

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS—Continued

District and station	Elevation of instruments			Pressure			Temperature of the air										Precipitation				Wind															
	Barometer above sea level	Thermometer above ground	Anemometer above ground	Station	Sea level	Departure from normal	Mean	Departure from normal	Maximum	Date	Mean maximum	Minimum	Date	Mean minimum	Greatest daily range	Total degree days	Mean temperature of the dew point	Mean relative humidity	Total	Departure from normal	Greatest in 24 hours	Days with 0.01 inch or more	Average hourly velocity	Prevailing direction	Maximum velocity		Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms		
																									Miles per hour	Direction										
Alaska																																				
Anchorage ¹	132	6	44	1,011.2	1,016.3	Mbs.	56.2	-0.8	78	6	64	40	29	48	30	50	50	50	2.53	1.9	17	5.1	nw	19	sw	20	5	3	23	7.7	0	0	0	0	0	0
Fairbanks ¹	455	4	63	995.8	1,012.5		61.0	+1.0	85	11	73	41	27	50	33	50	72	90	2.26	0	11	6.9	w	26	w	16	1	11	19	7.5	0	0	0	0	0	2
Juneau ¹	80	3	21	1,015.6	1,018.6		55.6	-	76	11	64	43	15	48	31	48	78	72	3.72	0	18	7.4	n	23	e	22	2	6	23	8.2	0	0	0	0	0	0
Nome	22	25	56	1,012.2	1,012.9		49.5	-	67	23	54	37	23	45	23	46	88	2.88	1.4	11	9.5	w	25	se	16	4	8	19	7.4	0	0	0	0	0	0	0
Bethel	28	7	31	1,012.2	1,013.9		57.0	+2.5	78	8	65	42	5	49	29	52	82	2.53	2.2	19	8.2	nw	34	---	17	4	8	19	7.3	0	0	0	0	0	2	
Gambell	32	5	32	1,010.8	1,011.9		43.5	-2.2	59	8	47	37	30	40	21	42	95	1.70	2.2	15	13.0	sw	38	ssw	9	0	2	29	9.0	0	0	0	0	0	0	
Ketchikan	75	69	90	1,018.0	1,018.6		58.4	+7.7	79	30	65	50	2	52	26	51	78	8.22	1.1	16	6.7	se	23	w	30	4	5	23	7.9	0	0	0	0	0	0	0
Kotzebue	20	31	31	1,011.5	1,012.2		53.2	+4.4	74	9	58	42	13	48	25	49	87	1.43	1.1	11	6.0	sw	33	sw	2	2	9	20	8.0	0	0	0	0	0	0	0
McGrath	331	3	31	1,001.0	1,013.5		61.2	-	84	9	72	42	27	50	33	49	68	7.6	1.4	12	---	nw	22	ssw	17	3	12	16	7.1	0	0	0	0	0	2	
Northway	1,718	32	32	951.9	1,013.5		60.0	-	83	11	71	42	20	49	32	47	68	1.86	---	14	5.8	w	25	---	5	0	12	19	7.7	0	0	0	0	0	4	
Summit	2,405	5	30	930.2	1,016.9		53.5	-	78	10	62	40	21	45	30	47	78	3.11	---	14	---	sw	---	---	1	4	26	8.8	0	0	0	0	0	0	2	
Hawaii																																				
Honolulu	38	86	100	1,016.3	1,017.3		77.8	+1	84	11	82	71	3	74	11	0	---	---	.39	-0.8	.15	7	10.4	e	23	e	2	14	13	4	4.4	0	0	0	0	0

¹ Data are airport records.
² Barometric data (adjusted to old city elevation) and hygrometric data from airport otherwise city office records.
³ Observations taken bihourly.
⁴ Pressure (adjusted to old city elevation), temperature, and hygrometric data from airport; otherwise city office records.
⁵ Temperature and precipitation from city records, other data from airport.
 NOTE.—Except as indicated by notes ¹, ², ⁴, and ⁵ data in table are city office records.

