

WEEKLY WEATHER AND CROP BULLETIN

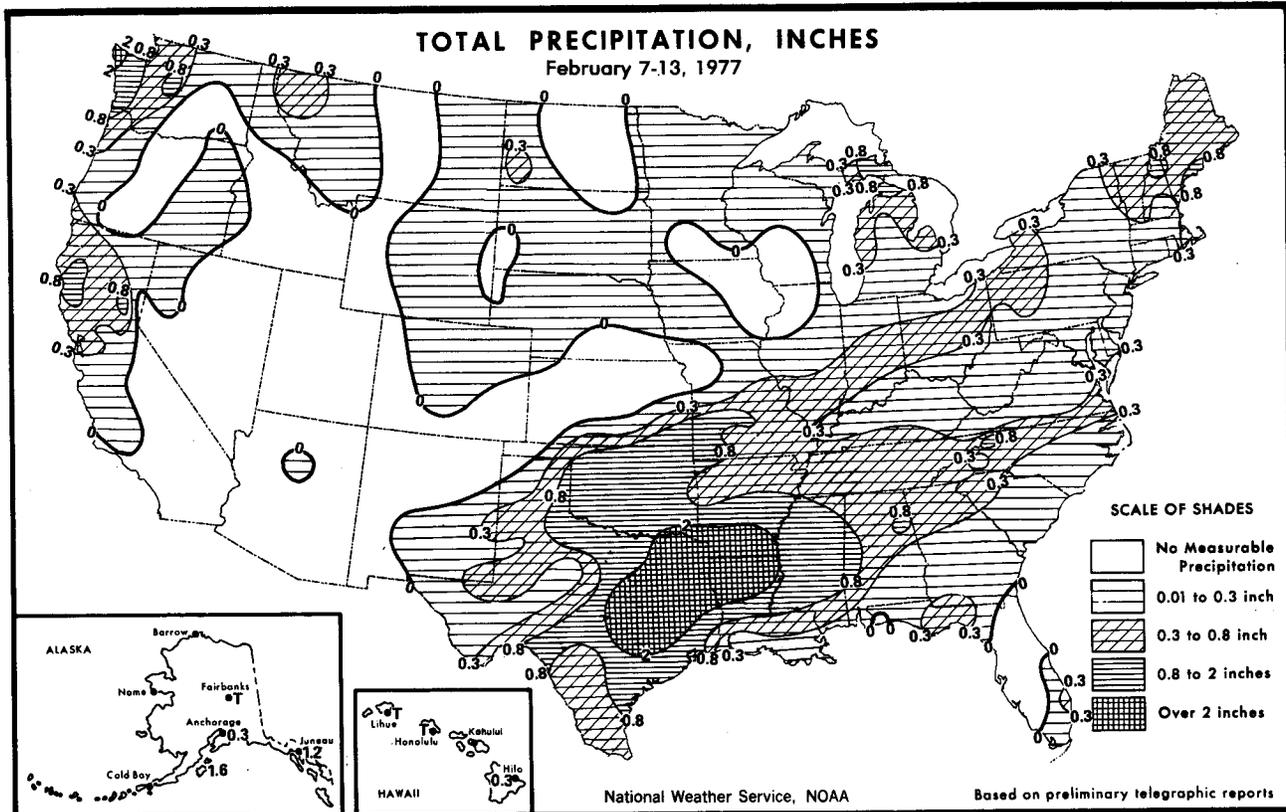
U.S. DEPARTMENT OF COMMERCE
National Weather Service, NOAA

U.S. DEPARTMENT OF AGRICULTURE
Statistical Reporting Service

Volume 64, No. 7

Washington, D.C.

Feb. 15, 1977



National Weather Summary

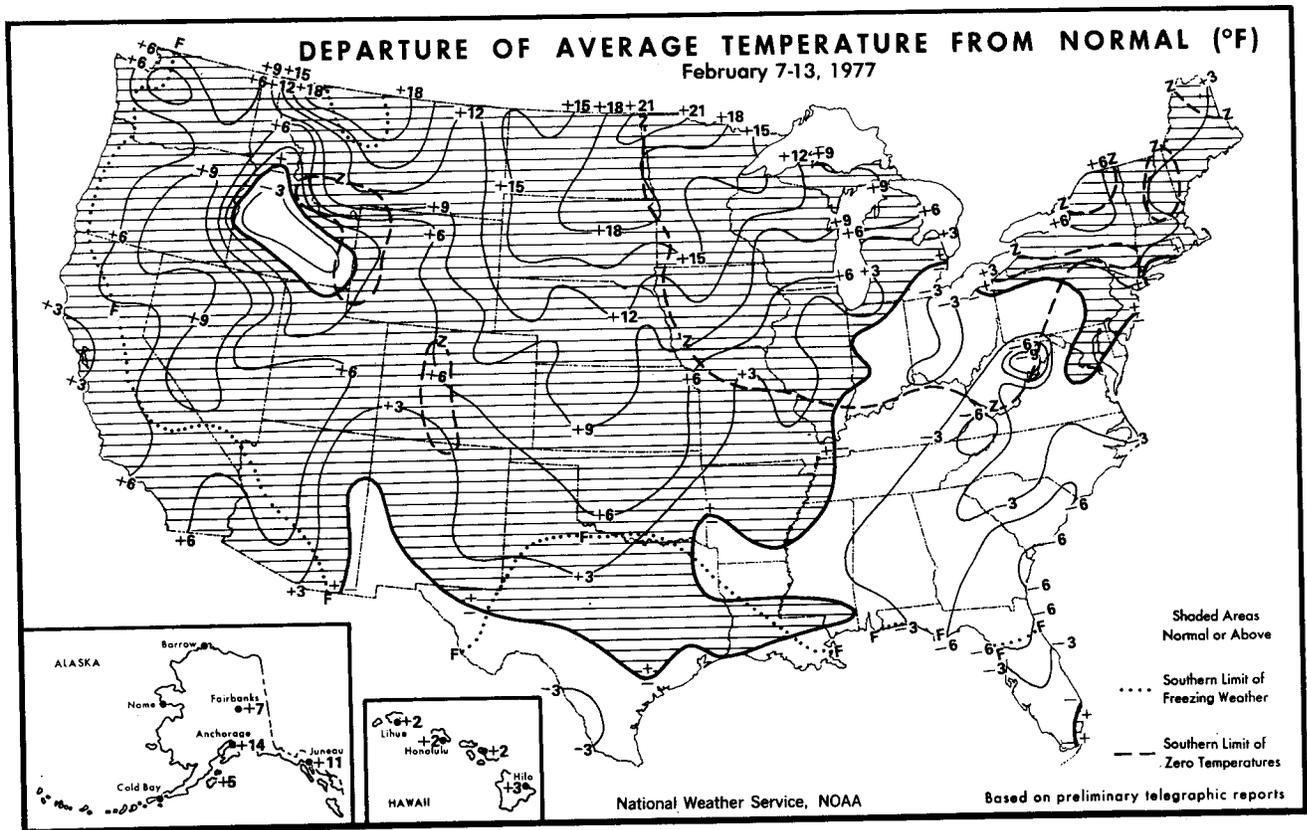
For the week of February 7-13

HIGHLIGHTS: Unseasonably warm temperatures prevailed most of the week in the Plains and upper Mississippi Valley. Temperatures in the northern Plains averaged 18 to 21° higher than normal. The cool weather lingered in the Ohio Valley and the Southeast but those areas also warmed during the latter part of the week. Most of the precipitation during the week was associated with a low pressure system that moved from Texas northeastward through New England spreading rain in its path. The rain was heavy in east Texas but rather light as the low moved northeastward. Some rain fell in the Pacific Northwest and northern California but not nearly enough to relieve the drought.

Monday was a cold day over the midwest and the East. Some early morning record low temperatures for the date were: -8° at Cincinnati, Ohio, -17° at Moline, Ill., 12° at Greensboro, N.C. and

16° at Huntsville, Ala. Mild weather that had been over the western third of the Nation spilled into the northern and central Plains. Afternoon temperatures rose above freezing as far north as North Dakota where some stations reported as high as 40°. A few snow flurries lingered from western New York through the central Appalachians and into Ohio and Michigan. Rain increased over southern Texas during the day.

Some important though generally light precipitation came to the far West Tuesday. Showers extended into eastern Washington and Oregon and northern California. Only the coastal area of northern California received moderate amounts of rain but some of the mountain stations reported up to a foot of snow. Rain continued over southern Texas and southern Florida. Elsewhere around the Nation unseasonably cold temperatures continued across the southern and central Atlantic Coastal States with highs climbing only to 30 or 40°. Warming continu-



ed in the Rockies, Plains and Midwest. Denver, Colo. and Chadron, Neb. both reached 61°.

Early morning temperatures were comparatively mild over all the Nation Wednesday. It was rather cold from the Ohio Valley through most of the Atlantic Coast States, but even in those areas the severe cold had moderated. As the day progressed, the warmest day of the year unfolded in the central Plains and middle Mississippi Valley regions and the moderating trend continued most pronounced across the Great Lakes and the Ohio Valley. Green Bay, Wisc. went above the freezing mark for the first time in fifty days. Precipitation was scarce over the Nation. Some light snow flurries fell in western New York, northeast Minnesota and western Montana. Light rain dampened southern Texas and a few widely scattered showers fell over southern California and the Pacific Northwest.

After so long a period with record cold temperatures it seems odd to be reporting record highs but on Thursday some cities in the northern Plains reported record high temperatures for the date. Sioux Falls, S.D. reported a record 56°, Des Moines, Ia. 63° and Rochester, Minn. 48°. Gradual warming continued throughout eastern U.S. Snow fell in parts of New York State and New England. Buffalo, N.Y. had its 53rd consecutive day with snowfall. Showers and a few thunderstorms in increasing amounts continued in southern and eastern Texas. Snow or rain fell in parts of New Mexico late in the day and rain with snow at higher elevations continued to drift eastward in the Pacific Northwest.

The rain in Texas increased on Friday with some heavy amounts reported and thus resulted in the threat of local flooding. The rain area spread northward and eastward to include Oklahoma, Arkansas and Louisiana early in the day. Afternoon thunderstorms with accompanying high winds and

downpours were included in the area from southeast Texas through Arkansas. The rain and showers spread to east Kansas, Missouri and western Kentucky and Tennessee by the end of the day. Other precipitation areas in the Nation included light snow and rain over the mountains of New England and scattered rain or snow in the Pacific Northwest. Buffalo, New York reported no snow for the first time since Dec. 20, 1976. The warm weather continued with numerous record high temperatures reported in the upper Mississippi Valley. The threat of flooding became greater as melting ice and snow combined with rainfall.

A low pressure system located over southern Indiana on Saturday continued on its northeasterly course spreading rain across the Ohio Valley and later in the day spread to the middle and North Atlantic States. Most rainfall amounts were light and this reduced the potential for flooding. Light rain also fell across portions of the Great Lakes region. Showers and thundershowers occurred from Louisiana to Tennessee and rain spread to the western Carolinas. Precipitation also fell in some of the dry areas of the Northwest. Rain and significant amounts of snow at higher elevations fell from western Washington into Montana. Mild weather dominated the entire Nation.

Sunday produced cooler temperatures behind a deepening low pressure system and changed the rain to snow over the lower Lakes region and Ohio Valley. Snow and rain moved on into New England. Some flooding was reported in West Virginia, Ohio and Kentucky. Rain and snow was also scattered from Montana and northern Wyoming into the western Dakotas and spread into Nebraska. Showers fell along the middle and south Atlantic Coast. No extremely cold weather occurred in the Nation but the East was cooler while western U.S. was unseasonably warm.

National Agricultural Summary

For the Week of February 7-13

HIGHLIGHTS: Above normal temperatures in all but the mideast and southeast areas of the Nation relieved much of the extreme winter stress which had existed in many areas since December. Loss rates of newborn calves and lambs lessened as temperatures climbed. Feed supplies, already short in many areas, went a little farther. Melted snow and thawed ponds and streams increased water supplies for livestock; however, the small amount of winter wheat that had a protective snow cover is now exposed to possible wind damage. Plowing, fertilizing and liming were active as milder temperatures allowed farmers to spend more time outside. A few remaining fields of corn, cotton and soybeans were harvested. Fruit growers took advantage of the break in cold temperatures and made good pruning progress.

SMALL GRAINS: The thaw which occurred during the week did little to relieve the moisture shortage of the U. S. winter wheat crop. Much of the crop was fully exposed, but wind damage through the week's end had been minimal.

Kansas winter wheat still rated poor to fair condition and the warm dry weather left it susceptible to severe wind damage. The Texas Plains received some moisture, but winter wheat there remained extremely dry. Growth had started but more moisture was needed for maturity. Fields in other areas of Texas accelerated growth but were wet. Most of the Oklahoma winter wheat acreage received an inch or so of rain which was expected to promote topgrowth and offer some protection from wind damage. Above normal temperatures early in the week ended the dormancy of most of the crop which rated mostly fair. Top-dressing of some acreage was accomplished. Mississippi's winter wheat rated very poor to poor condition. Cattle were removed from New Mexico winter wheat dryland which was in poor condition with some blowout reported. Irrigated acreage was good in most of the southern areas, fair in other parts of the State.

Winter wheat in Montana rated poor to fair with poor snow cover protection but little wind damage. In Wyoming wind damage to winter wheat had been light. The Washington acreage planted on fallow ground was in good condition while fields rotated from crops showed moisture stress. In Illinois the winter wheat crop rated mostly fair. Virginia winter wheat was reported in poor condition with some wind and cold damage.

OTHER CROPS: Florida sugarcane harvest continued very active while young cane remained in poor condition. Limited cotton planting began in south Texas. Wet soil conditions hampered land preparation and fertilizing in most areas of the State and resulted in planting delays. Burley tobacco in Kentucky was prepared for market during the favorable warm, wet weather. Some burley markets remain open but deliveries were very light during the earlier cold weather. Tobacco plantbeds were fumigated and prepared for seeding in Virginia and South Carolina. Plantbed preparation in Georgia neared completion. Planting small grains in Arizona and Oklahoma made some progress.

FRUITS AND NUTS: In Florida citrus harvest was very active while post freeze conditions of defoliation and fruit dropping continued. New tree growth started during the week. Citrus harvest in Texas was limited due to continued wet weather. California lemon, tangerine, grapefruit and Navel

orange harvest progressed. Picking was active in Arizona's sweet oranges, Navel oranges, tangelos and lemons. Valencia oranges were coloring and sizing well.

Warm temperatures encouraged many growers to begin pruning deciduous orchards. Pruning in Washington and Oregon remained active. Pruning was underway in New Jersey and Virginia and mostly completed in South Carolina.

VEGETABLES: In Florida mild weather improved vegetable crop condition as damaged plants suckered and added new growth. Transplanting and spot resetting continued in tomatoes and green peppers. Vegetable shipments overall increased and included tonnage from cabbage, carrots, escarole-endive, strawberries, lettuce, potatoes, radishes, squash and light, but steady supplies of green peppers, eggplant, and tomatoes. Reduced shipments included snap beans, celery, sweet corn, and cucumbers. Good supplies of snap beans, cucumbers and squash are expected through late March with good strawberry movement through early March.

Rains continued to delay Texas vegetable harvest in the Lower Rio Grande Valley and San Antonio-Winter Garden areas. Wet conditions also delayed plantings in all areas except Trans-Pecos where onion planting was active. Onion and lettuce planting was completed in El Paso. In Arizona harvest of lettuce, broccoli, and cabbage was active. Preparation, planting and irrigation of cantaloups and watermelons continued.

