

WEEKLY WEATHER AND CROP BULLETIN

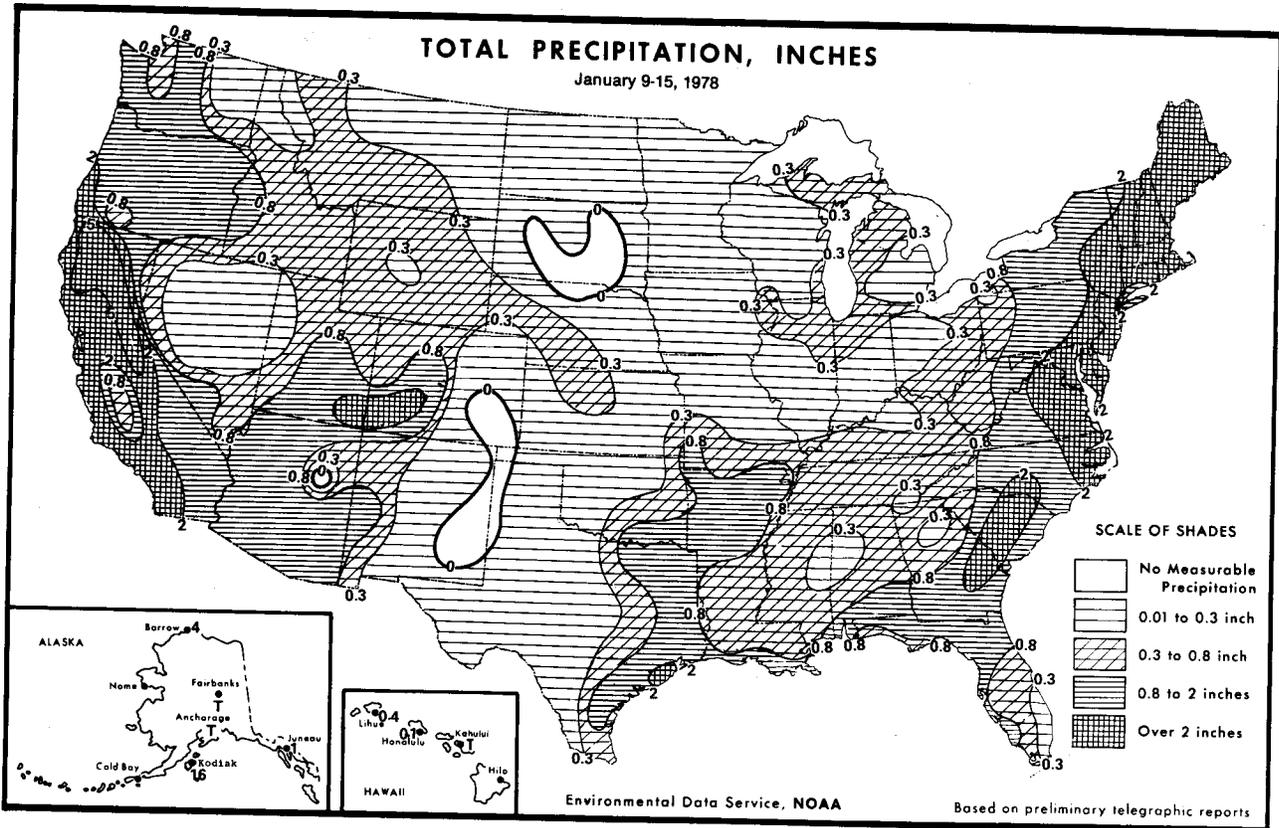
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National Weather Summary

January 9 - 15

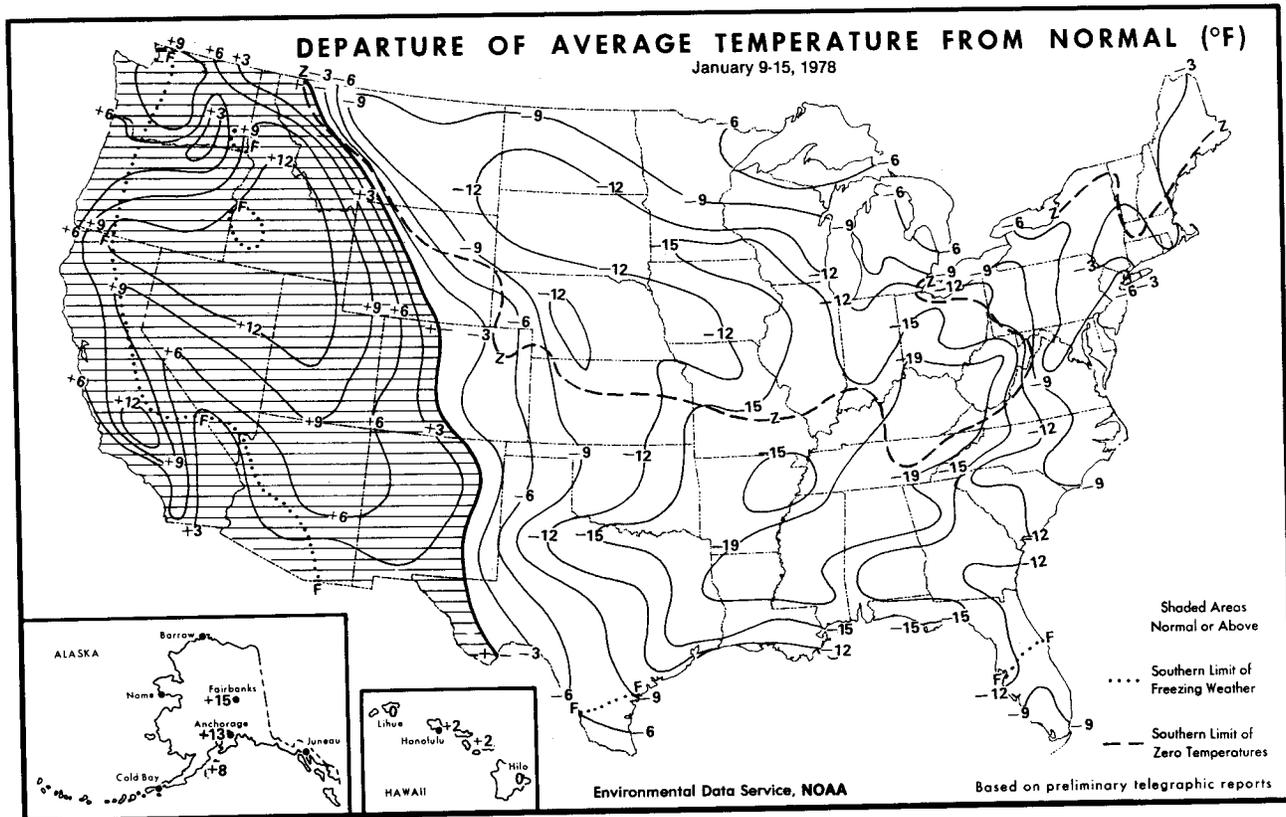
HIGHLIGHTS: Nearly all areas of the country measured some precipitation. Low pressure originating in the western Gulf of Mexico followed a leading edge of cold air eastward and northeastward; there was rain, freezing rain, and snow from the Delta States to New England. Some recent dry areas gathered some moisture. Western Texas was dampened by light rain while western Kansas got somewhat more adding an inch of snow. The eastern sections of Colorado and New Mexico counted just a bit. Rain and snow persisted on the Pacific Coast and extended to the formerly dry Plateau Region.

Average temperatures for the week were warmer than normal west of the Rockies---10 to 14° above what is expected for this time of year at some points. East of the Rockies colder-than-normal readings chilled the Nation, and as the week drew to a close, freezing temperatures threatened Florida citrus.

Thunderstorms marked the leading edge of cold air along the Atlantic Coast on Monday. Heavy rains soaked many areas; Rumford, Maine, measured nearly three and one-half inches. Intense low pressure in eastern Canada lowered temperatures and brought snow to a large portion of the Nation east of the Rockies. Cleveland collected 8 inches of the white stuff while South Bend, Ind., accumulated 16 inches. High winds made for a bitterly cold day.

On the West Coast rain was abundant; Los Angeles was soaked, by more than an inch and more than 2 inches fell on some northern California points. Readings west of the Rockies were in sharp contrast to the rest of the country; Alamosa, Colo., notched a record high of 51°.

Rain associated with an eastward-moving Pacific frontal system covered much of California Tuesday morning. The total rainfall in Los Angeles jumped



to 2.36 in. Snow fell in the mountains and edged into the southern Plateau Region where several inches were reported at some Arizona points.

Temperatures remained cold east of the Rockies and as far south as northeastern Florida. Record low readings ranged from -30° in Aberdeen, S. Dak., to 25° at Apalachicola, Fla.

On Wednesday a low pressure center in the western Gulf of Mexico pumped rain, freezing rain, and snow into the Delta States and parts of the southern Plains. In Texas, Houston and Galveston gathered an inch of rain and in Arkansas, Little Rock and Fort Smith counted more than 4 inches of snow. Another front pushed into the upper half of the West Coast spreading showers as far east as Nevada and Idaho.

More low temperatures entered the record books---Beckley, W. Va., broke last year's mark by 6 degrees with a minus 10 while Columbia, S.C., tied the 35-year reading of 12° .

The ice and snow that plagued Arkansas and Louisiana moved northward to Illinois and eastward to Virginia by day's end. Snow also blanketed the northern Plains and reached across the Great Lakes region. A few showers dotted the California coast and rain fell along the Gulf Coast into the lower South.

The mercury stayed low again east of the Rockies. Shades of last winter---Beckley, W. Va., chalked up another record, 0° , to make it the twelfth time since late November for a daily record low.

A black cat of a winter storm crept up the Atlantic Coast on Friday the thirteenth. A combination of rain, freezing rain, and snow fell from the coast as far inland as the Great Lakes region and as far north as New England. Several

rivers reached flood stage because of either ice jams or large amounts of rain.

On the West Coast scattered showers became heavy rain with snow in the higher elevations; Sacramento was drenched by nearly an inch and one-half of rain.

The Atlantic Coast storm began to dissipate on Saturday, but not before dumping from 6 to 12 inches of snow from West Virginia to New England, and hefty amounts of varied precipitation from the East to the Midwest. The Chicago area got 5 to 10 inches of snow; Altoona notched 10 inches; and 8 inches covered Albany, N.Y.

Yet another Pacific cold front trudged into California producing heavy rain. The San Francisco Bay area reported more than 3 inches. Nearly an inch and three-quarters surprised San Diego and even the deserts got a little.

Boise, Idaho, set a record high temperature of 56° , topping the 1927 mark by three.

While the remnants of the Atlantic storm lingered over New England on Sunday, two low pressure centers intensified out West. San Diego received additional rain reaching a total of more than four inches. Rivers began to crest in the Golden State and a heavy mantle of snow covered the northern Sierra Nevada Mountains. Snow spread across the central Plateau Region past the Rockies and Plains into the middle Mississippi Valley. The mountains of Utah, Arizona, and Colorado collected 6 to 12 inches of snow. Freezing rain iced eastern Oklahoma and Arkansas.

Cold temperatures gripped much of the eastern half of the Nation, and as week's end approached, an Arctic air mass zeroed in on the north central U.S. and reached all the way to Florida.

National Agricultural Summary

January 9 - 15

HIGHLIGHTS: From the Rocky Mountains eastward the United States shivered under temperatures as much as 15° subnormal. The low readings forced livestock producers to dig deeper in the feed bins to help animals fight the cold. Snow covered most of the Nation's winter wheat except on the southern Great Plains. Low temperatures kept farm activities to a minimum. Wintery weather created hazardous road conditions in northern areas making milk pick-ups and other hauling very difficult. Frozen soils allowed farmers to harvest some of the remaining corn, soybeans, and cotton but storms along the East Coast prevented much progress. Southern pastures provided very little grazing after exposure to the chilling temperatures. The West Coast got more precipitation and mild temperatures which improved pastures and water supplies.

SMALL GRAINS: Winter wheat maintained its fair to good rating in most of the Nation in spite of sharply lower temperatures and winter storms. Dry soils and no significant precipitation to change the situation kept dryland stands on the southern Great Plains needing moisture. Snow protected winter wheat from winds and low temperatures in the northern half of the Nation.

Kansas wheat rated good. Strong winds swept through the State with only minimal damage; adequate ground cover protected the crop. Oklahoma's crop rated fair; both top and subsoil moisture were short. Producers moved some cattle off wheat pastures. Texas dryland wheat on the High Plains got no additional moisture while Low Plains fields had only a trace of freezing rain---not enough to improve dry fields. Irrigated stands made fair to good growth but provided less than average grazing. Low temperatures limited wheat growth in all areas of Texas. New Mexico---irrigated stands rated fair to good with grazing active; dryland fields scored only fair yielding limited grazing. Rains delayed small grain planting in Arizona, but earlier seeded stands were good. Wyoming wheat rated fair to good but needed moisture. Montana winter wheat rated good with an adequate snow insulating the crop from subnormal temperatures. The Pacific Northwest crop rated fair. California small grains grew well in response to mild temperatures and ample rainfall. In the north central States winter grains rated good. Most of the wheat acreage was protected by a blanket of snow. In the South Atlantic States winter wheat rated good to excellent although low temperatures slowed growth particularly in Florida.

OTHER CROPS: Cotton picking was almost complete, but adverse weather continued to delay the final harvests in several States including Alabama, South Carolina, and Georgia. Texas gins on the plains and in the west operated on ricks and modules, but picking was generally complete. California cotton plowdown was slow.

Corn and soybean harvests also dragged on without much progress. Very little remained for harvest, but wet soils or snow cover kept combines at bay. Some feed grains remained standing in almost all major production areas. Indiana reported 3% of the corn and soybeans were left to harvest;

New Jersey, South Carolina, Georgia, and Alabama also had minor acreage to harvest.

Virginia tobacco growers marketed fire and sun-cured and burley. Kentucky producers marketed a light volume of burley; half the markets were closed. Weather conditions slowed Georgia tobacco bed preparations.

Sugarcane harvest was active in Florida. The crop rated fair to good although low temperatures slightly damaged terminal buds of mature cane.

FRUITS AND NUTS: Fruit growers made only limited progress pruning deciduous trees and grapevines in Maryland, Virginia, and the Pacific Northwest. Mild temperatures in California caused almond buds to swell.

