

WEEKLY WEATHER AND CROP BULLETIN

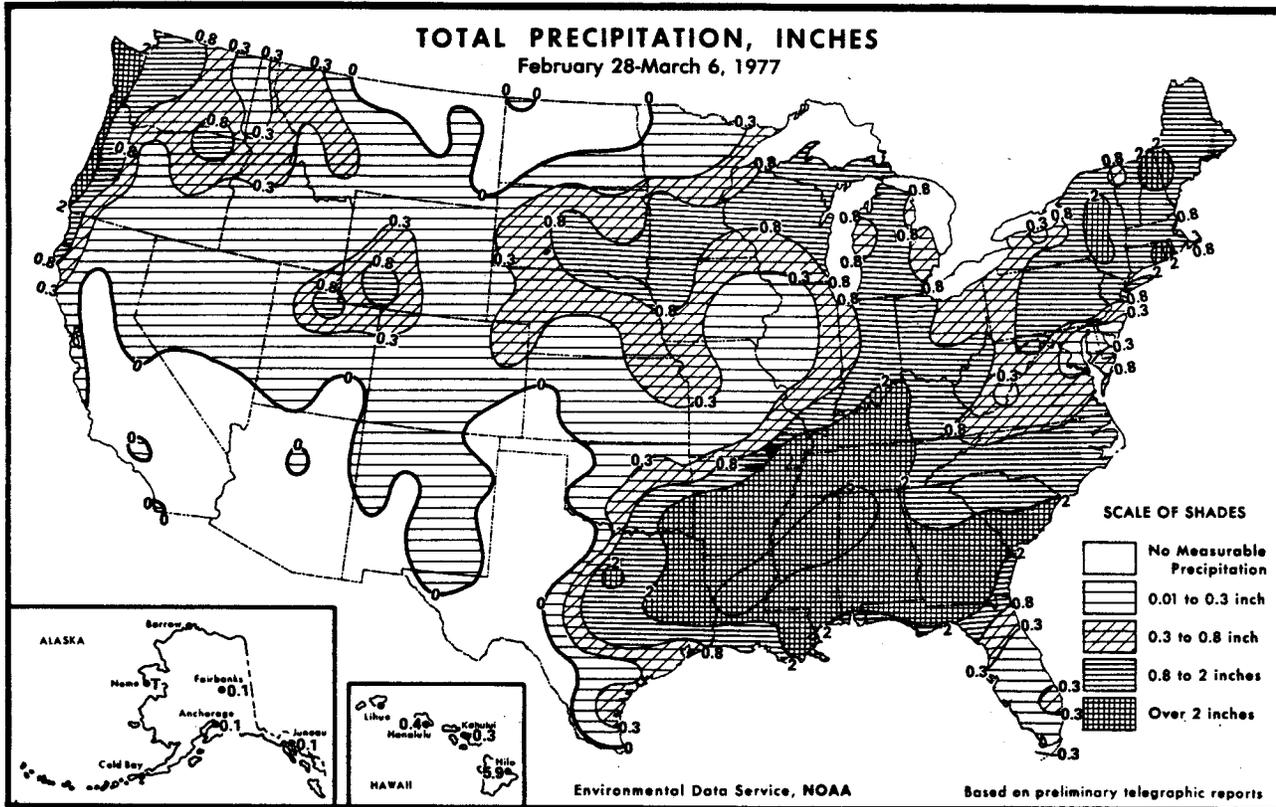
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National Weather Summary

February 28 - March 6, 1977

HIGHLIGHTS: A major storms system moved across the northern half of the country during the week, producing substantial moisture in many dry areas. The Pacific Northwest States received 2.00 to 3.75 in. along the coast and 0.25 to 0.75 in. inland. Heavy snow fell in the mountain areas, across the Central Rockies and the northern Great Plains. Over a foot of snow fell in northwest Iowa and southern Minnesota.

Heavy rains fell across the Deep South and flash flooding occurred in several States. Tornadoes touched down in a handful of States.

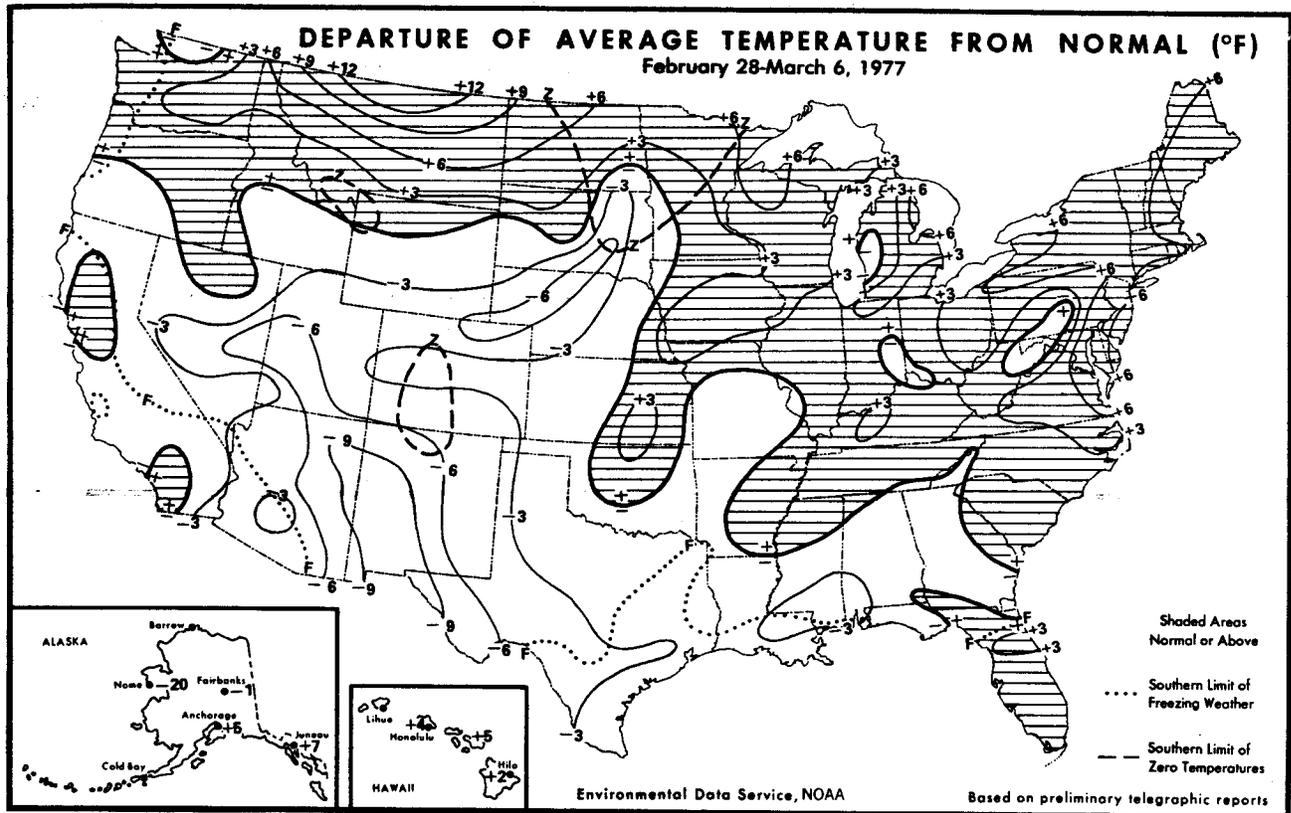
Temperatures were much warmer than normal in New England, many northern States, with the greatest departures in Montana where 6 to 12° departures were common. Parts of the Southwest were much cooler than normal.

The week began with rain and snow falling across the Pacific Northwest. The heaviest moisture fell in western Oregon where Eugene received

1.28 in. and Astoria 1.36 in. However the circulation pattern prevented any penetration of moisture very far into California. Rain was widespread in the northern Atlantic Coast States during the early morning hours. Clear skies generally covered the rest of the Nation.

Early morning temperatures plunged into the 20's and 30's in the Lower Mississippi Valley and the southeast. Afternoon temperatures ranged from 14° at International Falls, Minn. to the low 80's in southern Florida.

The storm over the Pacific Northwest grew in both intensity and coverage on Tuesday. Rain fell along the northern half of the Pacific Coast and snow fell at the higher elevations across the northern Rockies and the western portions of the Central Rockies, with some of the heaviest snow in the mountains of northern Utah where 8 to 10 inches fell. High winds penetrated southward creating blowing sand and dust in the deserts. Except for a band of snow from east central Missouri to the



Lower Great Lakes, fair skies were the rule during the day in most areas.

By daybreak Wednesday heavy snow was falling from northern Utah across southern Wyoming and eastward into northwest Iowa and southern Minnesota. Rock Rapids, Iowa had a foot of snow on the ground by late afternoon. Salt Lake City also accumulated over a foot. Strong winds circulating around the low created considerable blowing snow in the central Plains and central Rockies, and blowing dust in the southwestern Plains. Arkon, Colo. recorded gusts up to 66 mph.

The intense weather also spawned thunderstorms over the central and southern parts of the Plains and Mississippi Valley. A tornado struck in Alex in central Oklahoma. Other twisters were sighted near Wilson and Canton, Oklahoma.

Besides the storm across the northern States, rain and snow fell in Arizona. Some snow also lingered thru much of the night in parts of New York and Vermont.

The winter storm continued in the northern Plains and Corn Belt on Thursday. In addition another storm began to approach the upper Pacific Coast. Considerable severe weather occurred in the Lower Mississippi Valley. Alexandria, La., received 3.41 in. in 6 hours, Little Rock, Ark., 1.74 in. Tornadoes were sighted near Farmerville and Ruston

La. Some flooding was associated with the heavy rains.

The heavy rains in the Lower Mississippi Valley moved east and northward during the day Friday. Flash flooding continued to occur in parts of the Lower Mississippi Valley. Heavy and severe thunderstorms moved into Alabama and substantial rains fell northward into New England, with snow in portions of Vermont, New Hampshire and Maine. Snow also fell in portions of Wyoming. South Dakota, Minnesota and Upper Michigan. Several tornadoes were reported across the Carolinas and West Virginia.

The weather was relatively quiet on Saturday. Precipitation was generally limited to snow in parts of New England and light shower activity in the southeastern States. Some rainfall and snow activity began to increase in the Pacific Northwest as another storm system moved onshore.

Temperatures warmed into the 50's and 60's across most of the Atlantic Coast States, the southeastern States, and the southern half of the Plains, the Southwest and the Pacific Coast.

Sunday was also generally warm and dry across the Nation. Temperatures rose into the 50's and 60's across most of the Country except for the Far North. Precipitation was generally restricted to the southeastern States.

World Weather and Crop update

Moisture supplies have improved over parts of the Northern Great Plains in the United States and parts of the Corn Belt, but subsoil moisture reserves remain well below normal throughout those areas. There has been no improvement in the severe drought in California. Western Europe continues to enjoy mild temperatures although precipitation has tapered off somewhat. Heavy showers hit the central Corn Belt in Argentina, and some localized

crop damage may have occurred. Winter grains in some southern regions of the USSR have begun to resume growth. South Africa's crop prospects continue very favorable as moderate to heavy showers have fallen over the principal agricultural areas. India remains seasonally dry. Precipitation also has been light over the main winter wheat area in the PRC, and there have been complaints of drought and lagging irrigation work in some provinces.

National Agricultural Summary

For the week of February 28 to March 6

HIGHLIGHTS: Land preparations advanced northward with some early reports of spring plowing in Iowa. Farmers throughout the Nation spread fertilizer and lime on small grains and fields to be spring planted. Precipitation limited fieldwork from Texas east to the Atlantic and from Tennessee south to the Gulf Coast. Soil moisture was short in the North Central States and the West; elsewhere soil moisture was adequate to surplus. Precipitation temporarily improved moisture conditions in several of the North Central States, falling in some northern areas as snow and elsewhere as rain. Small grains improved in response to higher temperatures and in some areas improved soil moisture supplies. Orchard pruning advanced in northern deciduous fruit areas. Peaches bloomed in southern areas. Southern pastures provided limited grazing and some northern grasslands greened. Farmers planted corn, cotton and sorghum in several States. Farmers prepared and seeded tobacco plant beds. Early germinating plants were small.

SMALL GRAINS: The winter wheat crop began growing as far north as Ohio. The crop greened in response to higher temperatures. Farmers fertilized fall seeded small grains. The condition of the winter wheat crop was fair and improving. Farmers reported dust blowing in some States but not as widespread as earlier dust storms. Most areas of the Great Plains have low soil moisture supplies and need frequent precipitation to promote good winter wheat development.

In Kansas winds continued to blow primarily in the southwest and west central areas. It was early to assess the extent of the wheat damage. Oklahoma winter wheat improved slightly, making fair to good growth where moisture was available. Additional wind erosion damaged some of the crop at midweek in the Panhandle. Plants began jointing in extreme southern Oklahoma. Producers sprayed greenbugs and spread fertilizer. Texas wheat fields grew quickly on the plains. Rain would be helpful to replace wind depleted topsoil moisture. Greenbug concentrations grew heavy on the southern Low Plains. In New Mexico dryland wheat rated poor and irrigated small grains only fair. Montana winter wheat condition was fair and the crop began greening. California winter wheat needs moisture. In Washington winter wheat planted on summer fallowed land was green and healthy with no moisture stress. Second crop wheat had less chance to produce a normal crop. The Missouri and Nebraska winter wheat crops rated poor to fair. Arkansas, Louisiana, Alabama and Mississippi winter wheat also scored poor to fair but improving as new growth developed. The winter wheat in the South Atlantic States was fair except in Virginia where the crop rated poor.

OTHER CROPS: Corn planting was underway in the southern part of the nation along the Gulf Coast. In Texas farmers planted only 1% of the crop, far behind the 1976 progress of 6% and the average 8%. Mississippi producers planted 5% of the corn crop. Corn growers also planted early fields in Georgia and Florida.

Sorghum planting reached 3% complete in Texas, well off the pace last year when 14% was planted and the average of 13%. Heavy demand for fertilizer caused transportation problems and delayed planting for some farmers.

