

Weekly Weather & Crop Bulletin

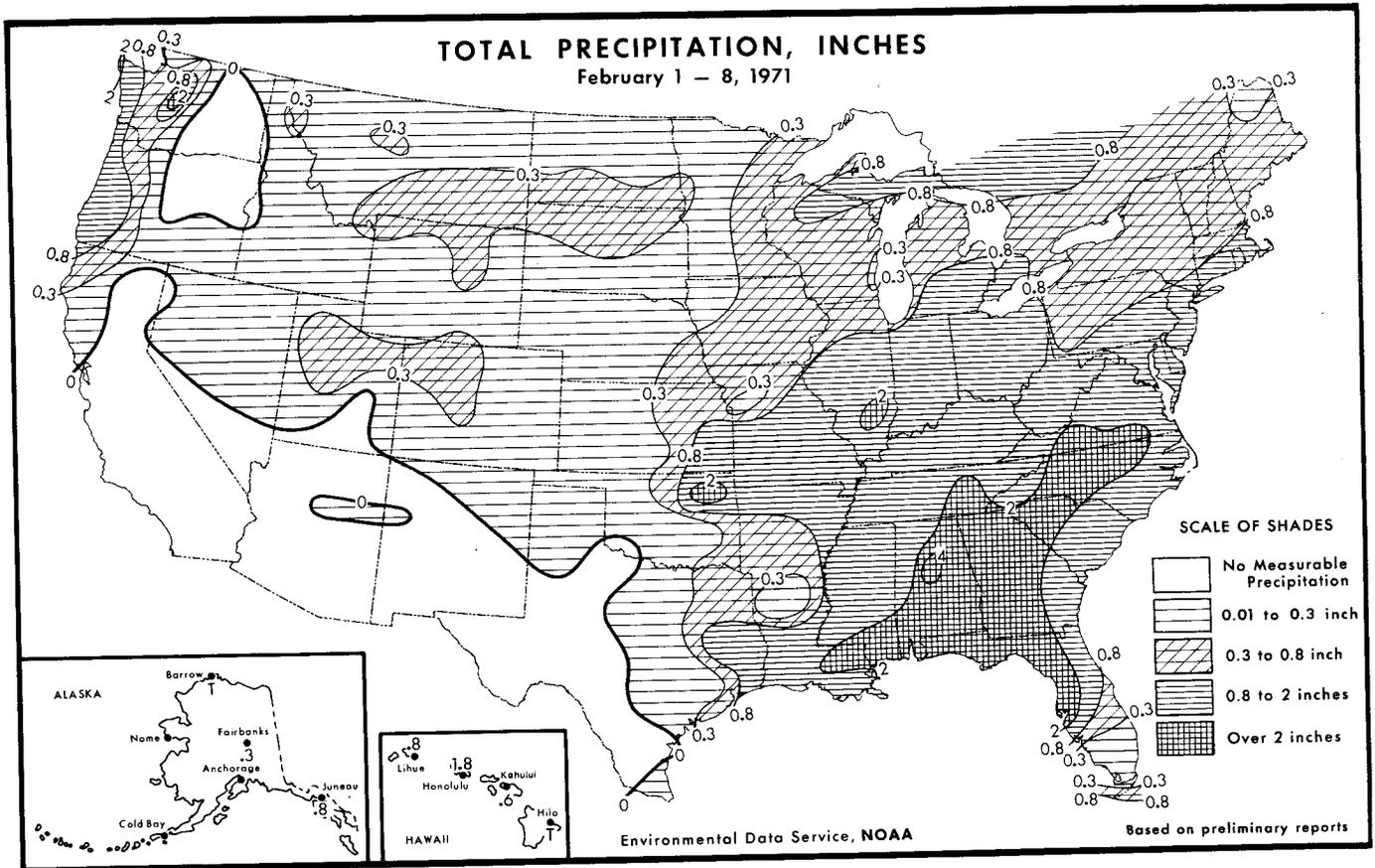
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Edited by Lucius W. Dye

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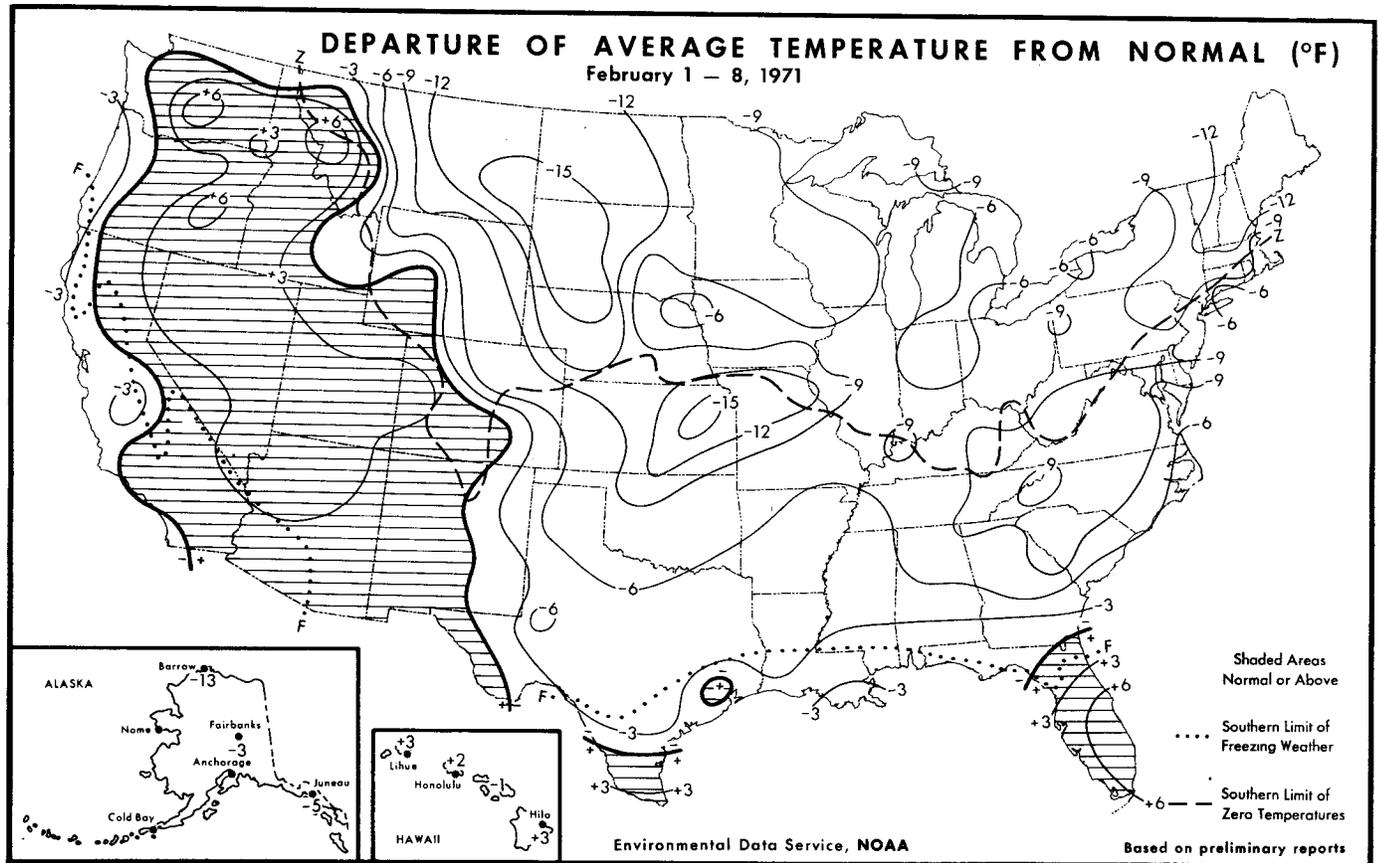
NATIONAL WEATHER SUMMARY

HIGHLIGHTS: The past week has been one of the coldest and stormiest of the season over much of the East. Mild weather continued over the West.

PRECIPITATION: Early in the week, cold westerly winds set off snow flurries on the lee side of the Great Lakes and in the hilly areas of New York and Pennsylvania. Light rain dotted the Pacific Northwest with snow inland across the Cascades and eastward to the Great Lakes. Rain mixed with snow fell over parts of the Great Basin. A low in the western part of the Gulf of Mexico spread rain over eastern Texas Tuesday.

A large and powerful storm began shaping up in the central Rocky Mountains Wednesday. The storm center moved to northeastern New Mexico, crossed the Texas Panhandle and Oklahoma to northwestern Arkansas, then turned northward, crossed Missouri and Illinois, and by late Thurs-

day night was centered over southern Wisconsin. By the weekend the storm had moved to Hudson Bay. It produced widespread precipitation from Canada to the Gulf of Mexico and eastward to the Atlantic Ocean. Snow fell in the northern and central Rocky Mountains and from the northern Great Plains to the Upper Mississippi River Valley. Freezing rain and freezing drizzle iced the roads from eastern Nebraska and central Kansas to New Jersey and southward to northern Georgia. Scattered thundershowers occurred from Oklahoma and north-eastern Texas to the Ohio River Valley and southward to the Gulf of Mexico. In most areas the snow or rain was accompanied by fog. A few tornadoes hit Mississippi and Alabama late Thursday evening. A tornado at Grenada, Miss., killed 7 persons. Few localities in the eastern half of the Nation escaped the damp and dismal weather produced by the massive storm. To add to the



misery produced by the storm, the winds in the Ohio River Valley gusted to over 70 m.p.h. at some localities Friday forenoon.

A new storm moved out of the southern Rockies over the weekend. It produced snow from Colorado and New Mexico to New England. Showers and thunderstorms occurred from the snow belt southward to the Gulf of Mexico. Some of the thunderstorms produced hail. Hail as large as baseballs fell at DeLand, Fla., Sunday afternoon. Monday morning much of the Northeast was buried in several inches of snow. The heavy rains south of the snow belt threatened to cause flash floods along some smaller streams New Jersey to South Carolina. Weekend tornadoes struck Georgia and Florida Monday and funnel clouds were seen in South Carolina.

