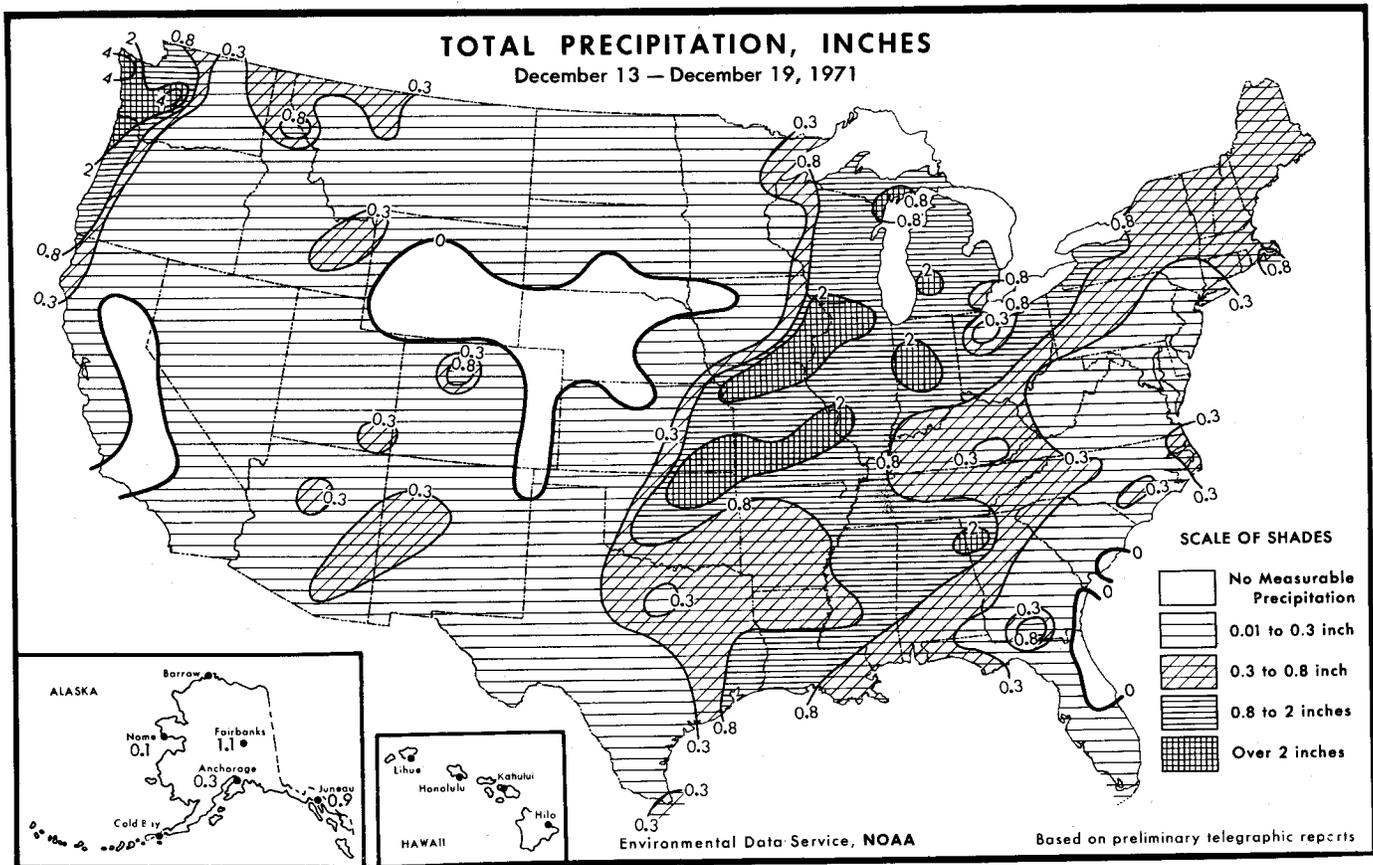


Weekly Weather & Crop Bulletin

U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service
U. S. DEPARTMENT OF AGRICULTURE
Statistical Reporting Service

Volume 58, No. 51

Edited by Lucius W. Dye December 20, 1971 Washington, D. C.

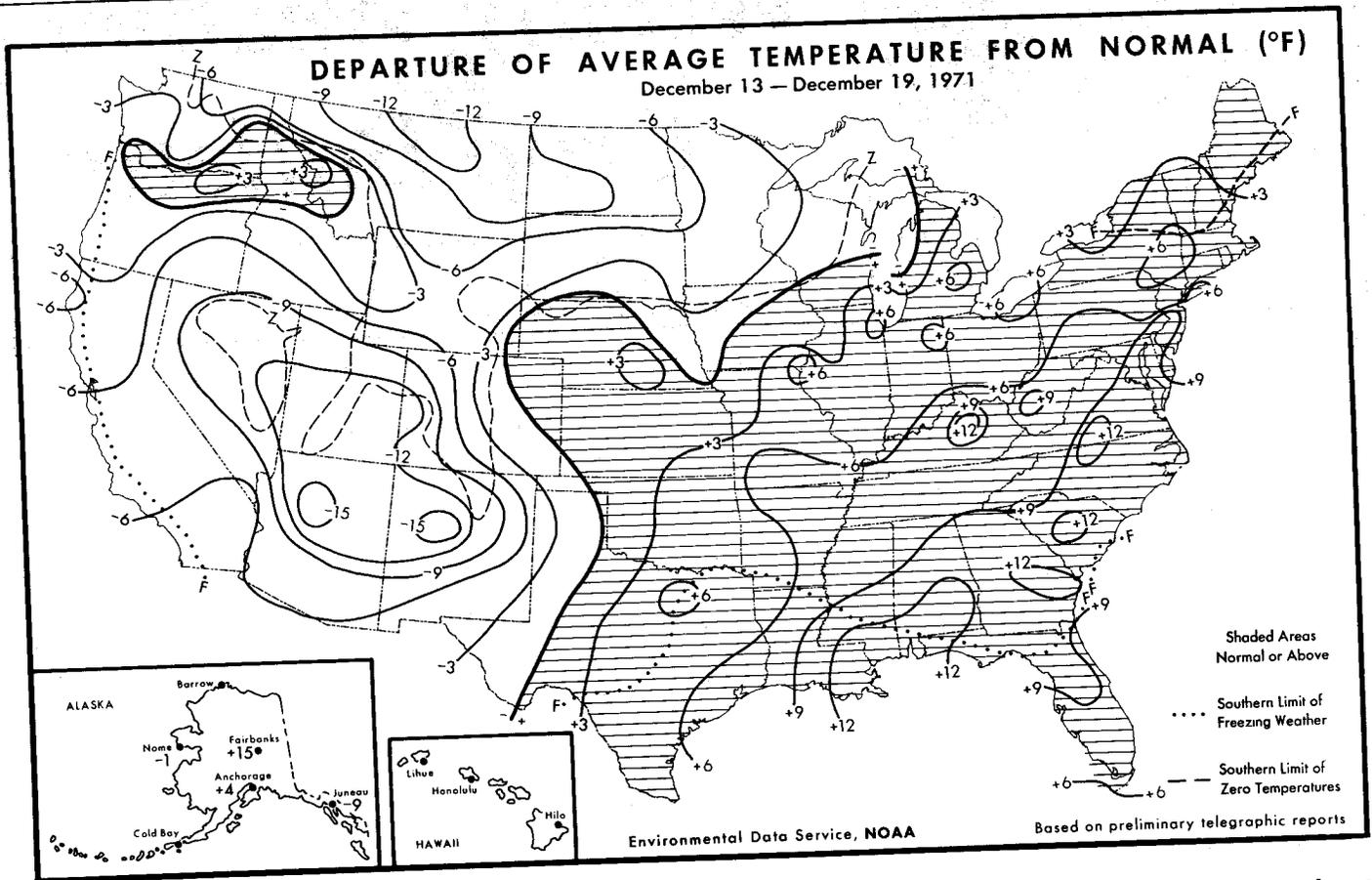


NATIONAL WEATHER SUMMARY

HIGHLIGHTS: Winter with cold temperatures and considerable snow covered much of the West and North-Central. Autumn warm lingered over the East until near the end of the week.

PRECIPITATION: Winter weather covered much of the Nation especially the West and North-Central early in the week. Snow depths Monday morning, December 13, in the Rocky Mountains ranged from a few inches to more than 2 feet. West Yellowstone, Mont., measured 26 inches and Fraser, Colo., 19 inches Monday morning. The snow cover extended across the northern Great Plains to the Great Lakes. Northern New England was also snow covered. Snow continued to fall over the West and North accumulating to 9 inches at Flagstaff, Ariz., and to 18 inches at Pagosa Springs in southwestern Colorado. South and east of the Snow Belt was a band of mixed precipitation, snow mixed with freezing rain or freezing drizzle.

Thunderstorms occurred over the middle and lower Mississippi River Valley and northeastward to Pennsylvania. A number of tornadoes occurred Wednesday in a half dozen or more States. A tornado caused one death at Springfield, Mo. Several persons at Poplar Bluffs, Mo., were injured by a tornado. Tornado damage was widespread in northeastern Arkansas. By Thursday, the storm that battered the central Great Plains was causing wintry weather in the Northeast. Friday was cloudy over much of the eastern quarter of the Nation. Rain was mostly light and scattered. A few flakes of snow fell over the northern Great Plains and the Great Lakes. Light rain or drizzle fell along the northern Pacific Coast with snow in the nearby hills and mountains. Weekend precipitation included rain and snow in the Pacific Northwest, showers in the Southeast, and snow flurries in the lee of the Great Lakes.