Arizona and Texas producers planted cotton but progress also lagged previous years. In Texas planting was less than 1% complete statewide compared with 3% last year and the 2% average. Last year in the Coastal Bend farmers had 45% of the cotton acreage planted; this year only 1% was planted.

Irish potato growers harvested the winter crop in Florida and California. Potato farmers planted late season crops in Texas, Mississippi, Alabama, North Carolina and Oregon. Alabama growers almost finished planting. North Carolina planters had 10% of the crop sown. Mississippi growers planted 37% of the crop, less than the 49% in the ground last year.

Producers harvested sugarcane in Florida and Texas. The harvest was almost complete in Florida. Louisiana sugarcane producers shredded stalks and plowed. Sugarbeets grew well in Arizona.

Tobacco plant bed preparation and seeding began in Kentucky and continued in Virginia and North Carolina. Seedlings were in fair condition but small because of earlier cold weather in South Carolina, Georgia and Florida. Weather became more favorable to strip tobacco in Ohio, Indiana and Kentucky. Indiana markets closed on the 7th but 14 markets remained open in Kentucky.

FRUITS AND NUTS: Fruit growers pruned deciduous orchards in Virginia, the Carolinas, Utah, Washington and Oregon. Peach trees bloomed in Florida, Oklahoma and Texas. In south Texas trees finished blooming and began setting fruit. Elsewhere in Texas trees ranged from pink bud to full bloom.

In Florida recent warm weather brought out abundant new foliage and bloom buds in citrus groves. First growth appeared on trees partially defoliated by last January's freeze. Picking crews finished harvesting early and midseason oranges and switched to Valencias and grapefruit. In Texas citrus trees displayed lush new growth and blooms. Harvests of grapefruit and Valencias increased thanks to improved weather. Arizona citrus growers also harvested grapefruit and Valencias. California growers harvested lemons, and Navels. Valencias colored and reached good size. Apple, cherry, pear, early peach trees and grapes budded. Almonds, apricots, nectarines and plum trees bloomed.

VEGETABLES: Florida vegetable growers harvested cabbage, celery, carrots, escarole-endive, lettuce and radishes; light volumes of eggplant, peppers and squash; and steady supplies of chinese cabbage and tomatoes. Heavier volumes of vegetables should reach markets near mid-March and full volume by mid-April. Texas growers harvested cabbage, carrots, broccoli and spinach. Producers prepared land and seeded a wide variety of vegetable crops and melons. California growers picked artichokes, cabbage, cauliflower, asparagus, broccoli, celery and strawberries.

PASTURE AND LIVESTOCK: Southern pastures greened and provided a limited amount of forage to cattle herds. In northern areas pastures greened but did not grow enough to be grazed. Pastures were in poor to fair condition nationwide. Texas ranges improved but need more rain. Drying winds kept California ranges in poor to fair conditions. Calving and lambing progressed with light losses because of less severe weather. Cattle were in fair condition.

Temperature and Precipitation Data for the Week Ending Midnight, Lst., Feb. 28-March 6, 1977

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 . . .	49	-1	2.7	-1.3	La. Baton Rouge . . .	54	-3	1.9	+ .7	Youngstown . . .	35	+5	.3	-.4
Mobile . . .	53	-4	1.7	+ .2	Lake Charles . . .	55	-2	1.3	+ .3	OKLA. Okla. City . . .	45	+1	.3	-.1
Montgomery . . .	53	0	2.7	+1.4	New Orleans . . .	57	-1	2.2	+ .9	Tulsa . . .	46	+2	.7	+ .2
ALASKA Anchorage . . .	26	+5	.1	-.1	Shreveport . . .	52	-1	2.3	+1.4	OREG. Astoria . . .	45	+1	3.2	+1.5
Barrow . . .	2	1	1.1	0	MAINE Caribou . . .	24	+6	.9	+ .4	Burns . . .	34	0	.2	0
Fairbanks . . .	2	1	1.1	0	Portland . . .	31	+4	1.9	+1.1	Medford . . .	42	-1	.3	-.1
Juneau . . .	37	+7	1.1	+ .3	MD. Baltimore . . .	45	+7	.2	-.6	Pendleton . . .	44	+2	1.0	-.7
Kodiak . . .	37	+7	1.1	+ .3	MASS. Boston . . .	39	+5	.5	-.4	Portland . . .	45	0	.8	-.1
Nome . . .	-15	-20	T	-.2	Chatham . . .	38	+6	.6	-.4	Salem . . .	44	0	1.4	+ .3
ARIZ. Flagstaff . . .	28	-4	T	-.4	MICH. Alpena . . .	27	+9	.6	+ .2	PA. Allentown . . .	41	+8	1.4	+ .6
Phoenix . . .	57	0	T	-.2	Detroit . . .	31	+0	.7	+ .2	Erie . . .	34	+6	.3	-.3
Tucson . . .	51	-4	0	-.2	Flint . . .	31	+3	.7	+ .2	Harrisburg . . .	35	-1	1.5	+ .8
Winslow . . .	34	-8	T	-.1	Grand Rapids . . .	26	+3	1.0	+ .2	Philadelphia . . .	44	+6	.5	-.3
Yuma . . .	57	-5	0	-.1	Houghton Lake . . .	24	+2	.9	+ .5	Pittsburgh . . .	36	+3	.6	-.1
ARK. Fort Smith . . .	44	-2	1.0	+ .2	Lansing . . .	31	+3	.9	+ .4	Scranton . . .	36	+5	1.0	+ .5
Little Rock . . .	47	+1	3.3	+2.2	Marquette . . .	27	+4	1.3	+ .9	R.I. Providence . . .	39	+6	.9	0
CALIF. Bakersfield . . .	54	-1	0	-.2	Muskegon . . .	27	-1	.8	+ .3	S.C. Charleston . . .	54	+1	2.9	+1.8
Eureka . . .	47	-1	1.0	-.2	S. Ste. Marie . . .	22	+3	1.3	+ .9	Columbia . . .	53	+3	1.5	+ .4
Fresno . . .	51	-1	T	-.4	MINN. Duluth . . .	23	+6	.5	+ .2	Greenville . . .	47	0	1.2	0
Los Angeles . . .	58	-1	0	-.6	Internatl Falls . . .	19	+5	1	-.1	S.D. Aberdeen . . .	17	-4	.4	+ .3
Red Bluff . . .	53	+1	T	-.7	Minneapolis . . .	25	+3	.9	+ .6	Huron . . .	17	-6	.6	+ .4
San Diego . . .	59	+2	T	-.4	Rochester . . .	25	+3	.4	+ .1	Rapid City . . .	27	-1	.3	+ .1
San Francisco . . .	52	0	T	-.6	St. Cloud . . .	21	+2	.5	+ .3	Sioux Falls . . .	23	-1	1.2	+ .9
Stockton . . .	53	+2	T	-.5	MISS. Jackson . . .	52	-1	3.8	+2.5	TENN. Chattanooga . . .	45	-1	1.9	+ .6
COLO. Denver . . .	31	-3	.1	-.1	Meridian . . .	50	-3	4.8	+3.4	Knoxville . . .	47	+1	1.0	-.2
Grand Junction . . .	37	-1	.2	0	MO. Columbia . . .	36	-1	.1	-.4	Memphis . . .	49	+2	2.6	+1.5
Pueblo . . .	33	-4	T	-.1	Kansas City . . .	37	0	.4	0	Nashville . . .	46	+2	3.0	+1.9
CONN. Bridgeport . . .	38	+4	1.1	+ .3	St. Louis . . .	38	-1	.3	-.3	TEX. Abilene . . .	49	-2	T	-.2
Hartford . . .	37	+6	1.3	+ .5	Springfield . . .	39	-1	.1	-.5	Amarillo . . .	49	-2	0	-.1
D.C. Washington . . .	48	+7	.1	-.6	MONT. Billings . . .	34	+4	.1	-.1	Austin . . .	54	-2	1.1	+ .5
FLA. Apalachicola . . .	56	+2	1.7	+ .6	Glasgow . . .	30	+10	T	-.1	Beaumont . . .	56	-1	.8	0
Daytona Beach . . .	65	+3	.2	-.6	Great Falls . . .	35	+7	.1	-.1	Brownsville . . .	63	-2	T	-.2
Ft. Myers . . .	67	0	T	-.7	Havre . . .	36	+15	T	-.1	Corpus Christi . . .	61	-1	.4	+ .1
Jacksonville . . .	59	0	.8	-.1	Helena . . .	31	+3	.4	+ .3	Dallas . . .	55	-4	T	-.2
Key West . . .	73	0	.3	-.1	Kalispell . . .	34	+6	.3	+ .1	Del Rio . . .	51	-10	0	-.1
Lakeland . . .	64	0	.1	-.8	Miles City . . .	32	+6	T	-.1	El Paso . . .	40	-2	1.1	+ .6
Miami . . .	71	+1	T	-.4	Missoula . . .	34	+4	.3	+ .2	Fort Worth . . .	51	-2	.4	-.2
Orlando . . .	66	+2	.1	-.7	NEBR. Grand Island . . .	31	0	.1	-.1	Galveston . . .	58	0	.6	-.2
Tallahassee . . .	57	+0	3.5	+2.1	Lincoln . . .	32	0	.5	+ .2	Houston . . .	55	0	.4	-.2
Tampa . . .	66	+2	T	-.9	Norfolk . . .	27	-1	.8	+ .5	Lubbock . . .	42	-3	T	-.2
W. Palm Beach . . .	70	+2	0	-.7	N. Platte . . .	26	-5	.1	0	Midland . . .	46	-5	0	-.1
GA. Atlanta . . .	47	-1	1.7	+ .4	Omaha . . .	34	+4	.6	+ .3	San Angelo . . .	50	-4	T	-.1
Augusta . . .	52	+1	2.1	+1.0	Valentine . . .	21	-6	.5	+ .4	San Antonio . . .	53	-5	.3	-.1
Macon . . .	52	-1	2.3	+1.1	NEV. Ely . . .	23	-7	.2	0	Victoria . . .	58	-1	1	-.4
Savannah . . .	55	0	1.4	+ .4	Las Vegas . . .	49	-3	0	-.1	Waco . . .	52	-2	1.0	+ .5
HAWAII. Hilo . . .	73	+2	5.9	+2.6	Reno . . .	37	-2	.1	-.1	Wichita Falls . . .	48	-1	0	-.3
Honolulu . . .	77	+4	.4	-.3	Winnemucca . . .	37	+1	.1	-.1	UTAH. Blanding . . .	32	-5	T	-.2
Kahului . . .	77	+5	.3	-.4	N.H. Concord . . .	31	+4	.9	+ .3	Salt Lake City . . .	31	+5	1.2	+ .9
Lihue . . .	39	0	.2	-.1	N.J. Atlantic City . . .	41	+4	.1	-.9	VT. Burlington . . .	45	+8	.6	+ .2
IDAHO. Boise . . .	39	0	.2	-.1	Trenton . . .	43	+6	.7	-.1	VA. Lynchburg . . .	45	+4	.5	-.3
Lewiston . . .	43	+2	.3	+ .1	N.MEX. Albuquerque . . .	34	-9	T	-.1	Norfolk . . .	51	+7	1.1	+ .3
Pocatello . . .	32	0	.2	0	Roswell . . .	43	-3	.1	0	Richmond . . .	48	+5	.3	-.5
ILL. Cairo . . .	44	+1	2.2	+1.1	N.Y. Albany . . .	35	+7	.8	+ .2	Roanoke . . .	45	+4	.4	-.4
Chicago . . .	34	+2	.6	+ .1	Binghamton . . .	33	+7	.9	+ .3	WASH. Colville . . .	37	+3	.1	-.2
Moline . . .	34	+4	.2	-.2	Buffalo . . .	33	+5	.4	-.2	Omak . . .	35	0	.8	+ .6
Peoria . . .	34	+2	.2	-.3	New York . . .	43	+7	1.5	+ .6	Quillayute . . .	43	+1	3.8	+1.1
Rockford . . .	32	+3	.2	-.2	Rochester . . .	33	+5	.2	-.4	Seattle-Tacoma . . .	45	+2	1.8	+ .9
Springfield . . .	35	+1	.2	-.3	Syracuse . . .	35	+7	.6	-.1	Spokane . . .	38	+3	.3	-.1
IND. Evansville . . .	41	+1	1.7	+ .7	N.C. Asheville . . .	42	0	1.5	+ .5	Walla Walla . . .	45	+2	1.0	+ .7
Ft. Wayne . . .	32	0	1.0	+ .4	Charlotte . . .	48	+1	1.0	-.1	Yakima . . .	42	+3	.4	+ .3
Indianapolis . . .	35	0	1.1	+ .4	Greensboro . . .	46	+2	.9	+ .1	W. Va. Beckley . . .	39	+3	.3	-.6
South Bend . . .	34	+4	1.2	+ .7	Hatteras . . .	50	+2	1.0	0	Charleston . . .	42	+2	1.0	+ .1
IOWA. Burlington . . .	34	+2	.2	-.2	Raleigh . . .	46	+1	1.5	+ .7	Huntington . . .	42	+2	1.2	+ .3
Des Moines . . .	33	+4	.2	-.2	Wilmington . . .	53	+2	1.6	+ .7	Parkersburg . . .	42	+4	.9	+ .1
Dubuque . . .	30	+3	.2	-.3	N.DAK. Bismarck . . .	23	+4	.1	0	WIS. Green Bay . . .	28	+5	1.0	+ .7
Sioux City . . .	27	-1	1.1	+ .8	Fargo . . .	17	0	.1	0	La Crosse . . .	27	+2	.6	+ .3
KANS. Concordia . . .	35	0	.3	0	Williston . . .	27	+8	T	-.1	Madison . . .	30	+5	.3	0
Dodge City . . .	36	-2	.1	-.1	OHIO. Akron-Canton . . .	37	+6	.3	-.3	Milwaukee . . .	30	+4	.8	+ .4
Goodland . . .	31	-2	.1	0	Cincinnati . . .	35	-2	2.0	+1.1	WYO. Casper . . .	26	-2	.1	0
Topeka . . .	39	+2	.4	0	Cleveland . . .	35	+4	.2	-.4	Cheyenne . . .	24	-6	.1	-.1
Wichita . . .	44	+4	.1	-.2	Columbus . . .	37	+3	.6	-.1	Lander . . .	27	-1	.5	+ .3
Lexington . . .	41	+2	1.8	+ .8	Dayton . . .	35	+1	1.0	+ .4	Sheridan . . .	30	+2	1	-.0
Louisville . . .	42	+3	2.2	+1.1	Toledo . . .	31	0	1.0	+ .5	P.R. San Juan . . .	79	+3	T	-.5

Based on 1941-70 normals

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State Summaries of Weather and Agriculture

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

ALABAMA: Cool and dry, becoming warm and wet and ending cool and wet. Temperatures near normal. Heavy rains 4th and 6th.