SEVERE LOCAL STORMS, JULY 1944

[Compiled by Mary O. Souder]

[The table herewith contains such data as has been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
Fergus County, Mont.	July 1	4:30 p.m.	14		\$10,000	Moderate hail	Loss in crops; path 6 miles long.
Hamel and Robbinsdale, Minn., and vicinities.	1	p.m.				Hail, electrical	Considerable damage to growing crops in places.
Maple Plain, Minn., vicinity of.	1	do.			900	Electrical	7 cows on 1 farm killed by lightning.
Minneapolis, Minn., and vicinity.	1	do.			10,000	do.	Property damaged.
Minneapolis and St. Paul, Minn., and vicinities.	1	do.				Rain and hail	Damages in places to real property and growing crops. In the Diamond Lake district, Minneapolis, the ground was white being covered with hailstones about the size of cherries.
Waukon, Iowa, vicinity of.	1				7,000	Electrical	Barn and contents burned.
Blaine Choutny, Mont.	2	4:30 p.m.	126		5,500	Light to heavy hail	Loss in wheat and barley; path 30 miles long. Loss in crops, \$5,000; property damage, \$500.
Fergus Falls, Minn., and vicinity.	2-3	10:15 p.m.-4:15 a.m. C. W. T.			16,400	Electrical and heavy rain.	Church struck by lightning and burned; several residences and barns damaged; cattle killed.
Teton County, Mont.	4	7 p.m.	2		5,000	Light hail	Loss in crops, \$5,000; gardens damaged; path 20 miles long.
Gallatin County, Mont.	5	4 p.m.	2		150,000	Heavy hail	Loss in canning peas, hay, and grain; path 10 miles long.
Valley County, Mont.	5	5-6 p.m.	850		15,000	do.	Loss in wheat and flax; path 2 miles long.
Lemmon, S. Dak., and vicinity.	5	6:15-6:40 p.m.	125	0	200,000	Tornado	Numerous buildings wrecked; several roofs sheared off; some stock killed; crops flattened; 3 persons injured; crop loss not serious.
Fallon County, Mont.	5	p.m.	2,640		25,000	Heavy hail	Loss in wheat, barley, and flax; path 5 miles long.
Valley County, Mont.	6	5:30 p.m.	880		500	Hail	Loss in wheat and oats; path 850 yards long.
Chouteau County, Mont.	6	p.m.	2,640		25,000	Light to heavy hail	Loss in wheat, oats, barley, and gardens; path 10 miles long.
Sioux City, Iowa, and vicinity.	6-7	p.m.	880-1,760		2,000,000	Excessive rain, flood, electrical.	Heavy rains fell over lower Floyd River and Perry Creek Valleys. Both streams rose sharply and overflowed, but the Perry Creek flood caused the greatest damage which was estimated at about \$1,000,000 in Sioux City. Basements and lower floors were flooded and streets and sidewalks covered with silt and slimy mud. 1,000 acres of land were flooded affecting 1,161 families with 465 houses and 522 other buildings damaged and 10 buildings destroyed. Loss in gardens and crops over an area covering 8 square miles. Electrical service in Morningside was interrupted because of lightning which also caused a fire in a stockyard shed filled with hay and was believed to have been responsible for the cave-in of the roof and large sections of sidewalls of a garage in which large transport trucks were stored.
Ainsworth, Nebr.	7	3:30 p.n., E. S. T.	15			Heavy hail	All small grain in path of storm damaged with considerable loss; path 8 miles long.
Idalia, Colo.	7	4:30-5 p.m.	12 1/2		10,000	Moderate hail	Considerable loss in wheat; path 25 miles long.
Beadle, Kingsbury, and Spink Counties, S. Dak.	7	5:30 p.m.	1-3			Wind, rain, and hail	High northwest to southeast winds accompanied by heavy rain and some hail in the vicinity of Carpenter, S. Dak., wrecked several farm buildings; flattened many grain fields; 1 person injured; path 20 miles long.
Concordia, Kans., and vicinity.	7	6:26 p.m.	16	0	350,000	Straight-line-wind, tornado and hail.	Chief damage from wind; crop loss, \$100,000; property damage, \$250,000; path 30 miles long.

¹ Miles instead of yards.

