

# WEEKLY WEATHER AND CROP BULLETIN

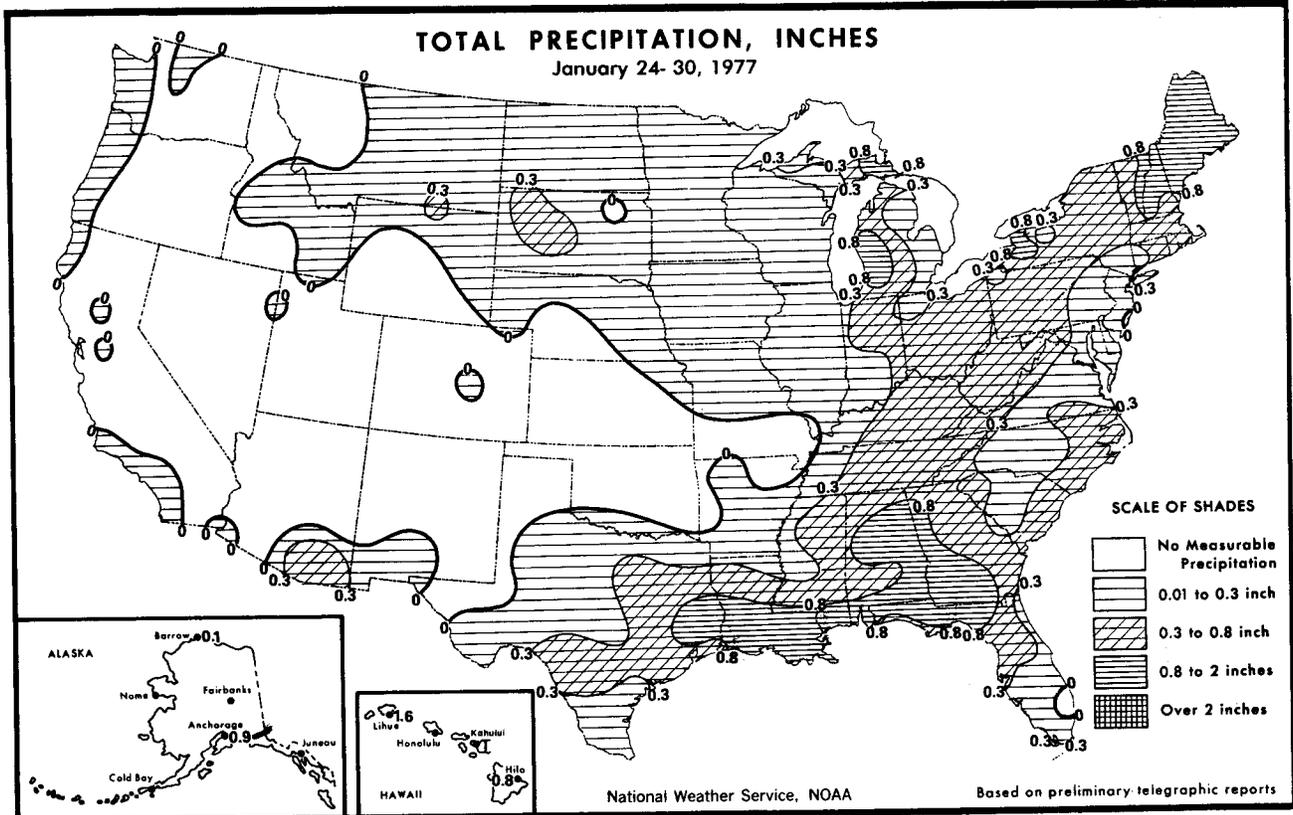
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## National Weather Summary

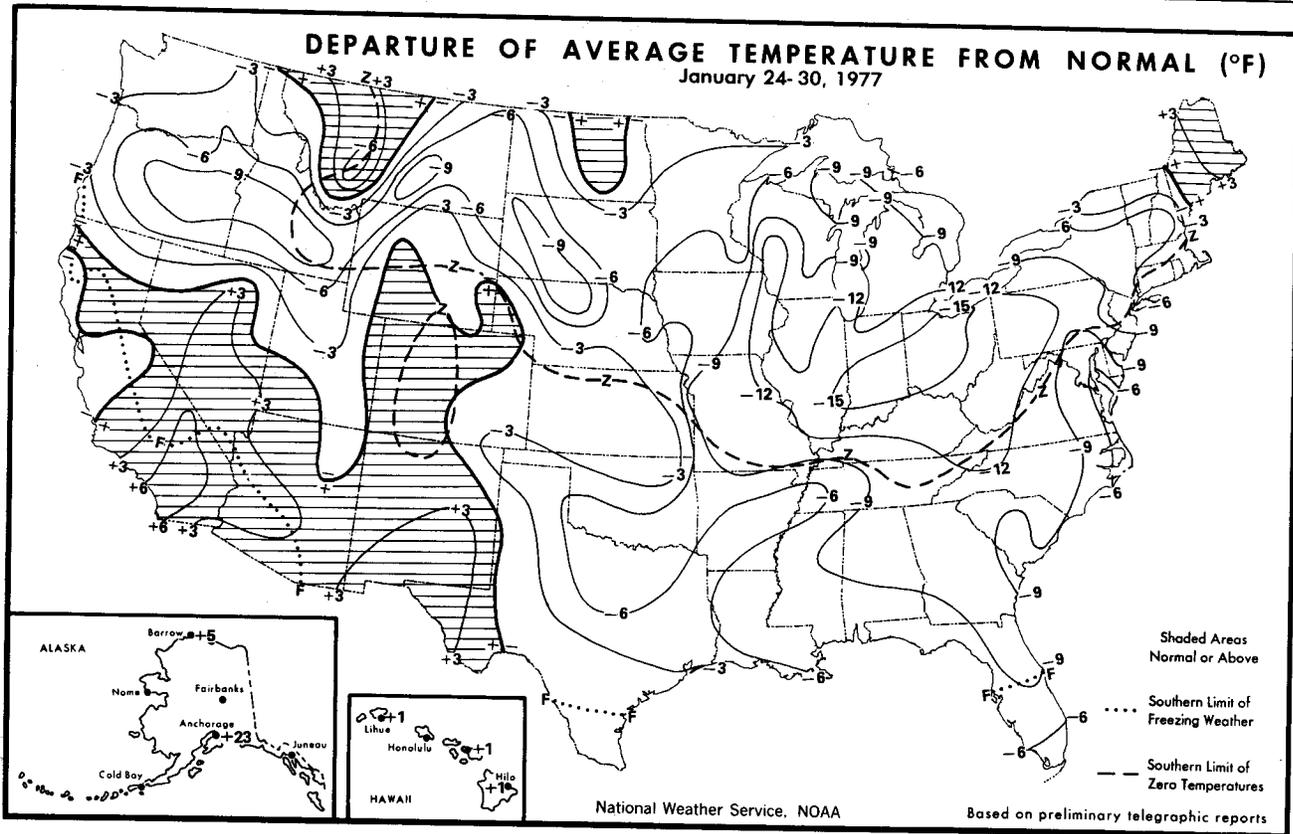
For the week of January 24-30

**HIGHLIGHTS:** Blizzard conditions in the northeastern quarter of the Nation and snow and ice in the South were the dominant features of the week's weather. Temperatures of 0° and below with snow accompanied by high winds followed a blast of arctic air into the Plains, the midwest and the Northeast late in the week. The icy wind penetrated insulation and clothing causing fuel consumption to soar, and numerous storm related deaths. Snow and freezing rain fell in the deep South causing extreme inconvenience to an area unaccustomed to such weather. Light drizzle along the Pacific Northwest coast and a few showers in extreme Southwest marked another very dry week in the West.

At midday on Monday snow was scattered over most of the Tennessee and Ohio Valleys through the southern and central Appalachians and the upper Great Lakes into Minnesota. Rain and drizzle was

falling over Alabama, Georgia, South Carolina and spreading into North Carolina. As the day progressed snow spread into Pennsylvania, Maryland and Virginia as the result of a low pressure system moving from the mid-South northeastward. It was not nearly so cold in eastern U.S. as it had been. Some areas in the Lower Great Lakes region and Ohio Valley had low temperatures Monday morning as much as 25° warmer than the previous day. A similar moderating trend was noted all along the Atlantic Coast and in the Southeast.

A low pressure center moved northward along the Atlantic Coast Tuesday morning spreading heavy snow across portions of Maine and New Hampshire after having left substantial amounts in Pennsylvania and New York. Rain fell along the coastlines from Virginia to the Carolinas and Georgia and in central and southern Florida. Elsewhere snow fell across portions of the upper Mississippi Valley, the Ohio Valley, the Great Lakes region



and the Appalachians. Rainshowers were widely scattered along the central California Coast Tuesday evening and snow flurries dotted the Missouri Valley. Afternoon temperatures were generally seasonable across most of the Nation.

The trend of moderating temperatures came to a halt in the northern Plains Wednesday morning. A large mass of air that had been stationary in the Polar region of northern Canada got colder and colder until its sheer weight caused it to plunge southward. Northerly winds gusting to 60 mph brought the frigid air into the northern Plains and upper Mississippi Valley. Drastic drops in temperature were noted as the front passed. A ten degree drop in temperature in one hour followed the frontal passage at Cedar Rapids, Ia. More dramatically, the temperature at 6 AM was 26° at Minneapolis, Mn. and at 9 AM it had dropped to 2° above zero. Snow and blowing snow accompanied the fronts progress and by late Wednesday snow was falling from eastern Montana and western North Dakota to northeast Kansas and parts of Missouri. A few rainshowers fell in the lower Mississippi Valley.

The thrust of cold air moved to the northeastern States and to the middle Mississippi Valley but was stopped at the middle Appalachians on Thursday. However, another arctic air mass began moving into the Nation via the northern Plains. Snow was widespread from the northern Plains into Iowa, Missouri, the Ohio Valley and the Great Lakes area. Elsewhere snow fell across the north Atlantic Coast States and in the middle and lower Appalachians. Gusty wind and blowing snow remained a problem in the Plains and Midwest. Seasonably mild temperatures covered the western third of the Nation with afternoon readings in the 20's and 30's across the intermountain region and the 40's and 50's in the Pacific Coast States.

Blizzard to near blizzard conditions raged Friday from the upper Mississippi Valley early in the day to the North Atlantic States by day's end. Temperatures dropped rapidly as the intense arctic cold front plummeted southward and eastward. In some areas the temperature fell from the 30's and 40's to near 0° in just a few hours. Some thundershowers broke out in eastern New England late Friday just before the cold front arrived. The lower Great Lakes and western New York bore the brunt of the blizzard as winds gusted to 75 mph and visibilities were reduced to zero in blowing snow.