Limited fieldwork. Feeding still major activity. Small grains poor to fair condition made limited growth. Planting spring potatoes nearly complete. Livestock poor to fair condition. Pastures supplying only limited grazing.

ARIZONA: Cold, windy, dry. Temperatures 4 to 9° below normal. Light moisture central, east mountains.

Cotton planting limited. Small grains good progress. Sugarbeets excellent progress. Cutting alfalfa hay increasing. Lettuce harvest continued. Yuma. Melon planting complete, Yuma. Harvest miscellaneous vegetables. Grapefruit, valencia orange harvest Yuma, Salt River Valley. Range conditions mostly poor lower deserts, poor to fair lower mountains, fair to good higher elevations. Soil moisture, stock water generally short. Cattle, calves fair to good condition.

ARKANSAS: Cool with rain. Temperatures 2 to 6° below normal. Central and southeast most rain with more than 3.00 in.

Rain at midweek stopped stalk cutting and disking in delta. Top dressing small grains continued. Winter wheat and pastures growing well central and south. Livestock requiring only supplemental feed south.

CALIFORNIA: Small amounts of precipitation midweek. Temperatures ranged from several degrees above normal to several degrees below normal.

North winds depleting soil moisture central interior valleys. Field preparation active for spring planting. Small grains need more moisture. Spraying, pruning, irrigation continue. Almonds, apricots, nectarines, southern San Joaquin area plums blooming. Apples, cherries, grapes, early variety peaches, pears, budding. Avocado, lemon, navel orange harvests continue. Valencia oranges sizing, coloring well. Artichoke, cabbage, cauliflower, light. Asparagus, broccoli, celery, strawberries, increasing. Range poor to fair. North winds drying. Supplemental feeding, herd thinning continues. Calving, lambing continues. Shearing started.

COLORADO: Winter storms 1st and 2d. Heaviest snow in northern mountains and extreme northeast. Up to 12 in. mountains; 3 to 8 in. extreme northeast with blizzard conditions on 2d. Elsewhere, tract to 4 in. of snow. Temperatures 1 to 15° below normal, with greatest departures in mountains and snow covered northeast.

FLORIDA: Rain early week. Warming trend began 3d continuing through weekend. Showers developed weekend. Temperatures averaged near normal. Rainfall mostly below 1.00 in. with isolated showers of 2.00 in. Panhandle areas.

Soil moisture adequate west, north, central; short south. Land preparation active all areas. Sugarcane harvest active, nearing completion. Small grains improving. Fruit trees blooming north, west. Tobacco plant beds fair. Pasture conditions vary considerably, very poor to fair. Small grain, rye pastures Panhandle, north responding favorably to warmer weather. Frost some

central areas retarded new growth permanent pastures. Cattle, calves mostly poor condition. In citrus groves, recent warm weather brought out abundant new foliage growth and bloom buds, with first growth appearing on trees partially defoliated by mid-January freeze. Harvest early, mid-season oranges about complete, with crews shifting to valencias and grapefruit. Harvest active cabbage, celery, carrots, escarole-endive, lettuce, radishes. Light volume eggplant, peppers, squash. Steady supply chinese cabbage, tomatoes, strawberries and new crop potato harvest gaining. Heavy volume available mid-March. Light volume snap beans, cucumbers, expected mid-March. Full volume most crops expected mid-April. Young spring crops making good growth.

GEORGIA: Temperature 4° above normal north and central, near normal south. Warm beginning of week; cold 1st and 2d, below freezing, except coast. Showers on 4th north averaging 0.05 to 1.50 in. Mild, heavy rain 5th and 6th.

Soil moisture adequate to mostly excessive. Fieldwork halted due to rain. Some corn planted southwest, east and central. Small grains fair condition, topdressing complete southwest, 60% complete central. Tobacco plants and pastures fair condition, cattle poor to fair condition.

HAWAII: Windy variable weather continues. More rain fell easing drought conditions, however, more moisture needed north Kona, Hawaii and leeward Kauai.

Strong winds bruised some crops in exposed areas. Banana orchards suffered leaf strippings. Vegetable supplies adequate. Banana supplies steady. More sugar mills beginning to grind. Pineapple harvesting light. Added moisture aiding forage growth all areas.

IDAHO: Temperatures near normal to 5° below. Extremes: 60 and 0°. Precipitation general, almost 0.05 in. above normal north, elsewhere 0.05 to 0.26 in. below normal.

Some field preparation and planting begun. Snow and rain helped ease drought but more needed. Calving and lambing well underway. Feed supplies adequate.

ILLINOIS: Temperatures 2 to 5° below normal. Precipitation mostly less than 0.33 in. north, near 0.75 in. extreme northeast; more than 2.00 in. some southern sections.

No snow cover. Soil moisture mostly short. Winter wheat and other small grains mostly fair. Legumes and livestock mostly fair to good. Main activities: Caring for livestock, hauling water, buying seed and chemical supplies, preparing machinery for spring work.

INDIANA: Temperatures above normal and ranged from 8 on 2d to 58 on 4th. Heavy rains caused minor flooding on low lands. Rainfall averaged 0.80 in. northwest, 1.00 in. central and northeast, 1.80 in. southwest and south central, and 2.00 in. southeast. Soils thawed central and south.

Soil moisture supplies improving. Wet fields limited fertilizer spreading and sowing grasses and legumes. Wheat starting to green. Tobacco stripping nearly completed; tobacco market will

close 7th. Main activities: Caring for livestock, buying fertilizer and seed, and preparing machinery for planting.

IOWA: Moderate temperatures and above normal precipitation west and north central to subnormal amounts elsewhere. Midweek precipitation accounted for heavy snow upward to 17 in. Water content exceeds 1.00 in. over northwest. Southwest precipitation fell as 0.50 to 0.80 in. rain. Northwest temperatures cooled by the snow cover averaged 1 or 2° subnormal to 3 or 4° above normal in the south and east.

Frozen water lines and water shortage still problem but eased by rising temperatures and precipitation. Increase in farm activity with some spring plowing. Fertilizer in adequate supply. High occurrence of TGE and pseudorabies among hogs in northwest. Hay and roughages mostly adequate and in good quality.

KANSAS: Moisture averaged from 0.30 to 0.40 in. east to 0.25 in. central and little or none west. Considerable blowing dust west 2d. Temperatures around normal and from 33° northwest to 41° southeast.

Winds continued to blow primarily in southwest and west central. Too early to assess extent of damage to wheat. Topsoil and subsoil moisture supplies remain short. Oats seeding 25% seeded, ahead of 10% normal, 30% last year. Barley 30% seeded, 5% average, 15% last year.

KENTUCKY: Temperatures near normal with daily averages in low to mid-40's. Rainfall about midweek resulted in 1.00 to 2.00 in. most areas, but near 3.00 in. south and west.

Farm activities accelerated including livestock care and feeding, spring plowing, some pasture renovation and tobacco plant bed preparation. Soil temperature and 4 in. depth averaged low 40's. Tobacco stripping continuing with 14 markets still open.

LOUISIANA: Temperatures 1 to 3° below normal. Extremes: 28 and 75°. Widespread rains 2d, 3d and 5th, heaviest northeast; largest weekly total 7.37 in.

Fieldwork active early week, mainly seedbed preparation, applying fertilizers and herbicides. Fieldwork: 3.5 days favorable. Soil moisture adequate to surplus. Shredding abandoned sugarcane. Plowing old stubble. Strawberries blooming. Small grains poor to fair condition, improving with warm weather. Cattle condition generally poor, pastures below normal, hay short.

MARYLAND & DELAWARE: Temperatures 5 to 6° above normal. Highs in upper 50's; lows in low 30's. Precipitation 0.50 in. in all areas except western Maryland where more than 1.00 in. fell.

Farmers doing fieldwork where possible. Much liming, fertilizing and spreading manure being done. Many repairing fences and buildings and preparing machinery for spring work.

MICHIGAN: Temperatures 1 to 5° above normal except in southwest Lower Peninsula where temperatures 2 to 3° below normal. Gradual warming trend during week. Precipitation heavy and generally uniform averaging 0.86 in. over Lower Peninsula and near 1.00 in. over Upper Peninsula. Snow reached central Lower Peninsula. Snow depths ranged from 7 to 9 in. Lower Peninsula and 23 to 39 in. extreme northern Lower and Upper Peninsula.

Main farm activities: Feeding livestock and farm chores.

MINNESOTA: Temperatures near normal west and 3 to 6° above normal east. Extremes: 42 and -13°. Precipitation about 0.50 to 1.00 in. above normal central and southwest, 0.25 to 0.50 in. above south central and north central and near normal to 0.17 in. below normal elsewhere. Precipitation from 1.00 to 1.39 in. southwest, from 0.40 to 1.00 in. central and south central and trace to 0.40 in. elsewhere. Snow on ground 10 to 14 in. central through southwest, 5 to 10 in. elsewhere except less than 5 in. extreme northwest and extreme southeast.

MISSISSIPPI: Temperatures near normal. Extremes: 20 and 87°.

Soil moisture adequate to excessive. Fieldwork: 2.0 days suitable. Acreage plowed 38%, 35% 1976, 23% average. Irish potatoes 37% planted, 49% 1976. Corn 5% planted. Winter wheat and oats in poor to fair condition. Pastures in mostly poor condition. Livestock in poor to fair condition.

MISSOURI: Temperatures ranged 1 to 4° below normal except for northwest prairie 1° above normal. Precipitation light in the north and west averaging about 0.50 in. Heavier amounts in east Ozarks and Bootheel ranging from 1.50 to 2.50 in. Snow accumulations between a trace and 5 in. Little spring work began. Winter wheat condition poor to fair. Soil moisture short.

MONTANA: Temperatures near normal to 15° above. Precipitation above normal west but continued very dry elsewhere. High temperatures reached into 50's and 60's by 6th. Nearly all precipitation first of week.

Winter wheat condition fair, beginning to green especially in south. Warm, dry weather good for calving and lambing; losses lighter than average. Winter ranges fair condition, with grazing generally open.

NEBRASKA: First good precipitation of season. Generally 0.50 to 1.56 in. except south central only 0.10 to 0.20 in. Temperatures near or little below normal.

Winter wheat poor to fair condition. Limited or no snow cover southern half, heavier accumulations northern half. Supplemental feeding on pastures. Corn and milo stalk fields being pastured. Calving started.

NEVADA: Cloudy skies, strong blustery winds prevailed. Precipitation heaviest northeast. Temperatures below normal. Extremes: 67 and -7°.

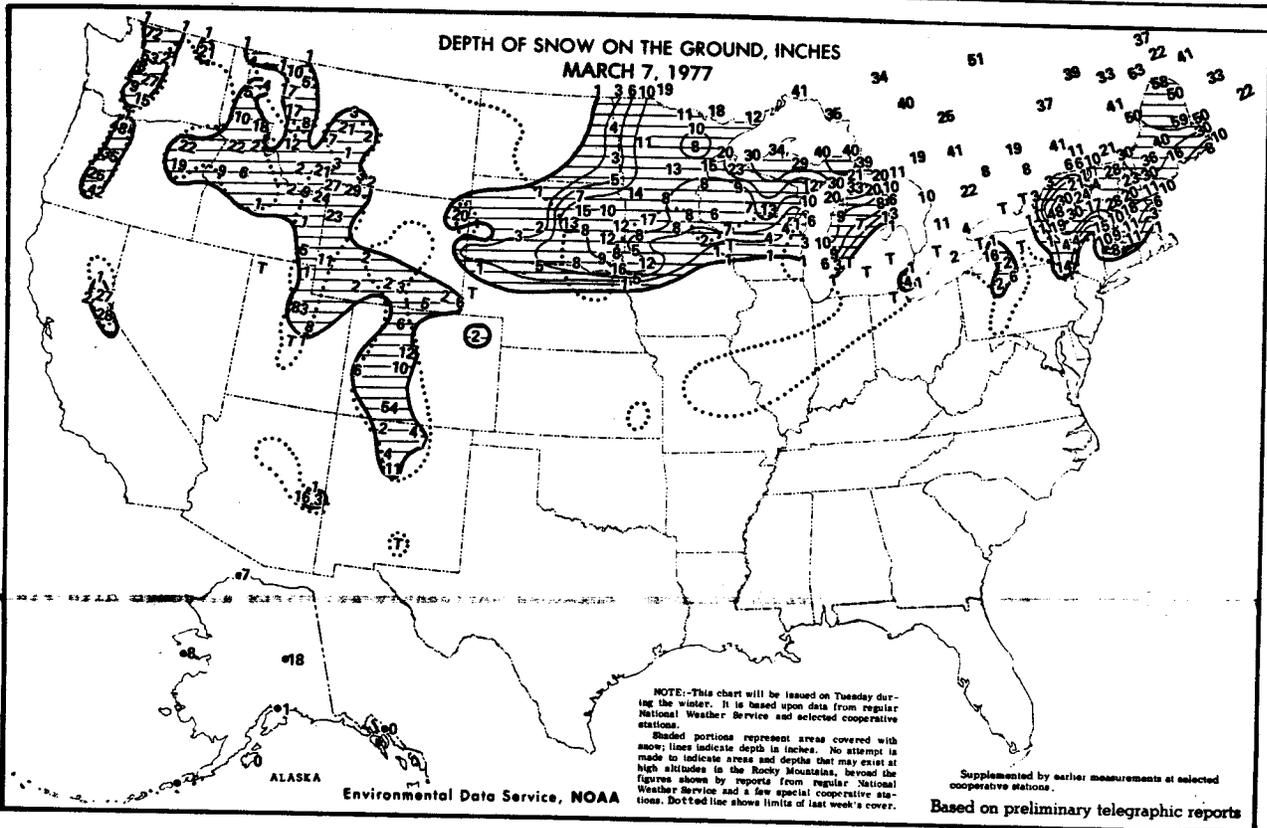
Calving and lambing on upswing. Livestock wintering well.