TEMPERATURE: Temperatures during the week ranged widely. Miami, Fla., registered 84° Monday afternoon; Hayward, Wis., 39° below zero Tuesday morning. Cold weather prevailed over much of the Nation early in the week. Subzero temperatures were common in a score of northern States from Montana to New England and as far south as Kentucky where London recorded 10° below zero Tuesday

morning. Subfreezing temperatures occurred in all continental States Tuesday morning when Jackson, Miss., registered 32° and Jacksonville, Fla., 30°.

Moist Gulf air pushed northward over mid-America about midweek. Dodge City, Kans., registered 63° Wednesday afternoon. On Thursday the mercury at West Plains, Mo., climbed to 60°, 28° warmer than the previous day. Bitter cold continued over the northern Great Plains and eastward to New England where afternoon temperatures remained below freezing through the entire week. Sunday was especially cold. Minimums dropped to zero or lower as far south as northern Kansas and afternoon temperatures failed to go as high as zero at some localities in the northern portions of Nebraska and Iowa. The temperature at Waterloo, Iowa., reached -3° Sunday afternoon and plunged to 25° below zero Monday morning February 8.

Temperatures averaged above normal in the Great Basin and much colder than normal over most areas east of the Continental Divide.

L. W. Dye

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Small grains made little growth during the week. Cold, snowy weather has intensified feeding and other winter care of livestock. Conditions remain dry in the Southwest.

SMALL GRAINS: Below-normal temperatures and a shortage of soil moisture held small grain growth to a minimum in the Great Plains. In Kansas some moisture for wheat was provided by snow, but more rain is needed in west and south-central areas. Some barley was winter-killed and localized freeze damage occurred to wheat. Rainfall along the eastern border of Oklahoma and Texas was highly beneficial, but western and central areas of both States are still extremely dry. Fall-seeded grains remained in good condition in the northern Great Plains, with adequate snow cover for crop production. However, high winds caused some erosion to fields in Nebraska, Montana, Colorado, and Wyoming. Early greening of Colorado wheat and barley was stopped by the midweek snow and cold. Wheat is in good condition in the northwest, with some fields coming out of dormancy in Washington. Some spring seeding of grain was accomplished in Kansas and Oklahoma. Cold weather discouraged early plowing in Utah.

In the Corn Belt moisture is adequate with fields snow covered in northern regions. Small grains are in fair to good condition in the south central and southeastern States. Soil moisture is mostly ample, but freezes, cold temperatures and ice continue to retard growth. Top dressing of wheat is becoming more prevalent around the Country as spring approaches.

OTHER CROPS: Poor weather conditions across the Country limited farm work to essential chores. However the humid weather in Maryland was favorable for stripping tobacco. Some potatoes were planted in Alabama prior to the rains. Digging of the winter crop was slow in California's San Joaquin Valley. Heavy rains in the Hastings area of Florida are a threat to recent planted seed pieces. Dry weather in California brought increased planting activity of sugar beets and safflower fields. Growers in Arkansas are still struggling to harvest remaining cotton and soybean fields.

Fruits and Nuts: Harvest of navel oranges continues in California; some valencias are showing frost damage from the January freeze. Lemon and avocado picking remains active. Limited citrus harvest occurred in the Yuma and Salt River Valley of Arizona. Strong winds caused heavy droppage of freeze-damaged fruit. Movement of grapefruit and oranges is heavy from Texas. In Florida citrus tree condition varies from excellent to poor. Most trees are beginning to show new growth buds. Two days of beneficial rains caused irrigation to cease. Harvest is at near record levels with labor abundant. Beautiful weather increased pruning activities in northwest orchards.

Vegetables: Supplies of California vegetables are light to moderate. Lettuce and asparagus harvesting is active in the Imperial Valley with quality improving. Harvest of winter crops continued in the Yuma and Salt River Valley areas of Arizona. Spring lettuce is making good progress throughout the State. Cold temperatures on February 8 caused some damage to watermelons in the Coastal Bend area of Texas. Emerged spring vegetables were not damaged in the Lower Rio Grande Valley. Florida's vegetable shipments declined sharply during the week. All commodities except melons are available; most at reduced levels.

PASTURES AND LIVESTOCK: Feeding of hay and other roughages continued heavy as cold snowy weather gripped the Nation for the second straight week. Heavy feeding has depleted feed supplies rapidly, but farmers should have enough feed until spring. Some shortages of feed grains are expected. Foraging in fields was limited by snow and ice cover as far South as Tennessee and Arkansas. Mild weather in the Far West reduced the need for feed. Dry conditions also improved livestock pens and corrals, however, strong winds held gains to a minimum. Farmers spent a large amount of time caring, feeding, and protecting livestock from the abnormal cold.