Severe cold gripped the northeast and north central U.S. on Saturday. Temperatures near or below zero combined with winds of 25 to 40 mph held firm control over the Northeast, the Great Lakes region, the upper Mississippi Valley and the northern Plains Saturday afternoon. Late afternoon temperatures in the 20's and 30's stretched from southern Georgia to Louisiana. Western Kansas and Nebraska welcomed a temperature rise into the 40's. A ridge of high pressure continued over the West preventing the cold arctic air from spreading in that direction but also resulting in abnormally low precipitation in the area.

Unusually icy weather in the Deep South was the dominant weather factor on Sunday as snow, sleet, and freezing rain fell from north central Texas into Georgia and Florida. Elsewhere cold, windy weather with heavy snow squalls and blowing snow continued in the Great Lakes area. Early in the day some snow fell along the eastern slopes of the Rockies in Colorado and Wyoming. A few areas of rain or drizzle were reported along the north Pacific Coast but otherwise dry weather persisted in the West. Other than the South, the Lakes region and parts of New England sunny to partly cloudy skies prevailed over the rest of the Nation.

## National Agricultural Summary

For the Week of January 24-30

**HIGHLIGHTS:** More cold weather swept through most of the United States plunging temperatures as much as 17° below normal for the period and keeping stress on livestock. Newborn calves and lambs were particularly vulnerable to the extreme cold. Farmers fed and watered animals only with great difficulty in some areas. Water pipes froze and ponds froze solid; snows whipped by winds made many rural roads impassable in some of the North Central and Northeastern States. Snows provided new cover in some States but in the major winter wheat area very little snow cover existed to protect the crop or provide moisture during a thaw. Precipitation remained subnormal throughout most of the Nation causing concern for stock water supplies, grazing crops and the winter wheat crop. Most fall sown grains deteriorated from the extreme cold and dry conditions. Soil moisture was adequate to surplus only in the Gulf Coast and Atlantic Coast States. Farmers fed heavier rations of feed and forage to help livestock combat the cold.

**SMALL GRAINS:** The Nation's winter wheat crop declined under the influence of generally dry conditions and subnormal temperatures. The crop in the eastern North Central States finally got some snow cover but in most of the Great Plains winter wheat lay exposed but had very little wind damage.

The Kansas winter wheat crop rated only poor to fair condition. In Oklahoma most of the winter wheat was in fair condition but more of the crop slipped into poor condition. Some of the crop greened, responding to warmer but below normal temperatures. Some light blowing occurred in the west central area. Winterkill concerned some farmers. Texas winter wheat on the High Plains lacked adequate moisture but cold kept most fields dormant. Spring growth is very dependent on additional moisture. Winter wheat in other areas of Texas responded to milder weather but development lagged normal. In New Mexico dryland wheat rated poor but irrigated wheat scored fair in the north and good in the south.

In Montana winter wheat was in fair condition. Snow cover protection ranged from poor to fair except for some good cover in eastern areas. Wind damage was mostly light. In Washington winter wheat fields were bare and vulnerable to winterkill. The crop needs moisture. In Oregon wheat stands rated poor to fair in the east. In Missouri 51% of the winter wheat crop rated poor, 35% fair and 14% good. The Illinois crop was in mostly fair condition with snow giving some helpful protection. The Ohio crop now has snow too. In Virginia winter grains were only 67% of normal, the lowest since 1966; and well below the 89% average for the date. The North Carolina crop was in poor to fair condition.

**OTHER CROPS:** Florida sugarcane growers harvested the crop quickly hoping to cut as much freeze-damaged cane to limit potential losses. Young sugarcane was in very poor condition. In Texas sugarcane harvest advanced as field conditions permitted. In Arizona spring sugarbeets developed a good taproot and top growth.

Tobacco plant bed preparation advanced in South Carolina. Georgia tobacco plants were in fair condition. Ohio tobacco farmers needed warmer weather to proceed with stripping operations. In Kentucky about half of the burley markets conducted sales. Dark fired markets opened with light

volume. Growers were stripping some leaf.

Texas farmers prepared land for spring planting but wet fields slowed progress in the south and dust storms were common over plowed fields on the northern High Plains.

**FRUITS AND NUTS:** Orchard operators pruned trees in New Jersey, South Carolina, Oregon and Washington as weather conditions permitted. In Kentucky the peach crop appears lost but damage to fruit trees was too early to assess. In Florida citrus trees showed freeze damage with many trees beginning to defoliate. Citrus groves need moisture in all areas and growers began irrigating. Growers harvested the citrus crops very fast. Texas growers moved a steady volume of fruit in response to the local warm temperatures and the earlier Florida freeze. The Arizona citrus harvest slowed seasonally for grapefruit and was almost complete for Navel, early oranges and lemons. In California harvests of lemons, tangerines and desert grapefruit were active. The Navel orange harvest continued scoring high marks for quality.

**VEGETABLES:** Florida vegetable growers salvaged mature fruit from tender crops following the mid-month freeze. Harvests of these vegetables should decrease. Growers quickly replanted crops but plant shortages developed in some areas. Vegetable producers mowed green pepper fields expecting the plants to send out suckers. Snap bean, cabbage, sweet corn, cucumber, eggplant, lettuce, squash and tomato movement declined. Shipments of celery, chinese cabbage, strawberries and radishes increased. Overall volume of Florida vegetable shipments declined 12%. A substantial decrease in volume is expected for the next week. In Texas harvests of carrots, cabbage, spinach and cauliflower were active. Growers planted watermelons on drier soils. Land preparation for more vegetable crop planting was underway but wet fields put farmers well behind schedule. In Arizona growers harvested lettuce in the Yuma area. In California growers harvested broccoli, brussels sprouts, cauliflower, carrots, potatoes, artichokes, asparagus and cabbage. Demand for most winter vegetables increased following the Florida freeze. Farmers prepared land for spring vegetable crops.

