

# WEEKLY WEATHER AND CROP BULLETIN

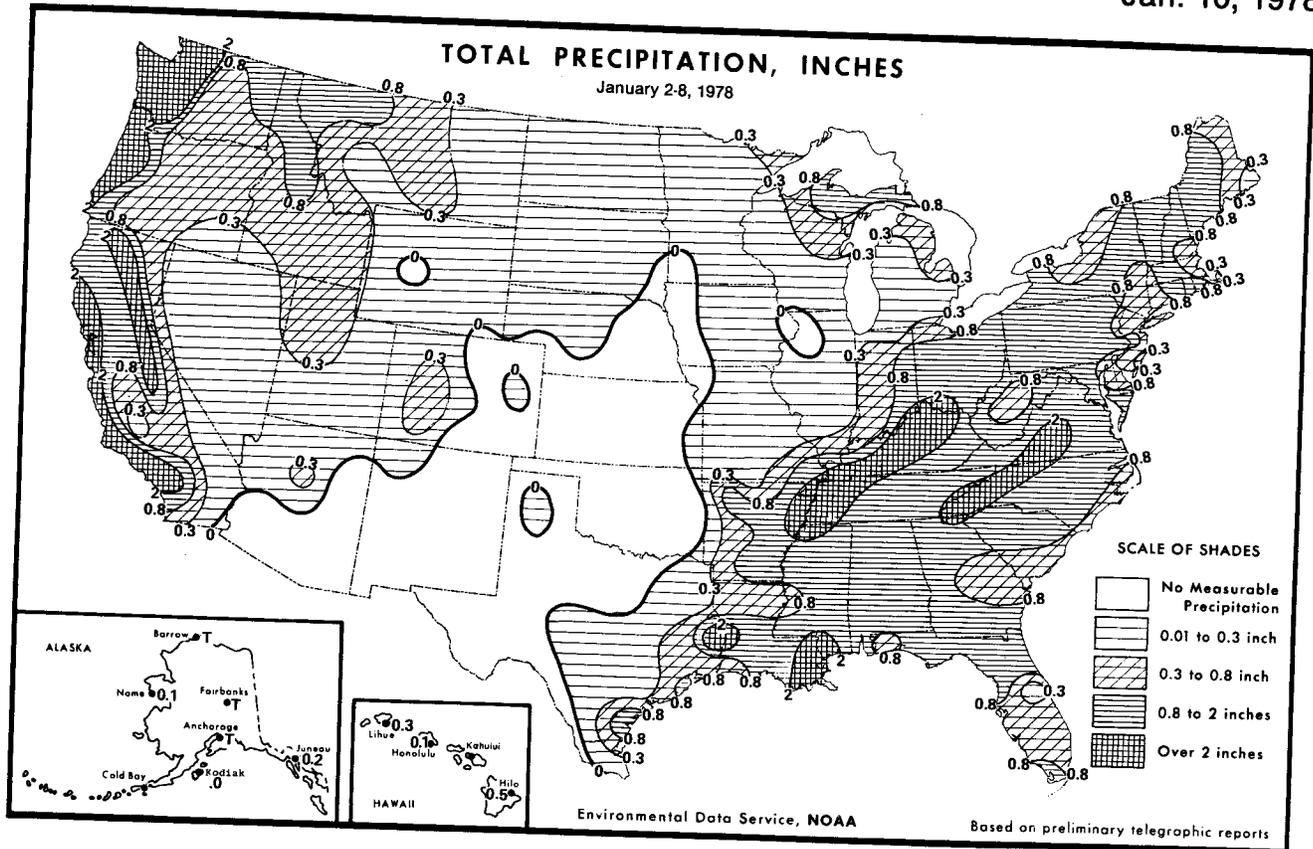
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## National Weather Summary

January 2 - 3

**HIGHLIGHTS:** Precipitation was heavy along the West Coast States. Rain soaked the coastal areas and snow blanketed the western slopes of the Sierras and the Cascades. There was no rain in most of Arizona and New Mexico and a large part of the western and southern Plains. The country's first tornado of the year hit southern California. Toward week's end, bone-chilling Canadian air moved south and eastward to the Appalachians. Severe weather with damaging winds occurred ahead of and along the front.

Temperatures in the eastern U.S. were near normal until the latter part of the week. Readings were 9 to 11° above normal in the southern sections of the Plateau Region and California.

Up to 6 inches of snow were left in the Northeast after a New Year's cold front moved off the Atlantic Coast on Monday.

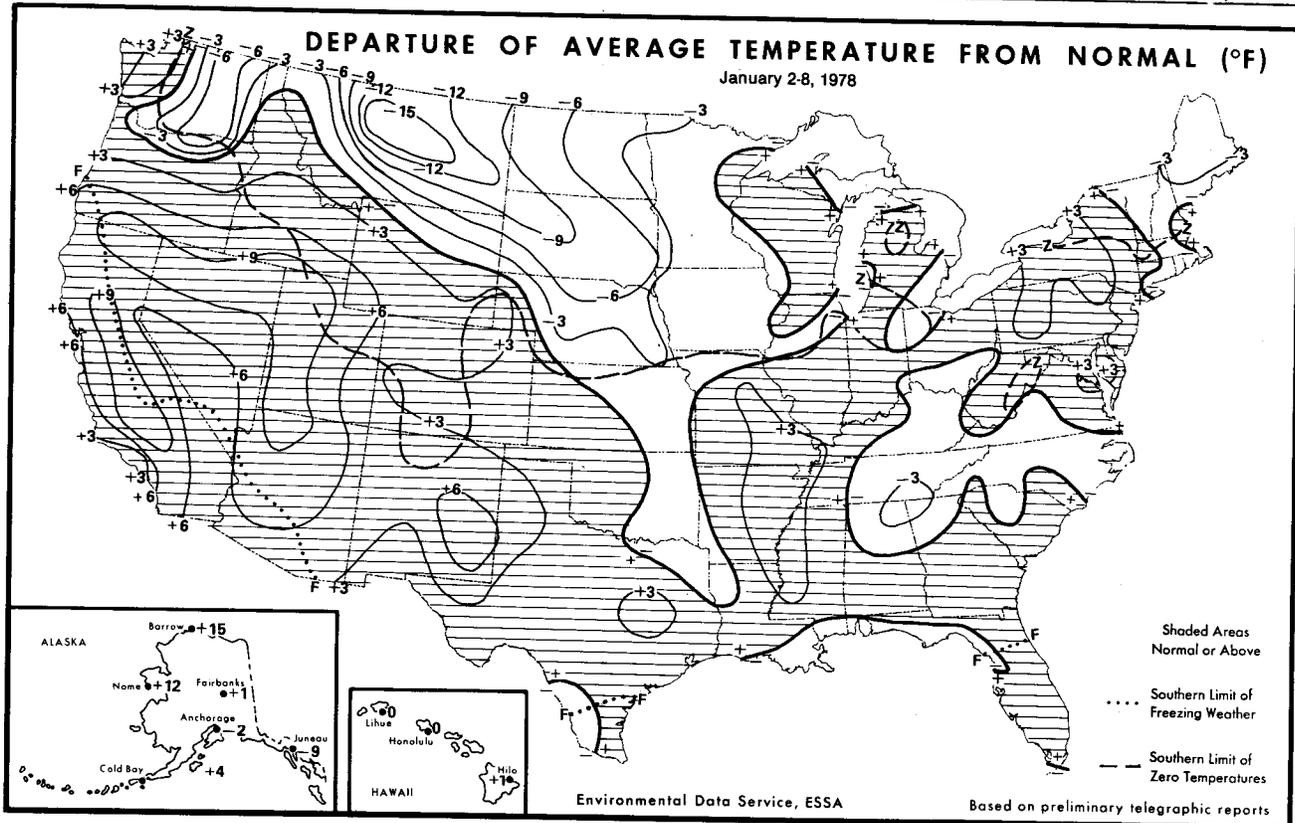
The week began with rain and freezing rain along the Texas/Louisiana coast; Corpus Christi picked

up about three-quarters inch of rain. Showers with snow in higher elevations hit the West from central California to southwestern Washington; San Simeon, on the California coast, measured more than one inch. Snowfall persisted around the Great Lakes.

It was cold throughout most of the Nation. Brownsville, Tex., usually one of the warmer points this time of year, reached only 38°.

Low pressure off the Pacific Coast continued to pump moisture-laden air into the western U.S. Precipitation took the form of rain along the ocean and became snow inland. By the end of Tuesday, Spokane added 5 inches of snow to the 10 that were on the ground. Snow reached as far east as Montana and Nevada, and showers dampened western Arizona.

The western sections of New York State and Pennsylvania experienced snow while rain soaked the southern half of Florida---Homestead chalked up just over one inch.



Again it was cold over much of the Nation; freezing readings extended to the Gulf Coast.

Wet weather in the Far West persisted on Wednesday. Several Arizona stations reported snow 3 to 6 inches deep. San Francisco was pelted by hail during an intense thunderstorm and Los Angeles gathered about three-quarters inch of rain while Long Beach counted 1.32 in. Snow spread eastward through central Colorado and Wyoming.

A large high pressure system over Texas kept most of the eastern U.S. dry.

Record low temperatures chilled Asheville, N.C., 10°, and Portland, Maine, -2°. Warm air moved into the Great Lakes where Muskegon, Mich., saw the mercury rise from 18° to 31° in 15 minutes.

The Pacific Coast States had received precipitation each day of the new year and Thursday continued the streak. Snow in the mountains and rain close to the coast were the order of the day; but a new twist was added when 50-70 mph winds whipped through Oregon and northern California making snow-clogged roads impassable. For the second consecutive year, the West Coast reported the first tornado of the year. A twister dashed through San Dimas north of Pomona, Calif. Some of the heaviest rainfall included 1.57 in. at Eugene, Ore., and 1.61 in. at Blue Canyon, Calif. Snow fell in the northern Intermountain Region and the lower Great Lakes area this day.

Temperatures varied across the Nation. Wind chill factors of 30 to 40° below zero contrasted with a record high 77° at Austin, Tex. The reading at Lewiston, Mont., plummeted from 40° to 16° in one hour.

Rain extended from the lower Mississippi Valley across the Gulf Coast and Tennessee Valley on Friday morning. Rain also fell over California where Los Angeles measured an inch. Precipitation in northern California caused the highest river

levels in 3 years on some waterways. When clouds entered Arizona, Kingman counted nearly an inch of rain. The Great Lakes area and central Rockies got a dose of the white stuff; Gunnison in west central Colorado received an additional 10 inches of snow.

Record high temperatures were put in the Louisiana books; Alexandria noted 79° and New Orleans, at 81°, topped the 1936 mark by two.

Severe weather pummeled points in Arkansas, Louisiana, and Tennessee on Saturday. Nine tornadoes and thunderstorms containing hail battered the 3 States. Meantime a blustery Canadian air mass blitzed the northern tier of States and raced across the Plains to the Mississippi Valley. Rain and snow continued in the Northwest. By evening, thunderstorms reached portions of Kentucky, Ohio, and Pennsylvania.

A record high temperature of 80° was equalled in Austin, Texas.

Sunday's weather picture was unsettled over much of the Nation. The cold air moved rapidly eastward to the Appalachians. Locally heavy rainfall triggered flash flooding near Lexington, Ky., while rain persisted over the country's southeastern quadrant. As nightfall approached, snow began falling from the western Great Lakes through the Ohio Valley as far south as northern Alabama. Thunderstorms rumbled over the Deep South and 3 tornadoes touched down in Florida. Some of the heaviest precipitation of the day included nearly 2 inches of rain in New Orleans; over an inch at Memphis and Nashville; nearly an inch and one-quarter in Apalachicola, Fla.; 1.61 in. at Valdosta, Ga.; and about an inch and one-third in Raleigh/Durham, N.C., and Dover, Del.

Binghamton, N.Y., posted a record high of 47° and Harrisburg, Pa., tied the 1930 mark of 60°.

## National Agricultural Summary

January 2-8

**HIGHLIGHTS:** Temperatures plunged well below normal in Montana and the Dakotas, but snow covered winter grains in this area. Elsewhere readings were near normal except in California and the Southwest where they were above normal. High temperatures thawed soils in the Midwest near the end of the week slowing harvest progress again. Winter wheat rated good in all areas except the southern Great Plains where dry soils stressed unirrigated stands. Southern pastures deteriorated under the influence of lower temperatures and, in Texas, dry soils. California grasslands got another boost from more precipitation and above normal temperatures.

