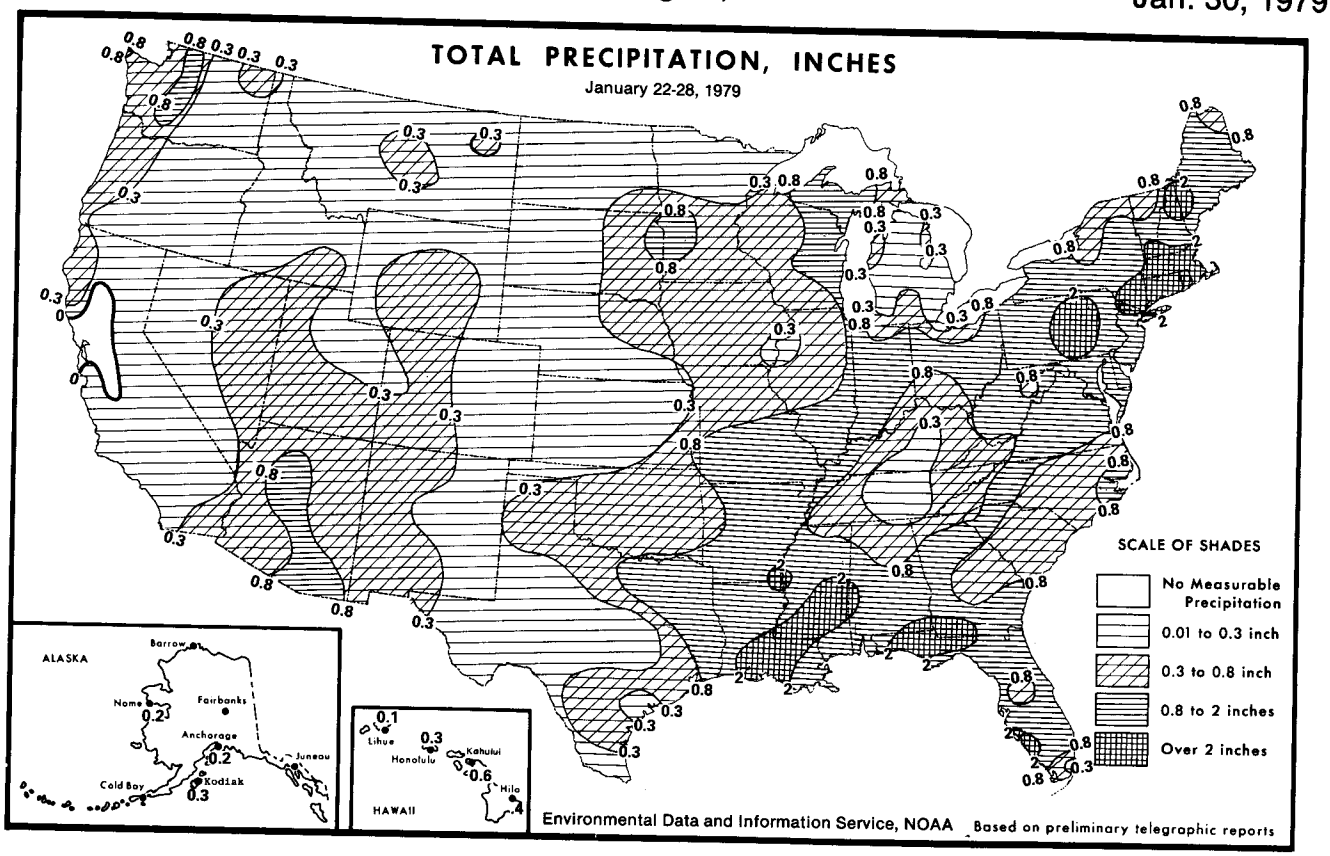
WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
Environmental Data and Information Service, NOAA

U.S. DEPARTMENT OF AGRICULTURE
Economics, Statistics, and Cooperatives Service

Volume 66, No. 5 | Washington, D.C. | Jan. 30, 1979



National Weather Summary

January 22 - 28

HIGHLIGHTS: Nearly all the Nation reported some moisture for the week. One-half to an inch of water in the form of rain or snow fell in the Southwest; heavy amounts also covered points from East Texas to New England. Thunderstorms broke out over the Gulf Coast. Some local flooding hit New England. Four inches and more added to the heavy mantle of snow already blanketing the upper Midwest and Lakes area.

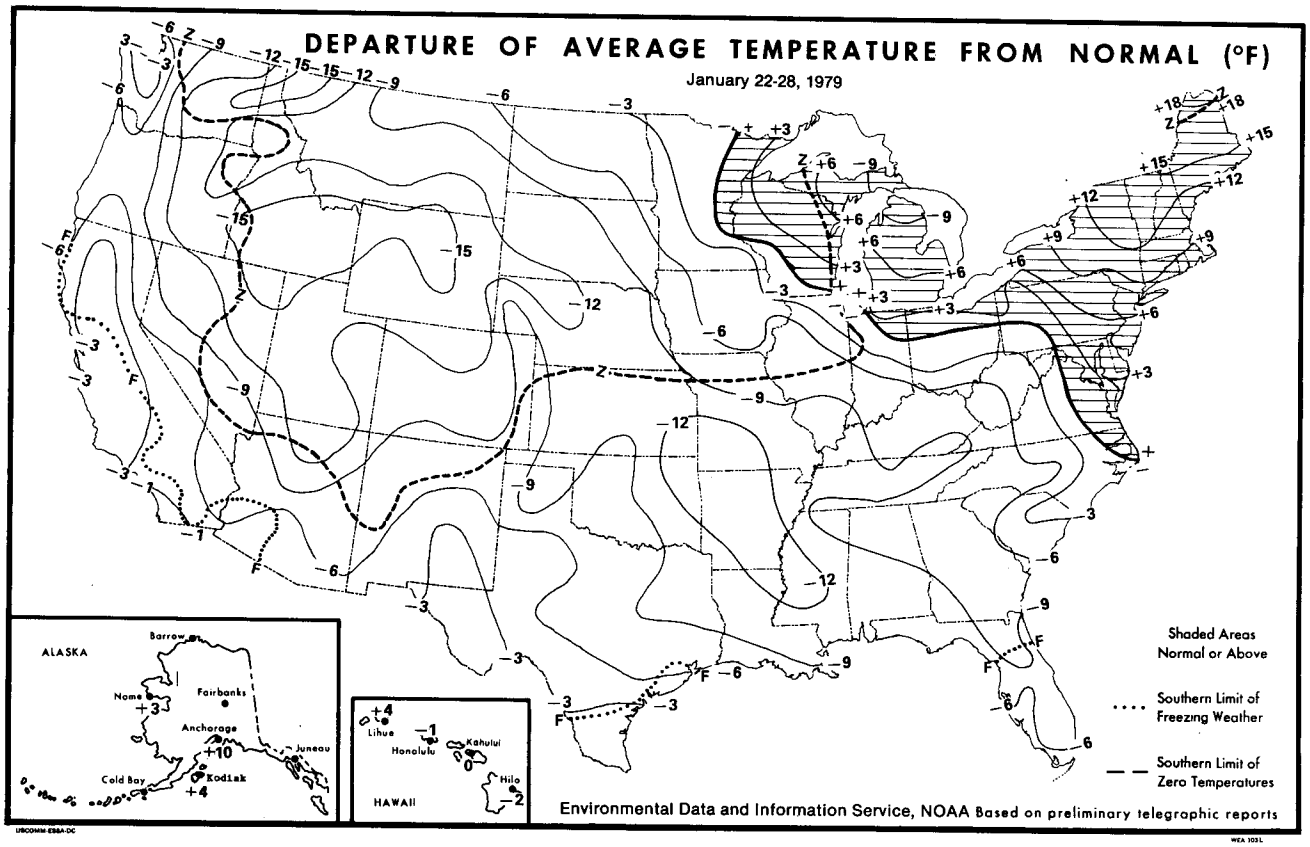
Much of the Nation was colder than normal, especially the northern Rockies where the thermometer dipped 15 degrees below expected readings. The Lakes area and the middle Atlantic through New England showed above-normal temperatures; readings in Maine soared 15 to 18 degrees above normal.

Snow spread from the eastern Rockies to the upper Midwest on Monday. High winds drifted the snow which fell heaviest in southern and eastern Minnesota; up to 8 additional inches blanketed the State.

The remainder of the country received little or no moisture with most temperatures seasonable.

On Tuesday, snow persisted in the Plains and reached the western Great Lakes; five inches collected in southwestern Missouri.

A cold front pushed thunderstorms through the western Gulf Coastal States; rain carried as far east as South Carolina and as far north as southern Indiana. Lafayette, southern Louisiana, gathered 3 inches of rain; other points from East Texas to the southern Atlantic Coast managed one-half to one and a half inches.



An intense low pressure system over West Virginia pumped snow into the hard-hit Midwest and rain from the South through most of the Atlantic Coast on Wednesday. Chicago tallied a half-foot of snow; the snow reached as far east as central Pennsylvania.

Rain soaked an area from Alabama to southern New England. Stations in Florida reported up to 1.3 inches; Bradenton, along the west central coast, weathered a tornado. One to one and three-quarters inch of rain drenched the Eastern Seaboard from the Carolinas to Connecticut.

Some light precipitation dotted the Nation from the Pacific Northwest through the central Plateau Region. In south central Colorado, Alamosa notched a record low -25°, undercutting the 1966 mark by 6 degrees.

Though the Northeast's storm moved out to sea on Thursday, up to another inch and one-quarter of rain fell on southern New England. Snow fell to the north with high winds accompanying the moisture. Light snow dusted the Ohio Valley.