**PASTURES AND LIVESTOCK:** The extremely cold temperatures and high winds in some areas of the Nation placed greater demands on feed supplies. Livestock producers fed heavier rations of feed and forage to help animals maintain body heat in the bone-chilling weather. In some of the western States cattle were able to find some grazing because of the milder temperatures. Southern pastures produced very little forage. In California drought plagued stockmen, drying rangelands and forcing sales of livestock for lack of feed. Foggy weather sustained surface moisture but prolonged cold, reduced sunlight and lack of deep moisture offset any benefit the fog had on grass growth. In many of the North Central States delivering feed and water to livestock became a worsening problem. Some low ponds froze solid, water pipes froze and wind-whipped snow closed some rural roads. Farmers in many parts of the Nation reported hay supplies shrinking fast. In eastern Texas pastures rated poor and elsewhere only a little better because cold and wet conditions stunted growth.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., January 30, 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 . . . . .    | 35             | -10       | 1.4                  | + .3      | La. Baton Rouge . . . . .    | 44             | - 7       | 1.4                  | + .4      | Youngstown . . . . .        | 11             | -14       | .5                   | - .1      |
| Mobile . . . . .             | 45             | - 7       | 1.2                  | + .2      | Lake Charles . . . . .       | 47             | - 6       | .8                   | - .1      | OKLA. Okla. City . . . . .  | 33             | - 5       | 0                    | - .3      |
| Montgomery . . . . .         | 39             | - 9       | .7                   | - .2      | New Orleans . . . . .        | 46             | - 7       | .9                   | - .2      | Tulsa . . . . .             | 35             | - 2       | 0                    | - .4      |
| ALASKA Anchorage . . . . .   | 36             | +23       | .9                   | + .7      | Shreveport . . . . .         | 42             | - 6       | .6                   | - .3      | OREG. Astoria . . . . .     | 38             | - 3       | .2                   | -1.9      |
| Barrow . . . . .             | -11            | + 5       | .1                   | 0         | MAINE Caribou . . . . .      | 14             | + 4       | 1.6                  | +1.1      | Burns . . . . .             | 15             | -11       | T                    | - .4      |
| Fairbanks . . . . .          | ---            | ---       | ---                  | ---       | Portland . . . . .           | 21             | 0         | 1.1                  | + .3      | Medford . . . . .           | 35             | - 3       | T                    | - .7      |
| Juneau . . . . .             | ---            | ---       | ---                  | ---       | MD. Baltimore . . . . .      | 27             | - 7       | 1                    | - .5      | Pendleton . . . . .         | 29             | - 4       | T                    | - .4      |
| Kodiak . . . . .             | ---            | ---       | ---                  | ---       | MASS. Boston . . . . .       | 25             | - 4       | .8                   | 0         | Portland . . . . .          | 34             | - 5       | .1                   | -1.1      |
| Nome . . . . .               | ---            | ---       | ---                  | ---       | Chatham . . . . .            | 27             | ---       | .6                   | ---       | Salem . . . . .             | 34             | - 6       | T                    | -1.5      |
| ARIZ. Flagstaff . . . . .    | 30             | + 2       | 0                    | - .4      | MICH. Alpena . . . . .       | 9              | - 8       | T                    | - .4      | PA. Allentown . . . . .     | 20             | - 7       | .1                   | - .5      |
| Phoenix . . . . .            | 57             | + 2       | T                    | - .1      | Detroit . . . . .            | 13             | -12       | .3                   | - .1      | Erie . . . . .              | 13             | -11       | .3                   | - .3      |
| Tucson . . . . .             | 53             | + 2       | T                    | + .7      | Flint . . . . .              | 11             | -11       | .2                   | - .2      | Harrisburg . . . . .        | 21             | - 9       | .2                   | - .4      |
| Winslow . . . . .            | 34             | + 2       | 0                    | - .1      | Grand Rapids . . . . .       | 13             | -10       | .9                   | + .5      | Philadelphia . . . . .      | 23             | - 9       | .2                   | - .4      |
| Yuma . . . . .               | 58             | + 2       | 0                    | - .6      | Houghton Lake . . . . .      | 7              | -10       | 1                    | - .2      | Pittsburgh . . . . .        | 14             | -14       | .6                   | 0         |
| ARK. Fort Smith . . . . .    | 32             | - 8       | 0                    | -1.0      | Lansing . . . . .            | 12             | -10       | .3                   | - .1      | Scranton . . . . .          | 16             | -10       | .1                   | - .4      |
| Little Rock . . . . .        | 36             | - 4       | 0                    | -1.0      | Marquette . . . . .          | 7              | -11       | .2                   | - .2      | R.I. Providence . . . . .   | 23             | - 5       | .4                   | - .4      |
| CALIF. Bakersfield . . . . . | 50             | + 1       | 0                    | - .2      | Muskegon . . . . .           | 14             | - 9       | 1.4                  | + .9      | S.C. Charleston . . . . .   | 40             | - 9       | .5                   | - .2      |
| Eureka . . . . .             | 47             | 0         | T                    | -1.1      | S. Ste. Marie . . . . .      | 7              | - 6       | .9                   | + .5      | Columbia . . . . .          | 38             | - 8       | .3                   | - .5      |
| Fresno . . . . .             | 48             | 0         | T                    | - .4      | MINN. Duluth . . . . .       | 3              | - 5       | 1                    | - .1      | Greenville . . . . .        | 33             | -10       | .4                   | - .5      |
| Los Angeles . . . . .        | 61             | + 4       | T                    | - .7      | Internatl Falls . . . . .    | 0              | - 2       | .2                   | + .1      | S.D. Aberdeen . . . . .     | 7              | - 3       | T                    | - .1      |
| Red Bluff . . . . .          | 47             | 0         | T                    | -1.0      | Minneapolis . . . . .        | 6              | - 6       | 1                    | 0         | Huron . . . . .             | 10             | - 3       | .1                   | 0         |
| San Diego . . . . .          | 63             | + 7       | T                    | - .3      | Rochester . . . . .          | 8              | - 5       | T                    | - .1      | Rapid City . . . . .        | 14             | - 8       | .3                   | + .2      |
| San Francisco . . . . .      | 49             | 0         | 0                    | - .9      | St. Cloud . . . . .          | 4              | - 5       | 1                    | - .1      | Sioux Falls . . . . .       | 9              | - 6       | T                    | - .2      |
| Stockton . . . . .           | 44             | - 2       | 0                    | - .6      | MISS. Jackson . . . . .      | 39             | - 8       | .3                   | - .8      | TENN. Chattanooga . . . . . | 31             | -10       | .4                   | - .9      |
| COLO. Denver . . . . .       | 32             | + 2       | T                    | - .1      | Meridian . . . . .           | 39             | - 8       | .3                   | - .7      | Knoxville . . . . .         | 31             | -10       | .7                   | - .4      |
| Grand Junction . . . . .     | 29             | + 1       | 0                    | - .2      | MO. Columbia . . . . .       | 19             | -11       | 1                    | - .3      | Memphis . . . . .           | 36             | - 5       | 1                    | -1.0      |
| Pueblo . . . . .             | 29             | - 2       | T                    | - .1      | Kansas City . . . . .        | 19             | -10       | 1                    | - .2      | Nashville . . . . .         | 30             | - 9       | .5                   | - .6      |
| CONN. Bridgeport . . . . .   | 26             | - 4       | .3                   | - .3      | St. Louis . . . . .          | 20             | -12       | 1                    | - .3      | TEX. Abilene . . . . .      | 38             | - 6       | .1                   | - .2      |
| Hartford . . . . .           | 20             | - 5       | .4                   | - .3      | Springfield . . . . .        | 24             | -10       | T                    | - .4      | Amarillo . . . . .          | 34             | - 3       | 0                    | - .1      |
| D.C. Washington . . . . .    | 30             | - 6       | 1                    | - .5      | MONT. Billings . . . . .     | 22             | -11       | 1                    | 0         | Austin . . . . .            | 47             | - 3       | .3                   | - .2      |
| FLA. Apalachicola . . . . .  | 47             | - 7       | .6                   | - .1      | Glasgow . . . . .            | 4              | - 6       | 1                    | 0         | Beaumont . . . . .          | 49             | - 3       | .6                   | - .4      |
| Daytona Beach . . . . .      | 50             | - 9       | T                    | - .5      | Great Falls . . . . .        | 26             | + 5       | T                    | - .2      | Brownsville . . . . .       | 61             | 0         | .1                   | - .3      |
| Ft. Myers . . . . .          | 57             | - 7       | .2                   | - .2      | Havre . . . . .              | 13             | + 1       | .2                   | + .1      | Corpus Christi . . . . .    | 55             | - 2       | .3                   | - .1      |
| Jacksonville . . . . .       | 45             | -10       | .2                   | - .5      | Helena . . . . .             | 24             | + 5       | 0                    | - .1      | Dallas . . . . .            | ---            | ---       | ---                  | ---       |
| Key West . . . . .           | 66             | - 5       | .4                   | 0         | Kalispell . . . . .          | 20             | 0         | T                    | - .3      | Del Rio . . . . .           | 51             | - 1       | .3                   | + .1      |
| Lakeland . . . . .           | 54             | - 7       | .1                   | - .5      | Miles City . . . . .         | 10             | - 6       | 1                    | 0         | El Paso . . . . .           | 49             | + 4       | T                    | - .1      |
| Miami . . . . .              | 62             | - 5       | T                    | - .5      | Missoula . . . . .           | 19             | - 3       | T                    | - .2      | Fort Worth . . . . .        | 37             | - 8       | .5                   | 0         |
| Orlando . . . . .            | 51             | -10       | .3                   | - .3      | NEBR. Grand Island . . . . . | 20             | - 3       | 1                    | 0         | Galveston . . . . .         | 51             | - 3       | .5                   | - .1      |
| Tallahassee . . . . .        | 46             | - 7       | 1.4                  | + .5      | Lincoln . . . . .            | 17             | - 6       | T                    | - .1      | Houston . . . . .           | 47             | - 5       | .8                   | 0         |
| Tampa . . . . .              | 53             | - 8       | .3                   | - .3      | Norfolk . . . . .            | 14             | - 5       | T                    | - .1      | Lubbock . . . . .           | 37             | - 2       | T                    | - .1      |
| W. Palm Beach . . . . .      | 59             | - 6       | T                    | - .6      | N. Platte . . . . .          | 19             | - 5       | T                    | - .1      | Midland . . . . .           | 43             | - 1       | T                    | - .1      |
| GA. Atlanta . . . . .        | 33             | -10       | .5                   | - .5      | Omaha . . . . .              | 16             | - 5       | .2                   | 0         | San Angelo . . . . .        | 44             | - 3       | .2                   | 0         |
| Augusta . . . . .            | 37             | - 9       | 1                    | - .7      | Valentine . . . . .          | 11             | -10       | .2                   | + .1      | San Antonio . . . . .       | 49             | - 2       | .8                   | + .4      |
| Macon . . . . .              | 38             | -10       | .5                   | - .4      | NEV. Ely . . . . .           | 24             | 0         | 0                    | - .1      | Victoria . . . . .          | 52             | - 2       | .2                   | - .3      |
| Savannah . . . . .           | 42             | - 8       | .3                   | - .3      | Las Vegas . . . . .          | 48             | + 3       | 0                    | - .1      | Waco . . . . .              | 42             | - 6       | .6                   | + .1      |
| HAWAII. Hilo . . . . .       | 73             | + 1       | .8                   | -1.3      | Reno . . . . .               | 34             | + 1       | T                    | - .3      | Wichita Falls . . . . .     | 35             | - 7       | .1                   | - .2      |
| Honolulu . . . . .           | ---            | ---       | ---                  | ---       | Winnemucca . . . . .         | 28             | - 2       | 0                    | - .2      | UTAH. Blanding . . . . .    | 27             | - 2       | 0                    | - .2      |
| Kahului . . . . .            | 72             | + 1       | T                    | - .8      | N.H. Concord . . . . .       | 12             | - 8       | .4                   | - .2      | Salt Lake City . . . . .    | 25             | - 4       | T                    | - .3      |
| Lihue . . . . .              | 72             | + 1       | 1.6                  | + .3      | N.J. Atlantic City . . . . . | 22             | -10       | 0                    | - .8      | VT. Burlington . . . . .    | 15             | - 1       | .5                   | + .1      |
| IDAHO. Boise . . . . .       | 21             | - 9       | T                    | - .3      | Trenton . . . . .            | 24             | - 8       | 1                    | - .5      | VA. Lynchburg . . . . .     | 27             | -10       | .2                   | - .4      |
| Lewiston . . . . .           | 30             | - 3       | 0                    | - .3      | N.MEX. Albuquerque . . . . . | 37             | + 1       | 0                    | - .1      | Norfolk . . . . .           | 34             | - 6       | .2                   | - .6      |
| Pocatello . . . . .          | 14             | -10       | T                    | - .2      | Roswell . . . . .            | 44             | + 5       | T                    | - .1      | Richmond . . . . .          | 31             | - 7       | .1                   | - .6      |
| ILL. Cairo . . . . .         | 28             | - 9       | 0                    | - .9      | N.Y. Albany . . . . .        | 13             | - 8       | .3                   | - .2      | Roanoke . . . . .           | 27             | -10       | .1                   | - .5      |
| Chicago . . . . .            | 11             | -13       | .1                   | - .3      | Binghamton . . . . .         | 13             | - 9       | .3                   | - .2      | WASH. Colville . . . . .    | 21             | - 4       | 0                    | - .4      |
| Moline . . . . .             | 12             | -10       | .2                   | - .2      | Buffalo . . . . .            | 14             | - 9       | .8                   | + .1      | Omak . . . . .              | 23             | - 1       | 0                    | - .3      |
| Peoria . . . . .             | 13             | -11       | .2                   | - .2      | New York . . . . .           | 24             | - 8       | .3                   | - .4      | Quillayute . . . . .        | 38             | - 1       | .1                   | -3.1      |
| Rockford . . . . .           | 9              | -11       | .2                   | - .2      | Rochester . . . . .          | 15             | - 9       | .3                   | - .3      | Seattle-Tacoma . . . . .    | 37             | - 2       | T                    | -1.3      |
| Springfield . . . . .        | 15             | -12       | .2                   | - .2      | Syracuse . . . . .           | 16             | - 7       | .3                   | - .3      | Spokane . . . . .           | 24             | - 3       | T                    | - .6      |
| IND. Evansville . . . . .    | 19             | -14       | .1                   | - .7      | N.C. Asheville . . . . .     | 27             | -11       | .2                   | - .6      | Walla Walla . . . . .       | 29             | - 6       | T                    | - .4      |
| Ft. Wayne . . . . .          | 12             | -13       | .3                   | - .3      | Charlotte . . . . .          | 33             | -10       | .2                   | - .6      | Yakima . . . . .            | 25             | - 4       | 0                    | - .3      |
| Indianapolis . . . . .       | 13             | -15       | .3                   | - .3      | Greensboro . . . . .         | 29             | -10       | .1                   | - .7      | W. Va. Beckley . . . . .    | 19             | -13       | .5                   | - .3      |
| South Bend . . . . .         | 14             | -10       | .5                   | 0         | Hatteras . . . . .           | 40             | - 5       | .7                   | - .3      | Charleston . . . . .        | 22             | -13       | .5                   | - .2      |
| IOWA. Burlington . . . . .   | 11             | -12       | .1                   | - .2      | Raleigh . . . . .            | 31             | -11       | .2                   | - .6      | Huntington . . . . .        | 23             | -12       | .5                   | - .3      |
| Des Moines . . . . .         | 13             | - 7       | .2                   | 0         | Wilmington . . . . .         | 38             | - 9       | .7                   | - .1      | Parkersburg . . . . .       | 20             | -13       | .4                   | - .3      |
| Dubuque . . . . .            | 6              | -12       | .4                   | 0         | N.DAK. Bismarck . . . . .    | 8              | 0         | T                    | - .1      | La Crosse . . . . .         | 6              | - 9       | .1                   | - .1      |
| Sioux City . . . . .         | 12             | - 7       | .1                   | - .1      | Fargo . . . . .              | 3              | - 3       | .2                   | + .1      | Madison . . . . .           | 3              | -13       | .2                   | 0         |
| KANS. Concordia . . . . .    | 24             | - 3       | T                    | - .2      | Williston . . . . .          | 2              | - 7       | .1                   | 0         | Milwaukee . . . . .         | 8              | - 9       | .1                   | - .2      |
| Dodge City . . . . .         | 32             | 0         | 0                    | - .1      | OHIO. Akron-Canton . . . . . | 12             | -14       | .4                   | - .2      | WYO. Casper . . . . .       | 23             | - 1       | T                    | - .1      |
| Goodland . . . . .           | 27             | - 1       | T                    | - .1      | Cincinnati . . . . .         | 14             | -17       | .4                   | - .4      | Cheyenne . . . . .          | 25             | - 2       | T                    | - .1      |
| Topeka . . . . .             | 26             | - 3       | .1                   | - .1      | Cleveland . . . . .          | 12             | -15       | .4                   | - .2      | Lander . . . . .            | 23             | + 2       | 0                    | - .1      |
| Wichita . . . . .            | 31             | - 1       | 0                    | - .2      | Columbus . . . . .           | 13             | -16       | .3                   | - .3      | Sheridan . . . . .          | 21             | - 1       | .4                   | + .2      |
| KY. Lexington . . . . .      | 20             | -13       | .6                   | - .3      | Dayton . . . . .             | 13             | -15       | .3                   | - .3      | P.R. San Juan . . . . .     | 75             | 0         | .9                   | + .1      |
| Louisville . . . . .         | 21             | -13       | .3                   | - .5      | Toledo . . . . .             | 11             | -14       | .3                   | - .1      |                             |                |           |                      |           |