Steve Pscodna
Agricultural Statistician

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., February 7, 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 . . .	41	-7	4.1	+2.9	New Orleans . . .	52	-4	1.7	+ .7	OKLA. Okla. City . .	32	-7	.1	-.3
Mobile . . .	53	-1	2.5	+1.5	Shreveport . . .	46	-3	.2	-.9	Tulsa . . .	32	-6	2.4	+1.9
Montgomery . . .	46	-4	2.1	+1.1	MAINE. Caribou . . .	3	-14	.2	-.3	OREG. Astoria . . .	39	-3	.9	-1.6
ALASKA. Anchorage . .	---	---	---	---	Portland . . .	8	-14	.7	-.3	Burns . . .	32	+6	.1	-.3
Barrow . . .	-32	-13	T	-.1	MD. Baltimore . . .	27	-9	1.5	+ .8	Medford . . .	39	+1	.8	+ .1
Fairbanks . . .	-10	-3	.3	+ .1	MASS. Boston . . .	22	-8	.9	0	Pendleton . . .	37	+3	T	-.3
Juneau . . .	21	-5	.8	0	Chatham . . .	22	---	1.1	---	Portland . . .	39	-1	.4	-.6
Nome . . .	---	---	---	---	MICH. Alpena . . .	12	-6	.6	+ .2	Salem . . .	37	-3	.8	-.5
ARIZ. Flagstaff . . .	33	+5	T	-.4	Detroit . . .	19	-8	1.3	+ .8	PA. Allentown . . .	19	-10	1.5	+ .8
Phoenix . . .	54	+2	0	-.2	Flint . . .	19	-3	.9	+ .5	Erie . . .	18	-8	.4	-.2
Tucson . . .	51	0	T	-.2	Grand Rapids . . .	15	-9	.8	+ .4	Harrisburg . . .	23	-8	1.4	+ .8
Winslow . . .	37	+3	.1	0	Houghton Lake . . .	11	-8	1.5	+ .2	Philadelphia . . .	25	-8	1.6	+ .9
Yuma . . .	56	+1	0	-.1	Lansing . . .	26	+2	1.0	+ .5	Pittsburgh . . .	22	-7	.7	+ .2
ARK. Fort Smith . . .	35	-7	.4	-.4	Marquette . . .	11	-8	1.0	+ .6	Scranton . . .	17	-10	.7	+ .2
Little Rock . . .	37	-5	.6	-.5	Muskegon . . .	17	-8	.8	+ .3	R. I. Providence . . .	20	-9	1.1	+ .3
CALIF. Bakersfield . .	54	+4	T	-.3	S. Ste. Marie . . .	5	-10	1.0	+ .6	S. C. Charleston . . .	46	-5	1.1	+ .3
Eureka . . .	45	-3	.6	-.8	MINN. Duluth . . .	0	-9	.7	+ .4	Columbia . . .	39	-9	1.6	+ .8
Fresno . . .	45	-4	T	-.5	Internatl Falls . .	5	-9	.2	0	Greenville . . .	35	-10	3.2	+2.2
Los Angeles . . .	57	+1	0	-.6	Minneapolis . . .	5	-8	.5	+ .3	S. DAK. Aberdeen . .	0	-12	.4	+ .2
Red Bluff . . .	49	+1	T	-.8	Rochester . . .	4	-10	.5	+ .3	Huron . . .	4	-9	.1	-.1
San Diego . . .	54	-2	0	-.5	St. Cloud . . .	1	-10	.4	+ .2	Rapid City . . .	6	-16	.3	+ .2
San Francisco . . .	49	-1	T	-.9	MISS. Jackson . . .	46	-4	1.2	+ .0	Sioux Falls . . .	7	-9	.1	-.1
Stockton . . .	44	-3	.1	-.5	Meridian . . .	46	-4	1.5	+ .3	TENN. Chattanooga . .	34	-10	2.8	+1.5
COLO. Denver . . .	23	-7	.2	0	MO. Columbia . . .	20	-12	1.2	+ .7	Knoxville . . .	33	-10	1.5	+ .4
Grand Junction . . .	34	+5	.1	-.1	Kansas City . . .	21	-12	.2	-.1	Memphis . . .	38	-5	1.5	+ .2
Pueblo . . .	33	+1	.1	0	St. Louis . . .	25	-7	1.6	+1.1	Nashville . . .	34	-7	1.1	-.1
CONN. Bridgeport . . .	26	-4	1.0	+ .2	Springfield . . .	27	-8	1.1	+ .5	TEX. Abilene . . .	42	-4	.1	-.2
Hartford . . .	16	-11	.8	0	MONT. Billings . . .	13	-10	.4	+ .2	Amarillo . . .	32	-8	.3	+ .2
D. C. Washington . . .	28	-9	1.4	+ .8	Glasgow . . .	4	-14	.1	0	Austin . . .	48	-4	.1	-.5
FLA. Apalachicola . .	55	-1	2.3	+1.4	Great Falls . . .	15	-6	.5	+ .3	Beaumont . . .	53	-2	1.2	0
Ft. Myers . . .	69	+5	T	-.5	Havre . . .	1	-12	.1	0	Brownsville . . .	67	+4	T	-.4
Jacksonville . . .	59	+2	1.6	+ .9	Helena . . .	21	+1	.2	+ .1	Corpus Christi . . .	59	0	T	-.4
Key West . . .	74	+4	1.7	+1.2	Kalispell . . .	23	+1	.3	0	Dallas . . .	43	-4	.2	-.4
Lakeland . . .	65	+2	3.6	+3.0	Miles City . . .	1	-16	.4	+ .3	Del Rio . . .	51	-3	0	-.2
Miami . . .	74	+7	.1	-.3	Missoula . . .	29	+8	T	-.2	El Paso . . .	49	+2	0	-.1
Orlando . . .	67	+6	1.8	+1.3	NEBR. Grand Island .	15	-9	T	-.2	Fort Worth . . .	43	-5	.1	-.4
Tallahassee . . .	54	-1	3.1	+2.1	Lincoln . . .	16	-10	.4	+ .2	Galveston . . .	55	-1	1.0	-.1
Tampa . . .	67	+5	2.7	+2.0	Norfolk . . .	14	-6	T	-.2	Houston . . .	53	+1	.2	-.7
GA. Atlanta . . .	38	-7	2.2	+1.2	North Platte . . .	11	-14	T	-.1	Lubbock . . .	37	-4	T	-.2
Augusta . . .	39	-10	1.5	+ .7	Omaha . . .	13	-9	.5	+ .3	Midland . . .	40	-6	T	-.1
Macon . . .	44	-7	3.1	+2.1	Valentine . . .	5	-16	.1	-.1	San Angelo . . .	45	-4	T	-.3
Savannah . . .	49	-4	.8	-.1	NEV. Ely . . .	29	+5	.2	0	San Antonio . . .	51	-3	.1	-.3
HAWAII. Hilo . . .	74	+3	T	-3.4	Las Vegas . . .	49	+4	0	-.1	Victoria . . .	54	-3	.1	-.6
Honolulu . . .	75	+2	1.8	+ .8	Reno . . .	37	+3	T	-.2	Waco . . .	46	-4	.1	-.5
Kahului . . .	71	-1	.6	-.6	Winnemucca . . .	34	+4	T	-.2	Wichita Falls . . .	38	-7	T	-.3
Lihue . . .	74	+3	.8	-.8	N. H. Concord . . .	8	-14	.5	-.1	UTAH. Blanding . . .	33	+3	T	-.3
IDAHO. Boise . . .	35	+4	T	-.3	N. J. Atlantic City . .	26	-9	1.8	+1.0	Salt Lake City . . .	32	+2	.6	+ .3
Lewiston . . .	36	+3	T	-.2	Trenton . . .	25	-8	1.7	+1.0	VT. Burlington . . .	6	-10	.4	-.1
Pocatello . . .	23	-1	.2	-.1	N. MEX. Albuquerque .	39	+2	T	-.1	VA. Lynchburg . . .	27	-11	1.7	+1.0
ILL. Cairo . . .	32	-7	.9	-.2	Roswell . . .	39	-1	T	-.1	Norfolk . . .	36	-6	.2	-.6
Chicago . . .	19	-7	.6	+ .2	N. Y. Albany . . .	11	-12	.8	+ .2	Richmond . . .	28	-11	1.9	+1.1
Moline . . .	15	-8	.6	+ .3	Binghamton . . .	13	-10	.8	+ .3	Roanoke . . .	29	-10	2.2	+1.4
Peoria . . .	19	-7	.9	+ .5	Buffalo . . .	18	-5	.4	-.3	WASH. Colville . . .	26	-2	T	-.4
Rockford . . .	15	-8	.8	+ .4	New York . . .	27	-7	1.3	+ .6	Omak . . .	24	0	0	-.3
Springfield . . .	21	-9	1.1	+ .6	Rochester . . .	18	-7	.4	-.2	Quillayute . . .	38	-1	2.0	-1.3
IND. Evansville . . .	27	-9	1.0	+ .1	Syracuse . . .	17	-7	.6	-.2	Seattle-Tacoma . . .	40	+1	.7	-.4
Fort Wayne . . .	22	-5	1.3	+ .7	N. C. Asheville . . .	34	-6	1.4	+ .6	Spokane . . .	31	+4	T	-.5
Indianapolis . . .	24	-6	1.8	+1.2	Charlotte . . .	33	-11	3.1	+2.3	Walla Walla . . .	40	+5	.1	-.3
South Bend . . .	21	-5	1.4	+ .9	Greensboro . . .	28	-13	2.2	+1.4	Yakima . . .	36	+6	0	-.2
IOWA. Burlington . . .	15	-10	.6	+ .2	Hatteras . . .	42	-4	1.2	+ .3	W. VA. Beckley . . .	25	-9	1.5	+ .6
Des Moines . . .	13	-8	.5	+ .2	Raleigh . . .	31	-11	2.4	+1.6	Charleston . . .	27	-10	1.3	+ .4
Dubuque . . .	8	-12	.7	+ .3	Wilmington . . .	41	-7	1.2	+ .4	Huntington . . .	29	-8	1.2	+ .3
Sioux City . . .	14	-5	.1	-.1	N. DAK. Bismarck . . .	4	-14	.4	+ .3	Parkersburg . . .	27	-8	1.2	+ .4
KANS. Concordia . . .	17	-12	.5	+ .3	Fargo . . .	3	-10	.3	+ .2	WIS. Green Bay . . .	7	-9	.4	+ .2
Dodge City . . .	25	-8	.1	0	Williston . . .	4	-13	1.0	+ .9	La Crosse . . .	---	---	---	---
Goodland . . .	21	-8	.1	0	OHIO. Akron-Canton . .	23	-5	.8	+ .2	Madison . . .	9	-9	.4	+ .1
Topeka . . .	15	-16	.8	+ .6	Cincinnati . . .	26	-8	1.4	+ .6	Milwaukee . . .	12	-9	.3	-.1
Wichita . . .	21	-13	.3	+ .1	Cleveland . . .	21	-7	.9	+ .3	WYO. Casper . . .	17	-7	.3	+ .1
KY. Lexington . . .	25	-10	1.2	+ .3	Columbus . . .	24	-6	.7	+ .1	Cheyenne . . .	19	-7	.2	+ .1
Louisville . . .	29	-6	1.2	+ .3	Dayton . . .	24	-6	1.2	+ .5	Lander . . .	22	+1	.1	-.1
LA. Baton Rouge . . .	52	-2	2.0	+ .9	Toledo . . .	21	-6	1.3	+ .8	Sheridan . . .	13	-8	.5	+ .3
Lake Charles . . .	52	-3	1.7	+ .7	Youngstown . . .	18	-9	.8	+ .2	P. R. San Juan . . .	78	+3	1.1	+ .3

* 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: Mostly cloudy, cold, and rainy. Precipitation very heavy all sections except extreme north and over 1.00 inch fell there. Temperatures averaged below normal. Rains interrupted early land preparation. Considerable fieldwork in south, limited elsewhere. Other activities included pruning fruit trees, taking soil samples, top dressing small grains, planning and trading cotton allotments. Low temperatures early period slowed small grain growth, but recent mild weather renewed growth, especially in south and central. Late spring potatoes planted prior to rain. Livestock condition fair to good. Stored feed supplies expected adequate, except short in south.

ALASKA: Extreme cold, dry weather predominant during January. Shallow snow depths all areas except mid- and lower Tanana Valley provided insufficient ground insulation permitting greater than normal penetration of freezing level. Frozen and broken water mains and sewer lines have been the result many communities. Heating degree day values for potato storages were about 50% above average. Livestock continued in good condition despite much below normal temperatures throughout January. Minimal sales of local hay most areas. Normal livestock losses, except several horses lost due to deep snow and arctic cold temperatures. Main January farm activities included general care and feeding livestock, snow removal, dairying, and keeping pipes thawed.

ARIZONA: No snow at any station. Temperatures much above normal at beginning of week dropping near normal after Tuesday. Strong winds and blowing dust much of State Wednesday and widely scattered showers but no significant precipitation. Shredding, plowing 1970 cotton crop nearly complete. Field preparations underway for 1971 crop. Small grain planting nearing completion. Harvest mixed winter vegetables continues Yuma and Salt River Valley areas. Spring lettuce Salt River Valley, Pima and Pinal Counties making good progress. Young lettuce, other spring vegetables making good progress Yuma area. Land preparations for spring planting active Cochise County. Limited citrus harvest Yuma, Salt River Valley. Citrus freeze damage not fully determined, but strong winds caused heavy droppage of freeze damaged fruit. Ranges fair condition due lack of winter precipitation. Supplemental feeding required most areas.

ARKANSAS: Cold week with temperatures averaging 5° below normal ranging from low 30's north to low 40's south. Daily extremes: 4° to 74°. Showers and locally severe thunderstorms late on 4th with weekly precipitation totals 0.50 to 1.50 inches. Hot Springs wet spot with 1.42 inches for week. One- to 5-inch snow totals northern 1/3 State over weekend. Fieldwork mostly at standstill because of wet fields. Some cotton and soybeans remain unharvested northeast. Growers made limited progress at harvesting. Need cold weather to freeze ground, support equipment. Livestock good condition, mostly on normal winter feeding. First snow accumulation of winter in north making feeding more difficult.

