

# Weekly Weather & Crop Bulletin

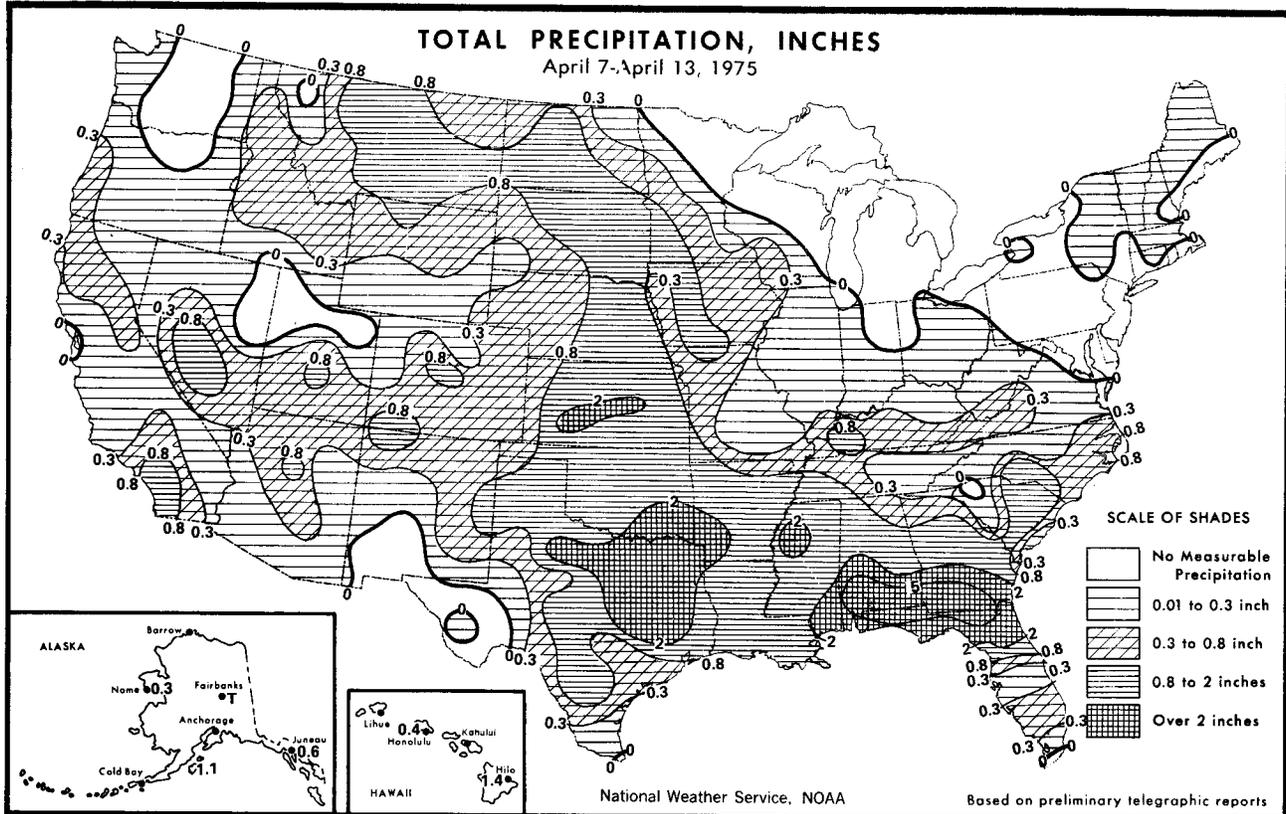
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## NATIONAL WEATHER SUMMARY

For the Week of April 7 - 13

**HIGHLIGHTS:** Old man winter seems reluctant to release his grip on the Nation. For the second week in a row almost all of the United States averaged below normal temperature. The exceptions were the extreme Southeast and the Northwest.

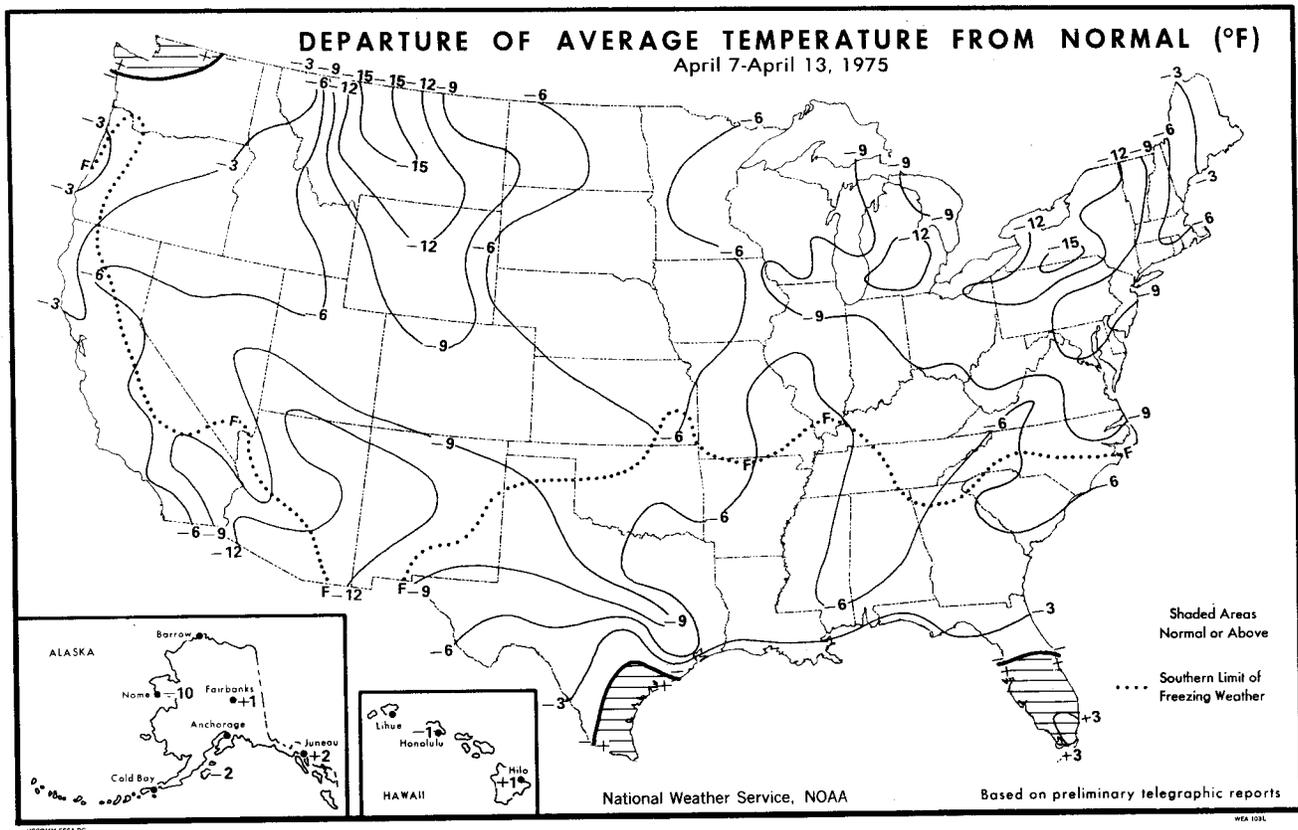
Heavy rain on the central Gulf Coast has caused record floods in that area. Lesser flooding occurred in northeast Texas as a result of moderate to heavy rains there.

**PRECIPITATION:** The week began Monday with another Colorado Low deepening as it moved northeastward. South of the low showers and thundershowers occurred in the High Plains of Texas and in Kansas. Occasional rain fell throughout the Plains and snow piled up in Montana, Wyoming and the Dakotas. A severe blizzard covered Montana east of the Continental Divide as winds to 50 mph, heavy snow and temperatures of 10° were reported. Some rain, and snow

at higher elevations, fell in Arizona.

By Tuesday the low had moved to western South Dakota and was beginning to weaken. Moderate to heavy snow was accompanied by high winds in the Dakotas and in Montana and Wyoming. A frontal system in southeast Texas triggered rain and showers northward throughout the Central Plains. Heavy rain with thunderstorms occurred in east Texas and caused some flooding. Rain and thunderstorms were reported eastward to Alabama. Elsewhere, showers brought more moisture to the West Coast from central California to Oregon.

On Wednesday, all that was left of the storm that had brought severe weather to the Plains and the northern Rockies was a weak low in Nebraska. The storms dying gesture brought snow mixed with rain to northern Iowa, southern Minnesota and southwest Wisconsin. Later heavy snow fell in South Dakota. Another disturbance moved into the Southwest. Snow



Thursday saw only light snow in northern Plains. The low pressure area in the southwest was producing showers of rain or snow from southern California to New Mexico. Snow in eastern New Mexico spread to the Texas Panhandle as the day progressed. Serious flooding occurred along the streams in Arkansas and east Texas. The dominate storm system was now the frontal wave which has moved to southern Alabama. Showers, rain and thunderstorms extended northeastward into South Carolina. Moderate rain fell from east Texas to Florida with the most severe weather in southern Alabama. Tornadoes added to the danger of the heavy rain which was swelling streams out of their banks.

After 24 to 36 hours of heavy rain, the storm began to diminish in the South by Friday but rain continued, heavy at times, from northern Florida to North Carolina. Serious flooding continued in Alabama. Elsewhere upslope flow brought snow showers to Colorado and Wyoming. Scattered showers of rain or snow fell in Nevada and Utah.

On Saturday a high pressure center in the Kansas-Oklahoma area pushed the front into the Gulf of Mexico and southward through Florida. Showers occurred along the front as it moved through Florida. Elsewhere the disturbance in the Southwest continued. Snow fell in eastern New Mexico and spread into west Texas and north to the Panhandle and into southeast Colorado.

Sunday dawned as a welcome bright clear day in the Southeast. However another wave formed on the coast of Texas threatening more severe weather for the South. The area of general low pressure in the Southwest caused a mixture of rain or snow in Ari-

zona, Nevada and Utah. Rain in southwest Texas spread east and north to Oklahoma, Kansas and Nebraska. Occasional rain or snow fell in the Dakotas. Snow fell in the mountains of southern California and into central Arizona. Meanwhile, the frontal system on the Gulf Coast spread rain and snow to the upper Mississippi Valley with thunderstorms confined to the lower Mississippi Valley and the Gulf Coast. Early morning hailstorms in Mississippi produced golf ball sized hail. By midday, thunderstorms were common along the Gulf Coast from Louisiana to Florida and were spreading northward to the lower Ohio Valley. Flooding began along many streams in the South.

**TEMPERATURE:** Warm air flowed northward into the Plains on Monday and cold air moved southward into the Rockies. McAllen, Texas, measured 74° and Cutbank, Mont. had a high of 3°.

On Tuesday temperature in the 50's reached as far north as eastern South Dakota while cold air continued to inundate the Rocky Mountain area from Montana to Arizona.

By Thursday temperature in the chilly 30's was the high reading in the upper Plains and Great Lakes area. The low 60's in southern Arizona was more than 15° below normal for this time of year.

It was chilly over much of the Nation on Friday with freezing weather pushing into the Ohio Valley, central Plains and southern Rockies.

Cool weather continued over most of the Nation on Saturday and Sunday. Maximum temperatures in the 30's were dominate across the northern States and portions of northeast Texas and Louisiana only reached the 50's.

## NATIONAL AGRICULTURAL SUMMARY

For the Week of April 7 - 13

**HIGHLIGHTS:** Subnormal temperatures throughout the Nation for the third straight week, continued to slow development of fall seeded crops and pastures and further delay spring planting in many States. Corn and cotton planting made slow progress except in few southern areas. Prior heavy snows along with damp and cool conditions are causing above normal deaths to livestock, mostly new born, in northern and western States.

**SMALL GRAINS:** Below normal temperatures for the third week in a row have restricted development of winter wheat over much of the major producing area. Wheat in Oklahoma was 54% jointing, normally 80% has reached this stage. Kansas wheat growth was slowed by cool weather and soil-borne mosaic was common in central and south central areas. Beneficial moisture was received statewide, however, western areas of Kansas still need much more. In Texas, the 1975 wheat crop was making excellent progress. Fields were headed from the Low Plains south and in southern areas early fields were approaching maturity. Added precipitation during the week helped to insure grain prospects in many areas of the State. Winter wheat in the southern Corn Belt varied from fair to good condition. Some fields were showing water damage, discoloration, and heaving. Recent rain helped to improve much of the crop in Nebraska, but warm weather is needed. Height of Kentucky's winter wheat averaged 7 in.; many acres suffered damage from high water. Condition ranged from fair to good in Mississippi, mostly good in Alabama, and excellent in Arkansas. Montana winter wheat was in fair to good condition as snow helped replenish the soil moisture supply. However, the condition of wheat in Colorado continued poor to fair as already short moisture supplies along with moderate to severe wind, damaged fields in the eastern plains.

Spring seeding lagging most areas except Indiana and Ohio. Oat seeding in Ohio was 40% complete versus 25% normally. In Indiana, seeding was 45% done compared with the average 30%. Seeding progress was behind normal for oats in Illinois; only half the normal pace in Kansas; while farmers in Iowa haven't been able to start seeding yet, normally 44% is complete. Small grains were in mostly good condition in Georgia and North Carolina. Early fields were heading out in the southern areas of Georgia. Winter-kill was light in fall seeded grain in Oregon and little reseeding was necessary.

**OTHER CROPS:** Very little fieldwork has been accomplished in Iowa, Michigan, Minnesota and Wisconsin, while progress continues ahead of normal in Indiana and Ohio. Open weather for the first time in 4 weeks allowed plowing and planting to get underway in Tennessee. Rain delayed field activities in most southern areas. Flooding in southern Alabama and Georgia and northern Florida will necessitate some replanting.

Corn planting got underway in Arkansas, California and Kansas. Planting in the Carolinas and Mississippi continued ahead of normal. Corn planting elsewhere in the South Central States ranges from 3% in Tennessee to 52% complete in Texas.

Cold wet weather delayed planting in Texas, but added moisture will aid germination.

Cotton planting was behind schedule in South Carolina, slow in California, and only a few acres had been planted in Alabama and North Carolina. Cold and wet weather delayed planting in Texas, 11% of the crop was planted versus 16% in 1974 and 14% normally. Cotton planting in Georgia was 2% done, much behind the 11% normally planted by mid-April.

