

On the other hand, the Southwest, the northern Plains and the Lake region received mainly less rain than normal. In North Dakota, Oklahoma, and Texas, this was the fourth dry month in succession, and in most of the Lake region the third.

Dryness in September was particularly notable from the upper Ohio Valley and North Carolina northeastward. A very large part of this section received less than half of the September normal and considerable districts less than a quarter. Furthermore, for much of the area it was the seventh or eighth or sometimes even the tenth dry month in succession, while in Maryland and Virginia no month since June has brought even half of the normal rainfall. Naturally water supplies have been greatly depleted and pastures are in wretched condition in the drier portions.

The far West showed some diversity as to rainfall, but the middle and northern portions of the plateau region and most of Oregon received somewhat more rainfall than normal.

SNOWFALL

During the final week the Black Hills region received more snow than usually occurs there in September.

Many elevated portions of the far West had light to moderate falls, chiefly during the last week, a few stations reporting total amounts in excess of a foot.

SUNSHINE AND RELATIVE HUMIDITY

Much cloudy weather prevailed in the Ohio and southern Mississippi Valleys and to the southeastward, in the northern portions of the New England and Lake region, the far Northwest and northern half of the Pacific coast region. Elsewhere, rather a large amount of sunshine prevailed, although throughout the more arid regions of the Southwest less than the average for September was received. The relative humidity was generally below the normal over much of the country, as would be expected because of the deficiency of precipitation for the month in many sections; however, throughout the Southeast, where more than the normal precipitation was received, the humidities were without exception above normal.

SEVERE LOCAL STORMS, SEPTEMBER, 1930

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the Annual Report of the Chief of Bureau]

Place	Date	Time	Width of path, yards ¹	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Binghamton, N. Y., and vicinity.	1	4 p. m.		1	\$125,000	Wind and rain	Power lines, buildings, trees, and crops damaged.	Official, U. S. Weather Bureau.
Dane County, Wis. (northern).	1	P. m.			250,000	Hail	Severe damage to tobacco and corn crops.	Do.
Harrisburg, Pa., and vicinity.	1	do			20,000	Electrical	Several barns and contents destroyed.	Do.
Selingsgrove, Pa.	1	do			10,000	do	Barn and contents destroyed.	Do.
York, Pa. (near)	1	do			10,000	do	do	Do.
Canon City, Colo.	2					Hail and rain	All fruits, flowers, and vegetables practically destroyed; basements flooded; highways and railroads damaged.	Do.
Eslie, Nebr.	3	5 p. m.	2 mi.		30,000	Hail	Severe crop injury in places; livestock hurt; buildings damaged; path 25 miles long.	Do.
Sutherland, Nebr.	3	do	3 mi.		25,000	do	Crops and roofs badly damaged.	Do.
Cimarron, N. Mex., and vicinity.	4	2 p. m.	440		1,500	do	Considerable damage to roofs, autos, and crops.	Do.
Russell County, Kans.	4	4 p. m.			25,000	do	do	Do.
El Dorado and Smackover, Ark.	4				17,000	Wind	No details reported.	Do.
Sugarite, N. Mex., and vicinity.	5	1:15-2 p. m.			5,000	do	Unharvested wheat and oats in path complete loss.	Do.
Elk Creek, Colo.	5					Hail	No details reported.	Do.
Butte, Nebr. (2 miles south).	6	10 p. m.	4 mi.			Hail and rain	Considerable damage in small areas; path 18 miles long.	Do.
Florence, Colo.	6	P. m.			250,000	Hail	Matured crops practically total loss; 200 carloads of vegetables ruined.	Do.
Powder River and Wibaux Counties, Mont.	6					do	Chief damage to crops.	Do.
Plymouth and Woodbury Counties, Iowa.	7	P. m.			800,000	Hail and wind	Character of damage not reported.	Do.
Carter County, Mont.	7					Hail	Crops injured.	Do.
Norwood, Colo.	7					do	No details reported.	Do.
Cotton County, Okla. (northeast).	8	4 p. m.	3 mi.		51,000	do	Heavy crop damage; 1,500 chickens and turkeys killed; path 5 miles long.	Do.
Mountain Home, Ark.	8				4,000	Hail and wind	Character of damage not reported.	Do.
Plaza, Wash.	8					Electrical	Practically 73,000 bushels of grain destroyed.	Do.
Tampa, Fla., and vicinity.	8-9				75,000	Wind and rain	Damage to crops, highways and bridges chiefly by torrential rains.	Do.
Lampassas, Tex. (near)	9	4:30 p. m.	400		1,000	Tornado	Buildings damaged.	Do.
Fallon County, Mont.	11					Hail	260 acres of flax ruined.	Do.
Dickinson and Osceola Counties, Iowa.	12	3-4 p. m.			6,500	Wind and hail	Crops damaged.	Do.
Carteret County, N. C.	12					Wind	Character of damage not reported.	Do.
Raymondsville, Mo.	12				2,000	Wind and rain	Small buildings and haystacks blown down.	Do.
Sedan and Peru, Kans. (vicinity of).	12		2 mi.		5,000	Wind	Oil-pumping station and barns wrecked; trees uprooted; path 20 miles long.	Do.
Rush County, Kans.	13	P. m.	8 mi.			Wind and hail	Many farm buildings blown down.	Do.
Auburn, Nebr.	14	4:30 a. m.	1.5 mi.		10,000	Hail	Corn injured; much glass broken; minor roof damage; path 5 miles long.	Do.
Terre Haute, Ind.	14	A. m.			10,000	Wind	Roof blown from brick and clay works.	Do.
Bellview, N. Mex. (near)	14	Noon-1 p. m.	3-5 mi.			Hail	Crops total loss for 3 miles of path. Path 15 miles long.	Do.
Logan, N. Mex., and vicinity.	14	1-1:20 p. m.			5,000	do	Crops destroyed or injured.	Do.
Plymouth County, Iowa.	14	1:30 p. m.			5,000	Wind and hail	Crops and livestock injured.	Do.
Fairbury, Nebr. (4 miles south).	14	2 p. m.	2.5 mi.		2,000	Hail	Late melon and garden crops damaged; path 11 miles long.	Do.
Pratt to Isabel, Kans.	14	3:30 p. m.	8 mi.			do	Crops, roofs, windows, and automobiles damaged; poultry killed; path 25 miles long.	Do.
Freeport, Kans. (4 miles southwest).	14	5:15 p. m.	50		12,000	Tornado	Buildings on 2 farms demolished; farm implements damaged; livestock injured; path 1 mile long.	Do.

