather returned to the Southland. A tornado struck near Freer, Texas, Thursday evening. No reports of damage or injuries have been received. Over 3.00 inches of rains doused Galveston, Texas, early Friday morning. Thunderstorms were widespread throughout the South from eastern Texas to Georgia.

The storm center moved northeastward crossing Lake Superior to Canada Saturday afternoon. Heavy snow fell from the northern Great Plains to New England. Winds gusting to 50 to 70 m.p.h. piled the snow in deep drifts halting traffic in some areas and making it hazardous and difficult in others. The winds and snow associated with the giant storm slackened Sunday as a new storm in the West gained strength.

TEMPERATURE: Cold air swept down across the Great Plains Monday. Temperatures dropped below zero in the Rocky Mountains from western Wyoming to northern New Mexico and in parts of the northern Great Plains, and on Tuesday from North Dakota to northern Nebraska, and to below freezing as far south as southern Texas where San Antonio registered 29°. Record warmth occurred in the East. Hatteras, N.C., recorded 76° Monday after-

noon, the highest temperature of record for the month of February. By Wednesday a high was centered over the Southeast and the southerly breezes over the west side of the high brought springlike weather to mid-America. On Thursday afternoon maximums over the midwest ranged from the 40's in the Dakotas to 80's in the Lower Rio Grande Valley. Sidney and Burwell, both in Nebraska, registered 58° and Laredo, Texas, recorded 87°. Balmy weather continued in the East with maximums Thursday afternoon ranging from the 60's from Kentucky to Virginia to the 70's in the Gulf States and the 80's in much of the Florida Peninsula reaching 88° at Tampa and Orlando. Tampa had never before registered 88° in any February.

Meanwhile bitter cold hit the Northeast. Greenville and Houlton both in Maine, registered -12° Thursday morning. Another cold blast hit the Far West over the weekend. Bryce Canyon, Utah, registered 21° below zero Saturday and Phoenix, Ariz., recorded 31° Sunday morning. In general, temperatures averaged below normal over the West and above normal over the East.

L. W. Dye

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Winter wheat conditions improved on the Great Plains. Spring seeding is behind last year. Cold temperatures damaged California fruit and vegetable crops. Some live-stock herds were stranded by the blizzard in the central Plains.

SMALL GRAINS: Rain and snow the last 2 weeks have improved winter wheat conditions in the Great Plains. However, many districts received only token amounts of moisture, and more rain will be needed soon. Some limited growth was made late in the week as weather conditions improved. Wheat crop prospects vary from good to excellent in Colorado to poor in Texas where drought conditions prevail. Fall grains have wintered well in the Pacific Northwest with new growth about to start.

Cold dry weather retarded development in northern California and Arizona, but some early fields around Yuma, Arizona are beginning to head. In the South, warm temperatures combined with abundant rainfall to stimulate growth. The condition of the crop is mostly good and showed improvement during the week. Southern farmers are hoping for dry weather so they can continue top dressing fall planted acreage. Top-soil moisture remains ample (and the crop satisfactory) in the Corn Belt.

Seeding of spring grains remained slow, with progress behind last year. In most areas of the Nation fields were either too wet (central Plains and South) or too dry (Texas) for planting. However, the weather was favorable and seeding active in Washington.

OTHER CROPS: Land preparation and spring seeding were delayed by frequent rains in the South. However, outside work was active in areas dry enough to support machinery. Land preparation for cotton planting is being done in southern California, with planting to start in Arizona about March 1. Southern California farmers also started cutting and green chopping alfalfa. Some peas and potatoes were planted in early areas of Washington. The first digging of potatoes occurred in Dade County, Florida. Ohio maple sirup producers started tapping their maple trees to be ready for the first sap flow.

Fruits and Nuts: Temperatures in California's fruit district dropped into the low 20's. Some frost damage is expected, especially to almonds and apricots which were near full bloom. In contrast to California, citrus trees in Florida improved during the week as rain and ideal temperatures were very helpful. Picking of oranges and grapefruit continued in both States. Citrus harvest was active in Texas and Arizona, with picking of the frost-damaged Arizona crop going to juice processors.

Vegetables: Cold nights retarded vegetable growth and development in California. Replanting of tomatoes (damaged by wind) was necessary along the South Coast. Supplies of lettuce and cabbage will soon end from the Imperial Valley. Vegetables harvest was active in Arizona. Texas onion growers started harvesting their early fields. Summer-like weather was ideal for growth in Florida. Shipments are increasing slowly and all commodities, except cucumbers and watermelons, are available. The first picking of strawberries was made in Louisiana. Fields dried out long enough in Georgia to allow some watermelon planting. However transplanting of South Carolina cabbage was limited by the scarcity of plants.

PASTURES AND LIVESTOCK: Livestock herds stranded by last week's blizzard in northern Oklahoma were aided by a haylift operation by The Air National Guard. More deep snow, mud, and isolated cases of high water (flooding) made caring and feeding of livestock hard in Kansas, Nebraska, and South Dakota. Some isolated herds in Kansas went 2 to 3 days without feed. The majority of death losses that occurred in these States were to young livestock.

Conditions were favorable for calving and lambing in the West with death losses very light. Mild temperatures and ample rainfall started pasture grasses growing in the South. Pastures are mostly fair, but improved during the week. Livestock in the Northeast section of the Country enjoyed their 2d straight week of above-normal temperatures, but remained on winter feed rations.