California harvest of lettuce, carrots, spinach and celery was strong. Winter potato harvest was steady while asparagus harvest increased slightly.

PASTURE AND LIVESTOCK: The livestock feed supply situation remained critical in all areas of the United States except the Pacific Northwest and some of the North Central area. Water supplies improved as ponds and streams thawed but ground thaws caused extremely muddy conditions and increased feed transportation and waste problems. Milder temperatures increased the chances of newborn calves and lambs making it through the remaining winter days. The break in cold weather was expected to allow existing feed supplies to stretch a little further.

California's range condition and stock water supplies remained critical. Supplemental feeding and herd thinning continued. Cattle were in poor to fair condition with sheep considered fair. Cattle and sheep in Arizona and New Mexico were in fair condition. Calving, lambing and shearing was active. Ranges in the eastern half of Texas were poor where continued rains made pastures muddy. Cattle there were fair to poor but in the western half where rain is needed they are in fair condition. Supplemental feeding was required in both areas. Oklahoma ranges and pastures rated poor to fair with cattle rated fair as feed supplies ran low. Hay supplies were short in Alabama, Louisiana, and Mississippi where livestock conditions ranged from poor to fair.

In Georgia and portions of Florida cattle were in poor to fair condition with range and pasture conditions poor. Livestock in Virginia were in generally good condition and death losses declined with the warmer temperatures. Hay supplies were low in many areas. Illinois livestock rated fair with feed consumption heavy in most areas. In Iowa hay and roughage were still adequate except in the northwest.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., February 13, 1977

| States and Stations | Temperature °F | | Precipitation Inches | | States and Stations | Temperature °F | | Precipitation Inches | | States and Stations | Temperature °F | | Precipitation Inches | |
|-------------------------|----------------|-----------|----------------------|-----------|--------------------------|----------------|-----------|----------------------|-----------|--------------------------|----------------|-----------|----------------------|-----------|
| | Average | Departure | Total | Departure | | Average | Departure | Total | Departure | | Average | Departure | Total | Departure |
| ALA. Birmingham . . . | 43 | - 3 | .5 | - .8 | La. Baton Rouge . . . | 53 | 0 | .7 | - .5 | Youngstown | 25 | 1 | .2 | - .4 |
| Mobile | 53 | 0 | T | -1.1 | Lake Charles | 54 | 0 | .1 | -1.0 | OKLA. Okla. City . . . | 47 | + 7 | 1.1 | + .8 |
| Montgomery | 46 | - 4 | T | -1.0 | New Orleans | 53 | - 2 | .1 | -1.1 | Tulsa | 47 | + 7 | 1.3 | + .9 |
| ALASKA Anchorage . . | 31 | +14 | .3 | + .1 | Shreveport | 48 | - 2 | 3.2 | +2.2 | OREG. Astoria | 48 | + 4 | 1.0 | -1.0 |
| Barrow | - | - | - | - | MAINE Caribou | 14 | + 3 | .8 | + .3 | Burns | 39 | + 9 | .1 | + .2 |
| Fairbanks | 3 | + 7 | T | - .1 | Portland | 23 | + 1 | .9 | 0 | Medford | 46 | + 5 | T | - .6 |
| Juneau | 38 | +11 | 1.2 | + .3 | MD. Baltimore | 36 | + 2 | T | - .7 | Pendleton | 44 | + 6 | T | - .3 |
| Kodiak | 36 | + 5 | 1.6 | + .3 | MASS. Boston | 33 | + 3 | .3 | - .6 | Portland | 45 | + 3 | .2 | - .9 |
| Nome | - | - | - | - | Chatham | 30 | - | .7 | - | Salem | 47 | + 5 | .1 | -1.1 |
| ARIZ. Flagstaff . . . | 36 | + 6 | .2 | - .2 | MICH. Alpena | 25 | + 7 | .5 | + .2 | PA. Allentown | 30 | + 2 | .1 | - .6 |
| Phoenix | 62 | + 7 | 0 | - .1 | Detroit | 24 | - 2 | .1 | - .3 | Erie | 28 | + 4 | .3 | - .2 |
| Tucson | 56 | + 3 | 0 | - .2 | Flint | 25 | + 2 | .3 | - .1 | Harrisburg | 30 | - 1 | T | - .6 |
| Winslow | 38 | + 0 | 0 | - .1 | Grand Rapids | 25 | + 1 | .2 | - .2 | Philadelphia | 33 | 0 | T | - .6 |
| Yuma | 63 | + 4 | 0 | - .1 | Houghton Lake | 25 | + 8 | .2 | - .1 | Pittsburgh | 27 | - 1 | .3 | - .3 |
| ARK. Fort Smith . . . | 43 | + 1 | .4 | - .4 | Lansing | 25 | + 2 | .1 | - .3 | Scranton | 28 | + 2 | T | - .5 |
| Little Rock | 44 | + 2 | 1.0 | - .1 | Marquette | 28 | + 9 | .2 | - .2 | R.I. Providence | 31 | + 2 | .3 | - .5 |
| CALIF. Bakersfield . . | 57 | + 5 | .3 | -1.0 | Muskegon | 24 | 0 | .3 | - .1 | S.C. Charleston | 43 | - 7 | T | - .8 |
| Eureka | 53 | + 5 | T | - .5 | S. Ste. Marie | 22 | + 8 | .9 | + .5 | Columbia | 44 | - 3 | T | - .9 |
| Fresno | 55 | + 6 | T | - .7 | MINN. Duluth | 26 | +15 | T | - .2 | Greenville | 43 | - 1 | .4 | - .7 |
| Los Angeles | 66 | + 8 | 0 | - .7 | Internatl Falls | 25 | +20 | .1 | 0 | S.D. Aberdeen | 32 | +19 | T | - .1 |
| Red Bluff | 56 | + 6 | .6 | - .2 | Minneapolis | 29 | +14 | T | - .2 | Huron | 33 | +16 | .1 | - .1 |
| San Diego | 64 | + 7 | 0 | - .4 | Rochester | 28 | +12 | T | - .1 | Rapid City | 40 | +15 | T | - .1 |
| San Francisco | 54 | + 3 | .3 | - .5 | St. Cloud | 26 | +14 | T | - .2 | Sioux Falls | 31 | +13 | .1 | - .2 |
| Stockton | 54 | + 5 | .4 | - .2 | MISS. Jackson | 48 | - 1 | .9 | - .2 | TENN. Chattanooga . . . | 38 | - 4 | .4 | - .9 |
| COLO. Denver | 41 | + 9 | .1 | 0 | Meridian | 46 | - 3 | .9 | - .3 | Knoxville | 33 | - 4 | .3 | - .9 |
| Grand Junction | 37 | + 5 | 0 | - .1 | MO. Columbia | 35 | + 2 | .3 | - .1 | Memphis | 44 | + 1 | .7 | - .5 |
| Pueblo | 40 | + 6 | 0 | - .1 | Kansas City | 37 | + 5 | T | - .3 | Nashville | 38 | - 2 | .5 | - .6 |
| CONN. Bridgeport . . . | 29 | - 1 | T | - .7 | St. Louis | 39 | + 5 | .4 | - .1 | TEX. Abilene | 50 | + 3 | .1 | - .2 |
| Hartford | 29 | + 3 | .1 | - .7 | Springfield | 39 | + 3 | .8 | + .3 | Amarillo | 43 | + 4 | .2 | + .1 |
| D.C. Washington . . . | 38 | + 2 | T | - .6 | MONT. Billings | 39 | +12 | 0 | - .1 | Austin | 54 | + 2 | 2.2 | +1.4 |
| FLA. Apalachicola . . | 49 | - 6 | .3 | - .6 | Glasgow | 26 | +12 | T | - .1 | Beaumont | 56 | + 1 | .7 | - .4 |
| Daytona Beach | 56 | - 3 | 0 | - .7 | Great Falls | 44 | +18 | .1 | - .1 | Brownsville | 62 | - 1 | .5 | + .1 |
| Ft. Myers | 63 | - 1 | T | - .5 | Havre | 35 | +18 | 0 | - .1 | Corpus Christi | 58 | - 1 | 1.0 | + .5 |
| Jacksonville | 48 | - 8 | T | - .9 | Helena | 36 | +11 | .1 | 0 | Dallas | - | - | - | - |
| Key West | 69 | - 2 | .1 | - .4 | Kalispell | 42 | +18 | .6 | + .3 | Del Rio | 54 | - 1 | 1.2 | + .9 |
| Lakeland | 59 | - 3 | 0 | - .6 | Miles City | 31 | +11 | T | - .1 | El Paso | 46 | - 2 | T | - .1 |
| Miami | 67 | 0 | T | - .5 | Missoula | 31 | + 5 | T | - .2 | Fort Worth | 49 | + 1 | 1.3 | + .7 |
| Orlando | 56 | - 5 | 0 | - .7 | NEBR. Grand Island . . | 38 | +11 | 0 | - .2 | Galveston | 54 | - 2 | .8 | + .1 |
| Tallahassee | 48 | - 6 | .4 | - .7 | Lincoln | 34 | + 7 | T | - .2 | Houston | 54 | - 1 | 1.2 | + .3 |
| Tampa | 60 | - 1 | T | - .7 | Norfolk | 35 | +12 | T | - .2 | Lubbock | 45 | + 3 | .2 | + .1 |
| W. Palm Beach | 66 | 0 | .7 | + .1 | N. Platte | 36 | + 9 | T | - .1 | Midland | 48 | + 1 | .5 | + .4 |
| GA. Atlanta | 41 | - 3 | .3 | - .8 | Omaha | 35 | +11 | T | - .2 | San Angelo | 50 | 0 | .3 | + .1 |
| Augusta | 42 | - 6 | .1 | - .8 | Valentine | 36 | +12 | T | - .1 | San Antonio | 53 | - 1 | .7 | + .1 |
| Macon | 45 | - 5 | .2 | - .9 | NEV. Ely | 32 | + 5 | 0 | - .1 | Victoria | 56 | 0 | 1.8 | +1.2 |
| Savannah | 46 | - 5 | T | - .7 | Las Vegas | 55 | + 7 | 0 | - .1 | Waco | 52 | + 2 | 3.3 | +2.7 |
| HAWAII. Hilo | 74 | + 3 | .3 | -2.9 | Reno | 41 | + 4 | 0 | - .2 | Wichita Falls | 48 | + 3 | 1.1 | + .8 |
| Honolulu | 74 | + 2 | T | - .6 | Winnemucca | 41 | + 7 | T | - .2 | UTAH. Blanding | 37 | + 5 | 0 | - .2 |
| Kahului | 73 | + 2 | 0 | - .7 | N.H. Concord | 22 | + 1 | .1 | - .5 | Salt Lake City | 36 | + 3 | 0 | - .3 |
| Lihue | 73 | + 2 | T | -1.1 | N.J. Atlantic City . . . | 32 | - 1 | T | - .8 | VT. Burlington | 21 | + 4 | .5 | + .1 |
| IDAHO. Boise | 31 | - 4 | T | - .3 | Trenton | 35 | + 2 | T | - .6 | VA. Lynchburg | 36 | - 1 | .1 | - .6 |
| Lewiston | 44 | + 7 | T | - .2 | N.MEX. Albuquerque . . | 40 | + 1 | T | - .1 | Norfolk | 40 | - 1 | .4 | - .4 |
| Pocatello | 24 | - 5 | T | - .2 | Roswell | 47 | + 5 | T | + .1 | Richmond | 39 | 0 | .1 | - .7 |
| ILL. Cairo | 40 | + 1 | .2 | - .7 | N.Y. Albany | 27 | + 5 | .1 | - .4 | Roanoke | 36 | - 1 | T | - .8 |
| Chicago | 30 | + 4 | .1 | - .3 | Binghamton | 26 | + 4 | .2 | - .4 | WASH. Colville | 34 | + 4 | .1 | - .3 |
| Moline | 29 | + 4 | T | - .3 | Buffalo | 28 | + 4 | .4 | - .2 | Omak | 35 | + 6 | .1 | - .2 |
| Peoria | 28 | + 1 | T | - .4 | New York | 35 | + 3 | T | - .8 | Quillayute | 46 | + 5 | 2.9 | - .2 |
| Rockford | 26 | + 3 | T | - .3 | Rochester | 28 | + 4 | .2 | - .4 | Seattle-Tacoma | 51 | + 9 | .7 | - .5 |
| Springfield | 33 | + 4 | .1 | - .3 | Syracuse | 30 | + 6 | .1 | - .6 | Spokane | 37 | + 6 | T | - .4 |
| IND. Evansville | 33 | - 2 | .2 | - .6 | N.C. Asheville | 35 | - 4 | .1 | - .8 | Walla Walla | 46 | + 7 | T | - .4 |
| Ft. Wayne | 25 | - 2 | .2 | - .3 | Charlotte | 41 | - 2 | - .2 | - .7 | Yakima | 41 | + 6 | T | - .2 |
| Indianapolis | 29 | - 1 | .4 | - .2 | Greensboro | 38 | - 2 | .3 | - .5 | W. Va. Beckley | 30 | - 2 | .2 | - .6 |
| South Bend | 29 | + 4 | .2 | - .3 | Hatteras | 42 | - 3 | T | -1.1 | Charleston | 31 | - 5 | .1 | - .7 |
| IOWA. Burlington . . . | 31 | + 5 | T | - .3 | Raleigh | 38 | - 4 | .2 | - .6 | Huntington | 34 | - 1 | T | - .7 |
| Des Moines | 34 | +11 | T | - .2 | Wilmington | 43 | - 4 | T | - .8 | Parkersburg | 32 | - 2 | T | - .7 |
| Dubuque | 27 | + 6 | T | - .3 | N.DAK. Bismarck | 29 | +17 | T | - .1 | WIS. Green Bay | 27 | +10 | T | - .2 |
| Sioux City | 32 | +10 | .1 | - .1 | Fargo | 26 | +17 | T | - .1 | La Crosse | 27 | + 8 | 0 | - .2 |
| KANS. Concordia | 41 | +10 | T | - .2 | Williston | 29 | +16 | .2 | + .1 | Madison | 26 | + 7 | T | - .2 |
| Dodge City | 44 | + 9 | 0 | - .1 | OHIO. Akron-Canton . . . | 27 | 0 | .4 | - .1 | Milwaukee | 27 | + 6 | T | - .3 |
| Goodland | 40 | + 9 | T | - .1 | Cincinnati | 28 | - 4 | T | - .7 | WYO. Casper | 35 | + 9 | .1 | 0 |
| Topeka | 40 | + 8 | 0 | - .2 | Cleveland | 25 | - 2 | .2 | - .3 | Cheyenne | 36 | + 7 | T | - .1 |
| Wichita | 43 | + 8 | T | - .2 | Columbus | 25 | - 4 | .4 | - .2 | Lander | 30 | + 5 | T | - .1 |
| KY. Lexington | 32 | - 2 | .1 | - .7 | Dayton | 29 | 0 | .3 | - .3 | Sheridan | 31 | + 6 | T | - .2 |
| Louisville | 35 | 0 | T | - .8 | Toledo | 23 | - 3 | .2 | - .2 | P.R. San Juan | 77 | + 2 | .4 | - .3 |

Based on 1941-70 normals

Publication of the Weekly Weather and Crop Bulletin began in 1892 as the Weekly Weather Chronicle. It is now issued under general authority of the Act of January 12, 1895 (44USC 213), 53 Cong., 3d Session. Contents of the Bulletin may be reprinted freely, with proper credit. Standard copy for the Bulletin is prepared by R.E. Felch, L.M. Denny, and O.W. Byrd,

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State Summaries of Weather and Agriculture

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

ALABAMA: Temperatures 2° below normal. Warming trend 11th through 13th. Limited rainfall on 13th.