Florida citrus trees rated very good following low temperatures, but very little freeze damage resulted to fruit or trees because of the short duration of damaging readings. Harvest of fruit destined for processing was very active. Showers delayed citrus harvests in the lower Rio Grande Valley and Arizona. Arizona's citrus for later harvest sized well and showed some color. California growers harvested desert grapefruit, lemons, Navels, and tangerines.

VEGETABLES: Florida vegetable crops rated fair to good, but low temperatures slowed fruit set and harvests. Shipments increased 13% from the previous week. Volume was steady to increasing for most crops; only snap bean supplies declined. Plantings for the spring season progressed well. Potato digging and watermelon seeding advanced more rapidly. Strawberry picking made excellent progress with quality and size very good. New Mexico growers planted lettuce and onions. Arizona rains limited vegetable planting, but earlier planted crops grew well. Texas growers harvested cabbage, carrots, broccoli, lettuce, spinach, and cauliflower. Rains delayed land preparation and planting in East Texas and dry soils did the same in central areas. Wet fields delayed California vegetable harvests as well as field preparation and planting of later crops. Warm, wet weather hurt broccoli and cauliflower quality.

PASTURES AND LIVESTOCK: Low temperatures slowed pasture growth. Most livestock producers increased feeding rations to help animals combat the cold. In Florida frosts browned many permanent pastures and small grain pastures grew slowly. Texas winter grasses and small grains grew very little because of the cold weather and, in most areas, continued short soil moisture. Some areas of Texas had freezing rain, but not enough to improve the range outlook. California range and pasture conditions were improved by rains and mild temperatures. Foothill pastures began greening and stock water supplies improved, nevertheless supplemental feeding was necessary.

Lambing and calving continued in southern areas of the Nation and was just getting started in northern areas. Cattle generally rated fair to good.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., JANUARY 15, 1979

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 . . .	25	-19	.3	-.8	LA. Baton Rouge . . .	36	-14	.5	-.5	Youngstown . . .	14	-12	.4	-.3
Mobile . . .	34	-17	.8	-.3	Lake Charles . . .	37	-15	.7	-.2	OKLA. Okla. City . . .	25	-11	.3	+.1
Montgomery . . .	34	-13	.6	-.3	New Orleans . . .	39	-13	.8	-.2	Tulsa . . .	22	-14	.1	-.2
ALASKA Anchorage . . .	24	+13	T	+.2	Shreveport . . .	29	-18	.6	-.3	OREG. Astoria . . .	46	+6	1.9	-.3
Barrow . . .	2	+15	T	+.1	MAINE Caribou . . .	8	-3	2.2	+1.8	Burns . . .	34	+10	1.3	+.9
Fairbanks . . .	2	+15	T	+.1	Portland . . .	20	-2	2.5	+1.8	Medford . . .	48	+12	.4	-.4
Juneau . . .	38	+8	1.6	+.5	MD. Baltimore . . .	27	-6	2.1	+1.4	Pendleton . . .	33	+2	1.3	+.9
Kodiak . . .	33	+6	1.8	+1.4	MASS. Boston . . .	26	-3	2.7	+1.9	Portland . . .	43	+6	.9	-.5
None . . .	56	+5	1.5	+1.3	Chatham . . .	29	-2	2.0	-.1	Salem . . .	43	+5	1.1	-.5
ARIZ. Flagstaff . . .	53	+2	1.5	+1.3	MICH. Alpena . . .	13	-5	.4	0	PA. Allentown . . .	23	-5	2.3	+1.6
Phoenix . . .	39	+7	0	-.1	Detroit . . .	16	-9	.3	-.1	Erie . . .	16	-9	.3	-.3
Tucson . . .	56	+1	1.0	+.9	Flint . . .	15	-7	.2	-.2	Harrisburg . . .	25	-5	1.5	+.9
Winslow . . .	39	+7	0	-.1	Grand Rapids . . .	15	-8	.2	-.3	Philadelphia . . .	25	-7	2.4	+1.8
Yuma . . .	56	+1	1.0	+.9	Houghton Lake . . .	10	-7	.3	-.1	Pittsburgh . . .	17	-11	.7	+.1
ARK. Fort Smith . . .	22	-16	.5	0	Lansing . . .	14	-9	.2	-.2	Scranton . . .	25	-4	4.3	+3.5
Little Rock . . .	24	-15	1.7	+.8	Marquette . . .	15	-3	.5	+.2	R.I. Providence . . .	37	-11	1.0	+.4
CALIF. Bakersfield . . .	61	+14	.3	+.1	Muskegon . . .	13	-11	.5	0	S.C. Charleston . . .	32	-13	2.3	+1.5
Eureka . . .	53	+6	1.6	+.2	S. Ste. Marie . . .	8	-6	.7	+.3	Columbia . . .	30	-12	.5	-.4
Fresno . . .	55	+10	.8	+.4	MINN. Duluth . . .	2	-6	T	-.3	Greenville . . .	30	-12	.5	-.4
Los Angeles . . .	58	+2	3.2	+2.5	Internatl Falls . . .	-6	-8	T	-.2	S.D. Aberdeen . . .	-1	-13	T	-.1
Red Bluff . . .	54	+9	6.5	+5.4	Minneapolis . . .	2	-10	.1	-.1	Huron . . .	9	-12	.1	0
San Diego . . .	61	+6	4.1	+3.7	Rochester . . .	-2	-15	.1	0	Rapid City . . .	1	-13	.1	0
San Francisco . . .	55	+7	4.0	+3.0	St. Cloud . . .	0	-9	T	-.1	Sioux Falls . . .	22	-18	.3	-.9
Stockton . . .	53	+9	2.3	+1.6	MISS. Jackson . . .	27	-20	.5	-.5	TENN. Chattanooga . . .	21	-19	.4	-.7
COLO. Denver . . .	27	-2	.1	0	Meridian . . .	31	-16	.1	-.9	Knoxville . . .	26	-14	.7	-.4
Grand Junction . . .	33	+7	.3	+.2	MO. Columbia . . .	17	-12	.1	-.3	Memphis . . .	20	-18	.3	-.8
Pueblo . . .	24	-5	T	-.1	Kansas City . . .	14	-13	.1	-.2	Nashville . . .	31	-12	.2	0
CONN. Bridgeport . . .	27	-3	1.5	+.9	St. Louis . . .	15	-16	.2	-.2	TEX. Abilene . . .	29	-6	T	-.1
Hartford . . .	24	-1	3.1	+2.3	Springfield . . .	15	-17	.4	0	Amarillo . . .	38	-11	.4	0
D.C. Washington . . .	29	-6	2.2	+1.6	MONT. Billings . . .	12	-9	.7	+.5	Austin . . .	39	-12	1.0	0
FLA. Apalachicola . . .	39	-14	.5	-.1	Glasgow . . .	0	-9	T	-.1	Beaumont . . .	56	-4	.6	+.3
Daytona Beach . . .	48	-10	.5	+.1	Great Falls . . .	10	-10	.2	0	Brownsville . . .	48	-8	.6	+.2
Ft. Myers . . .	54	-9	1.6	+1.2	Havre . . .	2	-9	.1	0	Corpus Christi . . .	-	-	-	-
Jacksonville . . .	43	-11	.9	+.3	Helena . . .	21	+4	.4	+.3	Dallas . . .	47	-3	T	-.1
Key West . . .	61	-9	.4	0	Kalispell . . .	20	+2	.5	+.1	Del Rio . . .	46	+3	T	-.1
Lakeland . . .	48	-12	.5	0	Miles City . . .	5	-10	T	-.1	El Paso . . .	31	-13	.5	+.1
Miami . . .	58	-9	.3	-.2	Missoula . . .	30	+10	.3	0	Fort Worth . . .	43	-11	3.2	+2.5
Orlando . . .	50	-10	.4	-.1	NEBR. Grand Island . . .	12	-10	.1	0	Galveston . . .	37	-15	1.1	+.3
Tallahassee . . .	36	-16	1.4	+.6	Lincoln . . .	10	-11	.1	0	Houston . . .	28	-11	T	-.1
Tampa . . .	48	-12	.6	+.1	Norfolk . . .	8	-10	.1	0	Lubbock . . .	38	-5	.1	0
W. Palm Beach . . .	56	-10	.1	.5	N. Platte . . .	11	-12	.4	+.3	Midland . . .	38	-8	.1	-.1
GA. Atlanta . . .	23	-19	.2	-.8	Omaha . . .	9	-11	.1	0	San Angelo . . .	42	-8	.3	-.1
Augusta . . .	33	-13	1.8	+1.0	Valentine . . .	9	-11	T	-.1	San Antonio . . .	43	-10	1.0	+.6
Macon . . .	33	-15	.6	-.2	NEV. Ely . . .	33	+10	.1	0	Victoria . . .	35	-11	.2	-.2
Savannah . . .	37	-13	.6	-.1	Las Vegas . . .	47	+3	.6	+.5	Waco . . .	26	-15	.1	-.1
HAWAII. Hilo . . .	71	0	0	-1.9	Reno . . .	38	+7	.7	+.4	Wichita Falls . . .	33	+6	2.1	+1.8
Honolulu . . .	74	+2	.1	-1.0	Winnemucca . . .	40	+13	.2	0	UTAH. Blanding . . .	40	+13	.5	+.2
Kahului . . .	74	+2	.4	-.8	N.H. Concord . . .	17	-4	3.0	+2.4	Salt Lake City . . .	12	-5	1.6	+1.2
Lihue . . .	71	0	.4	-1.1	N.J. Atlantic City . . .	27	-6	2.0	+1.2	VT. Burlington . . .	25	-11	1.5	+.9
IDAHO. Boise . . .	41	+13	1.3	+.9	Trenton . . .	26	-6	2.2	+1.6	Norfolk . . .	33	-8	1.9	+1.1
Lewiston . . .	39	+9	.4	+.1	N.MEX. Albuquerque . . .	39	+4	.1	0	Richmond . . .	29	-8	2.4	+1.8
Pocatello . . .	35	+13	.4	+.1	Roswell . . .	37	-1	T	-.1	Roanoke . . .	23	-13	.9	+.3
ILL. Cairo . . .	20	-16	.4	-.5	N.Y. Albany . . .	22	0	2.5	+2.0	WASH. Colville . . .	26	+3	.1	-.4
Chicago . . .	10	-14	.4	0	Binghamton . . .	17	-5	1.7	+1.2	Omak . . .	30	+9	.1	-.3
Moline . . .	7	-14	.3	-.1	Buffalo . . .	16	-8	1.2	+.6	Quillayute . . .	46	+8	1.0	-2.3
Peoria . . .	8	-15	.2	-.2	New York . . .	25	-7	1.4	+.8	Seattle-Tacoma . . .	48	+11	.6	-.7
Rockford . . .	5	-15	.2	-.2	Rochester . . .	19	-5	1.5	+1.0	Spokane . . .	32	+8	.2	-.4
Springfield . . .	10	-16	.3	-.1	Syracuse . . .	18	-6	1.4	+.8	Walla Walla . . .	36	+4	.6	+.1
IND. Evansville . . .	16	-16	.3	-.5	N.C. Asheville . . .	21	-17	.3	-.5	Yakima . . .	37	+11	1.4	+1.0
Ft. Wayne . . .	12	-13	.2	-.4	Charlotte . . .	32	-10	1.2	+.4	W. Va. Beckley . . .	13	-18	.5	-.2
Indianapolis . . .	14	-14	.2	-.5	Greensboro . . .	26	-13	1.2	+.5	Charleston . . .	15	-19	.6	-.2
South Bend . . .	13	-11	.7	+.1	Hatteras . . .	39	-6	2.3	+1.4	Huntington . . .	15	-19	.6	-.1
IOWA. Burlington . . .	9	-13	.2	-.2	Raleigh . . .	31	-9	1.6	+.9	Parkersburg . . .	16	-16	.4	-.3
Des Moines . . .	8	-11	.1	-.2	Wilmington . . .	37	-9	1.1	+.4	WIS. Green Bay . . .	5	-10	T	-.3
Dubuque . . .	2	-15	.3	-.1	N. DAK. Bismarck . . .	-4	-12	.1	0	La Crosse . . .	-1	-17	.2	0
Sioux City . . .	6	-11	T	-.1	Fargo . . .	-3	-9	.1	0	Madison . . .	4	-13	.2	-.1
KANS. Concordia . . .	15	-11	T	-.1	Williston . . .	-3	-11	T	-.1	Milwaukee . . .	9	-10	.4	0
Dodge City . . .	22	-9	.2	+.1	OHIO. Akron-Canton . . .	13	-13	.3	-.3	WYO. Casper . . .	19	-4	.4	+.3
Goodland . . .	20	-7	.3	+.2	Cincinnati . . .	12	-19	.3	-.5	Cheyenne . . .	24	-2	.4	+.3
Topeka . . .	14	-12	.1	-.1	Cleveland . . .	15	-12	.4	-.2	Lander . . .	24	+5	.3	+.2
Wichita . . .	20	-11	.2	0	Columbus . . .	13	-15	.3	-.4	Sheridan . . .	12	-8	.4	+.3
KY. Lexington . . .	14	-19	.2	-.7	Dayton . . .	12	-16	.4	-.2	P.R. San Juan . . .	78	+2	0	-.9
Louisville . . .	17	-16	.3	-.5	Toledo . . .	11	-14	.3	-.2					

Based on 1941-70 normals

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State Summaries of Weather and Agriculture

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

ALABAMA: Coldest week of winter. North stations stayed below freezing all week. Temperatures 16° below normal. Snow on 14th. Precipitation below 1.00 in.

Caring and feeding livestock and poultry. Small grains and winter grazing crops providing very limited grazing. Increasing amounts of hay fed; supplies short to adequate. Some cotton and soybean fields not harvested.

ARIZONA: Two storms, substantial moisture, mostly 0.75 to 1.50 in. Snow level 6,000 feet, snow depths 5 to 10 in. Temperatures 1 to 6° above normal.

All activities halted. Cotton harvest nearing completion, gins catching up. Small grain planting delayed, stand establishment earlier fields good. Sugarbeets good growth. Alfalfa hay activity seasonally slow. Field activities stopped; wet, muddy. Later vegetables good growth. Citrus harvest halted. Fruit later harvest sizing well, some color break. Recent rain, snow showers improved soil moisture, stock water. Prospects late winter and spring browse improved. Livestock mostly fair to good. Sheep on feed good to excellent.