**SMALL GRAINS:** Winter wheat rated fair to good in all areas of the Nation except the southern Great Plains where dry soils stressed unirrigated stands. Snow protected most small grains in northern areas from the Pacific Northwest through Montana, the Dakotas, Minnesota, the Great Lakes region, and across New England.

In Kansas wheat generally rated good--much better than last year. Strong winds blasted across the Kansas plains but damage was light and limited to the west. No disease or insect damage was reported. Ranchers moved cattle off wheat pastures, but 20% was grazed compared with 5% last year and 15% average. Both topsoil and subsoil moisture were short in western Kansas. Oklahoma wheat was fair to good but soil moisture supplies were short; most major wheat areas needed precipitation. In Texas low temperatures and dry soils slowed winter wheat growth. Dryland stands were severely stressed on the High and Low Plains with some stands dying for lack of moisture. Elsewhere in Texas dryland stands fared better but also need moisture. Irrigated stands rated fair to good. Greenbugs and grain mites lightly damaged some North Texas fields. New Mexico irrigated stands scored fair to good and were actively grazed; dryland wheat was fair with very little grazing. Nebraska winter wheat rated good. Snow protected small grains in Montana and the Dakotas. Pacific Northwest wheat rated fair. Rains helped California's small grains. Wheat in the South Atlantic States ranged from fair to excellent, but low temperatures slowed growth in some southern areas. Wheat rated fair to good in the south central States.

**COTTON:** Weather and soil conditions dictated the harvest wrap-up schedule in the Delta States and the Southeast. Very few fields remained to be picked, but wet soils kept farmers out of those areas. Producers were scrapping cotton in Arkansas and Arizona. New Mexico farmers cut stalks, disked, and prepared land for the 1978 crop. Texas cotton gins on the Plains and the west operated on ricks and modules of field-stored seed cotton. Farmers in central and southern Texas prepared seedbeds for spring planting. California producers stopped scrapping and plow-down operations.

**OTHER CROPS:** Corn Belt soils froze solid early in the week allowing farmers to harvest some row

crops, but later thawing temperatures mired equipment and suspended harvests. Indiana farmers have about 4% of their corn and soybeans unharvested. Illinois farmers also have some to harvest too. South Atlantic States farmers were almost finished with row crop harvests; some of Virginia's soybeans shattered.

Florida sugarcane producers cut cane; the crop rated good.

Tobacco growers prepared seedbeds in Georgia and planted beds in Florida. Producers marketed tobacco in the major producing States where markets opened after the holidays. Kentucky burley markets were open. Virginia growers marketed dark, sun, and burley tobacco.

**FRUITS AND NUTS:** Fruit growers pruned deciduous trees and grape vines in the Southeast, the Northwest, and California. Producers in California and Utah marketed deciduous crops from storage. Florida citrus groves rated excellent with adequate soil moisture. Trees were mostly semi-dormant; fruit was excellent. Harvest for processing was active. Texas citrus harvest was steady following the December rush for gift fruit. Freezing temperatures caused minor leaf burn in some areas, but trees and fruit were unaffected. Arizona citrus harvest was in full swing; later varieties sized well. California rains slowed citrus picking, however, growers harvested small quantities of grapefruit, Navels, and lemons.

**VEGETABLES:** Florida vegetables reported good. Harvests picked up after the holiday lull with shipments up 33% from the previous week. Volume of most crops was steady to higher; only snap beans and escarole declined in supply. Potato digging, watermelon seeding, and strawberry picking gained momentum. Texas low temperatures damaged a few tomatoes and bell peppers in the lower Rio Grande Valley. Growers harvested cabbage, carrots, lettuce, broccoli, cauliflower, and spinach. Producers planted melons, but dry soils caused some delays in the Coastal Bend. California rains delayed vegetable harvests for the second week. Artichokes, broccoli, and cauliflower were in light supply. Carrot, lettuce, celery, and potato harvests were active but slow.

**PASTURE AND LIVESTOCK:** Cattle grazed crop stubble in Nebraska and other northern States which lacked snow cover. Low temperatures slowed growth of southern grasses. Florida pastures rated poor to fair. Frost and excessive rainfall were harmful; permanent pastures were turning brown and small grain pastures grew slowly. Texas range conditions deteriorated from dry soils. Permanent pastures were short; small grains provided limited grazing except in the east and Upper Coast where grazing was fair. Texas cattle marketings were heavy in some localities because of inadequate forage supplies. California rains and mild weather continued to improve pastures. Runoff replenished stock water.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., Jan. 8, 1978

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
ALA. Birmingham . . .	43	-1	1.2	+ .1	LA. Baton Rouge . . .	53	+2	1.5	+ .5	Youngstown . . . . .	28	+2	1.5	+ .9
Mobile . . . . .	50	-1	1.0	- .2	Lake Charles . . . . .	52	0	.7	- .3	OKLA. Okla. City . . .	38	+1	0	- .3
Montgomery . . . . .	49	+2	.8	- .2	New Orleans . . . . .	52	-1	2.4	+ 1.3	Tulsa . . . . .	35	-1	0	- .3
ALASKA. Anchorage . .	9	-2	T	- .2	Shreveport . . . . .	44	-3	.3	- .6	OREG. Astoria . . . . .	44	+3	3.6	+ 1.3
Barrow . . . . .	1	+15	T	0	MAINE. Caribou . . . .	6	-5	.4	- .1	Burns . . . . .	29	+4	.3	- .1
Fairbanks . . . . .	-13	+1	T	- .1	Portland . . . . .	22	0	1.1	+ .3	Medford . . . . .	45	+9	.6	- .2
Juneau . . . . .	15	-9	.2	- .7	MD. Baltimore . . . . .	35	+2	.7	0	Pendleton . . . . .	24	-7	.6	+ .2
Kodiak . . . . .	34	+4	1.0	- .1	MASS. Boston . . . . .	31	+1	.3	- .5	Portland . . . . .	36	-2	1.8	+ .4
Nome . . . . .	17	+12	.1	- .1	Chatham . . . . .	33	-1	.3	- .1	Salem . . . . .	41	+2	2.9	+ 1.3
ARIZ. Flagstaff . . . .	35	+7	.5	0	MICH. Alpena . . . . .	19	0	.3	- .1	PA. Allentown . . . . .	30	+2	.6	- .1
Phoenix . . . . .	59	+8	T	- .2	Detroit . . . . .	23	-2	.2	- .3	Erie . . . . .	28	+2	1.3	+ .7
Tucson . . . . .	55	+5	0	- .2	Flint . . . . .	23	0	.3	- .1	Harrisburg . . . . .	32	+2	1.0	+ .4
Winslow . . . . .	39	+8	0	- .1	Grand Rapids . . . . .	24	0	.1	- .4	Philadelphia . . . . .	32	-1	1.4	- .2
Yuma . . . . .	59	+5	0	- .1	Houghton Lake . . . . .	19	+1	.2	- .2	Pittsburgh . . . . .	31	+3	1.3	+ .7
ARK. Fort Smith . . . .	39	0	T	- .5	Lansing . . . . .	23	0	.2	- .3	Scranton . . . . .	32	+6	.9	+ .4
Little Rock . . . . .	43	+0	.3	- .6	Marquette . . . . .	19	0	1.1	+ .7	R.I. Providence . . . .	27	-2	.3	- .5
CALIF. Bakersfield . . .	57	+11	.2	0	Muskegon . . . . .	24	-1	.1	- .4	S.C. Charleston . . . .	50	+2	.6	- .1
Eureka . . . . .	55	+8	1.4	+ .3	S. Ste. Marie . . . . .	12	+3	1.1	+ .6	Columbia . . . . .	43	-2	.9	+ .1
Fresno . . . . .	54	+10	.7	+ .3	MINN. Duluth . . . . .	11	+2	.2	- .1	Greenville . . . . .	43	+1	1.7	+ .8
Los Angeles . . . . .	59	+2	2.7	+ 1.5	Internatl Falls . . . .	0	-2	.2	0	S.D. Aberdeen . . . . .	6	-6	T	- .1
Red Bluff . . . . .	52	+8	1.8	+ .8	Minneapolis . . . . .	11	-2	T	- .2	Huron . . . . .	6	-7	T	- .0
San Diego . . . . .	62	+7	.4	0	Rochester . . . . .	12	-1	.1	- .1	Rapid City . . . . .	16	-6	1	- .0
San Francisco . . . . .	54	+6	2.8	+ 1.8	St. Cloud . . . . .	50	+3	T	- .2	Sioux Falls . . . . .	7	-7	T	- .1
Stockton . . . . .	53	+9	.5	- .2	MISS. Jackson . . . . .	50	+3	.6	- .5	TENN. Chattanooga . . .	36	-4	1.6	+ .4
COLO. Denver . . . . .	34	+4	T	- .1	Meridian . . . . .	48	+2	1.0	- .1	Memphis . . . . .	38	+2	1.7	+ .7
Grand Junction . . . . .	29	+3	.2	+ .1	MO. Columbia . . . . .	33	+4	T	- .4	Nashville . . . . .	43	+3	2.8	+ 1.7
Pueblo . . . . .	33	+3	T	- .1	Kansas City . . . . .	28	0	0	- .3	Amarillo . . . . .	38	0	1.7	+ .6
CONN. Bridgeport . . . .	30	-1	.5	- .1	St. Louis . . . . .	32	+1	T	- .4	TEX. Abilene . . . . .	45	+1	T	- .2
Hartford . . . . .	27	+2	.8	0	Springfield . . . . .	34	+1	T	- .4	Austin . . . . .	39	+3	.2	- .4
D.C. Washington . . . .	38	+3	.8	+ .2	MONT. Billings . . . . .	14	-8	.5	+ .4	Beaumont . . . . .	54	+2	.3	- .6
FLA. Apalachicola . . .	52	-2	1.3	+ .6	Glasgow . . . . .	-1	-11	.1	0	Brownsville . . . . .	62	+2	T	- .3
Daytona Beach . . . . .	59	+1	.8	+ .4	Great Falls . . . . .	5	-16	.4	+ .2	Corpus Christi . . . . .	58	+2	.8	+ .5
Ft. Myers . . . . .	65	+1	.4	0	Havre . . . . .	-2	-14	.5	+ .4	Dallas . . . . .	51	+1	0	- .1
Jacksonville . . . . .	55	+1	.9	+ .3	Helena . . . . .	14	-4	.2	+ .1	Del Rio . . . . .	45	+2	0	- .1
Key West . . . . .	69	-2	1.4	+ 1.0	Kalispell . . . . .	19	0	1.0	+ .6	El Paso . . . . .	45	+0	T	- .4
Lakeland . . . . .	61	0	.4	- .1	Miles City . . . . .	2	-14	.1	0	Fort Worth . . . . .	45	0	T	- .6
Miami . . . . .	69	+1	.6	+ .1	Missoula . . . . .	21	0	.4	+ .1	Galveston . . . . .	57	+3	1.3	+ .4
Orlando . . . . .	62	+2	.2	- .3	NEBR. Grand Island . . .	20	-2	T	- .1	Houston . . . . .	53	+1	1.4	- .4
Tallahassee . . . . .	52	0	1.1	+ .3	Lincoln . . . . .	17	-5	T	- .1	Lubbock . . . . .	43	+4	T	- .1
Tampa . . . . .	62	+2	.7	+ .2	Norfolk . . . . .	14	-5	T	- .1	Midland . . . . .	45	+2	0	- .1
W. Palm Beach . . . . .	68	+2	.4	- .2	N. Platte . . . . .	19	-4	T	- .1	San Angelo . . . . .	47	+1	T	- .1
GA. Atlanta . . . . .	41	-1	1.7	+ .7	Omaha . . . . .	18	-2	T	- .1	San Antonio . . . . .	52	+1	T	- .3
Augusta . . . . .	45	0	.6	- .2	Valentine . . . . .	13	-7	.1	0	Victoria . . . . .	55	+1	.2	- .2
Macon . . . . .	47	0	.4	- .5	NEV. Ely . . . . .	30	+7	.2	0	Waco . . . . .	50	+3	T	- .4
Savannah . . . . .	50	+1	.5	- .2	Las Vegas . . . . .	48	+5	.2	+ .1	Wichita Falls . . . . .	41	0	T	- .3
HAWAII. Hilo . . . . .	72	+1	.5	- 1.8	Reno . . . . .	37	+6	.4	+ .1	UTAH. Blanding . . . . .	33	+5	.1	- .2
Honolulu . . . . .	73	0	.1	- .9	Winnemucca . . . . .	37	+9	.1	- .1	Salt Lake City . . . . .	38	+11	.4	+ .1
Kahului . . . . .	---	---	---	---	N.H. Concord . . . . .	18	-3	.6	0	VT. Burlington . . . . .	17	-1	.8	+ .4
Lihue . . . . .	72	0	.3	- 1.2	N.J. Atlantic City . . . .	35	+2	.3	- .5	VA. Lynchburg . . . . .	36	0	2.2	+ 1.6
IDAHO. Boise . . . . .	32	+4	.3	0	Trenton . . . . .	34	+2	1.3	+ .7	Norfolk . . . . .	41	+1	1.2	+ .5
Lewiston . . . . .	32	+1	.7	+ .4	N.MEX. Albuquerque . . .	38	+4	0	- .1	Richmond . . . . .	39	+2	1.6	+ 1.0
Pocatello . . . . .	29	+6	.4	+ .2	Roswell . . . . .	44	+7	0	- .1	Roanoke . . . . .	35	-1	1.1	+ .5
ILL. Cairo . . . . .	40	+4	1.5	+ .6	N.Y. Albany . . . . .	24	+2	.5	0	WASH. Colville . . . . .	19	-4	1.1	+ .6
Chicago . . . . .	24	-1	.1	- .3	Binghamton . . . . .	26	+4	.8	+ .2	Omak . . . . .	14	-8	.7	+ .3
Moline . . . . .	23	+1	T	- .4	Buffalo . . . . .	27	+3	1.1	+ .5	Quillayute . . . . .	41	+2	4.2	+ .8
Peoria . . . . .	23	-1	T	- .4	New York . . . . .	34	+2	.4	- .3	Seattle-Tacoma . . . . .	43	+5	2.5	+ 1.2
Rockford . . . . .	21	+1	T	- .4	Rochester . . . . .	29	+4	.7	+ .2	Spokane . . . . .	24	-1	1.4	+ .8
Springfield . . . . .	28	+1	T	- .4	Syracuse . . . . .	29	+5	.6	0	Walla Walla . . . . .	27	-6	.7	+ .2
IND. Evansville . . . . .	33	0	.4	- .4	N.C. Asheville . . . . .	38	0	2.3	+ 1.5	Yakima . . . . .	23	-4	.3	0
Ft. Wayne . . . . .	24	-2	.8	+ .2	Charlotte . . . . .	41	-1	1.4	+ .6	W.Va. Beckley . . . . .	33	+2	.8	0
Indianapolis . . . . .	29	+1	.7	+ .1	Greensboro . . . . .	38	0	2.0	+ 1.3	Charleston . . . . .	35	+1	.8	0
South Bend . . . . .	25	+1	.2	- .4	Hatteras . . . . .	43	-3	.3	- .7	Huntington . . . . .	34	0	1.5	+ .8
IOWA. Burlington . . . .	23	0	T	- .4	Raleigh . . . . .	39	-1	1.2	+ .5	Parkersburg . . . . .	32	-1	1.1	+ .4
Des Moines . . . . .	19	-1	.1	- .2	Wilmington . . . . .	46	0	.6	- .1	WIS. Green Bay . . . . .	16	0	.4	+ .2
Dubuque . . . . .	17	-1	T	- .4	N.DAK. Bismarck . . . . .	3	-6	T	- .1	La Crosse . . . . .	16	0	T	- .2
Sioux City . . . . .	16	-2	T	- .1	Fargo . . . . .	4	-3	T	- .1	Madison . . . . .	18	+1	0	- .3
KANS. Concordia . . . . .	24	-2	T	- .1	Williston . . . . .	1	-8	.2	+ .1	Milwaukee . . . . .	20	0	T	- .4
Dodge City . . . . .	32	+2	0	- .1	OHIO. Akron-Canton . . . .	28	+1	1.0	+ .4	WYO. Casper . . . . .	24	+1	.1	0
Goodland . . . . .	29	+2	T	- .1	Cincinnati . . . . .	28	-3	2.0	+ 1.3	Cheyenne . . . . .	31	+4	T	- .1
Topeka . . . . .	27	-1	T	- .3	Cleveland . . . . .	28	+1	1.2	+ .6	Lander . . . . .	23	+4	T	- .1
Wichita . . . . .	31	0	T	- .2	Columbus . . . . .	30	+2	1.8	+ 1.2	Sheridan . . . . .	16	-5	.3	+ .2
KY. Lexington . . . . .	33	0	3.0	+ 2.1	Dayton . . . . .	29	+1	1.0	+ .4	P.R. San Juan . . . . .	---	---	---	---
Louisville . . . . .	34	+1	2.1	+ 1.3	Toledo . . . . .	23	-2	.4	- .1					