Steve Pscodna
Agricultural Statistician

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., February 28, 1971

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 . . .	51	+ 1	1.9	+ .5	New Orleans . . .	57	- 2	1.0	0	OKLA. Okla. City . . .	41	- 3	.1	- .2
Mobile . . .	61	+ 4	1.6	+ .4	Shreveport . . .	54	+ 2	.3	- .7	Tulsa . . .	42	- 2	.7	+ .2
Montgomery . . .	55	+ 3	1.5	+ .3	MAINE, Caribou . . .	20	+ 5	.2	- .3	OREG. Astoria . . .	39	- 5	2.0	- .4
ALASKA, Anchorage . . .	7	-14	.5	+ .3	Portland . . .	27	+ 2	1.9	+1.0	Burns . . .	28	- 5	.2	- .1
Barrow . . .	-26	- 8	.1	0	MD, Baltimore . . .	47	+10	2.6	+1.9	Medford . . .	39	- 3	.3	- .3
Fairbanks . . .	- 8	-10	.1	0	MASS. Boston . . .	35	+ 4	1.1	+ .3	Pendleton . . .	37	- 3	.1	- .2
Juneau . . .	23	- 5	.8	+ .1	Chatham . . .	35	---	.8	---	Portland . . .	39	- 5	1.5	+ .4
Nome . . .	---	---	---	---	MICH, Alpena . . .	27	+ 7	1.0	+ .6	Salem . . .	36	- 8	2.0	+ .8
ARIZ, Flagstaff . . .	21	-10	.1	- .3	Detroit . . .	37	+ 9	.2	- .4	PA, Allentown . . .	39	+ 8	1.7	+1.1
Phoenix . . .	53	- 3	T	- .2	Flint . . .	35	+11	.4	- .1	Erie . . .	38	+11	.3	- .3
Tucson . . .	48	- 7	T	- .2	Grand Rapids . . .	33	+ 7	.4	0	Harrisburg . . .	43	+ 8	1.9	+1.3
Winslow . . .	31	-10	T	- .1	Houghton Lake . . .	28	+ 8	1.1	+ .8	Philadelphia . . .	46	+11	2.0	+1.3
Yuma . . .	54	- 5	T	- .1	Lansing . . .	35	+10	.4	- .1	Pittsburgh . . .	42	+11	1.4	+ .8
ARK, Fort Smith . . .	46	0	T	- .9	Marquette . . .	29	+ 8	.4	0	Scranton . . .	37	+ 7	1.2	+ .7
Little Rock . . .	51	+ 4	T	-1.1	Muskegon . . .	34	+ 7	.4	- .1	R.I, Providence . . .	38	+ 7	1.4	+ .7
CALIF, Bakersfield . . .	48	- 7	T	- .3	S. Ste. Marie . . .	25	+ 8	1.5	+1.2	S.C, Charleston . . .	61	+ 9	2.7	+1.8
Eureka . . .	43	- 5	1.8	+ .4	MINN, Duluth . . .	23	+ 9	1.2	+1.0	Columbia . . .	55	+ 6	2.5	+1.5
Fresno . . .	45	- 8	.1	- .5	Internatl Falls . . .	21	+10	.9	+ .7	Greenville . . .	51	+ 4	2.0	+ .9
Los Angeles . . .	56	- 2	0	- .7	Minneapolis . . .	27	+ 8	.7	+ .4	S. DAK, Aberdeen . . .	26	+ 7	T	- .2
Red Bluff . . .	46	- 6	T	- .8	Rochester . . .	25	+ 6	.9	+ .6	Huron . . .	20	- 1	.1	- .1
San Diego . . .	53	- 4	.1	- .4	St. Cloud . . .	23	+ 5	.6	+ .4	Rapid City . . .	25	- 2	.1	0
San Francisco . . .	47	- 5	.1	- .7	MISS, Jackson . . .	53	+ 1	2.3	+1.0	Sioux Falls . . .	27	+ 4	.1	- .2
Stockton . . .	47	- 4	.3	- .3	Meridian . . .	52	0	.8	- .6	TENN, Chattanooga . . .	49	+ 3	3.6	+2.3
COLO, Denver . . .	27	- 6	0	- .2	MO, Columbia . . .	38	+ 1	.3	- .2	Knoxville . . .	50	+ 6	2.0	+ .7
Grand Junction . . .	25	-11	T	- .2	Kansas City . . .	36	- 3	.5	+ .2	Memphis . . .	51	+ 5	T	-1.1
Pueblo . . .	30	- 6	T	- .1	St. Louis . . .	42	+ 4	.2	- .4	Nashville . . .	48	+ 4	.7	- .5
CONN, Bridgeport . . .	39	+ 8	3.1	+2.4	Springfield . . .	41	+ 1	.1	- .4	TEX, Abilene . . .	51	0	T	- .3
Hartford . . .	36	+ 5	1.6	+ .9	MONT, Billings . . .	27	- 2	.1	- .1	Amarillo . . .	37	- 7	.1	- .1
D.C, Washington . . .	49	+10	1.7	+1.1	Glasgow . . .	18	- 1	T	- .1	Austin . . .	57	+ 1	.5	- .2
FLA, Apalachicola . . .	64	+ 6	.4	- .6	Great Falls . . .	30	+ 3	.2	0	Beaumont . . .	58	+ 1	2.4	+1.5
Ft. Myers . . .	74	+ 8	.3	- .3	Havre . . .	20	- 1	.2	+ .1	Brownsville . . .	70	+ 5	.3	- .1
Jacksonville . . .	66	+ 7	.2	- .6	Helena . . .	28	+ 1	.2	+ .1	Corpus Christi . . .	66	+ 4	.2	- .3
Key West . . .	78	+ 7	.1	- .4	Kalispell . . .	28	+ 1	.1	- .1	Dallas . . .	52	0	.6	- .1
Lakeland . . .	72	+ 8	.4	- .3	Miles City . . .	24	0	.2	+ .1	Del Rio . . .	59	0	.3	+ .1
Miami . . .	78	+ 9	T	- .5	Missoula . . .	30	+ 1	.1	- .1	El Paso . . .	46	- 6	0	- .1
Orlando . . .	73	+10	.2	- .5	NEBR, Grand Island . . .	29	0	.6	+ .4	Fort Worth . . .	50	- 2	.6	0
Tallahassee . . .	61	+ 4	.3	- .8	Lincoln . . .	29	- 3	1.2	+ .9	Galveston . . .	59	0	3.1	+2.3
Tampa . . .	71	+ 7	.2	- .6	Norfolk . . .	28	+ 1	.1	- .1	Houston . . .	57	+ 1	1.3	+ .5
GA, Atlanta . . .	51	+ 4	1.4	+ .2	North Platte . . .	27	- 3	T	- .1	Lubbock . . .	42	- 4	0	- .2
Augusta . . .	53	+ 2	2.4	+1.5	Omaha . . .	26	- 2	.9	+ .6	Midland . . .	48	- 3	T	- .2
Macon . . .	56	+ 4	1.1	0	Valentine . . .	23	- 3	T	- .2	San Angelo . . .	53	0	.2	0
Savannah . . .	62	+ 8	.7	- .3	NEV, Ely . . .	33	+ 4	.1	- .1	San Antonio . . .	60	+ 2	.7	+ .3
HAWAII, Hilo . . .	69	- 2	4.4	+1.1	Las Vegas . . .	43	- 8	T	- .1	Victoria . . .	61	+ 1	.9	+ .3
Honolulu . . .	74	+ 1	.6	- .2	Reno . . .	32	- 6	.1	- .1	Waco . . .	55	+ 1	.4	- .3
Kahului . . .	72	0	.2	-1.3	Winnemucca . . .	30	- 5	1.2	+ .6	Wichita Falls . . .	47	- 2	.1	- .2
Lihue . . .	---	---	---	---	N.H, Concord . . .	30	+ 5	1.2	+ .6	UTAH, Blanding . . .	23	-12	T	- .3
IDAHO, Boise . . .	33	- 5	.2	- .1	N.J, Atlantic City . . .	44	+ 8	2.9	+2.2	Salt Lake City . . .	29	- 7	.4	+ .1
Lewiston . . .	37	- 2	.1	- .1	Trenton . . .	44	+ 9	1.8	+1.2	VT, Burlington . . .	27	+ 8	.7	+ .3
Pocatello . . .	24	- 7	.2	0	N.MEX, Albuquerque . . .	31	-12	0	- .1	VA, Lynchburg . . .	47	+ 6	1.4	+ .8
ILL, Cairo . . .	46	+ 3	.3	- .3	Roswell . . .	41	- 4	.2	+ .1	Norfolk . . .	55	+13	1.0	+ .2
Chicago . . .	39	+ 9	1.2	+ .8	N.Y, Albany . . .	38	+12	.9	+ .4	Richmond . . .	50	+ 9	1.2	+ .5
Moline . . .	36	+ 7	.3	- .1	Binghamton . . .	34	+ 9	1.0	+ .4	Roanoke . . .	46	+ 5	.8	+ .1
Peoria . . .	37	+ 6	.2	- .2	Buffalo . . .	36	+10	.7	0	WASH, Colville . . .	31	- 1	.5	+ .2
Rockford . . .	36	+ 9	.5	+ .1	New York . . .	42	+ 7	1.9	+1.1	Omak . . .	39	+ 7	.9	- .6
Springfield . . .	39	+ 4	.3	- .1	Rochester . . .	36	+10	.4	- .3	Quillayute . . .	37	- 5	4.7	+1.9
IND, Evansville . . .	45	+ 5	.6	- .1	Syracuse . . .	34	+ 8	.7	- .1	Seattle-Tacoma . . .	39	- 3	.9	- .1
Fort Wayne . . .	37	+ 7	.7	+ .2	N.C, Asheville . . .	48	+ 6	1.9	+1.1	Spokane . . .	31	- 2	.3	- .2
Indianapolis . . .	37	+ 4	1.2	+ .6	Charlotte . . .	52	+ 6	.6	- .3	Walla Walla . . .	38	- 4	1.2	+ .8
South Bend . . .	38	+ 9	.4	- .1	Greensboro . . .	51	+ 9	1.0	+ .2	Yakima . . .	34	- 4	T	- .2
IOWA, Burlington . . .	35	+ 4	.4	+ .1	Hatteras . . .	55	+ 8	.7	- .3	W.VA, Beckley . . .	43	+ 8	.4	- .7
Des Moines . . .	29	+ 3	.2	- .2	Raleigh . . .	53	+ 9	.7	- .2	Charleston . . .	46	+ 7	.6	- .3
Dubuque . . .	30	+ 5	.6	+ .2	Wilmington . . .	57	+ 7	1.0	+ .1	Huntington . . .	48	+ 9	.5	- .2
Sioux City . . .	28	+ 2	.4	+ .1	N.DAK, Bismarck . . .	20	+ 2	T	- .1	Parkersburg . . .	45	+ 8	1.3	+ .6
KANS, Concordia . . .	28	- 7	.7	+ .4	Fargo . . .	24	+ 9	T	- .2	WIS, Green Bay . . .	23	+ 2	.6	+ .3
Dodge City . . .	28	- 9	.2	0	Williston . . .	21	+ 4	T	- .1	La Crosse . . .	27	+ 4	.8	+ .5
Goodland . . .	30	- 3	.1	- .1	OHIO, Akron-Canton . . .	41	+11	1.6	+1.1	Madison . . .	30	+ 8	.4	+ .1
Topeka . . .	30	- 6	.5	+ .2	Cincinnati . . .	44	+ 7	2.0	+1.4	Milwaukee . . .	31	+ 6	.7	+ .3
Wichita . . .	28	-11	.2	- .1	Cleveland . . .	39	+ 9	.9	+ .3	WYO, Casper . . .	22	- 7	.2	+ .1
KY, Lexington . . .	45	+ 7	.7	- .2	Columbus . . .	41	+ 8	1.2	+ .6	Cheyenne . . .	21	- 8	0	- .2
Louisville . . .	45	+ 7	1.3	+ .4	Dalyton . . .	41	+ 8	1.1	+ .6	Lander . . .	21	- 7	T	- .2
LA, Baton Rouge . . .	57	0	1.0	0	Toledo . . .	37	+ 8	.4	0	Sheridan . . .	26	- 1	.2	0
Lake Charles . . .	57	- 1	1.4	+ .2	Youngstown . . .	39	+10	.7	+ .1	P.R. San Juan . . .	77	+ 2	.1	- .4