Rice seeding was underway in Arkansas with 5% complete, slightly behind average. Seeding was slowed by rain in Louisiana with 45% done against 60% in 1974. In Texas, growers had 75% of their intended acreage seeded, ahead of both 1974 and average.

Sorghum planting was underway in Arkansas and advanced to 36% planted in Texas and slightly ahead of the normal pace. Some replanting was necessary in the Blacklands and south central areas due to earlier freezes.

Tobacco transplanting was underway for flue-cured in the coastal area of North Carolina; 80% complete in Georgia, ahead of both last year and normal. Seeding plant beds was 86% done in Kentucky and Tennessee, and 80% complete in Ohio, where usually only 40% has been seeded by mid-April. Wind, sand, and cool temperatures damaged plants in Maryland and Virginia, while scattered frost did light damage in Florida.

**FRUITS AND NUTS:** Florida citrus trees remain in good condition as bloom nears completion. Rain-fall was spotty and irrigation was widespread.

In California, the Navel orange harvest was slowed by cool, wet weather and the Valencia volume was gaining slowly. Lemon, grapefruit and avocado harvests were making good progress. Pears, prunes, plums, apples, and apricots were in various bloom stages.

The northern Texas peach crop suffered freeze damage, but in the south, the crop looks excellent. Peach condition was good in South Carolina, but early variety Peaches were poor in Georgia.

Spraying programs were active in most orchards across the Nation.

**VEGETABLES:** Vegetables continued to move in heavy volume in Florida. Increases of shipments in celery, peppers, snap beans and sweet corn more than offset declines in cabbage, cucumbers, escarole, lettuce, radishes, and tomatoes.

Onion harvest was gaining in the Texas Lower Rio Grande Valley along with light supplies of cabbage and carrots. Cantaloups, cucumbers, cabbage, onions, honeydews, and tomatoes were making good growth in most areas.

Artichokes, asparagus, broccoli, cauliflower, celery and lettuce harvests were active in California, while wet fields kept carrot digging slow.

**PASTURES AND LIVESTOCK:** Below normal temperatures continued to retard growth of pastures and ranges throughout much of the Nation. Feed shortages necessitated the need for farmers and ranchers in many areas to move livestock out on pastures with only limited new growth. Cold and wet weather the past 3 weeks has accounted for above normal deaths of new born calves and lambs and increased respiratory and pneumonia problems.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., April 13, 1975

| 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 . . .    | 56             | - 6       | 1.1                  | -.1       | La.Baton Rouge . . .    | 63             | - 4       | 1.1                  | -.1       | Youngstown . . .       | 33             | -13       | T                    | -.8       |
| Mobile . . .            | 63             | - 4       | 3.9                  | +2.5      | Lake Charles . . .      | 65             | - 3       | .9                   | -.1       | OKLA.Okla. City . . .  | 52             | - 7       | 1.4                  | + .7      |
| Montgomery . . .        | 58             | - 6       | .9                   | -.2       | New Orleans . . .       | 64             | - 3       | 1.5                  | + .5      | Tulsa . . .            | 53             | - 6       | 1.7                  | + .8      |
| ALASKA.Anchorage . . .  | ---            | ---       | ---                  | ---       | Shreveport . . .        | 61             | - 4       | 1.5                  | + .3      | OREG.Astoria . . .     | 46             | - 1       | .1                   | -1.1      |
| Barrow . . .            | ---            | ---       | ---                  | ---       | MAINE.Caribou . . .     | 33             | - 1       | .1                   | -.5       | Burns . . .            | 39             | - 4       | .1                   | 0         |
| Fairbanks . . .         | 26             | + 1       | T                    | -.1       | Portland . . .          | 38             | - 3       | T                    | -.8       | Medford . . .          | 46             | - 3       | .2                   | 0         |
| Juneau . . .            | 39             | + 2       | .6                   | -.1       | MD.Baltimore . . .      | 44             | - 8       | T                    | -.7       | Pendleton . . .        | 49             | - 1       | T                    | -.2       |
| Kodiak . . .            | 34             | - 2       | 1.1                  | + .2      | MASS.Boston . . .       | 41             | - 6       | T                    | -.8       | Portland . . .         | 48             | - 2       | T                    | -.5       |
| Nome . . .              | 6              | -10       | .3                   | + .1      | Chatham . . .           | 39             | ---       | 0                    | ---       | Salem . . .            | 46             | - 3       | .1                   | -.5       |
| ARIZ.Flagstaff . . .    | 29             | -12       | 1.1                  | + .7      | MICH.Alpena . . .       | 30             | - 8       | 0                    | -.6       | PA.Allentown . . .     | 40             | - 8       | T                    | -.9       |
| Phoenix . . .           | 57             | - 9       | .2                   | + .1      | Detroit . . .           | 36             | -10       | 0                    | -.8       | Erie . . .             | 32             | -11       | 0                    | -.8       |
| Tucson . . .            | 51             | -13       | .2                   | + .1      | Flint . . .             | 32             | -12       | T                    | -.6       | Harrisburg . . .       | 43             | - 8       | 0                    | -.6       |
| Winslow . . .           | 41             | -11       | .1                   | 0         | Grand Rapids . . .      | 32             | -12       | 0                    | -.8       | Philadelphia . . .     | 42             | - 9       | 0                    | -.8       |
| Yuma . . .              | 59             | -11       | .3                   | + .2      | Houghton Lake . . .     | 30             | -10       | 0                    | -.6       | Pittsburgh . . .       | 37             | -11       | T                    | -.8       |
| ARK.Fort Smith . . .    | 52             | - 9       | .9                   | -.2       | Lansing . . .           | 32             | -12       | 0                    | -.7       | Scranton . . .         | 36             | -11       | T                    | -.9       |
| Little Rock . . .       | 55             | - 5       | 1.4                  | + .2      | Marquette . . .         | 31             | - 7       | 0                    | -.6       | R.I. Providence . . .  | 40             | - 6       | 0                    | -.7       |
| CALIF.Bakersfield . . . | 58             | - 3       | .2                   | 0         | Muskegon . . .          | 35             | - 8       | T                    | -.8       | S.C.Charleston . . .   | 57             | - 6       | .1                   | -.6       |
| Eureka . . .            | 47             | - 2       | .3                   | - .4      | S. Ste. Marie . . .     | 26             | -10       | T                    | -.5       | Columbia . . .         | 57             | - 6       | .8                   | 0         |
| Fresno . . .            | 53             | - 6       | T                    | -.3       | MINN.Duluth . . .       | 28             | - 8       | 0                    | -.6       | Greenville . . .       | 53             | - 6       | T                    | -1.1      |
| Los Angeles . . .       | 55             | - 6       | .5                   | + .1      | Internat Falls . . .    | 33             | - 3       | 0                    | -.4       | S.D.Aberdeen . . .     | 39             | - 3       | .9                   | + .5      |
| Red Bluff . . .         | 52             | - 6       | .4                   | 0         | Minneapolis . . .       | 35             | - 8       | .2                   | -.2       | Huron . . .            | 38             | - 5       | .9                   | + .5      |
| San Diego . . .         | 57             | - 3       | 1.4                  | +1.2      | Rochester . . .         | 36             | - 6       | .2                   | -.3       | Rapid City . . .       | 37             | - 5       | .3                   | -.2       |
| San Francisco . . .     | 51             | - 4       | T                    | -.4       | St. Cloud . . .         | 32             | - 8       | .1                   | -.4       | Sioux Falls . . .      | 39             | - 5       | 1.0                  | + .5      |
| Stockton . . .          | 53             | - 4       | .2                   | -.2       | MISS.Jackson . . .      | 59             | - 5       | 1.6                  | + .5      | TENN.Chattanooga . . . | 51             | - 8       | .3                   | -.8       |
| COLO.Denver . . .       | 38             | - 8       | .2                   | -.2       | Meridian . . .          | 57             | - 7       | 1.6                  | + .3      | Knoxville . . .        | 52             | - 7       | .1                   | -.8       |
| Grand Junction . . .    | 42             | - 8       | .1                   | -.1       | MO.Columbia . . .       | 47             | - 6       | .2                   | -.7       | Memphis . . .          | 56             | - 5       | 1.5                  | + .2      |
| Pueblo . . .            | 43             | - 7       | .3                   | 0         | Kansas City . . .       | 47             | - 6       | .7                   | -.1       | Nashville . . .        | 52             | - 6       | .1                   | -.9       |
| CONN.Bridgeport . . .   | 39             | - 8       | 0                    | -.8       | St. Louis . . .         | 49             | - 6       | T                    | -.9       | TEX.Abilene . . .      | 55             | - 9       | .5                   | 0         |
| Hartford . . .          | 40             | - 6       | T                    | -.9       | Springfield . . .       | 48             | - 7       | .3                   | -.7       | Amarillo . . .         | 46             | - 9       | 1.0                  | + .8      |
| D.C.Washington . . .    | 48             | - 7       | T                    | -.6       | MONT.Billings . . .     | 29             | -14       | .8                   | + .4      | Austin . . .           | 65             | - 2       | .3                   | -.5       |
| FLA.Apalachicola . . .  | 64             | - 3       | 3.0                  | +2.1      | Glasgow . . .           | 33             | - 7       | .4                   | + .3      | Beaumont . . .         | 66             | - 2       | .9                   | 0         |
| Daytona Beach . . .     | 68             | - 1       | 1.8                  | +1.2      | Great Falls . . .       | 24             | -17       | 1.5                  | +1.2      | Brownsville . . .      | 75             | + 1       | T                    | -.3       |
| Ft. Myers . . .         | 74             | + 2       | .4                   | -.1       | Havre . . .             | 27             | -14       | .9                   | + .7      | Corpus Christi . . .   | 74             | + 2       | .1                   | -.3       |
| Jacksonville . . .      | 63             | - 4       | 4.4                  | +3.6      | Helena . . .            | 27             | -14       | .5                   | + .3      | Del Rio . . .          | 66             | - 5       | .4                   | + .1      |
| Key West . . .          | 80             | + 2       | 0                    | -.5       | Kalispell . . .         | 39             | - 1       | T                    | -.2       | El Paso . . .          | 53             | - 9       | T                    | -.1       |
| Lakeland . . .          | 73             | + 2       | .3                   | -.3       | Miles City . . .        | 32             | -11       | .9                   | + .6      | Fort Worth . . .       | 59             | - 5       | 2.9                  | +1.9      |
| Miami . . .             | 78             | + 4       | .1                   | -.7       | Missoula . . .          | 38             | - 4       | 1                    | -.1       | Galveston . . .        | 67             | - 1       | .4                   | -.2       |
| Orlando . . .           | 72             | + 2       | .2                   | -.5       | NEBR.Grand Island . . . | 44             | - 4       | 1.2                  | + .7      | Houston . . .          | 60             | - 8       | 1.7                  | + .9      |
| Tallahassee . . .       | 63             | - 4       | 5.0                  | +4.0      | Lincoln . . .           | 44             | - 5       | 1.0                  | + .4      | Lubbock . . .          | 49             | - 9       | .4                   | + .2      |
| Tampa . . .             | 73             | + 2       | .1                   | -.5       | Norfolk . . .           | 41             | - 5       | 1.8                  | +1.3      | Midland . . .          | 56             | - 7       | .1                   | 0         |
| W.Palm Beach . . .      | 74             | + 1       | .4                   | -.4       | N.Platte . . .          | 41             | - 5       | .7                   | + .3      | San Angelo . . .       | 58             | - 8       | .8                   | + .5      |
| GA.Atlanta . . .        | 56             | - 4       | .9                   | -.2       | Omaha . . .             | 45             | - 3       | .6                   | 0         | San Antonio . . .      | 66             | - 2       | 1.3                  | + .7      |
| Augusta . . .           | 56             | - 6       | .2                   | -.6       | Valentine . . .         | 40             | - 4       | .4                   | 0         | Victoria . . .         | 70             | + 1       | .4                   | -.2       |
| Macon . . .             | 59             | - 5       | .9                   | 0         | NEV.Ely . . .           | 31             | - 9       | T                    | -.2       | Waco . . .             | 55             | -11       | 3.2                  | +2.3      |
| Savannah . . .          | 62             | - 3       | .3                   | -.4       | Las Vegas . . .         | 54             | - 8       | .3                   | + .2      | Wichita Falls . . .    | 56             | - 7       | 1.1                  | + .4      |
| HAWAII.Hilo . . .       | 73             | + 1       | 1.4                  | -1.7      | Reno . . .              | 39             | - 6       | T                    | -.1       | UTAH.Blanding . . .    | 37             | - 9       | .4                   | + .2      |
| Honolulu . . .          | 73             | - 1       | .4                   | 0         | Winnemucca . . .        | 39             | - 5       | .1                   | 0         | Salt Lake City . . .   | 42             | - 6       | T                    | -.5       |
| Kahului . . .           | ---            | ---       | ---                  | ---       | N.H.Concord . . .       | 36             | - 6       | T                    | -.7       | VT.Burlington . . .    | 29             | -12       | .1                   | -.5       |
| Lihue . . .             | ---            | ---       | ---                  | ---       | N.J.Atlantic City . . . | 40             | -10       | T                    | -.8       | VA.Lynchburg . . .     | 49             | - 6       | .2                   | -.4       |
| IDAHO.Boise . . .       | 43             | - 4       | .4                   | + .1      | Trenton . . .           | 42             | - 8       | T                    | -.8       | Norfolk . . .          | 46             | -10       | .2                   | -.4       |
| Lewiston . . .          | 46             | - 3       | .3                   | 0         | N.MEX.Albuquerque . . . | 42             | -12       | .1                   | 0         | Richmond . . .         | 47             | - 9       | .1                   | -.5       |
| Pocatello . . .         | 37             | - 6       | .3                   | + .1      | Roswell . . .           | 47             | -11       | .3                   | + .2      | Roanoke . . .          | 49             | - 5       | .5                   | -.1       |
| ILL.Cairo . . .         | 54             | - 4       | .3                   | -.7       | N.Y.Albany . . .        | 34             | -11       | 0                    | -.6       | WASH.Colville . . .    | 44             | - 1       | .2                   | 0         |
| Chicago . . .           | 38             | -10       | T                    | -.9       | Binghamton . . .        | 28             | -15       | T                    | -.7       | Omak . . .             | 46             | - 1       | 0                    | -.2       |
| Moline . . .            | 39             | - 9       | .3                   | -.6       | Buffalo . . .           | 32             | -11       | T                    | -.7       | Quillayute . . .       | 45             | 0         | .1                   | -2.0      |
| Peoria . . .            | 43             | - 6       | .1                   | -.9       | New York . . .          | 42             | - 8       | T                    | -.8       | Seattle-Tacoma . . .   | 48             | 0         | .1                   | -.5       |
| Rockford . . .          | 37             | - 9       | .1                   | -.8       | Rochester . . .         | 30             | -14       | T                    | -.6       | Spokane . . .          | 42             | - 2       | T                    | -.3       |
| Springfield . . .       | 46             | - 5       | .1                   | -.9       | Syracuse . . .          | 32             | -12       | T                    | -.7       | Walla Walla . . .      | 50             | - 1       | T                    | -.3       |
| IND.Evansville . . .    | 49             | - 6       | .1                   | -.9       | N.C.Asheville . . .     | 50             | - 4       | T                    | -.9       | Yakima . . .           | 47             | - 1       | 0                    | -.1       |
| Ft. Wayne . . .         | 37             | -10       | T                    | -.8       | Charlotte . . .         | 54             | - 5       | .9                   | + .1      | W.Va.Beckley . . .     | 42             | - 8       | .4                   | -.4       |
| Indianapolis . . .      | 42             | - 8       | .1                   | -.8       | Greensboro . . .        | 51             | - 6       | .2                   | -.6       | Charleston . . .       | 44             | -10       | 0                    | -.8       |
| South Bend . . .        | 38             | - 8       | T                    | -1.0      | Hatteras . . .          | 48             | - 9       | 1.3                  | + .6      | Huntington . . .       | 46             | - 8       | T                    | -.8       |
| IOWA.Burlington . . .   | 43             | - 6       | .2                   | -.7       | Raleigh . . .           | 50             | - 8       | .2                   | -.5       | Parkersburg . . .      | 44             | - 9       | T                    | -.8       |
| Des Moines . . .        | 42             | - 5       | .6                   | 0         | Wilmingon . . .         | 56             | - 6       | .6                   | -.1       | WIS.Green Bay . . .    | 34             | - 8       | T                    | -.6       |
| Dubuque . . .           | 36             | - 9       | .4                   | -.6       | N.DAK.Bismarck . . .    | 34             | - 7       | 1.3                  | + .9      | La Crosse . . .        | 37             | - 8       | .5                   | -.1       |
| Sioux City . . .        | 42             | - 5       | .5                   | 0         | Fargo . . .             | 35             | - 5       | .3                   | -.2       | Madison . . .          | 37             | - 6       | .1                   | -.5       |
| KANS.Concordia . . .    | 46             | - 5       | 1.2                  | + .7      | Williston . . .         | 34             | - 6       | .4                   | + .1      | Milwaukee . . .        | 33             | -10       | T                    | -.6       |
| Dodge City . . .        | 45             | - 7       | 2.2                  | +1.8      | OHIO.Akron-Canton . . . | 36             | -11       | T                    | -.8       | WYO.Casper . . .       | 30             | -11       | .5                   | + .2      |
| Goodland . . .          | 40             | - 7       | .7                   | + .4      | Cincinnati . . .        | 43             | - 9       | .1                   | -.7       | Cheyenne . . .         | 32             | - 9       | .3                   | -.1       |
| Topeka . . .            | 48             | - 4       | .9                   | + .1      | Cleveland . . .         | 33             | -13       | T                    | -.8       | Lander . . .           | 30             | -11       | .3                   | -.2       |
| Wichita . . .           | 48             | - 7       | 1.2                  | + .5      | Columbus . . .          | 39             | -10       | T                    | -.8       | Sheridan . . .         | 29             | -13       | .4                   | -.1       |
| KY.Lexington . . .      | 45             | - 8       | .2                   | -.7       | Dayton . . .            | 40             | - 9       | T                    | -.8       | P.R.San Juan . . .     | 80             | + 3       | .4                   | -.3       |
| Louisville . . .        | 48             | - 6       | .2                   | -.8       | Toledo . . .            | 35             | -11       | T                    | -.7       |                        |                |           |                      |           |