Farm activities increasing. Soil moisture adequate. Small grains and winter grazing crops made some growth. Livestock poor to fair condition. Hay supplies becoming short.

ARIZONA: Moisture in north central, White Mountains. Elsewhere dry, warm. Temperatures 1 to 7° above normal.

Land preparation, furrowing, pre-irrigation, cotton. Herbicide incorporation, planting wheat, barley. Harvesting lettuce, mixed vegetables, citrus. Wheat planting over 95% complete, barley over 90%. Hay development slow. Lettuce harvest Yuma. Preparation, planting, irrigation, cantaloups, watermelons. Harvest broccoli, cabbage continues. Active picking sweet oranges, tangelos, Navels, lemons. Lemon harvest nearly complete. Valencia oranges coloring, sizing well. Rain, snow in higher elevations. Moisture supplies still deficient. Lower ranges poor to fair, limited stock water. Supplemental feeding portions of State. Cattle, sheep fair to good condition.

ARKANSAS: Temperatures near normal. Departures ranged from -4 to 4° above normal. Extremes: 70 and 12°. Precipitation over entire State late in week. Amounts from 0.29 in. to 2.27 in., with most in southern and eastern areas.

Some fieldwork in Delta - mainly stalk cutting. Showers helped but still below normal in subsoil moisture. Very little growth of wheat and oats. Ponds thawed.

CALIFORNIA: Some precipitation over northern half. Amounts generally light, and only a few inches snow fell on the Sierra Nevada. Average temperatures were several degrees above normal.

Light rain helped small grains, ground preparation underway. Spraying for aphids, weeds progresses. Early almond varieties started to bloom. Avocado harvest light. Lemon, tangerine, desert grapefruit, and Navel orange harvest continues. Vegetable harvesting pressing forward. Lettuce, carrots, spinach, and celery harvests strong. Steady harvests of winter potatoes. Cabbage harvesting declined. Asparagus harvest increased slightly.

Last week's rains did little to improve range conditions and stock water supplies. Supplemental feeding, herd thinning continues. Cattle poor to fair condition, sheep fair condition. Lambing, calving continues. Mild weather helped growth irrigated pasture.

COLORADO: Mild, dry weather continued. Some light snow in northern and central mountains. Windy conditions occurred late in week over mountains and east portion. Temperatures averaged 3 to 7° above normal at lower elevations. Near normal over mountains.

FLORIDA: Scattered showers south during midweek produced isolated rains of 0.25 to 0.50 in. Patchy light rain produced near 0.38 in. over the northern portions, 13th with little or none elsewhere. Below normal temperatures early week were balanced by warmer readings weekend, averaging near to slightly below normal most areas.

Soil moisture adequate. Land preparation increasing as weather improves. Small grains, tobacco plant beds poor condition. Sugarcane harvest very active. Young cane continues poor condition. Temperatures suppressing small grain growth. Condition cattle, calves north central, north, panhandle becoming serious, some deaths have occurred. Hay supplies short to nonexistent. Central, south pastures show little recovery. Heavy supplemental feeding, cattle, calves very poor to fair. Citrus post-freeze conditions continue, defoliation, fruit dropping. New growth just starting. Harvest very active all areas. Mild weather improved vegetable crop condition, increased harvest. Freeze damaged plants sucker-ing out, putting on new growth. Transplanting, spot resetting continue active, green peppers, tomatoes, overall vegetable shipments increased. Crops showing increased movement were cabbage, carrots, escarole-endive, strawberries, lettuce, potatoes, radishes, squash. Light steady supplies green peppers, eggplant, tomatoes. Shipments declined snap beans, celery, sweet corn, cucumbers. Good supplies snap beans, cucumbers, squash late March. Good strawberry movement early March.

GEORGIA: Temperatures 7 to 11° below normal. Coldest 5° on 8th. Dry the 5th to 11th. Rainfall 12th and 13th more than 0.75 in. over mountains. Less than 0.25 in. central and south.

Soil moisture mostly adequate. Field work active south, slower north due to wet and cold soil. Harvesting corn, cotton, pecans, soybeans nearing completion. Small grains poor to fair condition. Pastures poor condition. Cattle poor to fair condition. Tobacco bed preparation nearing completion. Tobacco plants mostly fair.

HAWAII: Weather generally dry. Some light showers windward areas.

Kona area of Maui showing effect of drought. New plantings curtailed due to lack or limited usage of irrigation water. Some reservoirs to irrigate sugarcane crop getting dry on Oahu. Vegetable supplies sufficient for most items. Cucumber yields on Hawaii affected by dry weather. Green onion production down. Banana supply adequate. Sugar harvesting light. Pineapple harvesting light. Pastures poor to fair. More moisture needed.

IDAHO: Temperatures averaged 5 to 12° below normal. Extremes: 66 and -7°. Drought conditions continue. Precipitation 0.20 to 0.60 in. below normal.

Calving and lambing active. Livestock in good condition. Feed supplies adequate.

ILLINOIS: Temperatures: 1 to 5° above normal. Precipitation: near 0.10 in. northeast. Trace other northern areas; 0.33 in. some southern areas.

Soil moisture mostly short. Winter wheat, other small grains and legumes mostly fair. Livestock doing fair most areas; feed consumption heavy. Losses due to cold in some areas. Caring for livestock main activity.

INDIANA: Temperatures averaged few degrees above normal and ranged from 11 to 59°. Snow cover melted, few in. of fresh snow in north and 0.30

in. rain in south. Soil freeze line 12.00 to 24.00 in.

Farmers took advantage of moderating conditions to clean bunkers and dispose of animal waste. Snow cover in many areas limited the spreading fertilizer, seeding clover and grass seeds. Purchases of seed and fertilizer underway. Caring for livestock and chores still major activities.

IOWA: Mild dry week. Only measurable precipitation on 13th over west and south areas. Temperatures averaging 5 to 10° above normal. Snow cover melted but added little water to streams and ponds.

Soil moisture still short despite snow melt. Stress on livestock diminished due to warmer temperatures. Hay and roughage availability is adequate most areas except northwest.

KANSAS: Highs 50's and 60's, minimums in 20's, averaged 8 to 10° above normal. No precipitation occurred except for showers that averaged 1.00 in. extreme southeast.

Wheat rated at poor to fair condition is susceptible to wind damage. Supplemental feeding still occurs as dry weather continues.

KENTUCKY: Weekly temperatures averaged near the normal mid-upper 30's. Continued dry with average rainfall less than 0.25 in.

Farmers welcomed warmer temperatures and resulting snow and ice melt. Livestock water supply relieved. Many farm water systems needing repair. Some fescue pasture available, but hay and forage shortage developing. Warm, moist weather over weekend favorable for stripping burley tobacco.

LOUISIANA: Temperatures 1 to 2° below normal. Extremes: 73 and 24°. Showers February 11th and 12th - heaviest north.

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

MARYLAND & DELAWARE: Temperatures 4 to 6° below normal. Highs in mid 40's, lows upper teens and mid 20's. Precipitation ranged 0.25 to 0.50 in. west. Less than 0.10 in. some areas Eastern Shore and Delaware.

Normal chores main farm work.

MICHIGAN: Temperatures averaged 2° below and 3° above normal over southern Lower Peninsula and 3 to 11° above normal over the northern Lower Upper Peninsulas. Precipitation varied with 0.30 to 1.00 in. falling over northern Lower Peninsula and 0.10 to 0.30 in. over southern Lower Peninsula. Upper Peninsula received mostly 0.30 in.

Farm activity is still limited to necessary chores and feeding of livestock. Some fruit growers were able to prune trees.

MINNESOTA: Warm, dry week, except sub-zero early Monday and light precipitation over weekend. Temperatures averaged 25° central and northeast, 30° most of south, west central and northwest. Extremes: 58 and -21°. Precipitation averaged 0.03 in. New snow 1.00 in. extreme north central, less elsewhere. Snow on ground at weeks end 10.00 in. north central to less than 1.00 in. south and extreme west.

MISSISSIPPI: Temperatures 6-12° subnormal. Extremes: 10 and 71°.

Soil moisture mostly adequate. Fieldwork: 3.7 days suitable. Winter wheat, oats in very

poor to poor condition. Livestock in mostly poor condition. Hay and roughage supplies very short. Feed grain supplies very short to short.

MISSOURI: Temperatures averaged 1 to 5° below normal east Ozarks and Bootheel. From normal to 3° above elsewhere. Precipitation averaged 0.25 in. and below in the Ozarks and Bootheel, light elsewhere.

MONTANA: Mostly dry week, temperatures well above normal. Significant precipitation northwest and mountains--otherwise dry. Light precipitation all areas end of week. Temperatures warm. Minimums mostly above freezing. Averages between 5 and 10° above normal. Warmest in the east.

Snowcover protection for winter wheat poor. Little wind damage to date. General condition remains poor to fair. Calving just starting. Grazing open many parts except closed eastern third.

NEBRASKA: Conditions dry over State with trace amounts of precipitation. Temperatures about 10° above normal with warm days and cool nights.

NEVADA: Daytime temperatures unseasonably warm, night temperatures near normal. Extremes: 78 to 4°. Light precipitation confined to high elevations.

Livestock losses below normal with mild, open winter. Feed supplies adequate.

NEW ENGLAND: Maximum temperatures of teens and 20's for first few days to well above freezing after midweek. Precipitation meager over area. Precipitation on final day near 0.50 in. across south to over 1.00 northern areas.

NEW JERSEY: Little precipitation. Temperatures averaged 29° north, 33° south, 35° coastal areas. Extremes: -4 and 60°. Precipitation well below normal.

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

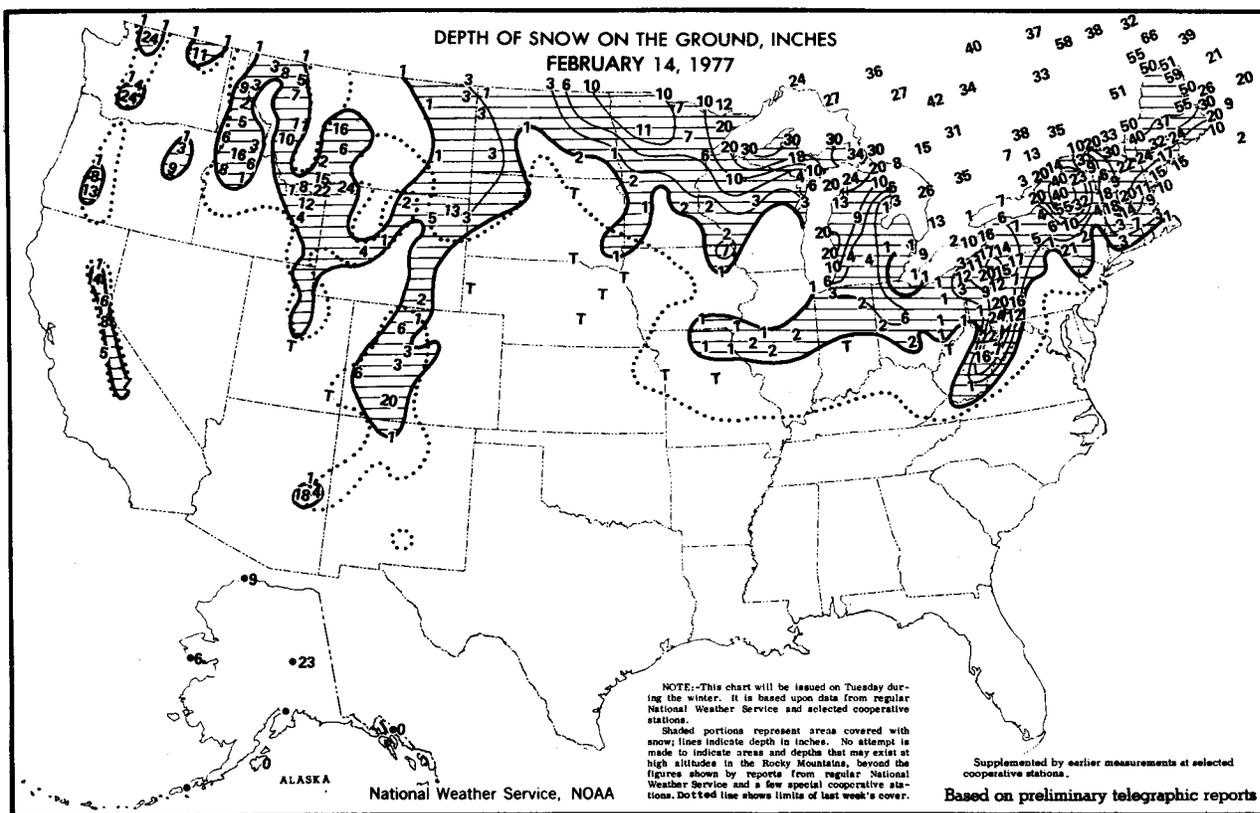
NEW MEXICO: Considerable snow cover 10th from west central mountains through central highlands.

Soil moisture adequate southwest, northwest, short elsewhere. Ranges poor north, fair south. Livestock fair. Calving, lambing, shearing continued. Land preparation, small grain irrigation continued. Dryland winter wheat poor. Cattle being removed, some blowout. Irrigated wheat and barley good most southern areas, fair elsewhere. Durum wheat good, with some emergence. Pecan harvest complete.

NEW YORK: Temperatures 10° above normal in St. Lawrence Valley; 3 to 6° above normal south and west. Extremes: -18 and 54°. Precipitation totaled 0.50 in. or less. Snow depths ranged from 20 to 50 in. Lee of Great Lakes to 2 to 5 in. in Lower Hudson Valley.

NORTH CAROLINA: Temperatures averaged about 7° below normal. Little or no precipitation until light rain 12th. Most rainfall amounts were under 0.25 in.

NORTH DAKOTA: Temperatures 12 to 17° above normal. Extremes: 52 and -25°. Precipitation ranged from 0.11 in. to 0.04 in. below normal. Snow cover ranged from 7 in. northeast to none west and southwest. Scattered snow over weekend. Livestock remain good condition. Farm activity minimal.



OHIO: Temperatures slightly below normal. Clear and cold early in week, mild 9th to 12th. Rain 12th with amounts 0.20 to 0.40 in. Mild temperatures and rain reduced much of snow cover. End of week snow cover averaged 1.00 to 3.00 in. mainly over eastern half. Precipitation remains low.

OKLAHOMA: Temperatures ranged from 1 to 7° above normal. Precipitation ranged from few tenths western areas to 2.50 in. southeast.

Rainfall amounts on 11th most wheat areas, which should promote needed top growth as a protection against possible blowing damage. Wheat condition rated mostly fair. Dry soils kept spring oats and barley seeding to a slow pace. Tending to livestock was main farm activity, but some top dressing of small grains was done. Ranges and pastures rated poor to fair. Cattle fair as feed supplies run low.

OREGON: Dry weather continued. Some rain along coast, but inland total was 0.10 in. or less. Temperatures little below normal north and east central, but elsewhere averaged near to slightly above normal. Extremes: High 60's and near 0°.

Soil moisture short. Lack of snow pack continues to cause concern for irrigation supplies. General farm activity light. Dry weather allowing some early seeding in west. Orchard pruning continues. Onions moving from storage. Livestock feeding heavy in some areas. Feed supplies are good. Calving and lambing continue. Pastures need moisture.