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

CONDENSED STATE SUMMARIES

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

ALABAMA: Fair and cool early in period. Much warmer Wednesday with general rains and heavy thunderstorms Thursday and Friday. Clearing and mild Saturday becoming cloudy again Sunday with light rain. Temperatures for week much warmer than usual for late February. Precipitation heavy all sections with many spots having more than 3.00 inches. Rains restricted farmwork to routine chores and caring for livestock. Few low-lying areas flooded. Soil moisture supplies mostly surplus. Mild temperatures and ample moisture stimulated small grain growth. Considerable acreage top dressed. Late spring Irish potato crop mostly planted—land preparation for commercial early summer crop delayed by rain. Livestock condition fair to good.

ARIZONA: Temperatures near normal at beginning of week, rose above normal on 24th, then fell below normal after 25th. Showers most sections during week but precipitation amounts very light. Strong winds most sections during week with highest speeds northern parts of State on 25th. Field preparations active for spring crops. Planting cotton to begin on March 1 southern Yuma County. Small grains making good progress. Cold, windy weather slowed growth. Early-planted fields Yuma area beginning to head. Fall-planted sugar beets making good growth. Harvest lettuce, cabbage continues Yuma. Cantaloupe planting active. In Salt River Valley, Pima and Pinal Counties, spring lettuce making satisfactory progress. Cochise County lettuce plantings up but lack uniformity. Picking of citrus for juice from damaged groves active. Limited picking of Valencias. Ranges fair conditions. Supplemental feeding required most areas. Stock water continues short supply with hauling, pumping necessary in some areas. Livestock continue fair to good condition. No unusual death losses.

ARKANSAS: Temperatures averaged 2° to 3° above normal ranging from mid-40's north to mid-50's south. Daily extremes: 18° to 78°. Light showers midweek totaling below 0.50 inch. Marked tree high with 0.65 inch. Significant application of fertilizer to small grains during week. Growth wheat and oats good statewide. Land preparation underway—notably Upper Delta with harvest finally complete that area. Cool season grasses and small grains providing some grazing, but livestock feeding continued to maintain good condition. Other activities included planning for 1971 crop season, repairs, and maintenance. Gardening active all areas.