Based on 1941-70 Normals

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## STATE SUMMARIES OF WEATHER AND AGRICULTURE

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

**ALABAMA:** Heavy rain fell across a wide elongated area of extreme south central and southeast on 9th. Totals during 2 day period rose to over 17.00 in. at Enterprise while 14.00 to 15.00 in. were common over an area from Evergreen to River Falls, Kinston and southeast of Enterprise. Flooding reached heights not experienced since the disastrous flood of 1929. Lighter amounts fell elsewhere, generally from 1.00 to 2.00 in. Temperatures varied from near normal early in the week to 5 and 10° subnormal on weekend.

Fieldwork halted midweek by rain. Generally, 2 days suitable for fieldwork. Corn 17% planted, 1974 20%, average 18%. Land 33% plowed. Soil moisture surplus throughout. Few acres cotton and peanuts planted. Wheat good condition, pastures fair and improving. Livestock poor to fair with marketings up.

**ARIZONA:** Cool, wet with temperatures 10 to 15° below normal. Precipitation 3 to 4 times normal.

Cotton planting nearing completion central, western areas. Small grains, safflower good progress. Sorghum activity seasonally light. Alfalfa hay cutting full swing warmer areas, yields lighter than normal. Sugarbeets reasonably good growth. Mixed vegetable harvest central, southwest. Potatoes good stands, Salt River Valley. Cantaloups, cucumbers, watermelons emerging and growing slowly Central Valley, some replanting necessary. Lettuce progressing normally Pima County. Deciduous fruit thinning active. Grape growers thinning shoots, pruning suckers. Citrus harvest Yuma, Maricopa Counties. Cattle, range conditions good. Runoff prospects good, spring feed prospects normal. Sheep condition good.

**ARKANSAS:** Cool, wet weather prevailed throughout week. Mean temperatures 6° below normal, cool beginning and end of week. Extremes: 79 and 25°. Heaviest precipitation extreme southeast.

Fieldwork advanced early in week, midweek rain stopped land preparation. Surplus soil moisture most of State. Considerable cropland under water. Fieldwork: 2.5 days available. Fuel and fertilizer supplies adequate. Seedbed preparation for cotton, rice and soybeans where land is dry. Rice 5% planted, 1974 15%, normally 7%. Oats and wheat in excellent condition showing good response to nitrogen applications. First corn and sorghum planted. Strawberries have excellent crop prospects. Peach trees in full bloom, no serious freeze damage. Cold weather, low fertilizer rates slowed hay and pasture growth. Pastures supplying inadequate amounts of forage. Cattle in poor condition.

**CALIFORNIA:** Cool, cloudy weather continued with snow in mountains and rain at lower elevations. Precipitation general except extreme southeast through 8th and over south late week. Amounts ranged from none extreme southeast to less than 1.00 in. north, and 1.00 to 3.00 in. Sierra Nevada, and over 1.00 in. along south coast. Minimum temperatures generally above 32° all low valleys. Average temperatures about 5 to 10° below normal, except 10 to 15° below normal southeast.

Grains continue to look good, dry warm weather aided growth. Fields heading out, few yellowing problems. Rice fieldwork beginning. Some cotton planted, mostly preparation and pre-irrigation.

Alfalfa cutting underway. Some corn planted. Sugarbeet harvest progressing. Frost protection devices utilized past week, damage slight. Pears, prunes, plums, apples, apricots, and walnuts in various bloom stages. Thinning table grapes south. Wine grapes leafing out. Navel orange harvest slowed by cool, wet weather. Valencia volume gaining slowly, weather holding tests low. Citrus and avocados show good bloom. Lemon, grapefruit and avocado harvests progress. Artichokes active. Asparagus active Delta. Broccoli and cauliflower strong, good quality. Carrot digging slow, wet fields Desert. Celery active, good quality. Lettuce past peak Palo Verde, active Santa Maria. Oxnard minor rain damage. Strawberries increasing. Cold temperatures north slowed feed growth, extended supplemental feeding stock animals. Southern, central valleys feed maturing, drying. Condition livestock varies. Sheep flocks moved into foothills in west. Stock water ample most areas.

**COLORADO:** Mountain temperatures average 8 to 11° below normal, elsewhere 3 to 7° below normal. Heavy snows mountains 20 to 40 in. San Juan Mountains. Lower elevations 0.10 to 0.30 in. Precipitation west slope, 0.20 to 0.40 in. eastern plains.

Wet snows late in week slowed fieldwork. Planting progressing slowly. Spring barley 13% seeded compared 34% 1974, average 40%. Oats 22% seeded compared 52% last year, 42% average. Sugarbeets 10% seeded compared 29% 1974, 22% average. Winter wheat and barley continue fair to poor, short on moisture with wind damage moderate to severe eastern plains. Livestock fair to good condition. Feed shortages some locales.

**FLORIDA:** Cool, dry weather prevailed first half, changing to warm and humid with showers second half. Temperatures averaged below normal north and near normal southern Peninsula. Rainfall generally light to moderate south half Peninsula, up to 6.00 and 7.00 in. north and central.

Flooding, parts of west, stopped farming activities. Damage heavy. Moisture adequate to excessive north. Central and south remain very dry; however, scattered rain brought some relief. Crops mostly fair condition. Scattered frost early in week caused light damage to tobacco plants and corn, not extensive. Peach and nectarine prospects good, thinning active. Sugarcane harvest practically complete, young cane excellent condition. Pastures making limited new growth most areas Peninsula. Panhandle pastures good progress with adequate to surplus moisture. Cattle beginning to lose weight as pastures continue to decline. Cattle and calves are in fair condition. Citrus trees good condition, bloom nearly complete. Rainfall light and spotty, irrigation widespread. Light frost central north caused very minor damage. Vegetables moved in heavy volume. Increases in snap beans, celery, sweet corn, peppers, potatoes more than offset declines in cabbage, cucumbers, escarole, lettuce, radishes, tomatoes. Watermelons increased sharply but volume continues light. Strawberries declining seasonally.

**GEORGIA:** Very heavy rainfall southwest on 10th with 5.00 to 8.00 in., some flooding. Elsewhere amounts 0.50 to 1.50 in. central and southeast, 0.25 to 0.50 extreme north and northeast. Temperatures 2 to 6° subnormal. Below freezing extreme

north and northeast mornings of 5th through 7th. Dry and cool weekend.

Soil moisture mostly surplus. Wet soils limited fieldwork to 2 days. Flooding some areas southwest will necessitate replanting. Tobacco fair to mostly good, transplanting 80% complete, 1974 72%, average 79%. Corn mostly fair to good, 27% planted, 17% 1974, average 31%. Cotton 2% planted, 1% 1974, 11% average. Peanuts 1% planted, equal 1974, average 7%. Small grains mostly good condition, heading in south, insect and disease problems. Early variety peaches poor, others fair to good. Watermelons fair to good, 48% planted, germination and growth restricted. Vegetables fair, growth retarded, poor stands. Pastures fair to mostly good. Cattle mostly fair, hogs good.

**HAWAII:** Weather favorable to crop growth. Rainfall light, getting drier on all islands. Irrigation becoming heavier. Spraying frequent to control insect infestation. Vegetable supplies adequate. Watermelon production increasing from Kauai and Oahu. Banana and papaya supplies light. Pastures in good condition. Pineapple harvest light. Most sugar mills in operation.

**IDAHO:** Cold wet weather throughout. Temperatures averaged well below normal, maxima upper 50's and low 60's north to upper 40's and 50's elsewhere. Minima mostly 20's except teens and subteens high valleys east and south central. Precipitation ranged from 0.03 in. above normal at Salmon to 0.76 in. above normal at Parma.

Fieldwork limited because of damp cool weather. Spring planting and crop progress lags normal 10 days to two weeks. Planting of potatoes continued on the lighter soils of southwest. Spring wheat, barley, and sugarbeet plantings southwest and south central, about 10% planted on each crop. Cattle and sheep moving to pasture in lower altitudes. Calving and lambing continues with losses higher than normal. Hay short in few localities.

**ILLINOIS:** Temperatures averaged 10° below normal north, 4 to 6° below normal elsewhere. Precipitation ranged from less than 0.10 to about 0.33 in. Most rain 7th and 8th.

Winter wheat mostly good condition, some discoloration, heaving, winter-kill. Oat seeding 30% complete, below both 1974 and average. Plowing for corn and soybeans 70% complete. Pastures fair to good, supplying 25% roughage requirements. Alfalfa and red clover hay fair to good condition. Fruit trees mostly good condition, light freeze damage. Fertilizer, fuel and pesticide supplies adequate. Livestock are mostly good condition. Soil moisture adequate 75%, surplus 25%. Main activities plowing, disking, fertilizer application. Fieldwork: 3 days suitable.

**INDIANA:** Sunshine, good drying prevailed. Temperatures 9° subnormal and ranged from 18° north to 67° south. Rainfall was minimal and averaged 0.01 in. north to 0.08 in. south.

Soil temperatures were 3 to 6° subnormal. Some soil nighttime freezing on surface north. Afternoon humidities were low, 8% below normal. Fieldwork averaged 6 days. Topsoil and subsoil moisture mostly adequate. Corn and soybean land 60% plowed, 40% average, 50% 1974. Oats 45% seeded, 30% average, 10% 1974. Winter wheat condition variable, some winter damage. Pastures poor to fair. Vegetative growth 2 days late. Fertilizer supplies mostly adequate, some nitrogen shortage.

**IOWA:** Temperatures averaged from 4° below normal southwest to 10° below normal east central. Precip-

itation was slightly above normal northwest to below normal southeast. Snowfall in extreme northeast 4 to 7 in. on 9th.

Almost no fieldwork started yet, except in extreme south. Warm weekend weather raised hopes of starting fieldwork, but rain the 13th, continuing yet the 14th will delay start further. Oat seeding normally 44% complete, but as of yet, not started. Plowing is still at the same level as last fall with 60% complete. Topsoil moisture 2% short, 61% adequate, and 37% surplus. This is the latest fieldwork start since 1965.

**KANSAS:** Week characterized by below normal temperatures. Precipitation general over the State, first of week and again on weekend. Western areas had best weekly rainfall totals since last fall.