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:** Temperatures ranged from 17° below to 16° above normal. Precipitation ranged from 1.00 to 2.00 in.

Fieldwork: 3.0 days suitable. Wet soils prevented final harvest. Small grains fair to good.

**ARIZONA:** Unusually mild; temperatures mostly 3 to 8° above normal. Moist air much of week.

Weather conditions nearly ideal. Cotton harvest virtually complete. Scrapping full swing many fields, nearly complete. Small grain planting underway, earlier plantings good progress. Sugarbeets good growth, top and taproot developing well. Unseasonally warm weather promoted growth alfalfa hay, seasonally slow colder areas. Safflower planting underway. Harvest lettuce, other mixed vegetables resumed. Later planted vegetables all stages, making good progress. Citrus harvest full swing, later varieties sizing well. Recent rainfall beneficial, still short. Livestock mostly fair to good condition. Supplemental feeding, watering required some areas.

**ARKANSAS:** Week began very cold, warmed to 60 and 70° 7th, ended cold. Dry except for 1.00 to 2.25 in. Rainfall 7th to 8th. Temperatures to 2° above normal.

Some fieldwork accomplished along Arkansas River in Sandy Loam areas. Some cotton scrapping. Spotted soybean harvest in low, poorly drained areas. Heavy cattle feeding. Nearly all herds on full feed.

**CALIFORNIA:** A deep low pressure area both on the surface and aloft pumped warm moist air over all of California throughout the week.

Temperatures ranged from near normal in desert and mountain areas to as much as 10° above normal in southern San Joaquin Valley. Over 2.00 in. precipitation reported in numerous areas with greatest amounts along north coast and mountain areas.

Rains benefited small grains. Sunshine needed to spur growth. Cotton scrapping, plowdown ceased. Sugarbeets doing well. Virtually all fieldwork halted; saturated fields. Deciduous crops continued to move from storage; apples, pears, pomegranates, kiwi, and grapes were main crops. Citrus harvesting slowed as rains hindered picking and markets were slow. Small quantities grapefruit, Navel oranges, and lemons picked. Early almond trees starting to show signs of pre-blooms. Rain for second week slowed all vegetable crops. Artichokes, broccoli, and cauliflower in light supply. Carrot, lettuce, celery, and potato harvests active but slower. General rains continue to improve pasture. Mild weather very conducive to good grass. Runoff replenishd stock water. San Joaquin Valley more rain necessary. Supplemental feeding continues. Lambing, calving continue; no unusual death losses.

**COLORADO:** Snow in mountains and western slope. Dry conditions remained over eastern plains. Heaviest snow occurred 6th and 7th, 10 in. in mountains. Several mountain passes reported ground blizzards. Temperatures 3 to 5° above normal west, 1 to 3° above normal east.

**FLORIDA:** Partly cloudy and warm; a few showers midweek. Mostly cloudy 8th with scattered showers

and thunderstorms. Temperatures near to slightly above normal. Rainfall from 0.25 to 1.00 in.

Soil moisture adequate. Sugarcane harvest active. Cane crop good condition. Fieldwork limited but land preparation for spring planting getting underway. Small grains good condition, growth slow due to recent cold. Tobacco plant beds mostly seeded. Pasture conditions mostly poor to fair. Few central, north areas very poor grazing. Frosts, excessive rainfall harmful; permanent pastures turning brown; small grain pastures making slow growth. Cattle condition mostly good. Citrus grove condition excellent, moisture adequate. Fruit condition excellent, trees mostly semi-dormant. Harvest for processing very active. Vegetable crops mostly good condition. Harvest picked up and back on schedule after holiday lull. Shipments up 33% from previous week. Quality, yields generally good. Volume steady to up most crops. Crops declining in supply are snap beans, escarole. Crops holding steady are carrots, cucumbers, peppers, radishes. Shipments cabbage, celery, sweet corn, chinese cabbage, eggplant, lettuce, okra, squash, tomatoes increased. Potato digging, watermelon seeding picking up. Harvest strawberries gaining. Good volume expected mid-January.

**GEORGIA:** Temperatures 3 to 6° below normal. Temperatures ranged 36° extreme northeast to 53° extreme south. Colder midweek, followed by warming. Rainfall mainly first of week except over north on 6th.

Wet weather limited fieldwork. Soil moisture mostly excessive. Corn, cotton, pecans, soybean harvest near completion. Small grains good condition. Pastures fair to good. Cattle fair condition. Tobacco bed preparation active.

**HAWAII:** Weather favorable. Rainfall light.

Crops fair to good. Spraying keeping insect disease infestations low. Some pasture areas south Kohala Island Hawaii received beneficial rains. Kona pastures still need moisture. Heavy supplemental feeding. Vegetable supplies: Chinese head cabbages, daikon, dasheen continue heavy. Others light to moderate. Banana supplies heavy. Papaya supplies light. Pineapple harvesting light. Sugar slack. Pastures poor to fair.

**IDAHO:** Temperatures 2 to 14° below normal north, 3 to 6° above normal elsewhere. Extremes: 54 and -42°. Precipitation above normal.

Winter activities: tending livestock, marketing, and repairing machinery. Calving and lambing continue. Feed supplies generally adequate. Livestock good condition.

**ILLINOIS:** Temperatures 1° below normal to 4° above normal. Precipitation less than 0.10 in. most areas, more than 1.00 in. extreme southeast. Some corn and soybeans left to harvest scattered areas. Winter wheat mostly good. Livestock doing well most areas. Soil moisture mostly adequate.

**INDIANA:** Cold beginning and end of period. Mid-period relatively warm, much fog. Several inches of snow near Lake Michigan weekend. No snow cover central and southwest.

Fieldwork continued part of week on frozen soils. Some equipment broke through ice and

mired down; some thawing late in period. Activities: Finishing corn and soybean harvest, spreading lime, fertilizer, and manure, hauling grain to elevators, caring for livestock, and doing chores. Corn and soybeans 4% unharvested.

IOWA: Temperatures near normal east to a few degrees subnormal west. Cold at the beginning, mild with thawing and fog midweek, turning bitterly cold with strong winds weekend. Freezing rain and drizzle fell over south late 4th and 5th. Snow cover diminished to traces over south and southwest to around 4 in. northeast.

KANSAS: Dry with temperatures averaging 25° north central to 34° southeast; 1° below normal central and north central, 1 to 3° above normal elsewhere.

Wheat condition generally good, well above last year's condition. Winter rye condition also above last year. Strong winds but damage generally light, limited west. No disease or insect damage. Wheat pasture 20%, last year 5%, average 15%. Some movement cattle off wheat pasture. Moisture supplies stretched to limit in west, subsoil moisture critically short.

KENTUCKY: Temperatures rose from below normal early week to well above normal by 7th. Very cold air spread back by 8th. Precipitation spotty and light 5th thru 7th then tapered off to light snow on 8th.

Burley market reopened. Livestock satisfactory, supplemental feeding heavy as temperatures drop.

LOUISIANA: Temperatures near normal. Extremes: 81 and 11°. Rain 7th and 8th; heaviest south.

Farm activities mainly feeding and care of livestock.

MARYLAND & DELAWARE: Temperatures 5° below normal. Highs in mid-40's, lows in teens. Precipitation widespread, 0.25 to 0.50 in. rain. Rain on weekend.

Most farmers limited to inside work and winter chores.

MICHIGAN: Temperatures over Lower at or slightly above normal. Over Upper temperatures generally below normal with largest departure 9° below normal. Temperatures cold early week with warming trend weekend. Precipitation was generally restricted to beginning and end of week. Precipitation over Lower averaged 0.21 in. and Upper averaged 0.87 in. Snow depths 3 in. over southern Lower and 8 in. over most of northern Lower. Extreme northern Lower and Upper reported snow depths near 25 in. at Lake Shore with near 15 in. inland.

Farm activities limited to feeding livestock and farm chores.