Based on 1941-70 normals

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National Weather Service, NOAA; H.J. Delong, Statistical Reporting Service, USDA.

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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, NOAA.

**ALABAMA:** Cold and wet. Cold air on 21st dropped temperature in some areas 50° by 22d. Average temperature 9° below normal except 26th and 27th which was 2 and 3° above normal. Snow 30th with 3 to 5 in. in band across central.

Soil moisture adequate to surplus. Farm activities limited to care and feeding of livestock and poultry. No growth of small grains and winter grazing crops. Livestock poor to fair condition.

**ARIZONA:** Light precipitation many areas; 0.50 in. or more eastern areas weekend. Temperatures near normal.

Major activities: Land preparation, herbicide application, planting wheat, barley. Lettuce harvest, watermelon planting, citrus harvest active southwest. Wheat, barley planting 90 to 95% complete central, southwest. Early fields good stands, some fields showing tillers, joints. Spring sugarbeets good top growth, tap root development. Hay seasonally slow. Lettuce harvest continued Yuma. Harvest navels, early oranges virtually complete. Lemon harvest nearing completion. Grapefruit harvest seasonally slow. Additional rain, some higher elevations. Stock water supplies lower desert ranges adequate. Cattle, sheep and open ranges fair to good condition.

**ARKANSAS:** Temperatures 3 to 11° below normal. Light precipitation ranging from 0.05 to 0.50 in.

Very little field activity due to cold, ice and snow. Only activities in Delta include machinery repair, maintenance around barn. Cattle on full feed, hay shortage many areas. Some fencing accomplished. Few calves lost to freezing temperatures. Breaking ice on ponds to get water for cattle.

**CALIFORNIA:** Light precipitation fell on south about midweek and drizzle in the Central Valley. Temperatures near or above normal in all areas except the extreme northern portion at Tulelake.

Cool, dry weather continues. Small grains in need of rainfall. Cotton plowdown continuing. Avacado, lemon, tangerine and desert grapefruit harvest is active. Olive harvest for oil is slow. Navel orange harvest continues with quality good to excellent. Spring vegetable crop ground preparation and planting active. Demand for most winter vegetables high due to Florida freeze. Harvest very active for broccoli, brussels sprouts, cauliflower, carrots, potatoes. Lighter harvest artichoke, asparagus, and cabbage. Continuing drought plague stockmen, rangeland extremely dry. Forced sales of livestock, lack of feed. Foggy weather helped sustain surface moisture but prolonged cold, reduced sunlight, lack of deep moisture, offset what benefit fog had on grass growth. Water supplies remain below normal.

**COLORADO:** Light snow beginning of week in San Luis Valley with amounts up to 3 in. Very light snow in northern mountains 27th with several eastern plains locations receiving trace amounts weekend. Temperatures ranged 2 to 6° above normal in mountains and 1 to 7° above normal in western valleys. Eastern foothills and plains ranged 2 to 6° above normal, but near normal in extreme east.

**FLORIDA:** Unseasonably cold temperatures averaged

8 to 10° below normal. Frost or freezing temperatures mornings of 26th, 27th and 30th. Rainfall mostly light, averaging less than 0.50 in.

Soil moisture ample south, central, ample to excessive north, west. Very little land preparation due to continued cold weather. More cold-killed oats showing up. Sugarcane harvest very active as growers attempting to cut freeze damaged cane. Young cane very poor condition. Pasture condition continued to decline from freezes week of 17th. Temporary pastures, panhandle, north providing only limited grazing. Pastures, south severely browned, grazing sharply reduced. Supplemental feeding heavy, increasing. Hay shortages particularly evident panhandle, some northern areas. Condition cattle and calves remained good in north central, generally poor elsewhere from cold, reduced forage and hay supplies. Citrus trees still showing freeze damage, many beginning to have some defoliation. Rain needed all areas. Irrigation being applied. Harvest very active all areas. Post-freeze vegetable salvage of mature fruit active tender crops. Should decrease this week. Growers actively replanting crops. Plant shortages some areas. Some green pepper fields mowed off; expected to sucker out. Snap bean, cabbage, sweet corn, cucumber, eggplant, lettuce, squash, tomato movement declined. Steady supplies carrots, escarole, green peppers, potatoes. Shipments increased celery, chinese cabbage, strawberries, radishes. Overall movement declined 12%. Substantial volume decrease expected this week.

**GEORGIA:** Temperatures 7 to 10° below normal. Averages near 30's mountains to low 40's central and south. Precipitation 0.25 in. extreme north-west, 0.50 in. elsewhere. Sleet and snow north on 24th, amounts to 6 in. in mountains.

Wet and extremely cold conditions seriously restricted farm activities. Very little harvesting progress on corn, cotton, pecans, soybeans. Small grains, cattle, and pastures fair condition. Extremely short pasture feed supplies putting pressure on hay stocks in some areas. Tobacco plants fair.

**HAWAII:** Weather favorable. Showers some areas Hawaii, Kauai and Oahu beneficial. However, more rains needed. Maui and Kona area of Hawaii remained dry.

Irrigation restrictions continue Maui. Water level in reservoirs to irrigate sugarcane low. Irrigation interval longer than normal. Some cane fields showing stress. Vegetable supplies adequate. Banana supplies moderate to heavy. Papaya supplies moderate to heavy. Sugar harvesting light. Pineapple harvesting light. Most pastures poor to fair. Supplemental feeding and water hauling necessary some ranches.

**IDAHO:** Temperatures near normal north, 3 to 6° below normal south and east. Extremes: 47 and -10°. Precipitation extremely sparse.

Snow cover short. Cattle good shape. Feed supply adequate. Calving and lambing underway.

**ILLINOIS:** Temperatures 9 to 13° below normal. Precipitation 0.20 in. north, less than 0.10 in. south. Snow of 1 to 3 in. north with high winds, blowing snow.

Soil moisture mostly short. Winter wheat and

other small grains mostly fair; snow cover helpful. Livestock doing well most areas; feed consumption up. Main farmwork: Caring for livestock.

**INDIANA:** Very cold, blizzard, and prolonged blowing and drifting snow closed roads in central and north. Most schools and businesses closed because of roads and fuel shortages. January and winter to date coldest of record which exceeds 100 years. Temperatures averaged 14° below normal. Precipitation 0.20 to 0.50 in. of water. Snow cover generally 6 to 12 in. but near 24 in. near Lake Michigan.

Soils frozen 12 to 30 in. Except for snow removal and caring for livestock, most activities at standstill. Attempts continue to keep water lines open, and getting feed supplies to livestock. Hay use heavy. Some livestock losses reported.

**IOWA:** Cold and dry. Temperatures averaged from near 6° subnormal west to 15° colder than normal east. Bitterest cold was the 28th with temperatures -10 to -20° and high winds causing wind chill readings of -70 to -80°. Snow fell on the 26th to 28th with strong winds creating poor visibility. Snow cover is 1 or 2 in. with many fields bare, excepting 4 to 6 in. south and east.

**KANSAS:** Temperatures averaged 22° east central to 31° south central or near normal northwest to 5 to 7° below normal northeast and east central and from 1 to 3° below normal elsewhere. Precipitation limited to 0.10 in. or less northeast.

Cold weather created hardships for livestock. Supplemental feed supplies generally adequate. Hay supplies short in some central areas, adequate elsewhere. Wheat remains only poor to fair condition.

**KENTUCKY:** Snow cover ranged from 1 to 3 in. south to around 11 in. northeast. Temperatures ranged 10 to 15° below normal.

Extreme cold, snow and ice caused critical situations on farms. Livestock producers losing animals, especially young calves and pigs. Water systems freezing up and pond water hard to get. Hay and roughage shortages already developing with more than a month until grass will be available. About half burley markets still operating. Some tobacco being stripped. Dark fired markets opened with light receipts. Peach crop appears lost, too early to assess tree damage.

**LOUISIANA:** Temperatures 4 to 6° below normal. Extremes: 76 and 16°. Light to moderate rainfall south 26th. Snow totaling 4 to 5 in. north 30th; rain, sleet, light snow south.

Farm activity mainly feeding and care of livestock. Hay supply short.

**MARYLAND & DELAWARE:** Temperatures 8 to 10° below normal. Highs in 30's; lows in teens to mid-20's. Some mountain areas below 0°. Precipitation light, less than 0.50 in. Weekend sunny, windy and cold.