TEMPERATURE: The temperature chart this week quite closely resembled last week's map. The West averaged cooler than normal but Indian summer continued over the East until after midweek. Maximum temperatures ranged widely early in the week. Afternoon temperatures over parts of the Great Basin and the Rocky Mountains remained below freezing until near the weekend when the northern Rocky Mountains warmed to the 40's. The highest temperature at Cut Bank, Mont., Thursday was -4° ; the highest Friday, 41° . Subzero temperatures occurred several days in the northern Great Plains and the northern and central Rocky Mountains. On Thursday morning, the temperature at Flagstaff, Ariz., fell to 18° below zero. The mercury at Alamosa, Colo., plunged to -15° on Friday and Saturday mornings.

The opposite temperature regime occurred over much of the East. Maximums in the Northeast dropped from the 30's and 40's early in the week to the 20's and 30's or colder over the weekend. The highest temperature at Caribou, Maine, Sunday was 5° . Mild temperature continued along the eastern Gulf Coast and in Florida until Sunday. Ft. Myers and Orlando, Fla., registered 86° Thursday afternoon. The freezing line pushed steadily southward late in the week and over the weekend. Tallahassee, Fla., registered 30° Sunday morning. Most Virginia stations, except along the coast, recorded 18° or 19° . Subzero weather was common over northern New England Sunday.

L. W. Dye

**SEASON'S GREETINGS
TO ALL**

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Frost damages fruits and vegetables in California and Arizona. * Cotton picking resumed on Texas High Plains. * Rains prolong completion of harvest in South.

SMALL GRAINS: The 1972 winter wheat crop continues to do well. Stands are well-rooted and ground cover is adequate. Only limited growth was made in the Southern Plains -- fields in the North are dormant until spring. Many northern fields are snow covered, but southern South Dakota fields could use more snow for additional protection. Growers in some southern Kansas counties are worried that plant growth is too good. Considerable yellowing was noted in Kansas and Oklahoma with some rust also seen. In the West -- grain condition is satisfactory. Snow covers much of the West.

Adequate moisture and balmy temperatures continue to provide excellent growing conditions for fall-seeded grains in the South. Growth on Arkansas upland soils has been extremely favorable. Growers with acreage remaining to plant have not found the wet weather ideal -- as fields are too muddy to enter with planting equipment.

CORN: Wet weather continues to delay final corn harvesting operations in the eastern half of the Nation. Farmers hoping to have all their corn picked before Christmas were hindered in the North by snow and in the South by rain. Only a few fields are left to be harvested in Nebraska, South Dakota, Wisconsin, and Indiana. Harvest activity increased late in the week as the soil froze enough to support tractors and pickers. Storage space is still a problem with some corn still piled on the ground in Indiana. Prolonged wet conditions have discouraged many growers in the Southeast, as many have from 5% to 10% of their acreage left to pick.

SOYBEANS: Growers are also having a difficult time combining their last soybean fields. Rainy weather is slowing field activity in the South. Some farmers in the Deep South are pessimistic about getting their last fields cut. Excessive moisture and unseasonably high temperatures have caused some sprouting and rotting. Over 95% of the southern acreage is cut, but growers in the Carolinas have only 75% of their crop cut as Christmas approaches. Some wet areas in Maryland also have 25% of their crop to combine. Harvesting is complete in the Corn Belt, however, a few isolated fields remain uncut in Nebraska.

COTTON: Cotton harvesting finally resumed on the Texas High Plains over the weekend. Picking should be extremely rapid with only a little slowdown to celebrate Christmas as picking is drastically behind last year. Only 39% of the crop is picked -- 60% behind last year. Earlier wet weather has also hurt crop yields and quality. Fieldwork was also at a virtual standstill in the South, but less than 5% of the acreage remains

to be picked -- except for North Carolina where 15% is left. Cold, rain, and snow also delayed harvest activity from New Mexico to California. Picking was at a standstill in southeast Arizona, but made fair progress in California's San Joaquin Valley.

OTHER CROPS: Christmas will be here and a few fields of sorghum grain will still be left to harvest. Muddy fields from California to Virginia have made it impossible for growers to complete combining. The first session of burley tobacco marketing closed December 16 -- selling will resume after the Christmas and New Year's Holidays. Plant bed preparation and treatment are underway in the Carolinas for next year's crop. Peanut growers in Texas and Virginia are striving to complete harvest before Christmas.

Fruits & Nuts: Temperatures dipped into the lower 20's in California causing some damage to fruit orchards and citrus groves. Orchardmen reduced damage by working all night to keep frost protection equipment operating. Arizona citrus groves also received slight damage as temperatures dropped into the freezing zone. Conditions in Florida were just the reverse as record high temperatures were set. Picking of oranges was very active with increasing volume going to processors. Christmas pack apples and pears were moving in good volume from the Hood River area of Oregon. Pecan picking is approaching completion in the South.

Vegetables: Cold weather slowed vegetable harvesting in California. The artichoke harvest may be delayed 3 to 4 weeks. "Ice" on lettuce heads delayed cutting until the afternoon in the Imperial Valley. Tomato shipments from Southern California were limited. Low temperatures also slowed lettuce cutting and plant growth in Yuma, Arizona.

Shipments were reduced from the West, but Florida volume increased 5% over the previous week. Tomatoes led in volume, followed by cabbage and celery. A good rain would boost prospects -- many growers are irrigating.

PASTURES AND LIVESTOCK: The condition of livestock across the Nation remains good, but cold temperatures, snow and rain have put herds on full winter feed, especially in the West. Many herds were moved off wheat pastures from Oklahoma to Alabama as fields are too soft to graze. Muddy barnyards are causing extra work for many cattlemen and some animals are suffering from foot rot. Cold weather is causing some pneumonia in the West. Flooding in Arkansas resulted in some livestock losses due to drowning. In the Southeast, late season pastures and fall-seeded grains are supplying much of the livestock feed, but hay and grain are needed to supplement the diet and maintain a healthy condition.