MINNESOTA: Temperatures 2° below normal. Extremes: 35 and -15°. Precipitation 0.10 in. below normal. Amounts ranged from trace southwest to 0.26 in. northeast. New snowfall ranged from traces southwest to about 4 in. northeast. Snow depth ranged from 3 in. southwest up to 20 in. north central, averaging about 7 in.

MISSISSIPPI: Temperatures 5° below normal. Extremes: 10 to 75°.

Soil moisture surplus to adequate north, surplus central, adequate south. Fieldwork: 1.9 days suitable. Winter wheat, oats, and livestock in fair to good condition. Hay and roughage supplies adequate. Feed grain supplies short to adequate.

MISSOURI: Cold early week; 40's and 50's later. Temperatures near normal in Bootheel; 2 to 3° above normal elsewhere. Precipitation less than 0.05 in.

Lack of snow cover permitted grazing.

MONTANA: Cold, wet except southwest. Several inches new snow west of Divide and over Plains. Temperatures much above normal southwest to between 5 and 15° below normal over central and east. Precipitation over 1.00 in. northwest to a few hundredths southwest valleys and east. Minimums below 0.

Livestock fair to good with virtually all on supplemental feed. Grazing difficult or closed.

NEBRASKA: Precipitation light. Temperatures 5° below normal except Panhandle where 5° above normal.

Winter wheat mostly good condition, fair year ago. Grain and hay supplies above normal. Over half of corn and milo stalk fields being pastured.

NEVADA: Precipitation in all areas, mostly in form of rain. Snow accumulations occurred only at higher mountain elevations. Temperatures well above normal.

Caring for livestock main ranch activity. Livestock mostly good condition.

NEW ENGLAND: Temperatures near normal. Precipitation averaged between 0.20 to 0.50 in.

NEW JERSEY: Temperatures slightly below normal averaging 28° north, 32° south and 34° coastal areas. Extremes: -2 and 63°. Precipitation below normal averaging 0.55 in. north, 0.33 in. south and 0.15 in. coastal sections.

Farmers tending livestock and doing winter chores.

NEW MEXICO: Scattered snows northern mountains first half; precipitation mostly light. General clearing on 6th with sunny weather over weekend.

Open weather allowed unhampered outdoor work. Main activities involved stalk cutting, discing, land preparation for spring planting. Soil moisture mostly short. Irrigated wheat fair to good, grazing active. Dryland wheat fair, very little grazing. Ranges fair, some very dry. Livestock good.

NEW YORK: Temperatures near or below normal. Coldest on 4th with temperatures 10 to 20° below zero northeast. Warming trend with rain developed on 8th.

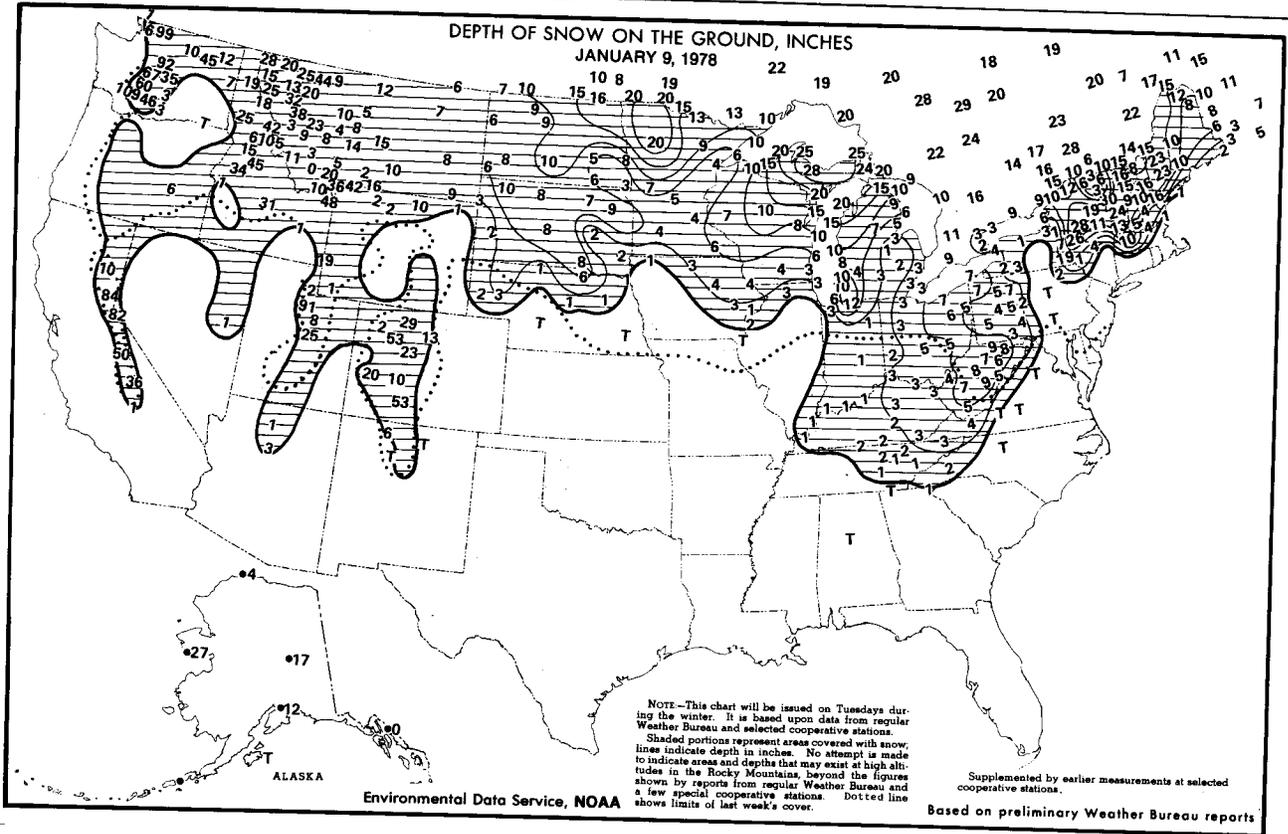
NORTH CAROLINA: Temperature near normal. Precipitation 0.33 in. to over 1.00 in. in isolated areas.

Fieldwork: 3.4 days suitable. Soil moisture adequate to surplus. Condition small grains fair to good; pastures fair. Supplies hay, roughage and feed grains short to mostly adequate.

NORTH DAKOTA: Temperatures 5 to 8° below normal. Precipitation below normal; trace to 0.10 in. Extreme: 19 and -18°.

Snow cover eliminated grazing except few isolated areas. Livestock feeding hampered but hay and other roughage accessible. Hay supplies short to adequate. Snow cover sufficient to protect fall sown grains and alfalfa. Icy, snow-packed roads and drifting snow continue to cause problems. Box car shortages for moving grain are a concern.

OHIO: Windy and cloudy early week with snow mainly northeast 2d and 3d. Rain and drizzle south and snow central and north 5th. Cloudy, foggy and mild 6th and 7th. Rain 7th, changing



to snow and turning much colder 8th. 3 to 6 in. snow over all but southwest. Snow cover should provide some protection to fall sown grains.

**OKLAHOMA:** Temperatures above normal southwest, below normal elsewhere. Ranges from 4° below normal south central to 2° above normal southwest. Extremes: 4 and 74°. No measurable precipitation. Topsoil and subsoil moisture supplies short. Wheat good to fair condition; moisture needed in all major wheat producing areas. Harvest of row crops virtually complete. Native pastures and ranges fair condition. Adequate forage available for livestock. Cattle are in good condition.

**OREGON:** Temperatures quite variable; ranging from 6° above normal to 15° below normal. Precipitation heavy along coast, ranging from 2.00 to 4.50 in. Rainfall in the western valleys ranged from 0.70 to 4.00 in. East of Cascades rainfall generally from 0.10 to 0.50 in. with locally heavy reports of 1.00 in. Extremes: High 50's, mid-20's, west; high 40's, subzero east. Farm activity light due to continuing rainfall. Some fields have surface moisture standing in them. Fall grain fields look fair. Pruning and spraying activities light. Feeding livestock continues heavy. Feed supplies adequate. Surplus of hay in some areas. Cattle and calves look good. Some damage from heavy rains and high winds reported.

**PENNSYLVANIA:** Sunny and fair days and cold clear nights first half; milder with mostly drizzle, rain and fog last half. Wide temperature fluctuation but averaged near normal. Extremes: 61 to -4°. Complex weekend weather system brought considerable warming along with strong winds and 1.00

to 3.00 in. rainfall. Rapid rises in all streams with some small stream overflows.

**SOUTH CAROLINA:** Temperatures varied considerably, averaged near normal. Extremes: 13 and 67°. Rainless first, then general rains later. Soybean, cotton harvest being completed as weather permits. Activities: Pruning, sampling soil, liming, general farm maintenance.

**SOUTH DAKOTA:** Temperatures 5 to 15° below normal. Extremes: -20 and 51°. Precipitation generally less than 0.12 in. Heavier amounts Central sections.

**TENNESSEE:** Temperatures about normal. Precipitation ranged from 2.68 in. to 1.07 in; scattered showers weekend. Rain changed to snow as temperatures dropped. Farmers limited to care of livestock and general farm chores.

**TEXAS:** Cold front 1st causing sleet, snow over north, freezing rain over southeast and south. Cold fronts also moved through 6th and 7th setting off severe thunderstorms over east, south central, southeast; while arctic front on 8th brought colder temperatures. Temperatures near normal over east and upper coast, 10° above normal over Edwards Plateau, and 5° above normal elsewhere. Rainfall near normal over north, south central and Edwards Plateau and below normal elsewhere. Small grains making little growth due to lack of moisture and cold temperatures most areas. Drought conditions on plains and west left pastures dry and dusty and stock water low. Dryland wheat stands stressed severely on High and Low Plains, some stands dying due to lack of moisture.

Dryland stands north central moisture stressed, with moisture short in nearly all other wheat areas. Irrigated stands fair to good condition. Greenbugs and grain mites causing light damage to north wheat fields. Oats, east and upper coast, furnishing fair to good grazing. Growth generally good but slowed by recent cold and ice. Cotton gins on Plains and west continue to operate on ricks and modules of field stored seed cotton. Harvest complete except for very few fields. Cotton farmers some central and southern areas preparing seedbeds for spring planting. Flax growth slowed by recent cold temperatures and ice in some areas. Pecan harvest 100%, 100% 1977, 98% average.

Lower Rio Grande Valley cold temperatures caused damage to remaining tomato and bell pepper fields. Harvest of cabbage, carrots, lettuce, broccoli, cauliflower continues. Citrus harvest steady following December rush for gift fruit. Freezing temperatures caused minor leaf burn in some areas. Trees and fruit remain in good condition. Potato and melon planting active. Coastal Bend dry conditions delayed melon planting in some areas. San Antonio-Winter Garden area most water-melon acreage prepared for planting. Harvests of broccoli, cabbage, carrots, spinach continue. Eagle Pass movement of broccoli, cauliflower, spinach steady. Central and East Texas producers breaking land and applying lime in preparation for spring planting. High Plains fields now bedded and ready for planting.

Range conditions continue to deteriorate due to lack of moisture. Permanent pastures short and dry while small grain pastures providing limited grazing in most areas except east and Upper Coast where they are supplying fair grazing. Supplemental feeding of livestock active. Cattle marketing heavy in some localities due to lack of forage.

UTAH: Snow in mountains and rain or rain and snow mixed in valleys first half. Amounts generally light to moderate. Temperatures variable ranging from 3° below normal to 7° above.

Continues concern over lack of moisture in south. Northern areas receiving good amounts.

Farming activities: Caring for livestock; marketing onions, potatoes and apples.

VIRGINIA: Rainfall averaged 0.50 to 1.00 in. Temperatures averaged slightly below normal. Extremes: 66 and 4°.

Topsoil moisture adequate to surplus. Few soybeans shattering; corn, milo harvests ending. Winter grains and grazing crops good to excellent. Activities: Pruning, hauling manure, fencing, feeding, liming, preparing and marketing dark, sun and burley tobacco.

WASHINGTON: West: Temperatures 1 to 3° below normal. Precipitation 0.10 to 1.70 in. below normal; except 0.20 in. above Puget Sound area. Increased volume alfalfa hay coming in from eastern Washington.

East: Temperatures 8 to 10° below normal. Precipitation averaged 0.20 below to 0.20 in. above normal.

Feeding livestock and equipment repair main activities. Some pruning of fruit trees and grapevines. Early lambing ongoing; also some calving.