PENNSYLVANIA: Mostly sunny skies with warming trend through Friday. Temperatures averaged from near normal west to 3° above normal east. Extremes: 61 and -16°. Snow cover decreased 0.60 in. to 24.00 in. during week.

Break in severe winter weather allowed most farmers to return to normal winter chores.

PUERTO RICO: Island average rainfall 0.29 in. or 0.40 in. below normal. Temperatures averaged about 76° on coasts and 70° interior.

Favorable weather for sugarcane maturity. Harvest and soil preparation for new plantings. Cultivation, harvest, fertilizing, application of pesticides main activities coffee zones. Production western interior affected by dry conditions. Tobacco harvest underway. Operations affected by rains some areas. Cool weather affecting development pastures. Cleaning operations active. relatively good weather for development food crop plantings. Soil preparation underway. Production, quality food crops affected by dry conditions at Morovis.

SOUTH CAROLINA: Temperatures averaged cooler than normal, ranging 4 to 10° below normal depending on region. Virtually no precipitation except for some scattered showers, below normal for week.

Harvesting a few remaining fields of soybeans, cotton. Setting cabbage plants. Preparing lands for spring planting. Also preparing land for cabbage, cucumber, tomato plants. Most peach, apple trees pruned. Tobacco beds being fumigated, prepared for seeding.

SOUTH DAKOTA: Spring-like conditions. Afternoon highs in the 50's and 60's. Early week nighttime lows quite cold. Extremes: -14 to 66°.

Farm activity continues slow, although the thaw allowed some increase.

TENNESSEE: Temperatures averaged 4° below normal east and 1° above normal west. Rainfall averaged 1.10 in.

Major activities: Feeding and caring for livestock, machinery and fence repair, planning 1977 crop.

TEXAS: Light rain west and south early. Spread north and east on 10th, 11th, dumping heavy rain. Temperatures 3 to 6° above normal over north. South, southwest, temperatures 2 to 3° below normal. West, northwest, rainfall near normal.

Land preparation well behind schedule in east. Plains received some moisture, but wheat still extremely dry. Wheat beginning to grow, but more moisture needed High Plains. Fields other areas accelerated growth, but still wet. Oats north and east, responded warmer weather. Fields still too wet; more drying weather needed to allow grazing. Cotton planting began in south on limited scale. Land preparation, fertilizing in east, central and south delayed throughout winter by wet soils, causing planting delays in these areas. Chiseling, plowing progressing at normal rate in west and north.

Lower Rio Grande Valley citrus, vegetable harvest limited under adverse conditions due continued wet weather. Coastal Bend wet fields continue delay spring planting. Laredo onions developing well. Land preparation melons, cantaloup continues. San Antonio- Winter Garden harvest spinach, carrots, cabbage halted by rains. Planting potatoes, watermelons delayed, wet conditions. East Texas land preparation interrupted by rainfall. Trans-Pecos onion planting active. El Paso, planting onions, lettuce complete.

Ranges in east poor. Continued wet kept pastures muddy. Hay short, as heavy supplemental feeding continued. Cattle fair to poor, with death losses reported. Ranges in west need rain, warm. Cattle there fair. Supplemental feeding widespread. Goat shearing began on Edwards -n' Plateau.

UTAH: No appreciable precipitation reported. Soil moisture shortage extremely serious. Temperatures ranged from 10° below to 7° above normal. Snow pack in mountains smallest of record.

Cattle and sheep on winter ranges in good condition by feeding and carrying water. Farm flock lambs beginning to drop. Turkey poults continue to be placed. Some marketing of potatoes, apples, and dry onions from storage continues.

VIRGINIA: Temperatures normal, slightly above toward end of period. Extremes: 3 and 70°. Most measurable precipitation occurred as snow in mountains.

Fieldwork: 1.2 days suitable. Topsoil moisture: 24% short, 56% adequate, 20% surplus. Calving, lambing going well during warm spell. Livestock generally good condition. Lamb, calf,

pig loss declining with warmer weather. Many areas very low on hay. Winter grain and grazing crops reported in poor condition. Lime, fertilizer spread mainly in eastern part of the State. Other activities: Tending livestock, working on records and taxes, pruning fruit trees, repairing equipment, and attending meetings. Some tobacco plantbeds prepared.

WASHINGTON: West: Temperatures averaged from 8° above normal coastal areas to 6° above elsewhere. Precipitation averaged 0.90 in. subnormal east Cascade foothills to 0.40 in. below San Juans.

Rain brought relief to forest trees, pastures. Fieldwork began with cultivation, liming farmland. Harvest of forced rhubarb continues. Berries look good and indicate early crop. Logging still open. Alfalfa hay moving in. Pastures showing slow growth.

East: Temperatures from 3° above normal central Basin, Okanogan areas to 5° above elsewhere. Precipitation averaged 0.20 in. subnormal Okanogan area to 0.50 in. below northeastern area.

Irrigating farmers concerned over water supply; some considering cropping alternatives. Pruning, orchard removal, irrigation modification active. Trees more dormant than usual. Wheat on fallow ground in good condition while recrop areas show moisture stress. Wheat in good condition. Range pasture moisture low. Calving, lambing full swing. Few health problems. Farm activities include cultivation, spraying weeds, applying fertilizer. Alfalfa hay cubes moving out.

WEST VIRGINIA: Temperatures below normal. Extremes: -32° and 65°. Precipitation below normal.

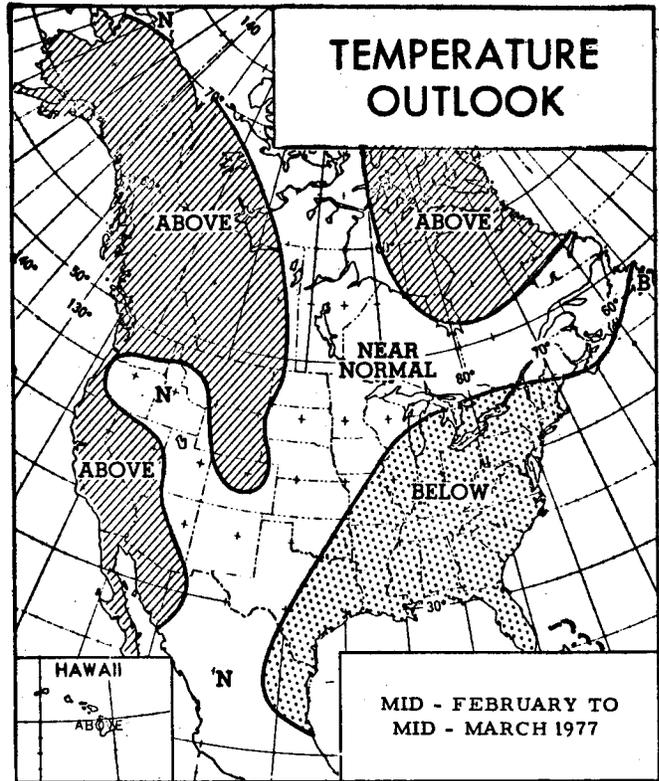
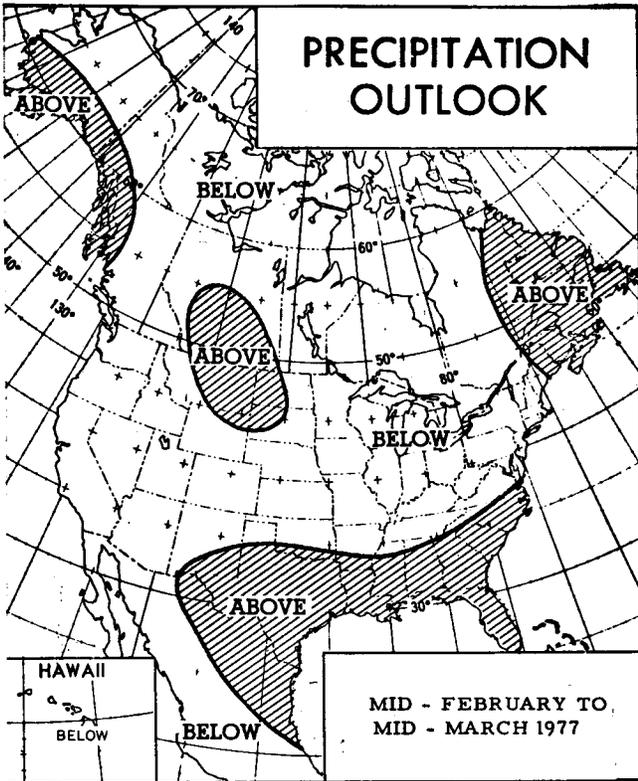
Fieldwork: 1.9 days suitable. Soil moisture short to adequate. Hay supply, 46% critically short, 27% short and 27% adequate. Livestock water supply improved with thawing. Above average losses of newborn calves and lambs. Livestock fair condition. Main activities thawing frozen water supplies and care of livestock.

WISCONSIN: Cloudy, cold beginning of week. Temperatures climbed to 40's and lower 50's, end of week. Precipitation scant as light rain and snow flurries occurred 12th and 13th. Frost depths as of 11th averaged 34 in. Snow depths averaged 8 in.

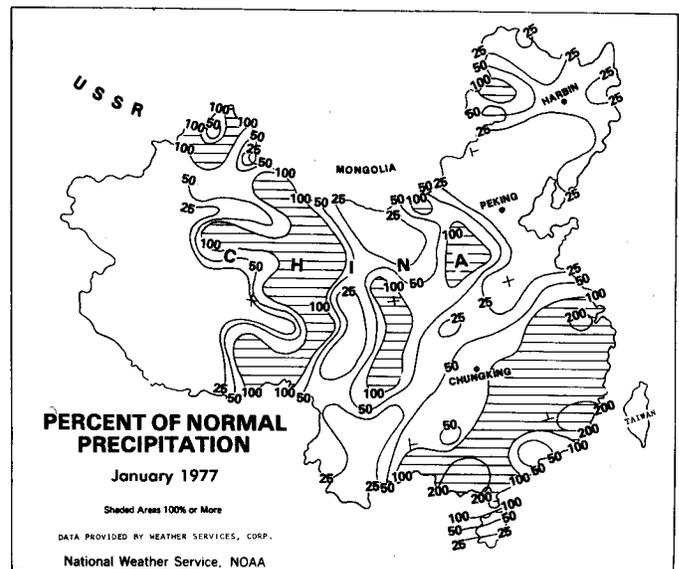
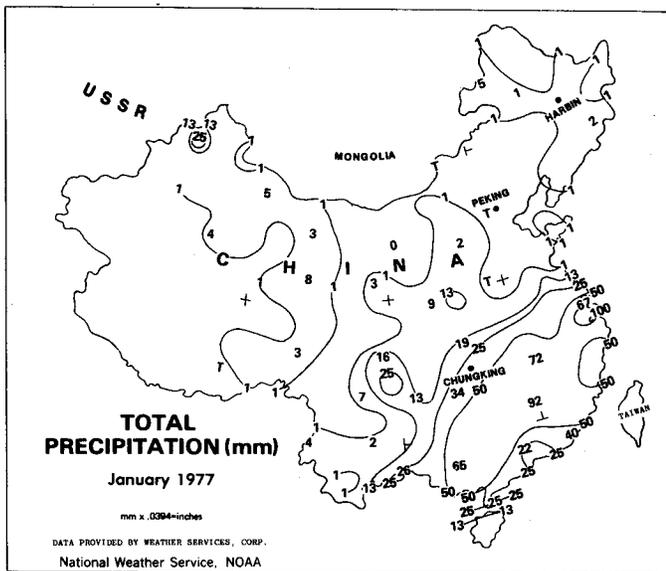
WYOMING: Temperatures above normal. Precipitation below normal. No measurable amounts recorded. Unseasonably dry.

Soil moisture very short. Winter wheat wind damage light. Mild winter has stretched feed supplies; still adequate. Good weather for livestock. Early lambing and calving picking up.

Average Monthly Weather Outlook



China Precipitation



DROUGHT
THE WEST COAST SITUATION

Extreme drought is occurring in many western States with California, Oregon and Washington the hardest hit. Rainfall has been only 20 to 40 percent of normal across these three States during the first four months of their rainy season.

This persistent dryness is becoming crucial. Normally 70 to 96 percent of the moisture in this area occurs the 7-month period October 1 to April 30. The heaviest amounts normally occur during the first four months of the period, tapering off during February, March and April to almost nothing during the summer months.

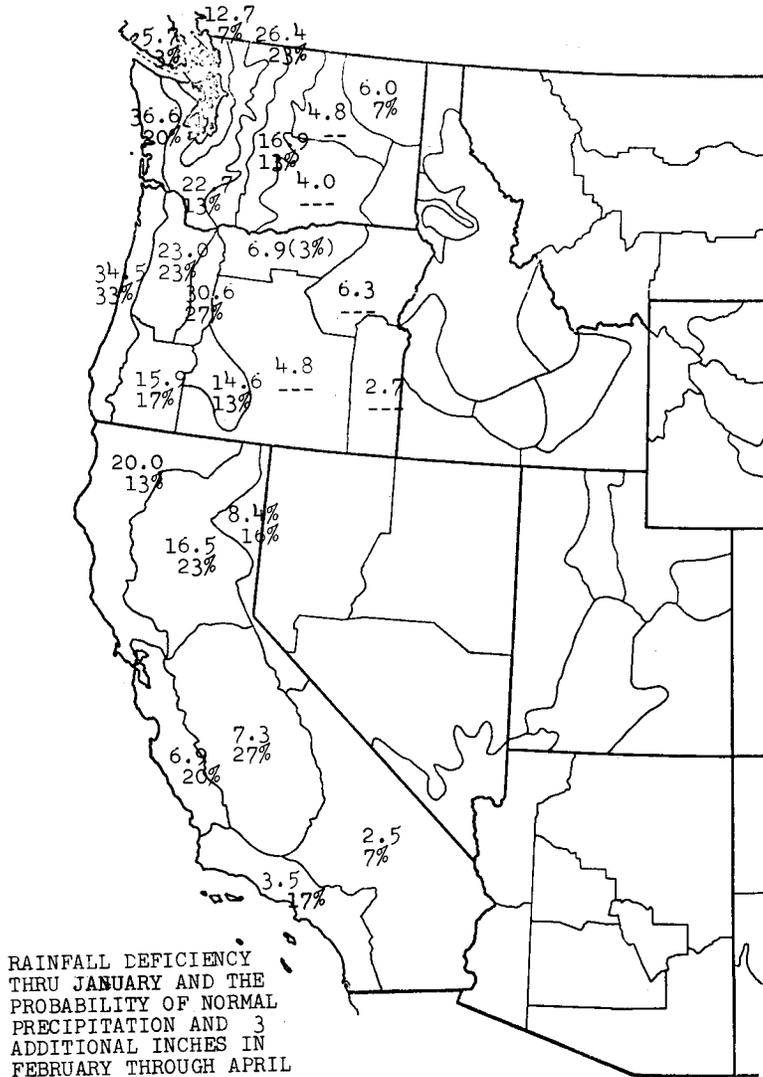
By looking at historical precipitation data, it is possible to determine the likelihood for improvement during the final three months of the rainy season.

The figure below shows the precipitation deficiency up until February 1 for various climatic divisions in Washington, Oregon and California. It also shows the likelihood, expressed as percent, of getting at least 3 inches more than normal precipitation. Even in rather wet divisions, the probability of overcoming even a small portion of

this season's deficit is very low. Therefore, it can be said with a very high degree of certainty that this area will face well below normal moisture supplies for at least the next 9 months.