NEW ENGLAND: Precipitation ranged from about 0.50 in. of water in southern areas to as much as 2.00 in. over northeast. Most of this precipitation in form of rain south and snow or mixed precipitation north. Temperatures near to well above seasonal normals in most areas with little significant day to day variations.

NEW JERSEY: Temperatures 38° north, 42° and 42° coastal areas. Extremes: 16 and 66°. Precipitation above normal in north and below elsewhere, averaging 1.61 in. north, 0.43 in. south and 0.32 in. coastal sections.

Soil preparations underway for early vegetable planting. Fall planted grain in poor condition.

NEW MEXICO: Snow in mountains and west midweek



then light snows mountains and eastern plains last of week. Amounts generally less than 0.20 in. liquid equivalent. Temperatures cool and mostly 3 to 5° below normal.

Soil moisture short. Ranges, livestock fair. Dryland wheat poor; irrigated wheat, barley, durum wheat fair.

NEW YORK: Temperatures averaged from mid-20's to the low 40's; 5 to 8° above normal. Extremes: 5 and 61°. Precipitation ranged from 1.00 to 2.00 in. in Hudson Valley to less than 1.00 in. elsewhere.

NORTH CAROLINA: Temperatures 3 to 4° above normal. Precipitation 1.50 in.

Fieldwork: 3.9 days suitable. Soil moisture adequate. Pastures poor. Wheat, rye mostly fair. Barley, oats poor to fair. Flue-cured tobacco plant beds fair to good. Hay and roughage supplies short. Feed grain supplies adequate. Farm activities: Land preparation, topdressing small grains and pastures, seeding tobacco plant beds, spreading lime. Fruit tree pruning active. Irish potato planting nearly 10% complete.

NORTH DAKOTA: Temperatures ranged from 6° above normal northwest to 2° below normal southeast. Extremes: 46 and -10°. Precipitation ranged from 0.17 in. below normal west central to 0.08 in. above normal south central. Snow cover ranged from none to 9 in. with heaviest accumulation in southeast. Weekend fair and dry.

Farmers cleaning seed and getting ready for spring. Calving and lambing started. Livestock in fair to good condition.

OHIO: Low pressure system spread snow across

southern half on 1st. Snow ranged from trace in central to 5 in. across extreme south. Warmer, moist air produced temperatures above normal and 4th with rain.

Weather more favorable for tobacco striping. Pastures greening but providing little grazing. Fall sown grains showing new growth. Calving and lambing gaining momentum.

OKLAHOMA: Temperatures averaged 2° above normal to 5° below normal. Precipitation averaged 0.02 in. Panhandle to 1.89 in. southeast.

Wheat condition improved slightly, as crop made fair to good growth where moisture was available. Some additional loss to wind erosion at midweek in Panhandle. Some fields starting to joint in extreme south. Greenbug buildup southwest warranted some spraying. Topdressing small grains continued. Cattle starting to move from acreage intended for grain, onto fields for grazeout. Spring oats and barley seeding slow. Fieldwork moderated because dry topsoils. Some southern peach trees starting to bloom. Ranges and pastures starting to green but too short to provide grazing. Cattle condition improved slightly. Supplemental feeding widespread.

OREGON: Heavy rains west, and extended to parts of northeast as well. Over 4.00 in. recorded along coast and 1.50 to 2.50 in. Willamette Valley. Rainfall east of Cascades variable ranging from 1.25 in. to less than 0.20 in. Temperatures averaged near normal. Extremes: mid-50's, mid-30's west; mid-50's, mid-teens east.

Soil moisture short but improving. Snowpack far below normal but higher elevations received up to 24 in. snow. General farm activity light due to continued precipitation. In west land

preparation and fertilizing grain fields continue. Liming for red clover and alfalfa. Pruning orchards. Onions being shipped. In east potato planting continues. Calving continues, feeding normal, supplies adequate. Livestock in good condition.

PENNSYLVANIA: Sunny but cool beginning then moderating. Temperatures 2 to 5° above normal. Extremes: 66 and 10°. Snow flurries 1st and major storms 4th produced up to 2 in. precipitation all except north and southeast corners.

Farmers doing normal winter chores. Some small grain fields greening south central.

PUERTO RICO: Island average rainfall 0.04 in. or 0.54 in. below normal. Temperatures about 77° on coasts and 71° interior. Extremes: 92 and 48°.

Drought rapidly intensifying southern sections. Subsoil moisture approaching critical conditions. Ground water table also seriously low which will restrict irrigation supplies especially southwest. Dry weather favored maturity and harvest of sugarcane and tobacco drying but affected seriously normal development of ratoon, coffee, tobacco, pastures and food crops. Conditions expected deteriorate further unless significant rainfall occurs in these crop zones.

SOUTH CAROLINA: Temperatures above normal except northwest. Extremes: 76 and 21°. Rainfall near normal except south which received 1.10 in. above normal. East and north central areas strong winds caused damage.

Tobacco plant beds in fair to good condition; moisture in beds good. Some tobacco plants up, others still germinating. Tobacco plants smaller than normal. Some vegetable weevil larvae damaging plants.

Other activities: Preparing land for spring planting; fertilizing pastures, small grains; harvesting greens; pruning, fertilizing apple, peach trees.

SOUTH DAKOTA: Second snowstorm of year midweek. Snow depth varies from 6 to 12 in. in east and central areas. Moisture equivalents ranged to over 1.00 in. Temperatures ranged from 5° below to 7° above normal. Extremes: -13 and 56°.

Farmers clearing snow. Moisture brightening 1977 crop prospects. Some cattle coming home for calving.

TENNESSEE: Temperatures near normal. Precipitation above normal from in excess of 1.00 in. to slightly less than 4.00 in. Heaviest rainfall in south and middle.

Activities slowed by wet weather. Plowing, fertilizing and liming, preparing seedbeds major activities.

TEXAS: Midweek cold front triggered heavy thunderstorms over north, central and east. Light rain southeast, light snow northwest, otherwise, windy and dry. Dust in west. Rainfall ranged from 1.50 in. above normal northeast to near normal west. Normals range from 0.10 in. southwest to 1.00 in. east. Temperatures erratic, ranging from 6° below normal in east to 6° above normal in Trans-Pecos Valley.

Field preparations, planting active beginning week, but rain stopped activity in east and central. Planting lags. Wheat fields grew on Plains, Edwards Plateau; wind depleted topsoil moisture. Rain would be welcomed. Greenbugs built up; heaviest concentration on southern Low Plains.

Oats made good progress in response to warm. Farmers continued to apply nitrogen in north and east. Cotton planting made slow progress south, but less than 1% complete, well behind 3% 1976 and 2% average. In Coastal Bend area, only 1% planted, compared 1976 rate of 45%. Sorghum planting, now 3% complete, far behind 14% in 1976 and average 13%. Heavy demand for fertilizer caused transportation problems, forcing some farmers to delay planting, waiting for deliveries. Corn planting gained momentum in south and central until rain shortly after midweek. At 1% complete, planting well behind 6% in 1976 and 8% average. Sugarcane harvesting active.

Drying conditions increased field activity. Harvest cabbage, broccoli, spinach, carrots continues. Cantaloup, cucumber, onions, sweet corn, watermelon planting active. Onions responding well to warm weather. Most citrus trees put on lush new growth. Blooming active in groves. Harvest grapefruit, Valencia groves gained momentum due improved weather. Peaches blooming. South blooming near completion and trees setting fruit. Central, trees range pink bud to full bloom stage. Livestock condition improved due to warm. Cattle in Coastal Bend still weak, but other herds in east fair. Cattle in west good. Ranges improved noticeably all parts although High Plains, west would like rain.

UTAH: Light rain and snow. Accumulated amounts moisture generally light but locally moderate to heavy in vicinity of Salt Lake City. Moisture deposit continues to increase. Temperatures ranged from near normal to 9° below normal.

Snow disappearing rapidly. Land preparation, ditch cleaning, orchard pruning resumed scattered sections. Farm flock lambing nearing completion. Range calving started. Some ranged sheep herds to start lambing soon.

VIRGINIA: Temperatures above normal. Extremes: 14 and 83°. Precipitation early and late in period ranged from 0.02 to 1.66 in.

Fieldwork: 3.2 days suitable. Topsoil moisture adequate. Plowing, spreading lime and fertilizer active. Preparing and seeding tobacco plant beds and top dressing small grains continued. Winter grains, grazing crops, pasture, generally poor condition. Livestock receiving little forage from grazing. Orchard pruning, pasture seeding, tending livestock, and a small amount of oat seeding being done.

WASHINGTON: West: Temperatures 1 to 2° above normal. Precipitation 0.10 in. subnormal coastal, near normal east Cascade foothills, 0.20 in. above normal San Juans to 0.40 in. above normal Puget Sound area.

Seeded preparation delayed. Strawberries showing some growth. Pastures greening; livestock still on winter rations.

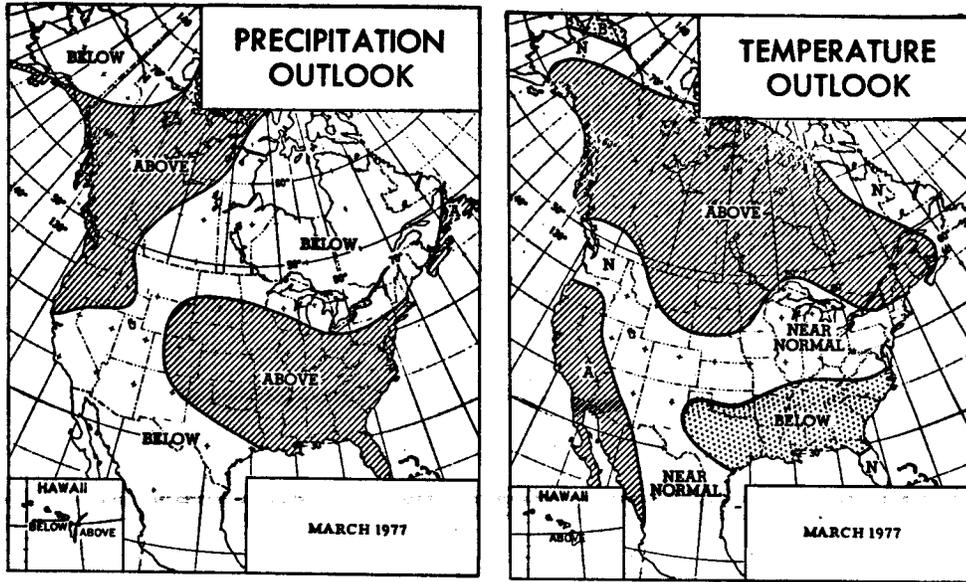
East: Temperatures 1 to 3° above normal. Precipitation 0.70 in. above normal Okanogan area, 0.40 in. above normal central basin, 0.10 in. above normal Palouse to 0.20 in. below normal northeast.

Irrigation supplies critical. Orchards in good water condition due to late fall irrigation. Major activities: Planting mint, green peas, tree fruit and grape pruning. Priority water going to perennial crops. Summer fallow wheat plants green and healthy with no moisture stress. Recrop wheat less chance to produce normal crop. Calving continues; lambing tapering off.

WEST VIRGINIA: Temperature and precipitation

Continued on page 14

Average Monthly Weather Outlook

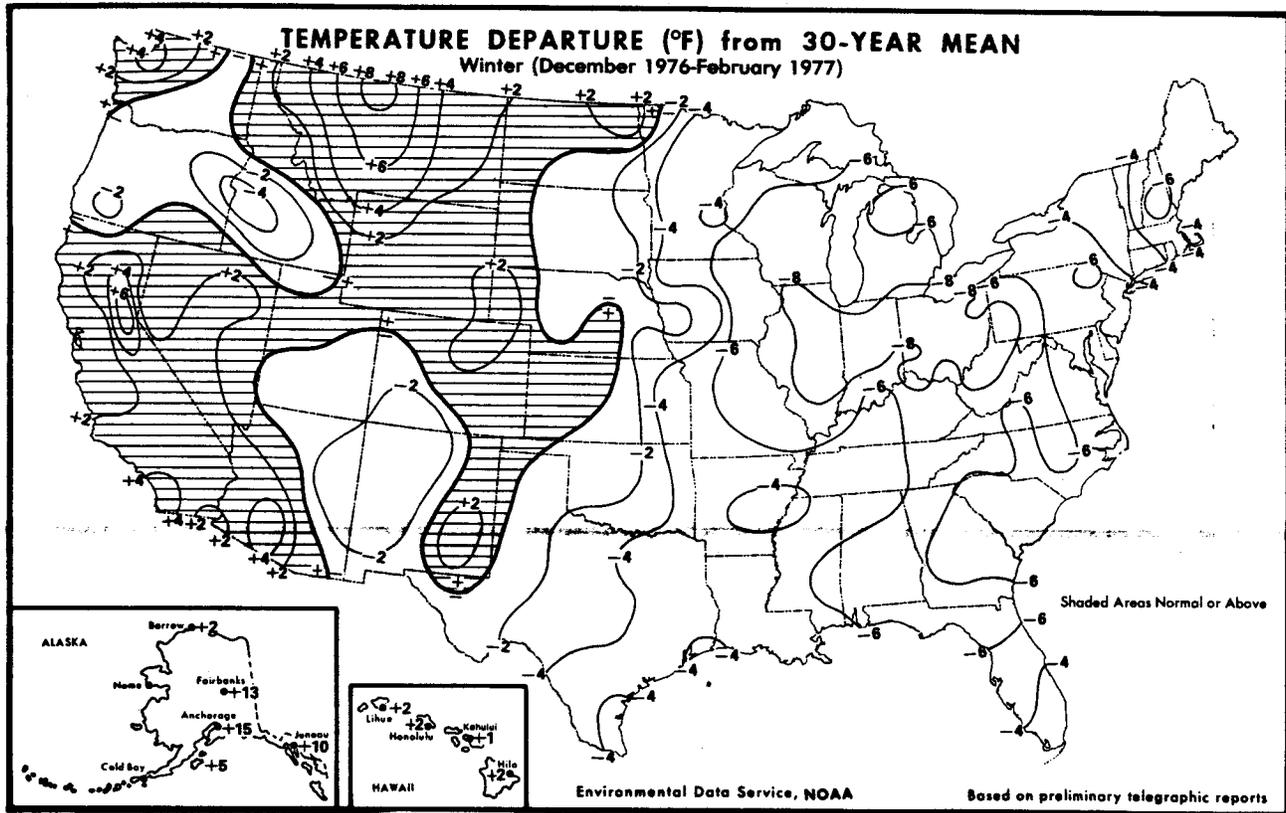


Heating Degree Days (Base 65° F.)