Meantime, two low pressure systems in the Southwest carried snow and rain as far east as the Mississippi Valley. While a few inches of snow whitened the Rockies, an inch of rain dampened Little Rock, and three-quarters inch moistened Dallas.

On Friday, snow fell from Oklahoma northward to the U. S./Canadian border and northeastward to the Great Lakes; only a few inches at most was reported.

About a quarter-inch of rain dampened parts of Texas and Louisiana, while the remnants of a storm in the Northeast produced three-quarters inch in southeastern New Hampshire.

Rain fell especially hard over Florida where Tallahassee picked up 1.53 in., and Panama City measured nearly 2 inches.

Snow, locally heavy, stretched from the Mississippi Valley through the Ohio Valley. The heaviest snow fell in Indiana and Ohio. Monroeville, eastern Indiana, counted 7 inches, and Indianapolis checked in with a half-foot. Cincinnati scored 4 inches. Rain continued in Florida where Fort Myers, on the Gulf Coast, reported an inch and a quarter.

Record January snowfalls were established by two cities; Rochester, southeastern Minnesota, totaled 23.8 inches, and Columbia, central Missouri, saw 20.2 inches.

Snow covered an area from Indiana to the middle Atlantic States on Sunday. Three to four inches whitened Akron, Pittsburgh, and the Washington, D.C. area.

A storm system began building in the Southwest setting off snow in northern Arizona and rain to the south; Flagstaff, Arizona, managed 5 inches and Las Vegas, Nevada, an inch. Phoenix was dampened by a quarter-inch of rain.

Unseasonably warm air edged into northern New England; Caribou, northeastern Maine, hit a record high of 39°.

National Agricultural Summary

January 22 - 28

HIGHLIGHTS: Farmers in northern areas spent a considerable amount of time wrestling with snow removal to bring feed and hay to cattle. In areas with minimal snowcover, farmers were able to perform a few winter chores including hauling manure and marketing crops. In the South, wet soils slowed land preparation for 1979 spring planting. Soil moisture rated adequate to surplus throughout most thawed areas of the Nation. Small grains rated fair to mostly good. Snowcover protected northern stands from subnormal temperatures. Winter wheat stands in the South rated only poor to fair because of low temperatures. Pastures rated only fair with grazing limited by low temperatures and muddy fields. Tobacco plantbeds got off to a good start in southern production areas. Southwestern cotton growers continued to harvest some of the crop, but weather proved to be a formidable adversary. Deciduous fruit growers pruned trees and checked for rodent damage. Citrus growers continued to harvest their crops and cull freeze-damaged fruit.

SMALL GRAINS: Winter wheat in major production areas rated good with snowcover extending into parts of the southern Great Plains. Snow protected winter wheat in the Corn Belt, although ice covered a limited acreage possibly causing some damage. Southern stands rated only poor to fair because of low temperatures and slower than expected growth. In the Southwest, early stands rated excellent; late plantings did not rate as well. Some growers continued to plant late fields and used aircraft to overcome wet field conditions. Pacific Northwest stands lay snow-covered.

Most Kansas wheat fields lay protected under a blanket of snow although blowing bared some fields. Oklahoma wheat rated fair to good with 40 percent being grazed. Subnormal temperatures damaged some southern Oklahoma wheat, but snowcover protected stands elsewhere. Texas wheat on the High and Low Plains stood dormant and furnished only limited grazing. Soil moisture scored adequate, and warmer temperatures should spur growth. Central and South Texas stands showed signs of recovery from earlier freeze damage but grew slowly. Early Arizona stands scored excellent, but late seedings were delayed by wet soils and some farmers seeded from aircraft. California growers continued to plant winter wheat in the Sacramento and San Joaquin Valleys. Weed control moved actively in earlier planted fields.

OTHER CROPS: Cotton producers in the Southwest continued to pick on a limited scale, but adverse weather conditions persisted hampering progress. Oklahoma growers finally reached 94 percent complete. Texas harvest stood at 98 percent for the third consecutive week as wet, cold conditions stifled progress. Cotton gins caught up with the backlog, and several stood idle. Arizona growers showed a substantial amount of acreage to harvest, but quality of the remaining crop was questionable. California growers moved into the second picking in desert areas. New Mexico producers also had some cotton standing in the fields. Weather delayed preparations for the 1979 cotton crop in Texas and California.

Florida sugarcane rated good, and harvest advanced on schedule.

Tobacco plantbeds in Florida and Georgia rated fair to good. South Carolina growers prepared beds for planting.

FRUITS AND NUTS: Deciduous fruit growers in the Southeast and Pacific Northwest pruned trees and caneberries and checked for rodent damage. New Mexico producers harvested some pecans. California deciduous orchard producers pruned, fertilized, weeded, and applied dormant sprays. Early almond buds swelled in California. Florida citrus rated excellent with soil moisture adequate to surplus. Low temperatures slowed activity of caretakers. New growth began in some locations. Texas harvests of grapefruit and Valencias for fresh market gained momentum following the shipping holiday. Arizona growers harvested a limited amount of citrus; freeze damage to unprotected groves proved severe. California growers harvested grapefruit, Navels, and lemons as groves dried. Valencia color improved, but fruit size was small.

VEGETABLES: Florida vegetable crops generally rated fair to very good. Harvest advanced steadily although shipments declined 11 percent from the previous week. Shipments of peppers and potatoes registered increases, while supplies of cauliflower, celery, chinese cabbage, sweet corn, eggplant, lettuce, strawberries and tomatoes declined. Volume of other vegetable crops held steady. Strong winds continued to whip plants and scar fruit. Spring planting was complete in some areas. Texas growers harvested carrots, spinach, cabbage, and lettuce. Wet weather delayed land preparations for spring-planted crops. A few early melon fields were planted. Arizona lettuce harvest advanced, and newly planted lettuce, cabbage, cauliflower and broccoli made good progress. Cool air in California retarded vegetable growth, although moderate supplies of broccoli, cauliflower and celery were available from southern areas. Lettuce harvest advanced actively in the Imperial Valley although farmworkers' strikes closed some shippers.

PASTURES AND LIVESTOCK: Northern pastures remained closed to grazing because of snowcover and subnormal temperatures. Low temperatures across the South kept grasslands in only fair condition and limited growth. Farmers fertilized some pastures in the South. In the Southwest, rains improved grasslands and supplemental feeding declined. Growers fed heavy rations of hay, forage, and feed throughout most of the Nation but most livestock could only hold their own; weight gains were minimal. Hauling feed to livestock proved a difficult task in many northern areas where new snowfall and continued blowing closed roads. Early calving and lambing got underway with a few areas reporting increased losses to the severe weather.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., Jan. 28, 1979