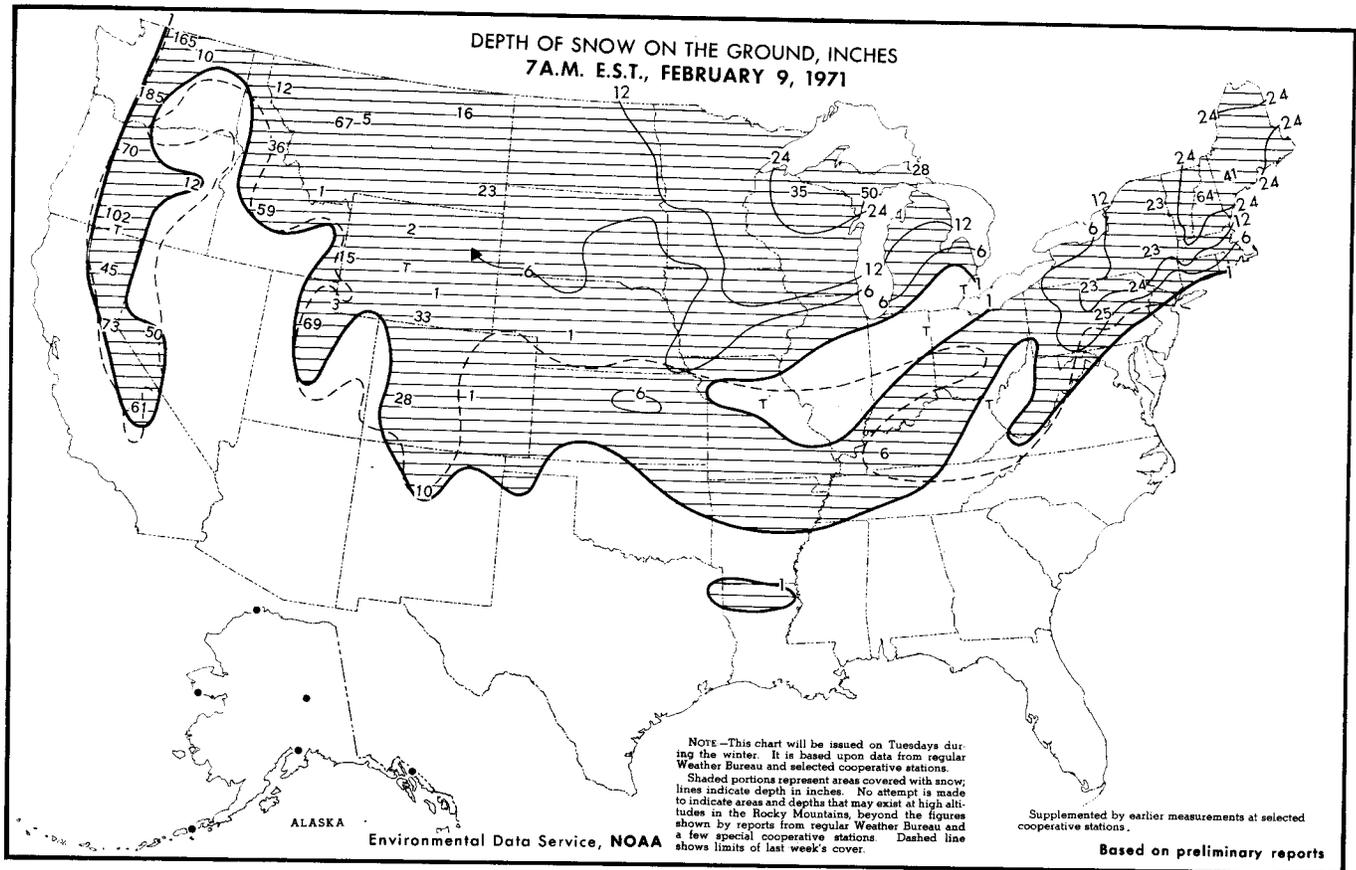
CALIFORNIA: Temperatures 2° to 8° above normal south of Tehachapis and in mountains and desert.

Third consecutive week much above normal. Remainder of State 2° to 4° below normal. Light precipitation extreme north. Fieldwork increased with dry weather. Planting small grain, safflower, alfalfa, sugar beets increased. Cutting alfalfa hay started desert areas. Plow-down of cotton continued as fields dried. Herbicide application small grains active. Cultural activities orchards and vineyards increased with improving weather. Almonds starting to bloom. Harvest navel oranges continues central and southern California; quality packed fruit very good. Valencias desert valleys showing some frost damage. Grapefruit harvest continues slow. Lemon and avocado harvest continues active. Ranges good condition, but need rain. Supplemental feeding continues many places. Stock in good condition. Some problem with predators. Imperial Valley asparagus harvest increasing; broccoli light with good quality. Cabbage harvest increased. Carrot volume light. Cauliflower seasonally light, quality good. Celery supplies moderately light. Imperial lettuce harvest active; quality improving. Winter potato digging slow San Joaquin Valley. South coastal strawberries being mulched, look good.

COLORADO: Storm and cold wave interrupted period of extremely warm temperatures since 2d week in January. Light to moderately heavy snows in mountains; light to none lower elevations. Greatest precipitation total 1.24 inches at Steamboat Springs. Heavy drifting of snow from high winds some areas. Winter wheat and barley condition good. Cold temperatures and snow mid-week stopped greening where crop had broken dormancy. Topsoil moisture remains short most areas. Subsoil moisture short to adequate. Light to moderate soil blowing eastern plains. Wheat damage light. Most ranges snow covered northwest. Ample hay and forage available. Livestock condition good. Calving underway isolated areas.

FLORIDA: Temperatures averaged 3° above normal due to high daytime temperatures reaching into the 80's in most places. During the week precipitation averaged 0.75 inch North Florida and less than 0.10 inch elsewhere. On the 6th and 7th, squall lines accompanied by severe thunderstorms strong gusty winds (gusts to 90 m.p.h.), tornadoes, and hail swept over north and central Florida and dumped from 2.00 to over 3.00 inches of rain throughout the area. In southern Florida temperatures remained above normal with only scattered showers. Weekend rains temporarily halted land preparation activities. Pasture and cattle fair. Small grain and winter lagoon pastures most improved. Recovery of overgrazed grasses will be slow. Citrus tree condition varies excellent to poor. Most beginning to show new growth buds. Two days of beneficial rains, irrigation stopped. Harvesting near record levels. Labor abundant. Vegetable shipments declined sharply. All commodities except melons available, most at reduced levels. Heavy rains, Hastings area, a threat to newly planted potato seed pieces. South Peninsula dry, irrigating. Planting, replanting increasing.

GEORGIA: Rain Wednesday night, Thursday, and Sunday. Amounts generally light to moderate at



midweek but heavy to locally excessive at end of period. Totals for week mostly between 1.50 and 3.50 inches. Some local wind damage Sunday. Cold 1st half of week, mild Friday and Saturday, and cool at end of period under cloudy rainy skies. Averages ranged from near to slightly above normal in South to 6° below in central and north. Soil moisture adequate to excessive. Condition small grains and pastures fair to good. Corn and pecan harvest completed. Tobacco bed maintenance active. Land preparation beginning to active where weather conditions permit.

IDAHO: Temperatures continued 4° to 12° above normal. Light scattered precipitation. Snow depth increases at mountain key stations zero to 4 inches. Drier conditions helped livestock pens and corrals. Cold nights favored fruit tree dormancy.

ILLINOIS: Precipitation totals 0.50 to 1.00 inch north and south and 1.00 to 2.00 inches central. Snow on ground mostly 1 to 3 inches northwest and extreme north and traces to 1 inch extreme south. Temperature averages mostly 6° to 10° below normal. Soil moisture adequate most areas. Fall-sown crops in good condition, protected some areas by snow cover. Main farm activities are routine farm chores.

INDIANA: Fifth week of subnormal temperatures. Week averaged 5° to 8° below normal and ranged from -7° on 2d to 56° on 4th. Two periods of freezing rain at midweek, along with fog, severest in South, created hazardous highway conditions. Snow near Lake Michigan diminished from 13 to 2 inches during week. Snow cover in South increased from trace to 4 inches on 8th. Very little in

central and northeast. Bare soils frozen to 8 inches in south, 18 inches in central, and 26 inches in far north. Soils under grass frozen 4 inches in South, 10 inches in central, 12 inches in far north. Precipitation averaged between 1.00 and 2.00 inches and 0.20 to 1.20 inches above normal. So far, an unusual winter central Indiana for snowless frozen ground. Farm activities winter chores.

IOWA: Cold and snow. Temperatures averaged mostly 10° to 12° subnormal. Subzero at beginning and end of week. Temperatures moderated at midweek with a little thawing followed by moderate to heavy snow over all but northwest where snow was light. Dubuque measured 12 inches and Fayette 10 inches new snow. Glaze across southeast and extreme east. Snow depth at weekend around 20 inches northeast and some north-central counties diminishing to around 5 inches south and west.

KANSAS: Major storm February 4; blizzard or near blizzard much eastern 2/3. Six to 8 inches snow parts of central and northeast. Locally 11 inches central. Very cold most of period. Weekly means averaged much below seasonal. Extremely cold late in week. Minima night February 7 to 8 eastern 2/3 generally below zero. Coldest 23° below locally north-central. Some moisture for wheat provided by snow eastern parts central Kansas. More surface moisture needed west and south-central where snow was light and much blew off fields. Subsoil moisture adequate east, but remains short elsewhere. Some winter kill of barley and local wheat freeze damage reported. Some light wind damage last week. Insufficient top growth leaves

much wheat unprotected. Some oats seeded last week. Livestock grazed fields early week, but snow increased supplemental feeding needs. Some calving and lambing occurred. Few newborn pig losses resulted from freezing weather.

KENTUCKY: Temperatures 20° to 30° below normal 1st and 2d. Rising to much above normal on 4th. Falling to below normal over weekend. Minimum temperatures on 1st -11° to +7°; on 2d, -10° to +12°. Maximum temperatures in 50's on 4th. Precipitation totals 0.80 to about 2.00 inches. Heavy precipitation on 3d and 4th. Snow, rain, and freezing rain becoming mostly rain. Scattered thunderstorms night of 4th. Snow cover 1 to 5 inches over much of State on 1st. Slowly melting until a rapid melt on 4th. On 7th light rain in southeast. Snow in north and in west and central at night. Cattle and hog markets active with prices showing considerable strength. Supplemental feeding needs increased sharply by melt and snow. Roughage supplies adequate. Feed grains in short supply.