February 1977

ALA. Birmingham . . .	566	MAINE, Caribou . . .	1453	OKLA. Okla. City . . .	529
Mobile . . .	355	Portland . . .	1199	Tulsa . . .	511
Montgomery . . .	501	MD. Baltimore . . .	790	OREG. Astoria . . .	504
ALASKA, Anchorage . . .	900	MASS. Boston . . .	956	Burns U. . .	825
Barrow . . .	2285	Chatham . . .	978	Medford . . .	581
Fairbanks . . .	1574	NICH. Alpena . . .	1270	Pendleton . . .	653
Juneau . . .	690	Detroit . . .	1106	Portland . . .	564
Nome . . .	---	Flint . . .	1186	Salem . . .	569
ARIZ. Flagstaff . . .	860	Grand Rapids . . .	1177	PA. Allentown . . .	950
Phoenix . . .	122	Houghton Lake . . .	1315	Erie . . .	1116
Tucson . . .	221	Lansing . . .	1164	Harrisburg . . .	966
Winslow . . .	106	Marquette U. . .	1253	Philadelphia . . .	873
Yuma . . .	602	S. Ste. Marie . . .	1420	Pittsburgh . . .	1060
ARK. Fort Smith . . .	539	MINN. Duluth . . .	1334	Scranton . . .	1058
Little Rock . . .	229	Internat. Falls . . .	1481	R.I. Providence . . .	1058
CALIF. Bakersfield . . .	400	Minneapolis . . .	1180	S.C. Charleston . . .	516
Eureka U. . .	313	Rochester . . .	1207	Columbia . . .	525
Fresno . . .	86	St. Cloud . . .	1283	Greenville . . .	627
Los Angeles U. . .	297	MISS. Jackson . . .	435	S. DAK. Aberdeen . . .	1135
Red Bluff . . .	324	Meridian . . .	487	Huron . . .	1101
Stockton . . .	94	Vicksburg U. . .	891	Rapid City . . .	846
San Diego . . .	326	MO. Columbia . . .	832	Sioux Falls . . .	1097
San Francisco . . .	749	Kansas City . . .	839	TEMN. Chattanooga . . .	879
COLO. Denver . . .	775	St. Louis . . .	752	Knoxville . . .	658
Grand Junction . . .	747	Springfield . . .	759	Memphis . . .	547
Pueblo . . .	940	MONT. Billings . . .	1074	Nashville . . .	327
CORN. Bridgeport . . .	1035	Glasgow . . .	714	TEX. Abilene . . .	393
Hartford . . .	729	Great Falls . . .	862	Amarillo . . .	592
D.C. Washington . . .	409	Havre . . .	949	Austin . . .	308
FLA. Apalachicola . . .	132	Helena . . .	862	Beaumont . . .	268
Ft. Myers . . .	414	Kalispell . . .	923	Brownsville . . .	123
Jacksonville . . .	20	Miles City . . .	918	Corpus Christi . . .	192
Key West . . .	183	Missoula . . .	861	Dallas . . .	---
Lakeland U. . .	82	NEBR. Grand Island . . .	927	Del Rio . . .	269
Miami . . .	218	Lincoln . . .	951	El Paso . . .	492
Orlando . . .	273	Norfolk . . .	920	Fort Worth . . .	431
Daytona Beach . . .	434	North Platte . . .	883	Galveston U. . .	274
Tallahassee . . .	214	Omaha . . .	952	Houston . . .	312
Tampa . . .	640	Valentine . . .	959	Lubbock . . .	520
GA. Atlanta . . .	565	NEV. Ely . . .	297	Midland . . .	409
Macon . . .	437	Las Vegas . . .	695	San Angelo . . .	377
Savannah . . .	868	Lenox . . .	734	San Antonio . . .	337
IDAHO, Boise . . .	653	Winnemucca . . .	1242	San Antonio . . .	246
Leviston . . .	1043	N.J. Atlantic City . . .	895	Victoria . . .	345
Pocatello . . .	715	Trenton U. . .	846	Waco . . .	460
ILL. Cairo U. . .	1058	N. MEX. Albuquerque . . .	674	Wichita Falls . . .	---
Chicago . . .	1059	Roswell . . .	462	UTAH, Blanding R. . .	813
Moline . . .	1061	N.Y. Albany . . .	1127	Salt Lake City . . .	1240
Peoria . . .	1158	Binghamton . . .	1137	VT. Burlington . . .	783
Rockford . . .	989	Buffalo . . .	1123	Norfolk . . .	657
Springfield . . .	867	New York . . .	883	Richmond . . .	680
IND. Evansville . . .	1107	Rochester . . .	1103	Roanoke . . .	786
Fort Wayne . . .	1025	Syracuse . . .	1086	WASH. Colville . . .	892
Indianapolis . . .	1063	N.C. Asheville . . .	788	Omak . . .	---
South Bend . . .	1019	Charlotte . . .	636	Quillayute . . .	554
IOWA, Burlington . . .	981	Greensboro . . .	723	Seattle-Tacoma . . .	451
Des Moines . . .	1155	Hatteras R. . .	575	Spokane . . .	832
Dubuque . . .	1019	Raleigh . . .	715	Walla Walla U. . .	602
Sioux City . . .	769	Wilmington . . .	541	Yakima . . .	730
KANS. Concordia . . .	645	N. DAK. Bismarck . . .	1147	W. VA. Beckley . . .	978
Dodge City . . .	778	Fargo . . .	1327	Charleston . . .	888
Goodland . . .	767	Williston U. . .	1112	Huntington . . .	829
Topeka . . .	646	WIS. Akron-Canton . . .	1057	Parkersburg U. . .	916
Wichita . . .	836	Cincinnati U. . .	980	WIS. Green Bay . . .	1254
KY. Lexington . . .	780	Cleveland . . .	1113	Madison . . .	1188
Louisville . . .	331	Columbus . . .	1071	Milwaukee . . .	1152
LA. Baton Rouge . . .	300	Dayton . . .	1042	WYO. Casper . . .	949
Lake Charles . . .	318	Toledo . . .	1135	Cheyenne . . .	894
New Orleans . . .	389	Youngstown . . .	1119	Lander . . .	940
Shreveport . . .				Sheridan . . .	926

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



Winter Weather Review

HIGHLIGHTS: The winter of 1976/77 will remain in everyone's mind for a long time to come. Bitter cold temperatures covered the eastern two-thirds of the Country for week after week, causing numerous energy transportation and economic problems. The circulation pattern that brought the bitter cold also kept moisture levels much below normal. The greatest concern has been over the western States, particularly for the agricultural areas of California, Oregon and Washington. The only areas which received above normal precipitation were parts of the Dakotas, and Montana, northern New England, the Florida peninsula and southern Texas.

December was unusually cold over the eastern half of the Country. Many cities claimed the coldest December on record. The coldest areas were in the Great Lakes region and New England where temperatures averaged 8° or more below normal. The relatively stable circulation maintained this pattern of cold throughout the month so that warming was usually brief and limited to more southerly areas. However the western States did continue to be above normal.

A large portion of the country received less than fifty percent of normal precipitation with above normal areas limited to the South and southeast, parts of New England and northern Montana and the Dakotas.

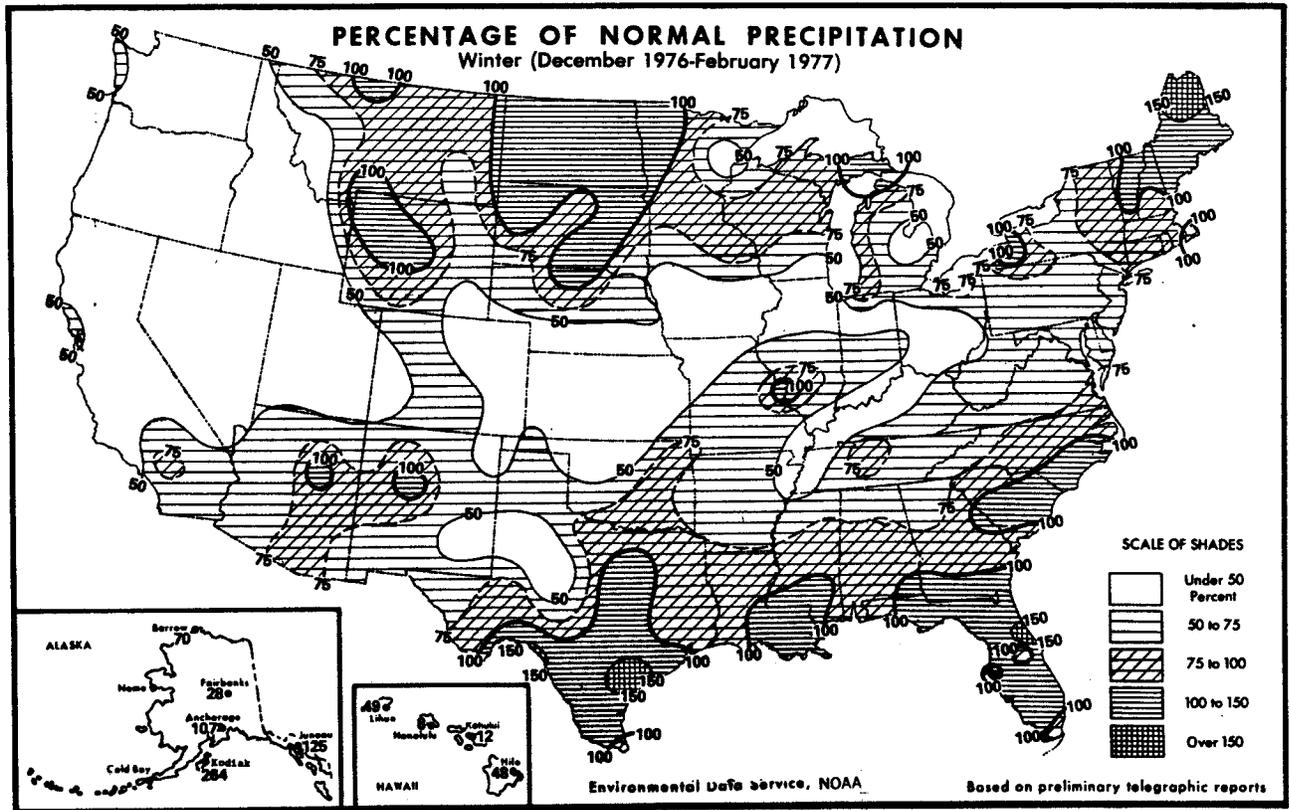
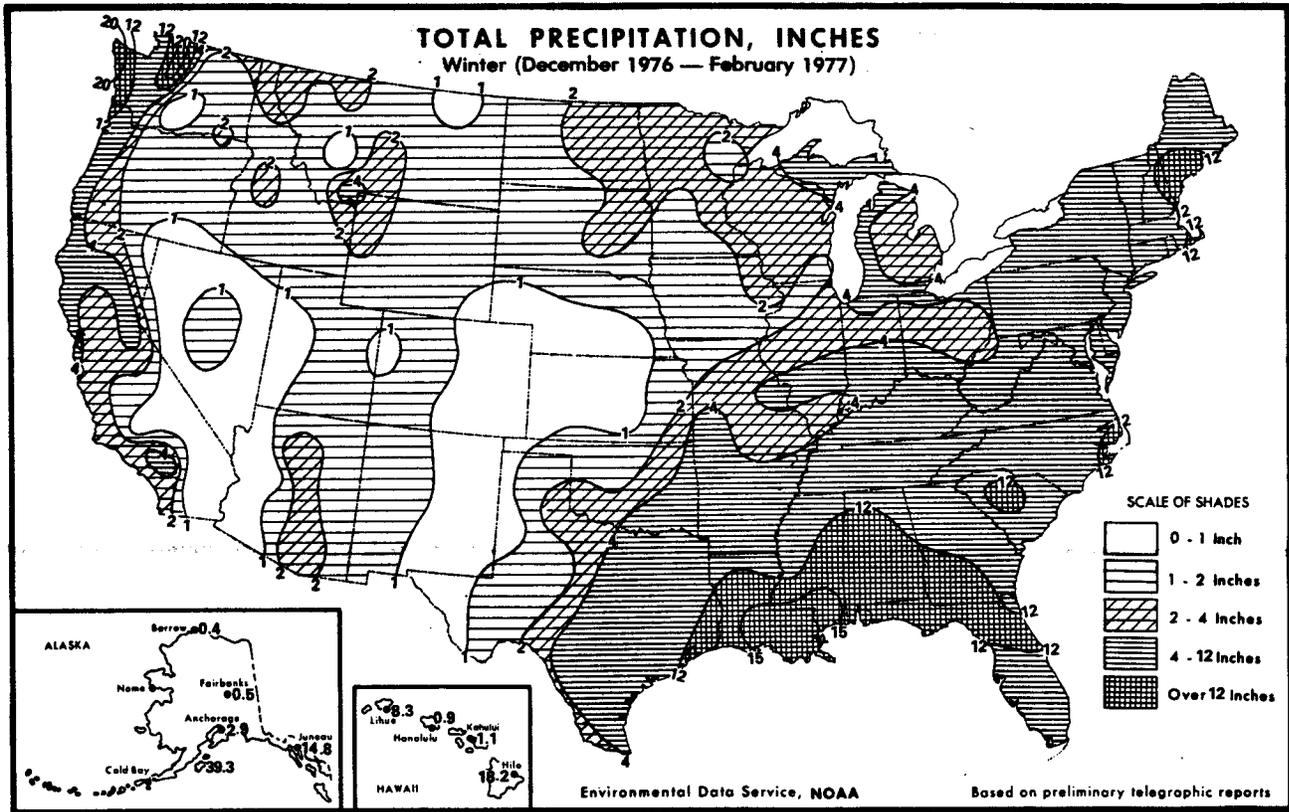
January was a month for setting records. Record low temperatures were reported all during