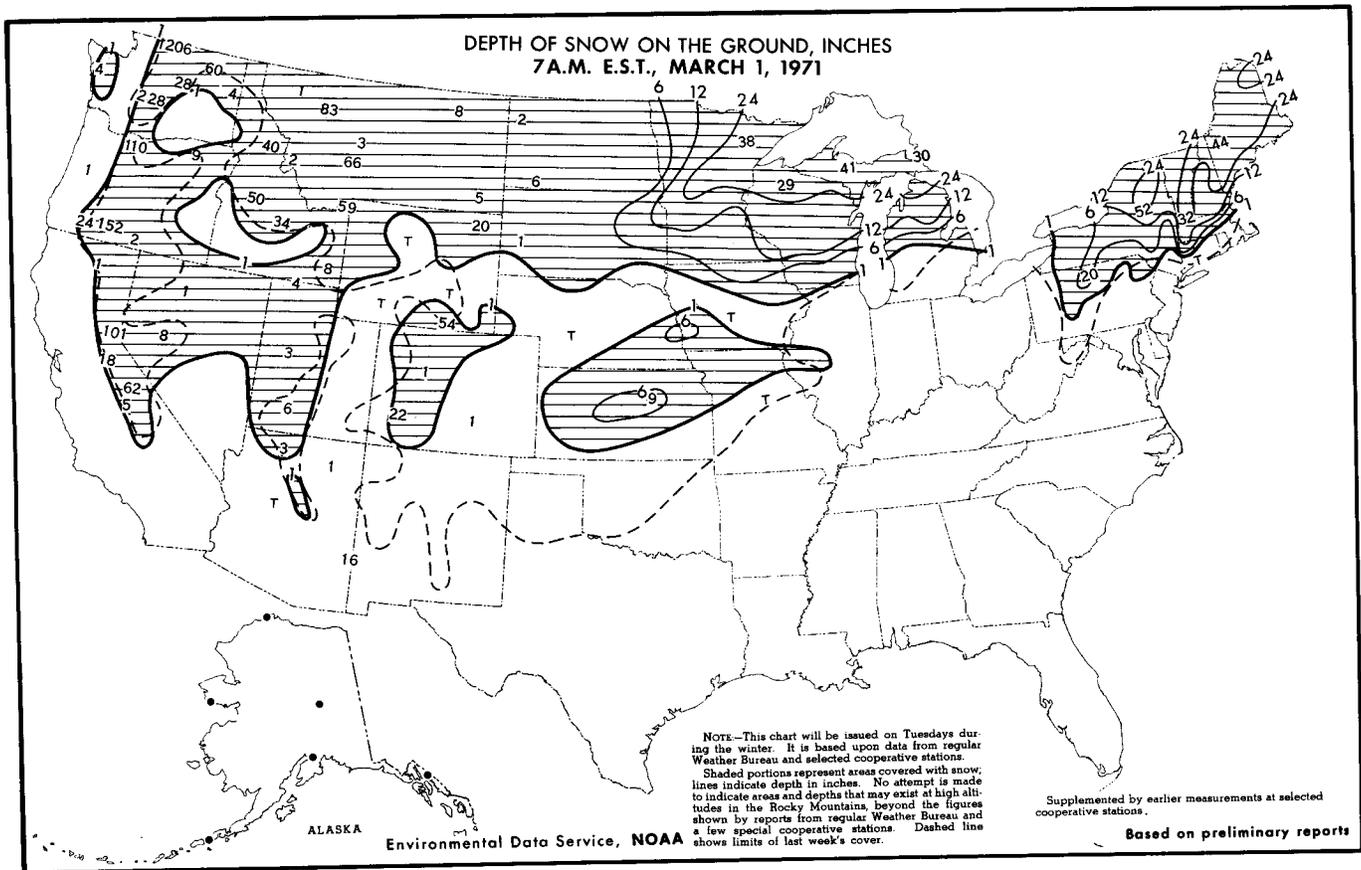
CALIFORNIA: Average temperatures 2° to 6° below normal throughout State; 5° to 10° colder than last week. Scattered light precipitation, strong wind on several days, continuing into weekend. Heavier amounts, moderate snow Sierra Nevadas above 1500 feet. Cold, dry weather retarded small grain development, northern areas. Fall-seeded grain fair to good condition but showing need for moisture. Preparation and seeding sugar beets, safflower underway. Old crop beet harvest continues. Land preparation for 1971 cotton and rice continues. Cutting and green chopping alfalfa underway Riverside and Imperial Counties. Cold, freezing weather hit fruit dis-

trict; temperatures in low 20's reported. Almonds and apricots near full bloom; some frost damage expected early varieties. Navel orange harvest continues. Valencia crop shows good development. Lemon and grapefruit harvest continues. Range feed growth slowed northern areas. Artichoke harvest light, moderate volume asparagus Imperial Valley, Orange, and Riverside Counties; cutting Delta district still light. Broccoli harvest continues Santa Maria and Salinas district; good quality. Cabbage harvest almost complete Imperial Valley. Pulling carrots Imperial and San Joaquin Valleys; good quality. Cauliflower harvest light due market conditions, cold nights. Lettuce harvest will be completed Imperial Valley 2 weeks; Palo Verde starting soon. Digging winter potatoes Kern district. Planting tomatoes active all districts; cold nights retarding early plantings. High winds South Coast damaged tomato fields; replanting in progress.

COLORADO: Temperatures well below normal except for 1 or 2 warmer days at midperiod in southeast. Mostly light snow mountains and west, heavier some local areas. Periods of high winds caused snow drifting or blowing dust. Winter wheat and barley condition good to excellent. Most fields snow-covered northwest and some eastern areas. Blowing soil minimized by varying amounts of precipitation. Surface soil moisture mostly adequate. Range and pasture condition fair. Recent moisture causing grass to deteriorate. Supplemental feeding general. Hay supply adequate. Blizzardlike conditions eastern area (previous weekend) hard on livestock, but condition remains good.

FLORIDA: Temperatures averaged 5° to 9° above normal throughout State except 3° to 5° above normal in Panhandle. Most stations reported high daily temperatures well into 80's. Rainfall averaged from 0.20 inch to 0.80 inch over most sections of State in scattered showers accompanying weak cold front on 23d. Rainfall in Panhandle averaged 1.50 inches in heavier showers on 23d and again on weekend of 27th and 28th. Rain slowed land preparation and planting field crops. Sugarcane recovering from frost damage. Small grains furnishing considerable forage. Other grasses greening in response to warm weather, but rain needed in central and south. Citrus tree condition improving. Rain last week very helpful. Open bloom beginning. Much new growth. Vegetable shipments increased slowly, returning to level of 3 weeks ago. All commodities, except cucumbers, melons available. Cabbage and celery nearly half of total volume. Summerlike weather promoting recovery from cold damage. Germination of seedings favorable. Planting activated northward, some statewide. Potato plantings complete, harvest underway Dade County.

GEORGIA: Unusually mild for 2d straight week. Light freezing confined to northern areas on 1-2 days. Highs reached 80's in south last half of week. Averages ranged from 3° to 6° above normal. Rain on 3 or 4 days. Totals mostly 1.00 to 3.00 inches except in southeast where amounts were generally less than 1.00 inch. Soil moisture adequate and land preparation active southern



part State. Soil moisture excessive and land preparation delayed north. Fescue and clover pasture beginning new growth. Small grains fair to good. Some early planting of watermelons. Livestock mostly good.

HAWAII: Weather unfavorable many areas. Harvest prospects for some vegetable crops reduced by hailstorm in Kona, Hawaii. High wind and rain in Waimea on Hawaii, Omaopio on Maui, and on Oahu. Supplies of bananas and papayas light. Vegetable supplies generally adequate. Production of sugar on uptrend. Harvesting of pineapples light, mainly for fresh market. Pastures and cattle fair to good.

IDAHO: First week since early January temperatures dropped below normal to average near normal north and southeast and mostly 2° to 8° below normal elsewhere. Precipitation last half of week generally less than normal and in form of snow. Snow depths at higher-elevation stations increased. Snow and wind storms latter part not favorable for livestock. However, cattle and sheep condition remains good. Mud problem in corrals and lots eased.

ILLINOIS: Precipitation mostly 0.25 to 0.50 inch except up to 1.00 inch near Lake Michigan. No snow on ground except traces. Temperatures averaged 3° to 6° above normal south and central and 5° to 9° above north. Soil moisture adequate. Winter-sown crops satisfactory. Fields ponding in some areas. Drainage ditches silting. Livestock in satisfactory condition.

