

Weekly Weather & Crop Bulletin

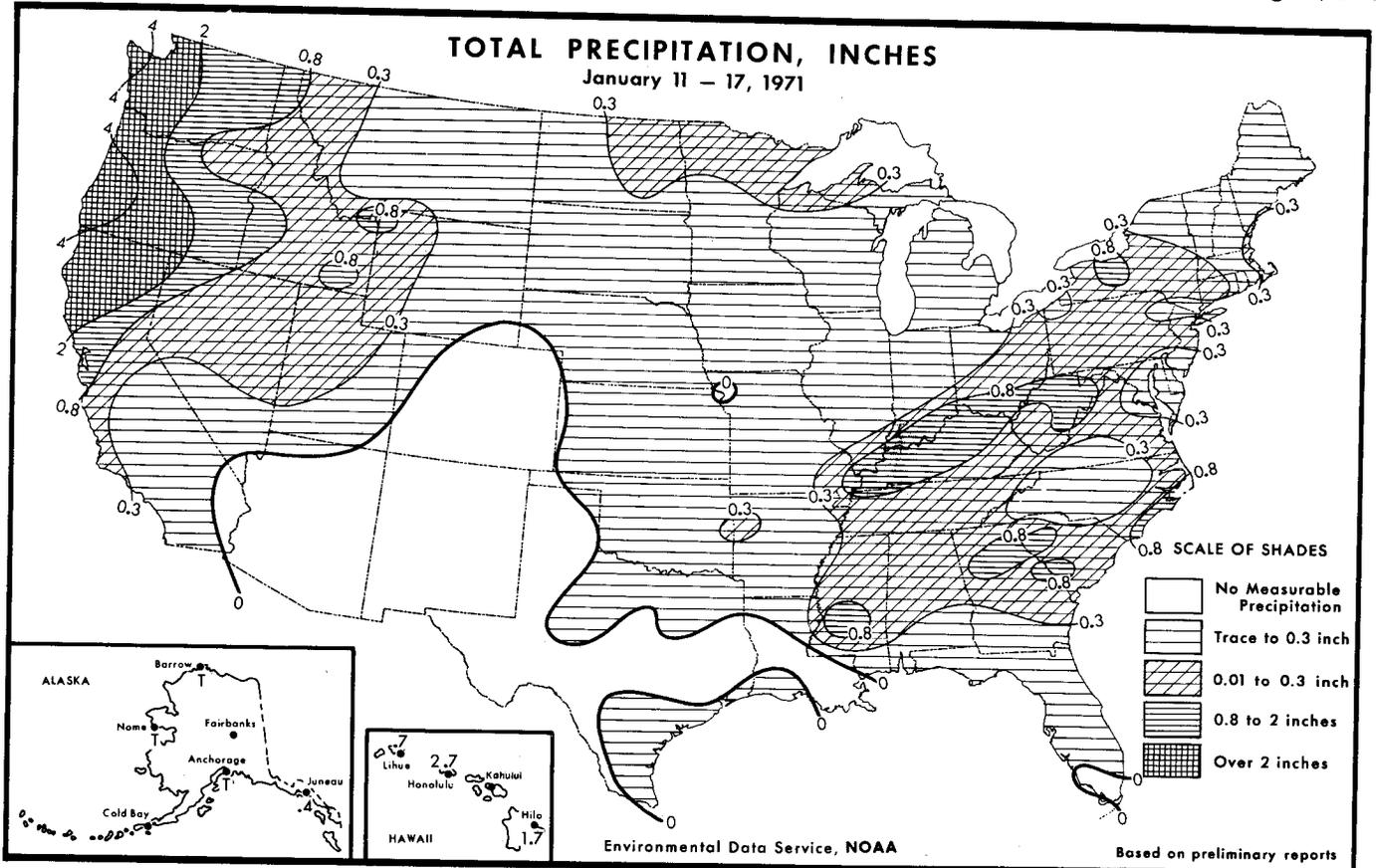
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Edited by Lucius W. Dye

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NATIONAL WEATHER SUMMARY

HIGHLIGHTS: Miserable weather occurred in most northern and central areas last week. The South was exceedingly pleasant.

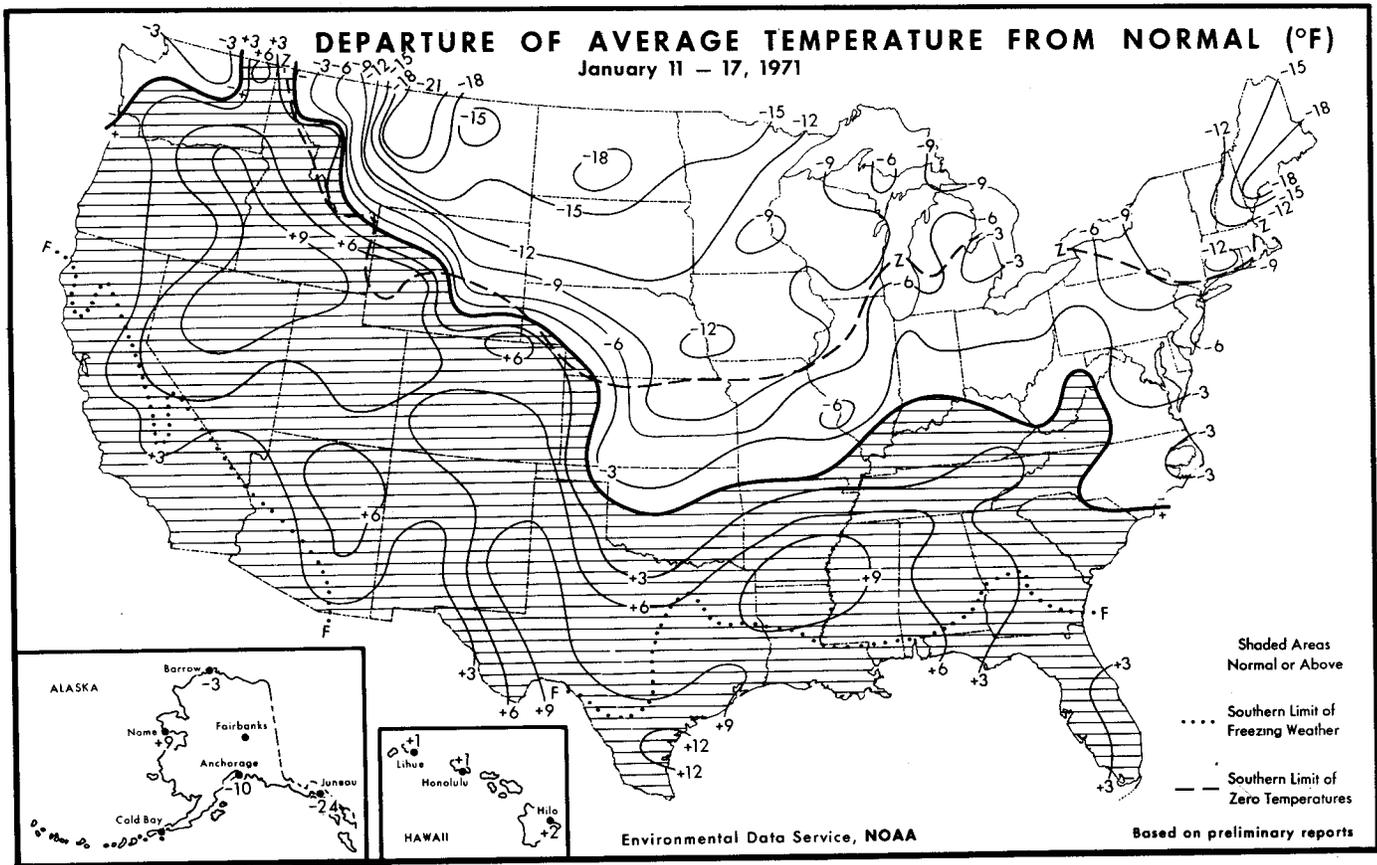
PRECIPITATION: Early in the week, as snow continued in New England, another arctic outbreak brought windy wet weather to the West. Rain fell along the coast with snow in the western mountain areas and eastward to the Great Lakes. At midweek, snow fell along the coast accumulating to 14 inches at Astoria, Oreg., by Wednesday morning.