Steve J. Psodna
Agricultural Statistician

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., December 19, 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 . . .	57	+10	1.1	0	New Orleans . . .	69	+14	.6	-.3	OKLA. Okla. City . .	43	+3	1.1	+.8
Mobile . . .	67	+13	.6	-.7	Shreveport . . .	55	+5	.5	-.6	Tulsa . . .	45	+5	3.1	+2.7
Montgomery . . .	62	+14	.7	-.4	MAINE. Caribou . . .	13	-2	.6	0	OREG. Astoria . . .	43	0	2.1	-1.1
ALASKA. Anchorage .	19	+4	.3	+.1	Portland . . .	29	+3	.5	-.4	Burns . . .	23	-6	.1	-.2
Barrow . . .	---	---	---	---	MD. Baltimore . . .	45	+10	.7	-.9	Medford . . .	35	-2	.1	-.7
Fairbanks . . .	7	+15	1.1	+1.0	MASS. Boston . . .	37	+4	.5	-.3	Pendleton . . .	41	+5	T	-.4
Juneau . . .	20	-9	.9	0	Chatham . . .	38	---	.8	---	Portland . . .	42	+1	.5	-.9
Nome . . .	5	-1	.1	-.1	MICH. Alpena . . .	27	+3	1.5	+1.1	Salem . . .	41	-1	.9	-.8
ARIZ. Flagstaff . .	15	-16	.6	+.2	Detroit . . .	32	+4	.7	+.2	PA. Allentown . . .	36	+5	1.1	+.6
Phoenix . . .	46	-6	.1	-.1	Flint . . .	32	+7	2.0	+1.6	Erie . . .	35	+6	1.1	+.5
Tucson . . .	44	-8	.3	+.1	Grand Rapids . .	31	+3	2.2	+1.7	Harrisburg . . .	40	+7	.1	-.6
Winslow . . .	19	-14	.1	0	Houghton Lake . .	26	0	1.6	+1.2	Philadelphia . . .	43	+9	T	-.6
Yuma . . .	49	-6	T	-.1	Lansing . . .	32	+5	1.3	+.9	Pittsburgh . . .	37	+6	.7	+.1
ARK. Fort Smith . .	47	+5	.7	+.1	Marquette . . .	23	-1	1.2	+.8	Scranton . . .	35	+6	.3	-.2
Little Rock . . .	48	+6	.3	-.6	Muskegon . . .	30	0	1.7	+1.2	R.I. Providence . .	37	+5	.4	-.4
CALIF. Bakersfield .	42	-7	T	-.2	S. Ste. Marie . . .	21	0	1.2	+.7	S.C. Charleston . .	61	+11	0	-.7
Eureka . . .	43	-6	.5	-1.0	MINN. Duluth . . .	9	-5	.6	+.3	Columbia . . .	59	+13	.2	-.6
Fresno . . .	40	-7	T	-.5	Internatl Falls .	6	-3	.2	0	Greenville . . .	53	+9	.7	-.2
Los Angeles . . .	55	-3	0	-.6	Minneapolis . . .	13	-5	.1	-.1	S. DAK. Aberdeen .	12	-6	.1	-.2
Red Bluff . . .	43	-4	T	-1.0	Rochester . . .	16	-2	.2	0	Huron . . .	16	-3	T	-.1
San Diego . . .	53	-4	.2	-.4	St. Cloud . . .	11	-5	.2	0	Rapid City . . .	24	-4	T	-.1
San Francisco . . .	44	-6	T	-1.0	MISS. Jackson . .	59	+10	.6	-.7	Sioux Falls . . .	16	-5	T	-.1
Stockton . . .	40	-6	T	-.7	Meridian . . .	59	+11	1.0	-.2	TENN. Chattanooga .	51	+9	.9	-.3
COLO. Denver . . .	31	-1	T	-.1	MO. Columbia . .	39	+5	1.5	+1.1	Knoxville . . .	50	+8	.8	-.2
Grand Junction . .	15	-14	.3	+.1	Kansas City . . .	37	+1	1.9	+1.5	Memphis . . .	50	+8	1.3	+.2
Pueblo . . .	32	-2	.1	0	St. Louis . . .	38	+4	2.8	+2.3	Nashville . . .	48	+7	.8	-.2
CONN. Bridgeport .	39	+6	.3	-.4	Springfield . . .	44	+7	2.6	+2.1	TEX. Abilene . . .	50	+4	.4	+.1
Hartford . . .	34	+4	.3	-.5	MONT. Billings . .	22	-7	.2	+.1	Amarillo . . .	37	-2	T	-.2
D.C. Washington . .	47	+9	T	-.6	Glasgow . . .	11	-7	.1	0	Austin . . .	57	+4	.1	-.5
FLA. Apalachicola .	65	+9	.5	-.2	Great Falls . . .	20	-8	.4	+.3	Beaumont . . .	63	+8	1.1	-.1
Ft. Myers . . .	73	+8	T	-.3	Havre . . .	7	-14	.3	+.2	Brownsville . . .	68	+5	.7	+.3
Jacksonville . . .	65	+9	T	-.5	Helena . . .	23	-1	T	-.1	Corpus Christi . .	66	+7	T	-.5
Key West . . .	77	+7	T	-.5	Kalispell . . .	18	-7	.2	-.1	Dallas . . .	54	+6	.4	-.2
Lakeland . . .	70	+7	T	-.4	Miles City . . .	13	-11	.2	+.1	Del Rio . . .	56	+3	T	-.2
Miami . . .	75	+7	T	-.4	Missoula . . .	28	+4	.2	0	El Paso . . .	40	-4	.1	0
Orlando . . .	72	+11	0	-.5	NEBR. Grand Island	30	+3	T	-.1	Fort Worth . . .	54	+6	.2	-.3
Tallahassee . . .	64	+10	.1	-.7	Lincoln . . .	31	+1	T	-.2	Galveston . . .	65	+7	1.0	0
Tampa . . .	69	+7	T	-.4	Norfolk . . .	24	-1	0	-.1	Houston . . .	62	+8	.8	-.2
GA. Atlanta . . .	55	+10	.5	-.5	North Platte . .	27	0	T	-.1	Lubbock . . .	44	+3	.1	0
Augusta . . .	58	+11	T	-.8	Omaha . . .	26	-1	T	-.2	Midland . . .	46	0	T	-.1
Macon . . .	61	+12	.2	-.7	Valentine . . .	26	+1	T	-.1	San Angelo . . .	51	+3	T	-.2
Savannah . . .	63	+12	T	-.7	NEV. Ely . . .	14	-13	.1	-.1	San Antonio . . .	58	+4	T	-.4
HAWAII. Hilo . . .	---	---	---	---	Las Vegas . . .	39	-6	.1	0	Victoria . . .	63	+6	T	-.6
Honolulu . . .	---	---	---	---	Reno . . .	24	-8	T	-.3	Waco . . .	54	+3	.3	-.3
Kahului . . .	---	---	---	---	Winnemucca . . .	19	-11	T	-.2	Wichita Falls . . .	48	+3	.5	+.2
Lihue . . .	---	---	---	---	N.H. Concord . . .	29	+4	.6	-.1	UTAH. Blanding . .	18	-12	.8	+.5
IDAHO. Boise . . .	26	-6	.2	-.1	N.J. Atlantic City	42	+6	T	-.7	Salt Lake City . .	20	-10	.1	-.2
Lewiston . . .	37	+2	T	-.3	Trenton . . .	44	+10	.1	-.6	VT. Burlington . .	26	+5	.3	-.2
Pocatello . . .	19	-9	.2	0	N.MEX. Albuquerque	22	-15	.5	+.4	VA. Lynchburg . .	50	+12	.1	-.6
ILL. Cairo . . .	45	+6	1.1	+.3	Roswell . . .	38	-1	T	-.1	Norfolk . . .	53	+11	.2	-.4
Chicago . . .	35	+6	1.9	+1.5	N.Y. Albany . . .	33	+7	.7	+.1	Richmond . . .	50	+11	.1	-.6
Moline . . .	29	+2	2.4	+2.0	Binghamton . . .	31	+5	.6	0	Roanoke . . .	46	+8	T	-.7
Peoria . . .	32	+3	1.2	+.8	Buffalo . . .	32	+5	.9	+.2	WASH. Colville . .	22	-6	.3	-.1
Rockford . . .	30	+4	2.3	+1.9	New York . . .	41	+5	.2	-.6	Omak . . .	19	-7	.1	-.3
Springfield . . .	36	+4	1.6	+1.2	Rochester . . .	31	+3	1.0	+.5	Quillayute . . .	37	-4	4.9	+1.1
IND. Evansville . .	40	+4	.6	-.1	Syracuse . . .	34	+7	.9	+.2	Seattle-Tacoma . .	39	-2	1.3	-.2
Fort Wayne . . .	34	+6	1.4	+.9	N.C. Asheville . .	48	+8	.3	-.4	Spokane . . .	33	+2	.3	-.3
Indianapolis . . .	36	+5	2.9	+2.3	Charlotte . . .	53	+10	.3	-.5	Walla Walla . . .	42	+4	.1	-.3
South Bend . . .	34	+5	1.0	+.5	Greensboro . . .	51	+12	.3	-.4	Yakima . . .	28	-4	T	-.3
IOWA. Burlington .	35	+7	2.2	+1.9	Hatteras . . .	59	+11	.6	-.5	W.VA. Beckley . . .	42	+8	.3	-.5
Des Moines . . .	26	+1	.2	-.1	Raleigh . . .	52	+10	.2	-.5	Charleston . . .	46	+9	.2	-.5
Dubuque . . .	25	+1	2.3	+1.9	Wilmington . . .	59	+11	.2	-.6	Huntington . . .	45	+8	.4	-.3
Sioux City . . .	23	-2	T	-.1	N. DAK. Bismarck .	7	-11	.1	0	Parkersburg . . .	41	+5	.2	-.4
KANS. Concordia . .	34	+2	T	-.2	Fargo . . .	9	-5	.2	+.1	WIS. Green Bay . .	20	-2	1.3	+1.0
Dodge City . . .	37	+2	.1	0	Williston . . .	8	-9	.1	0	La Crosse . . .	19	-3	.4	+.2
Goodland . . .	32	+2	1.0	0	OHIO. Akron-Canton	34	+4	1.1	+.6	Madison . . .	24	+2	1.7	+1.4
Topeka . . .	35	+1	1.0	+.7	Cincinnati . . .	39	+6	.8	+.2	Milwaukee . . .	28	+3	1.6	+1.2
Wichita . . .	39	+3	.5	+.3	Cleveland . . .	37	+7	1.0	+.5	WYO. Casper . . .	23	-5	T	-.1
KY. Lexington . . .	48	+12	.8	0	Columbus . . .	36	+5	1.3	+.8	Cheyenne . . .	30	0	0	-.1
Louisville . . .	43	+7	.7	0	Dayton . . .	36	+5	1.3	+.8	Lander . . .	20	-3	0	-.1
LA. Baton Rouge . .	65	+11	1.3	+.2	Toledo . . .	33	+5	.8	+.3	Sheridan . . .	19	-8	.1	0
Lake Charles . . .	64	+9	1.4	+.1	Youngstown . . .	34	+5	1.1	+.5	P.R. San Juan . . .	78	+1	1.3	+.2

* 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 Climatologists.

ALABAMA: A brief cold spell Friday and Saturday; otherwise mostly cloudy and quite warm all week with several periods of light rain. Record or near record highs several areas Wednesday and Thursday and frost or freezing in north and central sections Saturday night. Average temperatures 8° above normal. Rainfall moderate to heavy with weekly amounts mostly above 1.00 inch. Rainy weather prolonging harvest remaining cotton, corn, and soybeans. Farmers pessimistic about getting remaining crops out of field. About 2 to 3 weeks open weather needed to complete harvest. Otherwise much remaining production will be lost. Unseasonably warm temperatures and rains providing excellent conditions for small grains and winter grazing crops. Many fields too wet to graze. Feed from pastures short. Light supplemental feeding being done, but supplies stored feed should be adequate most farms.