The impact of this dryness has numerous short and long range implications. Both agricultural and urban populations depend heavily on the water from melting winter snows to carry them through the dry summer months. Reservoirs are extremely low and mountain snowpack is greatly reduced. The potential for extremely serious water shortages is very real. Sufficient water supplies are a big question. Irrigation water allotments have already been reduced by 75 percent in some areas. Growers may need to use what water they have to maintain long term investments such as trees and vineyards at the expense of small fruits and vegetables.

Serious problems may affect urban populations. Marin County in the San Francisco area has already adopted strict regulations on using water. This will be very common before the summer of 1977 is over.



World Agricultural Weather Summary

(Mid-January - Mid-February 1977)

NORTH AMERICA. The bitter cold that has prevailed for weeks over the United States east of the Rocky Mountains had moderated into normal and well-above normal temperatures by mid-February. But the effects of the worst winter in decades linger. A substantial portion of the Florida citrus and winter vegetable crops were destroyed. Winterkill of winter grains, although undetermined at this time, will probably be above normal in the hard wheat areas of the Great Plains and in the eastern half of the country where soft wheat is grown. Hardships are evident in the livestock and poultry industries. Additionally, drought threatens crop production in the Plains States, the corn belt and in the western states especially where irrigation is necessary.

USSR. Winter grains in some areas of European USSR have been subjected to extremely low temperatures interspersed between mild weather over the past month. Most of the area is under a good snow cover; however, some winterkill of wheat probably occurred in areas of light or no snow cover--north-central, southern and eastern, Ukraine, northeastern Caucasus, and Krasnodar Kray. Precipitation was generally below normal in January over European USSR, but the first two weeks of February have brought moderate to heavy precipitation to all of the winter grain areas. Asiatic USSR continued to experience extremely cold temperatures, but most of the principal agricultural areas are under deep snow cover. Snow retention measures, however, are being carried out over tens of millions of hectares as a means to increase the amount of moisture that will be available for crops.

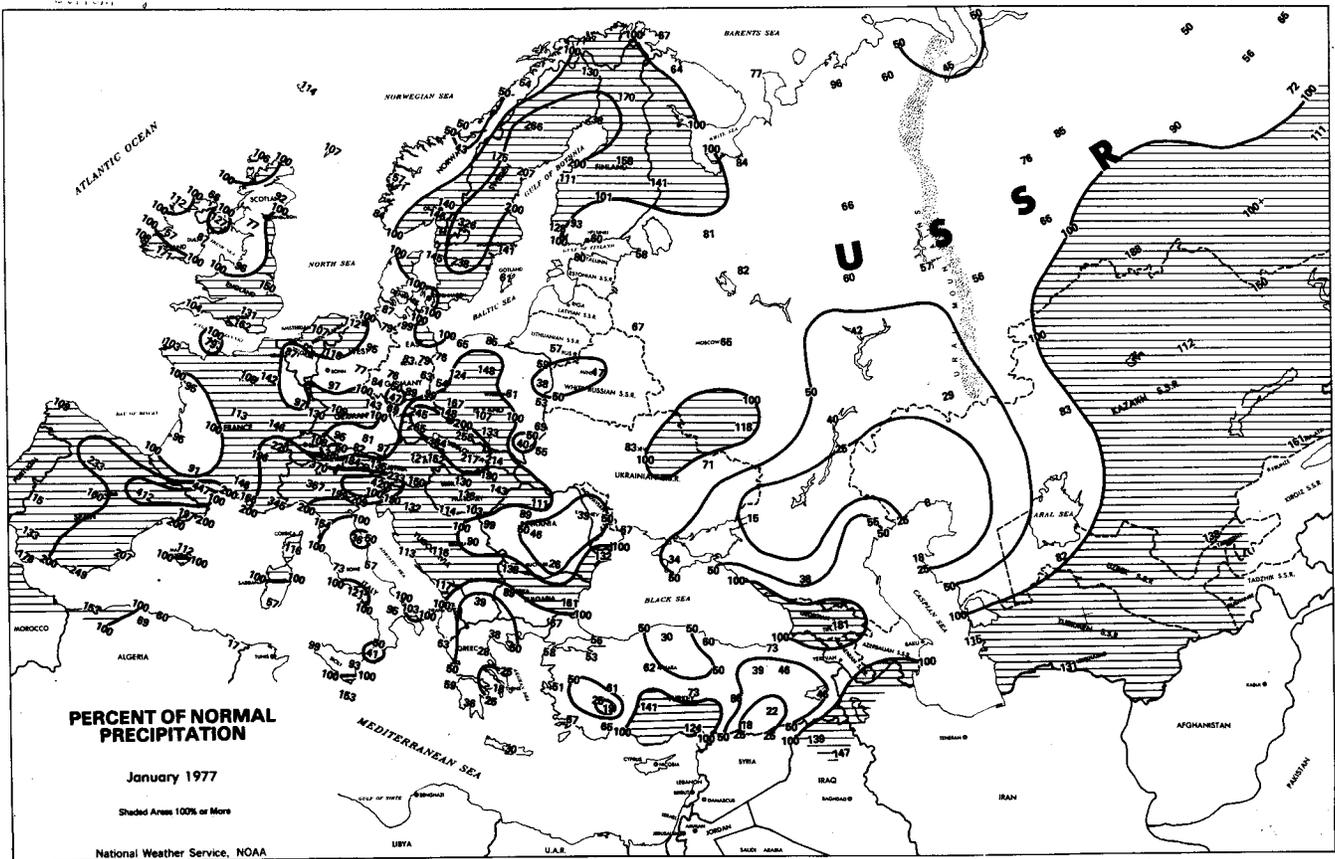
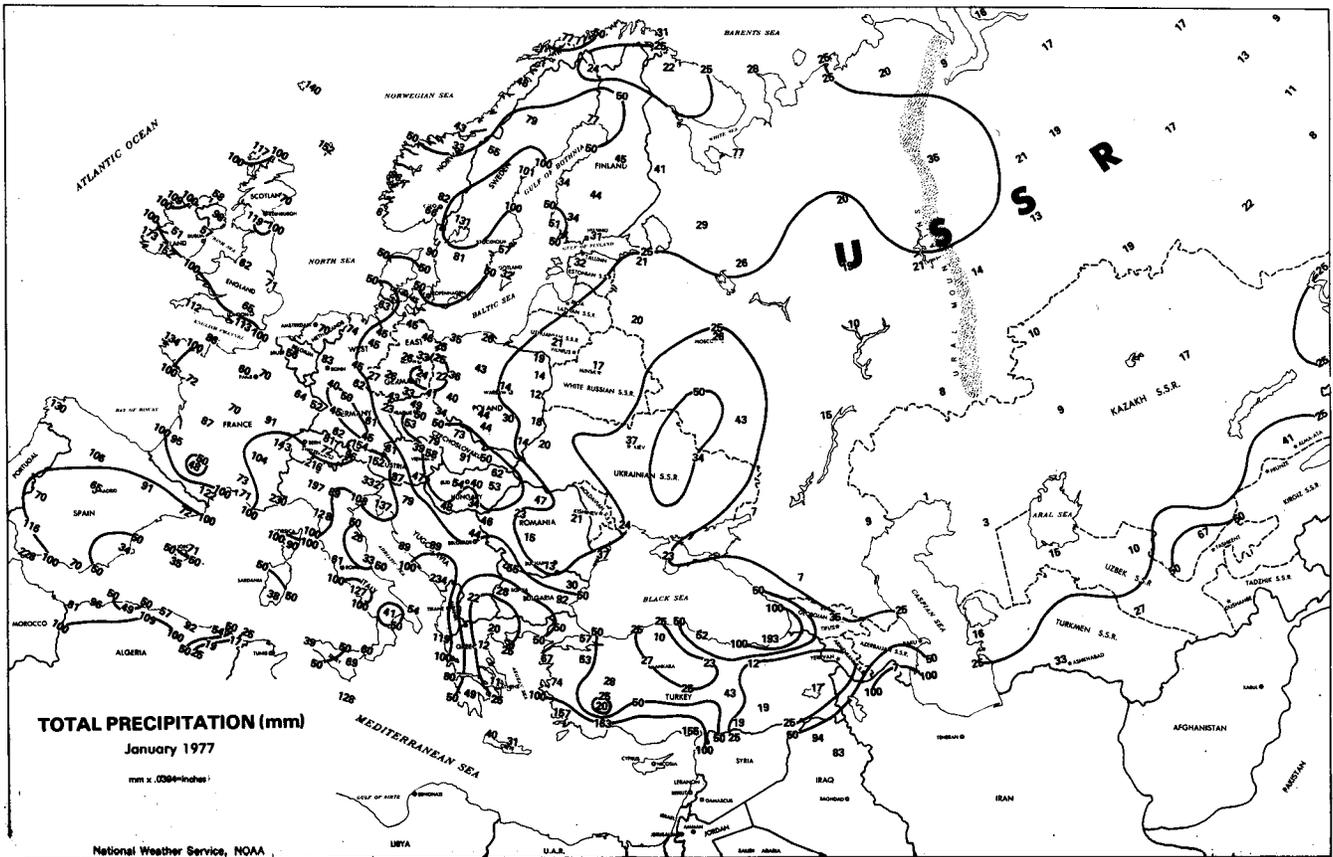
ASIA. Temperatures have persistently been below normal over The People's Republic of China during the reporting period. Winter wheat, rapeseed, sweet potatoes, lentils and vegetables have been adversely affected by the cold temperatures which brought sleet to northern Kwangsi and southern Kiangsi provinces. Precipitation has generally been sparse in India. Some northern wheat growing regions, however, did receive some rainfall as well as winter rice-growing regions in the extreme south and in neighboring Sri Lanka. In Australia, precipitation has been about normal along the eastern and southern coasts, but further inland unirrigated crops and pastures have been suffering from

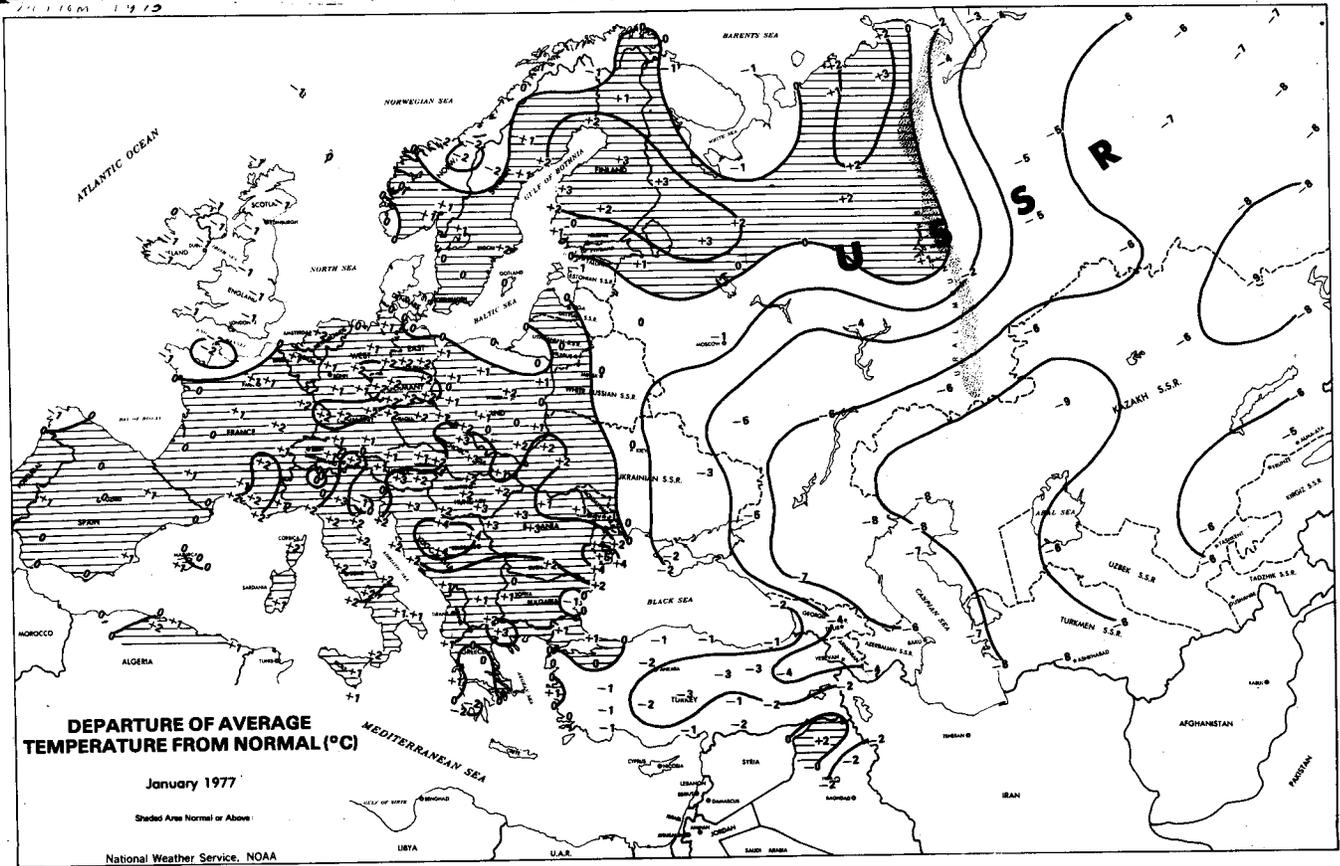
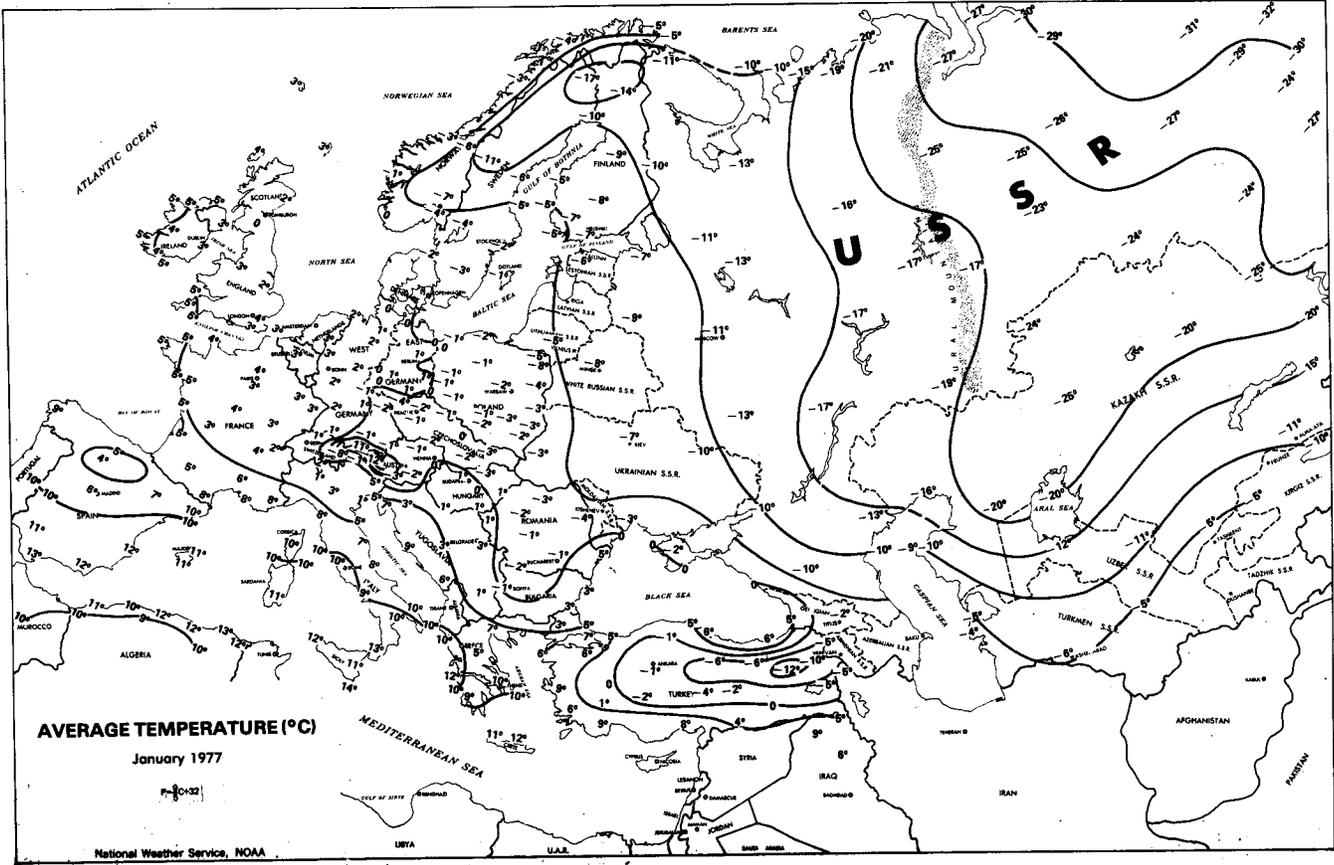
a moisture deficit. Severe drought conditions also are affecting crop development in southwest Australia where precipitation during the past two months has been less than half the normal amount.