MARYLAND AND DELAWARE: Coldest week of season with temperatures averaging 9° to 12° below normal. Temperatures averaged below normal for 6th consecutive week. Lowest temperatures ranged from 11° to -9°, with most readings near zero. Precipitation heavy, totaling mostly 1.50 to 2.00 inches. Rainfall heavy in east on 7th, moderate snowfall in west. Severe ice conditions especially in northern portion of Bay and its tributaries. Farm activities limited mainly to livestock care. Humid weather favorable for tobacco stripping.

MICHIGAN: Temperatures for week averaged 8° to 11° below normal in Upper Peninsula and from 6° to 9° below normal in Lower Michigan. Cold early in week moderating by midweek followed by cooling over weekend. Precipitation ranged from 0.50 to 0.75 inch in northern Lower Michigan and from 0.75 to 1.25 inches in Upper Michigan and southern Lower Michigan. In Upper Peninsula precipitation mostly as snow. Rain and wind during last part of week caused local damages in Lower Michigan.

MINNESOTA: Second consecutive week of very cold weather across State with temperatures averaging 10° below normal. Coldest temperature was 39° below zero at Detroit Lakes. Snowfall averaged 4 to 8 inches across State except for lesser amounts in northwest and southwest. Snow storm with near-blizzard conditions began late on 4th and continued into 5th. Storm moved north-northeast and generally east of a line from Fairmont-St. Cloud-International Falls. Five deaths occurred after storm from exertion or exposure. Snow depths of 12 inches and greater exist across State except in southwest which has been 8 inches. Snow depths of 30 inches and greater exist from Grand Rapids northeast across Arrowhead country.

MISSISSIPPI: Scattered light rains Wednesday and much heavier Thursday. Numerous funnels Thursday west-central and northern Mississippi with 4 small tornado touchdowns. There were 7th deaths, near Gore Springs. A 7-day rainfall of 2.28 inches was measured at Columbia Friday morning. Temperature averages for week near normal to about 5° below normal and precipitation totals generally over 0.80 inch. Some rain Saturday or Sunday. One to 3 inches of snow on ground in northern 1/3 of State. Soil moisture surplus in north, adequate in southeast, and adequate to surplus other areas. Winter wheat, oats, and livestock fair to good condition. Pasture condition fair. Hay and

roughage supplies mostly adequate. Feed grain supplies short to adequate. Average of 2 days suitable for fieldwork.

MISSOURI: Week began and ended very cold with brief moderation in temperature at midweek. Temperatures averaged 8° to 14° below normal. Substantial precipitation, with most places reporting from 0.50 to as much as 1.50 inches, falling as rain at midweek, and as snow early in week and over weekend. Monday snow depths were 2 to 3 inches in northern quarter and from 1 to 5 inches in southern 1/3 of State.

MONTANA: Warmer at first, cooler west, much colder east at end of week. Average temperatures ranged 16° below normal east, 7° above normal west. Coldest, 40° Broadus 7th. Snowfall generally light except moderate southeast. Heavy livestock feeding eastern Montana. Grazing difficult to closed eastern districts. No feed shortage. Livestock stress above normal, death loss remains low. Stock water adequate statewide. Calving and lambing underway western and central areas. Shearing 5% complete. Winter wheat has protective snowcover, condition good. Light wind damage.

NEBRASKA: Cold and snowy. Grazing of field forages limited by snow and ice cover. Supplemental feeding of hay and other forages increased. Small amount of wind erosion southern Panhandle but many wheat fields snow-covered. New-born livestock requiring extra care but no abnormal losses.

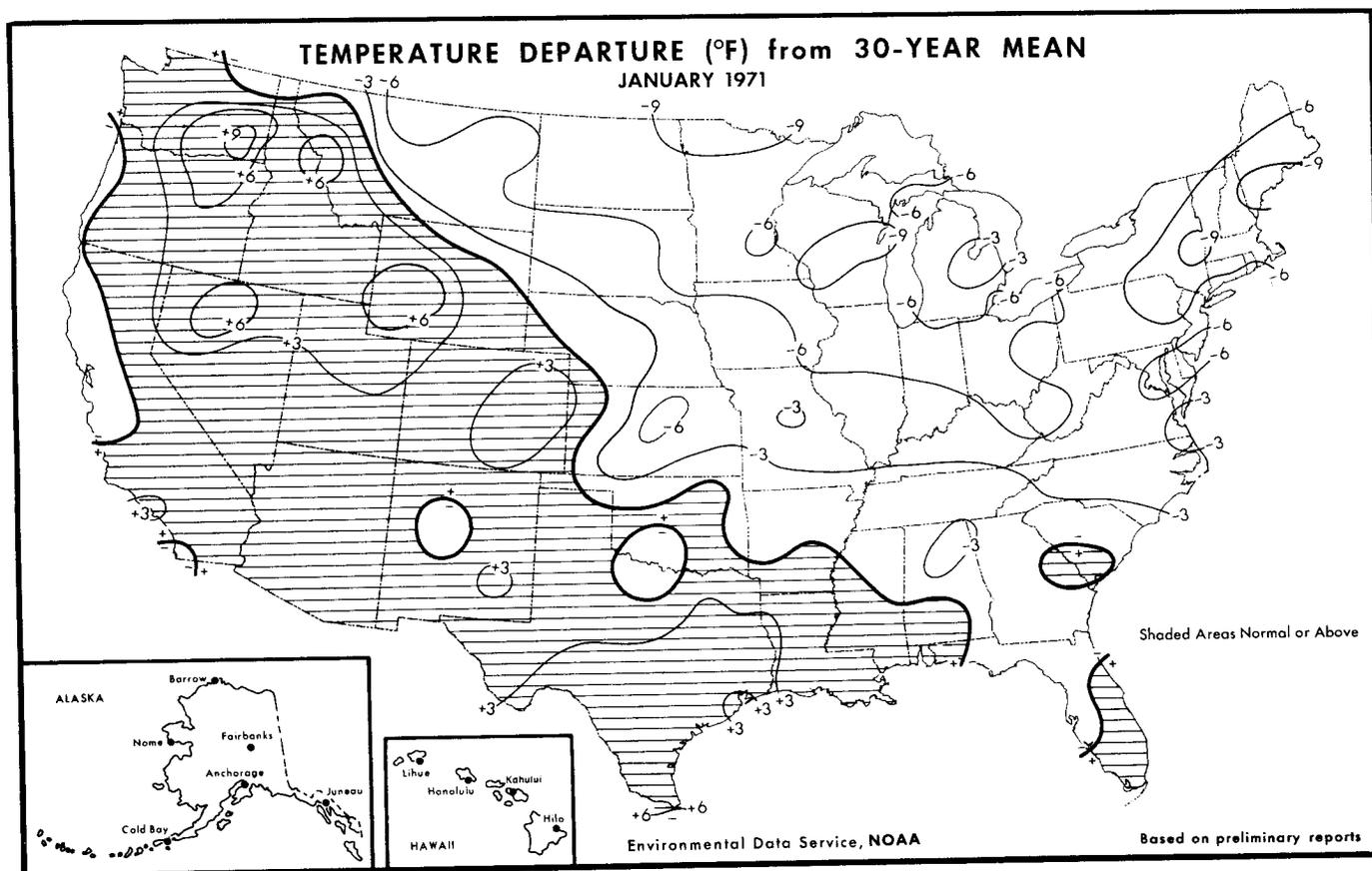
NEVADA: Temperatures at all stations above normal, from 4° above normal extreme south to 8° above normal in northeast. Light to moderate precipitation in north. One to 3 inches snow in northeast. Snow ground cover in mountains. Ranges mostly fair condition, with warmer weather helping grass growth. Recent moisture helped soften "brush" and dry feeds. Livestock continue good condition with supplemental feedings as main source of feed. Stock water and feed supplies adequate. Planting radishes on limited acreage continues Moapa Valley.

NEW ENGLAND: Temperatures averaged 6° to 10° below normal making this the 4th very cold week in a row. Trend to moderation latter half of week. Two major and rather similar storms, mainly on 5th and 8th, both beginning as snow but changing to freezing rain and rain over much of section. Transportation hampered. New snowfall mostly 2 to 12 inches. Precipitation totals mostly 0.50 to 1.50 inches in north and 1.25 to 2.50 inches in south.

NEW JERSEY: Seventh consecutive week with temperatures averaging below normal. Very cold at start of week moderating by weekend. Afternoon readings ranged from low teens to mid-40's and nighttime temperatures from a little below zero to mid-30's. Precipitation for week totaled about 1.80 inches all divisions of State. Rain or snow Thursday, Friday, and Sunday. Station totals ranged from 1.10 inches at Atlantic City Marina to nearly 4.00 inches at Eatontown in Monmouth County. Snow depths on morning of 8th from 1 to 12 inches over northern 1/3 of State, none elsewhere.

NEW MEXICO: Continued dry in south. Light showers in northern half midweek and scattered light showers in east on weekend. Light snows midweek melted by weekend. Windy and cooling midweek. Temperatures averaged much below normal in east and a little above normal in southwest. New Mexico continues droughty. Soil moisture short to very short. Farm activity increasing. Active land

(Continued on page 10)



WEATHER - JANUARY 1971

TEMPERATURE: January was named for the ancient Roman god, Janus, who had two faces. A happy face looked one direction, a sad face looked the opposite direction. Weatherwise, January 1971 was as two-faced as Janus.

Cold weather prevailed over the West and East early in the month but unusual warmth occurred over southern Texas where Cotulla registered 96° on January 3. This is only 2° cooler than the highest January temperature of record for any spot in the Nation. Fort McIntosh, Tex., registered 98° on January 18, 1914, and Laredo, Tex., recorded 98° on January 17, 1936. In about 18 hours from the afternoon of January 3, 1971, to the following morning, the temperature at Cotulla plunged 60°, from 96° to 36°. On the 7th, Fraser, Colo., registered 42° below zero.