States and Stations	Temperature °F Average	Temperature °F Departure	Precipitation Inches Total	Precipitation Inches Departure
ALA.Birmingham	36	- 8	.8	- .3
Mobile	41	-10	.7	- .3
Montgomery	40	- 8	.8	- .1
ALASKA.Anchorage	23	+10	.2	0
Barrow	--	--	--	--
Fairbanks	--	--	--	--
Juneau	--	--	--	--
Kodiak	35	+ 4	.3	- .8
Nome	10	+ 3	.2	0
ARIZ.Flagstaff	16	-12	1.1	+ .7
Phoenix	48	- 3	.5	+ .4
Tucson	45	- 6	.9	+ .8
Winslow	30	- 4	.4	+ .3
Yuma	50	- 6	.6	+ .5
ARK.Fort Smith	26	-13	.7	+ .1
Little Rock	28	-12	1.0	0
CALIF.Bakersfield	47	- 2	T	- .2
Eureka	42	- 6	.7	- .9
Fresno	44	- 2	.1	- .3
Los Angeles	52	- 5	T	- .7
Red Bluff	45	- 1	T	- 1.0
San Diego	54	- 1	.2	- .2
San Francisco	46	- 3	T	- 1.0
Stockton	43	- 2	0	- .6
COLO.Denver	14	-16	.2	+ .1
Grand Junction	16	-11	.3	+ .2
Pueblo	20	-11	.2	+ .1
CONN.Bridgeport	39	+ 9	2.6	+ 2.0
Hartford	35	+10	2.0	+ 1.3
D.C.Washington	39	+ 3	1.1	+ .5
FLA.Apalachicola	45	- 9	1.0	+ .3
Daytona Beach	52	- 7	1.4	+ .9
Ft. Myers	58	- 6	3.6	+ 3.2
Jacksonville	46	- 9	1.3	+ .6
Key West	67	- 4	.4	0
Lakeland	--	--	--	--
Miami	61	- 6	.2	- .3
Orlando	52	- 9	.7	+ .1
Tallahassee	42	-11	2.2	+ 1.3
Tampa	54	- 7	1.0	+ .4
W.Palm Beach	57	- 8	.9	+ .3
GA.Atlanta	35	- 8	.9	- .1
Augusta	40	- 6	.7	- .1
Macon	41	- 7	.7	- .1
Savannah	43	- 7	.8	+ .2
HAWAII.Hilo	69	- 2	4.4	+ 2.4
Honolulu	71	- 1	.3	- .6
Kahului	71	0	.6	- .2
Lihue	75	+ 4	.1	- 1.2
IDAHO.Boise	14	-16	.2	- .2
Lewiston	22	-10	.1	- .2
Pocatello	7	-17	.4	+ .2
ILL.Cairo	28	- 9	1.1	+ .2
Chicago	22	- 2	1.1	+ .7
Moline	15	- 7	.3	- .1
Peoria	17	- 7	.5	+ .1
Rockford	19	- 1	.5	+ .1
Springfield	19	- 8	.5	+ .1
IND.Evansville	24	- 9	1.5	+ .7
Ft. Wayne	26	+ 1	.8	+ .2
Indianapolis	23	- 5	1.6	+ 1.0
South Bend	28	+ 4	.6	+ .1
IOWA.Burlington	17	- 6	.1	- .3
Des Moines	14	- 4	.4	+ .2
Dubuque	15	- 3	.6	+ .2
Sioux City	9	- 9	.5	+ .4
KANS.Concordia	17	-10	.2	0
Dodge City	20	-11	.1	0
Goodland	20	- 8	T	- .1
Topeka	19	-10	.2	0
Wichita	23	- 9	.2	0
KY.Lexington	25	- 8	.3	- .6
Louisville	27	- 7	.7	- .1
LA.Baton Rouge	40	-11	2.1	+ 1.1
Lake Charles	44	- 9	1.5	+ .6
New Orleans	43	-10	.6	- .4
Shreveport	37	-10	.9	0
MAINE.Caribou	28	+18	.5	0
Portland	31	+10	1.5	+ .7
MD.Baltimore	38	+ 4	1.3	+ .7
MASS.Boston	39	+10	2.4	+ 1.6
Chatham	38	--	1.7	--
MICH.Alpena	26	+ 9	.3	- .1
Detroit	29	+ 5	.1	- .3
Flint	28	+ 6	.2	- .2
Grand Rapids	28	+ 5	.1	- .3
Houghton Lake	26	+ 9	.2	- .1
Lansing	28	+ 6	.4	0
Marquette	18	+ 6	1.3	+ .9
Muskegon	26	+ 3	.2	- .3
S. Ste. Marie	24	+11	.4	0
MINN.Duluth	11	+ 3	.2	0
Internatl Falls	0	- 2	.2	0
Minneapolis	14	+ 2	.5	+ .4
Rochester	9	- 4	.5	+ .4
St. Cloud	7	- 2	.7	+ .5
MISS.Jackson	35	-12	1.9	+ .9
Meridian	35	-12	2.4	+ 1.4
MO.Columbia	21	- 9	.7	+ .3
Kansas City	19	- 9	.4	+ .1
St. Louis	23	- 9	.8	+ .4
Springfield	20	-13	1.1	+ .7
MONT.Billings	12	-10	.2	+ .1
Glasgow	0	- 9	T	- .1
Great Falls	12	- 9	T	- .2
Havre	3	- 8	T	- .1
Helena	8	-11	.1	0
Kalispell	5	-15	.1	- .3
Miles City	3	-12	.1	0
Missoula	11	-10	.1	- .1
NEBR.Grand Island	12	-11	.2	+ .1
Lincoln	13	-10	.2	+ .1
Norfolk	10	- 9	.5	+ .4
N.Platte	11	-13	T	- .1
Omaha	13	- 7	.3	+ .1
Valentine	9	-12	.2	+ .1
NEV.Ely	10	-14	.3	+ .2
Las Vegas	39	- 6	.2	+ .1
Reno	25	- 8	.1	- .2
Winnemucca	18	-11	.2	0
N.H.Concord	31	+11	1.6	+ 1.0
N.J.Atlantic City	36	+ 4	1.4	+ .6
Trenton	38	+ 6	1.9	+ 1.3
N.MEX.Albuquerque	30	- 6	.3	+ .2
Roswell	37	- 2	.1	0
N.Y.Albany	33	+12	1.5	+ 1.0
Binghamton	31	+ 9	1.4	+ .9
Buffalo	31	+ 8	1.3	+ .6
New York	39	+ 7	1.8	+ 1.2
Rochester	33	+ 9	1.5	+ 1.0
Syracuse	34	+11	.8	+ .2
N.C.Asheville	32	- 6	.8	0
Charlotte	36	- 7	.7	- .1
Greensboro	35	- 4	.6	- .2
Hatteras	45	0	1.1	+ .1
Raleigh	35	- 6	.5	- .3
Wilmington	43	0	.7	- .1
N.DAK.Bismarck	2	- 6	.1	0
Fargo	0	- 6	.1	0
Williston	3	- 5	T	- .1
OHIO.Akron-Canton	26	0	1.1	+ .5
Cincinnati	25	- 6	.8	0
Cleveland	31	+ 4	.8	+ .2
Columbus	27	- 2	1.0	+ .4
Dayton	26	- 2	.8	+ .2
Toledo	28	+ 3	.1	- .3
Youngstown	29	+ 4	1.0	+ .3
OKLA.Okla. City	28	- 9	.4	+ .1
Tulsa	25	-12	.7	+ .3
OREG.Astoria	34	- 7	.6	- 1.5
Burns	14	-12	.2	- .2
Medford	32	- 5	.1	- .7
Pendleton	20	-13	.2	- .2
Portland	34	- 5	.4	- .9
Salem	33	- 6	.4	- 1.1
PA.Allentown	36	+ 8	1.5	+ .8
Erie	28	+ 3	.9	+ .3
Harrisburg	33	+ 3	2.2	+ 1.6
Philadelphia	37	+ 5	1.4	+ .5
Pittsburgh	27	- 2	1.5	+ .9
Scranton	32	+ 6	1.6	+ 1.2
R.I. Providence	36	+ 8	2.8	+ 2.0
S.C. Charleston	44	- 5	.7	+ .1
Columbia	43	- 3	.6	- .2
Greenville	36	- 7	.8	- .1
S.D. Aberdeen	1	- 8	.4	+ .3
Huron	3	- 9	.3	+ .2
Rapid City	11	-11	.1	0
Sioux Falls	8	- 6	.5	+ .4
TENN.Chattanooga	32	- 8	.3	- 1.0
Knoxville	32	- 9	.5	- .6
Memphis	32	- 9	.6	- .5
Nashville	30	- 9	.2	- .9
TEX.Abilene	38	- 6	.1	- .2
Amarillo	26	-10	.4	+ .3
Austin	42	- 8	.2	- .3
Beaumont	45	- 7	1.8	+ .9
Brownsville	60	- 1	.1	- .3
Corpus Christi	55	- 1	.3	- .1
Del Rio	48	- 4	.1	- .1
El Paso	40	- 4	.3	+ .2
Fort Worth	37	- 8	.8	+ .3
Galveston	49	- 5	.5	- .1
Houston	44	- 8	.4	- .4
Lubbock	34	- 5	.1	0
Midland	39	- 5	T	- .1
San Angelo	39	- 8	.1	- .1
San Antonio	46	- 5	.5	+ .1
Victoria	48	- 6	.2	- .2
Waco	38	- 9	.1	- .4
Wichita Falls	35	- 7	.5	+ .3
UTAH.Blanding	17	-12	.2	0
Salt Lake City	17	-12	.1	- .2
VT.Burlington	29	+13	.4	0
VA.Lynchburg	34	- 3	1.0	+ .4
Norfolk	42	+ 2	.6	- .2
Richmond	40	+ 2	1.0	+ .3
Roanoke	33	- 4	.9	+ .3
WASH.Colville	14	-10	.4	0
Omak	13	-10	.1	- .2
Quillayute	35	- 4	.6	- 2.6
Seattle-Tacoma	37	- 2	.3	- 1.0
Spokane	11	-15	.2	- .4
Walla Walla	22	-12	.2	- .2
Yakima	14	-14	T	- .3
W.VA.Beckley	25	- 7	.7	- .1
Charleston	28	- 7	1.5	+ .7
Huntington	28	- 7	.6	- .1
Parkersburg	28	- 5	1.1	+ .4
WISC.Green Bay	19	+ 4	.9	+ .7
La Crosse	14	- 2	.8	+ .6
Madison	19	+ 2	.4	+ .1
Milwaukee	22	+ 3	.9	+ .6
WYO.Casper	8	-15	.4	+ .3
Cheyenne	15	-12	.1	0
Lander	6	-14	.7	+ .6
Sheridan	5	-16	.1	- .1
P.R.San Juan	79	+ 4	0	- .8

Based on 1941-70 normals

Publication of the Weekly Weather and Crop Bulletin began in 1872 as the Weekly Weather Chronicle. It is issued under general authority of the Act of January 12, 1895 (44USC 213), 53d Congress, 3d Session. Contents of the Bulletin may be reprinted freely, with proper credit.

Standard copy for the Bulletin is prepared by Donald J. Haddock, Lyle Denny, and O. W. Byrd, Environmental Data and Information Service, National Oceanic and Atmospheric Administration; Harry DeLong and Jim Carlin, Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture.

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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 ESCS State offices in cooperation with the National Weather Service.

ALABAMA: Temperatures 9° below normal. Several days rain or snow. Precipitation mostly below 1.00 in., south central totaled near 2.00 in.

Fieldwork: 1.9 days suitable. Soil moisture adequate to surplus. Outdoor activity limited. Fieldwork behind schedule; plowing 20% completed. Pasture feed supply very short; stored feed mostly adequate. Pastures poor condition. Wheat poor to fair. Livestock fair.

ARIZONA: Substantial precipitation 24th through 26th, up to 0.50 in. western third, 2.00 in. eastern two-thirds. New snowfall to 10 in. central basins, Mogollon Rim, up to 25 in. White Mountains. Temperatures mostly 3° to 6° below normal.