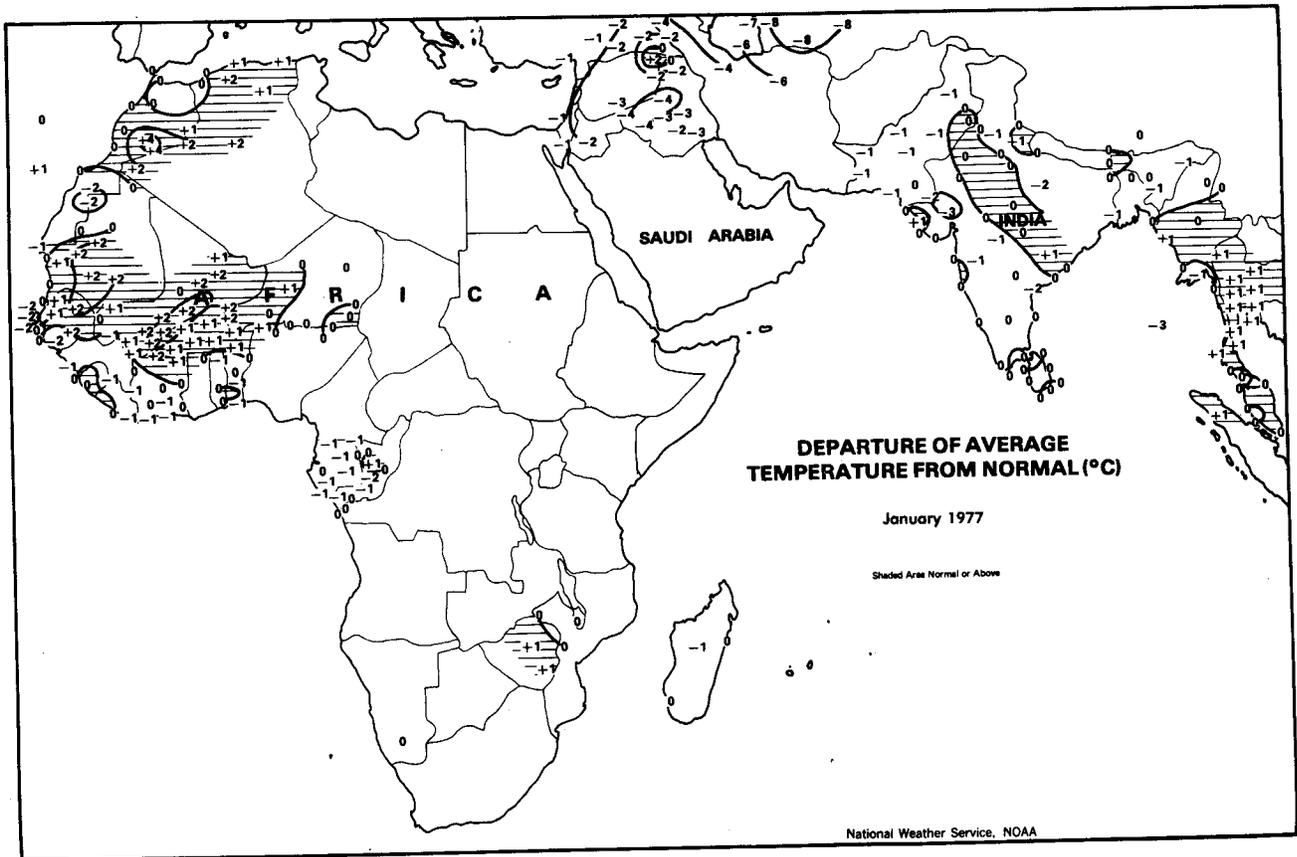
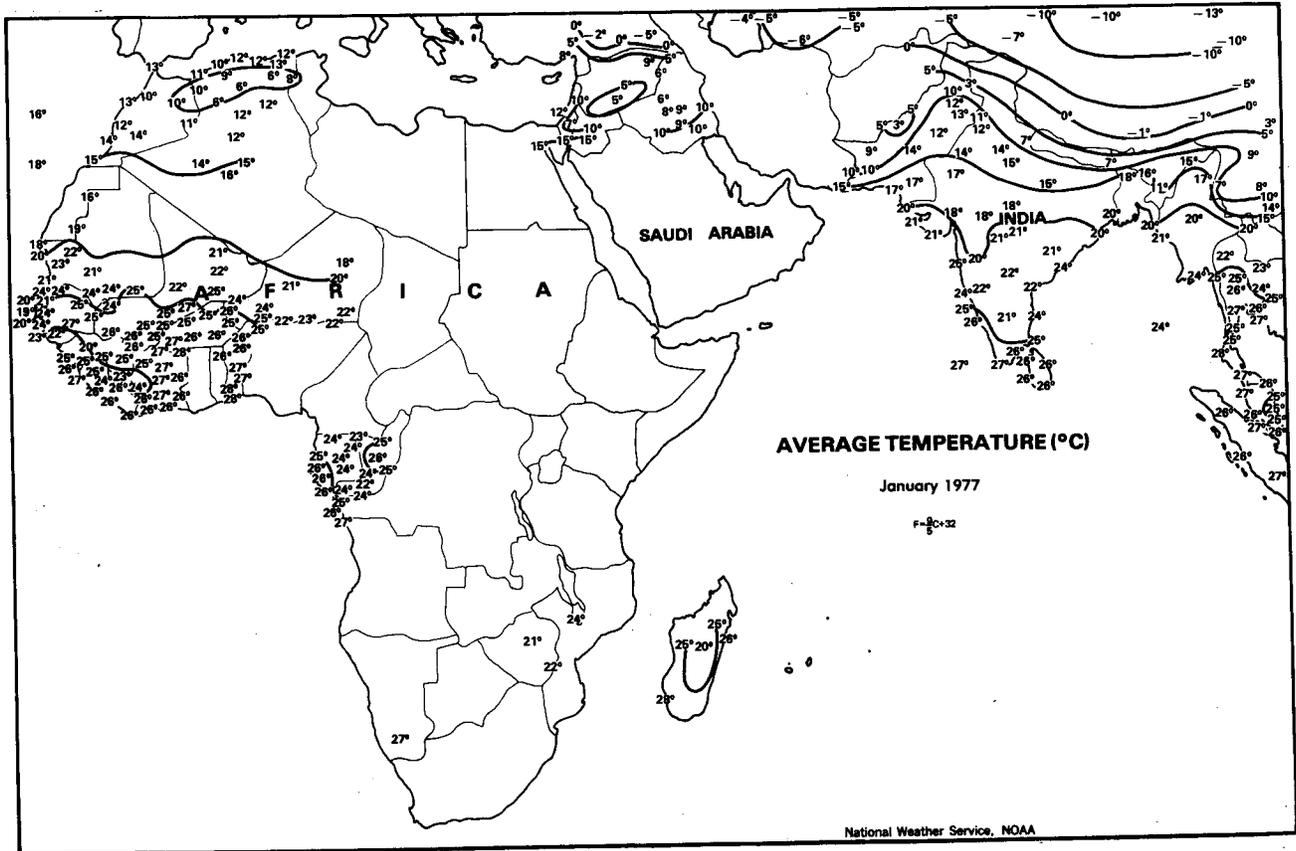
AFRICA. Morocco has enjoyed generally excellent conditions for winter grains and pastures with well above normal rainfall and above normal temperatures. Conditions are not quite as favorable in Algeria and Tunisia although most areas in these countries received at least two inches of rainfall in January, and additional precipitation has fallen in February. In South Africa, crops are developing under generally good conditions in the principal agricultural areas. Ample precipitation in recent weeks has eradicated any localized drought conditions that may have existed at the beginning of the period. The Sahel remains seasonally dry.

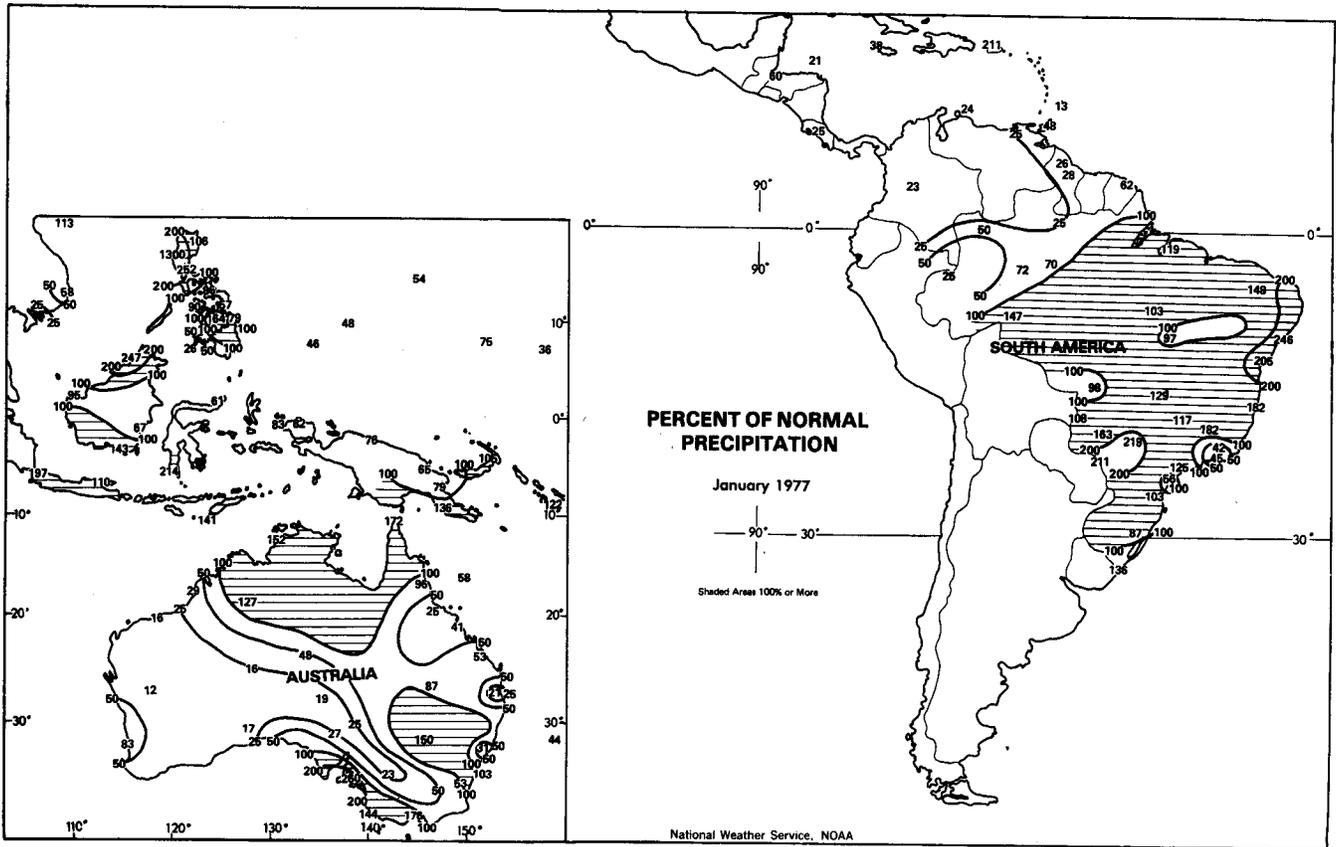
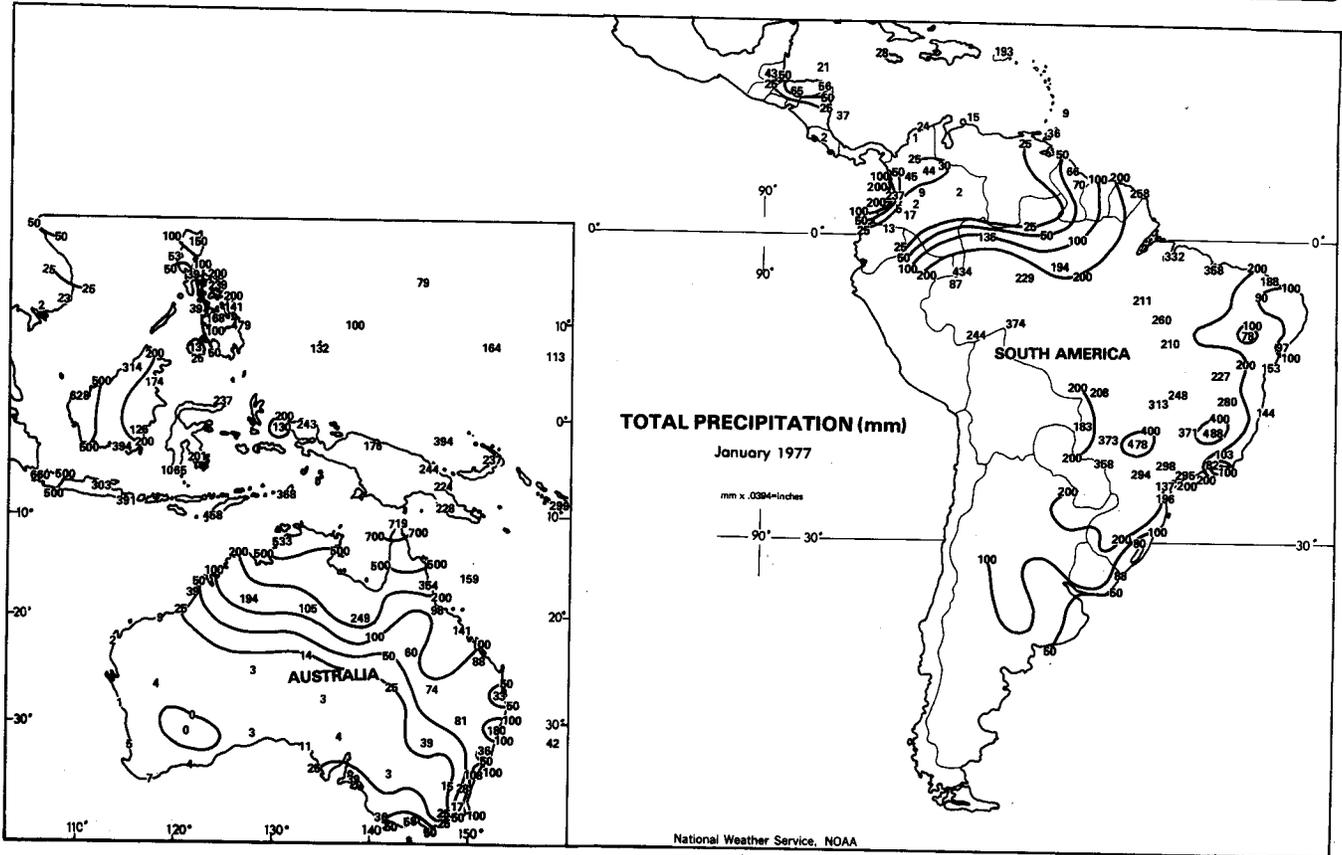
SOUTH AMERICA. Conditions continue to favor good crop development in Brazil and Argentina. Both countries received above normal rainfall in January, and timely rains have fallen over almost all of the principal agricultural areas of these countries during the past month. Crops and rangelands have rebounded in northeastern Brazil as substantial rains broke a serious drought in that area. January temperatures were near normal for both countries, but Argentina has been unseasonably cool in February.