At noon Wednesday, a front extended from the north-central States to the Carolinas with miserable weather on both sides of it. Snow fell in the northern States as sleet, freezing rain, or freezing drizzle, with fog, occurred south of the snow belt. By Thursday morning the freezing pre-

cipitation had coated a large area from Illinois to the Northern and Middle Atlantic States with a layer of ice that made walking or driving risky.

As the weekend approached, an intense storm off the Pacific coast was bringing heavy precipitation and strong winds to the Northwest. After gusting to 109 m.p.h. at Cape Blanco, Oreg., late Friday the winds slackened somewhat but by Sunday, another storm was pounding the Pacific coast with winds up to 60 to 70 m.p.h.

The leading edge of a cold air mass set off generous thundershowers in northern Georgia and western South Carolina Thursday. Light precipitation occurred over the Atlantic Coastal States Friday and from the Great Lakes to the Ohio River Saturday.



TEMPERATURE: Cold air continued to pour into the Northern States from Canada. The mercury at Cut Bank, Mont., plunged to below zero Saturday morning January 9, and remained below zero until Friday. Temperatures at Cut Bank from Monday to Thursday ranged from 33° below zero Wednesday morning to 17° below zero Tuesday and Thursday afternoons. Bismarck, N. Dak., registered 35° below zero Friday morning. The coldest temperature that has come to our attention is 39° below zero at Stillwater Reservoir, N.Y., Wednesday morning. On Tuesday morning subzero weather occurred over the Great Plains as far south as Nebraska. Subfreezing temperatures occurred along the Mexican border on Monday and Thursday mornings.

In sharp contrast to the bone-chilling temperatures that prevailed from Montana to New

England, is the near-record warmth in portions of the South. Southern Texas registered temperatures in the 80's on almost every afternoon. The mercury climbed to 86° at McAllen, Tex., Wednesday. Sixty and 70° maximums occurred in the Florida Peninsula on almost every afternoon.

Weekly mean temperatures were below normal from the Continental Divide in Montana and Wyoming to the Atlantic Ocean. Much of the northern and central Great Plains averaged 10° to 22° colder than normal. Above-normal temperatures prevailed west of the Continental Divide and across the southern half of the Nation. Parts of Texas and Louisiana averaged 10° to 12° warmer than normal.

L. W. Dye

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Unseasonably cold weather lingered over the northern half of the Nation, increasing the caring and feeding of livestock. Most small grains continued dormant. Milder temperatures in the southern half permitted normal farm activities and vegetable and citrus harvesting.

SMALL GRAINS: Fall-seeded grains in the northern half of the Country endured a second week of cold, wintry weather. Above-average temperatures were welcomed through most of the southern half of the Nation. In the Great Plains, unseasonably cold weather held small grains dormant southward into Oklahoma. Protective snow covering exists generally in Colorado and Kansas northward. Moisture is still needed in much of the southern Great Plains. Texas small grain fields are providing limited grazing. The western half of the State is dry. In Oklahoma, some grazing is provided but small grain condition declined seasonally. Wheat growth in Kansas was very limited. Some wind damage occurred in western areas where moisture is also short. Snow cover depth is varied in Nebraska. Some wheat fields are exposed. In the northernmost Plains States and across Montana into the Pacific Northwest, small grains are snow covered. Moisture is mostly adequate. Small grains in California and Arizona responded slowly to mild temperatures. In the South, fall-seeded grains are in fair to good condition. Above-normal temperatures and light precipitation stimulated some growth. Some grazing is permitted. In the Corn Belt, small grains are holding fair to good condition. Additional snow cover is needed in southern parts of Illinois, Indiana, and Ohio.

OTHER CROPS: Cotton harvest edged nearer to completion. Frozen ground in Arkansas allowed pickers to operate the first part of the week. Harvest is generally completed in Arizona. Wet fields in California's central valley areas delayed compliance plowdowns. Burley tobacco is mostly sold in Kentucky with dark fired selling strong. Most West Virginia tobacco has moved through auctions. Tobacco plant bed preparation continues in North Carolina and Georgia. Beds are 75% seeded in South Carolina.

Fruits and Nuts: Temperatures in Arizona and California's citrus areas averaged well above normal following freezing temperatures of the previous week. In California some freeze and frost damage from the previous week was reported for navel oranges, valencias, and tangerines.

Lemons are showing little damage. Movement of most varieties was steady or increasing. In Arizona, citrus picking was limited in the Salt River Valley and Yuma areas. Young trees and new growth on older trees show frost injury. In Texas, orange and grapefruit harvests continued active as temperatures shot up to 10-12 degrees above normal. Citrus trees and fruit are in good condition in Florida. Harvest is active. Some new growth and buds are appearing. Orchardmen in the Atlantic Coast States are pruning and caring for trees as weather permits.

Vegetables: In California, harvest of winter potatoes continues. Planting of the late spring crop in Kern County is active. Most winter vegetables are moving in fair to good volume; broccoli light, cabbage expected to increase, carrots slow from Salinas and light from Desert areas, cauliflower slow and celery expected to continue in good volume. In Arizona winter vegetables are at seasonal volumes. Some harvest delays from previous week's cold weather were noted. The freezing temperatures caused some damage to young plants; the full extent is not yet determined. In South Texas, cutting of cabbage and lettuce is heavy. Most other winter crops are in light to moderate supply. Frequent irrigations are needed. Seeding of spring crops is underway in southernmost areas. In Florida, above-normal temperatures accelerated growth of vegetables. Tomatoes, cabbage, celery, and peppers are leading other winter vegetables in volume.

PASTURES AND LIVESTOCK: Continued cold weather over much of the Nation added stress to livestock. Many ranges and fields are snow covered. Farmers and ranchers are spending considerable time in the care of livestock. However, roads and other accesses are generally open for feeding and movement of animals. Heavy feeding just for maintenance has been required. Flesh loss on cattle due to the extreme conditions has been held to a minimum and stock are in fair to good condition. The heavy feeding has caused a drain on feed grains and roughages but supplies are still adequate in most areas. The extreme cold has caused losses of small lambs and calves and deaths in some hog herds. In the southern half of the Nation, stockmen welcomed milder temperatures. Pastures are fair and some grazing is available. Dry conditions persist in Southwest ranges.