ARIZONA: Temperatures much below normal most of week with freezing temperatures in colder sections of Salt River Valley on 5 nights and in Yuma area on 4 nights. Precipitation beginning of week reached most sections but was light over irrigated valleys south. Maximum weekly water totals were in White Mountains but most were under 1.00 inch. Inclement weather delayed operations southeast. Cotton harvest that area at standstill. Yuma and central areas, harvest nearing completion. Plow up finished southern Yuma County. Sorghum harvest complete southeast, nearing completion Yuma and central. Growth fall-planted sugar beets slowed by low temperatures. Seeding small grains and safflower continues active. Low temperatures retarded emergence recent plantings. Alfalfa fields pastured by sheep. Growth newly-planted fields slowed by cold weather. Lettuce harvest Yuma area delayed low temperatures. Growth later plantings lettuce, cabbage, carrots, and romaine slowed. Overall progress good. Harvest navels, sweets, tangelos, tangerines, lemons, few grapefruit continued Salt River Valley. Harvest lemons, grapefruit, navels, and sweets continued Yuma. Citrus groves received slight damage recent low temperatures. Range conditions fair to good. Stock water adequate most areas. Supplemental feeding increasing winter feed supplies diminish.

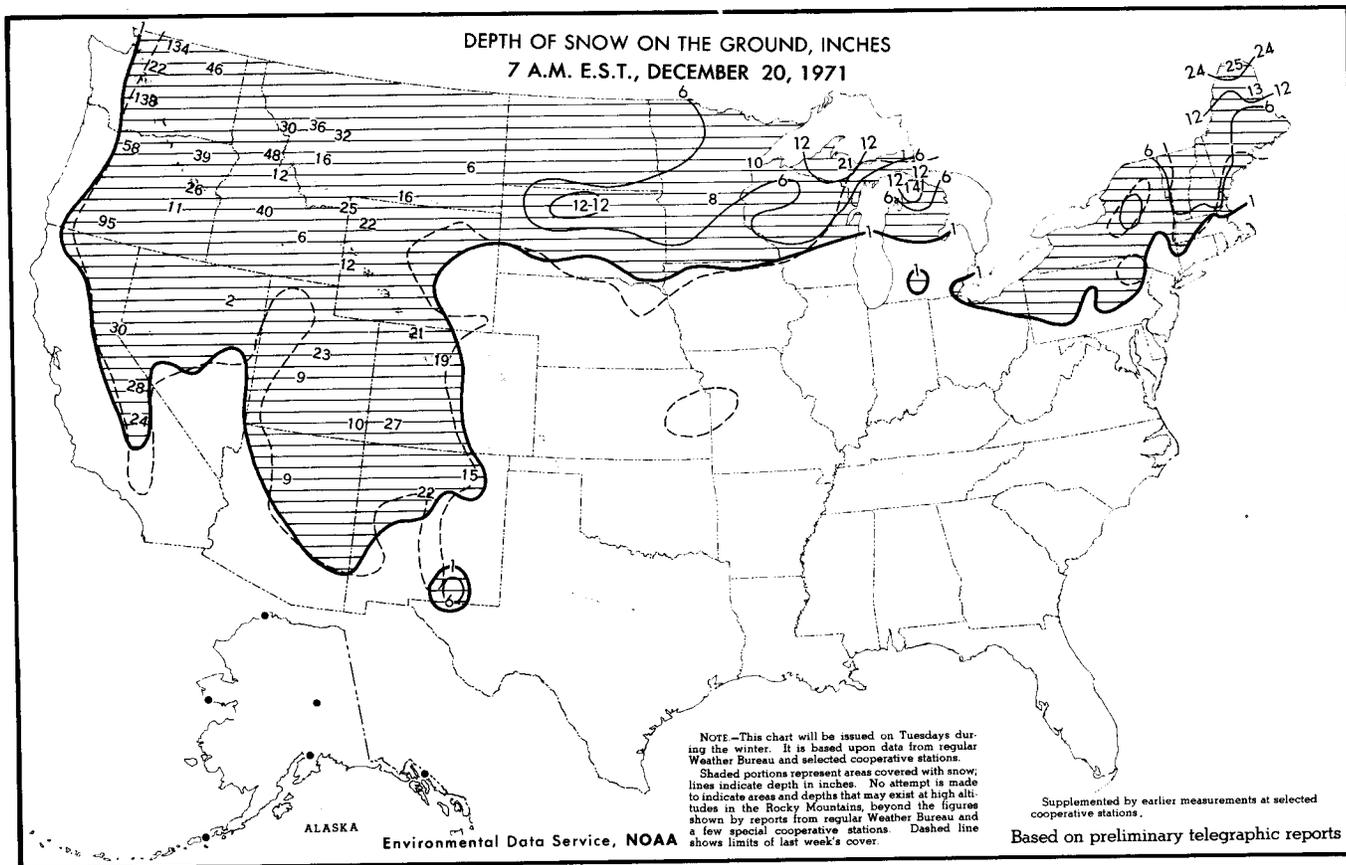
ARKANSAS: Mean temperatures 4° to 8° above normal. Rainfall generally in excess of 1.00 inch in northwest, north-central, and central sections with heaviest falls at Morrilton with 1.64 inches and Mountain Home with 1.63 inches. Amounts elsewhere in State from 0.50 to 1.00 inch. Highest temperature 75° at Texarkana on 14th. Lowest 21° at Gilbert on 18th. Strong winds and some tornado funnels caused widespread but generally minor damage. Extremely wet all areas. Little or no fieldwork done. Flooding numerous local western areas caused limited losses cattle from drowning. Winter grain crops made favorable growth particularly uplands with moderate temperatures prevailing. Many fields too soft for grazing. Livestock continued to be fed and mostly fair to good condition.

CALIFORNIA: Temperatures 5° to 8° below normal west of Sierras, 10° to 12° below normal mountains, desert. Extensive valley fog last days. Light

rain during week, amounts ranging from 0.25 inch south coast to 1.25 inch north coast. Most field activity limited due to cold, wet weather north--dry windy weather south. Limited seeding small grains, milo harvest. Cotton picking continues San Joaquin Valley. Alfalfa planting San Joaquin Valley. Temperatures below normal and freezing temperatures several areas. Navel orange harvest continues slow, maturity problem. Temperatures dipped lower 20's some areas, frost protection equipment used. Some damage occurred. Valencia orange crop developing satisfactorily. Harvest grapefruit continues, small fruit sizes. Lemon harvest progressing slowly. Tangerine harvest continues. Avocado harvest continues slow pace. Dormant spraying and pruning vineyards and deciduous orchards. Grass growth slowed by cold. Stockwater supplies good. Supplemental feeding increasing. Sheep on alfalfa. Artichoke harvest very slow; may be delayed 3 to 4 weeks some areas due cold. Broccoli, cauliflower slow Salinas, light to moderate other areas. Carrots harvest nearly complete Salinas; continues Desert Valleys. Celery shipments light Salinas; active Oxnard, San Diego County. Lettuce harvest past peak Palo Verde, increasing Imperial Valley, delayed until afternoons by ice on lettuce; harvest complete Bakersfield. Potato harvest underway Madera, some frozen tubers; shipments moderate southern California. Tomatoes limited southern California due cold weather.

COLORADO: Continued cold; some warming east over weekend. Scattered very light snow east, light to locally heavy snow mountains and west. Cold and snow early in week limited farm activities to livestock care and general chores. Surface soil moisture improved. Fall-seeded grains good to excellent. Most acreage eastern plains has sufficient growth to support livestock grazing. Range and pastures fair. Supplemental feeding required most areas.

FLORIDA: Temperatures continued to average well above normal early portion of week as unprecedented hot weather continued. A cold front passage on 17th and 18th brought temperatures back to near normal but early temperatures averaged 10° to 15° above normal in north sections and 5° to 10° above normal south sections. Many stations in north and central Florida set daily high temperature records and a few monthly extremes were set. On December 16, at Tallahassee, a monthly high of 84° was tied and with the record high minimum of 71° on that morning gave that station the hottest December day ever. Rainfall was sparse with only scattered showers, mainly in vicinity of front. Largest divisional total of 0.10 inch was in northwest division. Adequate moisture and warm temperatures promoted growth small grains. Wheat still being planted. Cotton and soybean harvest nearly complete. Sugarcane harvest full swing. Dry weather central and south causing pastures to decline. Small grains north providing increased grazing. Supplemental feeding light. Citrus condition very good. Moisture short, rain needed. Irrigation continues. Fresh fruit movement very active. Processors receiving increasing volumes. Vegetable shipments increased 5% over previous week continuing current trend. High temperatures,



lack of rainfall conducive to rapid growth and may necessitate more selective harvest. Tomatoes lead in volume followed by cabbage, celery, peppers. Nearly all vegetables available variable quantity. Showers needed. Irrigation necessary. Seeding, transplanting active for late winter, spring harvest.

GEORGIA: Unseasonably warm weather continued through Thursday. New record highs for date or so late in season at numerous places. 83° at Savannah on Wednesday equaled December record established previous Saturday. Change to more seasonal Friday. Freezing extreme north Saturday morning, and over most of State Sunday. Freezing temperatures were first recorded in State in about 2 weeks. Mild weather returned late Sunday. Averages for week were 12° to 16° above normal. Rain in north and west on 3 to 4 days with heaviest amounts Sunday night. Totals ranged from more than 1.00 inch north and parts of west to little or none southeast and extreme south. Soil moisture remains adequate to excessive. Harvest cotton and soybeans delayed several areas by wet fields. Excessive moisture northeast combined with unseasonably high temperatures caused sprouting and rotting some soybeans. Small grains, pastures and livestock remain mostly good condition.