Wheat growth slowed by cool weather. Soil-borne mosaic common central and south central. Beneficial moisture received throughout. West needs more. Spring oats 40% planted, 80% normal. Spring barley 50% planted, 75% normal. Very little corn planted.

**KENTUCKY:** Temperatures averaged 8 to 10° below normal. Precipitation occurred around midweek, averaging near 1.00 in. west to 0.10 in. east.

Farmers averaged 4 days in the field, less in western areas, more central and east. Soil moisture mostly surplus west, adequate elsewhere. Plowing 47% complete. Tobacco plant beds 86% seeded, 10% plants up. Wheat average height 7 in. About 15% small grain acreage suffered damage from high water. Pasture condition 82% normal.

**LOUISIANA:** Temperatures 2 to 6° below normal. Cool to mild, cloudy and rainy weather prevailed. Extremes: 83° on 9th, 41° Monroe 12th. Precipitation totals 1.25 to 2.50 in. Greatest 1-day rain 2.40 in. on 10th at Diamond.

Land preparation fair progress until midweek rains. Soil moisture mostly surplus. Days favorable for fieldwork 2.5. Corn 35% planted, 5% behind 1974, about normal this date. Rice seeding slowed, 45% seeded, 15% behind last year, 3% ahead of average. Cool weather slowed growth. Water mold, bronzing, and seedling blight taking heavy tolls scattered areas of most southern rice parishes. Sugarcane fertilization and herbicide application active where soils dry enough. Fieldwork behind schedule most farms. Growth slowed by cool weather. Strawberry harvest in full swing. Quality good, but rain lowered quality somewhat. Pastures mostly average; cattle mostly fair.

**MARYLAND AND DELAWARE:** Temperatures 6 to 10° below normal. Highs low 50's to low 60's, lows mostly low 20's to low 30's. Garrett County only area appreciable precipitation. Rest of 2 States 0 to 0.02 in.

Fieldwork slightly behind normal. Sowing spring oats starting important northern area. Tobacco seedbeds damaged by winds and blowing sand, some reseeded. Plants range from just emerging to size of dime. Low temperatures endangered peach buds but little damage. Full bloom important northern areas about April 20th. Planting green peas for processing well along, early fields up. Potato planting also started.

**MICHIGAN:** Colder than normal by about 12° southern lower and 10° in Upper Peninsula. Very dry with abundant sunshine and only about 0.02 in. precipitation fell southwest. Average temperatures ranged from the upper 20's over Upper Peninsula, low to mid-30's over southern Lower Peninsula. Warming trend end of week, most southern areas the upper

40's. A record low for April 12th occurred at Muskegon with a temperature of 19°.

**MINNESOTA:** Third consecutive cold week with temperatures averaging 4 to 8° below normal. Extremes: 10° above northeast on 11th to 55° above southwest on 13th. Precipitation confined to southwest and only significant snow on ground at week's end 17 to 23 in. northeast.

No fieldwork yet but continued favorable dry springlike weather would allow field preparation to begin next week southwest.

**MISSISSIPPI:** Temperatures averaged 3 to 8° below normal. Extremes: 83 and 27°. Rain over State on the 8th, 9th, and 10th. Rain returned during afternoon of 13th.

Soil moisture surplus to excessive. Days suitable for fieldwork: 1.5. Plowing 40% complete, normal 50%. Irish potatoes 75% planted, 1974 virtually complete. Corn 20% planted, 1974 25%, normal 14%. Wheat 75% jointing, normal 93%. Condition of wheat and oats fair to good. Condition of truck crops, peaches and pastures mostly fair. Condition of livestock poor to fair.

**MISSOURI:** Temperatures averaged 5 to 7° below normal. Greatest departures occurred north. Precipitation was general but light, amounts mostly less than 0.25 in.

Fieldwork 2.5 days suitable. Fertilizer spreading continues. Pasture condition mostly fair to good. Wheat condition fair to good. Oats seeding 26% complete, 82% 1974. Corn planting 15% complete in Bootheel, 2% statewide, 5% normal.

**MONTANA:** Cold and wet with heavy snow and strong northerly winds many areas east of Divide. Moderate temperatures and dry over weekend. Temperatures near normal west and north central, well below normal elsewhere. Maximums weekend mostly 40's and 50's except 60's west. Minimums near zero in coldest areas. Precipitation above normal except west. Exceptional heavy snow east of Divide, amounts of 1.00 to 2.00 in. moisture central and southwest.

Field tillage and spring planting delayed. Heavy snow replenished soil moisture but made livestock care difficult. Above normal calf and lamb losses most sections. Hay shortages developing. About 65% calving and 55% lambing complete. Shearing 50% done. Winter wheat fair to good.

**NEBRASKA:** Temperatures 5 to 7° below normal. Precipitation 0.40 to 0.60 in. intermittent throughout week.

Fieldwork: 2.0 days suitable. Topsoil moisture supplies short 21%, adequate 77%, surplus 2%. Subsoil moisture supplies short 93%, compared to 8% in 1974. Winter wheat fair condition, recent rain improved condition. Warm weather needed. Alfalfa, wild hay in fair condition. Sugarbeet ground preparation and planting slow. Cold weather detrimental to livestock health. Pasture and range feed conditions short 96%.

**NEVADA:** Cold early, warming trend toward end. Temperatures averaged 4 to 10° below normal. Extremes: 2° Ely to 75° Las Vegas. Frequent snow and rain showers, amounts generally light. Unseasonably cold temperatures brought additional 1 to 2 ft. new snow higher elevations. Snowpack well above normal Sierra Nevada Mountains.

Seedbed preparation delayed another week. Vegetative growth also limited. Calf and cow

deaths greater than normal.

**NEW ENGLAND:** No major storms. Much cloudiness held over New England early week with periods of snow flurries mainly north and east. Precipitation amounts light. Fair weather returned 10th thru 13th. Chill northerly winds lasted well into week. Newport, Vermont had 13° early 10th and Pittsfield, Massachusetts 22°. Boston had 46° on 9th and 12th.

**NEW JERSEY:** Very dry week averaging 8 to 11° below normal. Averages: 38° north and 40° central and south. Extremes: 18° Long Valley and 57° at several locations. Daily minimum temperatures below freezing since April 4th.

Soil temperatures averaging 45° below usual levels. Cold windy weather slowed field activities. Irish potato planting underway. Blooming of peach trees delayed by low temperatures. Winds caused some damage to early vegetable crops.

**NEW MEXICO:** Quite wet except the southern desert. Recurrent rains and snows most western and northern mountains almost daily with totals of 1.56 in. at Chama and 3.10 in. at Los Alamos. Los Alamos had about 2 ft. of snow late 11th and 12th. Substantial showers most of eastern plains last half of week. Temperatures very cold for early April with averages 8 to 11° colder than normal.

Soil moisture short to adequate with a few areas surplus. Small grains fair to good, 25% jointing on winter wheat and barley. Alfalfa fair to good and greening, northern alfalfa dormant due to cold temperatures. Very small acreage of cotton planted, soil temperatures not favorable for adequate germination. Lettuce, onions fair to good. Apples fair, early buds nipped by cold. Livestock fair to good with supplemental feed in snow areas. Ranges fair, poisonous weeds a problem.

**NEW YORK:** Temperatures unseasonably cold from 6° below normal at Bridgehampton to 14° below normal at Binghamton and Rochester. Extremes: 7° at Saranac Lake to 55° at Poughkeepsie. Precipitation was well below normal. The weekly total of 0.15 in. at Saranac Lake was the highest. Light precipitation early in week followed by spotty light amounts on weekend. Temperatures moderated slightly as week progressed, but dropped again on weekend. The 10th and 11th were the mildest days.

**NORTH CAROLINA:** Temperatures 4 to 8° above normal. Precipitation end of week averaging 0.50 to 0.75 in.

Fieldwork: 3.9 days suitable. Soil moisture 1% short, 86% adequate, 13% surplus. Flue-cured tobacco plant beds fair to good condition, burley beds mostly fair. Transplanting flue-cured in coastal plains underway. Small grain crops, pastures mostly good condition. Corn 13% planted, 1974 9%. Small percentage sorghum, peanuts, cotton, soybeans planted. Peaches, Irish potatoes, truck crops fair to good condition.

**NORTH DAKOTA:** Unusually cold, ranging from 14° below normal southeast to 6° below normal northeast. Extremes: 2° Ft. Yates to 49° Pembina. Precipitation above normal, ranging to 0.97 in. above normal northwest. Greatest one day precipitation at Bottineau with 1.21 in. 8th, greatest precipitation for week at Minot with 1.48 in. Snow cover ranges from 2 in. at Bismarck and Williston to 16 in. at Dickinson. New snow up to 12 in. at Ashley-Wishek area over weekend.

Farmers busy with calving. Respiratory problems and scours becoming apparent in new calves as result of blizzards. Farmers generally having

problems with muddy yards as snow melts. Fieldwork still 1 to 2 weeks away.

**OHIO:** Temperatures below normal. Freezing or below in all but south. Record low Akron and Cincinnati. Rainfall totaled 0.07 in. or less.

Plowing for corn and soybeans over 70% complete, 65% 1974, 55% average. Oats 40% seeded, 10% 1974 and 25% average. Most progress west central and southwest. Potato planting less than 15% complete, 5% average. Sugarbeets planting 20% done, 15% average. Tobacco beds sown ahead of normal, with 80% complete, 40% average. Fruit remains dormant. Pruning and tying of grapes northeast. Peaches showing pink in southern areas. Pasture fair to good condition. Winter wheat condition mostly fair to good. Soil moisture supplies short 9%, adequate 88%, surplus 3%. Nearly 6 days favorable for fieldwork.

**OKLAHOMA:** Temperatures averaged 2 to 5° subnormal. Precipitation ranged from 0.60 to 1.30 in. Week-end cool and wet most areas.

Wheat mostly good condition, 54% jointing, 82% 1974, 80% average. Oats 35% jointing, 46% 1974, 49% average. Barley 39% jointing, 49% 1974, 62% average. Greenbugs remain problem southwest and Panhandle. Alfalfa weevil active most areas, control measures underway. Summer crop seedbed preparation proceeded well, rainfall light. Fruit crops damaged considerably, but some buds appear to have escaped. Cattle mostly fair condition, pastures short but growing.

**OREGON:** Temperatures below normal in west, temperatures 50's and 30's. In east, temperatures 40's, and 20's. Precipitation ranged from 0.50 to 1.00 in. along coast, over 0.50 in. Willamette Valley, less than 0.67 in. east.

Fall seeded grains fair to good. Minimal winterkill, little reseeding necessary. Seedbed preparation, seeding, weed control, fertilization continuing. Most fruits expected to be late. Peaches in bloom. Caneberry pruning, tying completed. Dormant and delayed dormant sprays being applied. Green pea planting continues. Asparagus developing slow. Potato planting full swing early areas. Livestock fair to good condition. Range, pastures showing retarded growth caused by cool weather. Feed supplies adequate.

**PENNSYLVANIA:** Cold and dry. No precipitation at most areas and very little elsewhere. Snow flurries common in mountains. Average temperatures 8 to 14° below normal. Extremes: 60° central on 12th, 10° central mountains on 13th and 14th. Minimum readings in upper teens and low 20's common in higher mountain areas. High winds of previous week finally subsided by 9th.

Plowing and disking increasing. Some seeding of spring planted crops.

**PUERTO RICO:** Island average rainfall 0.63 in. Highest weekly total 3.08 in. at Palmarito. Highest 24-hour total 2.62 in. at Utuado. Temperatures averaged 76° on coasts and 72° interior. Extremes: 48 and 94°.

Sugarcane harvest continued normal under favorable weather. Dry weather and some light showers favored flowering of coffee shrubs and cultivation operations. Harvest and curing of tobacco benefited by dry weather. Rains needed good pasture development. Food crops affected by lack of rain most areas, but were benefited by scattered showers

north, east, and west. Production of food crops low.

**SOUTH CAROLINA:** Week averaged cooler than usual, temperatures below normal early and late, warmer than usual midweek. Rainfall below normal, falling late in week. Heaviest amounts central and north central. Colder weather on 12th caused scattered frost on 13th north and west.

Cotton planting still behind schedule. Corn condition fair, 33% planted, 34% 1974, 25% average. Tobacco fair condition, 25% planted, 52% 1974, 26% average, some problems with wind damage. Small grains fair to good condition. Pastures with fertilization fair to good condition. Peach condition good, sprays applied to orchards. Watermelons good condition, 62% planted, 49% normally.

**SOUTH DAKOTA:** Temperatures averaged 3 to 11° below normal. Moisture ranged from 0.50 to 1.75 in. Extremes: 61° Chamberlain 8th and Pierre 12th, 11° Camp Crook on 9th.

Fieldwork was delayed due to cool, damp weather. Spring plowing 2% complete, 1974 14%, normal 11%. Spring wheat 3% complete, 1974 20%, normal 18%. Oats 3% seeded--1974 18%, normal 19%. Barley seeded small amount, 1974 13%, normal 14%. Livestock fair to good condition despite cold, wet weather of past 3 weeks. Scours and pneumonia common in new born calves and lambs. Muddy yards are also a problem. Death losses in new born animals above normal.

**TENNESSEE:** Cool northerly winds and cloudy skies held temperatures in low 50's or 5° below normal. Rainfall averaged very light east to 1.00 in. west, 1.50 in. at few places, well below seasonal normals.

Open weather allowed plowing and planting for first time in 4 weeks. Corn 3% planted, 1974 2%, average 8%. Small grains fair condition, short growth. Pastures poor condition and not growing yet. Tobacco 86% seeded, normal and last year all seeded. Many beds reworked and reseeded due to hard rains.

**TEXAS:** Cold front 7th became stationary along coast, Rio Grande Valley 8th. Rainfall ranged nothing extreme west, southwest to over 3.00 in. southeast. Precipitation above normal northwest; north, central, approximately 1.00 to 2.50 in. respectively. Precipitation above normal upper coastal plains; off sharply lower coast, Lower Rio Grande Valley. Temperatures unseasonably cool northwestern half, 10° below normal. Slightly above normal south, southeast.