ARKANSAS: Highest normal 46°, lowest 36°. Highest mean 30°, lowest 18°. Extremes: 40 and 2°. Departures 15 to 20° subnormal. Most precipitation 1.43 in.; least 0.10 in.

Snow and ice reduced activity to livestock feeding. Hay supplies adequate. Trouble getting water to some herds. Substantial poultry losses when buildings collapsed under weight of ice storms.

CALIFORNIA: Warm moist weather systems brought considerable rainfall and snowfall. Many stations reported over 2.00 in. precipitation. Norden in the high Sierra reported total of 133 in. snow on ground 16th. Temperatures above normal with departures of 10 and 11° above normal common in Sacramento and San Joaquin Valleys.

Warm temperatures, rainfall beneficial. Field activities slowed. Small grains, sugarbeets doing well. Cotton plowdown slowed. Almond buds swelling due to unseasonably warm weather. Harvests of desert grapefruit, lemons, Navel oranges and tangerines continues. Wet weather stopped ground preparation, planting vegetable crops. Harvest slowed by wet fields. Quality of broccoli, cauliflower affected by warm, wet weather. Imperial County lettuce harvest slow, some loss due to delay in harvest. Range and pasture conditions improved by rains, mild temperatures. Foothills greening. Water supply improving. Supplemental feeding necessary. Lambing, calving continue.

COLORADO: Little or no precipitation eastern plains. Moderate amounts snow fell on western slope. Southwest had substantial increase in moisture over recent weeks. Pacific frontal systems produced snowfalls from 10th to 12th and 14th through 15th. Eastern plains temperatures 2 to 5° below normal. Temperatures over mountains, western slope and San Luis Valley continued above normal. Cloudiness and relatively high humidities kept average temperatures unseasonably mild.

FLORIDA: Cold front caused general rains 13th; amounts ranged from 1.00 in., north to near 0.50 in., central and south. Temperatures below normal with coldest readings 15th.

Soil moisture mostly adequate but low areas are wet. Sugarcane fair to good condition, slight damage to terminal buds of mature cane from recent cold. Harvest active and on schedule. Farmwork limited due to cold. Small grains good condition but growth slowed by cold. Pastures mostly poor to fair. Frosts browned many permanent pastures. Small grain pasture growth slow. Cattle, calf condition good. Citrus tree condition very good following freezes. Very little serious freeze damage to fruit or trees because of short duration of damaging temperatures. Harvest for processing very active. Vegetable crops fair to good condition. Fruit set, harvest slowed due to cold weather. Shipments up 13% from previous week. Fruit sizing well. Volume steady to increase most crops. Plantings for spring season progressing well. Snap beans declined in supply. Crops holding steady are cabbage, sweet corn, chinese cabbage, cucumbers, tomatoes, eggplant. Shipments celery, carrots, escarole, lettuce, okra, peppers, potatoes, radishes, squash increased. Potato digging, watermelon seeding gaining momentum. Strawberry harvest making excellent progress; quality, size very good.

GEORGIA: Temperatures 8 to 11° below normal north and 5 to 8° below normal south. Averages ranged from 29° extreme northeast to 47° extreme south. Much colder midweek. Precipitation first of week and again 13th. Freezing rain, sleet and snow north on 13th. Some light snow north on 14th and 15th.

Wet and cold conditions restricting farm activities. Very little progress on unharvested corn, cotton, pecans, soybeans. Small grains good condition. Pastures fair to good, cattle fair condition. Tobacco bed preparation slowed.

HAWAII: Weather favorable. Showers light. Low temperatures higher elevation affecting crop maturity Maui Island, Hawaii. Some pastures Hawaii poor. Heavy supplemental feeding continuing. Vegetable supplies: Pole beans increasing, head cabbage still heavy. Others light to moderate. Banana supplies heavy. Papaya supplies light. Pineapple harvesting light; planting continuing. Sugar slack. Pastures poor to fair.

IDAHO: Temperatures 1 to 15° above normal. Extremes: 50 and -2°. Precipitation ranged from 0.06 to 1.51 in.

Farm activities limited to tending livestock and marketing. Calving and lambing continue at slow pace. Feed supplies generally adequate. Livestock good condition.

ILLINOIS: Temperatures 13 to 16° below normal. Precipitation 0.25 to 0.33 in.; 4 to 7 in. snow. Winter wheat mostly good. Livestock doing well most areas. Soil moisture mostly adequate.

INDIANA: Cold and snowy but sunshine 63% of possible. Temperatures ranged from -6 to 27° and

averaged 12° below normal. Snow cover 2 to 4 in. except more than a foot near Lake Michigan.

Harvest and field activities again at standstill. Corn and soybeans still 3% in fields. Activities: Hauling grain, caring for livestock, chores.

IOWA: Cold with light precipitation falling mostly on 12th and 13th. Temperatures from 11 to 15° subnormal. Snow cover at weekend varied from 1 to 2 in. south and west to 6 in. northeast.

KANSAS: Snowfall 15th produced 4 to 6 in. snows southeast quarter and northwest from 2 to 3 in. elsewhere. Water equivalent was 0.10 to 0.50 in. Temperatures ranged from 23° southwest to 16 to 20° elsewhere; 7° below normal west, 10 to 12° below normal elsewhere.

Wheat condition good most areas. Strong winds; most areas damage slight because of adequate ground cover. Livestock receiving supplemental feed.

KENTUCKY: Temperatures 15 to 20° below normal. Precipitation ranged up to 1 in. mostly in the form of snow.

Snow covering most areas, with additional amounts falling. Livestock dependent on supplemental feed. Volume of burley sales light; only about half burley markets remain open.

LOUISIANA: Temperatures 15 to 17° below normal. Extremes: 65 and 14°. Rain midweek.

Farm activities mainly feeding and care of livestock.

MARYLAND & DELAWARE: Temperatures much below normal, with highs in the low 40's and lows in the mid-20's. Few days below zero in mountains. Precipitation moderate to heavy, occurring at beginning and end of period. Snowfall 3 to 4 in., except mountains where 1 foot fell. Weekend cold with snow flurries 14th.

Farmers limited to inside work and normal chores due to wet weather. Small grains in good condition. Heavy rains eroded fields in some areas. Winter pruning continues in fruit orchards. Tobacco stripping progressing ahead of normal. Livestock in good condition.

MICHIGAN: Temperatures varied from near 10° below normal southern Lower and southwestern Upper to 3° below northwestern Lower, 5° below northeastern Lower and 6° below in eastern Upper. Cold, with maximum temperatures in 20's; minimum temperatures varied from near zero in southeastern Lower to near -15° in northwestern Lower and from -1° in the south central Upper to -10° in east and -20° in southwestern Upper. Precipitation varied from near 0.75 in. southwestern Lower to near 0.60 in. northwest. Elsewhere precipitation mostly around 0.50 in. or less, except central Upper was generally around 1.50 in. Snow depths varied from 4 in. over most of Lower to around 10 to 23 in. along Great Lakes shore of western and northern Lower. Over Upper snow depths ranged from 25 to near 35 in. mainly along Lake Superior shore.

Farm activities primarily feeding livestock and farm chores.

MINNESOTA: Temperatures 8° below normal north; 10 to 15° below normal south. Extremes: 23 and -27°. Precipitation nearly 0.25 in. below normal northeast and 0.10 in. below normal elsewhere. Totals about 0.10 in. over state. New snowfall from 1 to 2 in. Snow on ground ranged from 3 in. southwest up to 20 in. north central.

MISSISSIPPI: Temperatures 6° below normal in south central section to 12° below normal in upper Delta. Extremes: 10 to 76°.

Soil moisture surplus to excessive. Fieldwork: 0.6 days suitable. Winter wheat, oats, and livestock fair. Hay and roughage supplies adequate. Feed grain supplies adequate to short.

MISSOURI: Temperatures 17° below normal in west Ozarks, 12 to 14° below normal elsewhere. Over 1.00 in. precipitation in Bootheel early week, generally light elsewhere.

Care of livestock main activity.

MONTANA: Temperatures 10° below normal all except west and southwest. Very little wind left thick blanket of snow most sections. Precipitation above normal west and south central and along foothills east of mountains. Little or no precipitation and coldest weather east of Havre and Miles City.

Winter wheat condition and snow cover good. Livestock fair to good with most on supplemental feed. Grazing difficult or closed. Some early calving.

NEBRASKA: Precipitation general with 0.25 in. west and less than 0.10 in. east. Temperatures 10° below normal except 5° below normal Panhandle.

NEVADA: Wet winter weather prevalent. Temperatures continued somewhat above normal. Extremes: Teens to 60's.

Livestock mostly good condition. Supplemental feeding requirements increased with inclement weather.

NEW ENGLAND: Week began with above normal temperatures. Sharp cooling brought averages 5 to 15° below normal 10th to 13th. Intense storm 9th gave from 0.75 to 1.50 in. rain most areas. Storm brought from 1.00 to 2.00 in. precipitation 13th and 14th. Southern New England received up to 8 in. snow 13th then sleet and freezing rain. Northern New England had mostly snow with 8 to 15 in. in Maine and 4 to 10 in. elsewhere.

NEW JERSEY: Cold, stormy. Temperatures 7° below normal, averaging 22° north, 25° south and 27° coastal areas. Extremes: 2 and 59°. Precipitation heavy averaging 2.93 in. north, 2.41 in. south and 2.20 in. coastal sections. Light snow 10th. Snow, sleet and heavy icing 13th to 15th.

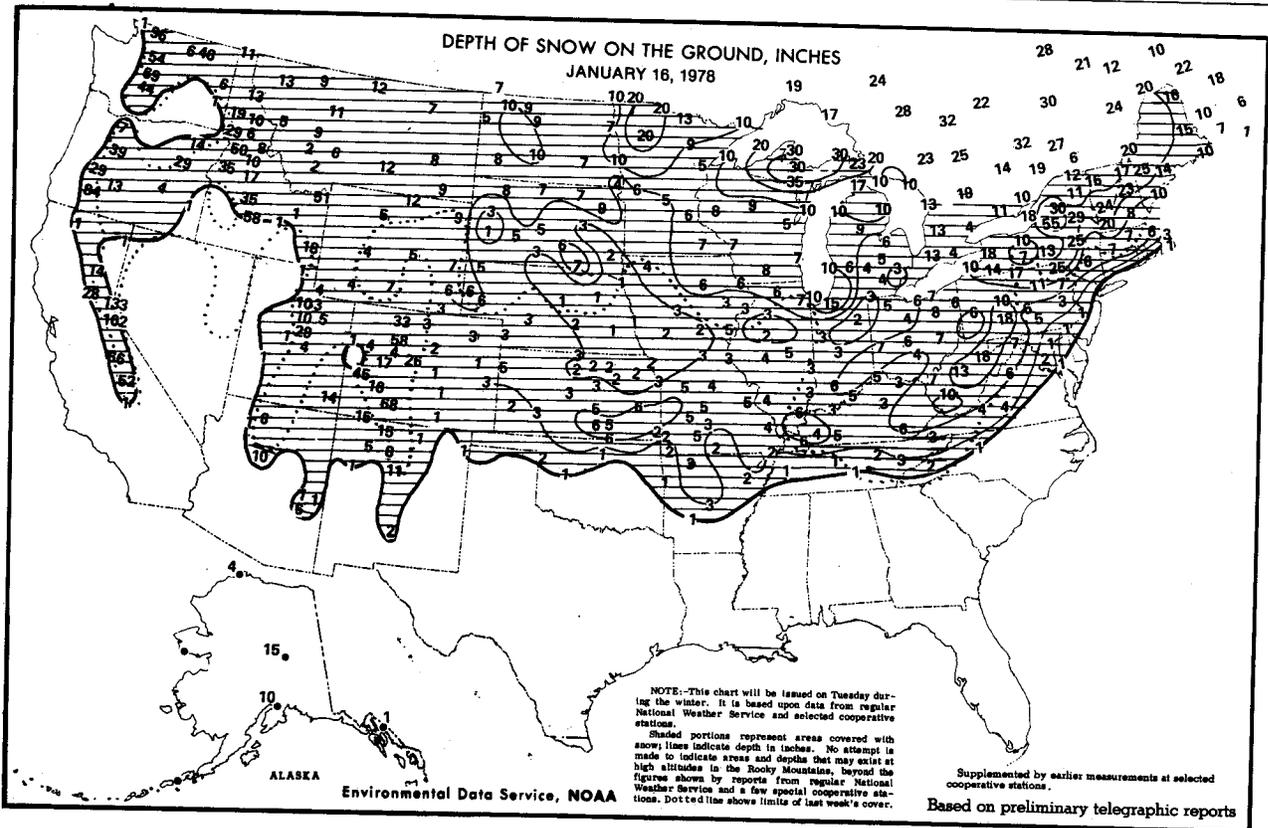
Farm activities limited to winter chores. Still some corn and soybean harvesting being done.

NEW MEXICO: Much colder eastern plains 10th with subfreezing throughout day northeast and east central. Rapid warming 11th. Rain and snow most of central and west 10th and 11th. Clearing through 13th then rain and snow again 15th. Precipitation mostly light.

Planting spring lettuce continued and midseason onions started in Mesilla Valley. Irrigated winter wheat, fair to good condition, grazing active. Dryland wheat fair, very limited grazing. Ranges fair, some very dry. Livestock good with supplemental feeding underway in few areas.

NEW YORK: Snow and rain 9th. Cold weather through week. Another general snow on 13th and 14th. Total melted precipitation well above normal. Snow depths mostly ranged from 4 to 18 in.

NORTH CAROLINA: Temperatures 4 to 8° below normal. Precipitation above normal.



Fieldwork: 2.3 days suitable. Soil moisture adequate to mostly surplus. Conditions: Small grains fair to good; pastures fair. Supplies: Hay and roughage and feed grains short to mostly adequate.

NORTH DAKOTA: Subnormal temperatures; mean readings below zero. Extremes: 28 and -31° . Precipitation generally below normal; less than 0.10 in. moisture. Snow depths ranged from 32 in. to trace. Most stations have 8 to 12 in. snow on ground.

Continued hazardous driving due to blowing snow and snow-packed roads. Farm activity limited by cold weather. Grains and concentrates for feed mostly adequate for remainder of winter.

OHIO: Temperatures mostly below normal, and remained below freezing. Windy and very cold 9th and 10th. Heavy snow in snowbelt northeast. Light snow 12th through 14th and flurries 15th. Snow depth ranged from 4 to 8 in. except greater amounts northeast.