Little fieldwork possible. Substantial cotton remains, quality questionable. Established small grains excellent progress, later planting delayed, some seeded by aircraft. Sugarbeet harvest Cochise County not complete; beets central, western areas making good progress. Alfalfa haying seasonally slow, new renovated fields good progress. Harvest lettuce, mixed vegetables limited. Newly planted lettuce, cabbage, cauliflower, broccoli good progress. Bad weather severely affected quality winter vegetable crops some areas, restricted plantings later harvest. Some onion acreage lost; planting watermelons, potatoes delayed. Limited citrus harvest, freeze damage severe both fruit, trees some unprotected groves. Range conditions generally excellent. Stock water, soil moisture adequate to surplus. Pastures, ranges supplying above average feed. Prospects late winter, spring browse good to excellent. Cattle, calves mostly good to excellent condition. Marketing and higher, more isolated ranges, restricted by wet, muddy roads. Most sheep on winter pastures lower desert valleys.

ARKANSAS: Very cold with temperatures much below normal. Precipitation below normal most areas. Lowest temperature 0°, highest 56°. Lowest normal 36°, highest 46°. Lowest mean 26°, highest 36°. Means ranged from 9 to 13° below normal. Least precipitation 0.44 in.; most 1.56 in.

Major farming activity limited to heavy feeding of livestock as little to no grazing available. Hay supply adequate. Small grains dormant; no winterkill evident. No field activity.

CALIFORNIA: Rain in extreme north coast, portions of Sierra Nevada and extreme south. Temperatures turned cooler.

Small grain planting continued Sacramento Valley; some replanted after extensive rain, San Joaquin Valley. Weed control active San Joaquin Valley, most areas good growth, development. Alfalfa sheeped south desert. Cotton scrapping, second picking continue desert area. Pre-irrigation fieldwork 1979 cotton crop San Joaquin Valley. Sugarbeets developing well Imperial Valley. Pruning, fertilizing, weeding, dormant spray main activities deciduous orchards as fields dried to allow access. Bud swelling early almonds progressing. Avocado harvest continued; Haas and Fuerte main varieties. Quality variable cold storage table grapes. Supplies below year ago. Grapefruit, Navels, and lemon harvests more active as fields dried. Actively sorting freeze damaged fruit. Valencia color improving, sizes small. Harvesting olives for oil. Low temperatures occurred in the Redlands district of southern California the night of January 28 - 29 with additional cold temperatures expected on January 29 - 30. Additional damage to citrus could occur. Cool weather retarding vegetable growth. Moderate supplies broccoli, cauliflower, celery south. Cauliflower moderate south bay, light Santa Maria. Lettuce harvest active Imperial Valley though several shippers closed by farm worker strikes. Rangeland conditions improved by wet soils. Supplemental feeding continued, decreasing as more grass available. Livestock good condition. Sheep graze alfalfa stubble fields San Joaquin Valley.

COLORADO: Another Pacific frontal system dumped snow in most areas with amounts ranging from 10 to 20 in. mountains and southwest. Temperatures ranged from 2° below normal east to 2 to 15° below normal mountains and west. Temperatures dipped 25 to 30° below normal in San Luis Valley and higher mountain areas 24th.

FLORIDA: High pressure dominated through 17th when cold front passed over Peninsula with winds of 15 to 20 to occasionally 30 mph; rainfall of 1.00 to 2.00 in. central and southwest but generally less than 0.50 in. elsewhere. Low in the 30's Panhandle to 40's central and 50's southeast coast. Generally fair until 20th when another cold front passed through with average rainfall less than 0.50 in. but scattered amounts up to 1.50 in. Temperatures cool through 28th with highs in 40's Panhandle, 50's north, central, and 60's south.

Soil moisture mostly adequate west, north, central but excessive most southern areas. Farmwork limited because of wet soils, cold weather. Small grains fair condition but growth slow due to cold. Tobacco plants in plant beds fair progress. Sugarcane harvest on schedule. Cane crop in good condition. No cold damage reported to peaches to date. Permanent pastures poor to good condition, central to Panhandle. Temporary pastures good condition. Supplemental feeding continued many areas. Southern pastures mostly good. Cattle, fair to good condition. Citrus condition excellent, moisture adequate to surplus. Cold weather slowing caretakers. New growth forming some locations. Harvest very active. Vegetable crop condition generally fair to very good; harvest mostly steady. Shipments decreased 11% from previous week. Shipments peppers, potatoes up while snap beans, cabbage, carrots, cucumbers, escarole, okra, parsley, radishes, squash held steady. Supplies cauliflower, celery, chinese cabbage, sweet corn, eggplant, lettuce, strawberries, tomatoes decreased. Quality, size good. Strong winds continue to whip plants, scar fruit. Spring planting complete few crops some areas. Strawberry crop recovering well from cold damage. Rains reducing quality. Volume continued low. Spring watermelon crop condition fair to good. Growth, germination slow. Planting active. Winter crop potato digging very active.

GEORGIA: Temperatures 3 to 8° below normal. Rainfall 1.75 in. southeast to 3.50 in. north and west. Skies cloudy 27th with light rain in north averaging less than 0.25 in. Colder on 28th; low 15° on 25th.

Soil moisture mostly surplus. Cold, wet conditions continued to limit field activities; some activity south. Tobacco beds producing good

stands, condition good. Small grains mostly fair to good. Pastures fair north to mostly good south; cattle mostly fair.

HAWAII: Weather variable. More rains along windward coast, Island Hawaii. Some flooding low-lying areas again. Rainfall light other Islands.

Low temperatures slowing crop progress. Frequent spraying for disease and insect control. Vegetable supplies light, quality continued poor. Bananas light to moderate. Papayas light. Pineapple harvesting slow. Sugar harvesting down. Pastures generally good.

IDAHO: Snow and cold winter weather continued. Temperatures 4 to 15° below normal. Extremes: -32 and 42°. Daily light precipitation but amounts less than normal.

With temperatures much below normal and snow continuing to pile up, most farmwork except livestock care at standstill. Potato marketing very slow and restricted to very short periods around midday. Livestock in fair to good condition with plenty of feed. Early calving and lambing continued.

ILLINOIS: Temperatures 1 to 9° below normal. Precipitation scattered, 0.25 to 1.50 in.; snowfall 1 to 9 in. northern half first of week, 1 to 4 in. most of state end of week. Snow depths 27 in. northeast, 2 in. south.

Winter wheat good condition, snowcovered. Livestock generally good condition, snow and cold increasing feed use, reducing gains. Farm activities: Snow removal, livestock care, general chores. Soil moisture adequate to surplus.

INDIANA: Snow storms with freezing rain and wind. Numerous schools and roads closed. Heaviest precipitation west central and southwest of 1.30 in., elsewhere 0.80 to 1.00 in. Snowcover 4 in. south, 9 in. central and 19 in. near Lake Michigan. Temperatures ranged from zero to 46° and averaged 5° below normal. Sunshine 28% of possible.

Fieldwork nil; hauling manure, cutting wood, repairing machinery, caring for livestock, and chores.

IOWA: Continued cold with moderate to heavy snowfalls. Temperatures 2° subnormal northeast to 6 to 10° subnormal south and west. Snow fell on 23d and again on 26th to 27th. Snowcover varied from near 10 in. southwest to near 20 in. east, and 25 to 30 in. north central.

KANSAS: Precipitation ranged from a few hundredths inch west to 0.25 in. central and northeast to locally around 0.75 in. southeast and east central falling mostly as snow. Temperatures 18° north central, and 20 to 24° elsewhere, 5° below normal northeast to 7 to 10° below normal elsewhere.

Cold, snowy weather continued to make livestock feeding difficult. Very little weight gain for livestock. Early lambing and calving underway, some losses. Reports of TGE losses in baby pigs. Wheat mostly snowcovered but some blowing occurred.

KENTUCKY: Temperatures 5 to 10° below normal. Precipitation 0.75 to 1.50 in. Midweek had least amount of precipitation.

Snow and ice storms limited outside work. Livestock on supplemental feed due to snowcover and cold weather. Hay supply adequate. Burley marketing continued but winding down.

LOUISIANA: Temperatures 9 to 12° below normal. Extremes: 65 and 21°. General rains first and midweek.

Activities: Care and feeding of livestock.

MARYLAND & DELAWARE: Temperatures 2° below normal except in western Maryland where temperatures 3° below normal. Highs in mid-40's and lows in upper 20's to low 30's except in western Maryland where highs averaged in mid-30's. Lows in upper teens to low 20's. Precipitation heavy; between 2.00 and 4.00 in. rainfall. Mostly sunny and cool 27th. Light snow in the morning 28th, then mostly cloudy, windy and cold.

MICHIGAN: Temperatures above normal. Values ranged from 1 to 11° above normal. Maximum temperatures held steady in 20's and low 30's. Precipitation light with amounts of 0.10 to 0.30 in. common. Heavy or moderate amounts over western Upper where 1.31 in. recorded. Snowcover 2 to 44 in.

Farm activities: Feeding livestock and equipment repair.

MINNESOTA: Temperatures 4° below normal west and extreme south; near normal east and north. Extremes: 27 and -33°. Precipitation near normal north, 0.40 in. above normal central and south. Precipitation 0.01 to 0.21 in. north, 0.50 to 0.79 in. central and south. Snowfall less than 1 in. northwest to more than 8 in. central and south. Snow depth generally 17 to 23 in., except around 12 in. northwest, 25 to 30 in. southeast.

MISSISSIPPI: Temperatures 10° below normal. Extremes 12 and 68°. Rain throughout week with 5.00 to 9.00 in. common.

Soil moisture surplus to excessive. Fieldwork: 0.5 days suitable. Continued wet and generally cold weather causing cattlemen to feed increased amounts. Hay and roughage supplies short to adequate. Feed grain supplies adequate to short. Livestock condition fair. Winter wheat fair to very poor.