Ron Brantner
Agricultural Statistician

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., January 17, 1971

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 . . .	51	+ 5	.7	-.4	New Orleans . . .	62	+ 7	0	-.9	OKLA. Okla. City . .	37	0	T	-.3
Mobile . . .	61	+ 8	.1	-1.0	Shreveport . . .	57	+10	T	-1.1	Tulsa . . .	36	0	.1	-.3
Montgomery . . .	53	+ 5	.3	-.6	MAINE. Caribou . .	5	-15	.3	-.2	OREG. Astoria . . .	40	0	4.0	+1.3
ALASKA. Anchorage . .	2	-10	T	-.2	Portland . . .	2	-20	.3	-.7	Burns . . .	30	+ 5	1.7	+1.3
Barrow . . .	3	+13	T	0	MD. Baltimore . . .	31	- 4	.2	-.6	Medford . . .	37	+ 2	3.5	+2.8
Fairbanks . . .	1	-24	.4	-.5	MASS. Boston . . .	20	-10	.3	-.6	Pendleton . . .	41	+ 9	.4	+ .1
Juneau . . .	13	+ 9	T	-.2	Chatham . . .	24	---	.4	---	Portland . . .	41	+ 3	3.0	+1.8
Nome . . .	33	+ 6	T	-.4	MICH. Alpena . . .	13	- 7	.2	-.2	Salem . . .	40	+ 2	3.2	+1.7
ARIZ. Flagstaff . . .	33	+ 3	0	-.1	Detroit . . .	23	- 4	.1	-.3	PA. Allentown . . .	23	- 6	.5	-.2
Phoenix . . .	53	+ 3	0	-.1	Flint . . .	21	- 1	1.0	+ .6	Erie . . .	25	- 3	.3	-.3
Tucson . . .	53	+ 4	0	-.2	Grand Rapids . . .	18	- 7	.1	-.3	Harrisburg . . .	28	- 4	.4	-.2
Winslow . . .	38	+ 7	0	-.1	Houghton Lake . .	15	- 4	.2	-.2	Philadelphia . . .	29	- 3	.2	-.5
Yuma . . .	53	- 1	0	-.1	Lansing . . .	19	- 5	.1	-.4	Pittsburgh . . .	27	- 2	.5	-.2
ARK. Fort Smith . . .	42	+ 3	.4	-.2	Marquette . . .	13	- 6	.3	-.1	Scranton . . .	19	- 9	.2	-.4
Little Rock . . .	49	+ 9	T	-1.2	Muskegon . . .	20	- 6	.1	-.4	R.I. Providence . .	19	-10	.2	-.7
CALIF. Bakersfield . .	50	+ 3	.2	-.1	S. Ste. Marie . . .	7	- 9	.2	-.3	S.C. Charleston . .	52	+ 2	.7	+ .2
Eureka . . .	48	+ 1	3.8	+2.3	MINN. Duluth . . .	2	-10	.8	+ .5	Columbia . . .	49	+ 2	.6	-.1
Fresno . . .	49	+ 3	.3	-.2	Internatl Falls . .	-13	-16	.3	+ .1	Greenville . . .	44	0	.5	-.4
Los Angeles . . .	58	+ 2	.3	-.3	Minneapolis . . .	5	- 7	.3	+ .1	S. DAK. Aberdeen . .	2	-13	.1	0
Red Bluff . . .	45	0	2.6	+1.6	Rochester . . .	4	-10	.1	-.1	Huron . . .	0	-13	.1	0
San Diego . . .	54	- 1	.2	-.2	St. Cloud . . .	2	-12	.2	0	Rapid City . . .	10	-12	.1	0
San Francisco . . .	51	+ 2	1.1	+ .2	MISS. Jackson . . .	57	+ 9	1.5	+ .4	Sioux Falls . . .	3	-12	T	-.2
Stockton . . .	49	+ 4	.7	+ .1	Meridian . . .	55	+ 7	.6	-.4	TENN. Chattanooga .	45	+ 3	.7	-.6
COLO. Denver . . .	33	+ 4	T	-.1	MO. Columbia . . .	25	- 5	T	-.4	Knoxville . . .	46	+ 4	.7	-.4
Grand Junction . . .	31	+ 6	T	-.1	Kansas City . . .	22	- 9	T	-.4	Memphis . . .	47	+ 6	.3	-1.1
Pueblo . . .	38	+ 8	T	-.1	St. Louis . . .	26	- 6	.1	-.3	Nashville . . .	43	+ 3	.7	-.6
CONN. Bridgeport . . .	24	- 6	.2	-.6	Springfield . . .	33	- 1	.3	-.2	TEX. Abilene . . .	50	+ 6	T	-.2
Hartford . . .	16	-12	.4	-.4	MONT. Billings . .	7	-16	.2	+ .1	Amarillo . . .	42	+ 6	0	-.1
D.C. Washington . . .	33	- 4	.1	-.6	Glasgow . . .	4	-14	.1	-.1	Austin . . .	57	+ 7	0	-.6
FLA. Apalachicola . .	57	+ 2	.2	-.5	Great Falls . . .	0	-22	.3	+ .1	Beaumont . . .	63	+10	.1	-.9
Ft. Myers . . .	67	+ 3	T	-.4	Havre . . .	8	-22	.3	+ .2	Brownsville . . .	72	+11	T	-.3
Jacksonville . . .	56	0	T	-.6	Helena . . .	4	-14	.3	+ .2	Corpus Christi . .	69	+12	T	-.3
Key West . . .	73	+ 4	.1	-.3	Kalispell . . .	16	- 4	.6	+ .3	Dallas . . .	51	+ 6	T	-.5
Lakeland . . .	63	+ 1	.1	-.4	Miles City . . .	1	-15	.2	+ .1	Del Rio . . .	61	+10	T	-.2
Miami . . .	70	+ 3	0	-.5	Missoula . . .	23	+ 4	.7	+ .5	El Paso . . .	45	+ 2	T	-.1
Orlando . . .	64	+ 3	T	-.5	NEBR. Grand Island	14	- 9	T	-.1	Fort Worth . . .	50	+ 5	T	-.4
Tallahassee . . .	55	+ 1	.3	-.5	Lincoln . . .	13	-12	T	-.2	Galveston . . .	62	+ 7	T	-.9
Tampa . . .	62	+ 1	T	-.5	Norfolk . . .	9	-10	T	-.2	Houston . . .	63	+12	T	-.9
GA. Atlanta . . .	49	+ 4	1.2	+ .2	North Platte . . .	21	- 3	T	-.1	Lubbock . . .	48	+ 9	0	-.2
Augusta . . .	48	0	.9	+ .2	Omaha . . .	9	-12	T	-.2	Midland . . .	53	+10	T	-.2
Macon . . .	52	+ 3	.4	-.4	Valentine . . .	10	-10	.1	0	San Angelo . . .	55	+ 8	T	-.3
Savannah . . .	52	0	.4	-.2	NEV. Ely . . .	28	+ 6	.6	+ .4	San Antonio . . .	61	+ 9	T	-.5
HAWAII. Hilo . . .	73	+ 2	1.7	-1.1	Las Vegas . . .	45	+ 2	0	-.1	Victoria . . .	65	+10	T	-.5
Honolulu . . .	74	+ 1	2.7	+1.9	Reno . . .	38	+ 8	.4	+ .1	Waco . . .	55	+ 7	T	-.5
Kahului . . .	80	+ 6	2.7	+1.7	Winnemucca . . .	38	+11	.1	-.2	Wichita Falls . . .	43	+ 1	.1	-.2
Lihue . . .	72	+ 1	.7	-.5	N.H. Concord . . .	8	-13	.1	-.6	UTAH. Blanding . .	31	+ 5	0	-.2
IDAHO. Boise . . .	38	+ 9	1.1	+ .8	N.J. Atlantic City .	29	- 6	.3	-.5	Salt Lake City . .	35	+ 8	.6	+ .3
Lewiston . . .	36	+ 6	.5	+ .3	Trenton . . .	28	- 4	.3	-.4	VT. Burlington . . .	5	-11	.1	-.4
Pocatello . . .	31	+ 9	.9	+ .6	N.MEX. Albuquerque	38	+ 3	0	-.1	VA. Lynchburg . . .	38	0	.3	-.5
ILL. Cairo . . .	38	+ 1	1.9	+1.0	Roswell . . .	47	+ 9	0	-.1	Norfolk . . .	39	- 2	.4	-.3
Chicago . . .	21	- 5	.1	-.3	N.Y. Albany . . .	12	-11	.4	-.1	Richmond . . .	36	- 3	.4	-.4
Moline . . .	13	- 9	.1	-.3	Binghamton . . .	15	- 9	.5	-.1	Roanoke . . .	39	+ 1	.3	-.4
Peoria . . .	19	- 7	T	-.5	Buffalo . . .	21	- 4	.3	-.3	WASH. Colville . .	29	+ 6	1.4	+1.0
Rockford . . .	16	- 6	T	-.5	New York . . .	28	- 6	.3	-.5	Omak . . .	16	- 5	1.1	+ .8
Springfield . . .	23	- 5	T	-.4	Rochester . . .	19	- 7	.4	-.2	Quillayute . . .	37	- 2	4.4	+ .9
IND. Evansville . . .	36	+ 2	1.6	+ .7	Syracuse . . .	15	-10	.5	-.2	Seattle-Tacoma . .	38	0	2.1	+ .8
Fort Wayne . . .	23	- 4	.3	-.3	N.C. Asheville . . .	42	+ 2	.2	-.5	Spokane . . .	30	+ 5	1.4	+ .8
Indianapolis . . .	27	- 2	.2	-.5	Charlotte . . .	43	0	.2	-.6	Walla Walla . . .	42	+ 9	.5	+ .1
South Bend . . .	23	- 3	.1	-.4	Greensboro . . .	40	0	T	-.8	Yakima . . .	32	+ 5	1.5	+1.2
IOWA. Burlington . .	14	-10	T	-.4	Hatteras . . .	42	- 5	1.2	+ .3	W.VA. Beckley . . .	35	+ 1	.9	-.1
Des Moines . . .	10	-10	T	-.3	Raleigh . . .	41	- 1	T	-.7	Charleston . . .	36	- 1	.4	-.6
Dubuque . . .	11	- 8	.1	-.3	Wilmington . . .	48	0	.9	+ .3	Huntington . . .	36	- 1	.7	-.2
Sioux City . . .	8	-10	T	-.2	N. DAK. Bismarck . .	9	-19	.1	0	Parkersburg . . .	34	- 1	1.0	+ .2
KANS. Concordia . . .	16	-11	T	-.2	Fargo . . .	7	-14	.2	+ .1	WIS. Green Bay . .	7	-10	.3	0
Dodge City . . .	26	- 4	T	-.1	Williston . . .	9	-17	.1	0	La Crosse . . .	6	-11	.1	-.2
Goodland . . .	30	+ 3	T	-.1	OHIO. Akron-Canton	25	- 4	.6	-.1	Madison . . .	8	-10	.2	-.1
Topeka . . .	18	-11	T	-.2	Cincinnati . . .	32	- 2	1.0	+ .2	Milwaukee . . .	15	- 6	.2	-.2
Wichita . . .	27	- 5	T	-.2	Cleveland . . .	25	- 3	.4	-.2	WYO. Casper . . .	17	- 7	T	-.1
KY. Lexington . . .	37	+ 2	1.4	+ .2	Columbus . . .	28	- 2	.3	-.4	Cheyenne . . .	33	+ 7	T	-.1
Louisville . . .	37	+ 2	1.2	+ .3	Dayton . . .	29	- 1	.3	-.5	Lander . . .	27	+ 8	.1	0
LA. Baton Rouge . . .	60	+ 7	T	-1.1	Toledo . . .	22	-14	.1	-.5	Sheridan . . .	10	-12	.1	-.1
Lake Charles . . .	62	+ 8	T	-1.0	Youngstown . . .	24	- 3	.6	-.2	P.R. San Juan . . .	76	+ 1	.6	-.5