HAWAII: Rainfall moderate to heavy on Hawaii, Oahu, and Kauai but light on Maui. Cool all areas. Farm operations slowed by wet fields. Sugarcane harvesting practically over; 21 of 23 sugar mills completed 1971 grinding. Work on pineapple plantations confined to planting, weeding, and fertilizing when weather permits. Sup-

plies vegetables and fruits continued adequate. Pasture and cattle fair to good condition.

IDAHO: Another colder-than-normal week that averaged 1° to 12° below normal. It was coldest east. Precipitation was general first half of week ranging from below to well above normal. The Panhandle reported totals reaching 1.00 inch. Most precipitation fell as snow. Heavy hay feeding required for all livestock. Little farm activity outside of routine chores.

ILLINOIS: Warm, rainy, and cloudy week. Temperatures averaged 8° above normal and precipitation exceeded 2.00 inches some areas. Intense low through State on 19th caused property loss and injuries to persons as tornadoes and high winds hit such communities as Homer, Charleston, and Hoopston. Winter small grains good to excellent condition. Livestock mostly good to excellent. Wet weather making lots and stalk fields muddy. Soil moisture adequate. Farm wells and stock ponds recovering from low water levels. Main activities include routine farm and livestock chores. Little or no fieldwork being done.

INDIANA: Stormy rainy week. Precipitation ranged from 1.00 inch south and north to 3.00 inches central. Temperatures averaged 7° above normal and ranged from 12° on 18th to 67° on 16th. Intense low on 15th caused scattered wind damage through most of State. Some injuries and deaths resulted. Fields soggy from rains. Little fieldwork accomplished. Few fields corn remain to be harvested. Some corn still stored awaiting shipment.

IOWA: Warm wet week in east, mild southern counties, cool and dry elsewhere. Heavy rains on 14th and 15th produced record December 24-hour rainfall. In Washington, 3.52 inches; Iowa City, 2.86 inches; and near record falls in several eastern localities.

KANSAS: Moderate to heavy rains most of southeast, east-central, and extreme northeast. Generally 1.00 to 3.00 inches. Local flooding in heavy rain areas. Little or no precipitation western 2/3 of State. Weekly mean temperatures averaged 2° to 2° above seasonal. Wheat continued to do well with stands well rooted and adequate ground cover. Some late-planted wheat too small for grazing. Favorable response to warmer weather and sunshine late week. Fall growth some southern counties more than desirable. Some leaf rust locally and considerable yellowing noted. Farmers attempted to harvest remaining fall crops late week. Fields too wet to complete sugar beet digging southwest. Some hay in windrows lost during wet weather. Livestock marketing active and some cattle moved back into wheat, beet, and stubble fields. Supplemental feeding continued. Feedlots muddy and confined cattle suffered foot rot. Some shipping fever in recently bought calves. Few lambs lost to coyotes.

KENTUCKY: A week of extremes. Maxima in 60's and 70's on 14th and 15th, record or near record readings for dates at a number of locations. Coldest morning of season on 18th, minima in the 10° to 20° range. High winds and scattered wind damage on the 15th, heavy thunderstorms in west. Some snow several locations on 17th and 19th. Weekly temperature averages 7° to 10° above normal. Precipitation 0.10 to about 1.00 inch, heaviest in western 1/3. First session burley market closed December 16, will reopen after holidays. Winter small grains good condition. Soil moisture mostly adequate. Livestock good, but changeable weather hard on young stock.

LOUISIANA: Unusual warmth for December continued. Weekly averages near 70° south to upper 50's in north or 7° to 15° above normals. Temperature extremes: 84° at Hammond, Amite, and New Orleans on Thursday and 37° at Alexandria and Monroe on Sunday. Precipitation again widespread with moderate to locally heavy showers most areas on 3 to 5 days. Weekly rainfall totals ranged from near 0.50 inch parts of northwest and southeast to locally more than 4.00 inches portions of north. Greatest 24-hour amount, 3.01 inches at Monroe at 6 a.m. Friday. Fieldwork at virtual standstill for 3d consecutive week due excessive moisture. Practically no cotton or soybeans harvested, but some progress made harvesting sugarcane. Cotton 95% picked, soybeans 98%, sugarcane 95%. Unusually warm weather stimulated growth winter pastures, but generally too wet to graze. Pasture feed below average. Some supplemental feeding livestock. Livestock good to fair condition.

MARYLAND AND DELAWARE: Decembers unseasonably warm temperature extended from 6th to 17th with record or near recordbreaking temperatures on 15th and 16th. Cold front passage brought much lower temperatures over weekend and very strong gusty winds on 18th. Rainfall on as many as 4 days but totals light mostly less than 0.10 inch. Corn and soybean growers discouraged by continued wet weather. About 5% corn and 8% soybeans unharvested. Some areas, nearly 1/4 soybeans not combined. Livestock good condition, muddy barn lots caused extra work.

MICHIGAN: Seasonal temperatures early and late in period, mild midweek as record maximum temperatures climbed into low 60's. Intermittent rain or snow most areas after mid-period. Temperature averages near normal Upper Peninsula, 2° to 6° above normal Lower Peninsula. Precipitation: 1.00 to 1.25 inch Upper Peninsula, 1.00 to 2.25 inches Lower Peninsula.

MINNESOTA: Cold week with temperatures varying from 3° to 5° below normal. Extremes: 33°, -24°. Precipitation generally less than 0.25 inch except along Lake Superior where it averaged more than 0.50 inch. Snow depth: From west-central through northeast generally 8 to 10 inches, the northwest and southeast districts generally less than 5 inches.

MISSISSIPPI: Rains continued on 4 to 5 days during week with greatest 1-day amount of 3.03 inches reported at Nitta Yuma on Friday. On 15th, some wind damage in southeast Mississippi with 2 injured near Laurel. Temperature averages rose to 8° to 18° above normal. Weekly extremes: 31° and 86°. Over weekend: Temperatures dropped with 24° Sunday at Tupelo; some rain with 3.28 inches reported at Tylertown this Monday morning. Some corn, cotton, and soybeans still remain unharvested due wet weather. Less than 1 day suitable for fieldwork. Corn 98%, cotton 99%, soybeans 98% and pecans 88% harvested. Soil moisture reserves now mostly surplus to excessive.

MISSOURI: Heavy rains midweek most of State except extreme northwest. Some flooding central and south. Widespread wind damage with intense winter storm that moved across State midweek. Above normal temperatures with greatest departures of 10° to 12° in Bootheel. Some light rain Sunday.

MONTANA: Cold through Thursday, then strong warming through weekend. Temperatures averaged above normal southwest, below normal elsewhere. Precipitation light except for up to 0.30 inch. Moisture weekend along eastern slopes of Rockies. Winter wheat fair to good condition. Supplemental feeding range livestock declined due reduced snow cover. Range cattle and sheep good, stock water adequate.

NEBRASKA: A few light snow flurries and seasonable temperatures. Limited harvest occurred when ground frozen sufficiently to support harvesting equipment. Corn harvest advanced 1% to 98% complete. Only isolated fields sorghum and soybeans remain for harvest. Frozen ground most areas have stopped fall tillage. Major farm activities included routine livestock care, machine repair, working farm records, attending sales, and movement feed supplies. Winter wheat continues good to excellent condition. Cool weather caused some problems for livestock producers. Few reports sickness newly placed cattle received. Many cattle still gleaning stalk fields.

NEVADA: Another very cold week. Temperatures in north averaged 11° below normal. 5° to 7° below normal in south. General light precipitation at all divisions. Light snowfall in north 1st part of week. Cotton harvest Pahrump Valley nearing completion. Elsewhere, farming activity, except for care and feeding livestock at minimum. Cattle and sheep continue generally good condition.

NEW ENGLAND: Mild first half with maxima in 50's and 60's in central and south on December 16 when records were broken at many places. Much colder over weekend with many subzero readings Sunday morning. Week averaged near to below normal in northeast but mostly 2° to 7° above normal in southwestern half. Precipita-

tion almost daily but mostly light. Heaviest on 15th and 16th. Totals for week ranged from 0.40 to 0.80 inch. Snow cover in south and central limited mostly to new snow over weekend ranging up to a few inches, but depths commonly near a foot in north.

NEW JERSEY: Temperatures were near or above normal until the 18th, then much colder. Record breaking high readings in the mid-60's most areas on 15th and 16th. Low readings in teens on 19th. Precipitation averaged 0.20 inch throughout State. Heaviest amounts were in north where from 1 to 2 inches of snow fell overnight on the 17th and 18th.

NEW MEXICO: General light showers early in week except in extreme southeast and scattered light showers at end of week in south. Precipitation totals of 0.25 to 0.50 inch in mountains. Temperatures averaged 5° to 10° below normal in west and central and slightly above normal in eastern plains. Much colder after Monday with most minimum temperatures on Thursday. Freezing daytime temperatures midweek in northwest and middle Rio Grande Valley. Soil moisture generally adequate. Harvesting cotton and sorghum grain delayed due to rain and snow. Winter wheat good to excellent condition; providing excellent pastures. Ranges fair. Livestock good. Supplemental feeding underway.