INDIANA: Week mild but windy. Temperatures averaged 37° to 46° which were 5° to 9° above normal. Extremes: 25° on 25th to 63° on 26. Precipitation on 26th and 27th ranged from 0.20 to 0.70 inch. No snow cover. Soils in north frozen to 2 feet and in central 1 foot, but some surface thawing. Thawed in south. Too wet for much farmwork. Care of livestock principal activity.

IOWA: A wet week with near seasonal temperatures. Heavy snow over glaze in some areas on 22d. In extreme southwest, amounts up to 15 inches fell. Elsewhere most amounts were 5 to 8 inches becoming 1 inch or less in extreme northwest and southeast. Freeze up early in week eased flooding conditions. Warmer on 25th, 26th with maximum to 62° at Burlington. Turning colder 26th with snow and some ice north and west-central.

KANSAS: Major storm ended 22d leaving 3 to 20 inches badly drifted snow. Generally fair and warmer February 23 to 25. Much of snow cover melted. Another storm late in period brought light to moderate precipitation. Snow northern Kansas and western 2/3 28th. Snow cover generally 1 to 8 inches those areas. Weekly precipitation totals mostly 0.10 to 0.50 inch. Weekly mean temperatures averaged below seasonal; much below southwest and central 1/3. Livestock experienced shrinkage and some death losses during severe blizzard. Some isolated cattle herds went 2 to 3 days without feed. Supplies of feed and hay still mostly adequate. Delayed milk pickup on dairy farms caused some losses. Wheat fields variable benefit from

snow, but added moisture over weekend beneficial. Winds blew most snow off wheat fields western and parts of north-central Kansas. Some wheat growth and greening late in week. Many pastures and stubble fields benefited from snow melt. Fields too wet for oat and barley seeding.

KENTUCKY: Light to heavy rain on 22d and light to moderate rain on 26th; some snow flurries late 22d and 23d. Precipitation totals 0.25 inch in east to 3.32 inches north-central. Mostly cloudy until mostly sunny 27th and 28th. Windy and turning colder 22d and 23d, but temperatures above normal 25th and 28th. In west, lower Green River and lower Ohio River rising to above flood stage. Little or no early spring plowing or fieldwork done due continued wet conditions. Some pastures beginning to green. Small grains good condition.

LOUISIANA: Temperatures averaged near seasonal normals. Cold followed by warming trend, then locally heavy rainfall and cooler Friday. Mild weekend. Temperature extremes: 80° Lake Charles and Natchitoches Friday; 26° Oakland Tuesday. Precipitation moderate to locally excessive with weekly totals ranging from less than 0.50 inch northwest to more than 3.00 inches locally central and northeast. Fieldwork limited by excessive moisture. Some plowing, cultivating of sugarcane. Top dressing winter pastures and water leveling rice lands. Some sweetpotatoes bedded and tomato plants moved to cold frames. Early Irish potatoes beginning to mark rows. Some light picking of strawberries in frost controlled acreage. Winter wheat and oats good. Pasture feed average. Livestock good.

MARYLAND AND DELAWARE: Wet and mild. Temperatures, above normal every day averaged 7° to 10° above normal. Extremes: 73°, 22°. Precipitation heavy, 1.00 to 2.00 inches with some light snow in west. February 1971 temperatures, after a very warm second half, averaged a little above normal. Precipitation mostly much-above normal, but snowfall below normal except near normal in west. Winter grain fields showing green growth. Winter damage relatively light. Fertilizer top dressing held back by soft fields. Orchard pruning nearly finished, except western Maryland. Tobacco stripping well advanced. Seeding of tobacco beds starting as soils dry.

MICHIGAN: Temperatures for week averaged 7° to 10° above normal. Greatest departures in Upper Peninsula and southeast Lower Michigan. Precipitation totaled over 1.00 inch northern Lower Michigan and Upper Peninsula while in southern Lower Michigan amounts ranged from 0.25 to 0.50 inch. Winds gusting to over 50 m.p.h. caused blowing and drifting snow and closing of highways Saturday in northern Lower Michigan and in Upper Peninsula.

MINNESOTA: Temperatures averaged 4° above normal in south to 10° above normal in north. Worst blizzard of winter with heavy snow and winds to 70 m.p.h. occurred late on 26th and continued in some areas into 28th. This stopped all traffic across State except very western and northwestern parts of State and larger cities. The worst areas were through south-central, north to center of State, then northeastward. A 12- to 19-inch snow band fell on a 50-mile-wide line from Jackson to Springfield to Melrose, then northeast through Hibbing. Heavy ice and wet snow reported 2 to 6 inches in diameter on utility lines with strong winds broke many wires and poles causing numerous outages. Rural areas in Aitkin, Itasca, and

particularly northern St. Louis Counties are still without power and telephone service. Water content of the heavy snow was from 1.00 inch to more than 2.00 inches, greatest amount Sandy Lake Dam, 2.52 inches. Lowest pressure was 28.72 inches at Duluth at 1:00 a.m. on 27th which approached the all-time low of 28.66 inches on November 11, 1940.

MISSISSIPPI: Weekly precipitation totals mostly over 4.00 inches in north and generally over 2.00 inches in south. Amounts Friday morning ranged from 8.30 inches at Lexington to 0.41 inch at Columbia. Temperatures averaged near to about 5° above normal; most sections were warmer than week before. On 21st tornadoes killed 101, injured 1,228, and caused damages exceeding \$10 million. Heavy rains most sections Friday, and light showers Sunday in central and southern sections with weekend totals ranging from none at Vicksburg to 2.02 inches at Biloxi. On Friday several places in southeast section of State reported small tornado or wind damage with no fatalities; several persons injured east of Rose Hill. Soil moisture surplus northern 2/3 State, and adequate to surplus southern 1/3. Winter wheat, oats, livestock in fair to good condition. Pastures fair condition. Plowing 15% complete. Average 1 1/2 days suitable for fieldwork.

MISSOURI: Week began cold and wet, turned briefly warmer late in the week, and cooler again on weekend. Weekly extremes: 5° above zero at Tarkio on Wednesday and 74° at Doniphan and Ozark Beach on Friday. Moderate to heavy precipitation fell early in week with most reporting stations receiving less than 0.50 inch except in Bootheel where total reached almost 3.00 inches. Most precipitation snow in northwest where up to 7 inches reported. Light precipitation fell over weekend with amounts generally less than 0.10 of an inch.

MONTANA: Warming until midweek then colder weekend. Light precipitation midweek and weekend, except heavy over southwestern mountains. Supplemental feeding of range livestock continues. Feed supplies adequate. Grazing difficult eastern districts. Storm late week caused stress to newborn calves and lambs. Calving and lambing proceeding at normal rate. Death loss low. Wind damage to winter wheat light.

NEBRASKA: Storm of previous weekend ended on Monday, but snow cover remained most of week except in southwest and portions of northeast. Light snow fell again as week ended. Farmers and ranchers kept busy with livestock care. Deep snow and muddy conditions causing problems in moving feed supplies and marketing farm products. There is an increased demand for hay, forage, and bedding. Scattered reports of cattle and hog losses in flooded areas. Some farmsteads remained isolated by high waters; livestock care difficult. Calving, lambing, and farrowing operations proceeding with no abnormal losses.