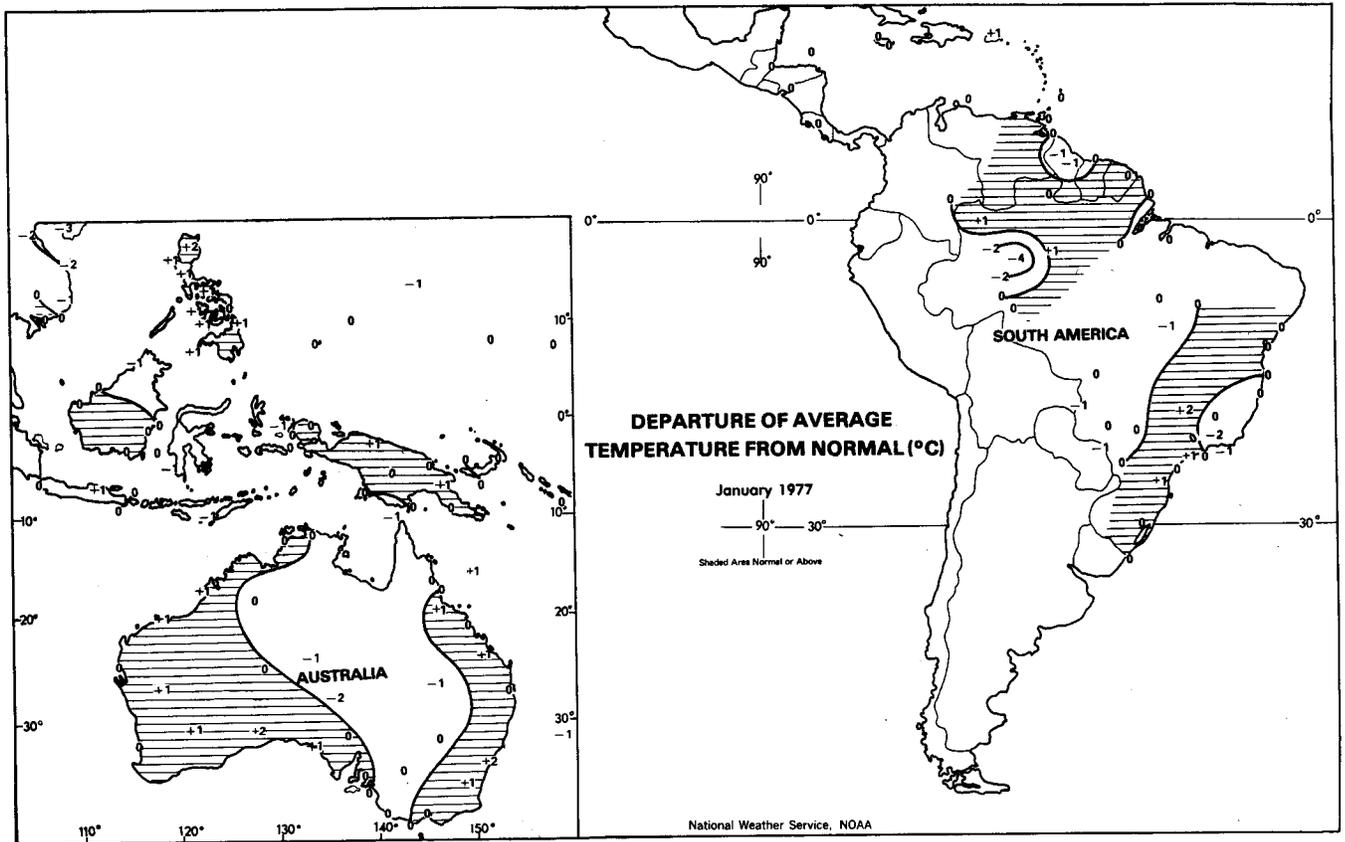
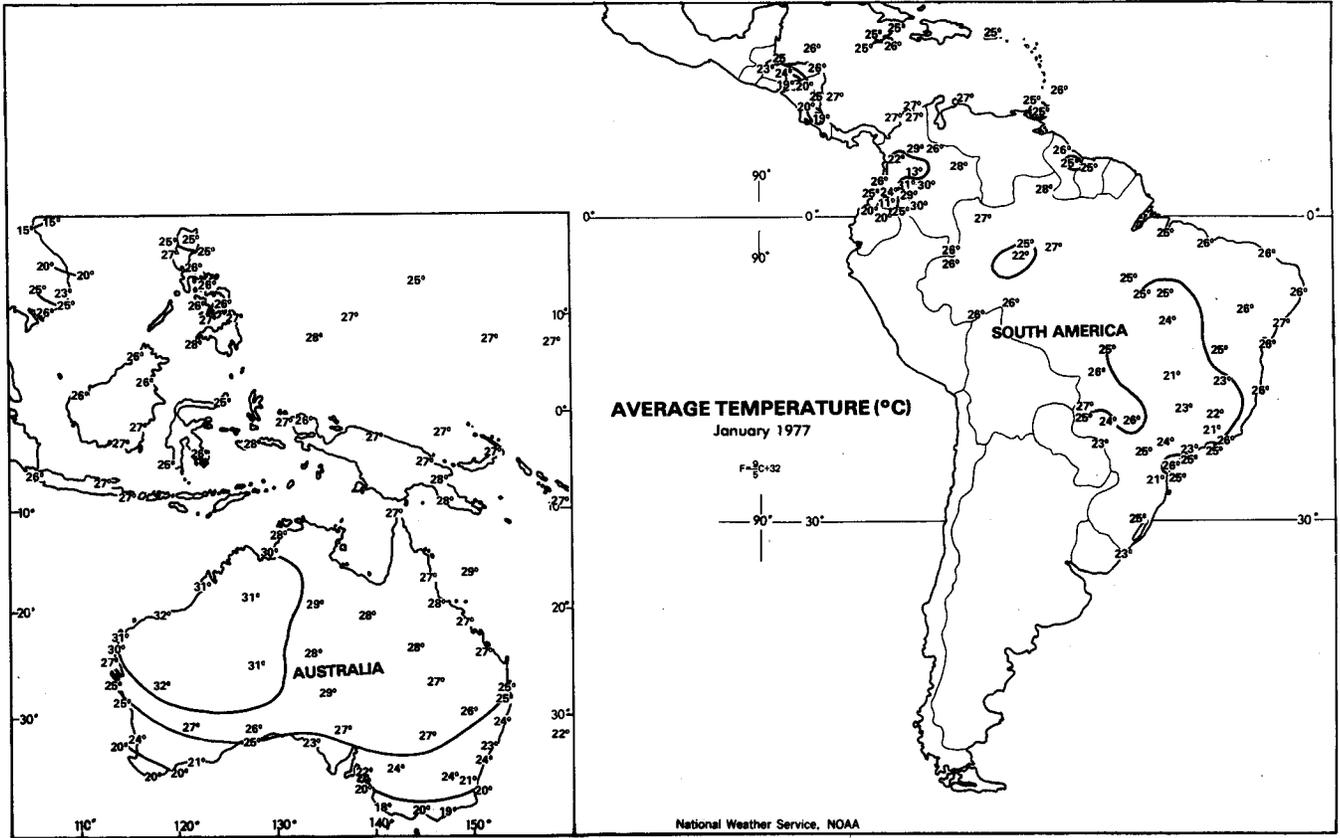
EUROPE. Mild, wet weather continued to dominate Western Europe generally over the past month. January temperatures were above normal for all the region except the United Kingdom which was slightly below. Temperatures have averaged above freezing in Western Europe, precluding any buildup of snow cover while enhancing the recharging of soil moisture which was badly depleted last summer. Precipitation for the region has generally been normal or slightly above. However, January precipitation in Spain was 50 to 100 percent above normal, but at the other end of the Mediterranean, Greece has had less than 50 percent of the norm over the past two months. Temperatures have been above normal in Eastern Europe, although averaging below freezing during January; mild weather has continued into February. Precipitation has been below normal in East Germany, parts of Poland and in Romania but generally normal or above elsewhere.









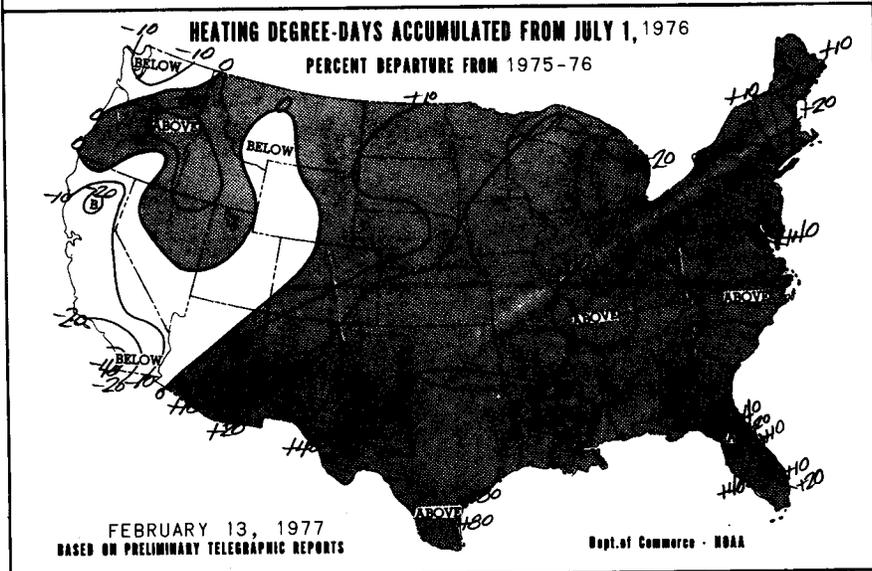
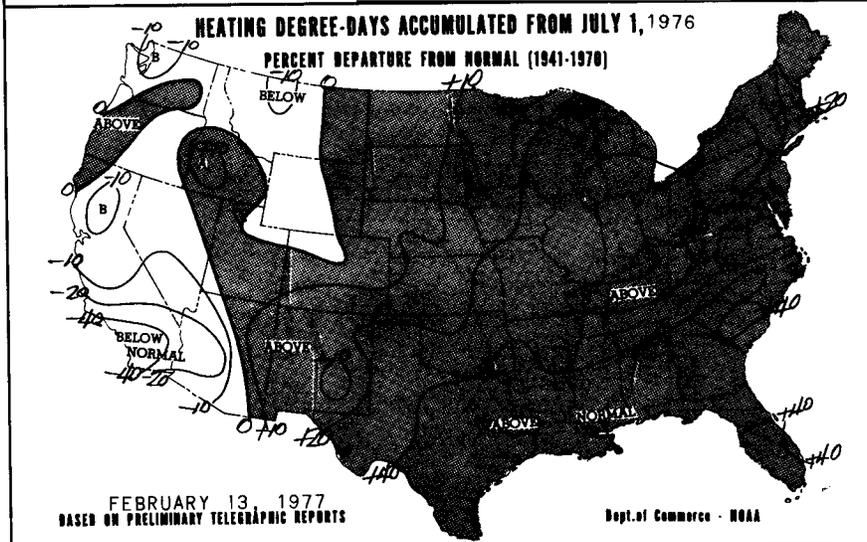
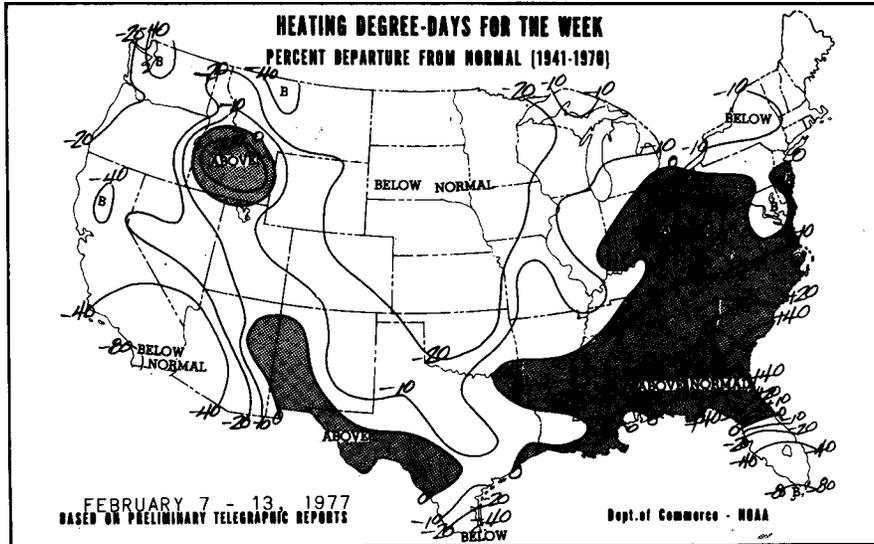


HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING FEB. 13, 1977.