* Departures are from 30-year means (1931-60). Based on preliminary reports

CONDENSED STATE SUMMARIES

These summaries provide brief descriptions of condition and activities important on a national scale. Detailed reports of crop and weather conditions during the growing season are contained in State issues of Weekly Weather and Crop Bulletins published by field offices of the Statistical Reporting Service, U.S.D.A. in cooperation with NOAA State Climatologists.

ALABAMA: Considerable cloudiness, fog, and occasional rain with temperatures much above normal Tuesday through Friday. Mostly fair and cooler Saturday and Sunday. Temperatures for week averaged much warmer than usual. Precipitation light to moderate except for locally heavy showers. Small grain growth stimulated by mild temperatures and ample moisture. Ove all condition good. Little grazing due to wet soil. Livestock condition good. Stored feed adequate. Farmwork seasonally slow, with outside work mostly caring of poultry and livestock, recordkeeping, and farm planning.

ARIZONA: Temperatures beginning week about normal and rose slowly reaching generally 5° to 10° above normal at weekend. Most sections averaged 3° to 7° above normal except Lower Colorado River Valley where averages were 2° to 3° below normal for week. No precipitation of consequence anywhere in State. Cold temperatures have slowed development of small grains. Recent warmer temperatures will help seed germination. Disking and plowing of cotton fields continue active. Cotton harvest generally completed. Planting of safflower continues on limited scale, early-planted fields generally good condition. Fall-planted sugar beets in generally good condition. Mixed vegetable harvest nearing seasonal volume from Salt River Valley area. Young plants making very slow progress. Damage from cold temperatures previous week still undetermined. Harvest of lettuce and mixed vegetables delayed in early mornings. Some crop damage evident. Land preparations for melons and tomatoes underway. Citrus picking in Salt River Valley limited. Yuma area harvest of oranges, lemons, grapefruit, and tangerines continued on a limited basis. New growth and young trees in both areas received frost injury. Higher elevations snow covered. Stock water supplies short to adequate. Supplemental feeding required in high elevation ranges. Livestock fair to good condition. Shearing near completion warmer winter valleys.

ARKANSAS: Weekly temperatures averaged 5° to 6° above normal ranging from low 40's north to upper 50's extreme south. Daily extremes: 18° to 78°. Precipitation 1.00 to 1.50 inches north-central sections, otherwise less than 0.50 inch. Traces only some sections with 1.90 inches Mountain Home, the wet spot. Field activities were limited by cold temperatures and wet fields. Frozen soils early in week allowed harvest of most remaining fields of cotton and soybeans. Shredding of cotton stalks was major activity. Cattle are on full maintenance rations. Feed supplies are adequate.

CALIFORNIA: Much warmer throughout State, especially southern coastal region over weekend. Temperature averaged near normal north Tehachapis but 2° to 6° below normal low desert, Sierras, and south coast. Minimums mostly above freezing. Moderate precipitation and high winds in mountains and north coast, with amounts 2 to 4 inches, and lesser totals south. Farmwork during week limited mostly to maintenance and chores due to cold, wet weather. Small grain growth retarded and discoloration from excessive moisture noted. Many cotton fields central valley too wet to allow

plowdown compliance. Additional moisture was beneficial for south dryland prospects. Temperatures warmed past week from freeze week earlier. Some damage navel oranges showing up, although full extent will not be known for some time. Frost lowered fruit quality. Valencias progressing normally. Some damage reported. Harvest avocados continues. Some fruit damage showing, extent expected minimal. Picking increased sharply after freeze. Lemon harvest steady. Little freeze damage. Harvest tangerines continues. Some damage noted especially in Desert areas. Grapefruit harvest increasing. Shipments grapes to cold storage continue. Pruning, dormant spraying, other winter cultural practices continue. Range grass growth slowed by cold. Supplemental feeding remains heavy in northern and mountain areas. Livestock in good condition. Freezing, high winds caused some lamb losses. Bees moving to almond orchards. Broccoli supplies light. Imperial Valley cabbage expected to increase. Salinas Valley carrot harvest limited by wet fields. Desert harvest continues light. Central Coast and Bay area cauliflower harvest hampered by rain. Southern California harvest active. Celery from southern areas expected to continue in good volume. Imperial lettuce mixed quality, smaller sizes due earlier freeze. Winter potato harvest continues. Planting late spring potatoes Kern County. Field preparation active southern California.

COLORADO: Varying temperatures, averages above normal east and most western areas. Light to locally heavy snow central mountains and north portion. Little or none south portion and most of plains. Warm winds over weekend east and in several mountain areas caused considerable melting of snow cover. Winter wheat and barley condition good to excellent. Cold temperatures held both crops in dormancy. Strong winds eastern slope caused minor damage. Most fields snow covered. Surface and subsoil moisture improved but still short most of State. Range and pasture condition fair. Most ranges snow covered. Hay and forage supplies adequate. Supplemental feeding heavy most areas. Livestock condition good with little weight loss evident.

FLORIDA: Temperatures averaged 3° above normal. A warm wet week over north Florida was followed by a cold frontal passage on Friday, dropping temperatures 10° to 15°. Considerable fog in early part of week. Elsewhere, mild weather throughout week with temperatures dropping following cold frontal passage. Precipitation averaged 0.50 to 0.75 inch over north Florida due to showers in early part of week and scattered showers elsewhere accompanying cold frontal passage. Land preparation for planting field crops favored by mild weather. Sugarcane area needs rain. Scattered rainfall improved pastures except drought area in south Florida. Small grain pastures making good progress. Citrus tree and fruit condition very good. Light rain helpful. New growth and pen head bloom buds appearing. Harvest active. Vegetable growth accelerated by above-normal temperatures. Weekend frost light, damage insignificant. Cooler weather was desirable. Most areas vegetable planting on schedule. Harvest active. Most winter vegetables moving in

Sanborn and Estherville and subzero all parts of State. Precipitation light. Snow cover around 15 inches northeast, north-central, and northern part of central divisions. Five inches or less snow cover in some northwest counties and a few extreme southern localities.