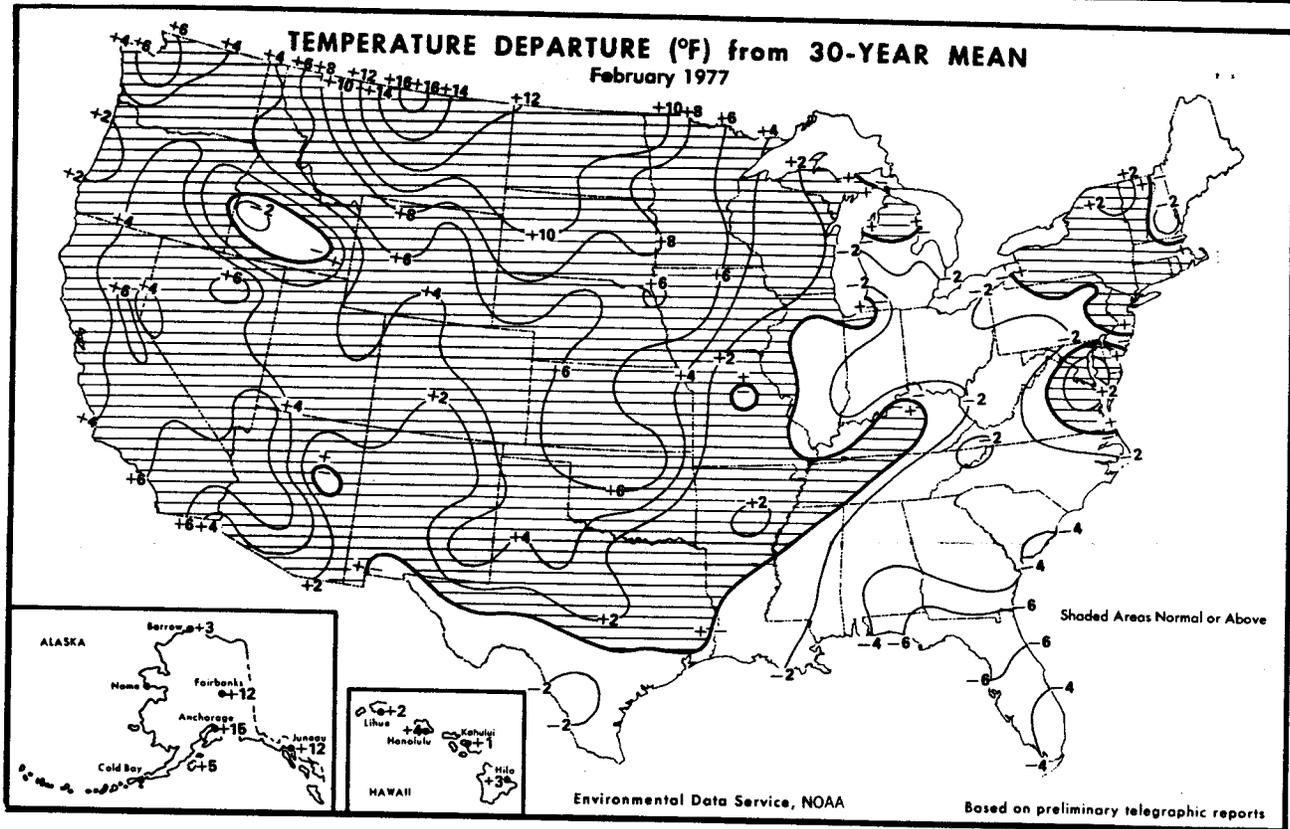
the month in nearly all areas east of the Rockies. Only portions of Far Southwest was above normal. The most severe departures from normal encompassed the States of Illinois, Indiana, Ohio, northern Kentucky and western Pennsylvania where average temperatures for the month were 18 to 19° below normal. Shortly after midmonth a cold outbreak all the way down to the Caribbean produced freezing temperatures all across Florida and snow in West Palm Beach. Temperatures dropped into the teens in many parts of Florida and the citrus and vegetable crops were seriously damaged.

Moisture was almost as scarce as warmth with only scattered parts of the country receiving above normal moisture and most of the western States well below normal.

February started out with the cold pattern but the overall situation improved markedly as the month progressed. Over the month temperatures were normal or above from the Mississippi westward and unusual coolness persisted only in Florida and the southeast.

Thanks in large measure to a series of storm systems at the end of the month, some moisture relief was seen in Oregon and Washington and the northern Great Plains. However, dryness continued to persist over the remainder of the Nation. Southern California received only 10 percent of its normal precipitation and indications of dryness in many eastern States were also starting to develop because of the general lack of moisture.





February Weather Summary

HIGHLIGHTS: The northern Great Plains and portions of the Corn Belt, parts of Texas, New England and scattered western mountain locations were the only areas to receive above normal moisture for the month. Many areas of the western States had less than 25 percent their normal moisture. Most of the moisture in the Upper Great Plains and the Pacific Northwest fell during the last week of the month.

The cold temperatures of winter finally moderated during February, averaging well above normal west of the Missouri River and only slightly below normal in the East. Parts of Montana averaged 12 to 16° above normal over the month.

The month began bitter cold temperatures persisting across the eastern half of the country. The Ohio Valley and the area south of the Great Lakes had the largest departures, averaging 12 to 15° below normal. Much of the western and northern Plains were near normal. Little or no moisture fell over the parched western States.

Snow and high winds buffeted the Buffalo, N.Y. area during the week. The southern and central Plains experienced a period of warming but cooled rapidly again at the week's end. Record low temperatures were set at numerous locations the morning of the 6th: Columbus, Ohio -11°, Madison, Wis. -19°, Roanoke, Va. 8° and Birmingham, Ala. 17°.

The second week saw unusually warm temperatures prevail over the western two-thirds of the Nation. Temperatures in the Plains averaged 18 to 21° above normal. Most of the precipitation during

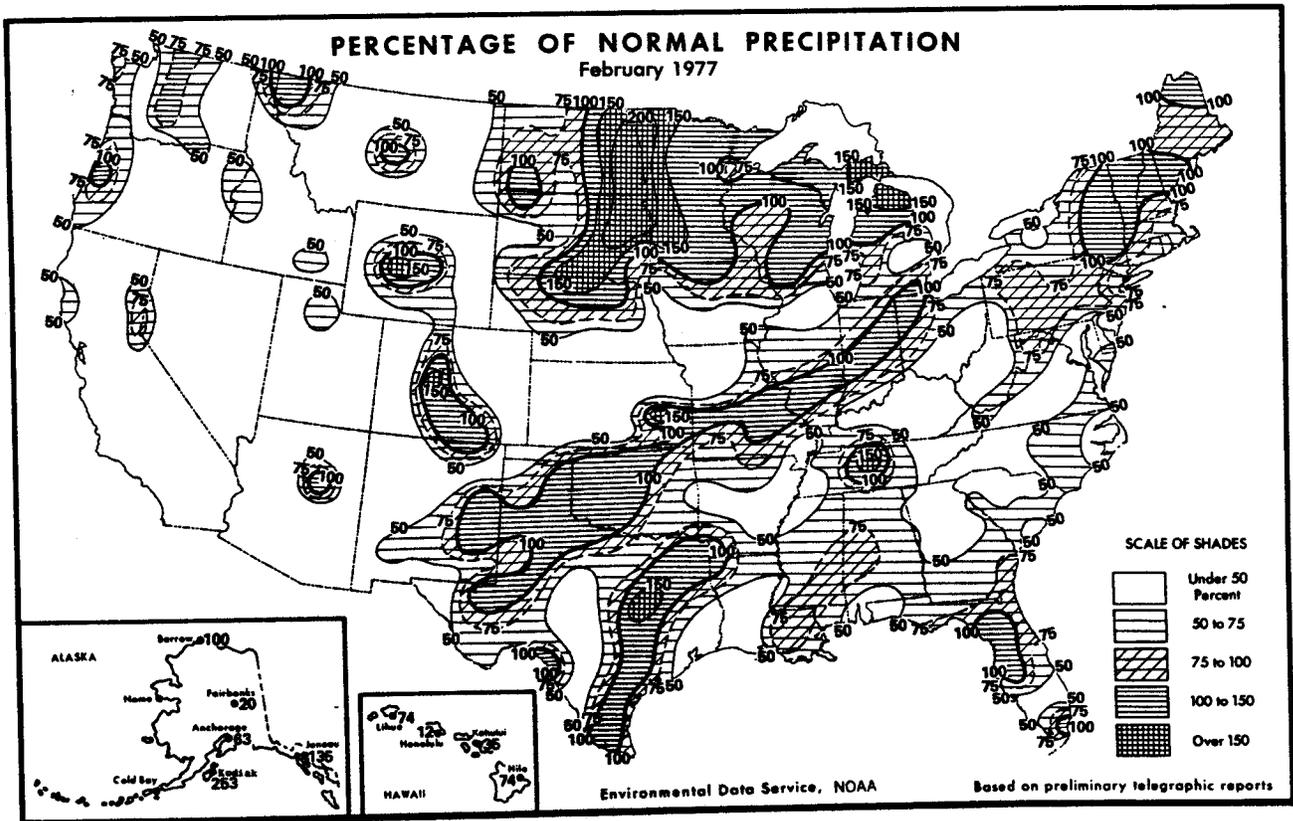
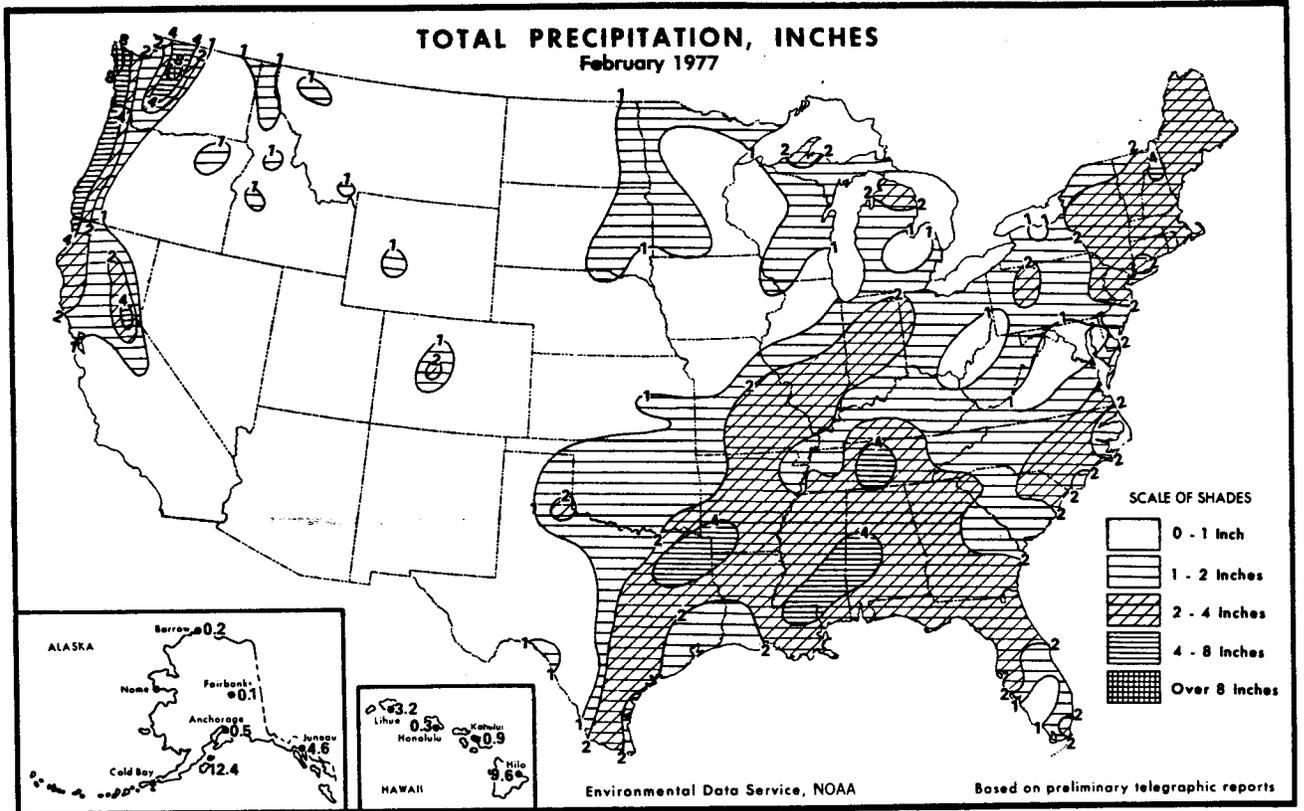
the week was associated with a low pressure system that moved from Texas northeastward through New England spreading rain in its path. The rain was heavy in east Texas but rather light as the low moved northeastward. Some rain fell in the Pacific Northwest and northern California but not nearly enough to relieve the drought.

The unseasonably mild temperatures continued to persist from the Mississippi to the West Coast during the week of February 14-20. Temperatures in the intermountain Plateau region averaged 10 to 13° above normal and most of Montana was 15 to 20° warmer than normal. On the other hand, Florida averaged 6 to 8° below normal and several frosty mornings were reported.

Precipitation was generally light across the Nation, but rain did start up again at the end of the week in Washington, Oregon and northern California. The New England area received additional snow bringing depths up to 60 inches in northern Maine.

In the wettest week of the winter, February ended with at least some moisture over the entire country, with a few minor exceptions. Record breaking warmth also covered many parts of the Nation. The entire Nation east of the Rockies was at least 6° above normal except in the upper Great Lakes, New England and Florida.