MISSOURI: Temperatures 6° below normal. Snow fell 22d west, entire State 23d, some freezing rain and drizzle south. Several more inches snow 25th to 27th. Total snow depth 10 to 20 in. north; 7 to 10 in. central and southwest; 2 to 4 in. southeast. Melted precipitation averaged 0.75 to 1.50 in. south and central, 0.50 in. north.

Snowcover making chores difficult.

MONTANA: Generally dry but cold. Temperatures 10 to 15° below normal.

Winter wheat condition good, snowcover good to excellent. Livestock losses normal. Hay supplies mostly adequate but continued heavy feeding could create local shortages. Grazing mostly closed.

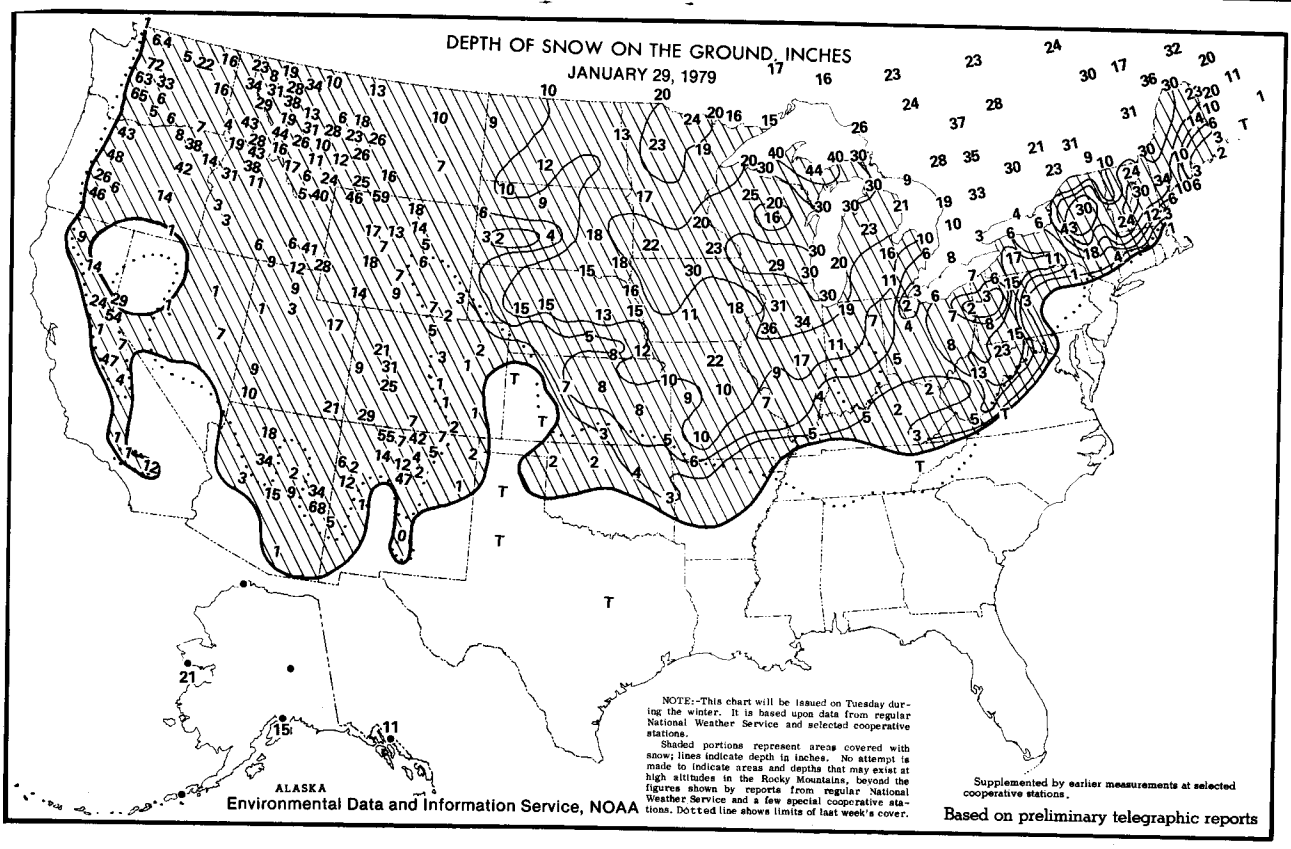
NEBRASKA: Temperatures 10° below normal. Precipitation 0.50 in. east; 0.20 in. elsewhere.

Snowcover continued to build north. Heavy snow cover in this area making travel and livestock care difficult. Eleven counties northwest and north central declared State disaster area. Statewide livestock requiring heavy supplemental feeding, feed supplies tightening.

NEVADA: Winter storms brought snow and cold weather. Precipitation heaviest northwest. Water equivalent ranged 0.60 to 0.02 in. Temperatures below average. Extremes: 62 and -17°.

Supplemental feeding necessary, cattle holding their own.

NEW ENGLAND: Rain south 24th and 25th, 2.00 to 4.00 in. Extensive flooding in some areas. Some heavy snows central sections. Light off and on rain or snow continued rest of week. Precipitation averaged 1.00 to 5.00 in. with the greater amounts south and east. Wettest January of record



in Boston area. Temperatures near seasonal early week, above normal latter part.

NEW JERSEY: Temperatures 2 to 5° above normal, averaging 34° north, 37° south, and 36° coastal. Extremes: 18 and 56°. Precipitation totals 0.70 to 2.00 in. above normal, averaging 2.77 in. north, 1.89 in. south and 1.40 in. coastal. Snow up to 3 in. Charlottesburg 25th to 26th. Southern sections 2.6 in. 28th Cape May Court House.

Farmers caring for livestock and tending to other winter chores.

NEW MEXICO: Widespread rain and snow early in week then again 25th and 26th.

More moisture so some cotton, grain sorghum, red chile, and pecans still in field. Weather delayed spring lettuce planting. Livestock fair with supplemental feeding.

NEW YORK: Very mild weather persisted; temperatures 6 to 10° above normal. Major storm on 21st produced heavy rain northeast. Over higher terrain heavy snow fell. Storm stalled east of New England and cloudy mild weather with occasional precipitation lasted into weekend.

NORTH CAROLINA: Temperatures 1° subnormal. Precipitation above normal.

Fieldwork: 1.9 days suitable. Soil moisture adequate to surplus. Condition of small grains fair to good. Pastures fair. Supplies of hay and roughage mostly adequate to surplus. Feed grains adequate.

NORTH DAKOTA: Temperatures 2 to 8° below normal. Extremes: 26 to -30°. Light snow most areas. Water equivalent 0.15 in. southwest to trace northeast.

Very little change in conditions past week as cold winter continued to require heavy livestock feeding. Other farm activities limited to snow removal, minor repairs. General snowcover adequate to protect wintering crops.

OHIO: Temperatures above normal northeast to below normal southeast. Highs generally from 3 to 5° below normal. Extremes: 42 and 12°. Precipitation 1.29 in. water equivalent to 0.12 in. Soil temperatures under grass averaged near freezing and in upper 20's north. Snowcover increased from 2 in. or less early week to 5 to 7 in. northeast outside snow belt and reached around 5 in. elsewhere except extreme south.

Some wheat reported having ice cover with rest of wheat now having adequate snowcover.

OKLAHOMA: Temperatures 6 to 10° below normal southwest, 10 to 13° below normal elsewhere. Precipitation in the form of mostly sleet and snow fell several times; less than 0.75 in.

Wheat rated fair to good with 40% of acreage being grazed. Forage supplies very limtied. Below normal temperatures damaged some wheat in south. Snowcover protected wheat elsewhere. Cotton harvest delayed by bad weather and is 94% complete. Cattle in fair condition. Several cattle lost when they fell through icy ponds.

OREGON: Temperatures 3 to 7° below normal with northeast area 8 to 14° below normal. Extremes: low 50's, low 20's west; high 40's, below zero east. Most of west had 0.33 to 0.50 in. precipitation except 1.00 in. on north coast and less than 0.10 in. in southwest valleys. East of Cascades precipitation 0.33 in. or less.

Fieldwork nil. Ground snow covered east, frozen in much of west. Activities: Chores, a little pruning. Storage supplies of onions and potatoes continued to move to market. Heavy livestock feeding from adequate supplies.

PENNSYLVANIA: Mild, windy and wet. Temperatures 20's to 30's and 40's averaging near to 6° above normal for mildest week since mid-December. Extremes: 13 and 55°. Series of storms brought precipitation mostly as rain totaling from 0.60 to 1.60 in. west and 2.00 to 3.50 in. east with bulk falling mid-period southeast. Few western mountain areas measured almost daily light snow fall.

Normal winter chores.

PUERTO RICO: Island average rainfall 0.47 in. or 0.26 in. below normal. Temperatures 76° on coasts and 70° interior. Extremes: 92 and 49°.

SOUTH CAROLINA: Temperatures below normal except central area near normal. General rains 23d with scattered rains near weekend; amounts near normal.

A few growers scrapped some cotton as weather permitted. Main activities: Pruning peach, apple trees and grape vines; tobacco beds and lands prepared for spring planting. Winter grazing fertilized.

SOUTH DAKOTA: Temperatures dropped from moderate readings of previous week. Readings -1 to 12°; 5 to 13° subnormal. Extremes: -29 and 46°. Precipitation heaviest east, 0.20 to 0.50 in.; northeast received up to 1.08 in.; central generally received 0.25 in. or less; the west 0.10 in. or less. Snowcover more than 20 in. east; elsewhere generally 8 to 12 in.

TENNESSEE: Cold fronts midweek and weekend. Temperatures 8 to 10° below normal. Lows mid-20's, highs mid-30's. Rainfall 0.50 in. statewide. Snow up to 3 in. northwest.