KANSAS: Unseasonably cold south and east; above normal northwest. Weekly mean temperatures 10° to 12° below seasonal north-central, northeast, and east-central. Coldest weather was on 12th. Maxima that day ranged 7° to 25°. Minima locally below zero northern portion 13th and 15th. Warming trend late in period. Most of snow cover gone at end of week. Heavy supplemental feeding and extra care for livestock provided due to cold snowy weather. Some hay supplies becoming tight. Most storm-drifted cattle rounded up. Cold caused considerable death losses in hog herds and problems with pneumonia and colds in newborn livestock. Wheat growth very limited by wintry weather. Some wind damage in western areas. Surface moisture adequate in eastern sections, more needed elsewhere. Subsoil supplies short in about half the counties in western and south-central districts, mostly adequate elsewhere.

KENTUCKY: Mostly cloudy. Temperature above normal through 14th. Below-normal balance. Scattered light precipitation first 2 days and last 2 days. Moderate to heavy rains 13th through 14th and many small streams central and east near bankfull. Weekly totals 0.65 inch to 3.50 inches. Snow flurries scattered areas late 17th and 18th. Mostly light but 1 inch on ground 7 a.m. on 18th all points extreme northern Bluegrass and northeast. Favorable winter weather for agriculture. Burley tobacco mostly sold. Dark fired tobacco selling well with very strong demand.

LOUISIANA: Temperatures averaged 7° to 11° above normal and 17° to 25° warmer than last week. Temperature ranges through 14th: Highs in 70's to lows in 50's and 60's. Extensive night and morning fog. Cooler 15th with lows in 30's statewide, moderating again over weekend. Extremes: 80° four stations 14th and 29° Monroe 16th. Precipitation trace to less than 0.30 inch most areas but locally heavier southwest to northeast. Alexandria recorded greatest daily total, 1.20 inches at 6 a.m. on 15th. Surplus soil moisture limited fieldwork to caring for livestock, field drainage, harvesting winter vegetables and water leveling rice land. Small grain and winter grazing crops resumed growth furnishing grazing in many fields; condition of these crops good. Livestock are in good condition. Most are on supplemental feed.

MARYLAND AND DELAWARE: Temperatures very cold last 2 days, averaged mostly 4° below normal. Freezing rain on 13th and 14th caused coated surfaces with ice up to 1/4 inch thick, melted by midmorning of 14th. Weekly precipitation mostly less than 0.30 inch. Snow on 9th and 17th very light. Field activities limited. Orchard pruning and tobacco stripping continuing. Colder weather increased livestock care.

MICHIGAN: Cloudy cold weather with frequent light snow flurries throughout week. Temperatures averaged from 3° to 5° below normal in Lower Michigan and from 5° to 7° below normal in Upper Peninsula. No great accumulations of snow occurred in spite of snow reported almost daily. In Upper Peninsula and northern Lower Michigan, total pre-

cipitation averaged around 0.25 inch while in central and Lower Michigan only about 0.10 inch was reported.

MINNESOTA: Very cold week with temperatures averaging 10° to 15° below normal. The average temperature at International Falls during the week was -13°. Precipitation: snowfall generally of 4 to 6 inches across north and east, and about 2 inches across rest of State. Snow depth average 18 inches in northern and southeast districts, rest of State averages about 6 to 8 inches.

MISSISSIPPI: Considerable fog most mornings. A minimum temperature of 21° at Hernando on 9th. Warming trend with temperatures reaching 81° Thursday at Belzoni. Weekly temperature averages mostly 4° to 7° above normal. Showers Thursday ending Friday, most weekly totals under 0.70 inch. At Forest 2.18 inches measured Friday morning. Fair and colder over weekend. Temperatures fell to 25° Saturday at Tupelo. Early this morning some light rain moved into extreme northern Mississippi, followed by sleet and light snow in more northern portion. Soil moisture adequate to surplus. Winter wheat, oats, and livestock are in fair to good condition. Pastures are mostly fair. Hay and feed grains generally adequate. Average of 1 1/2 days suitable for fieldwork.

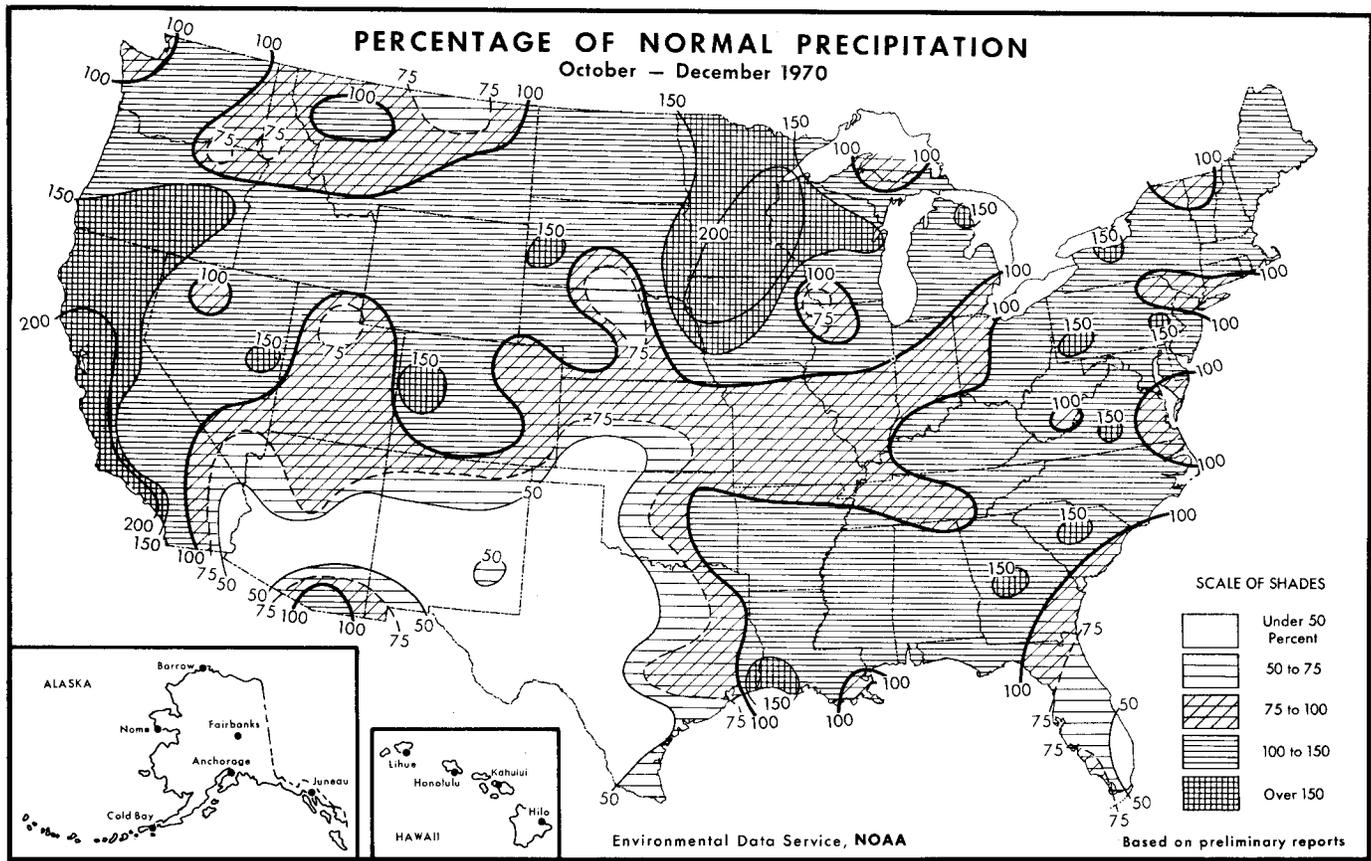
MISSOURI: Two surges of cold air kept temperatures below normal over all but Bootheel. Extremes: 64° at Carruthersville on Thursday and 4° below zero at Tarkio on Tuesday. Precipitation was heavy along southern edge of Ozarks and Bootheel with a few stations reporting more than 2.00 inches, while over remainder of State precipitation totals were mostly less than 0.10 inch.

MONTANA: Very cold at first with rapid warming by end of week. Temperatures averaged near or above normal west to 22° below normal North-Central. Coldest, -33° Cut Bank January 13. Snowfall light except some locally heavier amounts especially mountains. Heavy stress on livestock from cold weather and snow. Supplemental feeding all livestock. Warm weather late in week allowed lighter feeding. Grazing still difficult to closed. Wheat has protect snow cover. No wind damage. Frozen fields not absorbing runoff.