SEVERE LOCAL STORMS, JULY 1944—Continued

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
North Platte Valley, Nebr.	7	7:45-8:05 p. m., E. S. T.	14	0	\$3,000,000	Wind and hail.....	Scotts Bluff and Sioux Counties portions of the valley affected. Some poultry and livestock killed and windows damaged.
Alexandria, Minn., vicinity of.	7	8:40-8:50 p. m., C. W. T.	880	0	10,000	Tornado.....	A funnel cloud reported in the west about a mile from Alexandria Airport. Rotary winds uprooted trees which were reported lying on the ground in different directions. Storm moved from west to east over a path about 5 miles long.
Scott City, Kans., vicinity of.	8	3:30 p. m.....	12	-----	15,000	Heavy hail.....	Loss principally in crops; path 4 miles long.
Larned, Kans., vicinity of.	8	4 p. m.....	300	0	800	Tornado and hail....	Damage from tornado, \$600; from hail, \$200; path 400 yards long.
Liberal, Kans.....	8	4-5:30 p. m.....	11	-----	6,000	Heavy hail.....	Loss in wheat; path 3 miles long.
Sublette, Kans., vicinity of.	8	5 p. m., M. W. T.....	200	0	500	Tornado.....	Property damaged; path 1 mile long.
Ardmore, S. Dak., and vicinity.	9	1:30 a. m.....	3	-----	5,000	Wind and hail.....	Spotted damage to crops; path 10 miles long.
Enid, Okla.....	9	5:30 p. m.....	-----	-----	6,650	Electrical.....	Barn destroyed and 200 sheep and some hay burned.
Canton to Potsdam, N.Y.	9	-----	-----	-----	3,000	Wind.....	Large barn demolished; silo blown over; buildings unroofed; trees uprooted.
Colorado Springs, Colo...	10	5-7 p. m.....	1,320	-----	-----	Hail and heavy rain...	Loss in beans and corn. Some crops a complete loss in worst storm in 18 years. Path 20 miles long.
New York, central and northern portion of State.	10	-----	-----	1	10,000	Electrical, hail, and wind.	At Canastota power lines were broken causing the closing of 3 war plants. At Waddington and vicinity hail caused heavy damage to crops. Barns and silos severely damaged by wind and large barn and warehouse burned.
West Union, Ind.....	11	p. m.....	-----	-----	2,000	Wind and hail.....	Roofs, trees and wires damaged by wind.
Rawlins and Thomas Counties, Kans.	12	6:30 p. m.....	15	-----	1,200,000	Heavy hail and wind.	600,000 bushels of wheat destroyed. Property damage \$200,000 included in estimate; path 28 miles long.
Thomas County, Kans., southwestern portion.	12	p. m.....	-----	-----	-----	Heavy hail.....	Crops a complete loss in some parts of the storm's path.
Rome, N. Y.....	12	-----	-----	-----	-----	Thundersquall.....	Thousands of dollars damage at Rome Airport; light planes damaged and trees uprooted.
Hayden, N. Mex.....	13	3-6 a. m.....	12	-----	1,200	Hail and rain.....	Property damaged; path 5 miles long.
Big Spring, Nebr.....	13	4:25 p. m., E. S. T.....	30	0	100	Tornado.....	Tornado well formed, but did not occur where much damage could result; loss in crops.
Roscoe to Andover, S. Dak.	14	4:30-6:30 a. m.....	12-3	-----	25,000	High wind.....	Some grain fields flattened and small buildings wrecked; property damaged \$25,000.
Brandon, Nebr., vicinity of.	14	5 p. m., E. S. T.....	110	-----	350,000	Hail and wind.....	Principal loss in wheat crop; path 10 miles long.
Lyon, Sioux, Osceola, O'Brien, and Clay Counties, Iowa.	14	5 p. m.....	13	-----	1,500,000	Hail.....	Destructive crop loss ranged from 5 to 50 percent. Several small buildings wrecked; path 15 miles long.
Cherokee and Ida Counties, Iowa.	14	6:30 p. m.....	-----	-----	100,000-150,000	Hail and wind.....	Crops in 100 square miles affected; trees uprooted.
Emmet, Kossuth, Winnebago, Hancock, and Worth Counties, Iowa.	14	do.....	-----	0	150,000	Tornado, wind, and hail.	Several barns destroyed and about 75 damaged; 100 or more other structures damaged or wrecked; considerable number of livestock and chickens killed; 1 person injured.
Byers, Colo.....	14	7:20 p. m.....	15-10	-----	500,000	Hail and wind.....	Much loss in beans, barley, corn and wheat; some property damage; path 100 miles long.