NEVADA: Temperatures over state averaged 6° to 8° below normal ranging from 3° below normal at Fallon to 9° below normal at Tonopah and Austin. Light precipitation in north; none in extreme south. Light snowfall in north, generally 1 inch with heavier amounts at higher elevations and extreme north. Snow ground cover ranging up to 7 inches at Owyhee. Early calving and lambing underway. Livestock wintering generally good. Stock water and supplemental feed remain adequate. Tomato planting underway Moapa Valley. Cooler

weather delayed growth green onions and radishes.

NEW ENGLAND: Week mild and wet. Temperatures averaged mostly 4° to 8° above normal. Warmest over weekend with considerable thawing. Frequent precipitation with major amounts on 23d to 24th and again on 27th, mostly as snow in north. Mixtures fell on 23d in south and central with rain, ice pellets, snow, and glazing some areas. New snow ranged from only a trace to 3 inches in south to 10 to 20 inches in some northern areas. Precipitation variable but totals mostly from 1 to 2 inches. Some heavier near the coast and some much less in extreme northern Maine.

NEW JERSEY: Week very warm and very wet. Temperatures averaged from 5° to 11° above normal with some stations in South Jersey reaching into the 70's on Saturday afternoon. Rains on Monday and again Friday night gave totals varying from 1.60 to 3.40 inches. No measurable snow remained on ground on morning of 1st.

NEW MEXICO: Very light precipitation in northern 1/3 of State. Dry elsewhere. Much cooler with temperatures averaging 5° to 10° below normal. Coldest Monday. Warmest Thursday. Cooling 2d half of week to lowest on Saturday. Top and sub-soil moisture short on west side. General land preparation - all crops very active. Irrigating spring lettuce, onions and alfalfa active. Irrigated wheat good, dryland only fair and in need of immediate moisture. Ranges varying poor to good. Livestock fair.

NEW YORK: Temperatures near normal through 25th with little day-to-day change. Very mild late week as maximums mid-50's extreme west and near 60° coastal on 26th and 27th with mid-40's to low 50's elsewhere. Daily means mostly above normal through midweek dropping to +5° northeast and teens central and eastern interior on 26th. Precipitation occurring mostly as rain on 22d and 23d, averaged 1.00 inch on Long Island with 0.40 to 0.80 inch widespread upstate. Additional precipitation late week with light amounts southeast decreasing to very light western half. Little snowfall of consequence except northeast where 6 inches or more. Considerable thawing late week as snow cover largely melted Finger Lakes and lower elevations of western 1/3.

NORTH CAROLINA: Temperatures averaged above normal. Lowest near freezing and highest in 70's most areas. Rain 22d and showers at weekend. Total amounts 0.25 inch to 5.00 inches mostly 1.00 to 2.00 inches. Tornado at Fayetteville and local wind damage parts of coastal plain 22d. Generally good outdoor weather 23d through morning of 26th. Soil moisture increased now mostly surplus. Small grains mostly good and improved from previous week. Pastures mostly fair and improving. Hay and feed grains remained mostly adequate. Some land preparation beginning. Considerable anxiety among farmers about corn seed situation. Many soybean seed samples showing low germination: damaged last season by dry weather during pod development and wet condition during harvest.

NORTH DAKOTA: Mild. Temperatures averaged 4° to 7° above normal south to 8° to 11° above normal north. Snow southwest late in week. Precipitation 0.20 to 0.50 inch southwest. Little or no precipitation elsewhere. Mild temperatures and light precipitation past week maintained livestock in good condition. Feed and roughage supplies adequate. Farmers and ranchers hauled grain, marketed livestock and prepared for winter show at Valley City.

OHIO: First confirmed tornado of season struck Columbus area on 22d causing 6 injuries and more than \$2 million property damage. A warm week with temperatures averaging 5° to 8° above normal. Rainfall heavy 22d over southern half of State. Precipitation also widespread 25th and 26th. Amounts for week ranged from 0.40 inch at Toledo to 2.50 inches at Cincinnati. Very windy over weekend with gusts of 40 to 50 m.p.h. common. Farm activity near standstill. Care and feeding of livestock were main activities. Some tapping of maple trees has begun.

OKLAHOMA: Temperatures reached near 4° below normal southeast 2/3 state and 7° to 11° below normal northwest 1/3. Extremes: 76° and 3°. Precipitation averaged from trace Panhandle to 0.40 inch northeast. Dry southwest area averaged 0.02 inch and west-central 0.01 inch. Snowstorm which blanketed State weekend February 20 stranded livestock many northern areas, but losses not completely accessed. Death loss restricted mostly to newborn calves and young livestock. Increase supplemental feeding necessary with haylift operations by Air National Guard. Most fall-planted small grains benefited from snow and rain, but some acreage received only nominal moisture as winds blew snow off many fields. Wheat growth limited but slight improvement. Now rated 20% poor, 43% fair, 36% good, 1% excellent. Wheat improved most southern 2/3, declined northern 1/3. Green bug population increasing southwest areas. Planting spring oats and barley made considerable headway, but snow cover and wet fields limited progress southern and eastern areas. Spring oats 41% and spring barley 51% planted, both behind year earlier. Condition most spring-planted small grains up from week ago. Moisture still mostly short western 1/3 and north-central Oklahoma adequate to surplus elsewhere. Range feed short throughout State.

OREGON: Return of cool wintry weather aided by 3 to 6 days of moisture and 1 to 4 inches of valley snow by close of week. Cool temperatures averaged mostly 1° to 5° below normal. Weekly minima: 10° to 25° east of Cascades and southwestern valleys, 27° to 35° westside. Maxima, 41° to 60°. Precipitation totaled mostly 0.15 to 0.40 inch east of Cascades in southwestern valleys, elsewhere 1.00 to 1.50 inches westside and 2.10 inches south coast. Fieldwork underway early week halted by cold snowy weather late week. Increase in livestock feeding also necessitated. Hay supplies reported adequate most areas. Calving and lambing continues.

PENNSYLVANIA: A mild rather wet week. Low pressure systems tracked through the State on Tuesday and Saturday. Brief touch of spring on Saturday despite weak cold frontal activity with temperatures reaching into the 60's in southern portions. Cool first 3 days followed by warmup latter 4 days of week. Temperatures averaged 8° to 10° above normal. Extremes: 67° at Pittsburgh on 26th and 23° at Wellsboro on 25th. Precipitation heaviest with early week storm with 0.25 inch in northwest 1/3 and from 0.75 to 1.25 inches most other areas. Only light amounts associated with 2d system on Saturday. Weekly totals averaged about 0.30 inch in northwest, 0.75 to 1.25 inches in central portions and 1.75 to 2.00 inches over the southeast. Routine farm chores.