Soil moisture surplus. Pastures and small grains fair. Cattle good. General chores and care of livestock main activities.

TEXAS: A cold front brought shower activity 25th and 26th. Light snow confined to Panhandle. Showers across southwest 28th. Temperatures below normal. Warmer weather favored lower Valley. Precipitation above normal southeast, upper coast, and Panhandle; Rio Grande Valley, Trans-Pecos below normal.

Wheat, oats central, southern areas show signs recovering early January freeze damage, however, development slow. Stands High, Low Plains mostly dormant but moisture adequate for good growth as weather warms up. Cotton harvest little progress as cold, wet weather drove strippers from fields. Many gins caught up, standing idle.

Harvest grapefruit and Valencias for fresh market gained momentum after shipping holiday expired January 18th. Carrot, spinach and cabbage harvest continued; harvest of lettuce picked up as fields recovered from freeze damage. Some early melon fields being planted. Land preparation delayed by wet weather.

Supplemental feeding increased as small grain pastures, ranges and permanent pastures declined due to wet, freezing conditions. Recent rains promoted growth most winter grasses; dried grasses and forage decayed from continued moisture. North, central and east Texas, hay stocks low. Some ranchers lost cattle to nitrate poisoning in hay. Livestock fair to good depending on pasture conditions; heavy shrinkage and loss of condition a problem in north and central Texas due to prolonged cold, wet weather.

UTAH: Recurring snow; accumulations generally light but locally moderate to heavy few areas southeast. Temperatures between 3 and 15° below normal.

Farm activities limited to chores and maintaining and repairing farm equipment. Care and maintenance of livestock. Grading and marketing onions, potatoes and apples continued.

VIRGINIA: Temperatures little below normal. Extremes: 68 and 9°. Precipitation heavy occurring mostly as rain except some snow west.

Topsoil moisture mostly surplus. Rain, ice prevented fieldwork with 0.6 days suitable. Ice storms caused power outages in north, central, and southwest localities. Dairy farmers shared portable power generators for milking, other farm service, and household needs. Most areas cleared downed trees from roads, broke ice on ponds. Cold, sleet increased newborn livestock losses. Aphid infestations of small grains minimal in east. Winter grains, grazing good. Some concern shown about winterkill; snow lacking for protection of small grains. Feed and roughage supplies adequate to surplus. Southside swine producers planning facility expansions. Some scours, pneumonia reported for newborn calves, north. Livestock treated for lice in north, southwest.

WASHINGTON: West: Temperatures 1 to 2° below normal. Precipitation below normal.

Seed cabbage fields damaged by cold weather. Caneberry pruning continued. Hay supplies adequate with new supplies arriving from east.

East: Temperatures 6 to 9° below normal. Precipitation ranged 0.20 to 0.30 in. below normal. Snow flurries continued.

Orchardists continued pruning and keeping check on possible rodent damage to tree trunks. Calving and lambing continued. Feed needs increased but supplies adequate. Winter crop damage unknown.

WEST VIRGINIA: Temperatures 2° above normal northeast, 3 to 4° below normal elsewhere. Extremes: 50 and 5°. Precipitation nearly every day. Rain and snow 0.33 in. above normal northwest to 0.90 in. northeast.

Fieldwork: 0.6 days suitable. Soil moisture adequate to surplus. Fields muddy. Hay, grain and other feed supplies adequate. Calving and lambing underway. Foot rot in few sheep. Cattle in good condition. Fall sown grains look good.

WISCONSIN: Temperatures seasonal beginning of week, turned colder at midweek, and moderated to near 30° weekend. Extremes: 20 and -27°. Precipitation came in snowstorm late 22d into early 24th. Snowfall 1 to 3 in. extreme north, 5 to 10 in. other areas, heaviest extreme southeast. Light snow and flurries weekend. Snow depths averaged record 26 in. as of 26th. Deepest in southern areas where Madison and Milwaukee established all-time record with over 30 in. on ground. Frost depths averaged 7 in. increase of only 1 in. from two weeks earlier.

WYOMING: Temperatures below normal. Precipitation generally above normal.

Snow, continued cold making livestock producers feed heavier than normal. Adequate hay supplies at this time, if snow, cold continues, there will be some shortages. Winter wheat fair to good, snow covered most areas.

World Weather and Crop Update

January 22 - 28

USSR. Precipitation (10 to 20 mm) in the Ukraine remained slightly above normal in most areas, as it has since December. An adequate snowcover had built up (fig. 1), protecting all areas against cold temperatures early in the week; however, strong warming caused considerable melt and left much of the southern third bare by Sunday evening. Snowfall in northerly agricultural areas from Belorussia to the New Lands surged above normal again after a single, relatively dry week.

CHINA. Most eastern areas received above-normal precipitation late in the week. The southern coast was nearly dry, but amounts in the highlands just south of the Yangtze River were commonly 15 to 40 mm, and in the China Plain 10 to 30 mm fell at many locations. Earlier in the week, temperatures frequently ranged up to 15°C in the wheat belt, possibly causing some break in dormancy. Some slight crop damage may have resulted since the precipitation fell as snow in many areas.

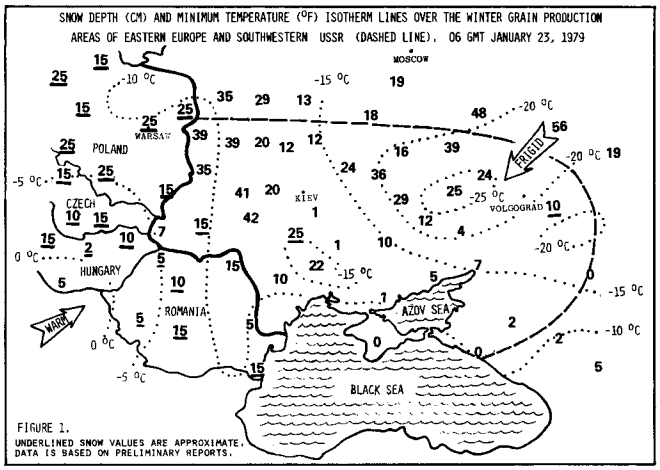
AUSTRALIA. Dry weather returned to southeastern crop areas after last week's brief respite. Crops should remain in satisfactory condition for awhile, but more rainfall will be needed very soon. Only the northeast coast received normal rainfall in the northern third of the country. Coastal areas of southeastern Queensland and northeastern New South Wales showed above-normal amounts.

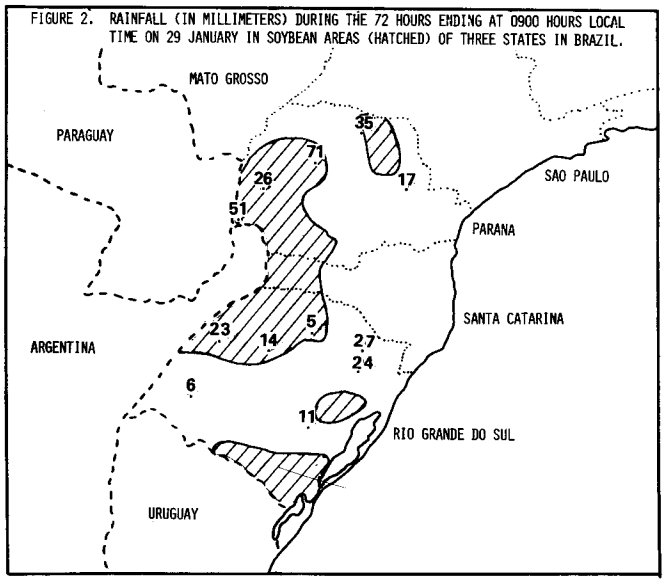
INDIA. Above-normal rainfall of 15 to 25 mm continued for the second week over an extensive area in central India; one location reported 120 mm. No precipitation fell in the mountains, but highland wheat areas just south of the Ganges River Valley should have quite adequate soil moisture now.

AFRICA. Abundant rains of 40 to 80 mm over all wheat areas in Morocco continued to improve the crop outlook. Coastal areas of Algeria received about 20 mm, and conditions there and in Tunisia remain good. South Africa's Maize Triangle turned mostly dry again after last week's beneficial rains. Some minimal amounts of 10 to 15 mm in the southwestern part fell short of normal, and more crops may be lost if rain does not fall soon.

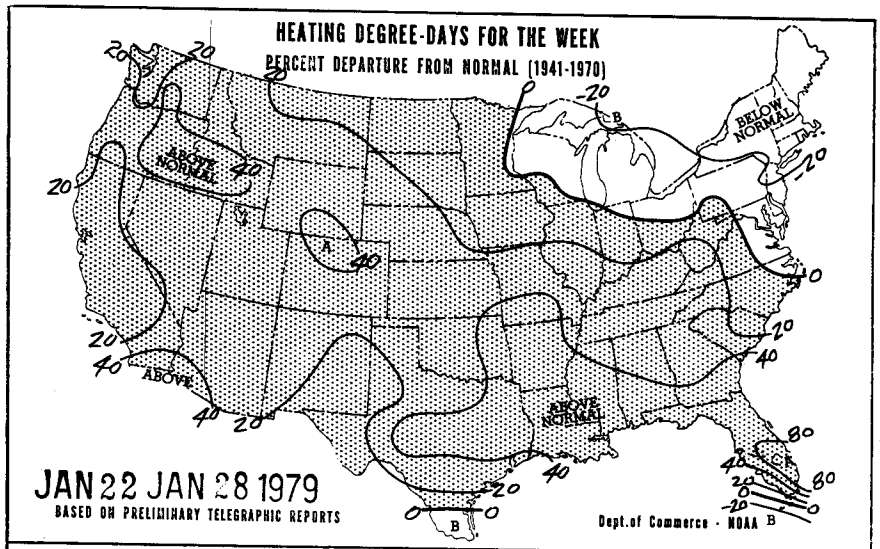
EUROPE. Above-normal precipitation of 30 to 80 mm continued for the second consecutive week over much of the Iberian Peninsula, essentially eliminating any moisture shortage. Similar amounts fell from central France eastward through northern Italy and Austria into Eastern Europe in a variable pattern. No extensive areas of below-normal precipitation occurred in Europe; the soil moisture outlook for spring appears favorable.