NEW YORK: Very mild weather since 6th continued through 17th. Maximums low 60's extreme west and mid- to upper 50's elsewhere west half and southeast on 15th, spreading to northeast on 16th. Buffalo 65° on Wednesday. Colder trends on weekend with maximum in teens north to mid-20's southern Upstate on 18th. Coldest on 19th with -5° north to near 20° coastal and near 10° southern Upstate. Rain on 14th and 15th. Totals from 0.60 to 0.90 inch. Great Lakes and St. Lawrence Valley down to 0.20 to 0.30 inch. Long Island and northeast. Snow fall limited to weekend. Totals 2 to 5 inches except 1 inch or less in southeast. Snow cover restored much of Upstate by 20th with greatest depth 7 inches at Boonville.

NORTH CAROLINA: Warmest since early November, averaging 15° above normal. Daily highs mostly in 70's warmer half of State, reaching lower 80's and breaking some long-established daily records some areas. Turning sharply colder over weekend, below freezing all areas morning of 19th, then warming again. Widely scattered showers most days. Total amounts 0.25 inch to 2.00 inches, mostly less than 1.00 inch except southern mountains. Soil moisture continues adequate to surplus, mostly adequate statewide, mostly surplus Piedmont and northern coastal plain. Wet fields continued slow harvest most crops. Corn harvest 90% complete, cotton 85%, soybeans 75%, sorghum grain 91%, and lespedeza seed 95%. Fallown grains mostly good, seeding lags, about 85% complete. Pastures mostly good. Labor supplies adequate. Some tobacco plant bed preparation underway.

NORTH DAKOTA: Temperatures variable with averages 2° to 10° below normal. Extremes 38° and 28°. Precipitation trace to 0.27 inch occurring as snow near midweek. Snow cover light to 6 inches, heaviest south. Ranges still open some areas and livestock grazing accompanied by supplemental feeding. Hay and roughage supplies generally adequate. Light snows brought no feed or stock movement problems. Farmers marketing livestock and crops and doing farm chores.

OHIO: Recordbreaking warm temperatures and strong winds accompanied by both rain and snow. Most of the State received rain on 14th and 15th with the northern part of State receiving nearly 1.00 inch. On 15th, Cleveland and Mansfield reported wind gusts in excess of 70 m.p.h. In addition, 5 Ohio cities set new high temperature marks for date. Rest of the week, temperatures were more seasonable. Northern and northeastern section of State received 1 to 3 inches of snow on 17th and 18th. Farm and building maintenance main farm activities. Mild weather allows farmers to work in fields chopping corn stalks. Wet soils most areas limited plowing.

OKLAHOMA: Temperatures averaged from 1° to 4° above normal western half and 3° to 7° above normal eastern half State. Rainfall averaged from less than 0.10 inch Panhandle to 2.48 inches northeast. Temperature extremes: 72° southeast and 12° Panhandle. Few fields cotton, sorghum grain, soybeans harvested, but rain, wet fields continue delay harvest most areas. Pecan harvest fair progress. Several consecutive days drying weather seeded before row crop harvest can resume. Small grains made only limited growth, but most fields have good stands forage and are good to excellent condition. Rust and yellowing still reported several localities. Many livestock removed from wheat pastures due wet fields, necessitating supplemental feeding. Range feed deteriorated primarily eastern areas due wet weather. Most cattle making favorable gains, but damp wet weather caused some shrink, sickness, and death loss. Soil moisture supplies adequate to surplus.

OREGON: Cool, wet, windy week with snow at higher elevations and eastside. Daily coastal rain but sunny at close in western valleys and eastside. Temperatures mostly 1° to 4° below normal, 6° to 7° below south border. Minima 4° to 22° east, 28° to 37° north-central and westside. Maxima 30° to 54°. Precipitation totaled 0.20 to 0.60 inch east, 1.20 to 2.80 inches Cascades and Willamette Valley, 2.50 to 5.20 inches coast. Supplemental feeding livestock increasing due to snow and cold weather. Too wet for fieldwork. Fall-seeded grain crops under snow higher elevations. Movement Christmas trees, holly, and other Christmas greenery active. Christmas pack apples, pears, moving from Hood River, Rogue River Valley areas.

PENNSYLVANIA: Another Cloudy, mild week. Rain, briefly mixed with sleet and snow in mountains, early in period. Moderate to heavy amounts northwest. Snow flurries and showers Friday and Saturday, heavy snow squalls of 4 to 6 inches or more parts of northwest. More rain, sleet and snow late Sunday and early Monday. Total precipitation 1.00 to over 2.00 inches northwest, under 0.25 inch southeast, 0.25 to 1.00 inch elsewhere. Maxima in 60's many areas Wednesday, 73° at Confluence. Much colder weekend, maxima 20's and 30's. Minima teens and 20's, except colder parts of northern mountains. Wellsboro -5° Sunday. Weekly temperatures 2° to 4° above normal north-central, 4° to 8° above normal elsewhere. Routine winter farm chores.

PUERTO RICO: Rainfall over island averaged 0.95 inch or 0.06 inch below normal. Heaviest rains occurred around north-central coast and Pico Del Este where 3.00 to 4.50 inches were recorded. The south-central coast received no rain. The interior divisions averaged about 0.50 inch in most areas. Crop moisture conditions were near normal except some areas on south coast. Temperatures averaged 75° to 76° on coast and 69° to 70° interior divisions with average departure -1.2°. Extremes: 90° and 52°. Good weather for harvesting sugarcane. Favorable conditions for coffee recollection. Pastures good to excellent islandwide. Conditions favorable for most field activities various minor crop producing zones around island.

SOUTH CAROLINA: Rainfall was light with 0.50 to 1.00 inch in extreme northwest and less than 0.25 inch elsewhere. Temperatures unseasonably high but began dropping as week ended. Columbia had a low of 69° and a high of 83° on 16th and this was typical of many locations. All sections averaged about 15° above normal. Continued wet weather hampered cotton, soybeans harvest and planting small grains. Cotton 92°, soybeans 69% harvested. Pecans fair to good condition. Pastures good. Oats 86% planted, 76% emerged. Wheat and oats condition good. Fall vegetables good. Tobacco beds being prepared and treated. Pruning peach trees.

SOUTH DAKOTA: Weekly temperatures averaged up to 8° below normal. This is the 3d week in a row State-wide subnormal temperatures. Extremes ranged from 22° below zero at Conde on 17th to 54° at Hermosa on 17th. Precipitation fell mostly as light snow scattered through week with amounts 0.10 inch or less. Snow cover

end of week ranged from a trace in southwest to about 1 foot in northeast. This has changed little since last week. The southwest and south-central areas could use more snow cover on fall-seeded grains, but generally fall-seeded grains good to excellent condition. Major movement feeders and calves to market over. Supplemental feeding universal throughout State. Few local reports pneumonia. Few scattered fields corn remain to be picked, especially northeast where greatest amounts snow received. Feed supplies adequate. Main farm activities caring for livestock and building repairs.

TENNESSEE: Cold air spread eastern 15th, brought first winter cold of December. Extremes 19°, 72°. Moderate warming with rain Sunday. Rain showers almost daily with some damaging winds at midweek. Totals 1.00 to 2.00 inches east half State, otherwise mostly under 1.00 inch. Farmwork restricted mostly to necessary livestock care. Winter grass and small grains made good growth under mostly mild fall weather. Harvest summer crops complete, except for scraping cotton. Burley tobacco sales closed December 16 for Christmas recess.

TEXAS: Moderate to locally heavy rain fell in East Texas and the Lower Valley during week. Lesser amounts fell elsewhere. Temperatures were mild. Harvest cotton and sorghum resumed on High Plains late week. Harvest sorghum restricted northern High Plains to early morning while ground frozen. Wheat and oats fair to excellent progress. Grazing lush. Flax seeding making good progress south Texas. Percent harvested major crops: cotton 39, 99 last year; sorghum 98, 100 last year; soybeans 94, 100 last year; peanuts 99, 100 last year; sugar beets 58, 98 last year. Percent planted flaxseed 83, 96 last year. Lower valley cabbage harvest fairly active with light supplies carrots, lettuce, broccoli, cauliflower. Winter Garden furnishing moderate supplies cabbage, carrots, spinach and light shipments lettuce, cauliflower. Most winter vegetables and spring onions good progress south Texas. Harvest fall peppers, tomatoes, cucumbers declining south, but light supplies still available. Citrus harvest active with increased shipments grapefruits, oranges. Pecan harvest 88%, 95% last year.

UTAH: Scattered snow first of period, little or none latter part. Many areas of State report snow on ground. Average temperatures continue well below normal, ranging generally between 5° and 16° below normal. More than half stations recorded subzero minimums during period. Bitter cold continues limit farmwork to essential operations. Care and feeding cattle and sheep feedlots and valley farms, dairy cattle, and poultry flocks leading activity. Turkey plants finishing processing this week. Sugar processing will lull for holidays, but resume full force right after New Years. Sorting, grading, and marketing potatoes, dry onions, and apples from storage continue. Irrigation water supply for 1972 as indicated by January 1, 1972, reservoir storage and snow pack expected to be best ever.