PUERTO RICO: Heavy rainshowers northern and interior divisions early in week. Little rain rest of week. Little or no rain entire week south

coast. Crop moisture conditions generally near normal except too dry in southern divisions where crop development is being retarded. Temperatures averaged 75° to 76° on coast and 70° to 71° interior with average departure of 0.7 degree above normal. Highest maximum, 90°; lowest minimum, 50°. Sugar-cane harvesting operations made good progress. Coffee plantations active with cultivating, planting and pruning operations. Tobacco harvesting and drying active interior zones. Pastures good to excellent, with some retardation south. Minor crops active fertilizing and cultivating with good abundance of citrus and legumes on market.

SOUTH CAROLINA: Rain early in period and as week ended. Amounts varied from 3.00 inches in north-west to 0.50 inch along coast. No real cold spells and temperatures averaged from 4° above normal in northwest to 1° above normal in south. Soil moisture adequate to surplus all areas. Farming activities included land preparation, top dressing of grains and permanent pastures, maintenance of fruit orchards. Cabbage planting continued depending on plant availability.

SOUTH DAKOTA: Weekly temperatures averaged from near normal in west to 7° above normal in east. Extremes ranged from 5° below zero at Philip and Mission on 23d to 56° at Pickstown and Menno on 25th. Precipitation fell as snow mostly end of week with totals in lower elevations up to 0.40 inch and up to 0.70 inch in northern Black Hills. Lead received 1 foot of new snow. Strong winds accompanying the snow produced near blizzard conditions many parts of State on 26th. Snow cover on 26th ranged mostly from 2 to 6 inches with spotty areas up to 1 foot. Supplemental feeds remain adequate throughout State. Livestock continue in good shape with no heavy losses. Main farm activities, caring and feeding of livestock, planning and preparation for spring work. Most areas report stock dams full of water. Some farmers being obstructed by muddy yards and feed lots.

TENNESSEE: A strong storm moved across Tennessee Sunday night and Monday accompanied by moderate to heavy precipitation. Rising temperature trend at midweek, but cooling again over weekend. Average temperatures ranged between 3° to 6° above normal most sections except 7° above normal northeast. Outside activities limited by rainfall, but few farms began spreading fertilizer on pastures and small grain. Pastures turning green and in good condition. Freeze damage to small grains light, and good growth has occurred. Livestock remains in good condition, but losses from "grass tetany" beginning middle Tennessee.

TEXAS: Good soaking rains blanketed eastern half of State Thursday. Amounts of 1.00 inch or more numerous in south-central and southeast Texas. Temperatures warmed gradually throughout week. Shortage of soil moisture continues over State. Several counties in eastern sections reporting adequate soil moisture, while The Plains, Trans Pecos, Edwards Plateau, south central, South Texas and Lower Valley still very dry. Planting operations in South Texas and Lower Valley progressing at slow rate as dry planting conditions dominate. South Texas cabbage, carrots, other winter vegetable harvest continues. Onions generally good progress as harvest few early fields beginning. Lettuce harvest continues Lower Valley.

Spring vegetables mostly good growth, and earlier than normal. Spinach harvest continues Winter Garden. Central, East Texas preparing for watermelon planting. Onion and potato planting beginning High Plains. Citrus harvest continues Lower Valley. Fruit trees blooming southern half State.

UTAH: Recurring periods of light to moderate precipitation latter half of period. Locally heavy snow and strong winds produced some drifting. After 6 weeks of much above normal, temperatures dropped to 4° to 12° below normal last week. Several colder valley stations dropped below zero. Schofield 20° below zero on 22d, coldest report received followed by Woodruff 12° below zero. Drifting snows closed some rural roads. Snow and cold temperatures halted early spring fieldwork. Care and feeding of milk cows, poultry flocks, beef cattle and sheep on winter ranges, valley farms, and feedlots continue major activities. Farm flock lambing in full progress and some calving started. No winter damage to fruit trees reported, but present cold temperatures causing concern.

VIRGINIA: Temperatures above normal with coolest at midweek. Showers and thundershowers near beginning, totals 0.50 to 2.00 inches. Mild and rainy weather produced muddy conditions and put a stop to most fieldwork and caused feeding problems for livestock producers. About 2/3 of State reports adequate top soil moisture, the others surplus. Some plowing was begun on well drained slopes. Farmers top dressing small grains and pastures in fields dry enough to support farm equipment.

WASHINGTON: West of Cascades: Temperatures near normal until near end of week. Colder over weekend with minimums in lower 20's. Showers latter half turning to snow Friday and Saturday. Lifting forest tree seedlings and certified strawberry plants continues. Bulb crops showing good growth. Raspberries and strawberries showing early growth. East of Cascades: Temperatures near normal until last of week. Colder over weekend with minimums 5° to 15° above zero. Precipitation light with 2 to 4 inches snow extreme east and north Friday and Saturday. Pruning and spraying orchards. Seeding spring wheat continues. Seeding peas and planting potatoes beginning early areas. Livestock good condition. Hay supply adequate.

WEST VIRGINIA: Light rain showers February 25 and 26. Weekly temperatures considerably above normal. Sunny but extremely windy February 27 and 28. Sunshine persisted through Monday as March came in like lamb. Mild weather allowed more outside activity than was possible most of winter. Livestock in good condition. Calves and lambs arriving with regularity.

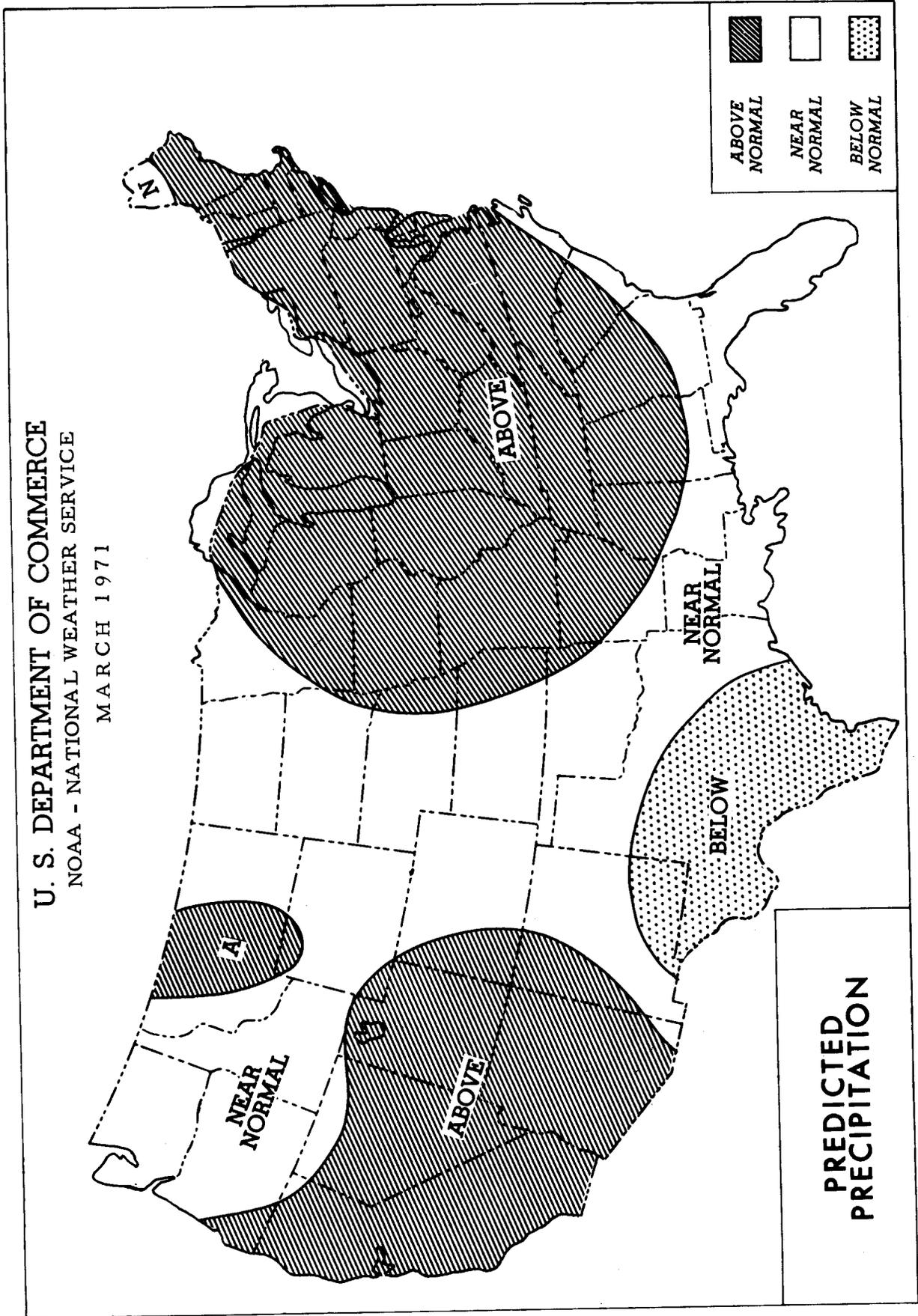
WISCONSIN: Another mild week but very stormy. Freezing rain, sleet, and snow on Monday. Rain and snow again on Friday. Very strong winds with heavy blowing snow on Saturday as record-deep low crossed northwestern Wisconsin. Many roads in north closed by both Monday's and Friday's storms. Some melting and compaction of snowcover. Snow depths range between 0 to 6 inches in the south to 30 inches in the north. Farm activities mainly care and feeding of livestock.