WEST VIRGINIA: Temperatures near normal; warmest end of week. Some subzero temperatures 4th in north central and central. Precipitation near normal northwest and north central, below normal elsewhere.

Soil moisture adequate. Fieldwork: 3.7 days suitable. Hay and grain supplies mostly adequate.

WISCONSIN: Week began cold with highs in teens and lows below zero. Temperatures moderated 4th through 7th, reaching mid-30's before bitter cold arctic air returned late 7th. Highs 8th near zero. Precipitation light. Fog, drizzle, and freezing rain 5th to 7th. Snowfall 7th less than 1 in. south to 3 in. north. Heavy snow squalls near Lake Superior 8th.

WYOMING: Temperatures below normal. Precipitation scattered.

Most livestock wintering well and shortages of hay not in evidence.

## World Weather and Crop Update

January 2 - 8

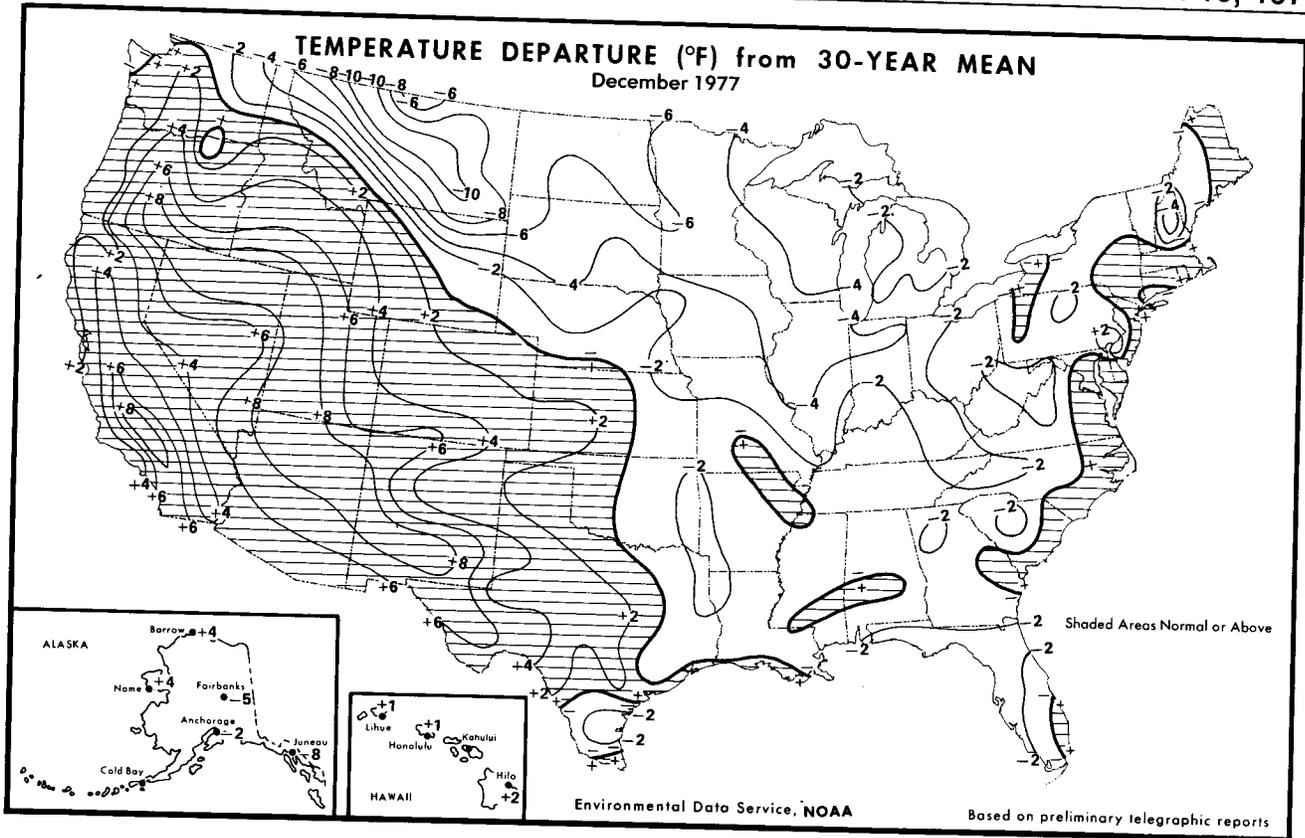
USSR. Winter grains in European USSR once again were exposed to bitter cold that may have damaged the dormant plants in some areas. Crops in the eastern Ukraine, in particular, may have been affected by temperatures that plunged to  $-21^{\circ}$  C. on January 8. Kharkov, in the northeastern Ukraine, for example, recorded an early morning temperature of  $-19^{\circ}$  C. with only a very light snow cover to help protect the plants.

ASIA. Little change took place in the Australian drought picture. Heavy rains fell along coastal regions of New South Wales, but interior regions received only light precipitation. Pastures and non-irrigated crops in most of the main agricultural areas urgently needed moisture. In the People's Republic of China, an intense high pressure system brought freezing temperatures into the south central provinces from Kweichow to Fukien on the southeastern coast.

AFRICA. Heavy rains continued to saturate the Transvaal in South Africa; excessive precipitation has caused some localized flooding. Substantial rains--1 to 2 inches--have greatly improved the moisture situation in the Orange Free State. But at the other end of the continent, light to moderate amounts of rain fell in the southern third of Morocco's wheat belt. Algeria and Tunisia received little precipitation during the period.

SOUTH AMERICA. Dry weather continued to aid the grain harvest in Argentina's southern grain areas, but summer crops and pastures needed moisture. Heavy rains helped summer crops in the northern grain sections. Timely rains, heavy in places, fell throughout much of Brazil's main agricultural portions in the southern and southeastern states. However, only light, scattered showers fell in the northeast where more rainfall is needed.

EUROPE. The first real cold snap of the winter brought freezing temperatures and snow throughout most of western Europe. Under the influence of the same weather pattern, winter grains in eastern Europe have been exposed to some of the coldest temperatures of the winter. Some damage may have occurred to winter grains in Romania where temperatures fell to  $-18^{\circ}$  C. with little or no snow cover to protect the dormant plants. Light to heavy precipitation fell throughout the central grain areas of Turkey.



### December Weather Summary

**HIGHLIGHTS:** The most notable feature of the month of December was a return to near-normal precipitation in most of the drought-stricken western U.S. Some areas received well above normal, but some minor points of the eastern Plateau Region got only small amounts of snow. Average temperatures for the month were colder than normal east of the Continental Divide. Most of this area averaged 2 to 5° colder than normal, but central Montana measured as much as 10° colder. Most of the West was as much as 7 to 9° warmer than normal.

Thunderstorms and tornadoes in the southern U.S. and record high temperatures in the mid-Atlantic States were more like late summer than the early days of December. From December 1st to 4th, heavy rain fell from the lower Mississippi River northward to the central Appalachians. Elsewhere flooding occurred in the coastal area of the Pacific Northwest as heavy rain persisted.

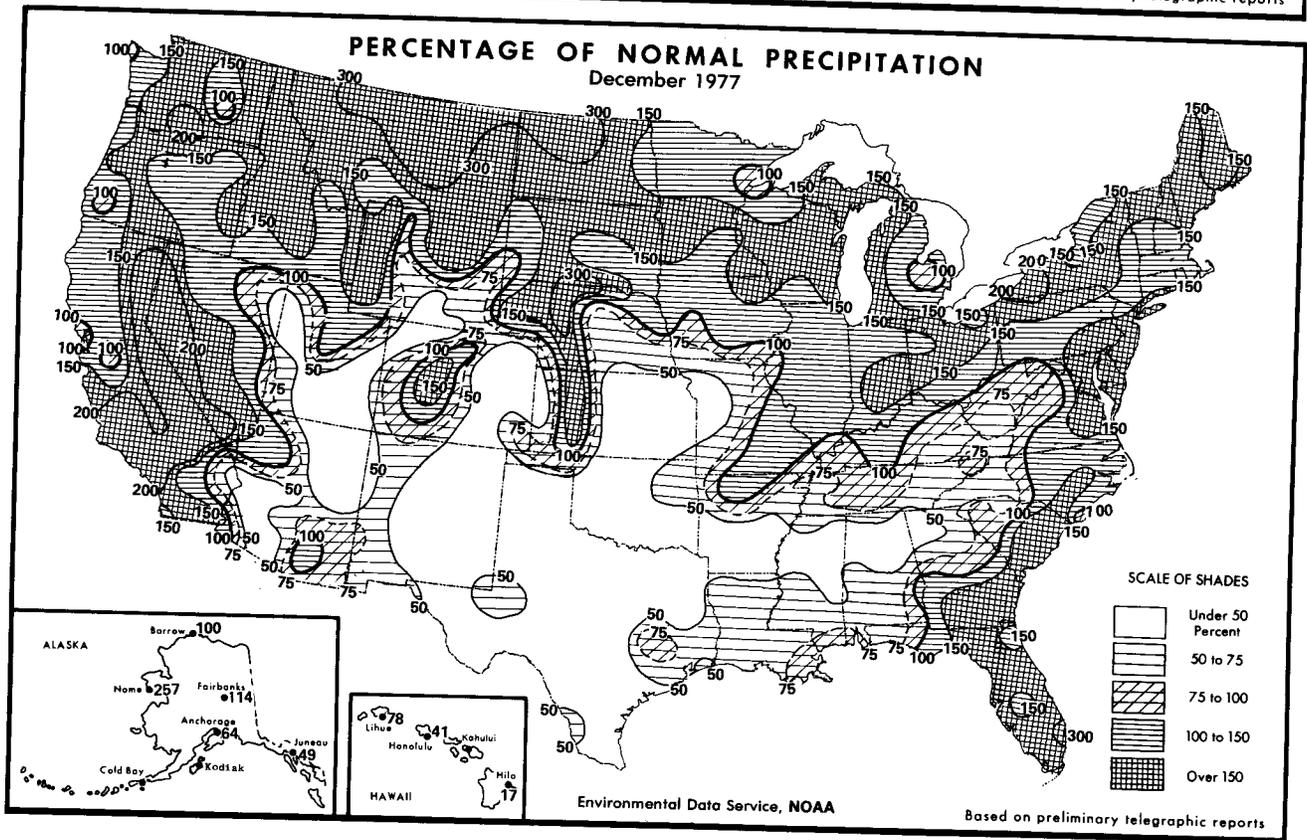
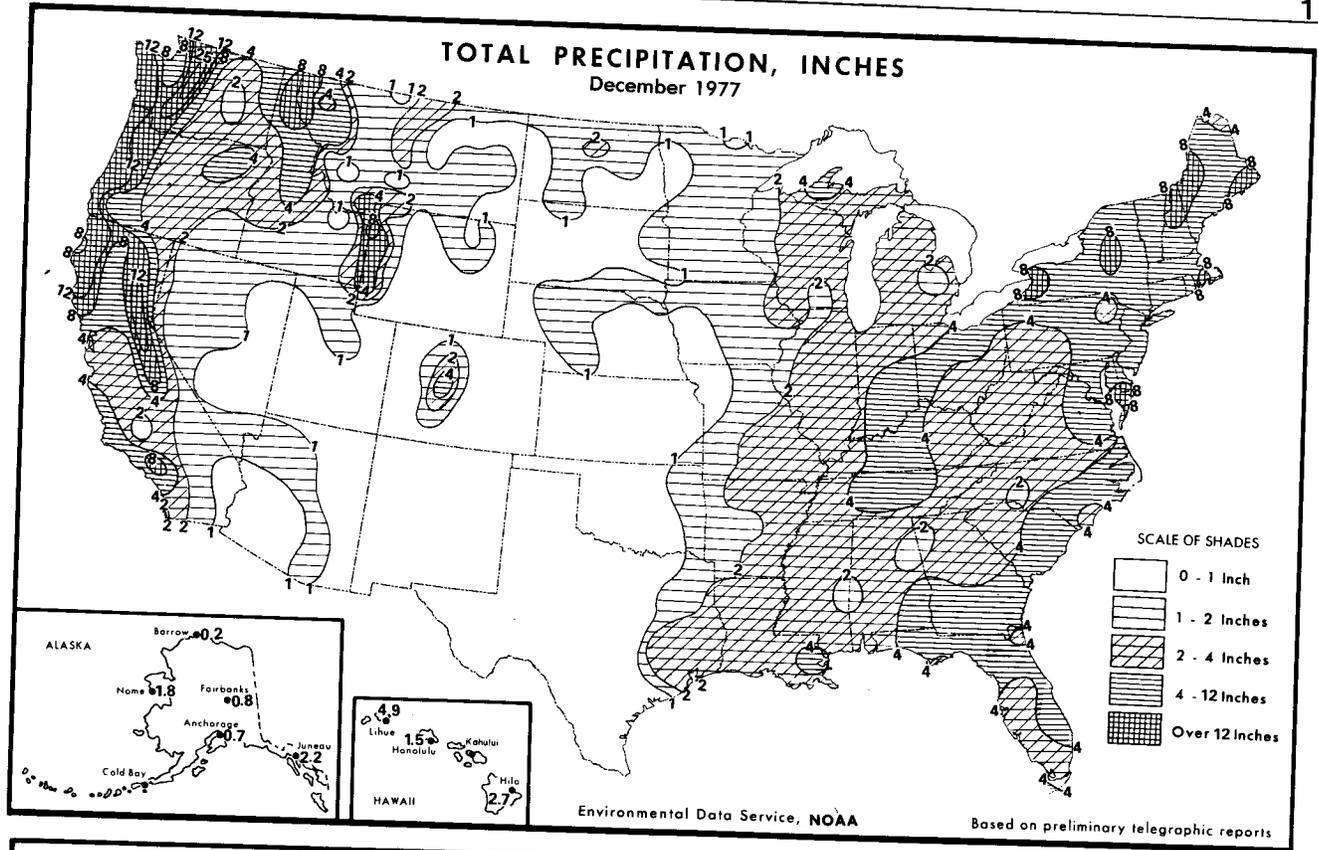
The week of December 5th to 11th was quite different from the earlier days. An outbreak of cold air moved southward from Canada and enveloped the entire Nation east of the Rockies. Freezing temperatures dipped into the Deep South and northern Florida. Sub-zero readings were recorded from the central Plains to New England. Ahead of the cold air another outbreak of thunderstorms and tornadoes hit the South and freezing rain, sleet, or snow fell from central Appalachians through the Ohio Valley and New England. Rain--snow in the mountains--continued in the Northwest and spread southward to central California.