| STATES AND STATIONS | WEEKLY | | SEASONAL ACCUMULATION + | | | STATES AND STATIONS | WEEKLY | | SEASONAL ACCUMULATION + | | | STATES AND STATIONS | WEEKLY | | SEASONAL ACCUMULATION + | | |
|-------------------------|--------|------------|-------------------------|------------|------------------------|--------------------------|--------|------------|-------------------------|------------|------------------------|---------------------------|--------|------------|-------------------------|------------|------------------------|
| | TOTAL | DEPARTURE* | TOTAL | DEPARTURE* | DEPARTURE FROM 1975-76 | | TOTAL | DEPARTURE* | TOTAL | DEPARTURE* | DEPARTURE FROM 1975-76 | | TOTAL | DEPARTURE* | TOTAL | DEPARTURE* | DEPARTURE FROM 1975-76 |
| ALA. BIRMINGHAM... | 156 | 22 | 2293 | 883 | 812 | MAINE CARIBOU... | 14 | 14 | 479 | 696 | 477 | YOUNGSTOWN..... | 279 | 6 | 5465 | 1336 | 1324 |
| MOBILE..... | 137 | 2 | 2293 | 883 | 812 | PORTLAND..... | 14 | 14 | 479 | 696 | 477 | OKLA. OKLAHOMA CITY..... | 129 | 4 | 3164 | 354 | 78 |
| MONTGOMERY..... | 137 | 2 | 2293 | 883 | 812 | MD. BALTIMORE..... | 202 | 15 | 3891 | 739 | 997 | TULSA..... | 129 | 4 | 5315 | 354 | 78 |
| ARIZ. FLAGSTAFF..... | 200 | 4 | 4229 | 264 | 148 | MASS. BOSTON..... | 222 | 22 | 4066 | 521 | 786 | OREG. ASTORIA..... | 118 | 3 | 2906 | 270 | 128 |
| PHOENIX..... | 224 | 5 | 4229 | 264 | 148 | MICH. ALPENA..... | 77 | 5 | 654 | 547 | 632 | BURNS..... | 118 | 3 | 4447 | 148 | 148 |
| TUCSON..... | 224 | 5 | 4229 | 264 | 148 | DETROIT..... | 77 | 5 | 654 | 547 | 632 | REDFORD..... | 118 | 3 | 4447 | 148 | 148 |
| MINSLON..... | 19 | 3 | 4229 | 264 | 148 | FLINT..... | 77 | 5 | 654 | 547 | 632 | PORTLAND..... | 118 | 3 | 4447 | 148 | 148 |
| YUMA..... | 19 | 3 | 4229 | 264 | 148 | GRAND RAPIDS..... | 77 | 5 | 654 | 547 | 632 | SALEM..... | 118 | 3 | 4447 | 148 | 148 |
| ARK. FORT SMITH..... | 156 | 22 | 336 | 988 | 904 | Houghton Lake..... | 77 | 5 | 654 | 547 | 632 | PA. ALLENTOWN..... | 24 | 2 | 4548 | 738 | 949 |
| LITTLE ROCK..... | 148 | 1 | 336 | 988 | 904 | LANSING..... | 77 | 5 | 654 | 547 | 632 | ELITE..... | 24 | 2 | 4548 | 738 | 949 |
| CALIF. BAKERSFIELD..... | 170 | 59 | 3800 | 18 | 200 | MARQUETTE..... | 77 | 5 | 654 | 547 | 632 | HARRISBURG..... | 24 | 2 | 4548 | 738 | 949 |
| FRESNO..... | 170 | 59 | 3800 | 18 | 200 | MUSKOGEE..... | 77 | 5 | 654 | 547 | 632 | PHILADELPHIA..... | 24 | 2 | 4548 | 738 | 949 |
| LOS ANGELES..... | 170 | 59 | 3800 | 18 | 200 | ST. MARIE..... | 77 | 5 | 654 | 547 | 632 | PITTSBURGH..... | 24 | 2 | 4548 | 738 | 949 |
| RED BLUFF..... | 170 | 59 | 3800 | 18 | 200 | MINN. DULUTH..... | 66 | 112 | 710 | 877 | 767 | SCRANTON..... | 24 | 2 | 4548 | 738 | 949 |
| SAN DIEGO..... | 170 | 59 | 3800 | 18 | 200 | INTERNATL FALLS..... | 66 | 112 | 710 | 877 | 767 | R. I. PROVIDENCE..... | 241 | 11 | 4598 | 844 | 882 |
| SAN FRANCISCO..... | 170 | 59 | 3800 | 18 | 200 | MINNEAPOLIS..... | 66 | 112 | 710 | 877 | 767 | S. C. CHARLESTON..... | 154 | 45 | 2237 | 679 | 706 |
| STOCKTON..... | 170 | 59 | 3800 | 18 | 200 | ROCHESTER..... | 66 | 112 | 710 | 877 | 767 | COLUMBIA..... | 154 | 45 | 2237 | 679 | 706 |
| COLO. DENVER..... | 170 | 59 | 3800 | 18 | 200 | ST. CLOUD..... | 66 | 112 | 710 | 877 | 767 | GREENVILLE..... | 154 | 45 | 2237 | 679 | 706 |
| GRAND JUNCTION..... | 170 | 59 | 3800 | 18 | 200 | MISS. JACKSON..... | 111 | 1 | 254 | 862 | 834 | S. DAK. ABERDEEN..... | 228 | 131 | 6093 | 385 | 841 |
| PUEBLO..... | 170 | 59 | 3800 | 18 | 200 | MERIDIAN..... | 111 | 1 | 254 | 862 | 834 | HURON..... | 228 | 131 | 6093 | 385 | 841 |
| CONN. BRIDGEPORT..... | 252 | 20 | 4014 | 640 | 701 | MO. COLUMBIA..... | 210 | 17 | 4681 | 1225 | 1294 | RAPID CITY..... | 228 | 131 | 6093 | 385 | 841 |
| HARTFORD..... | 252 | 20 | 4014 | 640 | 701 | KANSAS CITY..... | 210 | 17 | 4681 | 1225 | 1294 | ST. LOUIS..... | 228 | 131 | 6093 | 385 | 841 |
| DEL. WILMINGTON..... | 227 | 1 | 3980 | 729 | 871 | ST. LOUIS..... | 210 | 17 | 4681 | 1225 | 1294 | SPRINGFIELD..... | 228 | 131 | 6093 | 385 | 841 |
| D.C. WASHINGTON..... | 188 | 13 | 3531 | 675 | 1027 | SPRINGFIELD..... | 210 | 17 | 4681 | 1225 | 1294 | TENN. CHATTANOOGA..... | 188 | 27 | 3361 | 875 | 673 |
| FLA. PALM BEACH..... | 130 | 5 | 1679 | 670 | 517 | MONT. BILLINGS..... | 182 | 16 | 4463 | 171 | 13 | KNOXVILLE..... | 188 | 27 | 3361 | 875 | 673 |
| DAYTONA BEACH..... | 130 | 5 | 1679 | 670 | 517 | GLASGOW..... | 182 | 16 | 4463 | 171 | 13 | MEMPHIS..... | 188 | 27 | 3361 | 875 | 673 |
| PORT JEFFERSON..... | 130 | 5 | 1679 | 670 | 517 | GREAT FALLS..... | 182 | 16 | 4463 | 171 | 13 | NASHVILLE..... | 188 | 27 | 3361 | 875 | 673 |
| PORT MYERS..... | 130 | 5 | 1679 | 670 | 517 | HAVER..... | 182 | 16 | 4463 | 171 | 13 | TEXAS. ABILENE..... | 107 | 128 | 2709 | 807 | 796 |
| JACKSONVILLE..... | 130 | 5 | 1679 | 670 | 517 | HELENA..... | 182 | 16 | 4463 | 171 | 13 | AMARILLO..... | 107 | 128 | 2709 | 807 | 796 |
| KEY WEST..... | 130 | 5 | 1679 | 670 | 517 | KALISPELL..... | 182 | 16 | 4463 | 171 | 13 | AUSTIN..... | 107 | 128 | 2709 | 807 | 796 |
| LAKELAND..... | 130 | 5 | 1679 | 670 | 517 | MILFORD CITY..... | 182 | 16 | 4463 | 171 | 13 | BEAUMONT..... | 107 | 128 | 2709 | 807 | 796 |
| MIAMI..... | 130 | 5 | 1679 | 670 | 517 | MOBILE..... | 182 | 16 | 4463 | 171 | 13 | BROWNSVILLE..... | 107 | 128 | 2709 | 807 | 796 |
| ORLANDO..... | 130 | 5 | 1679 | 670 | 517 | MOBILE..... | 182 | 16 | 4463 | 171 | 13 | CRISTINA..... | 107 | 128 | 2709 | 807 | 796 |
| TALLAHASSEE..... | 130 | 5 | 1679 | 670 | 517 | NEBR. GRAND ISLAND..... | 190 | 77 | 4651 | 368 | 462 | EL PASO..... | 107 | 128 | 2709 | 807 | 796 |
| TAMPA..... | 130 | 5 | 1679 | 670 | 517 | LINCOLN..... | 190 | 77 | 4651 | 368 | 462 | FORT WORTH..... | 107 | 128 | 2709 | 807 | 796 |
| NORTH PALM BEACH..... | 130 | 5 | 1679 | 670 | 517 | NORFOLK..... | 190 | 77 | 4651 | 368 | 462 | GALVESTON..... | 107 | 128 | 2709 | 807 | 796 |
| GA. ATLANTA..... | 115 | 1 | 3455 | 961 | 945 | NORTH PLATTE..... | 190 | 77 | 4651 | 368 | 462 | HOUSTON..... | 107 | 128 | 2709 | 807 | 796 |
| AUGUSTA..... | 115 | 1 | 3455 | 961 | 945 | VALENTINE..... | 190 | 77 | 4651 | 368 | 462 | LUBBOCK..... | 107 | 128 | 2709 | 807 | 796 |
| Macon..... | 115 | 1 | 3455 | 961 | 945 | NEV. ELV..... | 230 | 86 | 4864 | 110 | 147 | MIDLAND..... | 107 | 128 | 2709 | 807 | 796 |
| SAVANNAH..... | 115 | 1 | 3455 | 961 | 945 | LAS VEGAS..... | 230 | 86 | 4864 | 110 | 147 | SAN ANGELO..... | 107 | 128 | 2709 | 807 | 796 |
| IDAHO. BOISE..... | 236 | 2 | 4313 | 469 | 534 | RENO..... | 230 | 86 | 4864 | 110 | 147 | SAN ANTONIO..... | 107 | 128 | 2709 | 807 | 796 |
| LEWISTON..... | 236 | 2 | 4313 | 469 | 534 | WINNEUECA..... | 230 | 86 | 4864 | 110 | 147 | VICTORIA..... | 107 | 128 | 2709 | 807 | 796 |
| POCATELLO..... | 236 | 2 | 4313 | 469 | 534 | N. H. CONCORD..... | 292 | 13 | 5809 | 1078 | 578 | WACO..... | 107 | 128 | 2709 | 807 | 796 |
| ILL. CAIRO..... | 151 | 3 | 3908 | 1199 | 1302 | N. J. ATLANTIC CITY..... | 230 | 36 | 4267 | 1056 | 933 | WICHITA FALLS..... | 117 | 21 | 2886 | 765 | 901 |
| CHICAGO..... | 151 | 3 | 3908 | 1199 | 1302 | TRENTON..... | 230 | 36 | 4267 | 1056 | 933 | UTAH. SALT LAKE CITY..... | 205 | 22 | 3890 | 53 | 28 |
| MOLINE..... | 151 | 3 | 3908 | 1199 | 1302 | N. MEX. ALBUQUERQUE..... | 74 | 36 | 3553 | 553 | 441 | VT. BURLINGTON..... | 307 | 26 | 5806 | 773 | 772 |
| PEORIA..... | 151 | 3 | 3908 | 1199 | 1302 | ROSWELL..... | 74 | 36 | 3553 | 553 | 441 | VA. LYNCHBURG..... | 203 | 9 | 3775 | 883 | 913 |
| SPRINGFIELD..... | 151 | 3 | 3908 | 1199 | 1302 | N. Y. ALBANY..... | 66 | 66 | 2222 | 752 | 870 | NORFOLK..... | 178 | 10 | 3354 | 734 | 828 |
| IND. EVANSVILLE..... | 221 | 10 | 4291 | 1096 | 1140 | BINGHAMTON..... | 66 | 66 | 2222 | 752 | 870 | RICHMOND..... | 178 | 10 | 3354 | 734 | 828 |
| FORT WAYNE..... | 221 | 10 | 4291 | 1096 | 1140 | BUFFALO..... | 66 | 66 | 2222 | 752 | 870 | ROANOKE..... | 178 | 10 | 3354 | 734 | 828 |
| INDIANAPOLIS..... | 221 | 10 | 4291 | 1096 | 1140 | NEW YORK..... | 66 | 66 | 2222 | 752 | 870 | WASH. QUILLAYUTE..... | 135 | 33 | 3323 | 269 | 192 |
| SOUTH BEND..... | 221 | 10 | 4291 | 1096 | 1140 | ROCHESTER..... | 66 | 66 | 2222 | 752 | 870 | SEATTLE-TACOMA..... | 95 | 11 | 2211 | 627 | 341 |
| IOWA. BURLINGTON..... | 243 | 29 | 5348 | 1216 | 1406 | SYRACUSE..... | 66 | 66 | 2222 | 752 | 870 | SPokane..... | 95 | 11 | 2211 | 627 | 341 |
| DES MOINES..... | 243 | 29 | 5348 | 1216 | 1406 | N. C. ASHEVILLE..... | 21 | 30 | 381 | 932 | 898 | HALLA HALLA..... | 136 | 44 | 4109 | 141 | 474 |
| UBUQUE..... | 243 | 29 | 5348 | 1216 | 1406 | CHARLOTTE..... | 21 | 30 | 381 | 932 | 898 | YAKIMA..... | 136 | 44 | 4109 | 141 | 474 |
| STOUCX CITY..... | 243 | 29 | 5348 | 1216 | 1406 | GREENSBORO..... | 21 | 30 | 381 | 932 | 898 | W. VA. BECKLEY..... | 248 | 17 | 4882 | 1185 | 1454 |
| KANS. CONCORDIA..... | 168 | 7 | 4285 | 499 | 792 | HATTERAS..... | 21 | 30 | 381 | 932 | 898 | CHARLESTON..... | 248 | 17 | 4882 | 1185 | 1454 |
| DODGE CITY..... | 168 | 7 | 4285 | 499 | 792 | RALEIGH..... | 21 | 30 | 381 | 932 | 898 | HUNTINGTON..... | 248 | 17 | 4882 | 1185 | 1454 |
| GOODLAND..... | 168 | 7 | 4285 | 499 | 792 | WILMINGTON..... | 21 | 30 | 381 | 932 | 898 | PARRKERSBURG..... | 248 | 17 | 4882 | 1185 | 1454 |
| TOPEKA..... | 168 | 7 | 4285 | 499 | 792 | N. DAK. BISMARCK..... | 254 | 115 | 6293 | 350 | 787 | WIS. GREEN BAY..... | 283 | 55 | 6449 | 1227 | 1291 |
| WICHITA..... | 168 | 7 | 4285 | 499 | 792 | FARGO..... | 254 | 115 | 6293 | 350 | 787 | LACROSSE..... | 283 | 55 | 6449 | 1227 | 1291 |
| KY. LEXINGTON..... | 223 | 8 | 4410 | 1198 | 1178 | HILLISTON..... | 254 | 115 | 6293 | 350 | 787 | MADISON..... | 283 | 55 | 6449 | 1227 | 1291 |
| LOUISVILLE..... | 223 | 8 | 4410 | 1198 | 1178 | OHIO. AKRON-CANTON..... | 271 | 11 | 5318 | 1293 | 1248 | HILKREEK..... | 283 | 55 | 6449 | 1227 | 1291 |
| LA. BATON ROUGE..... | 86 | 7 | 1849 | 585 | 504 | CINCINNATI..... | 271 | 11 | 5318 | 1293 | 1248 | WYO. CASPER..... | 208 | 63 | 4691 | 45 | 9 |
| LAKE CHARLES..... | 86 | 7 | 1849 | 585 | 504 | CLEVELAND..... | 271 | 11 | 5318 | 1293 | 1248 | CHEYENNE..... | 208 | 63 | 4691 | 45 | 9 |
| NEW ORLEANS..... | 86 | 7 | 1849 | 585 | 504 | COLUMBUS..... | 271 | 11 | 5318 | 1293 | 1248 | LANNER..... | 208 | 63 | 4691 | 45 | 9 |
| SHREVEPORT..... | 86 | 7 | 1849 | 585 | 504 | DAYTON..... | 271 | 11 | 5318 | 1293 | 1248 | SHERIDAN..... | 208 | 63 | 4691 | 45 | 9 |

* BASED ON 1941-70 NORMALS.

+ ACCUMULATION FROM JULY 1, 1976.





FIRST CLASS MAIL