Wheat, oats excellent progress, grain prospects above average most areas. Planting cotton, corn, sorghum delayed by cold, wet weather. Moisture conditions adequate, satisfactory growth allow farmers finish seeding crop. Sunflower good growth Blacklands, south central, Trans-Pecos. Wheat: excellent progress, fields headed Low Plains, southward. Insured excellent grain prospects. Early fields south approaching maturity. Oats: satisfactory progress Low Plains to Lower Rio Grande Valley. Fields headed where grain crop expected, yield prospects above average. Cold, wet weather delayed cotton planting Blacklands, East, south central. Early stands little growth cold weather. High, Low plains, seedbed preparations as soil temperature conditions permit. Sorghum growth fair, some replanting Blacklands, south central. Major crops percent planted: Cotton 11, 1974 16, average 14; corn 52, 1974 56, average 53; sorghum 36, 1974 38, average 35; peanuts 11, 1974 5, average 8; rice 75, 1974 71,

average 67; sugarbeets 78, 1974 91, average 62. Lower Rio Grande Valley: Onion harvest gaining momentum, shipments exceeding 100 cars per day. Light supplies of cabbage, carrots still available. Cantaloups, cucumbers, honeydews, tomatoes making good progress. San Antonio-Winter Garden: Potatoes, cabbage, onions good growth. Cucumbers being replanted due earlier freeze damage. Central: Tomatoes damaged by freeze replanted. Some water-melons, cantaloups also replanted. High Plains: Potatoes emerging, good growth. Onions, carrots being planted. Peach crop suffered freeze damage in north. South crop looks excellent with harvest 5 to 6 weeks off. Pecan trees leafing. Blooming central, south central along upper gulf coast. Little freeze damage. Citrus: Harvest in wrap-up stages with routine grove care. Livestock good condition, putting on weight as pastures green up. Short moisture south, Coastal Bend restricting growth, overgrazing still common. Rains High Plains, upper Gulf Coast insure grazing late spring, early summer and provide good early hay cuttings. Goat shearing complete, sheep shearing rapid pace though delays from rain cold weather.

UTAH: Recurring rain and snow south and west. Accumulated amounts moisture generally light to moderate, locally heavy over and near mountains. Average temperatures 3 and 11° below normal. Snow pack increased at higher elevations but little or no snow cover remains lower valley farm and range lands.

Field preparation and spring planting much behind normal. Growth of winter wheat, alfalfa hay and range feed just starting. Fieldwork: 3 days suitable. Soil moisture adequate and reservoir storage above average though less than 1974. Spring planting estimated about 8% spring wheat, 3% oats, 11% barley, 4% green peas, 2% onions and none for sugarbeets. Heavier than normal losses noted for calving and lambing.

VIRGINIA: Precipitation light occurring on 10th and 11th, trace of snow mountains, extreme north. Temperatures well below normal.

Fieldwork: 4.5 days suitable. Topsoil moisture 87% adequate, 9% surplus, 4% short. Corn planting less than 2% complete, normal is 3%. Small grain topdressing, herbicide applications continue. Powdery mildew in some wheat varieties, bacterial blight in winter oats. Tobacco plants damaged by high wind, cold temperatures. More beds reseeded. Potatoes 50% planted Eastern Shore, well behind normal. Fruit prospects very good, spraying active. Pastures good condition. Cattle being turned in full-time. Marketing feeder calves, sheep shearing active. Gale force winds crusted soil sur-

face, damaged farm buildings, fences, trees.

WASHINGTON: West: Average temperatures 2 to 7° subnormal over State. Extremes: 60's, 30's. Very little precipitation, mostly beginning of period, trace to 0.30 in.

Seeding early lettuce, seedbed preparation for other crops. Harvesting forced rhubarb, tulips, daffodils. Sorting and shipping certified strawberries. Cattle on pasture but grass short. East: Extremes: 50's, 20's. Precipitation early period with some snow, trace to 0.60 in.

Planting potatoes, peas, sugarbeets, spring wheat, barley. Fertilizing and spraying. Applying dormant oil sprays on fruit trees delayed dormant sprays on grapes. Apricots blooming. Some frost damage to cherries. Reseeding and overseeding winter wheat. Stands on recrop ground showing results of cold stress. Soil moisture excellent. Fieldwork several days behind normal. Pastures growing slowly. Hay supplies getting short.

WEST VIRGINIA: Temperatures 10° below normal. Precipitation 0.20 in. south, less than 0.10 in. elsewhere.

Fieldwork: Suitable 4.9 days. Soil moisture adequate. Livestock being turned out on short pasture due to lack of hay. Farmers actively involved in planting preparations.

WISCONSIN: Unseasonably cold weather continued to prevail, temperatures averaging 7 to 10° below normal. Highs in 40's and 50's and lows in teens and 20's. Week began sunny but cloud cover moved in on 8th. Precipitation in the form of snow on the 9th, amounts light except in west and southwest. La Crosse had 4 in. of snow on 9th. Skies cleared north on 10th and entire State had sunshine through the 13th, with gradual warming to the upper 50's.

Practically no fieldwork done yet. Snow depths averaged 3 in., with most snow confined to the north. Frost depths averaged 7 in. Snow melting and frost leaving ground as temperatures increase.

WYOMING: Temperatures averaged well below seasonal normals. Precipitation averaged above seasonal normal. Snow fall very beneficial.

Snow storms delayed fieldwork, put stress on livestock. Damp weather caused losses from scours, pneumonia in young livestock. Moisture aided winter wheat and ranges. Planting 2 weeks behind 1974. Spring wheat 5%, oats 5%, barley 14%, sugarbeets 2% seeded. Adequate fertilizer available. Ewes lambed: Farm flocks 75%, range 33%. Sheep shorn: Farm flocks 65%, range two-fifths. Calving about 50% complete.

## GROWING DEGREE DAYS

Plants grow, develop, and produce best within certain limits of air temperatures. Above or below these limits the heat or cold can hinder the productivity of the plant. Within the range in which plants can grow there is a direct relationship between temperature and how fast the plant will develop.

The upper and lower limits of temperature in which the plant will grow varies with the type of plant. For corn and soybeans the limits have been shown to be approximately 50° and 86°. For small grains the limits are closer to 40° and 90°. Each degree of temperature above the minimum for growth contributes toward the development of the crop and is called the Growing Degree Day Unit. The Growing Degree Day accumulations across the Nation have been published in the Weekly Weather and Crop Bulletin for the past 5 years. This issue begins another year of presenting such data.

The GDD accumulation for a particular day is calculated according to the definition:

$$\text{GDD} = \frac{\text{Daily Max ( } 86^{\circ}\text{ ) + (Daily Min ( } 50^{\circ}\text{ )}}{2.0} - 50^{\circ}$$

Maximum temperatures above 86° are entered as 86° since the additional heat does not contribute to crop development. Minimum temperatures below 50° are set equal to 50° since temperatures below this level do not reverse development.

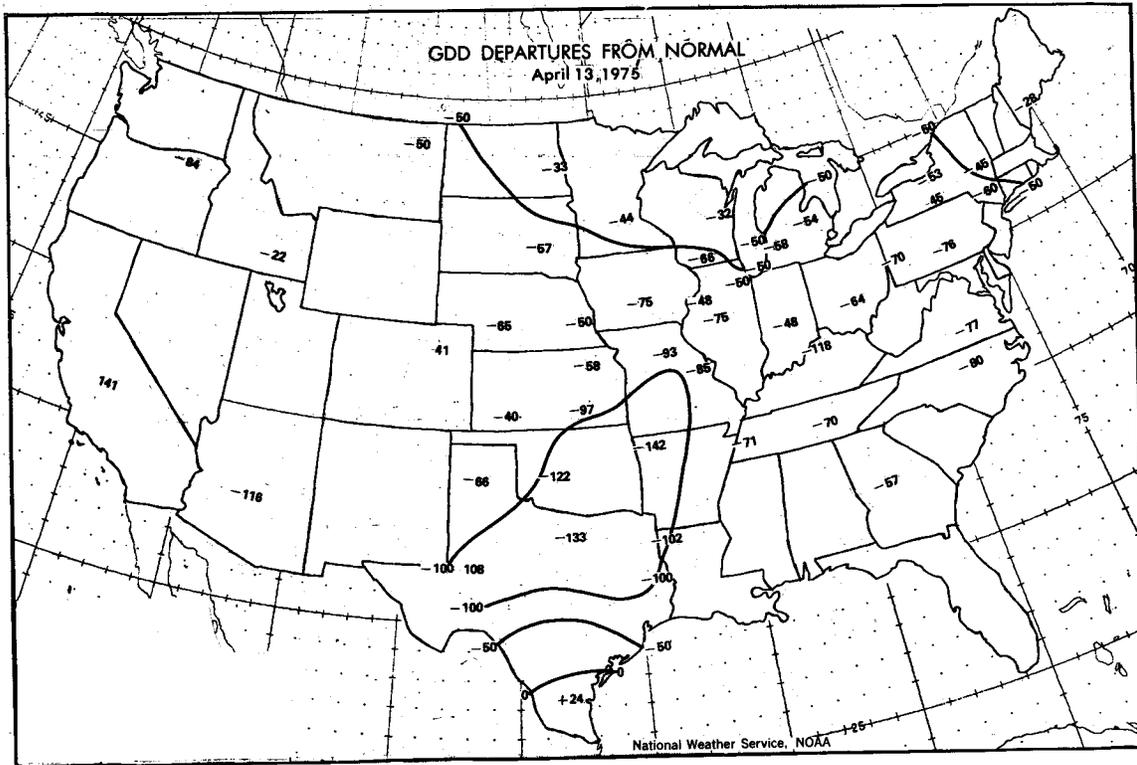
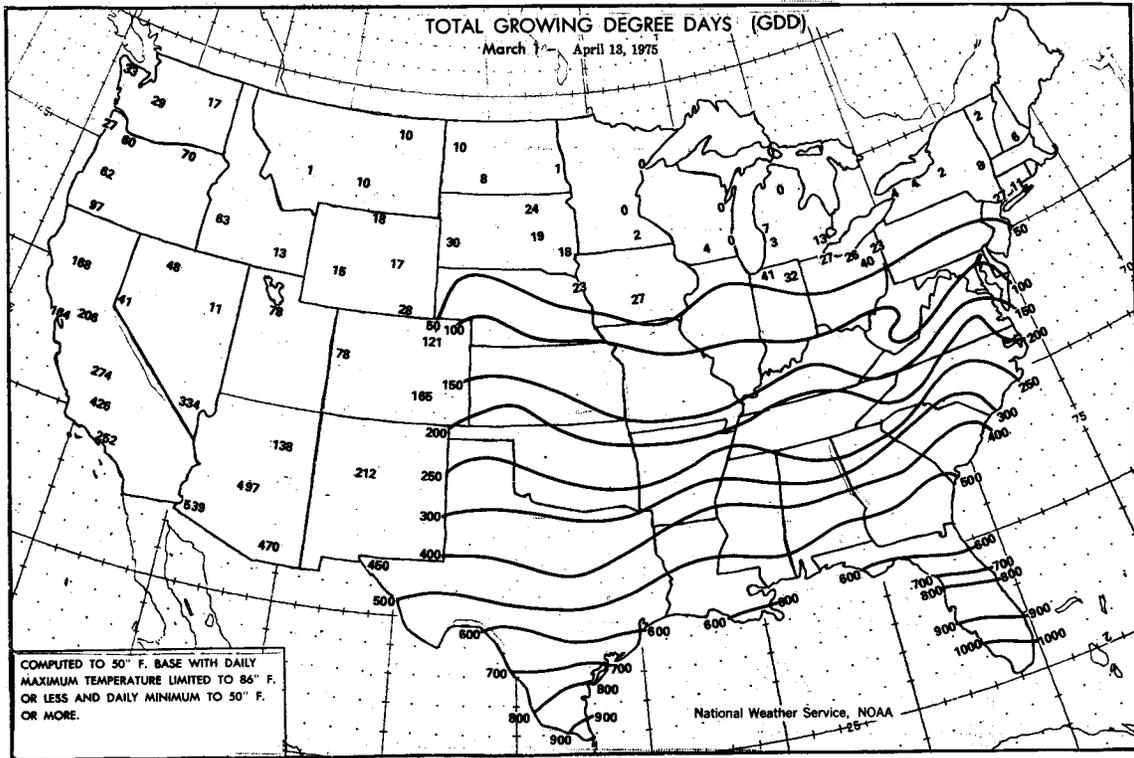
This particular method of calculating GDD's was first introduced in the Weekly Weather and Crop Bulletin in 1969, and in 1970 it was adopted by the Hybrid Seed Corn Industry as a common basis for evaluating maturity. A number of publications have been prepared by universities to describe the climatology of growing degree days for their

particular state in more detail than we can in the Bulletin.

This type of information has many uses. If a grower knows the expected growing degree day accumulation in his area, he can select varieties which will fully utilize the growing season, but minimize the risk of damage due to frost. If his planting is delayed due to poor weather, a grower can determine what adjustment he must make in his selection of varieties. The same holds true if reseeding is necessary. It also helps to protect the grower when he buys his seed. In the future all corn companies will rate their varieties by this procedure.

Once he has made his seed selection and planted, the grower can then follow the development of the crop or progress of the growing season. In order to this the grower should note the number of GDD's accumulated at the time of planting from the map. This value will serve as a base figure. For example, assume approximately 350 GDD's had accumulated at the time of planting. If as of July 1, 1200 GDD's has accumulated, only 850 of these have contributed to the development of his crops. If the variety requires 2400 to mature, an additional 1550 GDD's are needed before the crop is safe from frost. The same procedure can be followed using a table of normals to determine whether the season is progressing normally. To assist our readers the table on page 12 will be helpful. The table lists the normal values at the time of planting and at intervals through the season.