Moisture amounts across the Pacific Northwest totaled 2.00 to 4.00 in. along the coast and up to 1.00 in. further inland. Heavy rains also fell across the Southeast with over three inches in parts of Alabama and Mississippi.



Temperature and Precipitation Data for February 1977

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 . . .	45	-2	3.9	-1.4	La. Baton Rouge . . .	53	-1	3.9	-.9	Youngstown . . .	25	-2	1.2	-1.2
Mobile . . .	52	-2	1.9	-2.9	Lake Charles . . .	54	-1	1.5	-3.0	OKLA. Okla. City . . .	46	+5	1.4	+1
Montgomery . . .	47	-4	3.2	-1.1	New Orleans . . .	54	-2	2.8	-2.0	Tulsa . . .	47	+6	1.6	-.1
ALASKA Anchorage . . .	33	+15	.5	-.3	Shreveport . . .	51	0	3.7	0	OREG. Astoria . . .	47	+3	5.2	-2.6
Barrow . . .	16	+3	.2	0	MAINE Caribou . . .	13	0	3.0	+ .9	Burns . . .	35	+4	.5	-.7
Fairbanks . . .	9	+12	.1	-.4	Portland . . .	22	-1	3.8	+ .3	Medford . . .	44	+3	.7	-1.5
Juneau . . .	40	+12	4.6	+1.2	MD. Baltimore . . .	37	+2	.6	-2.2	Pendleton . . .	42	+3	.6	-.5
Kodiak . . .	36	+5	12.4	+7.5	MASS. Boston . . .	31	+1	2.4	-1.1	Portland . . .	45	+2	2.5	-1.6
Nose . . .	34	+3	.8	-.7	Chatham . . .	30	+1	2.3	-1.4	Salem . . .	45	+2	2.8	-2.0
ARIZ. Flagstaff . . .	62	+7	.1	-.5	MICH. Alpena . . .	19	+1	2.2	+ .8	PA. Allentown . . .	31	+2	2.5	-.3
Phoenix . . .	57	+3	.1	-.7	Detroit . . .	25	-1	1.6	-.2	Erie . . .	25	0	1.4	-.7
Tucson . . .	57	+3	.3	0	Flint . . .	22	-1	.7	-.9	Harrisburg . . .	30	-2	1.8	-.6
Winslow . . .	37	-2	.7	+ .3	Grand Rapids . . .	23	-2	1.4	-.1	Philadelphia . . .	34	0	1.3	-1.3
Yuma . . .	62	+3	T	-.3	Houghton Lake . . .	28	-1	1.5	+ .3	Pittsburgh . . .	27	-2	.9	-1.5
ARK. Fort Smith . . .	43	0	1.5	-1.7	Lansing . . .	28	-1	1.6	+ .1	Sc anton . . .	27	-1	1.8	-.2
Little Rock . . .	46	+3	2.1	-2.3	Marquette . . .	20	0	1.6	+ .1	R. I. Providence . . .	29	0	2.9	-.6
CALIF. Bakersfield . . .	57	+5	.1	-.9	Muskegon . . .	22	-3	1.2	-.6	S. C. Charleston . . .	46	-5	1.4	-1.9
Eureka . . .	51	+3	2.2	-3.0	S. Ste. Marie . . .	14	-1	2.9	+1.4	Columbia . . .	46	-2	1.2	-2.5
Fresno . . .	54	+4	.1	-1.6	MINN. Duluth . . .	17	+5	.5	-.4	Greenville . . .	42	-2	2.0	-2.4
Los Angeles . . .	63	+5	.2	-2.6	Internatl Falls . . .	13	+6	1.0	+ .3	S. D. Aberdeen . . .	24	+9	.9	+ .3
Red Bluff . . .	54	+4	1.4	-1.8	Minneapolis . . .	23	+6	.9	+ .1	Huron . . .	25	+7	1.7	+ .9
San Diego . . .	63	+6	.1	-1.4	Rochester . . .	22	+5	1.0	+ .3	Rapid City . . .	35	+9	.3	-.3
San Francisco . . .	53	+2	1.0	-2.0	St. Cloud . . .	19	+6	1.0	+ .2	Sioux Falls . . .	26	+7	.8	-.2
Stockton . . .	53	+4	.8	-1.3	MISS. Jackson . . .	49	-1	2.3	-2.3	TENN. Chattanooga . . .	41	-2	3.0	-2.2
COLO. Denver . . .	38	+5	.3	-.4	Meridian . . .	47	-3	4.8	-.1	Knoxville . . .	41	-2	1.5	-3.2
Grand Junction . . .	37	+3	.1	-.5	MO. Columbia . . .	33	-1	1.2	-.6	Memphis . . .	45	+1	2.0	-2.7
Pueblo . . .	38	+3	.3	0	Kansas City . . .	35	+2	.6	-.7	Nashville . . .	41	0	6.8	+2.4
CONN. Bridgeport . . .	31	0	1.7	-1.0	St. Louis . . .	35	0	2.5	+ .4	TEX. Abilene . . .	51	+3	.1	-.9
Hartford . . .	28	+1	2.8	-.4	Springfield . . .	38	+1	1.6	-.6	Amarillo . . .	44	+4	.5	-.1
D. C. Washington . . .	39	+2	.7	-1.8	MONT. Billings . . .	38	+11	.1	-.5	Austin . . .	54	+1	2.6	-.5
FLA. Apalachicola . . .	50	-6	3.5	-.3	Springfield . . .	27	+12	.1	-.2	Beaumont . . .	55	0	1.1	-3.1
Daytona Beach . . .	56	-4	2.5	-.4	Great Falls . . .	39	+12	.2	-.6	Brownsville . . .	62	-1	1.4	-.1
Ft. Myers . . .	61	-4	.2	-1.8	Havre . . .	34	+16	.1	-.3	Corpus Christi . . .	59	-1	1.7	-.3
Jacksonville . . .	50	-6	3.2	-.4	Helena . . .	34	+8	.1	-.3	Dallas . . .	55	-1	1.2	+ .2
Key West . . .	68	-4	1.5	-.4	Kalispell . . .	31	+6	1.0	0	Del Rio . . .	47	-1	1.7	-.4
Lakeland . . .	58	-4	3.5	+1.0	Miles City . . .	32	+10	.1	-.4	El Paso . . .	49	0	1.7	-.7
Miami . . .	66	-2	2.1	+ .1	Missoula . . .	32	+5	.2	-.5	Fort Worth . . .	49	0	1.7	-.4
Orlando . . .	57	-5	1.8	-1.2	NEBR. Grand Island . . .	34	+6	.2	-.6	Galveston . . .	55	-1	1.1	-1.6
Tallahassee . . .	49	-6	3.1	-1.7	Lincoln . . .	32	+4	.1	-.8	Houston . . .	54	-1	1.7	-1.8
Tampa . . .	58	-4	2.4	-.5	Norfolk . . .	31	+7	.8	0	Lubbock . . .	46	+3	.4	-.1
W. Palm Beach . . .	64	-2	1.1	-1.5	N. Platte . . .	32	+4	.3	+ .2	Midland . . .	50	+2	.6	0
GA. Atlanta . . .	45	-3	2.1	-2.3	Omaha . . .	33	+7	.4	-.6	San Angelo . . .	52	+2	.3	-.5
Augusta . . .	47	-3	1.9	-1.9	Valentine . . .	31	+6	.8	+ .3	San Antonio . . .	53	-2	.9	-1.2
Savannah . . .	49	-3	1.8	-1.1	NEV. Ely . . .	31	+3	.1	-.5	Victoria . . .	56	-1	2.6	+ .3
HAWAII. Hilo . . .	74	+3	9.6	-3.0	Las Vegas . . .	40	+5	.7	-.2	Waco . . .	53	+2	3.7	+1.3
Honolulu . . .	76	+4	.3	-2.2	Reno . . .	39	+5	.1	-.7	Wichita Falls . . .	48	+2	1.3	+ .1
Kahului . . .	73	+1	.9	-1.7	Winneuecca . . .	21	-2	2.0	-.5	UTAH. Blanding . . .	36	+3	T	-.9
Lihue . . .	73	+2	3.2	-1.1	N. H. Concord . . .	21	-2	2.0	-.5	Salt Lake City . . .	36	+3	.6	-.6
IDAHO. Boise . . .	34	+2	.6	-.6	N. J. Atlantic City . . .	33	-1	1.4	-2.0	VT. Burlington . . .	37	+2	1.8	-.1
Lewiston . . .	42	+4	.4	-.5	Trenton . . .	35	+2	2.1	-.6	VA. Lynchburg . . .	37	+1	.6	-2.2
Pocatello . . .	28	-1	.4	-.4	N. MEX. Albuquerque . . .	41	+1	.1	-.3	Norfolk . . .	42	+1	2.2	-1.1
ILL. Cairo . . .	39	-1	1.3	-2.5	Roswell . . .	48	+5	.4	0	Richmond . . .	41	+2	1.3	-1.7
Chicago . . .	27	0	.7	-.9	N. Y. Albany . . .	25	+1	2.6	+ .5	Roanoke . . .	36	-2	.7	-2.4
Moline . . .	27	+1	.6	-.7	Binghamton . . .	24	+1	1.5	-.8	WASH. Colville . . .	33	+2	.4	-1.0
Peoria . . .	24	-1	1.0	-.5	Buffalo . . .	24	0	1.6	-1.0	Omak . . .	35	+5	.8	-.3
Rockford . . .	30	0	1.2	-.6	New York . . .	33	0	2.1	-1.0	Quillayute . . .	45	+4	11.2	-.8
Springfield . . .	34	-2	1.3	-2.0	Rochester . . .	25	0	1.0	-1.4	Seattle-Tacoma . . .	49	+7	1.6	-2.6
IND. Evansville . . .	25	-3	2.2	+ .1	Syracuse . . .	26	+1	1.6	-1.2	Spokane . . .	35	+3	.5	-1.2
Ft. Wayne . . .	28	-3	3.6	+1.2	N. C. Asheville . . .	37	-2	1.0	-2.6	Walla Walla . . .	43	+3	.6	-.8
Indianapolis . . .	28	+3	3.6	+1.2	Charlotte . . .	39	-2	1.5	-2.5	Yakima . . .	39	+3	.7	-.1
South Bend . . .	27	+1	1.3	-.6	Greensboro . . .	44	-2	1.7	-1.7	W. Va. Beckley . . .	30	-3	1.6	-1.7
IOWA. Burlington . . .	28	+1	.8	-.5	Hatteras . . .	39	-2	1.6	-2.6	Charleston . . .	34	-3	1.1	-2.0
Des Moines . . .	30	+6	.4	-.7	Raleigh . . .	46	-2	2.1	-1.2	Huntington . . .	35	-1	.8	-2.1
Dubuque . . .	24	+2	1.1	-.2	Wilmington . . .	46	-2	1.8	-1.6	Parkersburg . . .	32	-3	.6	-2.2
Sioux City . . .	28	+5	.3	-.6	N. DAK. Bismarck . . .	24	+10	.3	-.1	La Crosse . . .	20	+2	1.4	+ .4
KANS. Concordia . . .	37	+5	T	-.9	Fargo . . .	17	+8	1.2	+ .8	Madison . . .	22	+2	.8	-.1
Dodge City . . .	42	+7	.1	-.5	Williston . . .	25	+11	.3	-.2	Milwaukee . . .	24	+1	.6	+ .4
Goodland . . .	37	+5	.1	-.3	OHIO. Akron-Canton . . .	27	-1	1.1	-1.1	WYO. Casper . . .	31	+4	.7	+ .2
Topeka . . .	37	+4	.2	-.8	Cincinnati . . .	30	-3	1.3	-1.7	Cheyenne . . .	33	+4	.1	-.4
Wichita . . .	42	+6	.1	-.9	Cleveland . . .	25	-3	1.4	-.8	Lander . . .	31	+5	1.1	+ .4
Lexington . . .	35	0	1.0	-2.4	Columbus . . .	27	-3	1.0	-1.3	Sheridan . . .	32	+6	.1	-.7
Louisville . . .	37	+1	1.5	-2.0	Dayton . . .	28	-2	1.8	-.4	P. R. San Juan . . .	78	+3	1.0	-1.5

Based on 1941-70 normals

Continued from page 8

above normal. Extremes: 71 and 10°.

Hay supplies short. Soil moisture short to adequate. Fieldwork: 3.6 days suitable. Some plowing down to frost level. Most work concentrated on general chores and repairing equipment. Livestock in good to poor condition.