VIRGINIA: Temperatures much above normal 1st half of period becoming below normal over weekend. Mostly light rain, mainly on Monday, Wednesday, and Friday. Fairly favorable week for harvest. Topsoil moisture 80% adequate and remainder surplus. 9% corn and 12% soybeans, little cotton, peanuts and grain sorghum to be harvested. Some small grains seeded. Plowed, and spread fertilizer, lime and manure. Prepared and marketed tobacco. Pastures winter grains and grazing crops excellent. Livestock obtained substantial forage from grazing. Feed supplies adequate. Livestock doing well.

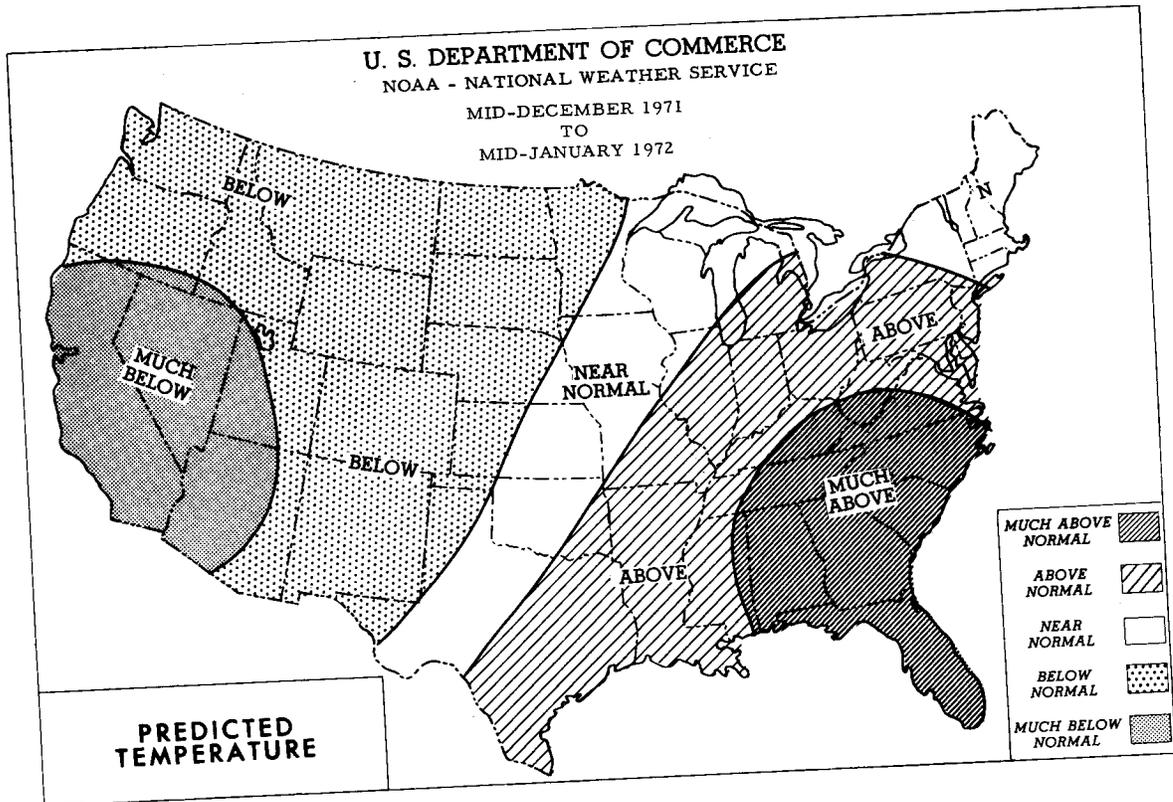
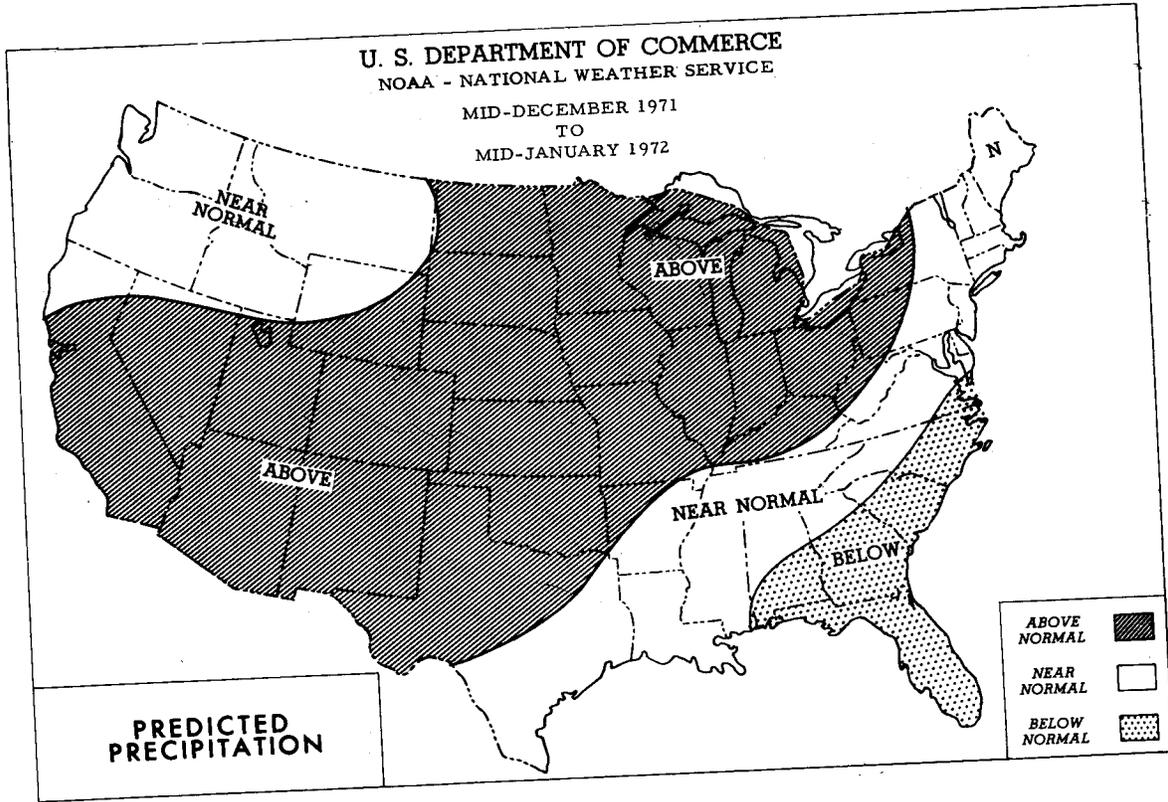
WASHINGTON: Western Washington: Temperatures slightly below normal. Precipitation light to heavy with strong winds some areas. Heavy rains end of week caused slight chance of flooding northern areas. Wet fields stopped fieldwork. Digging Victoria rhubarb crowns for forcing continues. Christmas tree harvest completed. Cabbage seed fields and berry fields doing well with no apparent damage from weather. Livestock in good condition with adequate hay and silage. Eastern Washington: Temperatures mostly below normal. Precipitation amounts variable up to an inch with snow several days. Snow depths ranged from 5 to 16 inches northern half. Care and feeding livestock major activity. Cattle doing well. Feed adequate.

WEST VIRGINIA: Extremely mild with temperatures in low 70's December 15. Rapid drop to teens as cold front moved across State from the northwest December 17. Weekly precipitation below 0.50 inch. Most fell as rain December 15 with light snow flurries December 17 and 18. Most farm activity has slowed because of winter season. Supplemental feeding of livestock increased due to cold weather.

WISCONSIN: Temperatures averaged near normal across Wisconsin during week ranging between colder than normal in northwest and milder than usual in southeast. Heavy rain once again fell across much of southeast half of State on Wednesday with up to 3.00 inches in counties just north of Milwaukee. Light snow fell in north on Wednesday and Saturday. Snow cover measures 6 to 12 inches in depth across most of northwest half. Ground mostly bare southeast. Still nearly 10% corn acreage waiting to be harvested. Some corn picked late week where snow melted and ground frozen. Frost depths generally 1 to 6 inches. Livestock doing good.

WYOMING: Moderate to heavy snow in northwestern mountains. Scattered light elsewhere. Bondurant reported the moisture with 1.30 inches. Temperatures averaged well below normal until Friday. Departures up to 18° below normal over Green and Bear drainages. Maxima were mostly 16° to 31° west of Divide, 30's and 40's east. Minima were mostly 0° to -28° west of Divide, -10° to 8° east. Temperature extremes were 51° at Carpenter and -28° at Big Piney. Livestock good condition, some supplemental feeding being done most areas. Winter pastures continue good condition; soil moisture, stockwater and feed supplies adequate.

AVERAGE MONTHLY WEATHER OUTLOOK



The above prognostic charts show the expected categories of average temperature and total precipitation for the period indicated. They were extracted from the Extended Forecast Division's publication "Average Monthly Weather Outlook" which contains additional information necessary for complete interpretation.