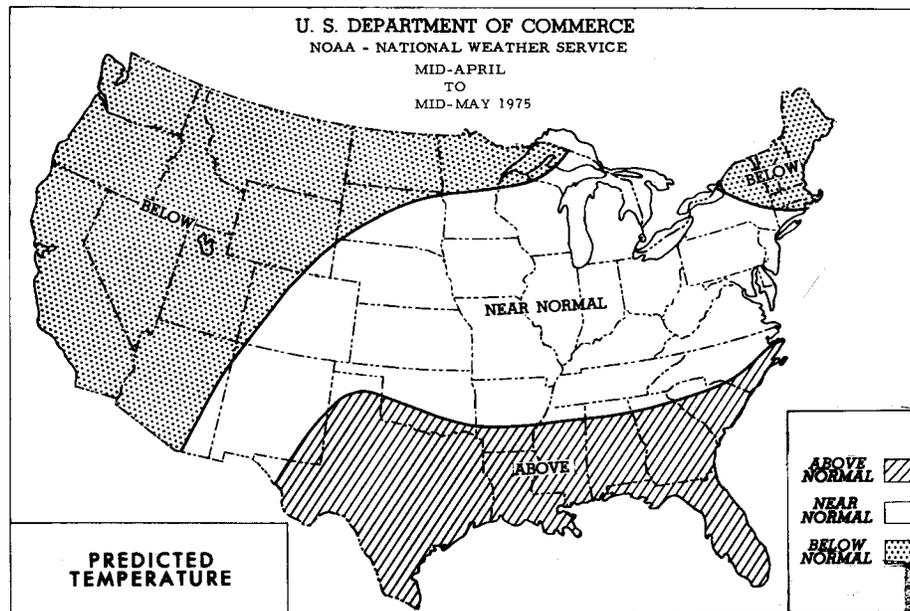
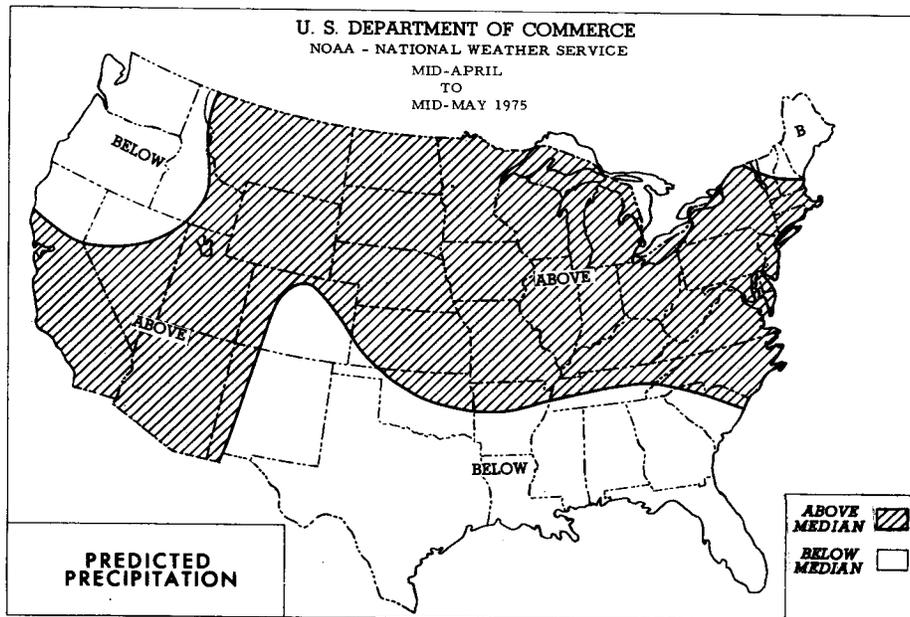
To assist in following the entire growing season two maps will appear most weeks during the coming months. The first will show the accumulation since March 1. The second will show the departure from normal based on expected accumulations since March 1.



THE MEAN NUMBER OF GROWING DEGREE DAYS ACCUMULATED  
FROM MARCH 1 TO THE INDICATED DATES USING THE 50° AND  
86° ADJUSTMENTS BASED ON THE 20 YEAR PERIOD 1949-68.

| Station               | Apr. 27 | May 4 | May 11 | May 18 | May 25 | June 29 | July 27 | Aug. 24 | Sept. 21 | Oct. 18 |
|-----------------------|---------|-------|--------|--------|--------|---------|---------|---------|----------|---------|
| <b>West:</b>          |         |       |        |        |        |         |         |         |          |         |
| Phoenix, Ariz.        | 875     | 1012  | 1165   | 1316   | 1490   | 2436    | 3340    | 4223    | 5042     | 5708    |
| Fresno, Calif.        | 596     | 689   | 797    | 909    | 1046   | 1778    | 2472    | 3163    | 3772     | 4282    |
| Denver, Colo.         | 271     | 327   | 398    | 467    | 546    | 1104    | 1707    | 2296    | 2758     | 3072    |
| Pocatello, Idaho      | 158     | 200   | 263    | 321    | 398    | 878     | 1431    | 1979    | 2398     | 2679    |
| Glasgow, Mont.        | 127     | 171   | 223    | 292    | 367    | 851     | 1408    | 1963    | 2320     | 2543    |
| Pendleton, Ore.       | 243     | 295   | 363    | 438    | 528    | 1067    | 1655    | 2254    | 2715     | 2997    |
| <b>North Central:</b> |         |       |        |        |        |         |         |         |          |         |
| Des Moines, Iowa      | 210     | 277   | 362    | 454    | 553    | 1245    | 1930    | 2579    | 3074     | 3393    |
| Minneapolis, Minn.    | 119     | 176   | 242    | 315    | 396    | 992     | 1618    | 2207    | 2624     | 2853    |
| North Platte, Nebr.   | 252     | 314   | 386    | 462    | 547    | 1153    | 1786    | 2397    | 2868     | 3178    |
| Omaha, Nebr.          | 262     | 336   | 431    | 530    | 637    | 1373    | 2091    | 2770    | 3300     | 3638    |
| Fargo, N. Dak.        | 93      | 148   | 200    | 268    | 347    | 871     | 1449    | 1993    | 2375     | 2579    |
| Huron, S. Dak.        | 168     | 226   | 290    | 365    | 447    | 1039    | 1669    | 2269    | 2715     | 2973    |
| Green Bay, Wisc.      | 93      | 137   | 190    | 250    | 322    | 829     | 1364    | 1860    | 2250     | 2458    |
| Madison, Wisc.        | 144     | 202   | 273    | 345    | 428    | 1015    | 1601    | 2155    | 2586     | 2841    |
| <b>South Central:</b> |         |       |        |        |        |         |         |         |          |         |
| Fort Smith, Ark.      | 583     | 696   | 832    | 967    | 1125   | 2018    | 2812    | 3594    | 4275     | 4781    |
| Dodge City, Kans.     | 387     | 464   | 563    | 662    | 771    | 1535    | 2252    | 2977    | 3569     | 3967    |
| Topeka, Kans.         | 361     | 442   | 547    | 643    | 775    | 1551    | 2285    | 2997    | 3578     | 3973    |
| Wichita, Kans.        | 414     | 498   | 612    | 721    | 852    | 1680    | 2448    | 3198    | 3824     | 4252    |
| Shreveport, La.       | 766     | 906   | 1064   | 1224   | 1396   | 2358    | 3184    | 4009    | 4761     | 5349    |
| Columbia, Mo.         | 354     | 441   | 547    | 652    | 775    | 1549    | 2280    | 2985    | 3573     | 3972    |
| St. Louis, Mo.        | 371     | 462   | 571    | 677    | 806    | 1616    | 2369    | 3096    | 3699     | 4109    |
| Oklahoma City, Okla.  | 535     | 633   | 764    | 883    | 1028   | 1898    | 2687    | 3469    | 4139     | 4627    |
| Amarillo, Texas       | 500     | 584   | 697    | 800    | 923    | 1697    | 2342    | 3128    | 3730     | 4155    |
| Corpus Christi, Texas | 1097    | 1281  | 1463   | 1654   | 1850   | 2902    | 3766    | 4635    | 5469     | 6204    |
| Fort Worth, Texas     | 748     | 876   | 1030   | 1184   | 1354   | 2336    | 3194    | 4050    | 4818     | 5416    |
| Midland, Texas        | 734     | 856   | 1004   | 1152   | 1307   | 2227    | 3008    | 3790    | 4484     | 5026    |
| <b>Midwest:</b>       |         |       |        |        |        |         |         |         |          |         |
| Chicago, Ill.         | 193     | 256   | 335    | 413    | 507    | 1188    | 1864    | 2517    | 3057     | 3385    |
| Moline, Ill.          | 208     | 281   | 368    | 453    | 554    | 1244    | 1913    | 2541    | 3046     | 3367    |
| Peoria, Ill.          | 232     | 304   | 391    | 480    | 582    | 1291    | 1972    | 2518    | 3142     | 3470    |
| Indianapolis, Ind.    | 272     | 346   | 435    | 525    | 632    | 1339    | 2017    | 2672    | 3195     | 3543    |
| Louisville, Ky.       | 398     | 494   | 599    | 707    | 837    | 1622    | 2343    | 3068    | 3668     | 4067    |
| Flint, Mich.          | 139     | 189   | 257    | 320    | 395    | 960     | 1525    | 2052    | 2478     | 2726    |
| Grand Rapids, Mich.   | 143     | 201   | 272    | 341    | 420    | 1014    | 1604    | 2163    | 2618     | 2880    |
| Columbus, Ohio        | 266     | 342   | 428    | 514    | 623    | 1304    | 1965    | 2597    | 3119     | 3458    |
| <b>Northeast:</b>     |         |       |        |        |        |         |         |         |          |         |
| Portland, Maine       | 71      | 102   | 147    | 195    | 253    | 698     | 1202    | 1678    | 2040     | 2248    |
| Albany, N.Y.          | 144     | 193   | 262    | 333    | 415    | 1003    | 1601    | 2161    | 2592     | 2849    |
| Binghamton, N.Y.      | 117     | 157   | 212    | 269    | 388    | 841     | 1374    | 1878    | 2267     | 2482    |
| Syracuse, N.Y.        | 138     | 188   | 254    | 318    | 398    | 968     | 1555    | 2108    | 2549     | 2806    |
| Harrisburg, Pa.       | 246     | 315   | 401    | 489    | 591    | 1285    | 1975    | 2639    | 3182     | 3505    |
| Philadelphia, Pa.     | 256     | 320   | 408    | 501    | 606    | 1310    | 2021    | 2708    | 3280     | 3628    |
| Pittsburgh, Pa.       | 235     | 307   | 386    | 464    | 559    | 1182    | 1802    | 2396    | 2886     | 3178    |
| Williamsport, Pa.     | 198     | 307   | 340    | 419    | 511    | 1125    | 1743    | 2334    | 2812     | 3094    |
| Richmond, Va.         | 453     | 261   | 650    | 765    | 892    | 1658    | 2389    | 3106    | 3713     | 4113    |
| <b>Southeast:</b>     |         |       |        |        |        |         |         |         |          |         |
| Macon, Ga.            | 753     | 898   | 1039   | 1191   | 1362   | 2281    | 3072    | 3862    | 4578     | 5125    |
| Raleigh, N.C.         | 527     | 634   | 750    | 873    | 1016   | 1807    | 2543    | 3279    | 3908     | 4342    |
| Memphis, Tenn.        | 571     | 693   | 831    | 975    | 1140   | 2055    | 2862    | 3660    | 4349     | 4848    |
| Nashville, Tenn.      | 506     | 617   | 739    | 867    | 1014   | 1862    | 2629    | 3382    | 4032     | 4488    |

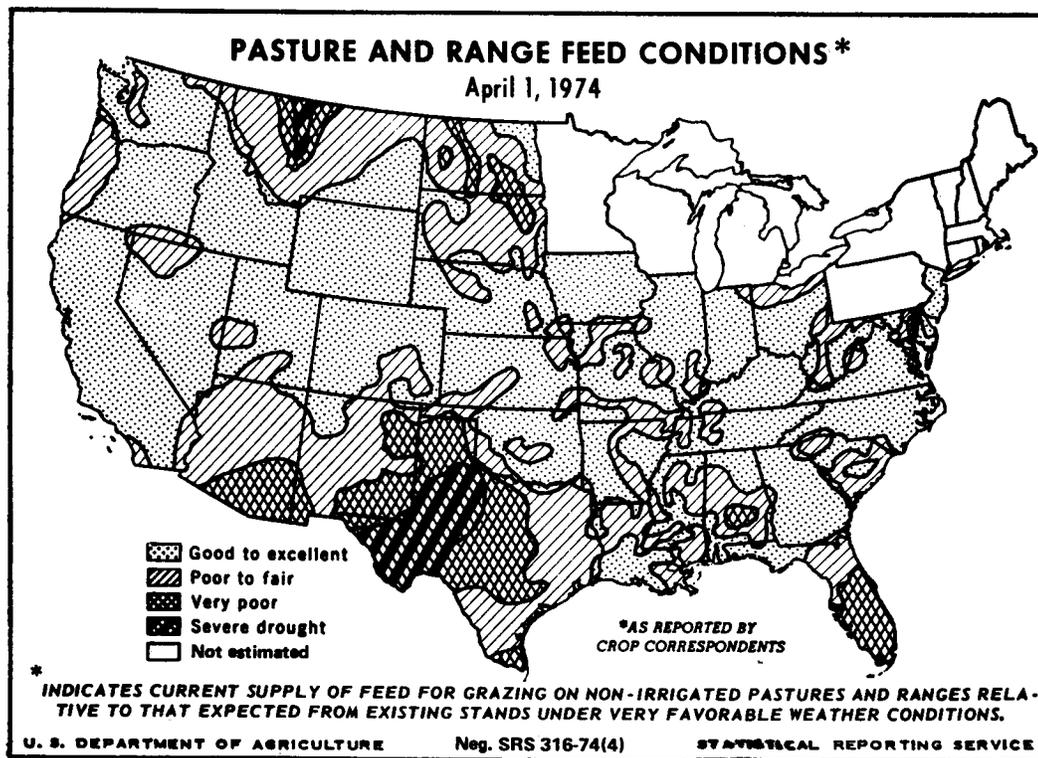
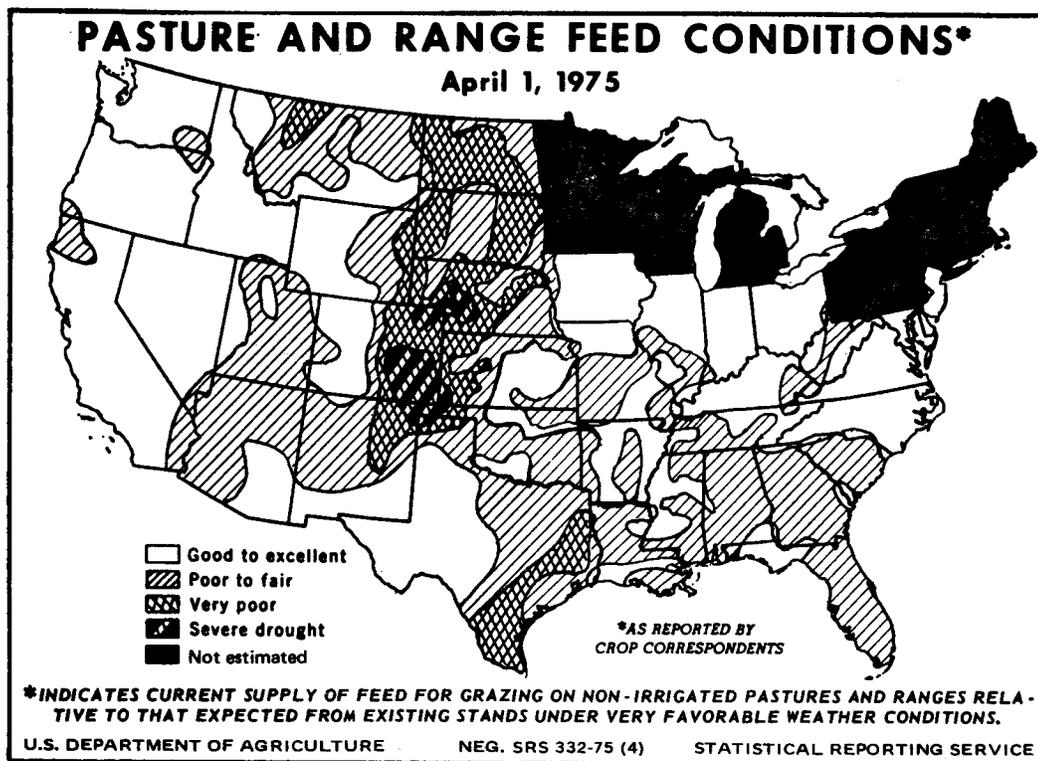
**AVERAGE MONTHLY WEATHER OUTLOOK**