Milk runs hampered in northeast by drifted snow. Livestock satisfactory, supplemental feeding heavy as temperatures drop.

OKLAHOMA: Temperatures much below normal; 15° below normal east to 10° below normal Panhandle. Precipitation from trace Panhandle to 1.20 in. southeast. Most was freezing rain and snow.

Topsoil and subsoil moisture supplies short. Snow provided very little relief from dry conditions. Wheat fair condition. Some movement of cattle off wheat pasture. Native pastures and ranges fair. Adequate forage in most areas. Supplemental feeding of livestock increased during snow storm. Cattle good to fair condition.

OREGON: Wet with mild temperatures. Rainfall generally 2.00 in. or more along coast, 1.00 in. in Willamette Valley and less than 0.25 in. in southwestern valleys. Temperatures mostly 3 to 6° above normal. South recorded temperatures 7 to 11° above normal. Extremes: Low 60's, mid-30's west; low 50's, mid-teens east.

Farm activity light. Surface moisture supply good. Mountain snowpack improving. Subsoil moisture supply still short some areas. Grain crops generally in fair condition. Fruit and berry pruning activity slow. Potatoes moving out of storage. Feeding heavy; supplies good. Calving and lambing beginning. Livestock condition good.

PENNSYLVANIA: Cold and bitter weather first half of week; major snowstorm end of period. Extremes: 38 and -7° . Temperatures averages 13 and 23° . Precipitation total 1.00 in. mountain areas, 2.00 in. southeast, 0.50 in. elsewhere. Snow amounts 2 to 4 in. southeast and 6 to 10 in. most other areas.

Farmers doing normal winter chores.

PUERTO RICO: Island rainfall 0.34 in. or 0.47 in. below normal. Temperatures about 75° coasts and 70° interior. Extremes: 90 and 49° .

SOUTH CAROLINA: Temperatures considerably below normal although week began well above normal. Extremes: 7 and 74° . General precipitation last half.

Cotton harvested except scrapping. Soybean harvest completion held back by weather.

SOUTH DAKOTA: Temperatures 9 to 19° below normal; 4th consecutive week below normal. Extremes: -32 and 44° . Precipitation generally less than 0.10

in., except up to 0.20 in. northeast and up to 0.27 in. southwest. Snow depths range from a few inches south to more than 6 in. north.

TENNESSEE: Cold northerly winds caused temperatures to average from the upper teens to the mid-20's, far below seasonal averages. Winter storm midweek brought freezing rain, sleet and snow with accumulation in some areas of as much as 4 in. Precipitation averaged 0.50 to 0.75 in.

Farm activities limited to regular chores and general care of livestock due to adverse weather conditions.

TEXAS: Major storm midweek brought sleet, snow, freezing rain. Rainfall about 0.50 in. above normal eastern Texas; normal elsewhere. Temperatures below normal by 4 to 6°; Panhandle by 8 to 12° eastern third; normal elsewhere.

Cold temperatures Panhandle, freezing rain from Cross-Timbers southward into south central, east Texas slowed growth of small grains, winter grasses. Dryland wheat High Plains no additional moisture; fields Low Plains only trace of freezing rain; not enough to improve moisture-stressed dryland fields. Irrigated stands plains making fair to good growth, but less than average grazing. Fields from Cross-Timbers south received rain and freezing rain varying from trace to 1.00 in. plus. Cold weather limiting growth. Oat fields furnishing fair to good grazing parts of Blacklands, east, south central Texas. Cold weather slowed regrowth but rainfall welcome. Fields along upper coast making good growth but some fields too wet to be grazed. Stands Cross-Timbers, Edwards Plateau received only trace of moisture; more needed. Some cotton gins on plains, west Texas still operating on ricks, modules; although harvest generally complete. Flax stands south central generally look good; recent rainfall improved prospects Coastal Bend, south, but more moisture needed. Sugarcane harvest continuing lower Rio Grande Valley.

Lower Rio Grande Valley movement of cabbage and carrots increasing. Supplies of broccoli and lettuce light. Recent showers caused some delays of citrus harvest. San Antonio-Winter Garden area, broccoli, cabbage, carrots, and spinach harvest active. Laredo onions making fair progress. Cabbage and carrot harvest continues. Eagle Pass harvest of broccoli, cauliflower, and spinach active. Upper Gulf Coast cold and wet conditions delayed land preparation for spring crops. East Texas seedbed preparation for potatoes, peas, and other spring crops active as weather permitted. Central Texas land preparation behind schedule areas due lack of moisture.

Cold temperatures Panhandle, freezing rain from Cross-Timbers southward into south central, east Texas caused light to moderate livestock shrinkage, necessitated increased feeding. Winter grasses, small grains making little growth due cold weather, continued short soil moisture. Livestock condition generally fair, but many herds that aren't receiving enough feed in poor condition. Calving, lambing continuing.

UTAH: Snow in mountains and rain or rain changing to snow in valleys. Accumulated moisture extremely variable ranging from light to locally heavy. Marked improvement in moisture south and east. Temperatures 2 to 12° above normal.

Grading, sorting, and marketing onions, potatoes and apples.

VIRGINIA: Rainfall averaged 1.50 to 2.00 in. Snow west first of week. Rain, sleet and snow elsewhere end of week. Temperatures 7° below normal. Extremes: 68 and 7°.

Cold and snow limited most activities. Winter grains and grazing good to excellent, some small grains topdressed. Severe cold in few areas and little snow cover showing effect on some small grains. Topsoil moisture adequate to surplus. Snow cut pasture use, feeding increased, short supplies of hay exist. Extreme cold with high winds and sudden drop in temperatures caused some deaths of newborn lambs, calves, pigs. Grading and marketing fire-cured, sun-cured and burley tobacco. Frozen ground helped in getting combines to soybeans not yet harvested. Pruning fruit trees. Fieldwork: 0.9 days suitable.

WASHINGTON: West: Temperatures 4 to 6° above normal. Precipitation variable; 1.00 in. below normal coastal area to 0.50 in. above normal Sound area.

Too wet and sloppy for much field activity.

East: Temperatures 2 to 5° above normal. Precipitation 0.10 in. below to 0.30 in. above normal.

Pruning activity in orchards and vineyards. Winter wheat seems in generally good condition. Some cleanup and preparatory work in hop yards. Early lambing and calving underway.

WEST VIRGINIA: Temperatures slightly below normal northeast, 10 to 15° below normal elsewhere. Sub-zero readings widespread 10th, 11th, 12th. Precipitation, mostly snow, well above normal; 5 to 18 in. coverage by end of week.

Soil moisture mostly adequate. Fieldwork: 1.8 days suitable. Hay and grain supplies mostly adequate.

WISCONSIN: Week began clear and cold. High temperatures ranged from 5 to -5°. Lows were -6 to -22°. Snow developed south 12th, with 1 to 4 in. except 6 to 8 in. near Lake Michigan. Northern and central areas had 1 in. or less. Scattered light snow continued 12th to 13th south and east. Temperatures moderated to mid-20's south 12th but were in teens weekend. Lows fell below zero again morning 15th. Frost depths averaged 6 in. as of 13th, snow depths averaged 9 in.

WYOMING: Temperatures above normal west, elsewhere below normal. Precipitation above normal in Powder, Little Missouri and Tongue drainage. Little or no precipitation southeast.

Winter wheat fair to good condition, additional moisture needed. Livestock generally good condition. Colder weather, snow cover increasing supplemental feeding. No unusual livestock losses.

WATER SUPPLY OUTLOOK FOR THE WESTERN UNITED STATES
Issued as of January 1, 1978

The table below shows the runoff forecast in percent of the 15-year (1958-72) average. The forecasts are for the remainder of the water year (October thru September), except for the full water year for the Sacramento and San Joaquin Basins; April 1 to September 30, 1978, for the Missouri, Yellowstone, and North Platte Basins; November 1, 1977 to June 30, 1978 for the Little Colorado Basins; and January 1 to June 30, 1978, for the Gila Basin. The publication "Water Supply Outlook for the Western United States," issued as of January 1, 1978, contains the complete water supply forecasts for about 375 stations in the Western United States.

River	Station	Forecast 1,000 Acre-feet	Percent 15-year average
Columbia	Grand Coulee, WA	68500	99
Columbia	The Dalles, OR	112000	107
Snake	Lower Granite, WA	26300	118
Sacramento	Red Bluff, CA	8000	90
San Joaquin	Big Creek, CA	1450	111
Weber	Gateway, UT	361	96
Jordan	Utah Lake, UT	417	97
Truckee	L. Tahoe-Farad	350	100
Colorado	L. Powell infl.	9900	108
Green	Green River, UT	4100	113
San Juan	Bluff, UT	1067	87
Little Colo.	Woodruff, AZ	5.2	60
Gila	Solomon, AZ	94	55
Rio Grande	San Marcial, NM	318	95
Arkansas	Pueblo, CO	228	85
Missouri	Ft. Peck, MT	6140	129
Yellowstone	Sidney, MT	8100	116
North Platte	Glendo, WY	835	101

Office of Hydrology
National Weather Service

World Weather and Crop Update

December Review - January 17

USSR. In sharp contrast to the warm November, weather throughout most of the USSR was colder than normal in December. Winter grains in European USSR were exposed to temperatures of -20° C. to -25° C. Although most winter grain areas were under a heavy protective snow cover, the southern and eastern Ukraine, lower Volga Valley, and the North Caucasus were essentially without snow cover at critical times; dormant wheat plants may have been damaged in some areas. Soviet media, however, indicated that winter crops had generally overwintered satisfactorily as of the end of December.

ASIA. The drought continued in Australia's main agricultural areas with December precipitation less than 50 percent of normal over most of the principal producing areas. Non-irrigated crops and parched, burned-out pastures urgently needed moisture as high, mid-summer temperatures intensified moisture-deficiency problems. Shortages of forage have meant starving livestock in some areas. December weather in the People's Republic of China was generally warmer than normal with unseasonably heavy precipitation, especially in the southern half of the country. Estimated soil moisture throughout the principal winter wheat belt in North China was well above normal by the end of December. Unseasonable December and early January rains have helped winter wheat crops in northern India. Rainfall throughout the rest of India, excluding the northeast, has been well below normal with significant areas in the south receiving little or no rain during the month.

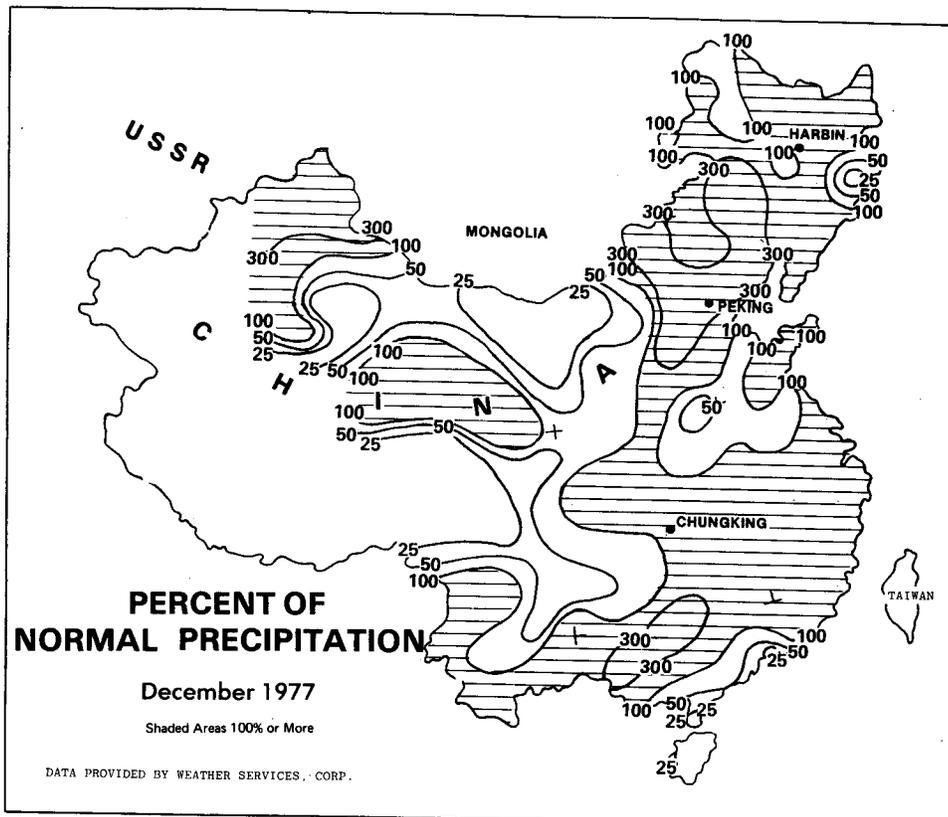
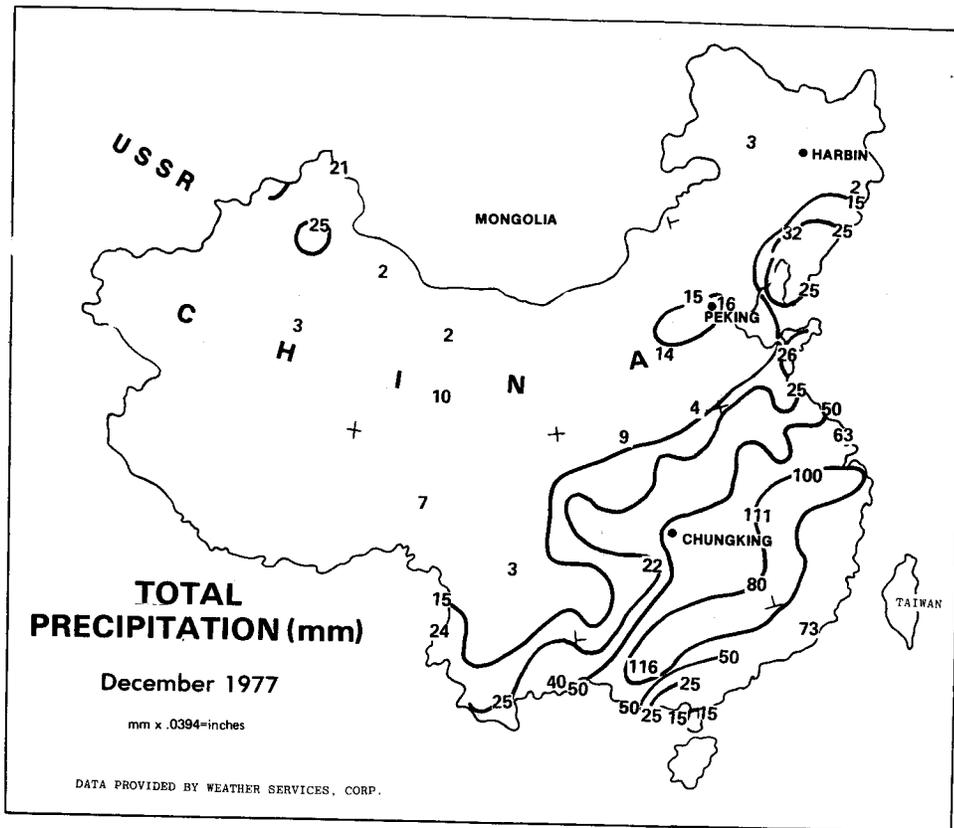
AFRICA. In South Africa, precipitation was generally below normal in the important maize triangle. However, crop prospects and pastures have been greatly enhanced by heavy rains which fell over corn producing areas at the end of the month and continued into January. Inadequate and patchy rainfall during the spring caused less acreage sown to corn. Substantial rains fell throughout Morocco in December, but rainfall was well below