Nora, Ruskin, and Sedan, Nebr., vicinities of.	14	9:30 p. m., E. S. T.....	-----	-----	6,000	Hail.....	Principal loss in corn.
Hodgeman County, Kans.	15	4 p. m.....	15	-----	10,000	Heavy hail.....	Loss in crops; path 8 miles long.
Buckein, Kans., and vicinity.	15	6:40 p. m.....	11	-----	5,000	Hail and wind.....	Gardens ruined; windows broken; path 1 mile long.
Stafford, Kans., vicinity of.	16	7 p. m.....	440	-----	600	Wind.....	Damage to power lines and small farm buildings; path 1 mile long.
Johnstown, Nebr., vicinity of.	16	7:30 p. m., E. S. T.....	12	-----	5,000	Hail.....	Loss in small grain and fruit; path 3 miles long.
Nickerson, Kans., and vicinity.	16	7:45-8 p. m.....	13	-----	2,500	Heavy hail.....	Damage chiefly to roofs and windows; path 12 miles long.
Johnstown, Nebr., vicinity of.	16	8 p. m., E. S. T.....	13	-----	2,500	Hail.....	Principal loss in small grains and fruit; property damaged; path 5 miles long.
Helena, Okla.....	16	10:30 p. m.....	12	-----	4,500	Wind and hail.....	Crop loss, 2,000; crop damage, 2,500; path 3 miles long.
Cherokee, Okla.....	17	-----	12	-----	55,000	Hail.....	Loss in alfalfa, feed crops, and pastures, poultry and livestock, path 8 miles long; loss in crops, \$50,000; property damage, \$5,000.
Noble County, Ind.....	19-20	p. m.....	-----	-----	-----	do.....	Much loss in corn.
Roosevelt, Mont.....	20	3 p. m.....	11	-----	1,000	Light hail.....	Loss in wheat; path 3 miles long.
Ironquoit and Webster, N. Y.	20	-----	12	-----	-----	Heavy hail.....	Unestimated damage to fruit and vegetable crops; on some farms a complete loss.
Dawson County, Mont...	21	6-7 p. m.....	12	-----	8,000	Moderate hail.....	Loss in wheat and barley; small property damage; path 15 miles long.
Nekoma, Kans., vicinity of.	22	6 p. m.....	13	-----	350,000	Heavy hail.....	Loss mostly in crops; path 10 miles long.
Otis, Kans., vicinity of...	22	do.....	880	0	1,500	Tornado.....	Storm traveled through rural section; path 1 1/4 miles long.
Mankato, Minn., and vicinity.	22	7:30 p. m., C. W. T.....	11	-----	25,000	Thunderstorm and hail.	Greenhouses damaged; loss in growing crops and gardens. Property damage, \$7,000; loss in crops and gardens, \$18,000.
Tecumseh, Nebr., and vicinity.	23	3-4:45 C. W. T.....	15	-----	5,000,000	Wind, hail, and rain...	5.25 inches of rain fell in less than 2 hours. Principal loss in corn, alfalfa, brome grass and pastures. About 25 town residences and business places and city light plant had considerable damage; soil washed; path 14 miles long.
Boone, Union, Polk, Jasper, and Lee Counties, Iowa.	23	4-6 p. m.....	-----	-----	35,000	do.....	Property damaged; barn burned and 25 hogs killed by lightning.
Dane and madison Counties, Wis.	23	5-8:15 p. m., C. S. T.....	67	0	20,000	Tornado and hail....	Storm occurred 3 miles south of Windsor in Dane County and 2 miles north of Truax Field, Madison County. 2 barns and 7 smaller farm buildings razed. Path 1 1/4 miles long. Property damage, \$15,000; loss in crops, \$5,000.
Gage County, Nebr., northwestern portion.	23	7 p. m., E. S. T.....	18	-----	235,000	2 hailstorms.....	Principal loss in both storms in corn. \$235,000 damage from both storms. Path of first 15 miles long.
Gage County, Nebr., extreme southeastern portion.	23	8 p. m.....	14	-----	Amount of loss included in above amount.	do.....	Path 6 miles long.
Marshall and Washington Counties, Kans.	23	8 p. m.....	13	-----	100,000	Heavy hail.....	Greatest damage in vicinity of Home City. Loss in corn; gardens ruined; trees defoliated, and property damaged; path 35 miles long.
Dane and Jefferson Counties, Wis.	23	8 p. m., C. S. T.....	-----	-----	-----	Hail.....	Loss in tobacco; much loss in corn and vegetables. Some property damaged.
Culbertson, Nebr.....	23	8:15 p. m., E. S. T.....	15	-----	-----	do.....	Considerable property destroyed, not estimated. Path 5 miles long.