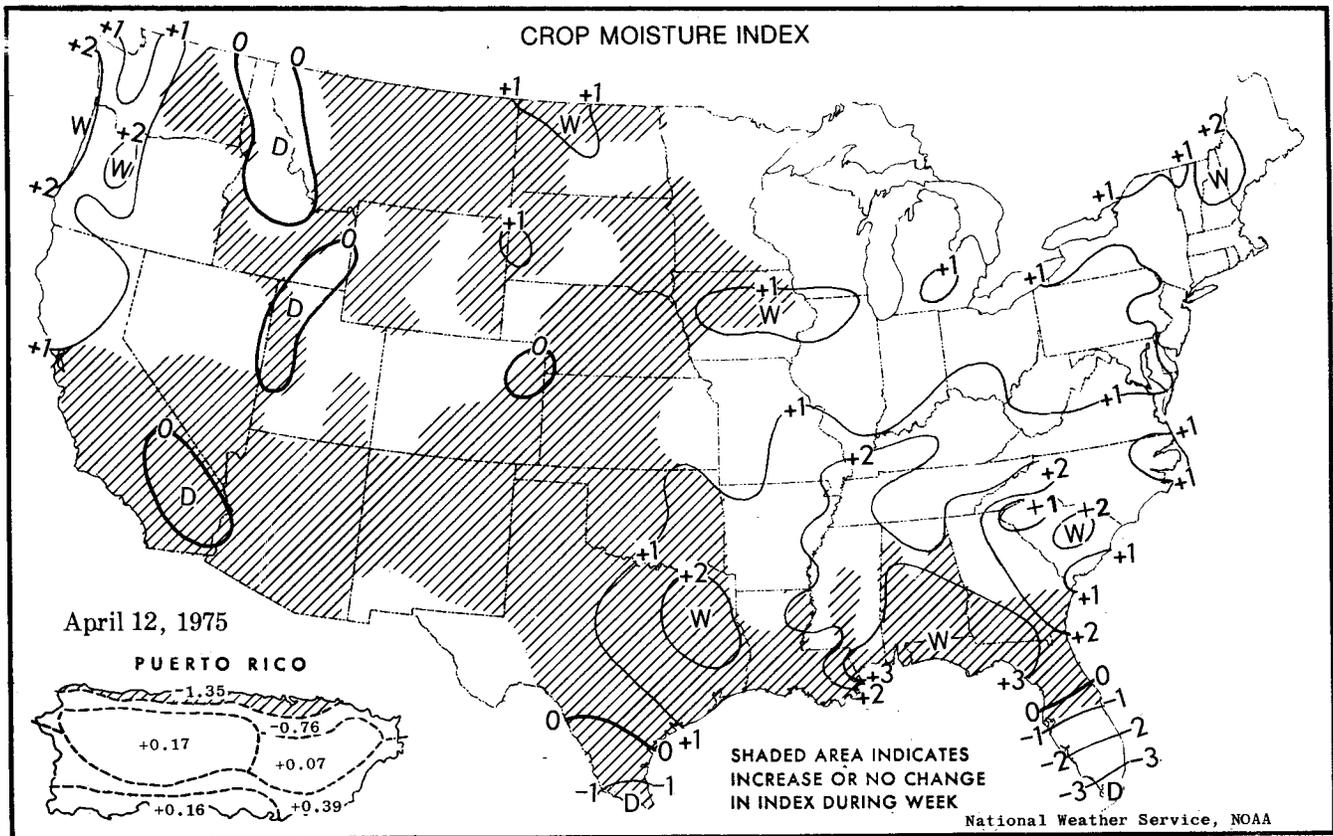


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**AGRICULTURAL IMPLICATIONS OF THE AVERAGE MONTHLY OUTLOOK:** The above normal precipitation and below normal temperatures forecast for the northern Great Plains, the northern Rockies and the Pacific Northwest would result in delays in field preparations and seeding of spring grains. Near normal temperatures in the Central States would be beneficial to winter grains and pastures. However above normal precipitation could result in the third late planting season in a row. Fieldwork to date in the Corn Belt has been progressing well, but soil moisture conditions are excellent to surplus and above normal precipitation would delay seeding. Above normal temperatures and below normal precipitation in the Deep South would assist farmers in their efforts to catch up on fieldwork and seeding and generally improve conditions.

### PASTURE CONDITION REPORT





The map above gives a general picture of how wet or dry the nation was last week. The lines show the crop-moisture situation according to an index computed from values of temperature and precipitation by areas. Previous weekly computations of soil moisture account for the effect of prior weather.

Shaded areas are those where precipitation increased the index last week or where soils did not dry. Unshaded areas:

**UNSHADED AREAS: INDEX DECREASED**

|         |      |   |
|---------|------|---|
| ABOVE   | 3.0  | SOME DRYING BUT STILL EXCESSIVELY WET     |
| 2.0 to  | 3.0  | MORE DRY WEATHER NEEDED, WORK DELAYED     |
| 1.0 to  | 2.0  | FAVORABLE, EXCEPT STILL TOO WET IN SPOTS  |
| 0 to    | 1.0  | FAVORABLE FOR NORMAL GROWTH AND FIELDWORK |
| 0 to    | -1.0 | TOPSOIL MOISTURE SHORT, GERMINATION SLOW  |
| -1.0 to | -2.0 | ABNORMALLY DRY, PROSPECTS DETERIORATING   |
| -2.0 to | -3.0 | TOO DRY, YIELD PROSPECTS REDUCED          |
| -3.0 to | -4.0 | POTENTIAL YIELDS SEVERELY CUT BY DROUGHT  |
| BELOW   | -4.0 | EXTREMELY DRY, MOST CROPS RUINED          |

areas dried last week. The centers of wet or dry areas are marked: W for wet; D for dry. Use the legend to interpret.

Local variations caused by isolated rain or by soil differences are not shown. Any interpretation must consider the type of agriculture and the stage of crop development.

**SHADED AREA: INDEX INCREASED OR DID NOT CHANGE**

|         |      |   |
|---------|------|---|
| ABOVE   | 3.0  | EXCESSIVELY WET SOME FIELDS FLOODED         |
| 2.0 to  | 3.0  | TOO WET, SOME STANDING WATER                |
| 1.0 to  | 2.0  | PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET |
| 0 to    | 1.0  | MOISTURE ADEQUATE FOR PRESENT NEEDS         |
| 0 to    | -1.0 | PROSPECTS IMPROVED BUT RAIN STILL NEEDED    |
| -1.0 to | -2.0 | SOME IMPROVEMENT BUT STILL TOO DRY          |
| -2.0 to | -3.0 | DROUGHT EASED BUT STILL SERIOUS             |
| -3.0 to | -4.0 | DROUGHT CONTINUES RAIN URGENTLY NEEDED      |
| BELOW   | -4.0 | NOT ENOUGH RAIN STILL EXTREMELY DRY         |



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**Heating Degree Days (Base 65°) For Week Ending April 13, 1975**