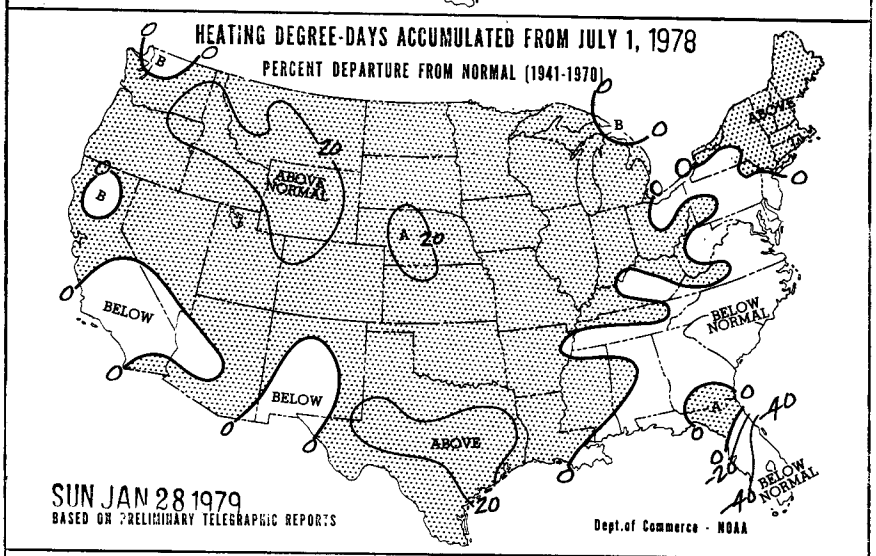
SOUTH AMERICA. Some relief came to dry soybean areas in Brazil over the weekend (fig. 2). Liberal totals of 25 to 70 mm in Parana should adequately supply crop moisture needs perhaps two weeks. Light amounts of 5 to 20 mm in Rio Grande do Sul brought temporary relief, but the threat of further yield reductions remains if more rains are not forthcoming soon. Argentine soybean areas also received timely rainfall (30 to 50 mm), and both the corn and soybean crops appear to be in good condition.

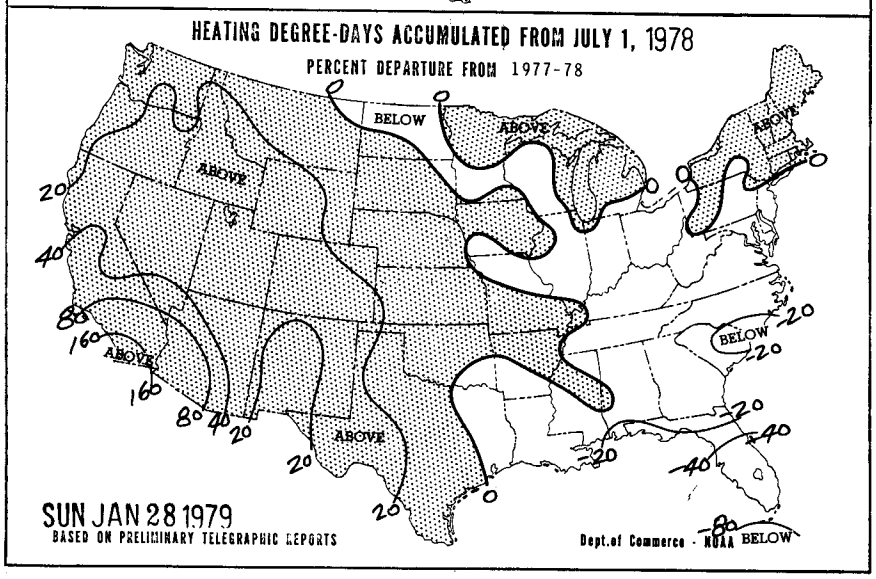




Errata---
HDD maps on page 10 of previous issue---Vol. 66, No. 4, Jan. 23, 1979---should appear as follows: the first and second maps should be transposed with headings remaining as shown.







HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING JAN. 28, 1979.