¹ Miles instead of yards.

SEVERE LOCAL STORMS, JULY 1944—Continued

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
Milwaukee and Waukesha Counties, Wis.	23					Severe thundersquall	An extreme wind velocity of 58 miles per hour recorded at 7:41 p. m., blew down a considerable number of trees and utility poles and wires and broke windows. The high winds blew automobiles into each other and into ditches. There were many traffic tieups and accidents. 6 injured persons received hospitalization.
Lawrence County, Ind.	24	5:30 p. m.	12		20,000	Wind and hail	Buildings, trees, and wires damaged; loss in crops.
Dodge City, Kans., and vicinity	24	7:15 p. m.		0		Small tornado	Vortex cloud touched the ground once and then in a wheat field, causing no damage.
Lawrence County, Ind.	25	12:30 a. m.	12		1,500	Wind and hail	Trees and wires damaged; loss in crops.
Chadron, Nebr.	25	3:30 p. m., E. S. T.	12			do	Loss in wheat; 50 percent of grain knocked off; path 5 to 6 miles long.
Tamaha, Okla.	27	11 a. m.	880		3,000	Wind	Damage to houses and barns.
Webber Falls, Okla.	27	11:45 a. m.			1,000	do	Loss in crops.
Sallisaw, Okla.	27	12:20 p. m.	115		85,000	do	Do.
Poteau, Okla.	27	1 p. m.			500	do	Do.
Adams and Union Counties, Iowa	27	2 p. m.	1		35,000	Hail	Crops seriously damaged in some areas; path 30 miles long.
Brodhead, Wis., vicinity of	27	3:30 p. m. C. S. T.			1,000	do	Loss principally in tobacco.
Hill City, Kans.	27	4:30 p. m.	115		3,000	Heavy hail	Loss in crops; path 30 miles long.
Le Flore County, Okla.	27				35,000	Wind	Property damaged.
Sequoyah County, Okla.	27			1	225,000	do	Property damaged; 1 person injured.
Harrison County, Iowa	27	2 a. m.	11		10,500	Hail and wind	Loss in crops from hail; \$10,000, wind damage to property, \$500; path 6 miles long.
Switzerland County, Ind.	28	4:20 p. m.	11			Hail	Loss in tobacco.
Oakley, Kans., vicinity of	28	6 p. m.	100	0		Tornado	Storm moved northwest over harvested wheat fields for about 4 miles.
Lane County, Kans., southern portion	28	p. m.	16		15,000	Heavy hail	Loss in sorghums; path 11 miles long.
Cedaredge, Colo.	29	1:30-2 p. m.	12		77,000	Hail	\$75,000 loss in fruit and \$2,000 in grain; path 2 miles long.
Cordell, Okla.	29	12:30 a. m.	11		60,000	do	Loss in crops and livestock; damage to buildings; path 14 miles long. Loss in crops, \$50,000; property damage, \$10,000.
Golden Valley County, Mont.	30	6 p. m.			7,000	Moderate hail	Loss in wheat and oats.
Fergus County, Mont.	30	6:30 p. m.	16		75,000	Heavy hail and wind	Loss in wheat, barley, and oats; loss from hail \$7,000; from wind, \$5,000; path 30 miles long.
Golden Valley and Yellowstone Counties, Mont.	30	8 p. m.	16		401,250	Heavy hail	Loss in all cereal crops and hay. Most destructive storm in 35 years. Crop loss, \$400,000; property damage, \$1,250; path 30 to 40 miles long.
Cloud Chief, Okla.	30	10 p. m.	12		120,000	Hail	Loss in cotton, corn, and livestock; buildings damaged; path 40 miles long.
Fallon County, Mont.	30	p. m.			50,000	Heavy hail	Loss in crops.
Plainville, Kans., and vicinity	31	6-7 a. m.	16		170,000	do	Chief damage in corn and gardens; path 23 miles long.
Ellis and Rooks Counties, Kans.	31	6:30 a. m.	18		50,000	do	Chief loss in crops; path 20 miles long.
Chouteau County, Mont.	31	9:30 a. m.	2,640		35,000	Moderate to heavy hail	Loss in wheat, barley and oats.
Gallatin County, Mont.	31	3:30 p. m.	16		150,000	Moderate hail	Loss in alfalfa, peas and grain; path 18 miles long.
Fergus County, Mont.	31	4:30 p. m.	15		25,000	Moderate to heavy hail	Loss in wheat and barley; path 10 miles long.
Blaine County, Mont.	1	7 p. m.	12		12,000	Moderate hail	Loss in wheat and barley; path 4 miles long.

¹ Miles instead of yards.