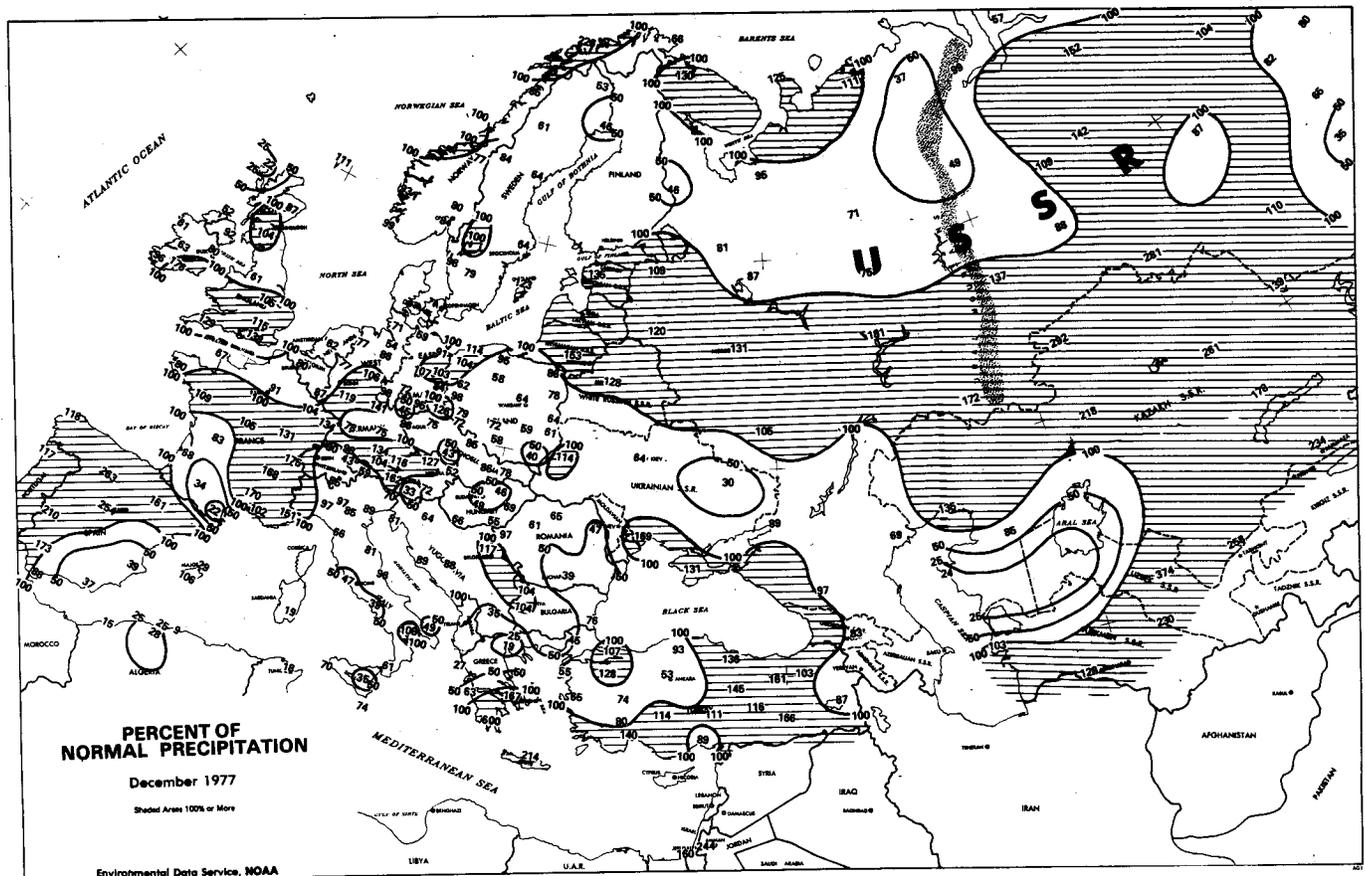
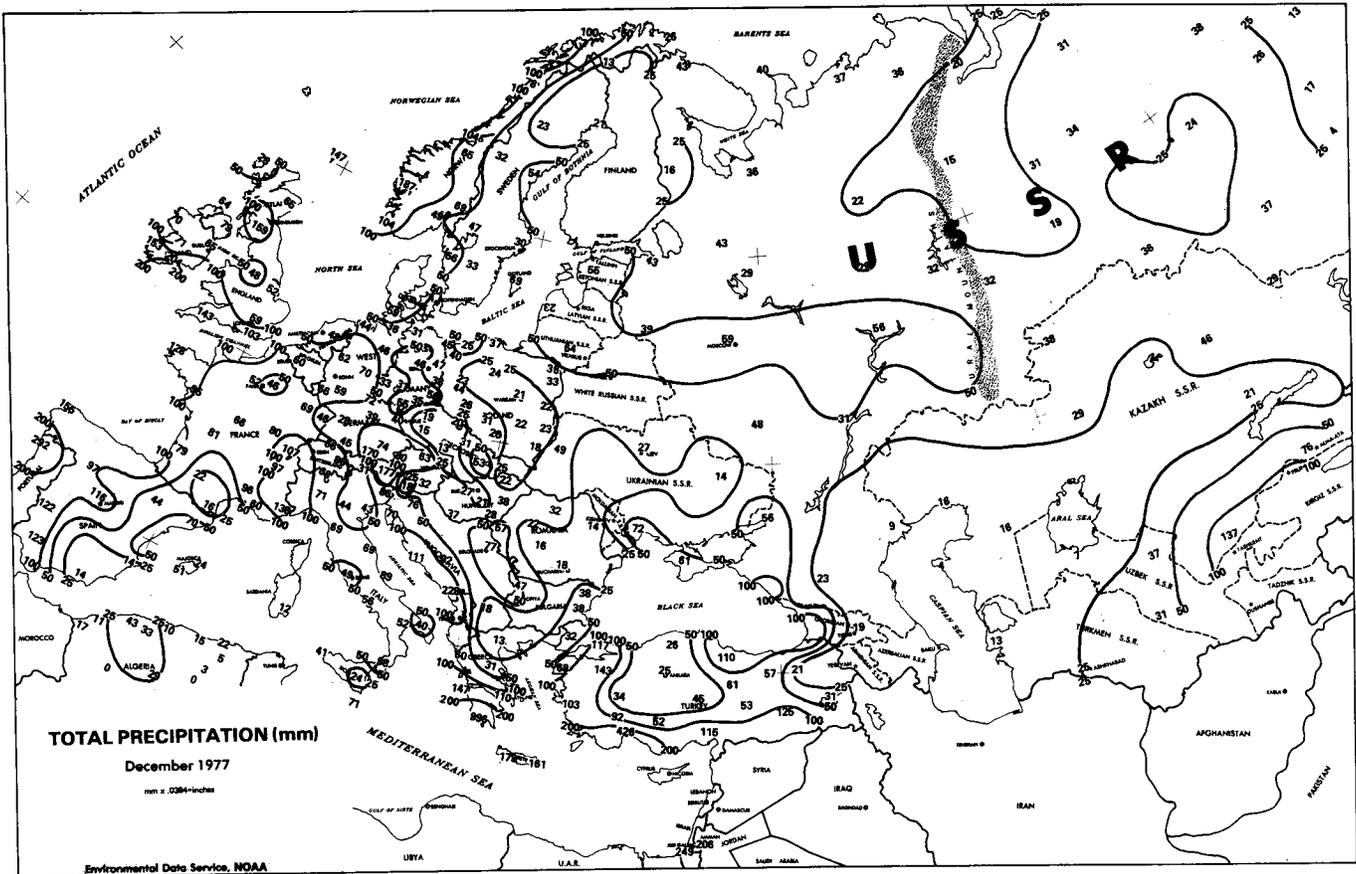
normal in Algeria and Tunisia; record dry conditions were reported in some areas.

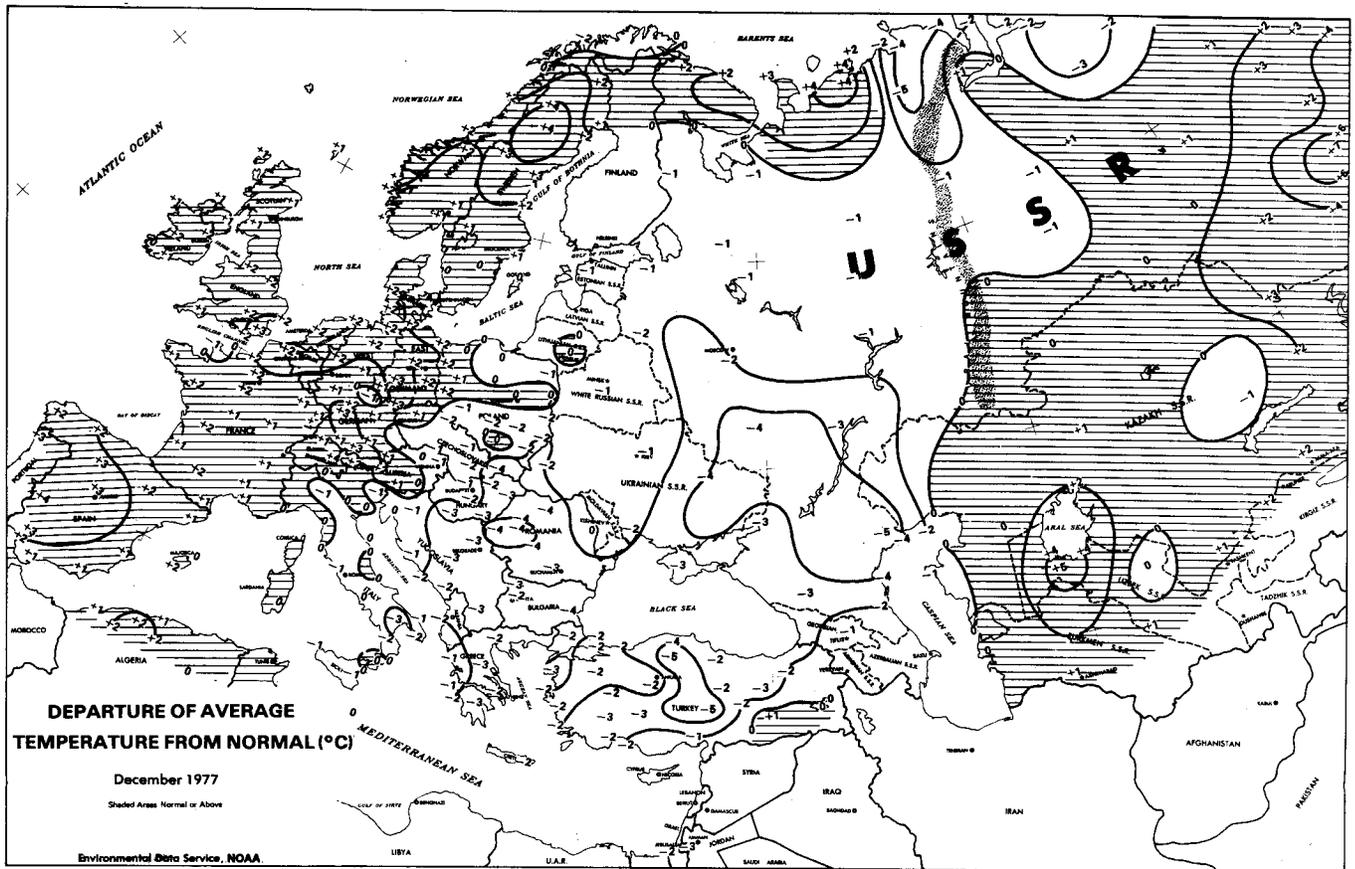
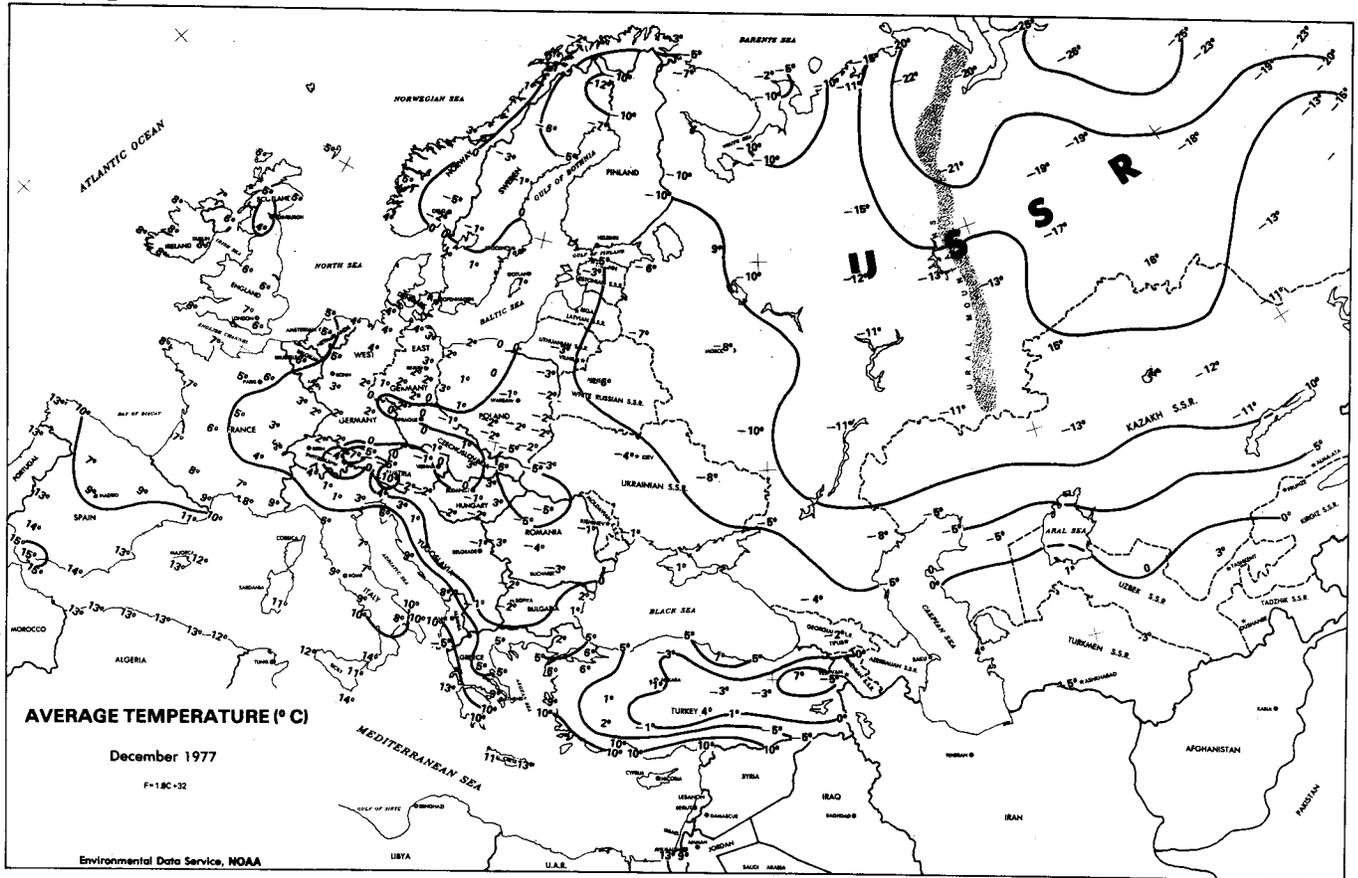
SOUTH AMERICA. Wheat harvest neared completion in Argentina. Summer crops and pastures, in general, continued to be helped by above-normal December rainfall although excessive rainfall may have caused some localized problems. Excellent rains fell in the first half of January. In Brazil, heavy rains at the beginning and end of December bracketed a 3-week dry spell in Rio Grande do Sul that was beginning to stress crops in this important corn and soybean state. January rainfall has been patchy with some areas below normal as water demands neared the mid-summer peak. Crops and pastures in Santa Catarina also have been dry because of below-normal precipitation in December coupled with deficient rainfall, thus far, in January. Ample precipitation fell in other eastern and southeastern agricultural areas; the north-eastern coastal area, however, needed rain.