Farmwork confined to chores, machine repair and other indoor activities. Livestock fair to good condition. Supplemental feeding continued.

**MICHIGAN:** Abnormally cold temperatures ranged from 8 to 9° below normal in east and central Lower and 10 to 11° below normal elsewhere. Numerous new lows reported. Major storms swept State 26th and 28th accompanied by strong, gusty winds causing blizzard conditions. Precipitation averaged 0.22 in. over central and eastern Lower

Peninsula to over 1.00 in. along Lake Michigan. Over Upper Peninsula snow along Lake Superior exceeded 1 in. in some areas with an average 3 in. inland.

Severe weather conditions limited farm activity to necessary chores.

**MINNESOTA:** Temperatures 2° below normal in north to 6° below normal central and south. Temperatures near normal to midweek then much colder. Extremes: 31 and -34°. Precipitation near normal central; from 0.50 to 0.10 in. below normal south and from 0.10 to 0.20 in. above normal north. Precipitation ranged from 0.02 to 0.07 in. south and 0.20 to 0.36 in. north.

**MISSISSIPPI:** Temperatures 7° subnormal. Extremes: 16 and 69°.

Soil moisture mostly surplus. Fieldwork: 1.2 days suitable. Winter wheat and oats in poor condition. Livestock in poor to fair condition. Hay and roughage supplies very short to short. Feed grain supplies short to very short.

**MISSOURI:** Temperatures ranged from 6° below normal northwest prairie to 10° below normal east Ozarks. Precipitation averaged about 0.25 in.

Winter wheat condition poor to fair. Livestock requiring extra care and supplemental feeding. Hay supply short to adequate. Livestock water is critical. Some ponds are so low they are frozen solid. Over 16% of farmers hauling water. Frozen pipes are also a problem. Livestock care and keeping warm are main activities.

**MONTANA:** Eastern area temperatures well below normal, with snow most days. About 12 in. new snow eastern border midweek. Precipitation above normal east and north central, none received western half. Temperatures 1 to 6° below normal; slightly above central and northwest.

Winter wheat remains fair condition. Wind damage mostly light. Snow cover protection poor to fair except good in east. Most livestock receiving supplemental feed and in good condition. Grazing difficult east and south central, generally open elsewhere. Calving now starting.

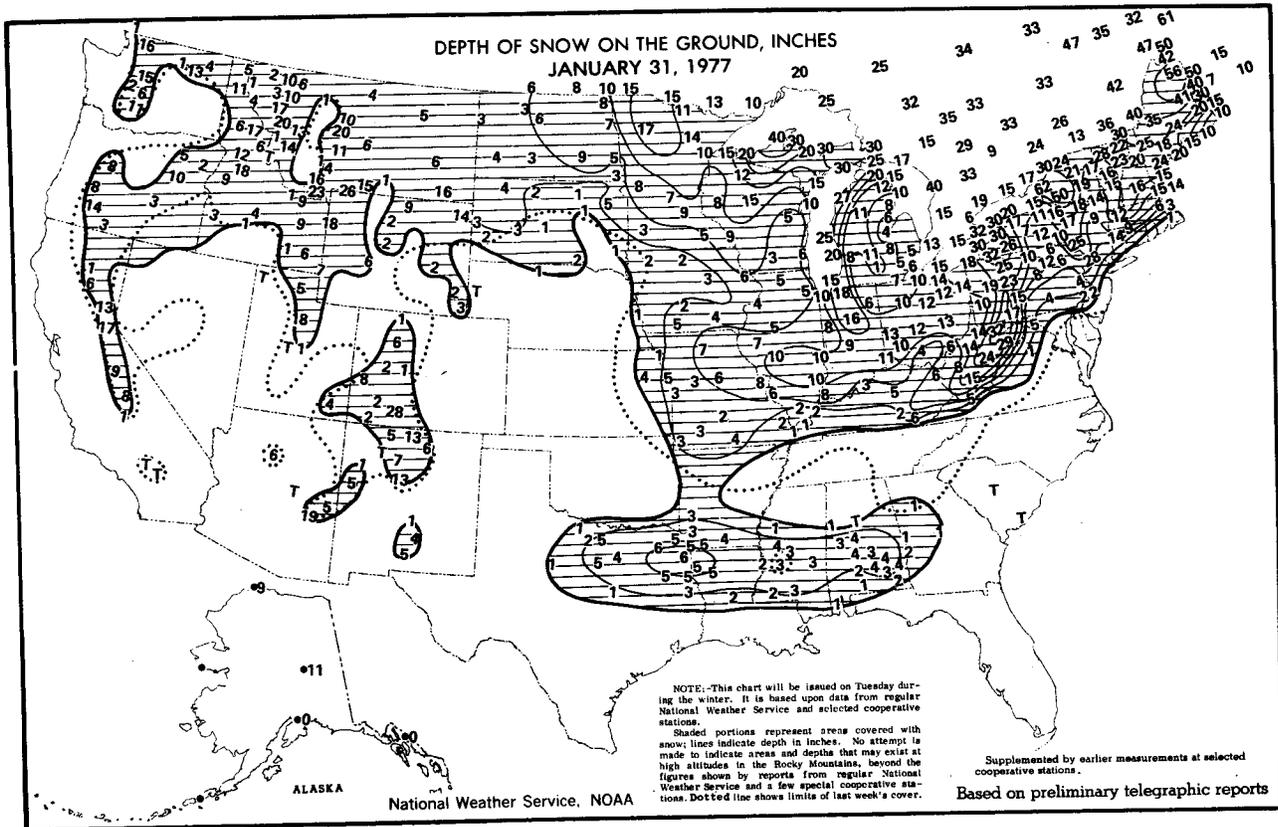
**NEBRASKA:** Temperatures 3 to 8° above normal first half of period and 10 to 34° below normal latter half. Snow fell over north and east averaging 1 in.

**NEVADA:** Sunny skies, warm afternoons and cool nights. Temperatures ranged from -5° to 66°. No precipitation.

Livestock wintering well as temperatures continue above average. There is growing concern because of lack of winter snows which are badly needed to fill depleted reservoirs.

**NEW ENGLAND:** Temperatures fluctuated from near normal to well below normal. On 28th cold air sent temperatures tumbling with Boston reporting 41° at 9:00 p.m., 25° at midnight and 11° by early morning 29th. On 28th high winds brought rain and some thunderstorms. On 29th heavy snows occurred mainly over northern portions of Maine, New Hampshire and Vermont while snow squalls occurred to the south. Northern Maine received 12 to 15 in. of snow.

**NEW JERSEY:** Temperatures well below normal, averaging 16° north, 21° south and 25° coastal areas. Extremes: -7 and 47°. Precipitation well below normal, averaging 0.11 in. north, 0.13 in. south and 0.09 in. coastal sections.



Farmers caring for livestock, pruning fruit trees and doing other winter chores.

**NEW MEXICO:** Substantial rains and snows south central and southwest weekend with liquid equivalents to near 0.50 in.

Soil moisture short, few sections with adequate moisture. Ranges and livestock fair. Dryland winter wheat poor; irrigated fair north, good south. Winter barley good south. Pecan harvest nearing completion.

**NEW YORK:** Temperatures 7 to 9° below normal except near normal St. Lawrence Valley. Temperatures averaged 8° in Adirondacks to 20° in Hudson Valley. Extremes: -24 and 44°. Precipitation 1.00 in. or less.

**NORTH CAROLINA:** Record-breaking low temperatures averaged 15 to 20° below normal. Precipitation about normal. Up to 10 in. additional snow in mountains, 1 to 3 in. elsewhere.

Fieldwork: 0.6 day. Soil moisture adequate, to surplus. Pastures poor to fair. Small grains poor to mostly fair condition. Hay and roughage supplies short to adequate. Feed grain short to mostly adequate. Feeding livestock and maintenance principle farm activities.

**NORTH DAKOTA:** Temperatures ranged from 3° above normal to 2° below normal. Extremes: 35 and -33°. Precipitation ranged from 0.80 in. below normal to 0.11 in. above normal. Snow cover ranged from 2 to 11 in. with average of 5 in. Weekend weather cloudy skies, near 0°.

Livestock remain in good condition. Farm activity limited by cold weather.

**OHIO:** Very cold. Frequent snows with much blowing

and drifting. Blizzard conditions on 28th.

Fall sown grains now have snow cover. Warmer weather required for tobacco to come in case. Stripping very slow. Extreme cold weather caused increased feeding.

**OKLAHOMA:** Temperatures ranged from 3 to 8° below normal. Up to 4 in. snow southern sections with precipitation mostly less than 0.10 in. No precipitation elsewhere.

Wheat remains in mostly fair condition, with a larger portion rated poor each week. Some greening occurred in a few areas last week under warmer but below normal temperatures. Some light blowing occurred in the west central area. No assessment of winterkill but reporters are concerned. Limited progress made on seedbed preparation for spring sown oats and barley. Farm activity principally held to care of livestock and other routine chores. Ranges providing little forage, and cattle condition now mostly fair to poor. With ponds frozen, water supply is a problem.

**OREGON:** Temperatures 3 to 9° below normal inland, 2 to 4° above normal along coast. Extremes averaged 60's, 30's coast; 50's, 20's western valleys; 40's, teens east. Trace of precipitation recorded along coast and in some eastern areas.

Farm activity continues light. Winter wheat stands rated poor to fair in east. Dry weather conditions are allowing some early plowing in west. Pruning orchards, training berries. Hay supplies above normal in many areas. Some livestock remain on pasture due to mild weather. Lambing continues.

**PENNSYLVANIA:** Temperatures 8 to 15° below normal even with abundant sunshine. Cold front 28th accompanied by high winds whipped falling snow

into blizzard conditions. Extremes: 46 and  $-29^{\circ}$ . Melted precipitation 0.10 in. southeast and 0.50 to 1.00 in. northwest. New snow 2 to 6 in.

Farmers, especially in western sections, attempting to care for livestock under extreme weather conditions. Some milk trucks delayed.

**PUERTO RICO:** Island average rainfall 1.56 in. or 0.83 in. above normal. Temperatures averaged about  $75^{\circ}$  on coasts and  $70^{\circ}$  interior. Extremes: 94 and  $52^{\circ}$ .

Sugarcane harvest underway. Good weather for pruning, cleaning and fertilizing coffee farms. Tobacco planting and replanting active. Harvest in some areas. Pastures developing well but more rains needed south and west. Fertilizing, cleaning and planting active. Soil preparation, planting and fertilizing main activities food crop zones. More rains needed for normal development.

**SOUTH CAROLINA:** Temperatures below normal. Extremes: 10 and  $60^{\circ}$ . Precipitation below normal. Some snow in northwestern area.