NEBRASKA: Cold with intermittent snow flurries except mild in far southwest and southern Panhandle. Cold temperatures causing usual problems on farms with frozen water supplies and hard to start vehicles. Snow cover on fields variable, but many wheat fields are bare. Stalk fields are being grazed where possible to conserve feed supplies. Livestock requiring additional feed but making slow gains. A few reports of weather-related livestock deaths.

NEVADA: All stations above normal temperatures. 2° above normal in Las Vegas to 14° above normal at Minden. Moderate precipitation general in northern half of State averaging approximately 0.50 inch. Heavy snow midweek melted. Snow ground cover still in mountains. Livestock are fair to good condition with hay and water stocks adequate most areas. Supplemental feeding remains a major source of feed. Cattle deaths light but sheep losses high in some areas due to predators.

NEW ENGLAND: Very cold week, averaging 6° to 12° below normal in south and 10° to 18° below normal in north. Subzero maxima frequent



PRECIPITATION—OCTOBER TO DECEMBER 1970

Near the 1st week of October, a large storm set off showers and local thunderstorms from the Upper Mississippi River Valley to eastern Texas. Several inches of snow fell in Wyoming, Colorado, and western Nebraska. A tropical depression produced torrential rains in the Caribbean, flooding parts of some of the islands.

In the 2d week of October, heavy downpours caused flash floods in Oklahoma and thundershowers fell from the Great Lakes to the Gulf of Mexico. Heavy snow fell near Syracuse, N.Y., in the 3d week. Up to 30 inches of snow fell in the higher mountains of Washington and Idaho in October.

Most areas of the United States received less than normal rainfall in November. A wide area from southern Arizona to the central and southern Great Plains received no rain or only light sprinkles which generally totaled less than 25% of normal. The heaviest rains fell along the Pacific coast in the last week of the month. Heavy snows occurred in the northern border States,

in the northern and central Rockies and in the lee of the Great Lakes in Ohio and Pennsylvania. Flood-producing rains fell in Oklahoma and the Virginias. A Pacific storm brought heavy rains to the western coast with snow from the Cascades and Sierras to the western Great Plains.

December precipitation included generous amounts in most of the Northwest and from the Great Lakes to the eastern portions of Kentucky and Tennessee. A large area from eastern Montana and the Dakotas to the Mexican Border and the western Gulf coast received less than 1.00 inch.

Totals for the 3 months, October to December, exceeded the normals by more than 50% along the California coast, in Minnesota and nearby parts of Iowa and Wisconsin, and in a few local spots in the East. A large area from southern Arizona to western Texas received less than half the normal rainfall in the 3-month period.

L. W. Dye

in northern Maine where week averaged below zero. Minima of -20° or lower common on January 13, 14, 17, and 18, with -30° on 18th at Chester, Mass. Frequent light snow flurries but new snowfall mostly only 1 to 5 inches, principally on January 14. Precipitation averaged about 0.25 inch but varied from 0.10 to 0.50 inch.

NEW JERSEY: Coldest week this season. Temperatures averaged 3° to 8° below normal with greatest departures in interior sections. Pre-

cipitation on 14th to 15th, 0.40 inch with amounts ranging from 0.20 in Camden area to 0.70 East Millstone. Snow on ground on morning of 18th ranged from 5 inches in Northwestern counties to none over southern coastal sections.

NEW MEXICO: Only a few scattered very light showers in northern mountains. Temperatures moderate and daytime temperatures became much above normal on weekend. Average temperatures for week above normal throughout State, and up to 10° above normal in east. Soil moisture

adequate in northwest, but short in remaining areas. Small grain pastures very dry and livestock are being moved from fields. Ranges and livestock in fair to good condition.

NEW YORK: Wide swings of temperatures as averages continue much below normal for another week. Maximus mostly in 30's early in week and again on 14th ranging down to teens or colder midweek and on 16th and 17th. Minimums 20° to 35° below zero northern sections and near to -15° southern interior on 13th. Massena 37° below zero and Stillwater Reservoir 39° below zero. Widespread below-zero minimums on 17th with coldest -23° at Albany and -22° at Watertown. Precipitation as freezing rain and rain before changing to snow on 13th to 14th totaled 0.25 to 0.50 inch south-central and southeast decreasing to 0.10 inch or less extreme north and western quarter. Frequent snow flurries last week with accumulations mostly 2 to 6 inches except locally heavier in Lake Ontario snowbelt. Snow cover ranges from less than 6 inches western 1/3 up to 15 inches in upper Hudson Valley and 20 inches or more Adirondacks and northern valleys.

NORTH CAROLINA: Temperatures averaged near normal, a little above west portion and slightly below east. Afternoon highs ranged from 30° to 70° and overnight lows 15° to 50°. Mostly cloudy weather but precipitation light except 0.10 inch to 2.00 inches 15th. Heaviest amounts coastal plain and southern Piedmont. Soil moisture declined, now mostly adequate except surplus southern Piedmont and localized areas. Condition of small grains fair to good. Pastures mostly fair to good except poor in the northern mountains. Supplies of hay and feed grain mostly adequate. Farmers active with livestock feeding, repair of machinery and buildings and tobacco plant bed preparation. The ice storm January 9 caused some power failures; farmers were forced to use generators.

NORTH DAKOTA: Extreme cold weather with temperatures dropping to near 40° below zero some central locations Friday. Temperatures averaged 15° to 20° below normal. Intermittent precipitation throughout week. Amounts mostly 0.20 to 0.50 inch. Heaviest in northeast. Snow depths range from 5 inches in southwest to 17 inches in northeast. Conditions continue cold and snowy but no heavy blizzards. Virtually no grazing possible and livestock are on feeding rations. Farmers and ranchers busy caring for livestock. Feed supplies accessible. Highways mostly open for marketing of crops and livestock.

OHIO: Heavy fog blanketed southwest quadrant on 11th. Freezing rain resulted in hazardous driving conditions over western and central areas morning of 13th. Rainfall 13th and 14th ranged from less than 0.10 inch in northwest to 0.95 inch at Cincinnati. Snowfall 16th and 17th totaled 1 to 3 inches. Temperatures were near or above normal through 14th but were 1° to 15° below normal over weekend. Farm activities near a seasonal low, generally caring and feeding of livestock with some maintenance of buildings and machinery.

OKLAHOMA: Precipitation southeast 1/2 State generally 0.25 inch or less but locally 1.00 to 2.00 inches east-central. Only trace precipitation northwest 1/2 State. Some freezing

drizzle central and northeast sections Monday night. Temperatures average 1° to 3° below normal Panhandle, north-central and 1° to 4° above normal elsewhere. Extremes: 74° and 7° below normal. Growth small grains retarded or stopped by cold temperatures. Most small grain pastures providing only limited grazing. No large scale overgrazing reported. Condition of small grains continued to decline seasonally and now rated 36% poor, 44% fair, 20% good, compared with 12%, 62%, and 26% a year ago. Surface moisture short in western 2/3, adequate to surplus elsewhere. Supplemental feeding continues throughout State. Range forage in short supply. Livestock condition rated 12% poor, 51% fair and 37% good, down from last week and substantially below year earlier.

OREGON: Very wintry week began with heavy rain. Heavy snow 4 days west of Cascades at mid-period concluded by moist coastal storm last day. Temperatures averaged 1° to 3° below normal west of Cascades, 4° to 7° above east side. Minima 9° to 26° east, 18° to 32° west. Maxima: 39° to 58°. Western valley snow depths 4 to 11 inches, lower hills 14 inches, coastal 1 to 4 inches and Astoria 12 inches but all melted in 12 hours on 15th. Weekly precipitation totaled east of Cascades 0.20 to 0.50 inch, western valleys 2.80 to 4.50 inches, coastal 4.40 to 7.00 inches. Coastal winds 90 to 110 m.p.h. caused \$1 million in property damage northern coast. Weekend rains for western Oregon provided 3.00 to 8.00 inches in the southwest with rivers above flood stage. Snow depths in Cascades 56 to 109 inches above 4,000 feet. Rain and snow limited field activity. Feeding of livestock increased due to snowfall. Lambing continues to increase. High winds and flooding caused damage to farm structures along northern coastal areas.