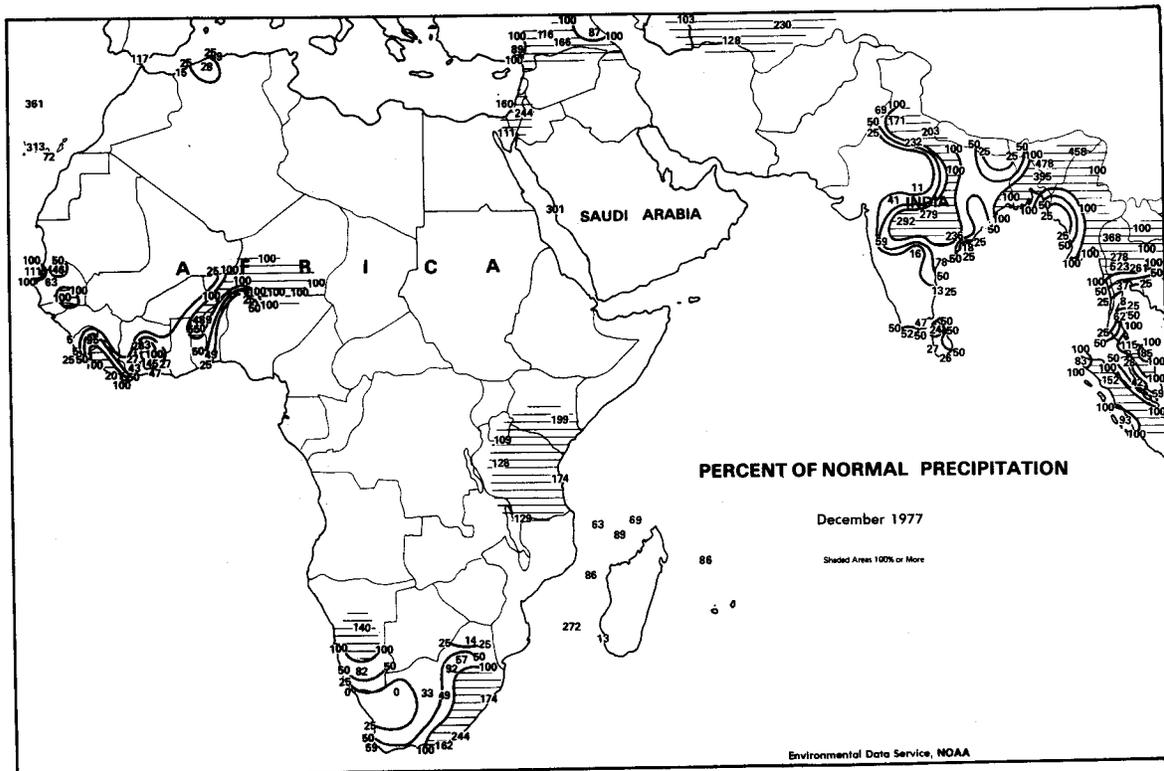
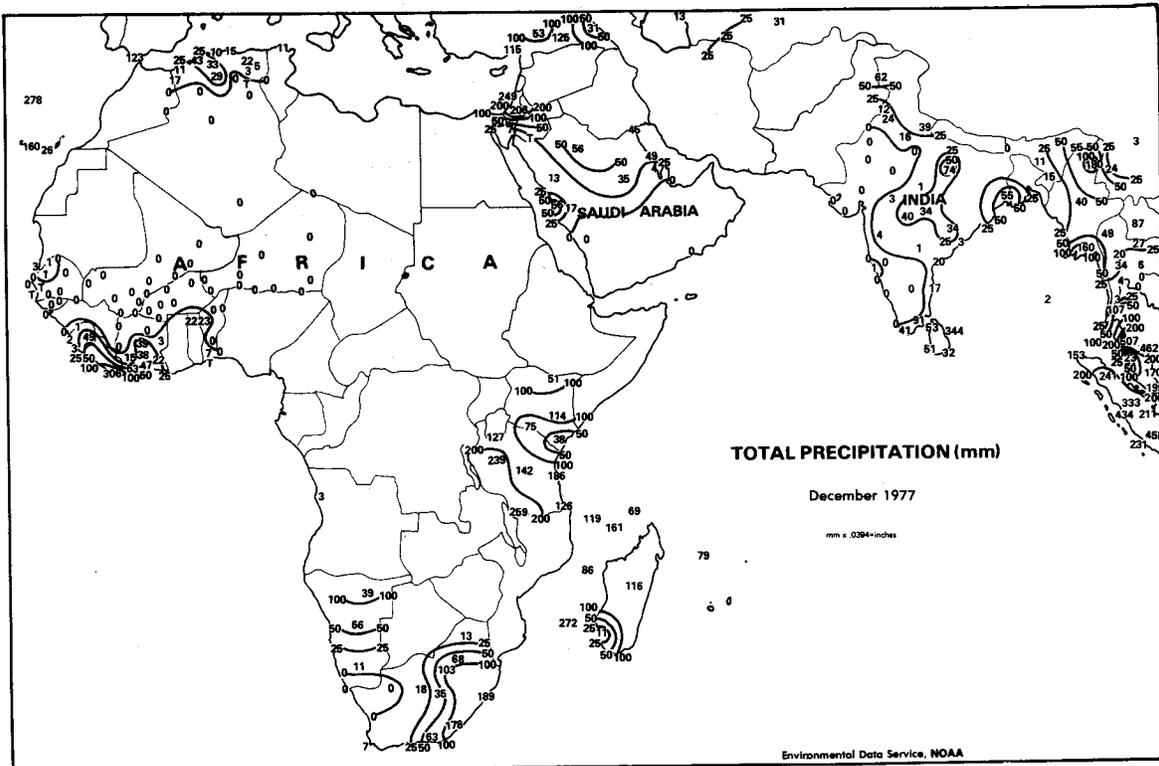
EUROPE. Western Europe was dominated by cool, damp weather in December. However, temperatures generally remained above freezing and only scattered light snow was reported for the month. The first real cold spell of the winter struck in early January, but temperatures moderated by mid-month. By mid-January western Europe was without snow cover except in the mountains. Precipitation was below normal throughout eastern Europe in December, and only light amounts of moisture have been recorded thus far in January. The early January cold spell exposed winter grains to the coldest temperatures of the winter, and with little or no snow cover to protect dormant plants, some damage may have occurred, especially in Romania where temperatures dipped as low as -18° C. December temperatures in Turkey were below normal; precipitation was above normal in the eastern half of the country but below normal in the west.

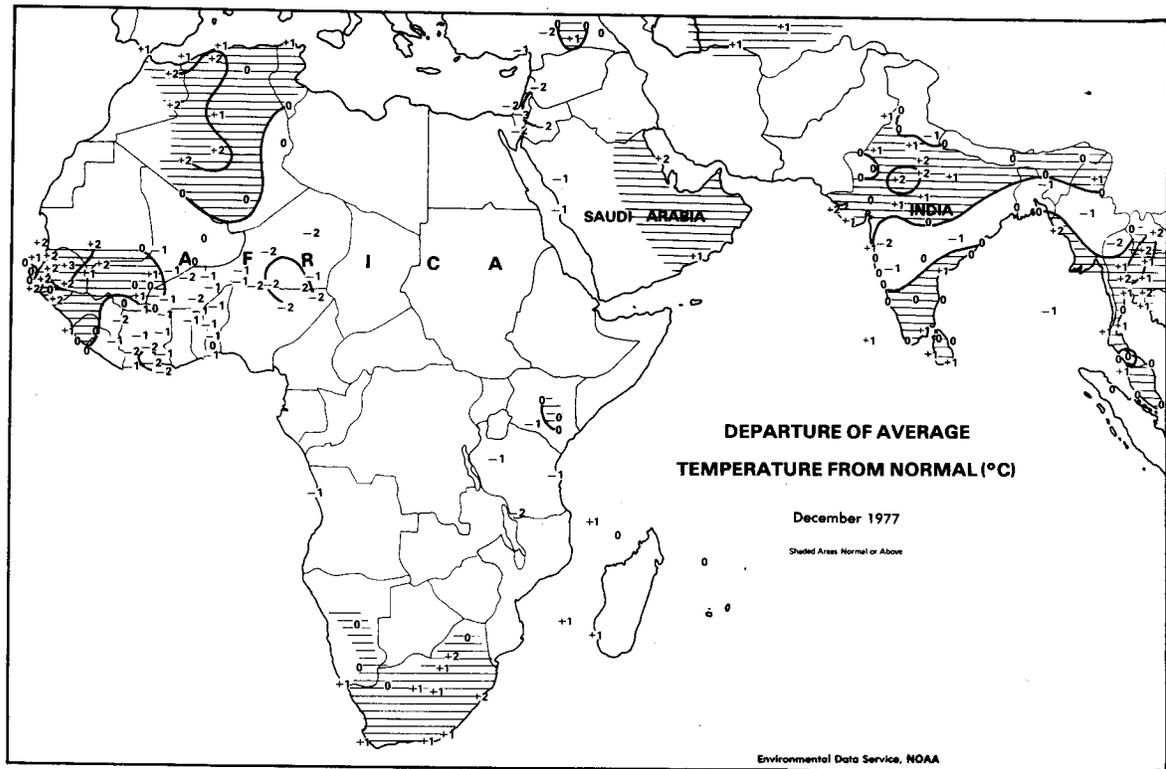
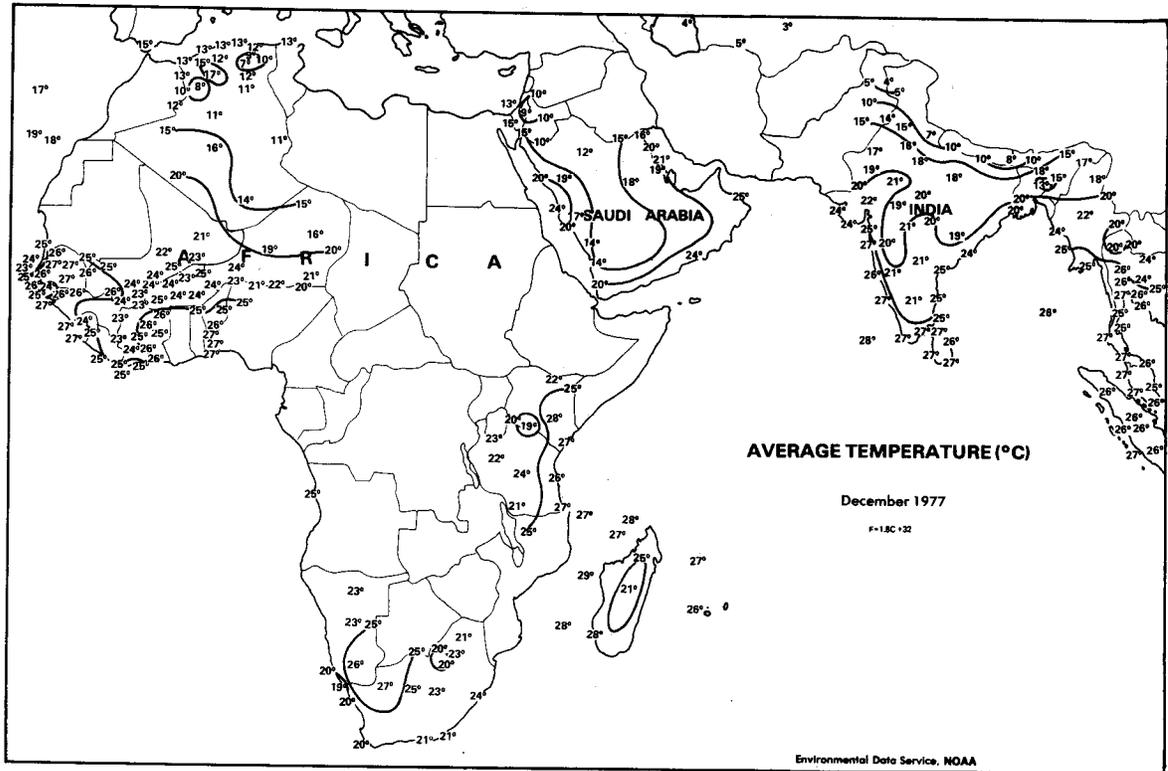
China Precipitation