When weather permitted, peach and apple trees were pruned, tobacco beds prepared, and general farm maintenance.

**SOUTH DAKOTA:** Arctic air pushed, temperatures 1 to  $9^{\circ}$  below normal. By weekend, lows below  $-15^{\circ}$ . Extremes:  $-38$  and  $48^{\circ}$ . Snows fell latter part week, mostly less than 0.10 in. of moisture. Very strong winds accompanied snow, producing near blizzard conditions.

Farm activity slow in cold weather. Caring for livestock.

**TENNESSEE:** Temperatures averaged 5 to  $15^{\circ}$  below normal. Snow totaling 2 to 5 in. covered the northeast with 1 in. or less elsewhere. Rain and snow midweek preceded another cold front 28th. Precipitation 0.25 to 0.75 in. were 0.50 to 1.00 in. below normal.

Cold weather quickly depleting hay supplies. Preparations made to ship hay from other States. Feeding and caring for livestock the only activities being performed. Land preparation behind schedule. Wheat crop in poor condition.

**TEXAS:** Through 27th temperatures at or above normal. Arctic air 28th. Precipitation began 29th, continued 30th, mainly over east. Snow north, rain south. Temperatures averaged 3 to  $5^{\circ}$  below normal except far south, where slightly above normal. Despite no precipitation during first 6 days, rainfall was normal. Little or no precipitation west, over 0.50 in. southeast. Normal ranges from less than 0.10 in. west to 1.00 in. southeast.

Winter returned late week after warm earlier. Warm, dry in central, south and east welcome relief, but did not last long enough. Wheat on High Plains short of moisture. Continued cold kept fields dormant. Future growth dependent on additional moisture. Other areas responded to open weather, but crop development behind normal. Oats provided only limited grazing as cold limited growth throughout winter. Oats responded to spring weather but wet fields warmed slowly and growth slow. Sugarcane harvest continues as conditions permit. Land preparation for spring underway, wherever conditions permit. Progress in south slowed by wet fields. On northern High Plains, dust storms common in plowed fields.

In Lower Rio Grande Valley, carrot, cabbage harvest continues. Steady volume of citrus moved in response to warm weather and Florida freeze. In Coastal Bend, land preparation well behind schedule. At Laredo, carrot, cabbage harvest

complete. Farmers planting watermelons on drier soils while early fields sprouting. In San Antonio-Winter Garden, harvest of carrots, cabbage, spinach continues. Some cauliflower ready. Land prepared for watermelons and potatoes. In East Texas, land preparation continued where fields dry enough to support equipment. North Texas farmers continued land preparations. Pruning, planting underway in peach orchards.

Ranges east, along upper Gulf Coast still poor. Cattle there poor. Supplemental feeding continued heavy. Hay supplies getting short. Death losses reported. Pastures elsewhere provided only limited grazing. Cold stunted growth. Livestock fair to good.

**UTAH:** Light snow early in period. Accumulated moisture generally very light. Soil moisture deposit becoming increasingly serious, especially northern mountain area. Average temperatures very variable due to local fog in valleys. Averages ranged from  $9^{\circ}$  below normal to  $11^{\circ}$  above.

Fair and unseasonably warm except in lower fog-covered valleys northwest made daily chores easier. Ranchers hauling water and feed to cattle and sheep on winter range. Farm flock lambing starting soon.

**VIRGINIA:** Temperatures 3 to  $11^{\circ}$  below normal. Extremes: 55 and  $2^{\circ}$ . Precipitation averaged 0.15 in., greatest snowfall in west and north.

Fieldwork prevented in most areas by unfavorable conditions. Topsoil moisture adequate to surplus. Feed supplies as percent of normal: Hay and roughage 56%, feed grain 73%. Most livestock on heavy rations. Losses of calves, lambs, pigs due to severe weather. Winter grain and grazing crops condition reported at 67% of normal, lowest since 1966, well below 89% average for the date. Chief activities were: Feeding and watering livestock, thawing pipes, and chores.

**WASHINGTON:** West: Temperatures near normal coastal area,  $2^{\circ}$  subnormal elsewhere. Trace of precipitation.

Frost widespread but no crop damage. Silage and hay adequate.

East: Readings  $2^{\circ}$  subnormal. Insignificant precipitation.

Pruning tree fruits and grapes. Potatoes and sugarbeets moving to processors. Winter wheat fields remain bare and vulnerable. Moisture needed. Calving and lambing progressing. Some increase in hay usage since ranges dry.

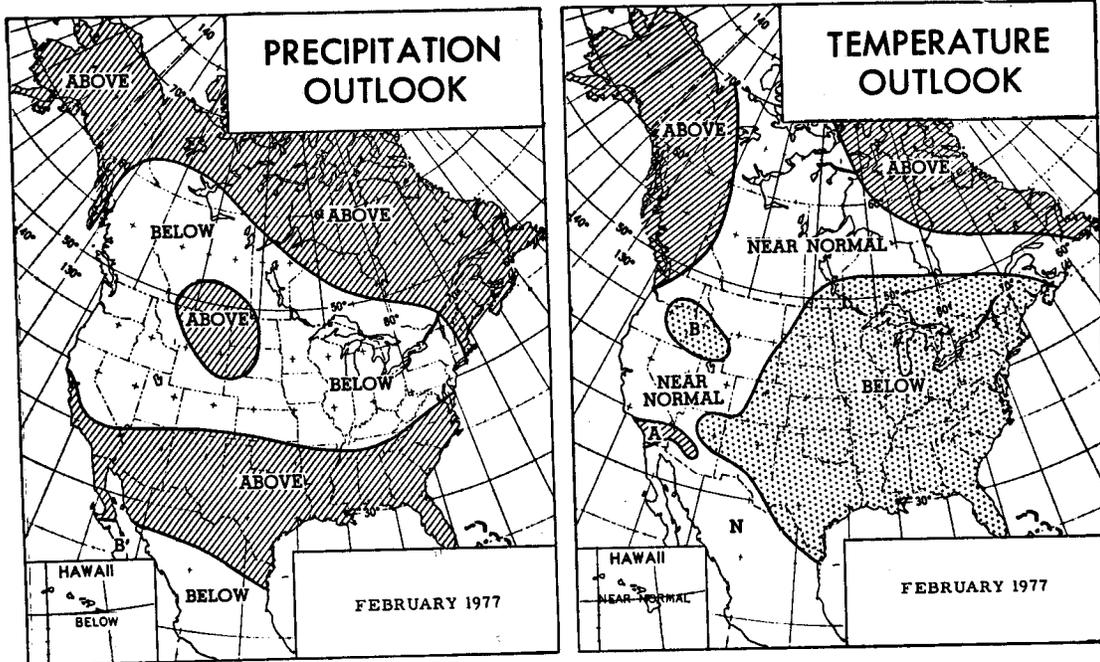
**WEST VIRGINIA:** Temperatures  $11^{\circ}$  below normal. Precipitation a little below normal. Windy and very cold with show each day. Extremes: 47 and  $-18^{\circ}$ .

Subfreezing temperatures causing heavy death losses in early calves and lambs. Livestock feed in very tight supply. Frozen water systems causing problems. Some cattle sold due to exhausted feed supply. Small grains covered by 18 in. snow.

**WISCONSIN:** Moderate temperatures in the 20's and low 30's until 26th when cold wave brought below zero weather again. Overnight lows on 27th ranged from  $-25^{\circ}$  north to  $-5^{\circ}$  south. Slight moderation on weekend to highs of  $10^{\circ}$ . Precipitation continued light, with scattered snow early in week and heavier amounts 25th to 26th. Gusty winds caused poor visibility, with blowing and drifting snow. Frost depths 28th averaged 30 in., a record since survey began in 1961. Snow cover averaged 10 in.

(continued page 10)

## Average Monthly Weather Outlook



## World Weather and Crop Update

**HIGHLIGHTS.** Bitter cold continued to grip the eastern half of the United States with fuel shortages compounding the problems created by nature. Rains in Cuba brought some relief from the 4-month drought. Heavy rains continue to alleviate the drought in Northeastern Brazil. Temperatures moderated over European USSR accompanied by light rain or snow. Temperatures also moderated in the Peoples Republic of China (PRC) but persisted below normal generally to the detriment of winter crops in the south. India received some precipitation in its northern wheat growing regions. But it was hot and dry over much of Australia with unirrigated spring crops and pastures in the south in need of moisture. Rains were general over the principal growing areas in South Africa.

**NORTH AMERICA.** Bitter cold in the eastern half of the United States combined with fuel shortages, continued to spotlight the multiple problems, including agriculture, created by the worst winter in decades. There has been no appreciable improvement in the moisture deficit in the Plains States which continue cold and dry. The California drought continues, and there has been no addition to the well-below-normal snow pack in the western mountains. A 4-month drought in Cuba has been temporarily broken with as much as 3 inches of precipitation in some places.