PENNSYLVANIA: Cold, rather dry week. High pressure dominated, interrupted only by a weak low disturbance Thursday which spread freezing rain and light snow over much of Commonwealth. Brief warmup across southern sections on Friday, but otherwise quite cold. Overall readings averaged 5° to 6° below normal for third straight week. Extremes: 58° at Confluence on 14th and -13° at Hawley on 18th. Precipitation was light and ranged from 0.50 to 0.75 inch water equivalent in western 1/3 to 0.25 to 0.50 inch elsewhere. Routine farm chores.

PUERTO RICO: Rainfall averaged about 0.50 inch or about 0.25 inch below normal. Little or no rain south coast. Highest total 2.78 inches east Luquillo mountains. Temperatures averaged 74° to 75° coast and 67° to 68° interior with average departure of 0.8° below normal. Highest maximum 88°; lowest minimum 50°. Sugar cane drying out prior to beginning of 1971 harvest. Coffee plantations completing harvest operations and beginning cultivation and seeding of young trees for next crop. Good progress is being made in tobacco preparation and planting. Pastures good to excellent condition. Favorable week for minor crop planting and cultivating operations. Abundance of pigeon peas, citrus and bananas on market.

SOUTH CAROLINA: Week began rainy and rain fell again on 14th. Amounts were 0.50 to 1.00 inch in extreme north and 1.00 to 2.00 inches elsewhere. Temperatures averaged 2° to 3° above normal. Week began and ended cold but the midweek period was warm with highs in 60's at many locations on 14th. Soil moisture

adequate all areas. Wet weather and seasonal lull limited field activity. Tobacco plant beds about 75% seeded. Winter grains in good condition. Orchard work and tree pruning continued. Fall vegetable harvest is slowed.

SOUTH DAKOTA: Weekly temperatures averaged 8° to 16° below normal. Temperatures averaged below normal 5 of the past 6 weeks. Extremes ranged from 30° below zero at Dupree on 15th to 46° at Hot Springs on 15th and at Rapid City on 16th. Precipitation fell as light snow scattered through week with amounts up to about 0.30 inch. Snow cover end of week generally about 3 to 7 inches. Livestock in good condition but requiring additional feed because of cold weather. Feed supplies generally adequate except in some western areas. Movement of livestock, especially feeder cattle, increasing. Some lambing and farrowing starting. Snow cover for winter grains generally adequate. Main farm activity caring and feeding of livestock.

TENNESSEE: Slow warming trend Monday through Thursday, turning cold over weekend. Most areas had warmest temperatures since December 23 on Thursday when highest reached upper 60's and low 70's. Averages were slightly above normal, but 10° to 15° higher than previous week. Light precipitation in most places, locally 0.50 to 0.75 inch in northern 1/3 of State. Some flurries late in period. Snowfall this winter has been considerably lighter than usual. Small grains about normal. Livestock condition mostly good. Roughage supplies ample for expected winter needs most areas.

TEXAS: Rains of 0.25 to 1.00 inch fell in a small area of northeast Texas northeast of Dallas Tuesday and Wednesday and in the extreme southeast corner near the Louisiana border Thursday. Little or no precipitation fell elsewhere. Western half of State continued extremely dry. Temperatures were unseasonably mild throughout week. Warmer temperatures prevailed over State as outdoor activities returned to normal. Livestock owners on the Plains are still in process of recovering from blizzard conditions of week earlier. Activities included rounding up strays and repairing fences and buildings. Supplemental feeding activities remained high as ranges and winter pastures are providing limited grazing. Only northern parts of Blacklands, northeastern sections of East Texas, and parts of upper coastal area are providing near normal grazing. Farmers have begun preplant irrigation operations and readying of planting equipment. Stalk shredding, plowing, and fertilization have been the primary farm activities. Winter vegetable harvest is active in South Texas. Large supplies cabbage and lettuce available. Light to moderate supplies of carrots, beets, broccoli, spinach, greens, other winter vegetables available. Frequent irrigation necessary for satisfactory growth most winter vegetables and spring onions. Seeding spring vegetables underway in southern-most areas. Rainfall is needed before some dryland acreage can be seeded. Citrus harvest active in Lower Valley.

UTAH: Most sections northern Utah recorded moderate to heavy precipitation during past week. Precipitation occurred as snow during forepart of period but changed to rain in valleys over weekend. Only scattered areas precipitation reported south portion. Rain on heavy snowpack plus above-normal temperatures have made fields

and holding areas very wet and soggy. Heavy winds in some higher valleys northern Utah have caused considerable drifting and ranchers having difficulty feeding cattle. In lower areas, more winter range grass exposed as snow recedes. Little agricultural activity possible except caring for stock and repairing equipment.

VIRGINIA: Temperatures above normal at beginning, below normal over weekend. Rain near end of week, light snow over weekend. Farmers caring for the new lamb and calf crops. Losses have been minimum. Snow cover prevented full use of pastures. Field activities limited to some fruit tree pruning and top dressing of pastures and small grains in the coastal plains.

WASHINGTON: West of Cascades: Temperatures below normal. Snow most of week, amounts heavy northern half and in mountains. Logging stopped. Wildlife feeding stations set up. In some areas near Canadian Border, dairymen dumped milk when tankers were unable to reach farms. Warmer with heavy rain Friday melted snow rapidly in lowlands. Avalanches in cascades. East of Cascades: Average temperatures 5° to 7° below normal northern half, 2° to 6° above normal southern counties. Snowfall heavy northern valleys and near east slope Cascades. Snow cover 2 to 6 inches southern half, 20 to 30 inches northern valleys. Orchards in good condition to withstand cold. Sugar beet processing continues. Livestock in good condition. Feed supplies adequate.

WEST VIRGINIA: Sunny and cold first part of week. 1.00 inch rain with temperatures in high 50's January 13 and 14 many areas. 2-inch snowfall night of January 16 and 17 with up to 7 inches northern mountains. Subteen lows January 19 northern half. Snow depths about 10 inches higher elevations end of period. Farmwork consisted of routine winter chores such as tending livestock and marketing apples. Most tobacco has moved through the auction. January 19 is last day of auction.

WISCONSIN: Pleasant winter weather. Several cold days with minima near 30° below zero but winds generally light. No thawing during week. Some freezing drizzle most sections Wednesday. Also several occasions of light dry snow. Up to 5 inches of fluffy snow south on Saturday with less than 0.20 inch water equivalent. Snow depths range between 10 and 30 inches over State. Greatest depths diagonally southwest to northeast across Wisconsin with least in extreme southeast and in northwest counties away from Lake Superior. Frost penetration into soils very shallow. Farm activities care and feeding of livestock.

WYOMING: Heavy snows occurred over northwestern mountains; scattered light to moderate elsewhere. Bondurant reported most moisture with 2.71 inches; also had 57 inches of snow on ground. Temperatures averaged 8° to 13° above normal west of Divide, 1° to 7° above normal over most of Wind River, Upper and Lower Platte Drainages, and 5° to 19° below normal elsewhere. Week ended on a sharp warming trend statewide. Maxima were mostly 35° to 45° west of Divide and Upper Platte Drainage, 40's to low 50's elsewhere. Minima were mostly 10° to -10° west of Divide and southern half east of Divide, -5° to -20° elsewhere. Temperature extremes were 54° at Torrington and -22° at Sheridan Field Station. Feeding of livestock continues at high level. Livestock showing the effects of prolonged cold spell but no unusual death losses reported.

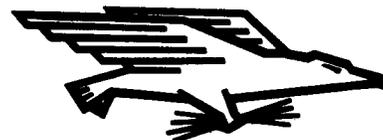
Heating Degree Days (Base 65° F.)