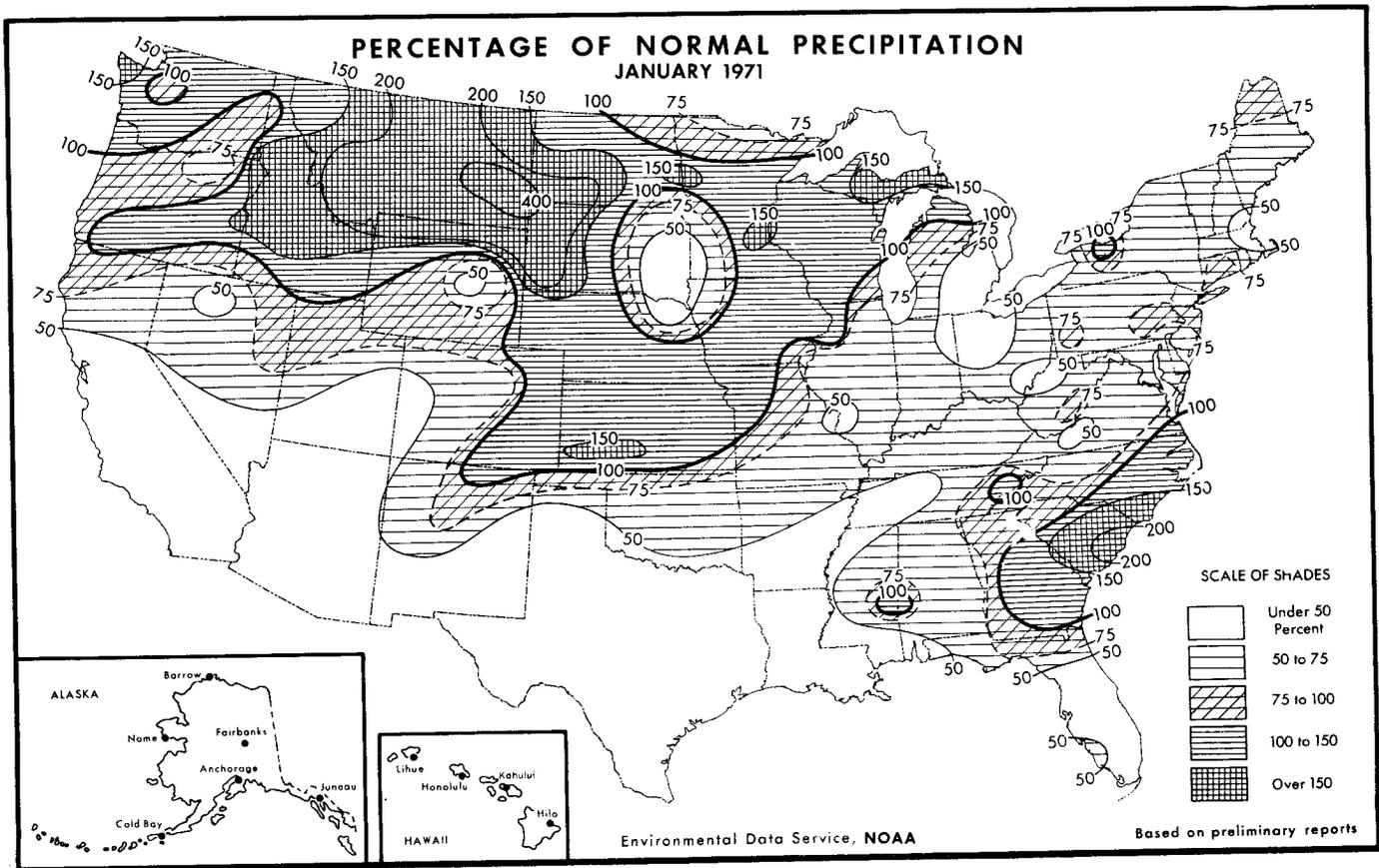
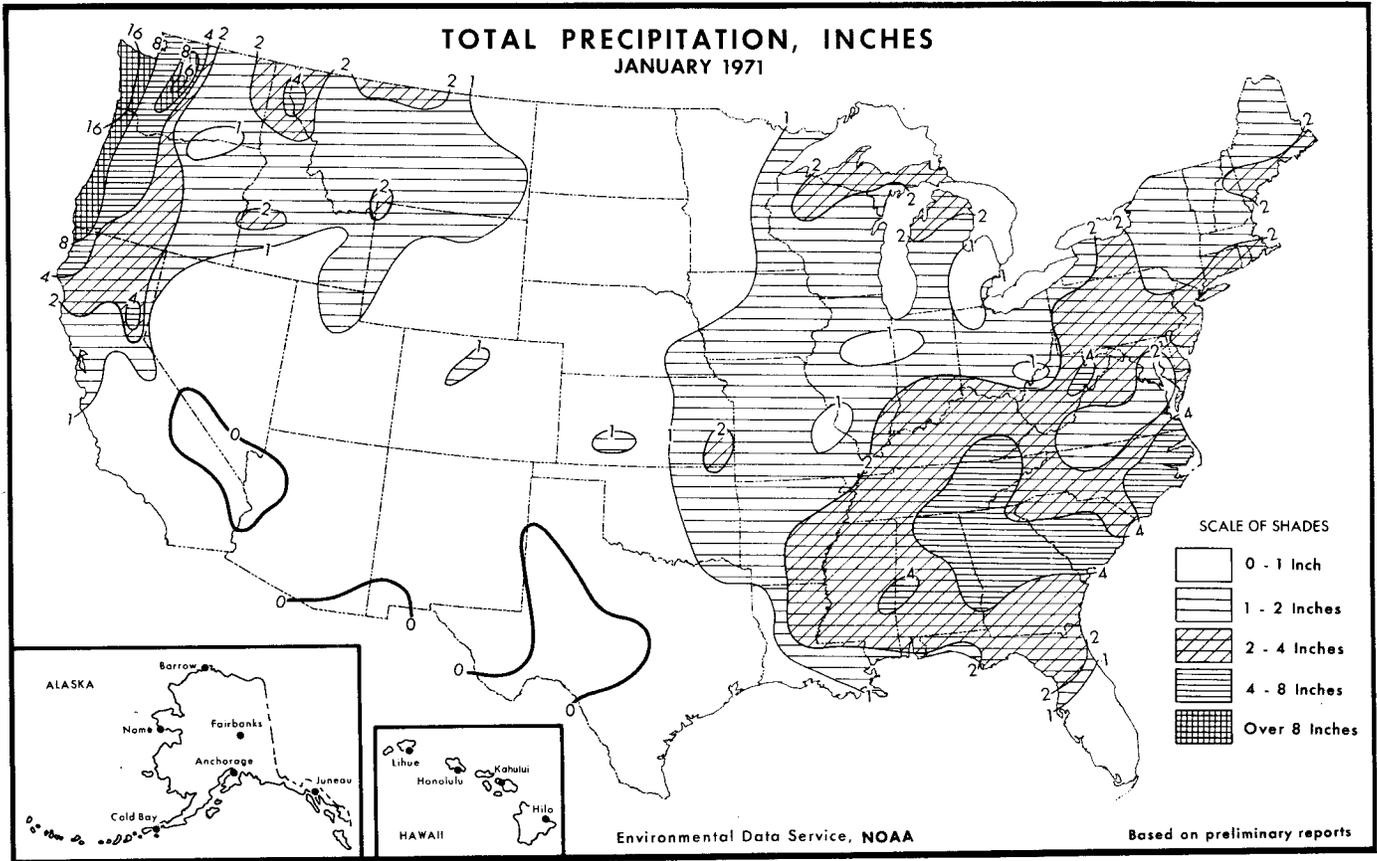
Bone-chilling cold continued from Montana to New England at midmonth while near-record warmth occurred in portions of the South. On January 18, the temperature at Los Angeles, Calif., climbed to 95°. This is 5° warmer than the previous January record for Los Angeles. Pueblo, Colo., set a new January maximum temperature record with a 78° reading on the 21st. Recordbreaking warmth occurred in parts of Washington and Oregon and in southern Texas on January 30 when subzero temperatures were recorded from Montana to the Great Lakes and as far south as Illinois.

In general, above-normal monthly mean temperatures occurred southwest of a line from western Montana to the Florida Panhandle and below-normal temperatures northeast of that line.

Much of the Great Lakes region averaged 6° to 10° colder than normal.

PRECIPITATION: A giant storm developed in the Southwest early January 2. It intensified as it moved into the southern Great Plains and spread heavy snow from the Rocky Mountains across the northern and central Great Plains to the Great Lakes. Mixtures of freezing rain and sleet fell east and south of the snow belt. Rain and scattered thunderstorms occurred farther south. In the snow belt, snow depths reached 12 to 17 inches from the Colorado Rockies across Nebraska and Iowa to northern Illinois. Moline, Ill., received 16.4 inches of snow on January 3. This is the greatest 24-hour snowfall of record for Moline. LaCrosse, Wis., set a 24-hour snowfall record when 16 inches fell there. Strong winds drifted the snow badly. Numerous roads became blocked. The care of livestock became extremely difficult.

Early in the 2d week of January, a storm developed over the Gulf of Mexico. It dumped several inches of snow over the northern portions of Mississippi and Alabama. Another storm brought wet and windy weather to the Pacific Northwest. Rain fell along the coast with snow in the mountains and eastward to the northern Great Plains. By the evening of January 9, 15 inches of new snow covered Lincoln, Mont., near the Continental Divide. Freezing rain slicked the highways in parts of Oregon and Idaho. Another storm brought freezing rain from northern Louisiana to Virginia and rain southward to the Gulf coast. The freezing rain made highway driving treacherous. Ice accumulated on trees, poles, and wires. Limbs and



wires broke. Electric service in the Athens, Ga., vicinity was interrupted for 12 hours.

On January 13, a front extended from the north-central states to the Carolinas with miserable weather on both sides of it. Snow fell in the Northern States and sleet, freezing rain, or freezing drizzle with fog, occurred south of the snow belt. By the 14th, a large area from Illinois to the Northern and Middle Atlantic States had become coated with a layer of ice that made walking or driving risky. Shortly after midmonth, an intense storm off the Pacific coast brought heavy precipitation and strong winds to the Northwest.