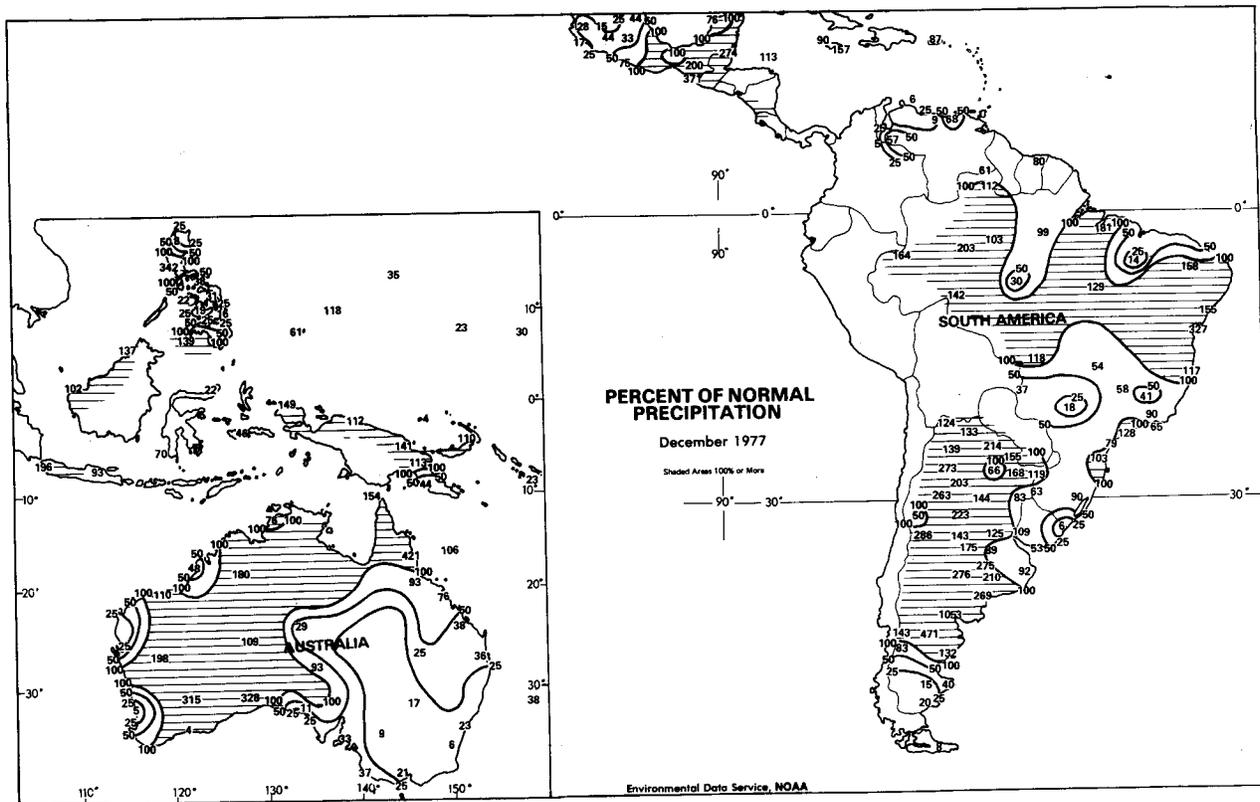
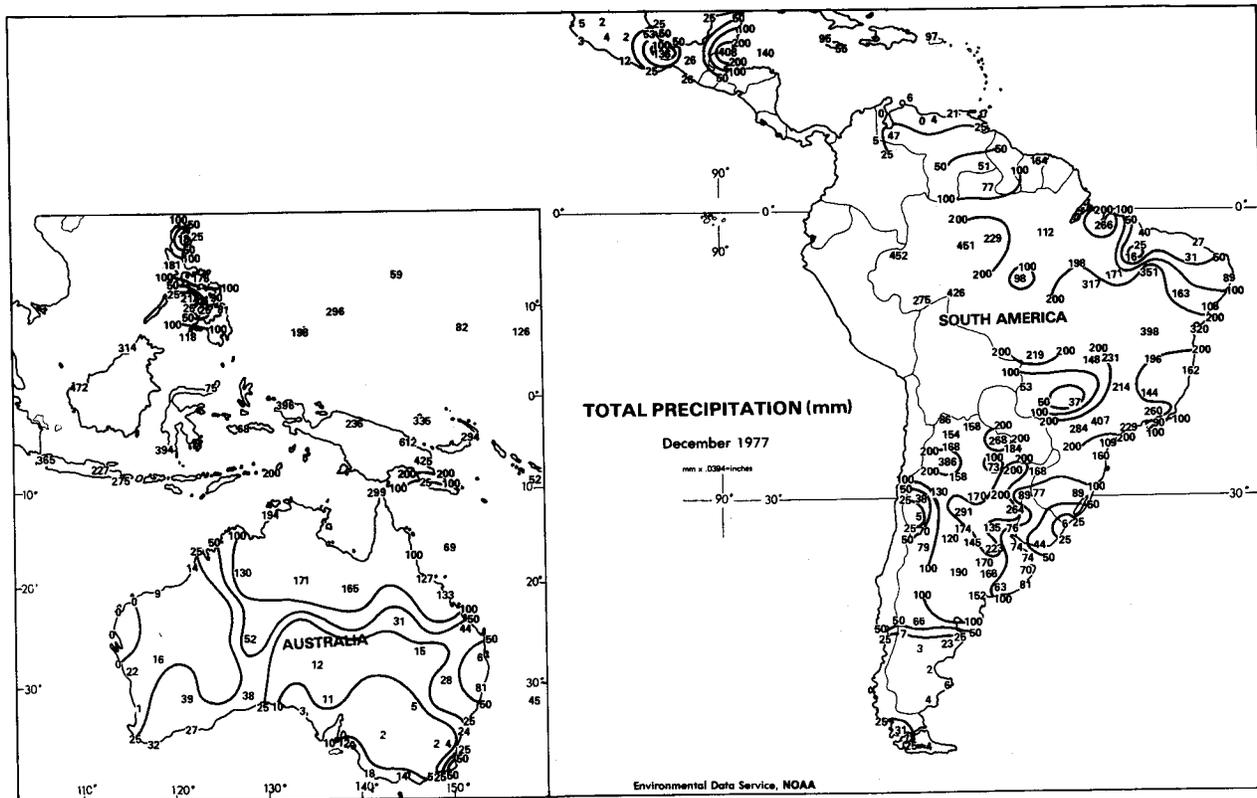


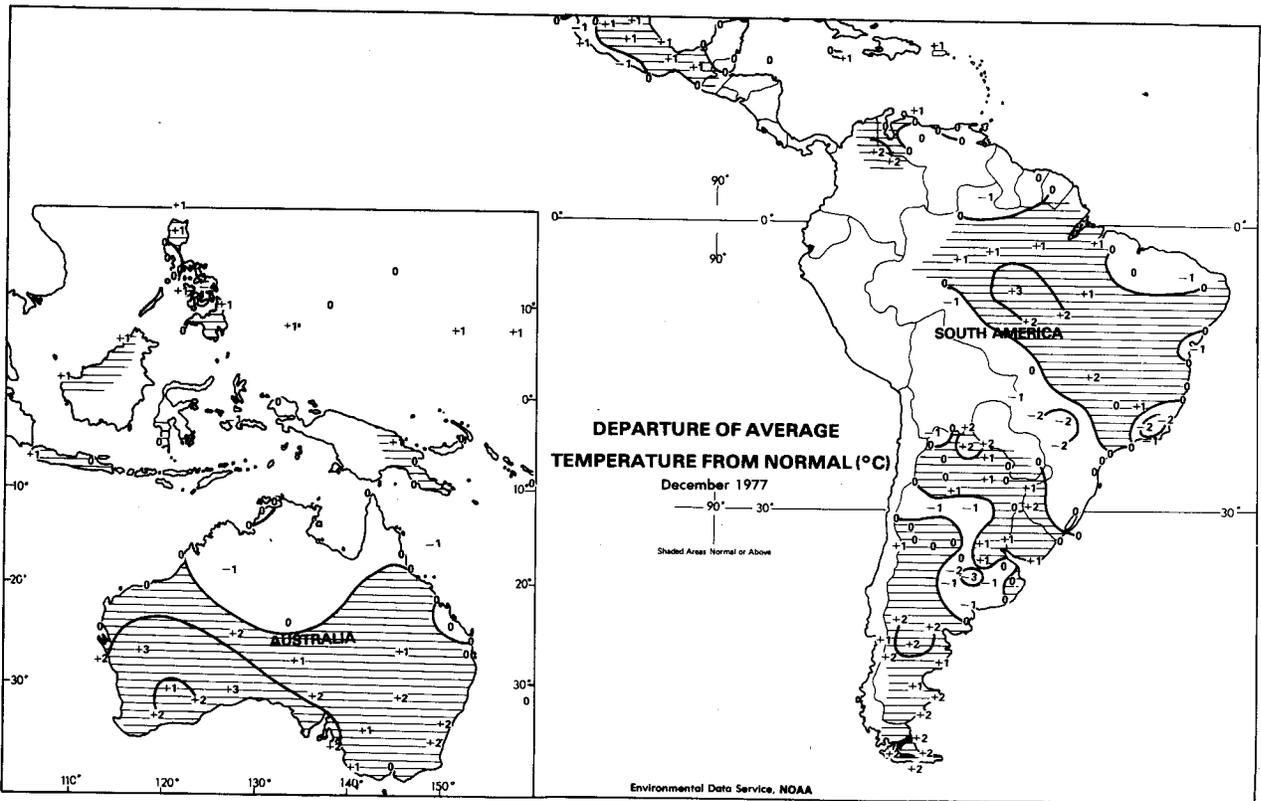
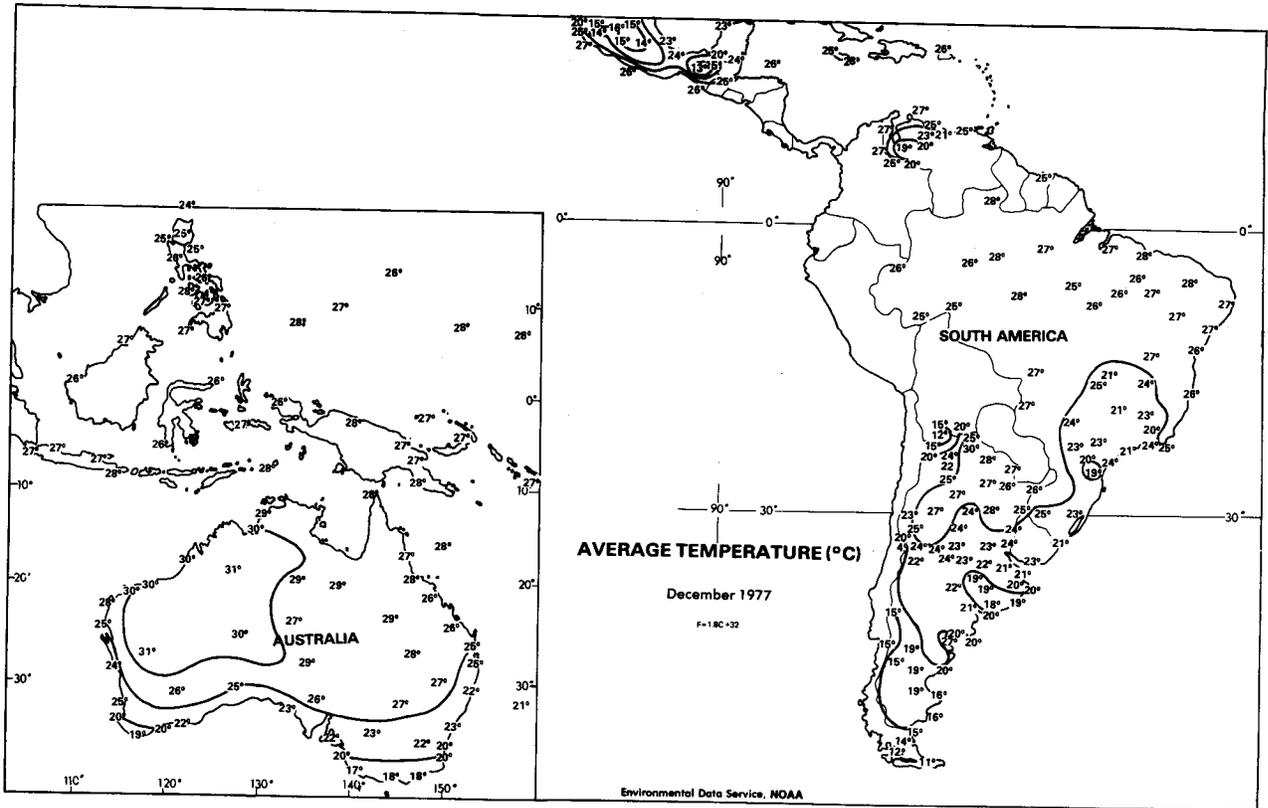