(Continued on back page)

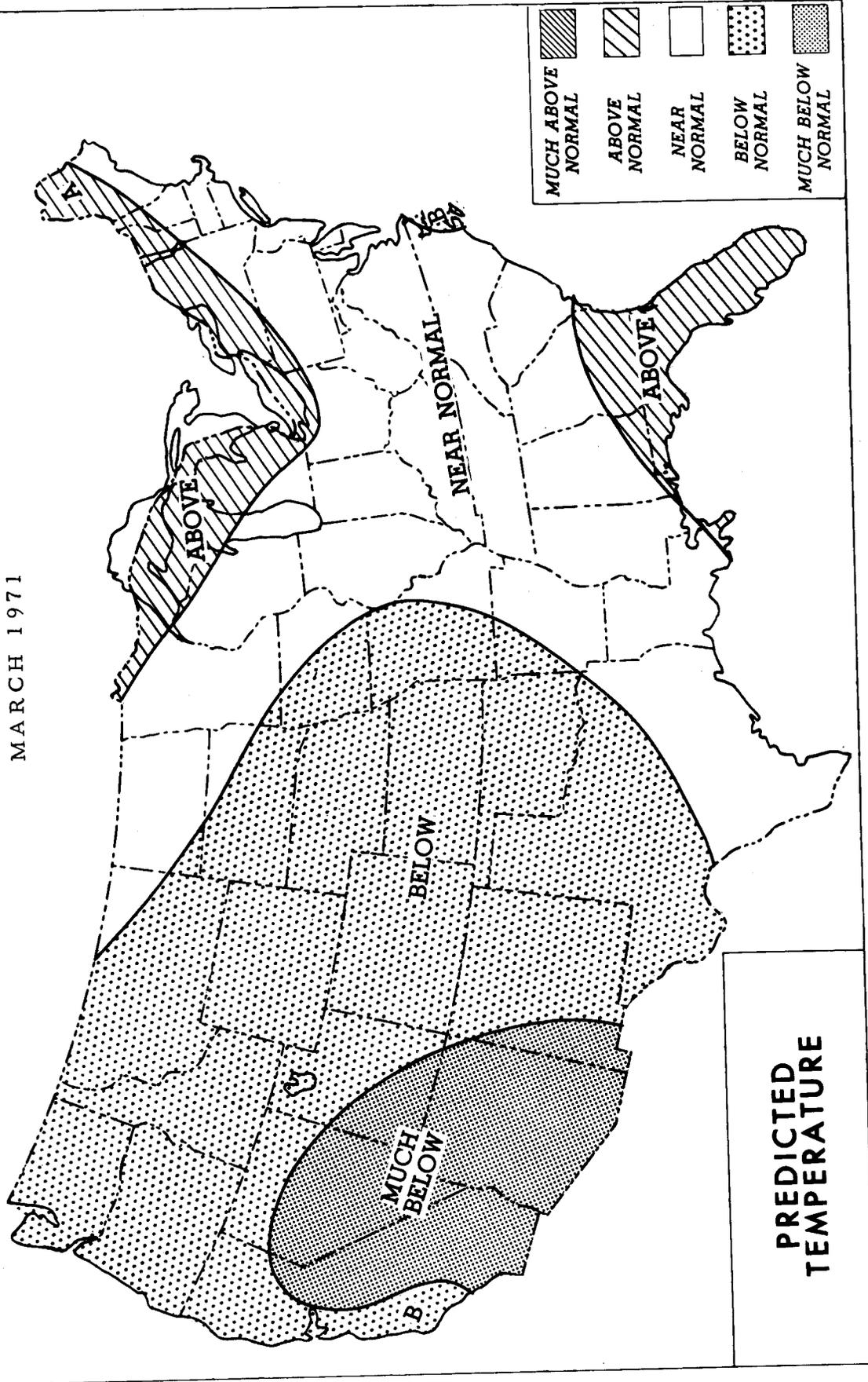
AVERAGE MONTHLY WEATHER OUTLOOK

U. S. DEPARTMENT OF COMMERCE
NOAA - NATIONAL WEATHER SERVICE

MARCH 1971



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The above prognostic charts show the expected categories of average temperature and total precipitation for the period indicated. They were extracted from the Extended Forecast Division's publication "Average Monthly Weather Outlook" which contains additional information necessary for complete interpretation.

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(Continued from page 9)

WYOMING: Most of the State received some snow: most mountains moderate to heavy. South Pass City reported most moisture with 0.97 inch. Temperature averages varied widely well below normal. Maxima were mostly in 30's west of Divide and Upper Platte Drainage, 40's to 50's elsewhere. Minima were mostly -2° to -24° west of Divide

and Upper Platte Drainage, 8° to -13° elsewhere. Temperature extremes: 54° at Torrington and Sheridan and minus -24° at Foxpark. Weather favorable for calving. Death losses light with only isolated disease problems. Feeding hay and concentrates continues throughout State. Probabilities for summer feed and water supplies generally good.

SPECIAL FEATURE THIS ISSUE

Monthly Weather Outlook for March---Pages 10, 11