| States and Stations          | Weekly |            |                        | Seasonal † Accumulation |                              |                        | States and Stations | Weekly   |            |                             | Seasonal † Accumulation |            |                        | States and Stations | Weekly |            |                        | Seasonal † Accumulation |  |  |
|------------------------------|--------|------------|------------------------|-------------------------|------------------------------|------------------------|---------------------|----------|------------|-----------------------------|-------------------------|------------|------------------------|---------------------|--------|------------|------------------------|-------------------------|--|--|
|                              | TOTAL  | Departures | Departure From 1973-74 | TOTAL                   | Departures                   | Departure From 1973-74 |                     | TOTAL    | Departures | Departure From 1973-74      | TOTAL                   | Departures | Departure From 1973-74 |                     | TOTAL  | Departures | Departure From 1973-74 |                         |  |  |
| ALA. Birmingham . . .        | 60     | 26         | 2517-266               | 437                     | Portland . . . . .           | 190                    | 21                  | 6452-218 | 247        | Tulsa . . . . .             | 83                      | 32         | 3794                   | 207                 | 540    |            |                        |                         |  |  |
| Mobile . . . . .             | 21     | 8          | 1352-324               | 327                     | MD. Baltimore . . . . .      | 146                    | 55                  | 4125-337 | 22         | OREG. Astoria . . . . .     | 134                     | 8          | 4110                   | 260                 | 436    |            |                        |                         |  |  |
| Montgomery . . . . .         | 44     | 21         | 1935-302               | 326                     | MASS. Boston . . . . .       | 168                    | 40                  | 5018-117 | 205        | Burns . . . . .             | 180                     | 24         | 6242                   | 41                  | 181    |            |                        |                         |  |  |
| ARIZ. Flagstaff . . . . .    | 248    | 77         | 6398-115               | 656                     | MICH. Alpena . . . . .       | 247                    | 58                  | 7313-223 | 45         | Medford . . . . .           | 129                     | 17         | 4228                   | 130                 | 236    |            |                        |                         |  |  |
| Phoenix . . . . .            | 55     | 38         | 1537-8                 | 444                     | Detroit . . . . .            | 203                    | 68                  | 6110-216 | 403        | Pendleton . . . . .         | 113                     | 5          | 4045                   | 694                 | 266    |            |                        |                         |  |  |
| Tucson . . . . .             | 96     | 73         | 2126-446               | 483                     | Flint . . . . .              | 228                    | 81                  | 6284-104 | 278        | Portland . . . . .          | 115                     | 7          | 3763-413               | -112                |        |            |                        |                         |  |  |
| Winslow . . . . .            | 163    | 71         | 4959-529               | 466                     | Grand Rapids . . . . .       | 227                    | 83                  | 6718-501 | 635        | Salem . . . . .             | 134                     | 20         | 3969                   | -217                | -239   |            |                        |                         |  |  |
| Yuma . . . . .               | 45     | 36         | 1134-137               | 227                     | Houghton Lake . . . . .      | 242                    | 65                  | 7400-95  | 156        | PA. Allentown . . . . .     | 174                     | 55         | 5272                   | -128                | 427    |            |                        |                         |  |  |
| ARK. Fort Smith . . . . .    | 87     | 47         | 3552-277               | 576                     | Lansing . . . . .            | 231                    | 87                  | 6446-138 | 263        | Erie . . . . .              | 229                     | 75         | 6063                   | -69                 | 525    |            |                        |                         |  |  |
| Little Rock . . . . .        | 66     | 26         | 3018-265               | 444                     | Marquette . . . . .          | 238                    | 51                  | 7172-161 | -133       | Harrisburg . . . . .        | 153                     | 54         | 5010                   | 85                  | 620    |            |                        |                         |  |  |
| CALIF. Bakersfield . . . . . | 46     | 8          | 2031-68                | 311                     | Muskegon . . . . .           | 207                    | 56                  | 6240-23  | 75         | Philadelphia . . . . .      | 157                     | 59         | 4331                   | -241                | 136    |            |                        |                         |  |  |
| Eureka . . . . .             | 124    | 12         | 3821-75                | 56                      | Kansas City . . . . .        | 270                    | 87                  | 8229-149 | 15         | Pittsburgh . . . . .        | 194                     | 77         | 5285                   | -207                | 463    |            |                        |                         |  |  |
| Fresno . . . . .             | 61     | 32         | 2695-189               | 382                     | MINN. Duluth . . . . .       | 261                    | 81                  | 9057-379 | 133        | Scranton . . . . .          | 198                     | 69         | 5474                   | -323                | -254   |            |                        |                         |  |  |
| Los Angeles . . . . .        | 81     | 12         | 1198-334               | -40                     | Internatl Falls . . . . .    | 219                    | 14                  | 9397-120 | -94        | R.I. Providence . . . . .   | 173                     | 37         | 5303                   | -110                | 310    |            |                        |                         |  |  |
| Red Bluff . . . . .          | 88     | 30         | 2880-368               | 307                     | Minneapolis . . . . .        | 206                    | 46                  | 7701-44  | 359        | S.C. Charleston . . . . .   | 58                      | 37         | 1912                   | -209                | 561    |            |                        |                         |  |  |
| San Diego . . . . .          | 58     | 32         | 1212-92                | 227                     | Rochester . . . . .          | 214                    | 53                  | 7833-270 | 430        | Columbia . . . . .          | 56                      | 31         | 2274                   | -287                | 719    |            |                        |                         |  |  |
| San Francisco . . . . .      | 99     | 28         | 2725-168               | 305                     | St. Cloud . . . . .          | 226                    | 53                  | 8504-365 | 407        | Greenville . . . . .        | 82                      | 40         | 3144                   | 65                  | 515    |            |                        |                         |  |  |
| Stockton . . . . .           | 79     | 21         | 2763-139               | 383                     | MISS. Jackson . . . . .      | 44                     | 21                  | 2035-237 | 339        | S.DAK. Aberdeen . . . . .   | 179                     | 16         | 7551                   | -372                | -390   |            |                        |                         |  |  |
| COLO. Denver . . . . .       | 186    | 50         | 5641-215               | 293                     | Meridian . . . . .           | 57                     | 33                  | 2125-231 | 614        | Huron . . . . .             | 191                     | 39         | 7453                   | 15                  | 378    |            |                        |                         |  |  |
| Grand Junction . . . . .     | 162    | 55         | 5508-246               | -131                    | MO. Columbia . . . . .       | 126                    | 41                  | 5260-448 | 673        | Knoxville . . . . .         | 88                      | 39         | 3341                   | -21                 | 601    |            |                        |                         |  |  |
| Pueblo . . . . .             | 155    | 47         | 5115-84                | 291                     | N. Columbia . . . . .        | 128                    | 42                  | 5324-421 | 630        | Memphis . . . . .           | 65                      | 26         | 2846                   | -315                | 407    |            |                        |                         |  |  |
| CONN. Bridgeport . . . . .   | 180    | 51         | 4857-111               | 355                     | St. Louis . . . . .          | 99                     | 25                  | 4906-386 | 508        | MO. St. Louis . . . . .     | 195                     | 36         | 6806                   | 232                 | 545    |            |                        |                         |  |  |
| Hartford . . . . .           | 174    | 38         | 5692-157               | 341                     | Springfield . . . . .        | 120                    | 44                  | 4581-230 | 716        | TEX. Abilene . . . . .      | 66                      | 35         | 2701                   | 138                 | 555    |            |                        |                         |  |  |
| DEL. Wilmington . . . . .    | 162    | 59         | 4491-144               | 409                     | MONT. Billings . . . . .     | 247                    | 90                  | 6828-329 | 745        | AMAR. Amarillo . . . . .    | 129                     | 54         | 4106                   | 135                 | 613    |            |                        |                         |  |  |
| D.C. Washington . . . . .    | 114    | 41         | 3635-390               | 402                     | Glasgow . . . . .            | 225                    | 51                  | 7672-484 | 87         | Austin . . . . .            | 13                      | -2         | 1609                   | -119                | 246    |            |                        |                         |  |  |
| FLA. Apalachicola . . . . .  | 23     | 13         | 1018-337               | 222                     | Great Falls . . . . .        | 267                    | 92                  | 7611-390 | 264        | Corpus Christi . . . . .    | 0                       | 0          | 824                    | -106                | 118    |            |                        |                         |  |  |
| Daytona Beach . . . . .      | 5      | -2         | 564-332                | 57                      | Havre . . . . .              | 267                    | 92                  | 7611-390 | 264        | DEL. Rio . . . . .          | 12                      | 6          | 1418                   | -105                | 315    |            |                        |                         |  |  |
| Ft. Myers . . . . .          | 0      | 0          | 146-311                | -88                     | Helena . . . . .             | 266                    | 96                  | 7541-280 | 623        | El Paso . . . . .           | 75                      | 48         | 2738                   | 87                  | 292    |            |                        |                         |  |  |
| Jacksonville . . . . .       | 17     | 9          | 1161-163               | 254                     | Kalispell . . . . .          | 182                    | 7                   | 7446-74  | 602        | Fort Worth . . . . .        | 40                      | 13         | 2265                   | -89                 | 312    |            |                        |                         |  |  |
| Key West . . . . .           | 0      | 0          | 7-55                   | -34                     | Las Vegas . . . . .          | 184                    | 47                  | 5502-234 | 515        | Galveston . . . . .         | 3                       | -3         | 890                    | -334                | 117    |            |                        |                         |  |  |
| Lakeland . . . . .           | 0      | -3         | 370-308                | -11                     | Missoula . . . . .           | 185                    | 24                  | 6781-232 | 260        | Houston . . . . .           | 8                       | 0          | 110                    | -283                | -8     |            |                        |                         |  |  |
| Miami . . . . .              | 0      | 0          | 59-147                 | -72                     | NEBR. Grand Island . . . . . | 146                    | 24                  | 6421-438 | 544        | Lubbock . . . . .           | 103                     | 49         | 3481                   | 40                  | 741    |            |                        |                         |  |  |
| Orlando . . . . .            | 2      | -1         | 387-317                | -21                     | Lincoln . . . . .            | 149                    | 37                  | 6364-524 | 475        | Midland . . . . .           | 60                      | 30         | 2435                   | -135                | 324    |            |                        |                         |  |  |
| Tallahassee . . . . .        | 27     | 16         | 1335-20                | 459                     | Norfolk . . . . .            | 188                    | 35                  | 6700-196 | 553        | Beaumont . . . . .          | 11                      | 0          | 1342                   | -171                | 177    |            |                        |                         |  |  |
| Tampa . . . . .              | 0      | -3         | 391-327                | -27                     | North Platte . . . . .       | 167                    | 29                  | 6583-390 | 336        | San Antonio . . . . .       | 57                      | 34         | 2268                   | 51                  | 534    |            |                        |                         |  |  |
| W. Palm Beach . . . . .      | 0      | 0          | 112-187                | -62                     | Omaha . . . . .              | 140                    | 34                  | 6190-483 | 497        | San Antonio . . . . .       | 8                       | -2         | 1530                   | -35                 | 253    |            |                        |                         |  |  |
| GA. Atlanta . . . . .        | 63     | 21         | 2819-196               | 585                     | Valentine . . . . .          | 177                    | 27                  | 6770-91  | 448        | Victoria . . . . .          | 1                       | -4         | 944                    | -283                | 90     |            |                        |                         |  |  |
| Augusta . . . . .            | 62     | 35         | 2594-86                | 679                     | NEV. Ely . . . . .           | 237                    | 60                  | 6768-34  | 170        | Waco . . . . .              | 41                      | 23         | 2190                   | 144                 | 484    |            |                        |                         |  |  |
| Macon . . . . .              | 39     | 19         | 2026-189               | 475                     | Las Vegas . . . . .          | 184                    | 47                  | 5502-234 | 515        | Wichita Falls . . . . .     | 60                      | 26         | 2868                   | 13                  | 511    |            |                        |                         |  |  |
| Savannah . . . . .           | 24     | 5          | 1522-411               | 270                     | Beno . . . . .               | 184                    | 47                  | 5502-234 | 515        | UTAH. Salt Lake C . . . . . | 157                     | 34         | 5241                   | -188                | 51     |            |                        |                         |  |  |
| IDAHO. Boise . . . . .       | 149    | 26         | 5075-169               | 305                     | Winemucca . . . . .          | 184                    | 34                  | 5778-37  | 628        | VT. Burlington . . . . .    | 254                     | 84         | 6999                   | -156                | -13    |            |                        |                         |  |  |
| Lewiston . . . . .           | 135    | 22         | 4708-220               | 37                      | N.H. Concord . . . . .       | 203                    | 43                  | 7033-358 | 364        | VA. Lynchburg . . . . .     | 113                     | 43         | 4138                   | 104                 | 628    |            |                        |                         |  |  |
| Pocatello . . . . .          | 196    | 45         | 6407-115               | 293                     | N.J. Atlantic City . . . . . | 174                    | 67                  | 4557-62  | 480        | W. Va. Beckley . . . . .    | 121                     | -1         | 4281                   | -169                | 134    |            |                        |                         |  |  |
| ILL. Cairo . . . . .         | 78     | 28         | 3788-59                | 451                     | Trenton . . . . .            | 161                    | 58                  | 4483-150 | 239        | Charleston . . . . .        | 157                     | 12         | 6320                   | 243                 | 417    |            |                        |                         |  |  |
| Chicago . . . . .            | 190    | 71         | 5823-144               | 372                     | N.MEX. Albuquerque . . . . . | 180                    | 85                  | 4565-455 | 454        | Walla Walla . . . . .       | 106                     | 1          | 4256                   | -192                | 91     |            |                        |                         |  |  |
| Moline . . . . .             | 179    | 63         | 6196-205               | 446                     | Roswell . . . . .            | 125                    | 71                  | 3607-2   | 652        | Yakima . . . . .            | 124                     | 4          | 5183                   | -261                | 79     |            |                        |                         |  |  |
| Peoria . . . . .             | 154    | 44         | 5898-189               | 478                     | N.Y. Albany . . . . .        | 218                    | 76                  | 6576-237 | 254        | W.Va. Beckley . . . . .     | 160                     | 55         | 5152                   | -1                  | 869    |            |                        |                         |  |  |
| Rockford . . . . .           | 191    | 59         | 6523-180               | 515                     | Binghamton . . . . .         | 236                    | 100                 | 6863-273 | 748        | Richmond . . . . .          | 124                     | 81         | 3827                   | 47                  | 655    |            |                        |                         |  |  |
| Springfield . . . . .        | 132    | 38         | 3305-84                | 450                     | Buffalo . . . . .            | 163                    | 58                  | 4464-112 | 264        | Roanoke . . . . .           | 109                     | 33         | 4121                   | 43                  | 723    |            |                        |                         |  |  |
| IND. Evansville . . . . .    | 113    | 42         | 4332-83                | 586                     | New York . . . . .           | 163                    | 58                  | 4464-112 | 264        | WASH. Quillayute . . . . .  | 159                     | 18         | 4767                   | -148                | -387   |            |                        |                         |  |  |
| Fort Wayne . . . . .         | 192    | 68         | 5868-122               | 409                     | Rochester . . . . .          | 242                    | 96                  | 6154-42  | 373        | Seattle-Tacoma . . . . .    | 121                     | -1         | 4281                   | -169                | 134    |            |                        |                         |  |  |
| Indianapolis . . . . .       | 159    | 57         | 5312-85                | 770                     | Syracuse . . . . .           | 228                    | 84                  | 6175-89  | 148        | Spokane . . . . .           | 157                     | 12         | 6320                   | 243                 | 417    |            |                        |                         |  |  |
| South Bend . . . . .         | 158    | 27         | 5312-627               | 148                     | N.C. Asheville . . . . .     | 105                    | 30                  | 3835-161 | 600        | Walla Walla . . . . .       | 106                     | 1          | 4256                   | -192                | 91     |            |                        |                         |  |  |
| IOWA. Burlington . . . . .   | 156    | 46         | 5968-198               | 501                     | Hatteras . . . . .           | 121                    | 67                  | 2302-305 | 520        | Yakima . . . . .            | 124                     | 4          | 5183                   | -261                | 79     |            |                        |                         |  |  |
| Des Moines . . . . .         | 162    | 37         | 6326-40                | 583                     | Charlotte . . . . .          | 73                     | 31                  | 3193-53  | 514        | W.Va. Beckley . . . . .     | 160                     | 55         | 5152                   | -1                  | 869    |            |                        |                         |  |  |
| Dubuque . . . . .            | 204    | 66         | 7085-352               | 546                     | Greensboro . . . . .         | 97                     | 41                  | 3486-187 | 263        | Huntington . . . . .        | 148                     | 71         | 4652                   | 314                 | 977    |            |                        |                         |  |  |
| Sioux City . . . . .         | 158    | 31         | 6756-242               | 792                     | Raleigh . . . . .            | 133                    | 52                  | 3465-71  | 792        | Parkersburg . . . . .       | 147                     | 62         | 4572                   | 29                  | 613    |            |                        |                         |  |  |
| KANS. Concordia . . . . .    | 135    | 38         | 5443-186               | 375                     | Wilmington . . . . .         | 64                     | 35                  | 2213-181 | 575        | Parkersburg . . . . .       | 147                     | 62         | 4572                   | 29                  | 613    |            |                        |                         |  |  |
| Dodge City . . . . .         | 137    | 44         | 4844-86                | 392                     | N.Dak. Bismarck . . . . .    | 219                    | 47                  | 8499-232 | -101       | WIS. Green Bay . . . . .    | 218                     | 55         | 7503                   | 147                 | 435    |            |                        |                         |  |  |
| Goodland . . . . .           | 170    | 42         | 5772-156               | 274                     | Fargo . . . . .              | 212                    | 35                  | 8195-317 | -683       | LaCrosse . . . . .          | 196                     | 58         | 7120                   | 215                 | 426    |            |                        |                         |  |  |
| Topeka . . . . .             | 117    | 28         | 5152-184               | 390                     | Littleton . . . . .          | 224                    | 47                  | 8294-62  | -160       | Madison . . . . .           | 198                     | 45         | 6906                   | -169                | 192    |            |                        |                         |  |  |
| Wichita . . . . .            | 115    | 39         | 4756-283               | 319                     | Dayton . . . . .             | 198                    | 69                  | 5484-234 | 456        | Milwaukee . . . . .         | 225                     | 69         | 6593                   | -110                | 373    |            |                        |                         |  |  |
| KY. Lexington . . . . .      | 138    | 56         | 4423-57                | 682                     | OHIO. Akron-Canton . . . . . | 221                    | 91                  | 5616-17  | 708        | WYO. Casper . . . . .       | 243                     | 73         | 7157                   | 472                 | 491    |            |                        |                         |  |  |
| Louisville . . . . .         | 116    | 39         | 4187-221               | 608                     | Columbus . . . . .           | 180                    | 70                  | 5114-200 | 589        | Cheyenne . . . . .          | 230                     | 60         | 6821                   | 452                 | 948    |            |                        |                         |  |  |
| LA. Baton Rouge . . . . .    | 24     | 13         | 1447-217               | 403                     | Cincinnati . . . . .         | 151                    | 80                  | 4857-90  | 538        | Lander . . . . .            | 24                      | 72         | 1172                   | 167                 | 343    |            |                        |                         |  |  |
| Lake Charles . . . . .       | 4      | -5         | 1321-175               | 226                     | Dayton . . . . .             | 198                    | 69                  | 5484-234 | 456        | Sheridan . . . . .          | 249                     | 85         | 7291                   | 445                 | 705    |            |                        |                         |  |  |
| New Orleans . . . . .        | 22     | 12         | 1284-177               | 357                     | Toledo . . . . .             | 206                    | 76                  | 5993-118 | 228        |                             |                         |            |                        |                     |        |            |                        |                         |  |  |