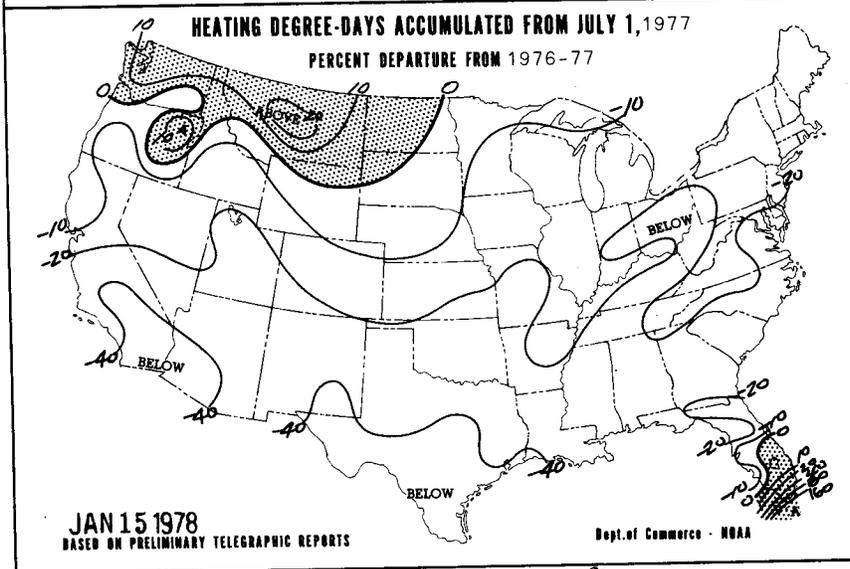
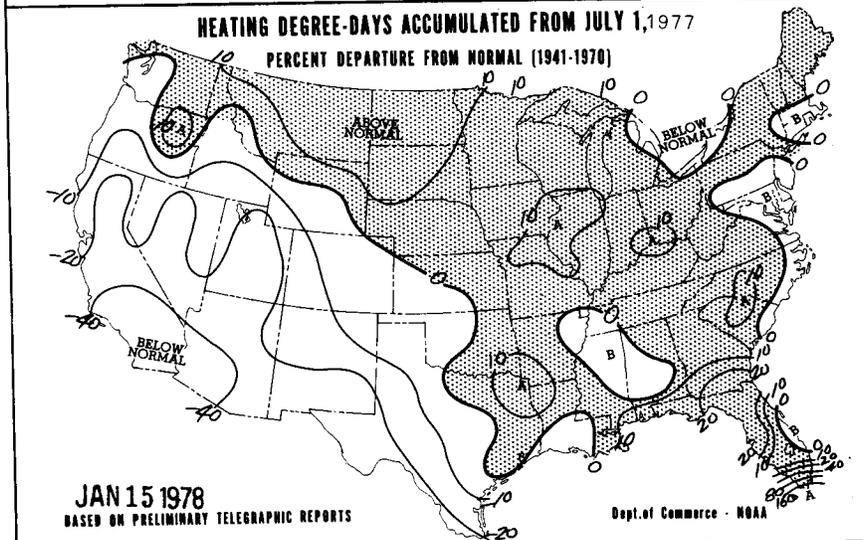
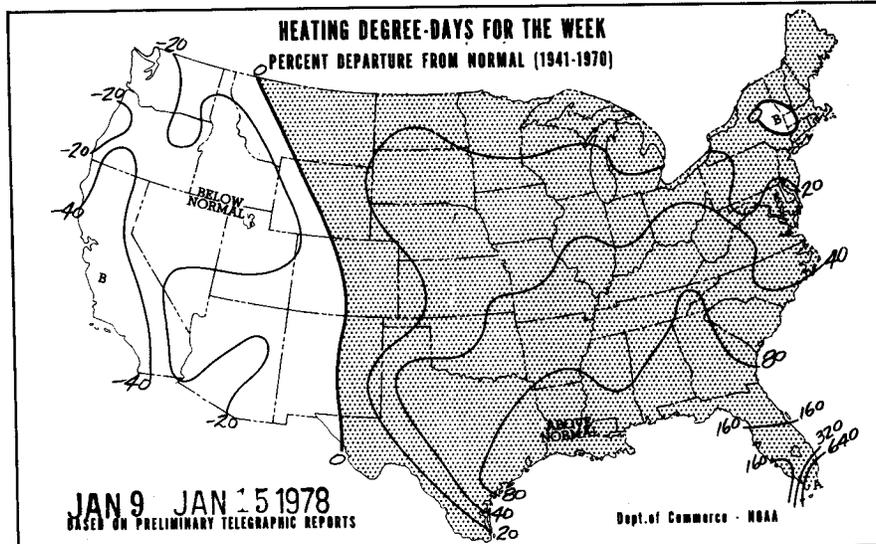












HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING JAN. 15, 1978.

STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +		
	TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1976-77		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1976-77		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1976-77
ALA. BIRMINGHAM.....	127	156	1459	99	451	MAINE CARIBOU.....	390	17	450	17	774	YOUNGSTOWN.....	358	85	3037	53	877
MOBILE.....	116	100	1000	107	663	PORTLAND.....	313	12	352	98	501	OKLA. OKLAHOMA CITY.....	281	78	1822	1822	1822
MONTGOMERY.....	107	107	1070	107	663	BALTIMORE.....	268	44	2191	54	553	TULSA.....	301	98	1885	1885	1885
ARIZ FLAGSTAFF.....	223	44	2556	99	714	MASS BOSTON.....	268	16	2429	76	428	OREG ASTORIA.....	129	4	247	247	247
PHOENIX.....	200	30	2300	107	900	MICH ALPENA.....	303	23	338	34	55	BURNS.....	111	4	247	247	247
TUCSON.....	189	10	2289	107	900	DETROIT.....	303	23	338	34	55	WEDFORD.....	111	4	247	247	247
MINSON.....	189	10	2289	107	900	GRAND RAPIDS.....	303	23	338	34	55	PENDLETON.....	111	4	247	247	247
YUMA.....	60	10	600	107	900	HOUGHTON LAKE.....	303	23	338	34	55	PORTLAND.....	111	4	247	247	247
ARK. FORT SMITH.....	297	110	1805	106	44	LANSING.....	303	23	338	34	55	SALEN.....	111	4	247	247	247
LITTLE ROCK.....	172	107	1722	107	900	MARQUETTE.....	303	23	338	34	55	PA ALLENTOWN.....	290	31	2716	199	504
CALIF BAKERSFIELD.....	29	97	454	64	42	MUSKOGEE.....	303	23	338	34	55	ERIE.....	290	31	2716	199	504
EUREKA.....	68	74	744	107	900	ST. MARIE.....	401	4	401	4	401	HARRISBURG.....	290	31	2716	199	504
FRESNO.....	68	74	744	107	900	MINN DULUTH.....	411	4	411	4	411	PHILADELPHIA.....	290	31	2716	199	504
LOS ANGELES.....	68	74	744	107	900	INTERNATIONAL FALLS.....	411	4	411	4	411	PITTSBURGH.....	290	31	2716	199	504
RED BLUFF.....	68	74	744	107	900	ROCHESTER.....	411	4	411	4	411	SCRANTON.....	290	31	2716	199	504
SAN DIEGO.....	68	74	744	107	900	ST. CLOUD.....	411	4	411	4	411	R. I. PROVIDENCE.....	282	27	2687	21	621
SAN FRANCISCO.....	68	74	744	107	900	MISS JACKSON.....	411	4	411	4	411	S. C CHARLESTON.....	303	7	1076	11	325
STOCKTON.....	68	74	744	107	900	MO COLUMBIA.....	411	4	411	4	411	GREENVILLE.....	303	7	1076	11	325
COLO DENVER.....	62	13	2584	24	354	KANSAS CITY.....	411	4	411	4	411	D. ABERDEEN.....	303	7	1076	11	325
GRAND JUNCTION.....	62	13	2584	24	354	ST. LOUIS.....	411	4	411	4	411	HURON.....	303	7	1076	11	325
PUEBLO.....	62	13	2584	24	354	SPRINGFIELD.....	411	4	411	4	411	SIoux FALLS.....	303	7	1076	11	325
CONN BRIDGEPORT.....	27	31	2301	58	463	MONT BILLINGS.....	411	4	411	4	411	TENN CHATTANOOGA.....	303	7	1076	11	325
HARTFORD.....	27	31	2301	58	463	GLASGOW.....	411	4	411	4	411	KNOXVILLE.....	303	7	1076	11	325
DEL WILMINGTON.....	286	55	2383	84	457	GREAT FALLS.....	411	4	411	4	411	MEMPHIS.....	303	7	1076	11	325
D.C WASHINGTON.....	250	43	1915	102	544	HAVRE.....	411	4	411	4	411	NASHVILLE.....	303	7	1076	11	325
FLA APALACHICOLA.....	14	19	78	10	268	HELENA.....	411	4	411	4	411	TEXAS ABILENE.....	303	7	1076	11	325
DAYTONA BEACH.....	14	19	78	10	268	KATIS.....	411	4	411	4	411	AMARILLO.....	303	7	1076	11	325
FORT MYERS.....	14	19	78	10	268	NEBR GRAND ISLAND.....	411	4	411	4	411	AUSTIN.....	303	7	1076	11	325
JACKSONVILLE.....	14	19	78	10	268	LYNDON.....	411	4	411	4	411	BERNHART.....	303	7	1076	11	325
KEY WEST.....	14	19	78	10	268	NORFOLK.....	411	4	411	4	411	BROADSVILLE.....	303	7	1076	11	325
LAKELAND.....	14	19	78	10	268	NORTH PLATTE.....	411	4	411	4	411	CHRISTIAN.....	303	7	1076	11	325
MARIETTA.....	14	19	78	10	268	OMAHA.....	411	4	411	4	411	DEL RIO.....	303	7	1076	11	325
ORLANDO.....	14	19	78	10	268	VALENTINE.....	411	4	411	4	411	EL PASO.....	303	7	1076	11	325
TALLAHASSEE.....	14	19	78	10	268	NEV ELY.....	411	4	411	4	411	FORT WORTH.....	303	7	1076	11	325
TAMPA.....	14	19	78	10	268	LAS VEGAS.....	411	4	411	4	411	GALVESTON.....	303	7	1076	11	325
NEXT PALM BEACH.....	14	19	78	10	268	RENO.....	411	4	411	4	411	HOUSTON.....	303	7	1076	11	325
GA ATLANTA.....	293	13	1681	116	499	WINNEBUCCA.....	411	4	411	4	411	LUBBOCK.....	303	7	1076	11	325
AUGUSTA.....	293	13	1681	116	499	N. H. CONCORD.....	337	29	359	517	272	MIDLAND.....	303	7	1076	11	325
Macon.....	293	13	1681	116	499	J. ATLANTIC CITY.....	265	41	2247	27	728	HOUSTON.....	303	7	1076	11	325
SAVANNAH.....	293	13	1681	116	499	TRENTON.....	277	46	2491	214	348	LUBBOCK.....	303	7	1076	11	325
IDAHO BOISE.....	167	92	2579	293	543	N. MEX ALBUQUERQUE.....	77	31	180	299	829	UTAH SALT LAKE CITY.....	174	91	2260	671	599
LENISEX.....	180	92	2331	42	438	ROSWELL.....	156	13	156	657	872	VT BURLINGTON.....	361	25	3693	64	562
POCATELLO.....	209	92	2999	42	438	N. Y ALBANY.....	302	1	302	1	302	VA LYNCHBURG.....	302	25	3160	73	501
ILL. CAIRO.....	311	108	1977	291	362	BINGHAMTON.....	302	1	302	1	302	NORFOLK.....	302	25	3160	73	501
CHICAGO.....	306	99	3163	302	614	BUFFALO.....	302	1	302	1	302	RICHMOND.....	302	25	3160	73	501
MOLINE.....	306	99	3163	302	614	NEW YORK.....	302	1	302	1	302	ROANOKE.....	302	25	3160	73	501
PEORIA.....	306	99	3163	302	614	ROCHESTER.....	302	1	302	1	302	WASH QUILLAYUTE.....	132	57	2021	221	249
SPRINGFIELD.....	306	99	3163	302	614	SYRACUSE.....	302	1	302	1	302	SEATTLE-TACOMA.....	117	117	2229	2229	2229
IND EVANSVILLE.....	114	24	2368	88	565	S. C ASHEVILLE.....	306	117	2237	134	404	SPOKANE.....	117	117	2229	2229	2229
FORT WAYNE.....	114	24	2368	88	565	CHARLOTTE.....	306	117	2237	134	404	HALLA HALLA.....	117	117	2229	2229	2229
INDIANAPOLIS.....	114	24	2368	88	565	GREENSBORO.....	306	117	2237	134	404	YAKIMA.....	117	117	2229	2229	2229
SPRINGFIELD.....	114	24	2368	88	565	HATTERAS.....	306	117	2237	134	404	W. VA BECKLEY.....	368	130	2775	39	688
SOUTH BEND.....	114	24	2368	88	565	HILMINGTON.....	306	117	2237	134	404	CHARLESTON.....	368	130	2775	39	688
IOWA BURLINGTON.....	397	99	3339	293	543	WIS BISHARCK.....	480	80	4790	459	33	HUNTINGTON.....	368	130	2775	39	688
DES MOINES.....	397	99	3339	293	543	HILLISTON.....	480	80	4790	459	33	PARKERSBURG.....	368	130	2775	39	688
DUBUQUE.....	397	99	3339	293	543	OHIO AKRON-CANTON.....	361	89	3015	114	766	WIS GREEN BAY.....	421	73	4011	22	827
SIoux CITY.....	397	99	3339	293	543	CINCINNATI.....	361	89	3015	114	766	LACROSSE.....	421	73	4011	22	827
KANS CONCORDIA.....	345	72	2800	90	370	CLEVELAND.....	361	89	3015	114	766	MILWAUKEE.....	421	73	4011	22	827
DODGE CITY.....	345	72	2800	90	370	COLUMBUS.....	361	89	3015	114	766	WYO CASPER.....	421	73	4011	22	827
GOODLAND.....	345	72	2800	90	370	DAYTON.....	361	89	3015	114	766	CHEYENNE.....	421	73	4011	22	827
TOPEKA.....	345	72	2800	90	370	TOLEDO.....	361	89	3015	114	766	LANDER.....	421	73	4011	22	827
NICHITA.....	345	72	2800	90	370	LA. BATON ROUGE.....	104	89	832	31	491	LAKE CHARLES.....	104	89	832	31	491
KY LEXINGTON.....	358	132	2382	87	698	LAKE CHARLES.....	104	89	832	31	491	NEW ORLEANS.....	104	89	832	31	491
LOUISVILLE.....	358	132	2382	87	698	SHREVEPORT.....	104	89	832	31	491						
LA BATON ROUGE.....	104	89	832	31	491												
LAKE CHARLES.....	104	89	832	31	491												
NEW ORLEANS.....	104	89	832	31	491												
SHREVEPORT.....	104	89	832	31	491												

BASED ON 1941-70 NORMALS.

* ACCUMULATION FROM JULY 1, 1977.



FIRST CLASS MAIL

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Average Monthly Weather Outlook