More storms occurred in the last week of January. Stampede Pass, Wash., received 75 inches of snow in 3 days, January 22 to 24. This is the most that ever fell at Stampede Pass in 3 days. Eighty-eight inches of new snow fell at Paradise Ranger Station, Wash., on the south side of Mt. Rainier in the same 3 days bringing their snow depth to 232 inches. A massive storm spread miserable weather from the Great Plains to New England. Strong winds, accompanied by heavy snow and poor visibility, made automobile travel impossible in some places and extremely hazardous in many others. Thunderstorms occurred along the Atlantic coast and dense fog covered parts of the Deep South.

L. W. Dye

(NEW MEXICO continued from page 7)

preparation, leveling, and irrigating of lettuce and onions, tree pruning. Ranges fair condition, but very short and dry. Livestock remains generally fair.

NEW YORK: Temperatures much below normal early half moderated by late week. Minimums -15° to -25° east-central and northern half daily to 4th. Massena 28° below zero on 3d. Western half, minimums -5 to -12° , 2 or 3 nights early in week for coldest of season to date. Maximums near zero to $+10^{\circ}$ Upstate on 1st and 2nd, warming to 30's and low 40's on 5th and 6th. Heavy snow squalls eastern lee of Lake Ontario on 1st and 2d yielded 6 to 12 inches of snow with 30 inches locally in Oswego County. Precipitation totals 0.20 to 0.50 inch in widespread storm of frozen rain and sleet on night of 4th. Coastal storm on 7th yielded 0.70 to over 1.00 inches of rain coastal sections and 6 to 12 inches of snow to central and southeastern of State. Liquid equivalent from 0.50 to 1.00 inch except decreasing to 0.2 inch extreme west and northwest where 1 to 3 inches of snow. Little net change in snow depth from previous week.

NORTH CAROLINA: Temperatures averaged much below normal. Lowest near zero mountains and 5° to 15° elsewhere remaining below freezing all day most areas February 1 and 2. Highest over weekend ranging from 40° northwest to 60's southeast. Freezing rain 3d and 4th damaged trees and shrubs and overhead wires. Rain and some thundershowers over weekend with total amounts mostly 0.50 inch to 2.00 inches averaging 1.00 inch. Soil moisture increased to mostly surplus. Condition of small grains declined slightly because of icy weather, but continued mostly good. Pastures declined and ranged poor to mostly good. Hay and feed grain supplies down slightly, but mostly adequate. Farm activities limited to farm repairs and caring for livestock and poultry.

NORTH DAKOTA: Extremely cold. Temperatures averaged 10° below normal in northeast to 16° below normal southwest. Snow midweek. Precipitation amounts 0.10 inch north to 0.40 inch south. Cold temperatures

along with snow kept farm activities at minimum during week. Ranges and pastures all snow-covered. Farmers and rancher's feed supplies remain adequate and accessible. However heavy feeding depleted supplies considerably. Farmers are busy plowing and hauling grain to market.

OHIO: Daily mean temperatures 1st and 2d, 20° to 30° below normal. Afternoon temperatures failed to reach 10° central and north on 1st. Steady warming between morning of 2d and 1:00 a.m. on 5th. During this period temperature climbed more than 50° . Steady rain 4th; freezing rain common 4th. Rainfall 4th and 5th ranged from 0.54 inch at Akron to 1.27 inches at Chillicothe. Nearly all this rain fell on frozen soils. Runoff caused streams to rise rapidly. Snow widespread on 7th. Snow cover 8th, 1 to 3 inches, except northeast. Care and maintenance of livestock generally were main farm activities.

OKLAHOMA: Cold damp week. Precipitation averaged from 0.05 inch southwest to 1.12 inch northeast. Snowfall northern 1/3 State ranged from 1 to 5 inches with 1/2 inch or less southern 2/3. Temperatures averaged 3° to 9° below normal. Extremes: 73° and -1° . Tornado occurred near Broken Bow in southeast corner State Thursday with local wind damage in northeast. No deaths nor injuries from tornado. Below-normal temperatures and short soil moisture supplies in western 2/3 State held small grain growth to minimum. Some benefit from limited precipitation but wheat condition at 38% poor, 34% fair, 28% good continues sharply below 1% poor, 43% fair, 56% good year ago. Wheat poor to fair western 1/3 Oklahoma, fair to good elsewhere. Top dressing wheat with nitrogen becoming more prevalent. Only limited progress seedbed preparation for spring-seeded small grains. Some seeding south-central and east. Range forage short, low quality. Limited grazing small grain pastures continues. Some pastures heavily grazed and cattle moved to market few western localities. Supplemental feeding throughout State. Heavy feeding required many areas but hay supplies adequate. Livestock mostly fair to good condition.

OREGON: Fourth consecutive mild week with moderate rainfall west of Cascades. Weekly temperatures eastern Oregon averaged 8° to 14° above normal; westside near normal, south to 5° above normal Willamette Valley. Minima east 17° to 26° , western valleys 25° to 33° , coast 30° to 35° . Maxima 48° to 69° . One to 6 days of rain totaled mostly less than 0.05 inch east of Cascades, western valleys 0.40 to 1.00 inch, coast 1.40 to 2.10 inches. Fall grains in good condition. Beautiful weather increased pruning activity in orchards. Training of cane berries continues. Warm temperatures reduced supplemental feed requirement. Lambing, calving operations continue.

PENNSYLVANIA: Cold wet week. Low pressure systems Thursday, Saturday, and late Sunday. Later system dumped from 5 to 10 inches of new snow on Appalachian Mountains Sunday night. Temperatures averaged over 8° below normal. This was 6th straight week of subnormal readings, and 5 straight week that temperatures averaged better than 6° below normal. Coldest Thursday and Wednesday mornings with near zero or subzero readings at all locals. Lowest was -19° at Hawley on 2d. High 56° at Confluence on 5th. Water equivalent precipitation totals for week generally 1.00 to 1.50 inches over southeast half and 0.50 to 1.00 inch over northwest half. Range 0.27 inch at Erie to 1.60 inches at Philadelphia. Routine winter farm chores.

PUERTO RICO: Light to moderate showers well distributed islandwide. Average rainfall 0.90 inch or about 0.20 inch above normal. Highest total, 2.64 inches East Luquillo Mountains. Soil moisture near normal all zones except slightly dry southeast and south slopes. Temperatures averaged 75° to 76° Coast and 70° to 71° interior. Average temperature departure .03° above normal. Highest maximum 90°, lowest minimum 52°. Sugarcane harvesting and grinding operations progressed well in favorable weather. Coffee plantations reported good progress seeding, fertilizing, and pruning. Tobacco plantations reported good development new crop and active field work in good weather. Pastures good to excellent except some areas south and west where growth retarded due lack rain. Some scarcity plantains and bananas, but citrus remains good.

SOUTH CAROLINA: Temperatures averaged 9° below normal in north and 7° below in south. Values in teens colder localities on 2d and 3d. Rain fell on 3 days totaling 1.50 to 2.00 inches in north-west, less than 1.00 in southwest, and 1.00 to 1.50 inches elsewhere. Soil moisture adequate all areas. Farm activities limited due to bad weather. Orchard maintenance and peach tree pruning continued. Some early spring cabbage transplanted.

SOUTH DAKOTA: Temperatures averaged 7° to 16° below normal. Extremes ranged from 35° below zero at Aberdeen on 8th to 45° at Pactola Dam on 3d. Precipitation fell as snow scattered through week. Heaviest amount fell in north where Harding reported 0.60 inch. Snow cover end of week ranged from about 2 to 5 inches in south to about 2 feet in north. Supplemental feeding to livestock still very heavy. Livestock condition declining, but still in good shape. Winter feed supplies generally adequate, with few localized areas reporting shortages. Fall-sown grains remain in good condition with adequate snow cover.

TENNESSEE: Week of extremes. Minimums early in period: 0° at higher elevations, low 20's in west. Maximum: 69° at Memphis on 4th. Week averaged 6° to 10° below normal. Thunderstorms night of 4th. Rainfall totals mostly moderate to heavy at midweek; 0.40 inch to about 2.00 inches. Sharply colder at end of period, with seasons first general snowstorm. Weather limited farm activities to essential chores. Most attention centered about feeding and caring for livestock.

TEXAS: Frigid polar Canadian air swept southward across State Saturday and Sunday bringing snow flurries deep into central Texas and good rains of an inch or more to parts of southeastern Texas. More than 2.00 inches of rain fell in Houston. Western 2/3 of State continued critically dry. Temperatures dropped to 34° at McAllen, 26° at Cotulla, and 23° at Victoria early Monday morning.

Dryland small grains prospects declined. Irrigated small grain prospects improved. Cattle marketing continues strong as carrying capacity of winter ranges and small grains are depleted. Hay supply short. Primary activities were pre-plant irrigating, bedding and chiseling, and equipment repair. Cold temperatures February 8 damaged watermelons Coastal Bend, but most emerged spring vegetables Lower Rio Grande Valley received no damage. Winter vegetables not damaged by cold on February 8. Cabbage, carrot harvest active Lower Valley, past peak Winter Garden. Lettuce harvest active Lower Valley with light supplies of greens, beets, broccoli, and celery. Spinach harvest active Winter Garden. Land preparation for spring, summer vegetables underway central and east Texas and High Plains. Citrus harvest active with

heavy movement grapefruit, oranges. Citrus not damaged by cold temperatures on February 8. Early peaches beginning to bloom south Texas, some damage expected from freeze.

UTAH: Rain, snow, and much colder temperatures moved into State about middle of last week. Precipitation generally light to moderate but locally heavy northern mountains and few stations along Wasatch front. Temperatures averaged 4° to 10° above normal but with cooling trend during period. Cold weather discouraged pre-spring plowing. Some early lambing started. Care and feeding of milk cows, poultry flocks, beef cattle, and sheep major activities. Some marketing of potatoes, apples, and dry onions from storage. Pruning of fruit trees in progress. Over 3.1 million acre-feet of water stored in Utah's 24 major reservoirs as of February 1. Largest amount ever for date. Irrigation water outlook average or better south, best ever in north. Potential exists for floods this spring some areas.