In the week of mid-December, precipitation in some form fell over nearly all of the Nation. Exceptions were southern Arizona and sections of New Mexico and the area from West Texas through western Kansas and eastern Colorado where rain was

badly needed. Rain covered the entire West Coast and snow fell all the way to the Rockies and south to northern Arizona and New Mexico. Snow also fell from the northern Plains eastward through New England. Moderate rain occurred from East Texas to the mid-Atlantic States and in the Southeast. Only New England recorded colder-than-normal temperatures. Elsewhere readings were well above normal--as much as 12 to 15° warmer than normal in parts of the Plains.

Early in the third week of December a ridge of high pressure began building over the western U.S. and, as a low pressure system deepened in the Pacific, a situation developed which triggered very high winds blowing from the Sierras westward. Considerable property and crop damage resulted. Blessings were mixed, however; as the low pressure moved inland the wind subsided and rain started. More snow covered the mountains adding to the moisture storage which will be needed as irrigation water in the summer. Thunderstorms and tornadoes occurred again in the South and rain or snow covered most of the area east of the Mississippi River.

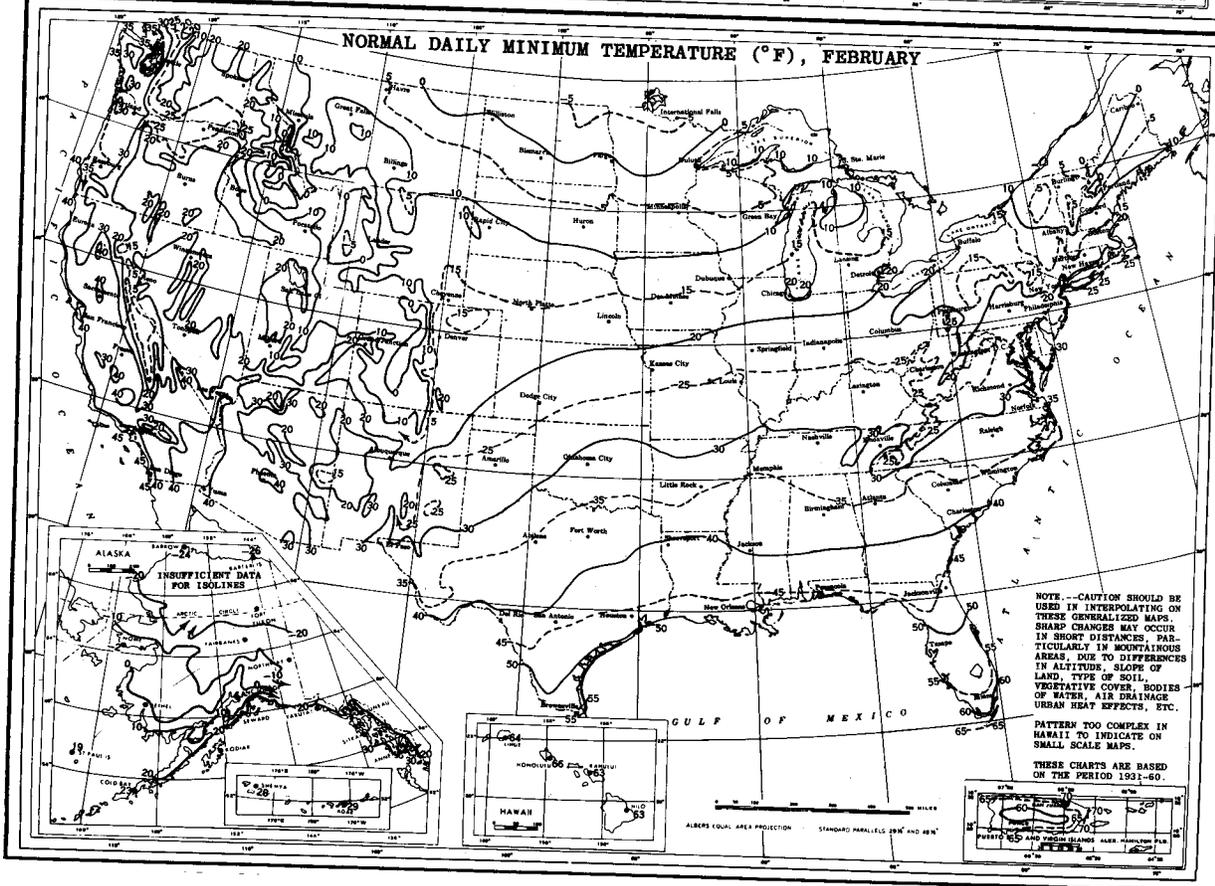
Precipitation fell in nearly all of the Nation during the last week in December. Even the dry area of West Texas received welcome but light amounts. Excluded again was the area of western Kansas and eastern Colorado. The persistent low pressure area off the West Coast continued to steer Pacific storms into the western U.S. This is a normal situation for this time of year but one that has not developed with such persistence during the last two years. Temperatures in all but the southwestern quarter of the U.S. were colder than normal. Freezing temperatures extended well into central Florida, but little crop damage was reported.

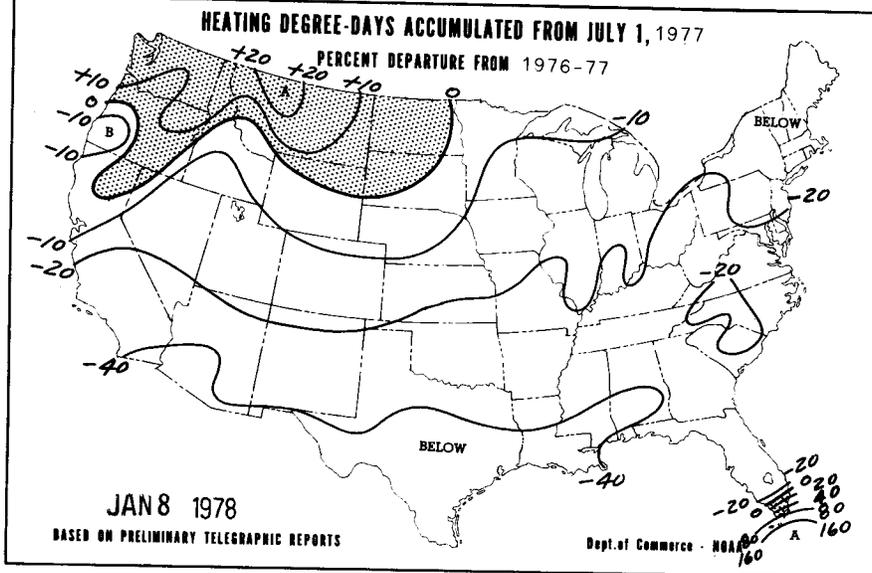
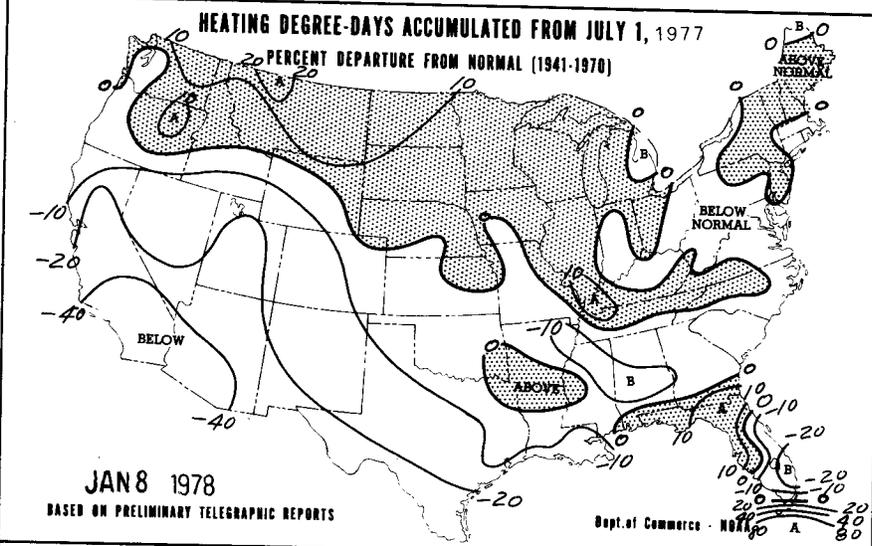
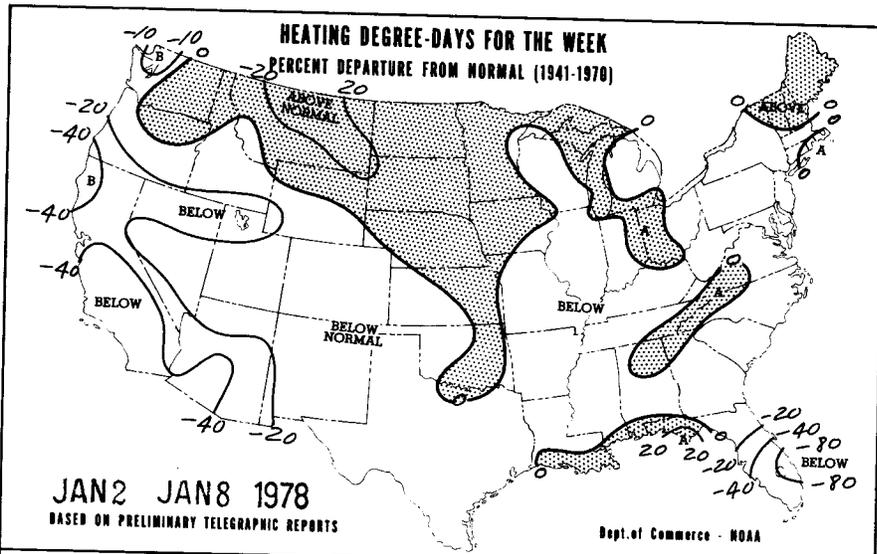