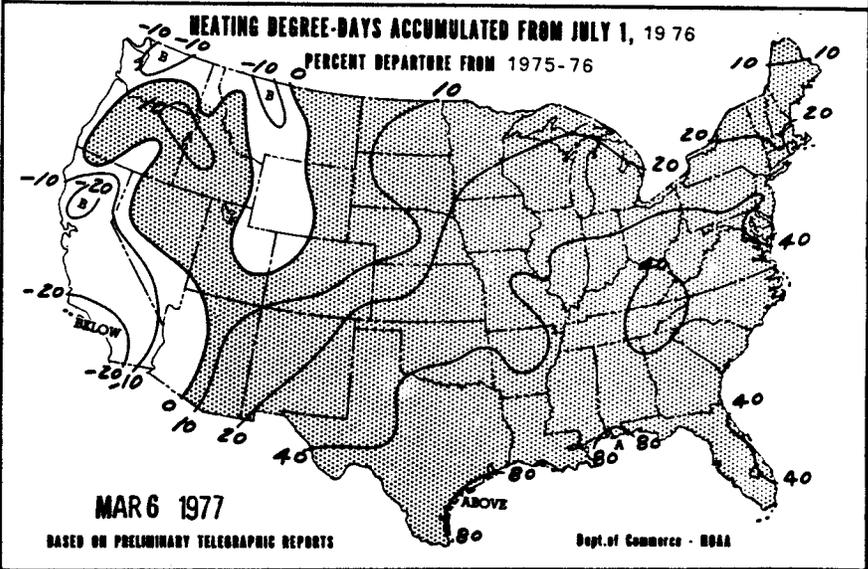
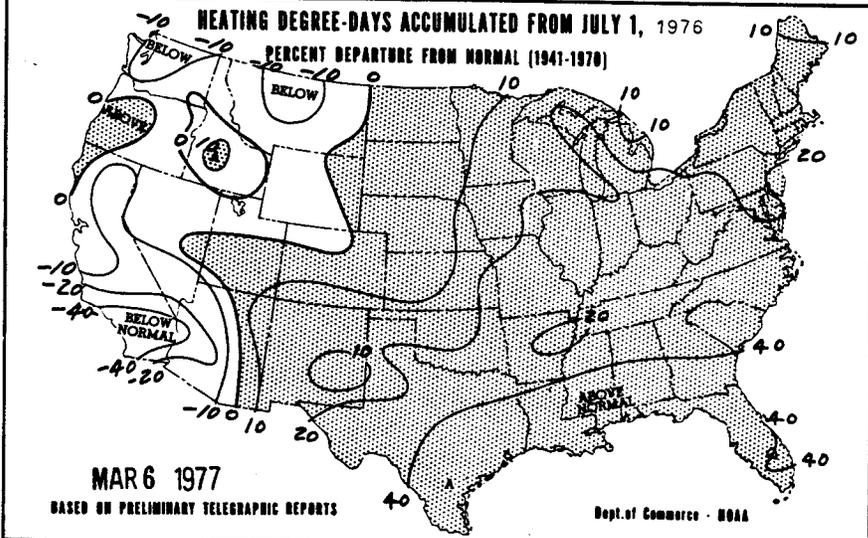
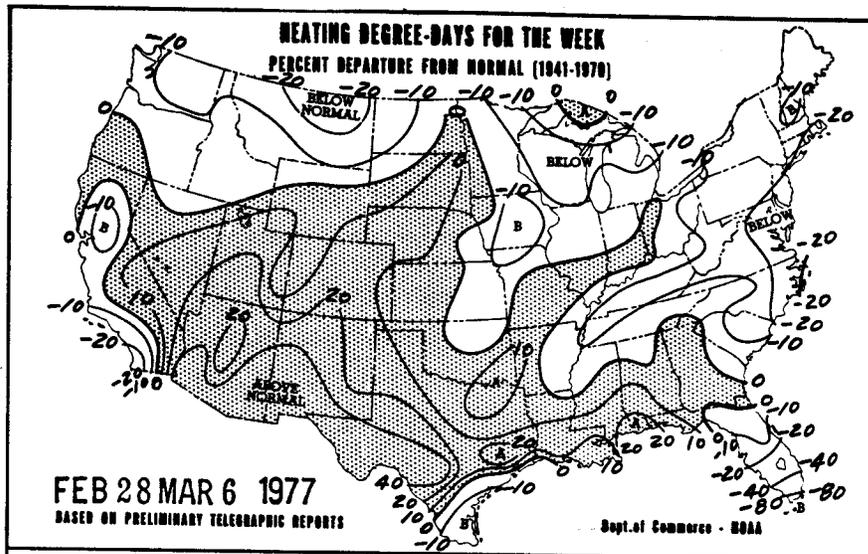
WISCONSIN: Temperatures in 20's north and 30's south. Around 7 in. snow fell northwest evening 2d, with rain and snow south. Snow continued north 3d as 5 to 9 in. fell, and south had 0.25

to 0.50 in. rain.

WYOMING: Temperatures up to 10° below normal.

Precipitation most areas still below normal. Most areas received a trace to 0.20 in.

Major activities: Seedbed preparation for spring planting, some planting, calving. Some early lambing. Feed supplies short in isolated localities. Livestock in good condition. Moisture conditions adequate only in northeast, short elsewhere.



Agricultural Climatology Service Office
 South Building Mail Unit
 U. S. Department of Agriculture
 Washington, D.C. 20250

IMMEDIATE - U. S. Weather Report
 This Report Will be Treated in All Respects as Letter Mail

POSTAGE AND FEES PAID
 U.S. DEPARTMENT OF COMMERCE



FIRST CLASS MAIL
 COM 210

HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING MAR. 6, 1977.

STATES AND STATIONS	WEEKLY			SEASONAL ACCUMULATION *			STATES AND STATIONS	WEEKLY			SEASONAL ACCUMULATION *			STATES AND STATIONS	WEEKLY			SEASONAL ACCUMULATION *			
	TOTAL	DEPARTURE*	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE*		TOTAL	DEPARTURE*	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE*		TOTAL	DEPARTURE*	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE*	
ALA. BIRMINGHAM...	1	3274	884	1023	1023	884	MAINE CARIBOU...	1	480	780	480	OKLA. OKLAHOMA CITY...	11	6199	1303	1642	OKLA. OKLAHOMA CITY...	11	3544	473	953
ARIZ. FLAGSTAFF...	3	4892	305	1023	1023	305	MD. BALTIMORE...	1	45	4390	640	OREG. ASTORIA...	1	3687	615	942	OREG. ASTORIA...	1	3687	615	942
ARK. FORT SMITH...	4	3807	273	111	111	273	MICH. ALPENA...	3	33	4723	488	PA. ALLENTOWN...	1	515	515	1103	PA. ALLENTOWN...	1	515	515	1103
CALIF. BAKERSFIELD...	7	1497	320	1023	1023	320	MINN. RAINY LAKE...	1	1023	1023	1023	PA. PHILADELPHIA...	1	5253	785	1023	PA. PHILADELPHIA...	1	5253	785	1023
COLO. DENVER...	2	4113	61	192	192	61	MISS. JACKSON...	1	1	291	813	S. CAROLINA CHARLESTON...	1	677	677	919	S. CAROLINA CHARLESTON...	1	677	677	919
CONN. BRIDGEPORT...	3	454	33	433	433	33	MO. COLUMBIA...	1	10	1107	1107	TENN. CHATTANOOGA...	1	370	370	902	TENN. CHATTANOOGA...	1	370	370	902
DEL. WILMINGTON...	15	4534	663	1078	1078	663	MONT. BILLINGS...	2	2	505	338	TEXAS AUSTIN...	1	4070	744	888	TEXAS AUSTIN...	1	4070	744	888
FLA. OPALACHICOOLA...	1	1919	71	674	674	71	NEBR. GRAND ISLAND...	1	1	500	500	UTAH SALT LAKE CITY...	3	448	83	4	UTAH SALT LAKE CITY...	3	448	83	4
GA. ATLANTA...	1	3537	371	1199	1199	371	NEV. LAS VEGAS...	1	1	480	480	VIC. MELBOURNE...	1	5181	718	1042	VIC. MELBOURNE...	1	5181	718	1042
IDAHO. BOISE...	1	4847	439	1023	1023	439	IND. INDIANAPOLIS...	1	1	480	480	VA. RICHMOND...	1	4260	844	1173	VA. RICHMOND...	1	4260	844	1173
ILL. CHICAGO...	1	4374	117	1023	1023	117	IOWA IOWA CITY...	1	1	480	480	WASH. BELLINGHAM...	1	4260	844	1173	WASH. BELLINGHAM...	1	4260	844	1173
IND. EVANSVILLE...	1	4827	104	1420	1420	104	KANS. CONCORDIA...	1	1	480	480	WIS. GREEN BAY...	1	781	1158	1428	WIS. GREEN BAY...	1	781	1158	1428
IOWA IOWA CITY...	1	480	117	1023	1023	117	LA. BATON ROUGE...	1	1	480	480	WYO. CHEYENNE...	1	480	480	480	WYO. CHEYENNE...	1	480	480	480
KANS. CONCORDIA...	1	480	117	1023	1023	117	MAINE CARIBOU...	1	1	480	480										
KY. LEXINGTON...	1	480	117	1023	1023	117	MD. BALTIMORE...	1	1	480	480										
LA. BATON ROUGE...	1	480	117	1023	1023	117	MICH. ALPENA...	1	1	480	480										
MAINE CARIBOU...	1	480	117	1023	1023	117	MINN. RAINY LAKE...	1	1	480	480										
MD. BALTIMORE...	1	480	117	1023	1023	117	MISS. JACKSON...	1	1	480	480										
MICH. ALPENA...	1	480	117	1023	1023	117	MO. COLUMBIA...	1	1	480	480										
MINN. RAINY LAKE...	1	480	117	1023	1023	117	MONT. BILLINGS...	1	1	480	480										
MISS. JACKSON...	1	480	117	1023	1023	117	NEBR. GRAND ISLAND...	1	1	480	480										
MO. COLUMBIA...	1	480	117	1023	1023	117	NEV. LAS VEGAS...	1	1	480	480										
MONT. BILLINGS...	1	480	117	1023	1023	117	IND. INDIANAPOLIS...	1	1	480	480										
NEBR. GRAND ISLAND...	1	480	117	1023	1023	117	IOWA IOWA CITY...	1	1	480	480										
NEV. LAS VEGAS...	1	480	117	1023	1023	117	KANS. CONCORDIA...	1	1	480	480										
IND. INDIANAPOLIS...	1	480	117	1023	1023	117	LA. BATON ROUGE...	1	1	480	480										
IOWA IOWA CITY...	1	480	117	1023	1023	117	MAINE CARIBOU...	1	1	480	480										
KANS. CONCORDIA...	1	480	117	1023	1023	117	MD. BALTIMORE...	1	1	480	480										
LA. BATON ROUGE...	1	480	117	1023	1023	117	MICH. ALPENA...	1	1	480	480										
MAINE CARIBOU...	1	480	117	1023	1023	117	MINN. RAINY LAKE...	1	1	480	480										
MD. BALTIMORE...	1	480	117	1023	1023	117	MISS. JACKSON...	1	1	480	480										
MICH. ALPENA...	1	480	117	1023	1023	117	MO. COLUMBIA...	1	1	480	480										
MINN. RAINY LAKE...	1	480	117	1023	1023	117	MONT. BILLINGS...	1	1	480	480										
MISS. JACKSON...	1	480	117	1023	1023	117	NEBR. GRAND ISLAND...	1	1	480	480										
MO. COLUMBIA...	1	480	117	1023	1023	117	NEV. LAS VEGAS...	1	1	480	480										
MONT. BILLINGS...	1	480	117	1023	1023	117	IND. INDIANAPOLIS...	1	1	480	480										
NEBR. GRAND ISLAND...	1	480	117	1023	1023	117	IOWA IOWA CITY...	1	1	480	480										
NEV. LAS VEGAS...	1	480	117	1023	1023	117	KANS. CONCORDIA...	1	1	480	480										
IND. INDIANAPOLIS...	1	480	117	1023	1023	117	LA. BATON ROUGE...	1	1	480	480										
IOWA IOWA CITY...	1	480	117	1023	1023	117	MAINE CARIBOU...	1	1	480	480										
KANS. CONCORDIA...	1	480	117	1023	1023	117	MD. BALTIMORE...	1	1	480	480										
LA. BATON ROUGE...	1	480	117	1023	1023	117	MICH. ALPENA...	1	1	480	480										
MAINE CARIBOU...	1	480	117	1023	1023	117	MINN. RAINY LAKE...	1	1	480	480										
MD. BALTIMORE...	1	480	117	1023	1023	117	MISS. JACKSON...	1	1	480	480										
MICH. ALPENA...	1	480	117	1023	1023	117	MO. COLUMBIA...	1	1	480	480										
MINN. RAINY LAKE...	1	480	117	1023	1023	117	MONT. BILLINGS...	1	1	480	480										
MISS. JACKSON...	1	480	117	1023	1023	117	NEBR. GRAND ISLAND...	1	1	480	480										
MO. COLUMBIA...	1	480	117	1023	1023	117	NEV. LAS VEGAS...	1	1	480	480										
MONT. BILLINGS...	1	480	117	1023	1023	117	IND. INDIANAPOLIS...	1	1	480	480										
NEBR. GRAND ISLAND...	1	480	117	1023	1023	117	IOWA IOWA CITY...	1	1	480	480										
NEV. LAS VEGAS...	1	480	117	1023	1023	117	KANS. CONCORDIA...	1	1	480	480										
IND. INDIANAPOLIS...	1	480	117	1023	1023	117	LA. BATON ROUGE...	1	1	480	480										
IOWA IOWA CITY...	1	480	117	1023	1023	117	MAINE CARIBOU...	1	1	480	480										
KANS. CONCORDIA...	1	480	117	1023	1023	117	MD. BALTIMORE...	1	1	480	480										
LA. BATON ROUGE...	1	480	117	1023	1023	117	MICH. ALPENA...	1	1	480	480										
MAINE CARIBOU...	1	480	117	1023	1023	117	MINN. RAINY LAKE...	1	1	480	480										
MD. BALTIMORE...	1	480	117	1023	1023	117	MISS. JACKSON...	1	1	480	480										
MICH. ALPENA...	1	480	117	1023	1023	117	MO. COLUMBIA...	1	1	480	480										
MINN. RAINY LAKE...	1	480	117	1023	1023	117	MONT. BILLINGS...	1	1	480	480										
MISS. JACKSON...	1	480	117	1023	1023	117	NEBR. GRAND ISLAND...	1	1	480	480										
MO. COLUMBIA...	1	480	117	1023	1023	117	NEV. LAS VEGAS...	1	1	480	480										
MONT. BILLINGS...	1	480	117	1023	1023	117	IND. INDIANAPOLIS...	1	1	480	480										
NEBR. GRAND ISLAND...	1	480	117	1023	1023	117	IOWA IOWA CITY...	1	1	480	480										
NEV. LAS VEGAS...	1	480	117	1023	1023	117	KANS. CONCORDIA...	1	1	480	480										
IND. INDIANAPOLIS...	1	480	117	1023	1023	117	LA. BATON ROUGE...	1	1	480	480										
IOWA IOWA CITY...	1	480	117	1023	1023	117	MAINE CARIBOU...	1	1	480	480										
KANS. CONCORDIA...	1	480	117	1023	1023	117	MD. BALTIMORE...	1	1	480	480										
LA. BATON ROUGE...	1	480	117	1023	1023	117	MICH. ALPENA...	1	1	480	480										
MAINE CARIBOU...	1	480	117	1023	1023	117	MINN. RAINY LAKE...	1	1	480	480										
MD. BALTIMORE...	1	480	117	1023	1023	117	MISS. JACKSON...	1	1	480	480										