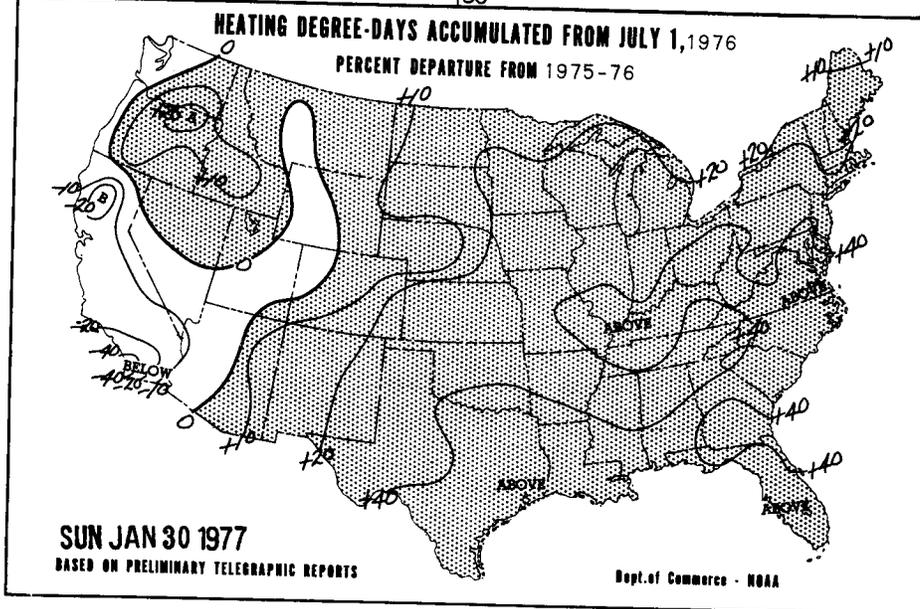
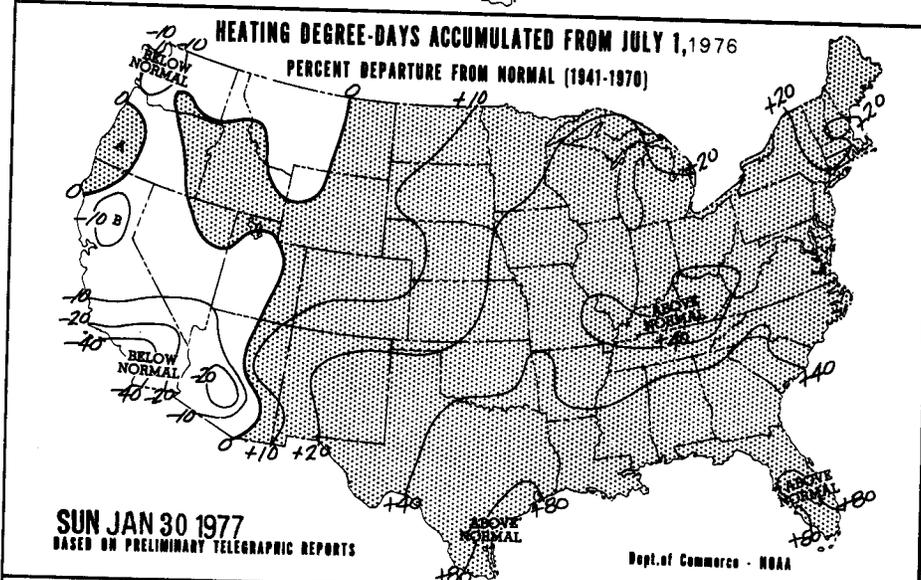
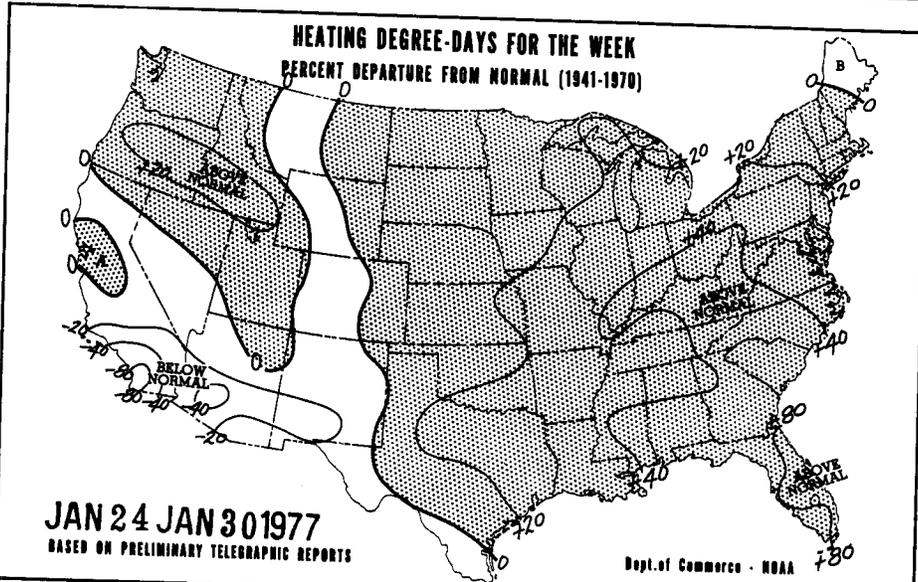
**SOUTH AMERICA.** Good rains in the northeast, central and coastal areas of Brazil continue to alleviate drought-stressed crops and improve grasslands in those areas. Heavy showers, up to 3 inches in places, have improved spotty drought conditions over western Brazil, Bolivia, Ecuador and northern Chile. Spring crops continue to develop under good conditions as timely rains fell in other important growing areas in Brazil and Argentina.

**USSR.** Bitter cold relaxed its grip over European USSR as temperatures climbed well above normal and light to moderate snow and rain fell over much of the area. There was, however, no appreciable precipitation in the Southern Urals, an important spring wheat region and a potential trouble spot if the moisture deficit is not alleviated.

**ASIA.** Temperatures in the PRC, although moderating somewhat, continue below normal over most of that country. Winter vegetables, lentils, rapeseed and other winter crops in some areas of southern China have probably been damaged by persistently below normal temperatures. Some wheat growing regions in northern India have received some much needed precipitation, but the rest of the country was seasonally dry. Temperatures soared above 100° over much of south and southeastern Australia as the heat wave placed additional stress on unirrigated crops and pastures. The excellent wheat harvest in that country, however, was virtually completed prior to the heat wave.

**AFRICA.** Generally good growing conditions continue in South Africa as moderate rains have fallen over the principal growing areas, including the maize triangle. Favorable cloud formations evident from satellite photos have probably brought some rain to Kenya, but amounts are unknown at this time. The Sahel continues seasonally dry following last summer's below normal monsoon rains.

**EUROPE.** Mild weather over Western and Eastern Europe has been interrupted by a moderate cold snap that has dropped temperatures 2-5 degrees C. below normal. Precipitation has been generally light with heavier amounts in parts of Greece, Italy's Po Valley, and in Spain. In North Africa, winter crops in Morocco continued to benefit from above normal precipitation, but rainfall in Algeria has been only about half of the January average.



HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING JAN. 30, 1977.