December 1970

ALA. Birmingham	523	MAINE, Caribou	1694	OKLA. Okla. City	651
Mobile	265	Portland	1400	Tulsa	692
Montgomery	410	MD. Baltimore	824	OREG. Astoria	743
ALASKA, Anchorage	1550	MASS. Boston	1113	Burns	1298
Barrow	2338	Chatham	963	Medford	827
Fairbanks	2318	MICH. Alpena	1294	Pendleton	903
Juneau	-----	Detroit	1105	Portland	770
Nome	1849	Flint	1177	Salem	797
ARIZ. Flagstaff	1125	Grand Rapids	1210	PA. Allentown	1056
Phoenix	376	Houghton Lake	1330	Erie	1056
Tucson	402	Lansing	1208	Harrisburg	931
Winslow	964	Marquette	1257	Philadelphia	899
Yuma	333	S. Ste. Marie	1469	Pittsburgh	1013
ARK. Fort Smith	639	MINN. Duluth	1616	Scranton	1162
Little Rock	554	Internatl Falls	1908	R. I. Providence	1124
CALIF. Bakersfield	486	Minneapolis	1443	S. C. Charleston	392
Eureka	539	Rochester	1450	Columbia	462
Fresno	573	St. Cloud	1548	Greenville	620
Los Angeles	243	MISS. Jackson	388	S. DAK. Aberdeen	1583
Red Bluff	649	Meridian	432	Huron	1541
Stockton	564	Vicksburg		Rapid City	1330
San Diego	290	MO. Columbia	845	Sioux Falls	1531
San Francisco	495	Kansas City	805	TENN. Chattanooga	636
COLO. Denver	977	St. Louis	863	Knoxville	641
Grand Junction	1019	Springfield	771	Memphis	571
Pueblo	820	MONT. Billings	1244	Nashville	672
CONN. Bridgeport	997	Glasgow	1638	TEX. Abilene	411
Hartford	1177	Great Falls	290	Amarillo	661
D. C. Washington	777	Havre	1690	Austin	231
FLA. Apalachicola	223	Helena	1372	Beaumont	168
Ft. Myers	33	Kalispell	1276	Brownsville	46
Jacksonville	215	Miles City	1464	Corpus Christi	93
Key West	1	Missoula	1312	Dallas	323
Lakeland	95	NEBR. Grand Island	1102	Del Rio	224
Miami	23	Lincoln	1040	El Paso	519
Orlando	79	Norfolk	1272	Fort Worth	369
Pensacola		North Platte	1175	Galveston	130
Tallahassee	357	Omaha	1169	Houston	208
Tampa	105	Valentine	1353	Lubbock	608
GA. Atlanta	537	NEV. Ely	1334	Midland	441
Augusta	510	Las Vegas	631	San Angelo	326
Macon	397	Reno	1102	San Antonio	201
Savannah	340	Winnemucca	1080	Victoria	149
IDAHO, Boise	969	N. H. Concord	1379	Waco	289
Lewiston	956	N. J. Atlantic City	875	Wichita Falls	519
Pocatello	1236	Trenton	907	UTAH, Blanding	
ILL. Cairo	685	N. MEX. Albuquerque	878	Salt Lake City	1103
Chicago	1032	Roswell	661	VT. Burlington	1567
Moline	1111	N. Y. Albany	1336	VA. Lynchburg	789
Peoria	1080	Binghamton	1258	Norfolk	552
Rockford	1182	Buffalo	1161	Richmond	756
Springfield	952	New York	886	Roanoke	769
IND. Evansville	846	Rochester	1218	WASH. Colville	1222
Fort Wayne	1033	Syracuse	1222	Omak	-----
Indianapolis	930	N. C. Asheville	682	Quillayute	799
South Bend	1066	Charlotte	622	Seattle-Tacoma	801
IOWA, Burlington	1082	Greensboro	736	Spokane	1146
Des Moines	1114	Hatteras	515	Walla Walla	826
Dubuque	1271	Raleigh	684	Yakima	1141
Sioux City	1326	Wilmington	461	W. VA. Beckley	890
KANS. Concordia	984	N. DAK. Bismarck	1667	Charleston	816
Dodge City	880	Fargo	1723	Huntington	800
Goodland	988	Williston	1689	Parkersburg	820
Topeka	945	OHIO. Akron-Canton	1015	WIS. Green Bay	1398
Wichita	866	Cincinnati	853	Madison	1310
KY. Lexington	821	Cleveland	1009	Milwaukee	1259
Louisville	781	Columbus	944	WYO. Casper	1225
LA. Baton Rouge	289	Dayton	907	Cheyenne	1108
Lake Charles	216	Toledo	1111	Lander	1344
New Orleans	248	Youngstown	1077	Sheridan	1347
Shreveport	351				

Preliminary reports from airport locations, except those marked U for urban and R for rural.
*Estimated.

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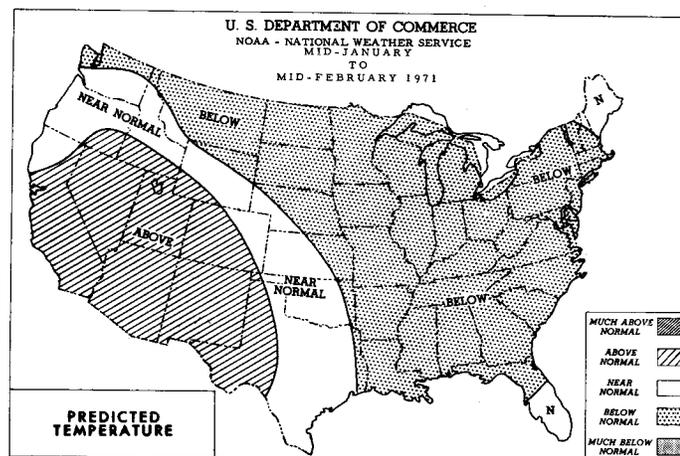
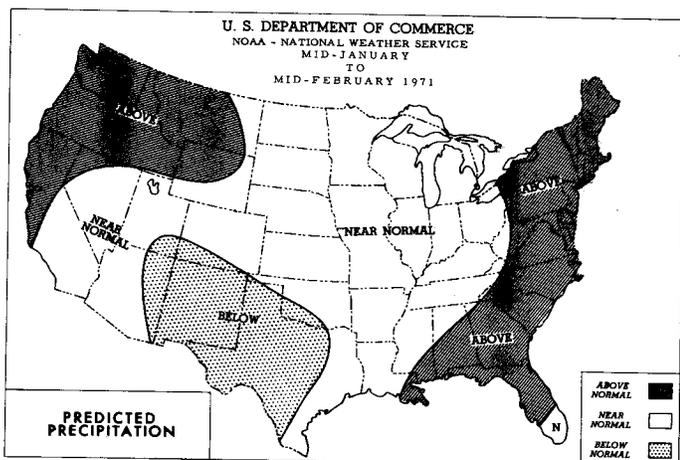
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AVERAGE MONTHLY WEATHER OUTLOOK



WATER SUPPLY OUTLOOK FOR THE WESTERN UNITED STATES
 Issued as of January 1, 1971

The table below shows the most probable water supply forecasts for the residual period (January 1 to September 30, 1971) at selected locations in the West. The publication "Water Supply Outlook for the Western United States," issued as of January 1, 1971, contains supplementary information and forecasts for these and many other localities in the West.

River	Station	Forecast in 1,000 acre-ft.	Forecast % of 15-yr. Avg.†
Columbia	Grande Coulee, Wash.	72,200	93
Columbia	The Dalles, Oreg.	126,000	102
S Snake	Clarkston, Wash.	38,500	121
Sacramento*	Red Bluff, Calif.*	12,200	139
San Joaquin*	Big Creek, Calif.*	1,650	130
Weber	Gateway, Utah	530	167
Jordan	Utah Lake, Utah	625	153
Truckee	Lake Tahoe to Farad	400	190
Colorado	Lake Powell inflow	11,230	129
Green	Green River, Utah	4,490	133
San Juan	Bluff, Utah	1,330	109
Little Colo.**	Woodruff, Ariz.**	6	79
Gila#	Solomon, Ariz.#	71	55
Rio Grande	San Marcial, N. Mex.	470	103
Arkansas	Pueblo, Colo.	415	106
Missouri##	Ft. Peck, Mont.##	5,310	120
Yellowstone	Sidney, Mont.	8,664	115
North Platte	Glendo, Wyo.	1,100	135

† Period, 1953-67
 * Period, Oct. 1, 1970 to Sept. 30, 1971
 ** Period, Nov. 1, 1970 to June 30, 1971
 # Period, Jan. 1, 1971 to June 30, 1971
 ## Period, Apr. 1, 1971 to Sept. 30, 1971

(Hydrologic Services Division, National Weather Service.)