99 YEARS OF THE WEEKLY WEATHER AND CROP BULLETIN

Title	Period	Bureau or Office	Department	Remarks
Weekly Weather Chronicle	Nov. 16, 1872- Apr. 4, 1881	Signal Corps	War	This was a 2-page printed release that contained a general summary of weather for each week ending on Wednesday. A paragraph on rivers was included, beginning in 1873. Publication discontinued in 1881.
Special Bulletin	June 1884- Apr. 1887	"	"	Issued as a special bulletin for the month; a one-page leaflet.
Weather Crop Bulletin	May 1887- June 26, 1891	"	"	Issued weekly during growing season May to September and monthly during other months. Consisted of one page of text under headings of "Temperature," "Precipitation," and "General Remarks." Crop information was given.
Weather Crop Bulletin	July 1891- Jan. 1896	Weather Bureau	Agriculture	The Weather Service of the Signal Corps was transferred from the War Department to the Department of Agriculture, effective July 1, 1891, thus creating the Weather Bureau. The Bulletin was issued weekly from April through September and monthly October to March. One large page (19"x24") containing charts of temperature and precipitation, tabulations of temperature and precipitation, and text under headings "Temperature," "Precipitation," "General Summary," and "State Summaries." The general plan (format) of the publication continued with little change to the end of 1921, except for adding the Snow and Ice Bulletin at end of 1919 as mentioned below.
Climate and Crop Bulletin	Feb. 1896- Aug. 22, 1904	"	"	Title of publication changed.
Weather Crop Bulletin	Aug. 29, 1904 Jan. 1906	"	"	Title of publication changed.
National Weather Bulletin	Feb. 1906- June 1914	"	"	Title of publication changed.
National Weather and Crop Bulletin	July 6, 1914 Dec. 1921	"	"	Title of publication changed. The Snow and Ice Bulletin that had been issued as a separate publication since 1894 was combined with the National Weather and Crop Bulletin during the winter from December 1919 to December 1921.
Weather, Crops, and Markets	Jan. 1922- Dec. 1923	"	"	For economy the bulletin was reduced in content and consolidated with the Crops and Markets under the title Weather, Crops, and Markets and published weekly at the Government Printing Office. The tabulation of temperature and precipitation was dropped, but the charts of temperature and precipitation, discussion of weather and its effects on crops, and State telegraphic summaries were generally carried in the consolidated publication.
Weekly Weather and Crop Bulletin	Jan. 1924- June 1940	"	"	Due to public demand for more detailed and earlier release of information on the weather and its effects on crops, a separate publication was again issued and printed weekly at the Weather Bureau. This bulletin consisted of 4 pages (9 1/2"x12") and contained a general discussion of conditions during the week with special emphasis on small grains, corn, cotton, miscellaneous crops, and pastures; charts and tabulation of temperature and precipitation; and State telegraphic summaries. The Snow and Ice Bulletin that was resumed as a separate publication from January 1922 to November 1932 was again added to the Weekly Weather and Crop Bulletin for the December to March period from December 1932 to present.
Weekly Weather and Crop Bulletin	July 1940- July 12, 1965	"	Commerce	The Weather Bureau was transferred from the Department of Agriculture to the Department of Commerce, effective July 1, 1940. There was little change in the format of the Bulletin until October 18, 1954, when revised to an 8-page publication.
Weekly Weather and Crop Bulletin	July 13, 1965 May 4, 1969	Environmental Data Service	"	On July 13, 1965, the Environmental Science Services Administration was created as an agency within the Department of Commerce. The Environmental Data Service was established in ESSA.
Weekly Weather and Crop Bulletin	May 5, 1969- Oct. 2, 1970	"	"	Format changed. The Bulletin was expanded to 12 or 16 pages to accommodate additional maps and articles.
Weekly Weather and Crop Bulletin	Oct. 3, 1970- (continuing)	"	"	On October 3, 1970, the National Oceanic and Atmospheric Administration was created as an agency within the Department of Commerce. ESSA went out of existence but all functions of ESSA, including Environmental Data Service, were combined with other Governmental organizations into NOAA.



FIRST CLASS MAIL

Subscription price \$5.00 per year in U. S. and pos-
 sessions, foreign mailing \$6.25 per year. For period
 December to March, \$1.50 domestic, \$2.00 foreign.
 If air mail is desired, add the appropriate amount.
 Make checks payable to "Superintendent of Documents."

Publication of this bulletin began in 1872 as the
 Weekly Weather Chronicle. It is now issued under
 general authority contained in the Act of January 12,
 1895 (44 USC 213), 53d Cong., Ill. Sess. Quotation
 or reproduction of this material is encouraged. Please
 give credit to this publication and, in case of special
 articles, to authors.

Questions and comments are invited; please send
 to Editor in Agricultural Climatology Service Office,
 address above.

Heating Degree Days (Base 65° F.)

November 1971

ALA. Birmingham	437	MAINE, Caribou	1106	OKLA. Okla. City	474
Mobile	204	Portland	898	Tulsa	444
Montgomery	343	MD. Baltimore	571	OREG. Astoria	538
ALASKA, Anchorage	1396	MASS. Boston	651	Burns U.	900
Barrow	1966	Nantucket	646	Medford	698
Fairbanks	1832	MICH. Alpena	871	Pendleton	634
Juneau		Detroit	788	Portland	581
Nome	1477	Flint	782	Salem	607
ARIZ. Flagstaff	936	Grand Rapids	800	PA. Allentown	719
Phoenix	185	Houghton Lake	912	Erie	763
Tucson	249	Lansing	792	Harrisburg	643
Winslow	623	Marquette	897	Philadelphia	576
Yuma	155	S. Ste. Marie	998	Pittsburgh	729
ARK. Fort Smith	441	MINN. Duluth	1099	Scranton	783
Little Rock	437	Internatl Falls	1201	R. I. Providence	736
CALIF. Bakersfield	329	Minneapolis	962	S. C. Charleston	261
Eureka	463	Rochester	917	Columbia	354
Fresno	423	St. Cloud	1023	Greenville	492
Los Angeles	153	MISS. Jackson	328	S. DAK. Aberdeen	977
Red Bluff	369	Meridian	359	Huron	946
Sacramento	169	Vicksburg	--	Rapid City	909
San Diego	349	MO. Columbia	581	Sioux Falls	945
San Francisco	771	Kansas City	538	TENN. Chattanooga	497
COLO. Denver	792	St. Louis	574	Knoxville	432
Grand Junction	723	Springfield	562	Memphis	462
Pueblo	643	MONT. Billings	871	Nashville	312
CONN. Bridgeport	756	Glasgow	973	TEX. Abilene	575
Hartford	518	Great Falls	854	Amarillo	184
D. C. Washington	125	Havre	957	Austin	208
FLA. Apalachicola	3	Helena	936	Beaumont	16
Ft. Myers	144	Kalispell	950	Brownsville	51
Jacksonville	0	Miles City	907	Corpus Christi	265
Key West	37	Missoula	934	Dallas	135
Lakeland	0	NEBR. Grand Island	743	Del Rio	381
Miami	30	Lincoln	693	El Paso	270
Orlando	--	Norfolk	824	Fort Worth	92
Pensacola	26	North Platte	829	Galveston	195
Tallahassee	226	Omaha	776	Houston	421
Tampa	41	Valentine	861	Lubbock	350
GA. Atlanta	436	NEV. Ely	983	San Angelo	289
Augusta	355	Las Vegas	417	San Antonio	129
Macon	321	Reno	861	Victoria	96
Savannah	236	Winemucca	970	Waco	230
IDAHO, Boise	753	N. H. Concord	610	Wichita Falls	364
Lewiston	758	N. J. Atlantic City	599	UTAH, Blanding	817
Pocatello	964	Trenton	587	Salt Lake City	939
ILL. Cairo	470	N. MEX. Albuquerque	495	VT. Burlington	613
Chicago	740	Roswell	838	VA. Lynchburg	391
Moline	728	N. Y. Albany	872	Norfolk	512
Peoria	771	Binghamton	771	Richmond	595
Rockford	633	Buffalo	612	Roanoke	
Springfield	571	New York	792	WASH. Colville	
IND. Evansville	743	Rochester	840	Omak	614
Fort Wayne	648	Syracuse	576	Quillayute	570
Indianapolis	717	N. C. Asheville	490	Seattle-Tacoma	882
South Bend	707	Charlotte	523	Spokane	593
IOWA, Burlington	756	Greensboro	285	Walla Walla	790
Des Moines	818	Hatteras	496	Yakima	714
Dubuque	807	Raleigh	318	W. VA. Beckley	578
Sioux City	670	Wilmington	1043	Charleston	607
KANS. Concordia	639	N. DAK. Bismarck	1052	Huntington	619
Dodge City	756	Fargo	1063	Parkersburg	902
Goodland	580	Williston	786	WIS. Green Bay	885
Topeka	628	OHIO, Akron-Canton	603	Madison	824
Wichita	536	Cincinnati	704	Milwaukee	1026
KY. Lexington	537	Cleveland	735	WYO. Casper	866
Louisville	242	Columbus	661	Cheyenne	1133
LA. Baton Rouge	191	Dayton	813	Lander	963
Lake Charles	208	Toledo	788	Sheridan	
New Orleans	282	Youngstown			
Shreveport					

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