Temperature and Precipitation Data for December, 1977

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
ALA.Birmingham . . .	44	- 1	2.0	- 3.2	LA.Baton Rouge . . .	53	0	2.9	- 2.1	Youngstown . . .	28	- 1	3.8	+ 1.2
Mobile . . .	51	- 2	4.0	- 1.0	Lake Charles . . .	53	- 1	3.2	- 2.5	OKLA.Okla. City . . .	40	0	.3	- 1.0
Montgomery . . .	50	+ 1	3.1	- 1.8	New Orleans . . .	54	- 1	4.2	- .9	Tulsa . . .	39	- 1	.9	- .7
ALASKA.Anchorage . . .	11	- 2	.7	- .4	Shreveport . . .	47	- 2	2.6	- 1.6	OREG.Astoria . . .	44	+ 1	14.3	+ 3.7
Barrow . . .	8	+ 4	.2	0	MAINE.Caribou . . .	17	+ 1	3.6	+ 1.0	Burns . . .	32	+ 4	2.3	+ .6
Fairbanks . . .	15	- 5	.8	+ .1	Portland . . .	25	- 1	6.6	+ 2.5	Medford . . .	43	+ 5	4.8	+ 1.1
Juneau . . .	19	- 8	2.2	- 2.3	MD.Baltimore . . .	36	+ 1	5.8	+ 2.5	Pendleton . . .	35	- 1	2.4	+ .9
Kodiak . . .	-	-	-	-	MASS.Boston . . .	34	+ 1	6.2	+ 2.0	Portland . . .	42	+ 1	9.0	+ 3.0
Nome . . .	8	+ 4	1.8	+ 1.1	Chatham . . .	35	-	8.6	-	Salem . . .	43	+ 2	8.7	+ 1.8
ARIZ.Flagstaff . . .	38	+ 8	1.2	- 1.0	MICH.Alpena . . .	22	- 1	2.3	+ .4	PA.Allentown . . .	30	- 1	5.5	+ 1.9
Phoenix . . .	60	+ 7	1.5	- 2.6	Detroit . . .	26	- 3	3.0	+ .7	Erie . . .	28	- 1	5.6	+ 2.8
Tucson . . .	57	+ 5	1.3	+ .4	Flint . . .	26	- 1	1.5	- .2	Harrisburg . . .	32	- 1	4.8	+ 1.7
Winslow . . .	42	+ 8	.1	- .3	Grand Rapids . . .	26	- 1	3.4	+ 1.2	Philadelphia . . .	33	- 2	5.2	+ 1.9
Yuma . . .	60	+ 4	.6	+ .5	Houghton Lake . . .	21	- 2	2.2	+ .4	Pittsburgh . . .	31	0	3.3	+ .8
ARK.Fort Smith . . .	40	- 2	1.3	- 1.6	Lansing . . .	25	- 2	2.3	+ .3	Scranton . . .	30	0	3.4	+ .9
Little Rock . . .	41	- 1	1.5	- 2.6	Marquette . . .	22	- 2	3.2	+ 1.2	R.I.Providence . . .	32	0	5.9	+ 1.8
CALIF.Bakersfield . . .	57	+ 9	1.8	+ 1.1	Muskegon . . .	26	- 3	4.0	+ 1.6	S.C.Charleston . . .	50	+ 1	5.9	+ 2.8
Eureka . . .	51	+ 2	6.6	0	S. Ste. Marie . . .	20	0	3.4	+ 1.0	Columbia . . .	44	- 2	3.7	+ .3
Fresno . . .	51	+ 5	3.0	+ 1.3	MINN.Duluth . . .	11	- 3	1.3	- .1	Greenville . . .	43	0	3.6	- .5
Los Angeles . . .	61	+ 3	4.7	+ 2.5	Internatl Falls . . .	4	- 5	1.0	0	S.D.Aberdeen . . .	11	- 6	.8	+ .3
Red Bluff . . .	50	+ 4	4.6	+ .7	Minneapolis . . .	14	- 5	1.2	+ .3	Huron . . .	16	- 3	.5	0
San Diego . . .	63	+ 6	1.7	0	Rochester . . .	14	- 5	1.6	+ .8	Rapid City . . .	22	- 5	4	0
San Francisco . . .	52	+ 2	3.7	- .3	St. Cloud . . .	11	- 5	1.4	+ .5	Sioux Falls . . .	16	- 4	.9	+ .2
Stockton . . .	50	+ 4	2.5	+ .2	MISS.Jackson . . .	48	- 1	3.5	- 1.5	TENN.Chattanooga . . .	41	0	2.4	- 2.9
COLO.Denver . . .	35	+ 2	T	- .4	Meridian . . .	48	0	1.7	- 3.9	Knoxville . . .	40	- 2	3.3	- 1.2
Grand Junction . . .	33	+ 3	.4	- .2	MO.Columbia . . .	31	- 2	1.2	- .6	Memphis . . .	44	+ 1	3.4	- 1.3
Pueblo . . .	36	+ 3	T	- .3	Kansas City . . .	30	- 2	.4	- 1.1	Nashville . . .	39	- 1	4.3	- .2
CONN.Bridgeport . . .	33	- 1	5.3	+ 1.8	St. Louis . . .	31	- 4	2.3	+ .3	TEX.Abilene . . .	49	+ 3	.2	- .8
Hartford . . .	28	0	5.7	+ 1.6	Springfield . . .	36	0	1.6	- .9	Amarillo . . .	40	+ 1	.3	- .4
D.C.Washington . . .	38	+ 1	4.9	+ 1.9	MONT.Billings . . .	20	- 7	1.7	+ 1.0	Austin . . .	54	+ 2	.3	- 1.9
FLA.Apalachicola . . .	53	- 2	3.7	+ .4	Glasgow . . .	8	- 9	.9	+ .6	Beaumont . . .	55	+ 1	2.0	- 2.9
Daytona Beach . . .	58	- 2	4.7	+ 2.7	Great Falls . . .	17	- 10	1.9	+ 1.2	Brownsville . . .	64	+ 1	.1	- 1.1
Ft. Myers . . .	63	- 2	2.7	+ 1.4	Havre . . .	12	- 6	2.0	+ 1.6	Corpus Christi . . .	62	- 3	.1	- 1.4
Jacksonville . . .	53	- 2	3.4	+ .8	Helena . . .	21	- 2	1.5	+ .9	Dallas . . .	-	-	-	-
Key West . . .	69	- 3	4.4	+ 2.9	Kalispell . . .	19	- 5	3.5	+ 2.0	Del Rio . . .	56	+ 4	T	- .5
Lakeland . . .	60	- 2	2.6	+ .5	Miles City . . .	14	- 8	1.2	+ .7	El Paso . . .	50	+ 6	.3	- .2
Miami . . .	69	+ 1	2.6	+ 1.0	Missoula . . .	25	0	2.9	+ 1.8	Fort Worth . . .	48	0	.3	+ 1.5
Orlando . . .	61	- 1	3.7	+ 1.8	NEBR.Grand Island . . .	27	0	.4	- .2	Galveston . . .	58	+ 1	1.5	- 2.2
Tallahassee . . .	51	- 2	6.0	+ 1.8	Lincoln . . .	25	- 2	.4	- .3	Houston . . .	54	- 1	2.9	- 1.1
Tampa . . .	59	- 3	3.4	+ 1.2	Norfolk . . .	22	- 2	.5	- .1	Lubbock . . .	45	+ 4	T	- .6
W.Palm Beach . . .	67	0	7.4	+ 5.2	N.Platte . . .	25	- 2	1.2	+ .8	Midland . . .	49	+ 3	.3	- .2
GA.Atlanta . . .	42	- 2	2.4	- 1.8	Omaha . . .	24	- 2	.6	- .2	San Angelo . . .	52	+ 4	.2	- .5
Augusta . . .	46	0	3.0	- .4	Valentine . . .	20	- 4	1.0	+ .7	San Antonio . . .	53	0	.3	- 1.2
Macon . . .	47	- 1	3.8	- .5	NEV.Ely . . .	31	+ 5	.9	+ .2	Victoria . . .	58	+ 2	.5	- 1.5
Savannah . . .	50	0	5.8	+ 2.5	Las Vegas . . .	52	+ 7	1.1	+ .7	Waco . . .	52	+ 2	.2	- 1.8
HAWAII.Hilo . . .	74	+ 2	2.7	- 13.1	Reno . . .	38	+ 5	2.5	+ 1.4	Wichita Falls . . .	44	0	.1	- 1.2
Honolulu . . .	75	+ 1	1.5	- 2.2	Winnemucca . . .	39	+ 9	1.2	+ .3	UTAH.Blanding . . .	35	+ 5	.6	- .7
Kahului . . .	-	-	-	-	N.H.Concord . . .	21	- 4	4.0	+ .7	Salt Lake City . . .	38	+ 8	1.4	0
Lihue . . .	74	+ 1	4.9	- 1.4	N.J.Atlantic City . . .	35	0	4.7	+ .7	VT.Burlington . . .	22	- 1	3.4	+ 1.2
IDAHO.Boise . . .	37	+ 5	2.5	+ 1.1	Trenton . . .	34	- 1	5.6	+ 2.3	VA.Lynchburg . . .	36	- 2	3.3	+ .1
Lewiston . . .	37	+ 2	2.1	+ .8	N.MEX.Albuquerque . . .	40	+ 4	.1	- .4	Norfolk . . .	44	+ 2	3.9	+ .8
Pocatello . . .	33	+ 6	1.1	+ .1	Roswell . . .	47	+ 8	T	- .5	Richmond . . .	40	+ 1	5.6	+ 2.4
ILL.Cairo . . .	37	- 2	3.0	+ .9	N.Y.Albany . . .	27	+ 1	4.2	+ 1.3	Roanoke . . .	36	- 1	2.5	- .6
Chicago . . .	25	- 4	2.4	+ .3	Binghamton . . .	25	0	4.8	+ 2.0	WASH.Colville . . .	24	- 3	3.5	+ 1.3
Moline . . .	22	- 5	1.8	0	Buffalo . . .	28	0	8.0	+ 5.0	Omak . . .	26	- 1	2.0	+ .4
Peoria . . .	23	- 5	2.3	+ .4	New York . . .	36	0	4.9	+ 1.3	Quillayute . . .	40	- 1	15.0	- .6
Rockford . . .	20	- 5	1.9	+ .2	Rochester . . .	28	0	4.7	+ 2.3	Seattle-Tacoma . . .	42	+ 1	6.5	+ .6
Springfield . . .	27	- 4	2.2	+ .3	Syracuse . . .	27	- 1	4.3	+ 1.2	Spokane . . .	26	- 3	4.5	+ 2.1
IND.Evansville . . .	34	- 1	3.2	- .1	N.C.Asheville . . .	37	- 2	2.4	- 1.2	Walla Walla . . .	38	+ 1	3.8	+ 1.8
Ft. Wayne . . .	25	- 4	2.8	+ .6	Charlotte . . .	43	0	2.0	- 1.4	Yakima . . .	34	+ 3	2.8	+ 1.6
Indianapolis . . .	29	- 2	4.3	+ 1.6	Greensboro . . .	38	- 2	3.3	+ .1	W.Va.Beckley . . .	33	0	2.1	+ 1.2
South Bend . . .	26	- 2	3.7	+ 1.2	Hatteras . . .	49	+ 1	6.0	+ 1.5	Charleston . . .	35	- 1	2.1	- 1.1
IOWA.Burlington . . .	24	- 4	1.4	- .2	Raleigh . . .	40	- 1	3.7	+ .6	Huntington . . .	35	- 1	2.3	- .7
Des Moines . . .	23	- 2	1.8	+ .7	Wilmington . . .	38	0	2.8	- .6	Parkersburg . . .	33	- 2	2.3	- .5
Dubuque . . .	18	- 5	2.5	+ .6	N.DAK.Bismarck . . .	11	- 5	.8	+ .3	WIS.Green Bay . . .	18	- 3	2.3	+ 1.0
Sioux City . . .	23	- 1	1.0	+ .2	Fargo . . .	7	- 6	.8	+ .2	La Crosse . . .	17	- 5	1.7	+ .7
KANS.Concordia . . .	30	0	T	- .8	Williston . . .	8	- 7	.9	+ .4	Madison . . .	20	- 2	1.6	+ .1
Dodge City . . .	36	+ 3	.8	+ .3	OHIO.Akron-Canton . . .	28	- 1	4.1	+ 1.7	Milwaukee . . .	22	- 2	3.3	+ 1.5
Goodland . . .	31	+ 1	.1	- .3	Cincinnati . . .	29	- 5	4.0	+ 1.1	WVO.Casper . . .	25	- 1	.7	+ .2
Topeka . . .	30	- 2	.3	- 1.2	Cleveland . . .	29	- 1	3.5	+ 1.1	Cheyenne . . .	29	0	.2	- .2
Wichita . . .	35	0	.2	- .9	Columbus . . .	30	- 1	3.5	+ 1.1	Lander . . .	26	+ 3	.3	- .2
KY.Lexington . . .	33	- 3	3.0	- .6	Dayton . . .	29	- 2	4.5	+ 2.2	Sheridan . . .	18	- 8	1.4	+ .7
Louisville . . .	35	- 1	4.3	+ 1.0	Toledo . . .	25	- 3	3.6	+ 1.4	P.R.San Juan . . .	79	+ 2	4.0	- .7

Based on 1941-70 normals





HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING JAN. 8, 1978.