STATES AND STATIONS	WEEKLY TOTAL	WEEKLY DEPARTURE*	SEASONAL ACCUMULATION + TOTAL	SEASONAL ACCUMULATION + DEPARTURE*	SEASONAL ACCUMULATION + DEPARTURE FROM 1977-78
ALA. BIRMINGHAM	205	58	1734	-7	-234
MOBILE	169	70	975	-69	-328
MONTGOMERY	177	51	1214	-201	-187
ARIZ. FLAGSTAFF	334	75	4001	76	880
PHOENIX	120	25	938	-38	493
TUCSON	135	37	1122	68	413
WINSLOW	276	58	2903	97	599
YUMA	105	38	843	178	438
ARK. FORT SMITH	272	93	2335	301	9
LITTLE ROCK	255	80	2158	126	56
CALIF. BAKERSFIELD	126	11	1163	-194	488
EUREKA	159	39	2698	194	429
FRESNO	148	17	1570	-17	442
LOS ANGELES	80	5	764	-106	382
RED BLUFF	134	3	1437	-121	251
SAN DIEGO	99	29	640	-106	440
SAN FRANCISCO	128	15	1763	148	416
STOCKTON	148	11	1716	89	549
COLO. DENVER	349	104	3791	505	630
GRAND JUNCTION	340	77	3971	649	1056
PUEBLO	313	72	3758	668	644
CONN. BRIDGEPORT	180	-65	2797	-17	29
HARTFORD	206	-74	3699	219	294
DEL. WILMINGTON	197	-34	2648	-80	-299
D.C. WASHINGTON	180	-23	2096	-298	-222
FLA. APALACHICOLA	146	63	757	-76	-312
DAYTONA BEACH	77	21	296	-230	-323
FORT MYERS	40	11	115	-134	-224
JACKSONVILLE	136	56	912	100	92
KEY WEST	5	-2	13	17	85
LAKELAND	76	34	272	-124	-241
MIAMI	32	18	71	-45	-85
ORLANDO	77	28	252	-169	-199
TALLAHASSEE	156	65	1004	24	235
TAMPA	76	27	283	-132	-274
WEST PALM BEACH	48	27	89	-85	-130
GA. ATLANTA	206	52	1671	-184	-385
AUGUSTA	175	42	1478	-91	-168
MACON	165	46	1288	-108	-259
SAVANNAH	153	48	1031	-178	-247
IDAHO. BOISE	356	110	3902	566	976
LEWISTON	307	76	3856	681	788
POCATELLO	403	115	4575	611	1137
ILL. CAIRO	269	71	2651	373	95
CHICAGO	300	14	3816	423	45
MOLINE	346	43	4196	578	158
PEORIA	333	46	3868	407	-45
ROCKFORD	320	5	4230	389	-78
SPRINGFIELD	321	55	3474	299	-64
IND. EVANSVILLE	284	60	2880	178	-84
FORT WAYNE	269	-10	3563	112	-189
INDIANAPOLIS	295	36	3259	94	-48
SOUTH BEND	255	-32	3552	3	-116
IOWA. BURLINGTON	337	43	4071	576	181
DES MOINES	356	37	4093	300	116
DUBUQUE	347	18	4548	452	-87
SIOUX CITY	389	62	4685	716	417
KANS. CONCORDIA	338	70	3612	394	150
DODGE CITY	311	76	3371	475	438
GOODLAND	314	56	3835	412	299
TOPEKA	319	64	3558	511	227
WICHITA	296	62	3164	421	265
KY. LEXINGTON	278	54	2833	121	-96
LOUISVILLE	264	45	2647	-30	-203
LA. BATON ROUGE	172	73	1087	35	-116
LAKE CHARLES	146	55	1066	139	-79
NEW ORLEANS	151	60	898	-12	-172
SHREVEPORT	194	71	1541	202	-174
MAINE. CARIBOU	264	-121	5398	163	208
PORTLAND	236	-72	4069	67	54
MD. BALTIMORE	188	-29	2463	-187	-182
MASS. BOSTON	184	-68	3039	66	201
MICH. ALPENA	273	-63	4319	-192	-258
DETROIT	250	-35	3715	-204	-116
FLINT	263	-38	3908	98	64
GRAND RAPIDS	259	-35	4066	383	185
HOUGHTON LAKE	274	-62	4725	221	134
LANSING	255	-46	3922	171	-64
MARQUETTE	324	-5	4778	387	322
MUSKEGON	271	-20	4060	399	152
S. STE. MARIE	285	-76	5171	297	42
MINN. DULUTH	378	-20	5728	378	82
INTERNATL FALLS	456	15	6596	670	210
MINNEAPOLIS	368	-3	4800	227	-156
ROCHESTER	390	26	5297	710	294
ST. CLOUD	408	14	5491	523	131
MISS. JACKSON	205	79	1517	106	-186
MERIDIAN	210	84	1578	85	37
MO. COLUMBIA	306	59	3151	228	-23
KANSAS CITY	319	62	3409	430	-4
ST. LOUIS	305	71	3110	363	-100
SPRINGFIELD	312	90	3030	373	109
MONT. BILLINGS	368	70	5037	1029	456
GLASGOW	454	64	5862	846	-6
GREAT FALLS	368	59	5120	918	66
HAVRE	425	50	5555	653	193
HELENA	396	72	5401	783	711
KALISPELL	420	102	5688	832	691
MILES CITY	419	72	5245	791	118
MISSOULA	376	71	5367	834	910
NEBR. GRAND ISLAND	370	73	4356	704	507
LINCOLN	353	56	4077	513	72
NORFOLK	383	62	4495	544	242
NORTH PLATTE	377	88	4776	363	583
OMAHA	332	37	3800	334	-6
VALENTINE	382	72	4889	824	339
NEV. ELY	381	95	4623	388	888
LAS VEGAS	181	42	1629	-4	514
RENO	271	47	3674	311	817
WINNEMUCCA	321	71	3906	200	890
N.H. CONCORD	239	-76	4311	281	16
N.J. ATLANTIC CITY	207	-23	2792	96	140
TRENTON	193	-38	2597	-109	-232
N.MEX. ALBUQUERQUE	245	43	2496	-77	200
ROSWELL	192	9	2320	9	550
N.Y. ALBANY	224	-84	3960	175	239
BINGHAMTON	237	-64	3943	18	-100
BUFFALO	235	-59	3716	57	73
NEW YORK	183	-48	2651	34	-135
ROCHESTER	226	-62	3593	15	37
SYRACUSE	220	-74	3683	125	61
N.C. ASHEVILLE	234	45	2296	-158	-359
CHARLOTTE	204	47	1841	-83	-179
GREENSBORO	207	25	2172	-86	-339
HATTERAS	140	0	1182	-258	-229
RALEIGH	170	2	1847	-227	-414
WILMINGTON	140	7	1207	-236	-313
N.DAK. BISMARCK	440	42	5646	570	1
FARGO	448	34	5783	585	80
WILLISTON	423	26	5798	633	30
OHIO. AKRON-CANTON	261	-12	3474	66	-94
CINCINNATI	282	44	3068	195	-329
CLEVELAND	240	-26	3220	-103	-175
COLUMBUS	263	11	3224	9	-172
DAYTON	268	9	3249	83	-185
TOLEDO	259	-21	3716	185	-154
YOUNGSTOWN	251	-28	3513	16	-58
OKLA. OKLAHOMA CITY	258	64	2461	259	84
TULSA	279	84	2490	289	40
OREG. ASTORIA	217	49	3090	267	354
BURNS	407	134	4676	656	866
MEDFORD	226	33	2953	181	525
PENDLETON	313	87	4002	955	653
PORTLAND	216	31	3110	438	538
SALEM	221	42	3084	423	499
PA. ALLENTOWN	205	-57	3113	-105	-114
ERIE	258	-24	3579	-18	-76
HARRISBURG	202	-43	2709	-255	-363
PHILADELPHIA	193	-38	2571	-119	-350
PITTSBURGH	268	12	3459	145	102
SCRANTON	228	-45	3627	158	99
R.I. PROVIDENCE	201	-58	3265	98	100
S.C. CHARLESTON	150	34	1095	-210	-219
COLUMBIA	153	20	1349	-244	-489
GREENVILLE	203	48	1881	-16	-113
S.DAK. ABERDEEN	432	43	5375	512	-61
HURON	434	66	5115	571	132
RAPID CITY	372	72	4717	730	237
SIOUX FALLS	401	46	4964	529	23
TENN. CHATTANOOGA	225	53	2007	-102	-295
KNOXVILLE	232	64	2110	-38	-250
MEMPHIS	232	64	1932	-20	-32
NASHVILLE	241	58	2256	-55	-260
TEXAS. ABILENE	184	38	1823	221	109
AMARILLO	269	68	2893	469	461
AUSTIN	160	54	1338	257	161
BEAUMONT	119	27	987	-45	-51
BROWNSVILLE	42	-7	462	71	36
CORPUS CHRISTI	75	6	691	107	23
DEL RIO	118	21	1153	131	224
EL PASO	169	25	1651	-85	222
FORT WORTH	193	54	1667	221	-47
GALVESTON	106	22	806	96	-45
HOUSTON	143	52	1100	210	-124
LUBBOCK	215	33	2335	216	363
MIDLAND	181	35	2039	407	472
SAN ANGELO	180	54	1815	401	398
SAN ANTONIO	128	30	1168	174	61
VICTORIA	117	33	993	234	83
WACO	186	61	1638	368	274
WICHITA FALLS	208	48	2131	362	106
UTAH. SALT LAKE CITY	337	83	3466	59	803
VT. BURLINGTON	255	-88	4452	189	179
VA. LYNCHBURG	210	14	2414	-32	-249
NORFOLK	161	-14	1769	-172	-125
RICHMOND	173	-16	2101	-181	-202
ROANOKE	226	30	2554	-79	-222
WASH. QUILLAYUTE	204	22	3375	174	172
SEATTLE-TACOMA	193	8	2858	2	327
SPOKANE	376	104	4920	1006	811
WALLA WALLA	285	67	3456	599	558
YAKIMA	358	102	4182	614	690
W.VA. BECKLEY	283	52	2963	-206	-322
CHARLESTON	258	48	2661	-11	-223
HUNTINGTON	259	48	2771	114	-63
PARKERSBURG	251	27	2728	-12	-287
WIS. GREEN BAY	318	-32	4843	404	201
LACROSSE	346	3	4311	143	-365
MADISON	323	-13	4640	345	12
MILWAUKEE	298	-22	4159	129	26
WYO. CASPER	392	101	5075	971	847
CHEYENNE	349	83	4403	523	426
LANDER	413	100	5615	1219	1366
SHERIDAN	408	103	5357	1111	581

BASED ON 1941-70 NORMALS. + ACCUMULATION FROM JULY 1. 1978.

Agricultural Weather Facility
USDA South Bldg., Room 1248
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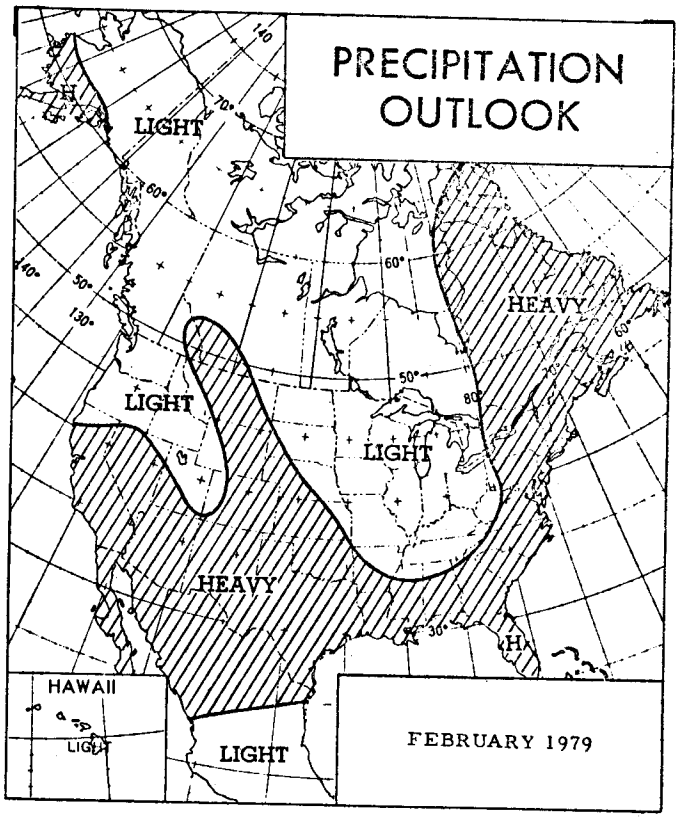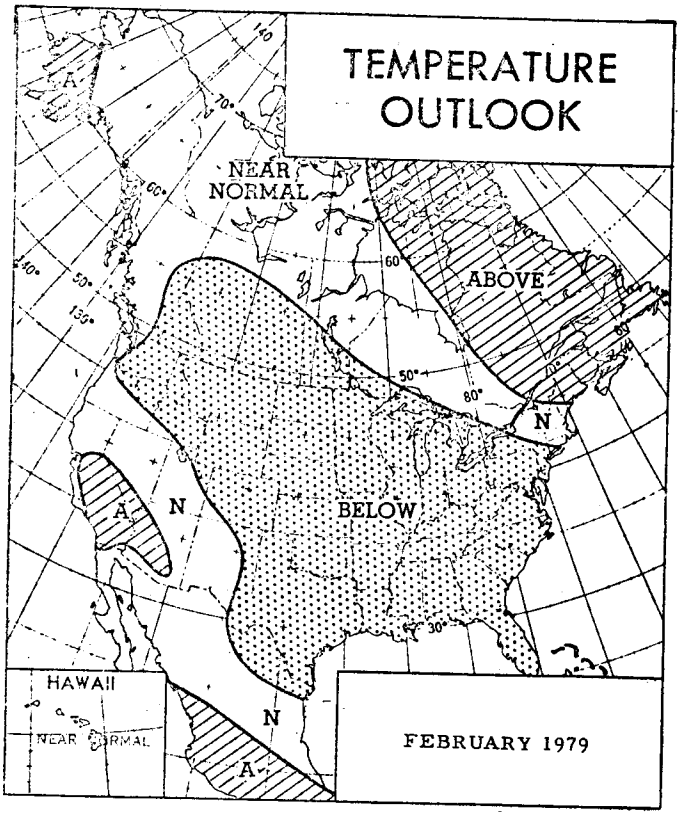
Average Monthly Weather Outlook