VIRGINIA: Temperatures much below normal except warmer over weekend. Heavy precipitation 2d half as snow, sleet, rain, and freezing rain. Freezing rain damaged trees and utilities and high water caused flooding. Cold temperatures and snow stopped outside work. Farmers caring, feeding, and protecting livestock from abnormal cold. Calving well along. Feed supplies adequate, but less than normal. Cold weather forced farmers to feed at heavy rate. Very little forage secured from grazing. Winter grain crops in good condition.

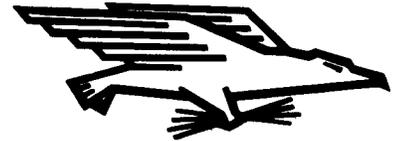
WASHINGTON: West of Cascades: Average temperatures 2° above normal. Most precipitation fell as rain in mountains and lowlands. Amounts 0.50 inch southern half, 1.00 to 2.50 inches northern half, 3.00 inches coastal areas and mountains. Mountain snow pack settled, depths 110 to 125 inches 3,000 to 4,000 feet, 160 to 180 inches at 5,000 feet. Forced Victoria rhubarb moving in high volume. German wine variety harvest starting. Caneberry fields being pruned. Daily cattle in good condition. Feed supply adequate. East of Cascades: Unusually warm and dry. Average temperatures 8° to 12° above normal. Maximums in 50's and 60's beginning of week decreasing to 30's and 40's latter half. Snow cover melted other than colder northern valleys. Pruning orchards and application of fertilizer southern valleys. Wheat out of dormancy some areas. Cattle wintering well. Hay supply adequate.

WEST VIRGINIA: Near zero temperatures January 31, February 1 and 2. Warmup with heavy rain February 3, with light showers February 4, 5, and 7. Weekly precipitation totaled over 1.00 inch generally. Snow and cold weather limited farm activities mostly to tending livestock and other routine chores.

WISCONSIN: Continuation of cold, snowy, winter weather. Temperature extremes: +42° and -40°. Another major winter storm crossed northward through State Thursday night. Near record low central pressure with storm. Heavy snow west and north. Thunderstorms, rains, and light snow east half. Some glaze damage to trees and wires mainly in east-central counties. Widespread roof damage from accumulated heavy snow. Snow depths after week's storm between 40 and 50 inches many northern counties. Water equivalent of snow cover between 4 and 6 inches over large portion of State. Logging operations suspended many areas due to heavy snow and soft ground underneath. Wildlife suffering. Dairy herds generally in good shape.

WYOMING: Most of State received snow last week, heavy in Black Hills, light to moderate elsewhere. Alva 5 SE reported the most moisture with 1.05 inches.

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Temperatures averaged 7° to 14° above normal west of Divide, Wind River and Upper Platte drainages, 8° to 10° below normal in Black Hills, 50's to low 60's elsewhere. Minima were mostly -10° to +10° statewide. Temperature extremes: 65° at Carpenter and -14° at Bondurant. Livestock, range, and winter grain conditions remain good despite continuation of windy weather. Moderate temperatures have offset stress to livestock caused by winds. Precipitation during week toughened range grasses which were extremely dry and subject to excessive shattering. Care and feeding of livestock still chief farm and ranch activity.

The following State summaries were omitted from last week's Bulletin. They relate to the weather and crop progress for the week ending January 31, 1971.

WEST VIRGINIA: Damaging winds struck during morning January 26 following strong cold front packed with rare winter thunderstorms. Temperatures dropped 50° during day. Temperatures remained below normal except for evening of January 29 when snow turned to rain and temperatures went into 40's briefly. Cold weather returned January 30 as blizzard conditions prevailed during afternoon. Additional wind damage occurred throughout State and 3 to 7 inches new snow fell. Sunny conditions January 31 failed to melt snow and depths in northern mountains were 9 inches. Subzero readings February 1 lowest of season. Main farm activities tending livestock as snow and cold weather curtail fieldwork.

WISCONSIN: Unpleasant week. Cold temperatures averaging about 15° below normal. Brisk northwesterly winds with considerable drifting most of period. Blizzard conditions Monday and Friday night. Several lives lost due to exposure and car accidents caused by cold and low visibilities. Snow depths range between 4 inches in extreme southeast and 40 inches in some northeastern counties. Pastures and new seedlings wintering well under heavy snow cover. Frost depths continue shallow most areas. Livestock mostly good and feed supplies ample.

WYOMING: A warm, very windy week with scattered light snows along north and west. Moran and Bondurant both reported nearly 0.50 inch of moisture. Temperatures averaged from 10° to 20° above normal statewide. Maxima were mostly in 40's west of Divide, high 40's and 50's east. Minima were mostly zero to high teens west of Divide, zero to 25° east. Temperature extremes: 61° Torrington and -1° at Big Piney. Continued warm weather very favorable to livestock. Grazing conditions improved most areas as snow cover diminished. Stock water supplies adequate most of Wyoming. Spring and summer water prospects are good. Weather and disease death losses slightly below normal.

Heating Degree Days (Base 65° F.)

JANUARY 1971

ALA. Birmingham . . .	657	MAINE, Caribou . . .	1833	OKLA. Okla. City . . .	866
Mobile . . .	461	MD. Baltimore . . .	1634	OREG. Astoria . . .	878
Montgomery . . .	525	MASS. Boston . . .	1269	Burns U.	1077
ALASKA, Anchorage . .	--	Nantucket	1541	Medford	892
Barrow	--	MICH. Alpena	--	Pendleton	767
Fairbanks	--	Detroit	1368	Portland	757
Juneau	--	Flint	1400	Salem	796
None	1099	Grand Rapids	1441	PA. Allentown	1326
ARIZ. Flagstaff	396	Houghton Lake	1536	Erie	1238
Phoenix	445	Lansing	1418	Harrisburg	1192
Tucson	993	Marquette	1563	Philadelphia	1145
Winslow	321	St. Charles	1813	Pittsburgh	1277
Yuma	800	MINN. Duluth	1996	Scranton	1494
ARK. Fort Smith	737	International Falls . .	2293	R.I. Providence	1298
Little Rock	532	Minneapolis	1811	S.C. Charleston	465
CALIF. Bakersfield . . .	593	Rochester	1927	Columbia	602
Eureka	593	St. Cloud	1927	Greenville	782
Fresno	255	MISS. Jackson	507	S. DAK. Aberdeen	1846
Los Angeles	584	Meridian	521	Huron	1777
Red Bluff	619	St. Louis	1159	Knoxville	1464
Stockton	331	MO. Columbia	1164	Dallas	504
San Diego	513	Kansas City	1151	Sioux Falls	807
San Francisco	1015	St. Louis	1159	TENN. Chattanooga	821
COLO. Denver	1152	Springfield	1035	Knoxville	1464
Grand Junction	926	MONT. Billings	1429	Memphis	781
Pueblo	1196	Glasgow	1856	Nashville	902
CONN. Bridgeport	1410	Great Falls	1057	TEX. Abilene	569
Hartford	1024	Havre	1822	Amarillo	837
D.C. Washington	338	Helena	1422	Anstett	325
FLA. Apalachicola	111	Kalispell	1338	Beaumont	266
Ft. Myers	348	Miles City	1066	Brownsville	130
Jacksonville	25	Missoula	1185	Corpus Christi	174
Key West	176	NEBR. Grand Island . . .	1392	Dallas	504
Lake Land	87	Lincoln	1393	Del Rio	287
Miami	165	Norfolk	1512	El Paso	625
Orlando	681	North Platte	1320	Fort Worth	564
Pensacola	423	Omaha	1519	Galveston	250
Tallahassee	201	Valentine	1494	Houston	298
Tampa	601	Las Vegas	630	Lubbock	723
GA. Atlanta	801	NEV. Ely	1259	Midland	540
Augusta	507	Las Vegas	630	San Angelo	453
Macon	457	Reno	985	San Antonio	283
Savannah	507	Winemucca	962	Victoria	228
IDAHO, Boise	958	N.H. Concord	1623	Waco	411
Leviston	885	N.J. Atlantic City	1117	Wichita Falls	1710
Pocatello	1166	Trenton	1137	Wichita Falls	--
ILL. Cairo	967	N.MEX. Albuquerque	930	Salt Lake City	1002
Chicago	1413	New York	1570	VT. Burlington	1710
Rockford	1549	Binghamton	1526	VA. Lynchburg	968
Springfield	1273	Buffalo	1381	Norfolk	812
Moline	1556	New York	1117	Richmond	961
Peoria	1418	Rochester	1405	Ronoke	948
Rockford	1549	Syracuse	1437	WASH. Colville	1191
Springfield	1273	N.C. Asheville	875	Omak	--
IND. Evansville	1087	Charlotte	1370	Quillayute	784
Fort Wayne	1382	Greensboro	916	Seattle-Tacoma	778
Indianapolis	1281	Hatteras	690	Spokane	1022
South Bend	1387	Raleigh	863	Walla Walla	700
IOWA, Burlington	1445	Washington	1520	Yakima	952
Des Moines	1521	N. DAK. Bismarck	1967	W. VA. Beckley	1149
Dubuque	1653	Fargo	2035	Charleston	1099
Keokuk	1281	Williston	1964	Huntington	1089
KANS. Concordia	1333	Wilmington	1309	Parkersburg	1110
Dodge City	1163	WIS. Green Bay	1797	Madison	1718
Goodland	1084	Cincinnati	1150	Milwaukee	1615
Topeka	1262	Cleveland	1344	WYO. Casper	1222
Wichita	1118	Columbus	1256	Cheyenne	1088
KY. Lexington	1087	Toledo	1379	Lander	1187
Louisville	1054	Youngstown	1366	Sheridan	1407
LA. Baton Rouge	327				
Lake Charles	316				
New Orleans	327				
Shreveport	459				