| STATES AND STATIONS   | WEEKLY |            | SEASONAL ACCUMULATION + |            | STATES AND STATIONS    | WEEKLY |            | SEASONAL ACCUMULATION + |            | STATES AND STATIONS    | WEEKLY |            | SEASONAL ACCUMULATION + |            |
|-----------------------|--------|------------|-------------------------|------------|------------------------|--------|------------|-------------------------|------------|------------------------|--------|------------|-------------------------|------------|
|                       | TOTAL  | DEPARTURE* | TOTAL                   | DEPARTURE* |                        | TOTAL  | DEPARTURE* | TOTAL                   | DEPARTURE* |                        | TOTAL  | DEPARTURE* | TOTAL                   | DEPARTURE* |
| ALA. BIRMINGHAM...    | 20     | 10         | 20                      | 10         | MAINE CARIBOU...       | 18     | 18         | 6027                    | 684        | OKLA. OKLAHOMA CITY... | 224    | 98         | 4838                    | 1261       |
| MOBILE...             | 20     | 10         | 20                      | 10         | PORTLAND...            | 11     | 11         | 4854                    | 764        | TULSA...               | 219    | 82         | 5015                    | 760        |
| MONTGOMERY...         | 20     | 10         | 20                      | 10         | MD. BALTIMORE...       | 269    | 51         | 3429                    | 716        | OREG. ASTORIA...       | 91     | 22         | 22                      | 62         |
| ARIZ. FLAGSTAFF...    | 21     | 11         | 21                      | 11         | MASS. BOSTON...        | 287    | 35         | 3553                    | 508        | BURNS...               | 20     | 22         | 22                      | 62         |
| PHOENIX...            | 21     | 11         | 21                      | 11         | MICH. ALPENA...        | 553    | 53         | 5187                    | 580        | HEDFORD...             | 20     | 22         | 22                      | 62         |
| TUCSON...             | 21     | 11         | 21                      | 11         | BETROIT...             | 441    | 41         | 4141                    | 500        | PENDLETON...           | 20     | 22         | 22                      | 62         |
| WINSLON...            | 21     | 11         | 21                      | 11         | FLINT...               | 441    | 41         | 4141                    | 500        | PORTLAND...            | 21     | 10         | 10                      | 46         |
| YUMA...               | 20     | 10         | 20                      | 10         | GRAND RAPIDS...        | 441    | 41         | 4141                    | 500        | SALEM...               | 21     | 10         | 10                      | 46         |
| ARK. FORT SMITH...    | 22     | 12         | 22                      | 12         | HOUGHTON LAKE...       | 441    | 41         | 4141                    | 500        | PA. ALLENTOWN...       | 315    | 31         | 3998                    | 704        |
| LITTLE ROCK...        | 22     | 12         | 22                      | 12         | LANSDALE...            | 441    | 41         | 4141                    | 500        | ERIE...                | 315    | 31         | 3998                    | 704        |
| CALIF. BAKERSFIELD... | 13     | 13         | 13                      | 13         | HARRISBURG...          | 441    | 41         | 4141                    | 500        | HARRISBURG...          | 315    | 31         | 3998                    | 704        |
| EUREKA...             | 13     | 13         | 13                      | 13         | PHILADELPHIA...        | 441    | 41         | 4141                    | 500        | PITTSBURGH...          | 315    | 31         | 3998                    | 704        |
| FRESNO...             | 13     | 13         | 13                      | 13         | SCRANTON...            | 441    | 41         | 4141                    | 500        | I. PROVIDENCE...       | 294    | 35         | 4051                    | 810        |
| LOS ANGELES...        | 13     | 13         | 13                      | 13         | MINN. DULUTH...        | 433    | 36         | 6441                    | 970        | S. C. CHARLESTON...    | 171    | 17         | 1900                    | 356        |
| SAN ANTONIO...        | 13     | 13         | 13                      | 13         | INTERNAT. FALLS...     | 433    | 36         | 6441                    | 970        | COLUMBIA...            | 171    | 17         | 1900                    | 356        |
| SAN FRANCISCO...      | 116    | 116        | 116                     | 116        | MINNEAPOLIS...         | 433    | 36         | 6441                    | 970        | GREENVILLE...          | 171    | 17         | 1900                    | 356        |
| STOCKTON...           | 116    | 116        | 116                     | 116        | ROCHESTER...           | 433    | 36         | 6441                    | 970        | S. DAK. ABERDEEN...    | 403    | 16         | 5190                    | 517        |
| COLO. DENVER...       | 230    | 13         | 3421                    | 67         | ST. CLOUD...           | 433    | 36         | 6441                    | 970        | HURON...               | 350    | 35         | 4051                    | 810        |
| GRAND JUNCTION...     | 230    | 13         | 3421                    | 67         | MISS. JACKSON...       | 177    | 51         | 2267                    | 809        | RAPID CITY...          | 350    | 35         | 4051                    | 810        |
| PUEBLO...             | 230    | 13         | 3421                    | 67         | MERIDIAN...            | 186    | 60         | 2368                    | 839        | ST. LOUIS...           | 350    | 35         | 4051                    | 810        |
| CONN. BRIDGEPORT...   | 278    | 33         | 3483                    | 599        | MO. COLUMBIA...        | 325    | 80         | 4151                    | 1158       | SPRINGFIELD...         | 325    | 80         | 4151                    | 1158       |
| HARTFORD...           | 321    | 41         | 4066                    | 655        | KANSAS CITY...         | 325    | 80         | 4151                    | 1158       | TEXAS ABILENE...       | 403    | 16         | 5190                    | 517        |
| DEL. WILMINGTON...    | 287    | 56         | 3472                    | 678        | ST. LOUIS...           | 325    | 80         | 4151                    | 1158       | HURON...               | 350    | 35         | 4051                    | 810        |
| D.C. WASHINGTON...    | 249    | 46         | 3099                    | 647        | SPRINGFIELD...         | 325    | 80         | 4151                    | 1158       | RAPID CITY...          | 350    | 35         | 4051                    | 810        |
| FLA. APALACHICOLA...  | 111    | 37         | 1410                    | 555        | MONT. BILLINGS...      | 301    | 51         | 4073                    | 108        | ST. LOUIS...           | 325    | 80         | 4151                    | 1158       |
| DAYTONA BEACH...      | 111    | 37         | 1410                    | 555        | GLASGOW...             | 301    | 51         | 4073                    | 108        | CHATTANOOGA...         | 325    | 80         | 4151                    | 1158       |
| FORT MYERS...         | 111    | 37         | 1410                    | 555        | GREAT FALLS...         | 301    | 51         | 4073                    | 108        | KNOXVILLE...           | 325    | 80         | 4151                    | 1158       |
| JACKSONVILLE...       | 111    | 37         | 1410                    | 555        | HAVRE...               | 301    | 51         | 4073                    | 108        | MEMPHIS...             | 325    | 80         | 4151                    | 1158       |
| KEY WEST...           | 111    | 37         | 1410                    | 555        | KELENA...              | 301    | 51         | 4073                    | 108        | NASHVILLE...           | 325    | 80         | 4151                    | 1158       |
| LAKELAND...           | 111    | 37         | 1410                    | 555        | KALISPELL...           | 301    | 51         | 4073                    | 108        | TEXAS AUSTIN...        | 403    | 16         | 5190                    | 517        |
| MIAMI...              | 111    | 37         | 1410                    | 555        | KALISPELL...           | 301    | 51         | 4073                    | 108        | BEAUMONT...            | 403    | 16         | 5190                    | 517        |
| ORLANDO...            | 111    | 37         | 1410                    | 555        | WHEELS CITY...         | 301    | 51         | 4073                    | 108        | BRANDSPRING...         | 403    | 16         | 5190                    | 517        |
| TALLAHASSEE...        | 111    | 37         | 1410                    | 555        | MISSOULA...            | 301    | 51         | 4073                    | 108        | CORPUS CHRISTI...      | 403    | 16         | 5190                    | 517        |
| TAMPA...              | 111    | 37         | 1410                    | 555        | NEBR. GRAND ISLAND...  | 313    | 19         | 4175                    | 440        | DEL RIO...             | 403    | 16         | 5190                    | 517        |
| WEST PALM BEACH...    | 111    | 37         | 1410                    | 555        | LINCOLN...             | 313    | 19         | 4175                    | 440        | EL PASO...             | 403    | 16         | 5190                    | 517        |
| GA. ATLANTA...        | 213    | 59         | 2775                    | 876        | NORFOLK...             | 313    | 19         | 4175                    | 440        | FORT WORTH...          | 403    | 16         | 5190                    | 517        |
| AUGUSTA...            | 213    | 59         | 2775                    | 876        | NORTH PLATTE...        | 313    | 19         | 4175                    | 440        | GALVESTON...           | 403    | 16         | 5190                    | 517        |
| Macon...              | 213    | 59         | 2775                    | 876        | OMAHA...               | 313    | 19         | 4175                    | 440        | HOUSTON...             | 403    | 16         | 5190                    | 517        |
| Savannah...           | 213    | 59         | 2775                    | 876        | VALENTINE...           | 313    | 19         | 4175                    | 440        | HOUSTON...             | 403    | 16         | 5190                    | 517        |
| IDAHO. BOISE...       | 314    | 73         | 3770                    | 1141       | NEV. ELY...            | 385    | 13         | 4358                    | 43         | HEADLAND...            | 403    | 16         | 5190                    | 517        |
| LEHISSION...          | 314    | 73         | 3770                    | 1141       | LAS VEGAS...           | 385    | 13         | 4358                    | 43         | SAN ANGELO...          | 403    | 16         | 5190                    | 517        |
| POCATELLO...          | 314    | 73         | 3770                    | 1141       | RENO...                | 385    | 13         | 4358                    | 43         | SAN ANTONIO...         | 403    | 16         | 5190                    | 517        |
| ILL. CHICAGO...       | 88     | 33         | 479                     | 1145       | WINNEBUCCA...          | 261    | 21         | 3548                    | 228        | VICTORIA...            | 403    | 16         | 5190                    | 517        |
| MILWAUKEE...          | 88     | 33         | 479                     | 1145       | N. H. CONCORD...       | 370    | 57         | 5141                    | 1023       | HICOITA FALLS...       | 403    | 16         | 5190                    | 517        |
| MOBILE...             | 88     | 33         | 479                     | 1145       | N. J. ATLANTIC CITY... | 370    | 57         | 5141                    | 1023       | UTAH SALT LAKE CITY... | 282    | 32         | 3416                    | 61         |
| PEORIA...             | 88     | 33         | 479                     | 1145       | TRENTON...             | 370    | 57         | 5141                    | 1023       | VT. BURLINGTON...      | 282    | 32         | 3416                    | 61         |
| ROCKFORD...           | 88     | 33         | 479                     | 1145       | N. MEX. ALBUQUERQUE... | 370    | 57         | 5141                    | 1023       | VA. LYNCHBURG...       | 250    | 54         | 3317                    | 815        |
| SPRINGFIELD...        | 88     | 33         | 479                     | 1145       | ROSMELL...             | 370    | 57         | 5141                    | 1023       | NORFOLK...             | 250    | 54         | 3317                    | 815        |
| IND. EVANSVILLE...    | 321    | 97         | 3750                    | 984        | N. Y. ALBANY...        | 364    | 56         | 4625                    | 752        | RICHMOND...            | 250    | 54         | 3317                    | 815        |
| FORT WAYNE...         | 321    | 97         | 3750                    | 984        | BINGHAMTON...          | 364    | 56         | 4625                    | 752        | ROANOK...              | 250    | 54         | 3317                    | 815        |
| LAFAYETTE...          | 321    | 97         | 3750                    | 984        | BUFALO...              | 364    | 56         | 4625                    | 752        | WASH. OULAYUTE...      | 190    | 10         | 3054                    | 197        |
| LINDSEY...            | 321    | 97         | 3750                    | 984        | NEW YORK...            | 364    | 56         | 4625                    | 752        | SEATTLE-TACOMA...      | 190    | 10         | 3054                    | 197        |
| SOUTH BEND...         | 321    | 97         | 3750                    | 984        | ROCHESTER...           | 364    | 56         | 4625                    | 752        | SPOKANE...             | 190    | 10         | 3054                    | 197        |
| IOWA. BURLINGTON...   | 366    | 76         | 4745                    | 1168       | SYRACUSE...            | 364    | 56         | 4625                    | 752        | HALLA WALLA...         | 190    | 10         | 3054                    | 197        |
| BES HAWES...          | 366    | 76         | 4745                    | 1168       | N. C. ASHEVILLE...     | 264    | 7          | 3352                    | 844        | VARTIA...              | 190    | 10         | 3054                    | 197        |
| DUBUQUE...            | 366    | 76         | 4745                    | 1168       | CHARLOTTE...           | 264    | 7          | 3352                    | 844        | W. VA. BECKLEY...      | 220    | 24         | 4333                    | 1078       |
| STOUCX CITY...        | 366    | 76         | 4745                    | 1168       | GREENSBORO...          | 264    | 7          | 3352                    | 844        | CHARLESTON...          | 220    | 24         | 4333                    | 1078       |
| KANS. CONCORDIA...    | 291    | 27         | 3853                    | 561        | HATTERAS...            | 264    | 7          | 3352                    | 844        | HUNTINGTON...          | 220    | 24         | 4333                    | 1078       |
| DODE CITY...          | 291    | 27         | 3853                    | 561        | RALEIGH...             | 264    | 7          | 3352                    | 844        | PARRERSBURG...         | 220    | 24         | 4333                    | 1078       |
| GOODYEAR...           | 291    | 27         | 3853                    | 561        | WILMINGTON...          | 264    | 7          | 3352                    | 844        | WIS. GREEN BAY...      | 410    | 60         | 5780                    | 1243       |
| TOPEKA...             | 291    | 27         | 3853                    | 561        | N. DAK. BISHARCK...    | 410    | 60         | 5780                    | 1243       | LACROSSE...            | 410    | 60         | 5780                    | 1243       |
| MICHAHA...            | 291    | 27         | 3853                    | 561        | FARGO...               | 410    | 60         | 5780                    | 1243       | MADISON...             | 410    | 60         | 5780                    | 1243       |
| KY. LEXINGTON...      | 315    | 91         | 3883                    | 1107       | HILLISTON...           | 410    | 60         | 5780                    | 1243       | WILBAURKE...           | 410    | 60         | 5780                    | 1243       |
| LOUISVILLE...         | 315    | 91         | 3883                    | 1107       | OHIO. ARRON-CANTON...  | 109    | 109        | 4707                    | 1221       | WYO. CASPER...         | 200    | 1          | 4240                    | 54         |
| LA. BATON ROUGE...    | 130    | 32         | 1623                    | 543        | CINCINNATI...          | 111    | 111        | 4745                    | 1219       | CHEYENNE...            | 200    | 1          | 4240                    | 54         |
| LAKE CHARLES...       | 130    | 32         | 1623                    | 543        | CLEVELAND...           | 111    | 111        | 4745                    | 1219       | LANDER...              | 200    | 1          | 4240                    | 54         |
| NEW ORLEANS...        | 130    | 32         | 1623                    | 543        | COLUMBUS...            | 111    | 111        | 4745                    | 1219       | SHERIDAN...            | 200    | 1          | 4240                    | 54         |
| SHREVEPORT...         | 130    | 32         | 1623                    | 543        | DAYTON...              | 111    | 111        | 4745                    | 1219       |                        |        |            |                         |            |
|                       |        |            |                         |            | TOLEDO...              | 111    | 111        | 4745                    | 1219       |                        |        |            |                         |            |

\* BASED ON 1941-70 NORMALS.

+ ACCUMULATION FROM JULY 1, 1976.

(continued from page 8)

WYOMING: Temperatures averaged 2 to 5° above normal. Precipitation mostly less than 0.10 in. except northeast where amounts generally around 0.25 in.

Conditions dry. Snow cover unusually variable; heavy in northeast to light or none in south. Snow pack remains below normal. Feed supplies adequate. Calving starting in some areas. Livestock in good condition.

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

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