STATES AND STATIONS	WEEKLY			SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY			SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY			SEASONAL ACCUMULATION +			
	TOTAL	DEPARTURE*	DEPARTURE FROM 1976-77	TOTAL	DEPARTURE*	DEPARTURE FROM 1976-77		TOTAL	DEPARTURE*	DEPARTURE FROM 1976-77	TOTAL	DEPARTURE*	DEPARTURE FROM 1976-77		TOTAL	DEPARTURE*	DEPARTURE FROM 1976-77	TOTAL	DEPARTURE*	DEPARTURE FROM 1976-77	
ALA. BIRMINGHAM...	15	2	129	22	51	51	MAINE CARIBOU...	45	29	683	YOUNGSTOWN...	260	13	32	867	OKLA. OKLAHOMA CITY...	191	7	59	499	
MOBILE...	10	1	78	20	70	70	PORTLAND...	50	32	435	TULSA...	203	7	47	554	OREG ASTORIA...	145	26	13	225	
MONTGOMERY...	10	25	85	20	102	102	MD BALTIMORE...	211	13	1923	BURNS...	145	26	13	225	MEDFORD...	145	26	13	225	
ARIZ FLAGSTAFF...	20	7	2373	80	581	581	MASS BOSTON...	235	12	2161	PENDLETON...	145	26	13	225	PORTLAND...	145	26	13	225	
PHOENIX...	47	2	2241	80	581	581	MICH ALPENA...	113	10	92	SALEM...	145	26	13	225	PA ALLENTOWN...	117	19	24	124	
TUCSON...	17	1	1448	40	286	286	DETROIT...	10	10	3347	LANSTING...	145	26	13	225	ERIE...	145	26	13	225	
YUMA...	18	4	1715	40	286	286	FLINT...	10	10	3347	HARQUETTE...	145	26	13	225	HARRISBURG...	145	26	13	225	
ARK FORT SMITH...	18	4	1508	40	286	286	GRAND RAPIDS...	10	10	3347	MUSKOGON...	145	26	13	225	PHILADELPHIA...	145	26	13	225	
LITTLE ROCK...	18	4	1433	40	286	286	HOUGHTON LAKE...	10	10	3347	S. STE. MARIE...	145	26	13	225	PITTSBURGH...	145	26	13	225	
CALIF BAKERSFIELD...	5	5	465	54	286	286	LANSTING...	10	10	3347	MINN DULUTH...	145	26	13	225	SCRANTON...	145	26	13	225	
EUREKA...	7	7	204	14	286	286	HARQUETTE...	10	10	3347	INTERNATL FALLS...	145	26	13	225	S. I. PROVIDENCE...	145	26	13	225	
FRESNO...	7	7	204	14	286	286	INTERNATL FALLS...	10	10	3347	HINNEAPOLIS...	145	26	13	225	C. CHARLESTON...	145	26	13	225	
LOS ANGELES...	7	7	204	14	286	286	HINNEAPOLIS...	10	10	3347	ST. CLOUD...	145	26	13	225	COLUMBIA...	145	26	13	225	
SAN DIEGO...	7	7	204	14	286	286	ST. CLOUD...	10	10	3347	MISS JACKSON...	145	26	13	225	GREENVILLE...	145	26	13	225	
SAN FRANCISCO...	7	7	204	14	286	286	MISS JACKSON...	10	10	3347	MD COLUMBIA...	145	26	13	225	S. DAK ABERDEEN...	145	26	13	225	
STOCKTON...	7	7	204	14	286	286	ROCHESTER...	10	10	3347	KANSAS CITY...	145	26	13	225	HURON...	145	26	13	225	
COLO DENVER...	3	3	223	258	32	32	ST. LOUIS...	10	10	3347	ST. LOUIS...	145	26	13	225	RAPID CITY...	145	26	13	225	
GRAND JUNCTION...	3	3	223	258	32	32	SPRINGFIELD...	10	10	3347	MO. KANSAS CITY...	145	26	13	225	SIoux FALLS...	145	26	13	225	
PUEBLO...	3	3	223	258	32	32	CONN BRIDGEPORT...	10	10	3347	ST. LOUIS...	145	26	13	225	TEXAS ABILENE...	145	26	13	225	
CONEC HARTFORD...	2	2	2029	85	450	450	HARTFORD...	10	10	3347	DELAWARE DOVER...	145	26	13	225	AMARILLO...	145	26	13	225	
WILMINGTON...	2	2	2029	85	450	450	D.C. WASHINGTON...	10	10	3347	FLA APALACHICOLA...	145	26	13	225	AUSTIN...	145	26	13	225	
FLA APALACHICOLA...	105	22	617	145	514	514	FLA APALACHICOLA...	105	22	617	DAVONA BEACH...	145	26	13	225	BEAUMONT...	145	26	13	225	
DAVONA BEACH...	105	22	617	145	514	514	DAVONA BEACH...	105	22	617	JACKSONVILLE...	145	26	13	225	BROWNSVILLE...	145	26	13	225	
FORT HERSH...	105	22	617	145	514	514	FORT HERSH...	105	22	617	KEY WEST...	145	26	13	225	CORPUS CHRISTI...	145	26	13	225	
JACKSONVILLE...	105	22	617	145	514	514	JACKSONVILLE...	105	22	617	LAKELAND...	145	26	13	225	DEL RIO...	145	26	13	225	
KEY WEST...	105	22	617	145	514	514	KEY WEST...	105	22	617	MIAMI...	145	26	13	225	FORT WORTH...	145	26	13	225	
LAKELAND...	105	22	617	145	514	514	LAKELAND...	105	22	617	ORLANDO...	145	26	13	225	GALVESTON...	145	26	13	225	
MIAMI...	105	22	617	145	514	514	MIAMI...	105	22	617	TALLAHASSEE...	145	26	13	225	HOUSTON...	145	26	13	225	
ORLANDO...	105	22	617	145	514	514	ORLANDO...	105	22	617	TAMPA...	145	26	13	225	LUBBOCK...	145	26	13	225	
TALLAHASSEE...	105	22	617	145	514	514	TALLAHASSEE...	105	22	617	WEST PALM BEACH...	145	26	13	225	MIDLAND...	145	26	13	225	
TAMPA...	105	22	617	145	514	514	TAMPA...	105	22	617	GA ATLANTA...	15	16	1388	SAN ANGELO...	145	26	13	225		
WEST PALM BEACH...	105	22	617	145	514	514	WEST PALM BEACH...	105	22	617	AUGUSTA...	15	16	1388	SAN ANTONIO...	145	26	13	225		
GA ATLANTA...	15	16	1388	16	555	555	GA ATLANTA...	15	16	1388	Macon...	15	16	1388	SAN ANTONIO...	145	26	13	225		
AUGUSTA...	15	16	1388	16	555	555	AUGUSTA...	15	16	1388	SAVANNAH...	15	16	1388	SAN ANTONIO...	145	26	13	225		
MACON...	15	16	1388	16	555	555	MACON...	15	16	1388	IDAHO BOISE...	20	9	2412	SAN ANTONIO...	145	26	13	225		
SAVANNAH...	15	16	1388	16	555	555	SAVANNAH...	15	16	1388	LEWISTON...	20	9	2412	SAN ANTONIO...	145	26	13	225		
IDAHO BOISE...	20	9	2412	20	340	340	IDAHO BOISE...	20	9	2412	POCATELLO...	20	9	2412	UTAH SALT LAKE CITY...	190	7	2086	580		
LEWISTON...	20	9	2412	20	340	340	LEWISTON...	20	9	2412	ILL CAIRO...	97	18	1886	BURLINGTON...	336	6	3332	39		
POCATELLO...	20	9	2412	20	340	340	POCATELLO...	20	9	2412	CHICAGO...	97	18	1886	VA LYNCHBURG...	203	18	1876	502		
UTAH SALT LAKE CITY...	190	7	2086	190	7	2086	UTAH SALT LAKE CITY...	190	7	2086	POLINE...	97	18	1886	NORFOLK...	203	18	1876	11		
ILL CAIRO...	97	18	1886	97	18	1886	ILL CAIRO...	97	18	1886	ROCKFORD...	97	18	1886	RICHMOND...	203	18	1876	498		
CHICAGO...	97	18	1886	97	18	1886	CHICAGO...	97	18	1886	SPRINGFIELD...	97	18	1886	ROANOKE...	203	18	1876	491		
POLINE...	97	18	1886	97	18	1886	POLINE...	97	18	1886	IND EVANSVILLE...	20	25	27	541	WASH QUILLAYUTE...	166	18	2789	118	
ROCKFORD...	97	18	1886	97	18	1886	ROCKFORD...	97	18	1886	FORT HAVRE...	20	25	27	541	SEATTLE-TACOMA...	166	18	2789	288	
SPRINGFIELD...	97	18	1886	97	18	1886	SPRINGFIELD...	97	18	1886	INDIANAPOLIS...	20	25	27	541	SPOKANE...	166	18	2789	449	
IND EVANSVILLE...	20	25	27	541	541	541	IND EVANSVILLE...	20	25	27	541	SOUTH BEND...	20	25	27	541	HALLA HALLA...	166	18	2789	100
FORT HAVRE...	20	25	27	541	541	541	FORT HAVRE...	20	25	27	541	IOWA BURLINGTON...	19	19	19	19	YAKIMA...	166	18	2789	115
INDIANAPOLIS...	20	25	27	541	541	541	INDIANAPOLIS...	20	25	27	541	DES MOINES...	19	19	19	19	VA BECKLEY...	166	18	2789	91
SOUTH BEND...	20	25	27	541	541	541	SOUTH BEND...	20	25	27	541	DUBUQUE...	19	19	19	19	CHARLESTON...	166	18	2789	736
IOWA BURLINGTON...	19	19	19	19	19	19	IOWA BURLINGTON...	19	19	19	19	BURRIDGE...	19	19	19	19	HUNTINGTON...	166	18	2789	621
DES MOINES...	19	19	19	19	19	19	DES MOINES...	19	19	19	19	SIoux CITY...	19	19	19	19	PARKERSBURG...	166	18	2789	175
DUBUQUE...	19	19	19	19	19	19	DUBUQUE...	19	19	19	19	KANS CONCORDIA...	11	11	353	353	WIS GREEN BAY...	166	18	2789	743
SIoux CITY...	19	19	19	19	19	19	SIoux CITY...	19	19	19	19	BODGE CITY...	11	11	353	353	LACROSSE...	166	18	2789	441
KANS CONCORDIA...	11	11	353	353	353	353	KANS CONCORDIA...	11	11	353	353	GOODLAND...	11	11	353	353	HADISON...	166	18	2789	604
BODGE CITY...	11	11	353	353	353	353	BODGE CITY...	11	11	353	353	TOPERA...	11	11	353	353	WILLAUKEE...	166	18	2789	565
GOODLAND...	11	11	353	353	353	353	GOODLAND...	11	11	353	353	NICHITA...	11	11	353	353	WYO CASPER...	11	11	353	125
TOPERA...	11	11	353	353	353	353	TOPERA...	11	11	353	353	KY LEXINGTON...	20	20	20	20	CHEYENNE...	11	11	353	220
NICHITA...	11	11	353	353	353	353	NICHITA...	11	11	353	353	LOUISVILLE...	20	20	20	20	HADISON...	11	11	353	175
KY LEXINGTON...	20	20	20	20	20	20	KY LEXINGTON...	20	20	20	20	LA BATON ROUGE...	15	15	638	638	SHERIDAN...	11	11	353	216
LOUISVILLE...	20	20	20	20	20	20	LOUISVILLE...	20	20	20	20	LAKE CHARLES...	15	15	638	638					
LA BATON ROUGE...	15	15	638	638	638	638	LA BATON ROUGE...	15	15	638	638	NEW ORLEANS...	15	15	638	638					
LAKE CHARLES...	15	15	638	638	638	638	LAKE CHARLES...	15	15	638	638	SHREVEPORT...	15	15	638	638					
NEW ORLEANS...	15	15	638	638	638																

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