¹ "Mi." signifies miles instead of yards.

Severe local storms, September, 1930—Continued

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Place	Date	Time	Width of path, yards ¹	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Stillwater, Okla.	14	8 p. m.	5 mi.		3,000	Wind	Some crop and property damage.	Official, U. S. Weather Bureau.
Fort Smith, Ark. (1 mile northwest).	14	10 p. m.			100,000	Wind and rain	Many buildings unroofed; some flimsy structures demolished; trees uprooted.	Do.
Mount Vernon, Ill.	14	10:45 p. m.	200-440		500,000	Tornado	Streets blocked by fallen trees, poles, and wires; a number of houses unroofed or otherwise damaged; 12 persons injured; path 1.5 miles long.	Do.
Belle Rive and Dahlgren, Ill., and vicinity.	14	11 p. m.			50,000	Wind	Several buildings wrecked or badly damaged.	Do.
Browning, Mo.	14	do.			2,000	do.	Roofs, chimneys, and trees damaged.	Do.
Lexington, Ky.	14					Wind	Trees and wires blown down.	Do.
Banborn, Ind. (near)	14					Electrical	2 barns and contents burned.	Do.
Rushville, Huntsville, and Vermont, Ill., and vicinity.	14					Wind and electrical.	A number of buildings struck; house and 3 barns burned; 50 poles blown down.	Do.
Cleveland, Miss. (2 miles north).	15	3 a. m.	300	1	300	Probably tornado.	Minor property damage; 1 person injured.	Do.
Philadelphia, Pa. (Germanatown section).	16	7 p. m.	50		2,500	Tornado	A few buildings damaged; trees uprooted.	Do.
Clarkston, Wyo. (near)	17	9:15-9:25 p. m.	1,760		2,200	Probably tornado.	Alfalfa and buildings damaged.	Do.
Monroe County, Iowa.	18	3 p. m.	33-50		9,500	Wind and tornado.	Character of damage not reported; path 8 miles long.	Do.
Cerro Gordo and Dickinson Counties, Iowa.	19					Wind and hail.	Corn damaged.	Do.
Fort Wayne, Ind.	22				67,000	Electrical.	Lumber yard and small mill destroyed by fire.	Do.
Miami, N. Mex., and vicinity.	23					Wind	Haystacks overturned; shocked beans scattered; outbuildings wrecked; orchards injured.	Do.
Port Arthur, Tex.	23	5 a. m.	100		8,000	Probably tornado.	Buildings and household goods damaged; 3 persons injured.	Do.
Anna, Ill.	24	11 a. m.	16-33		10,000	Small tornado.	Property damaged at intervals over path 2.5 miles long.	Do.
Smith Center, Kans. (near)	25	3 p. m.				Wind and hail.	Number of small buildings wrecked; some damage to crops.	Do.
Lee County, Iowa.	25	3:30-4 p. m.	880	2	47,000	Wind, hail and tornado.	Path 6 miles long; character of damage not reported.	Do.
Lee County, Iowa.	25	do.	880		3,000	do.	Path 2 miles long; character of damage not reported.	Do.
Monroe County, Iowa.	25	4-4:30 p. m.			17,300	do.	Path 14 miles long. No details reported.	Do.
Montgomery County, Iowa.	25	4:30 p. m.	27		1,000	Tornado	Path 4 miles long. No details reported.	Do.
Lawrence, Kans., and vicinity.	25	4:50-5:25 p. m.				Wind	Damage to buildings on State University campus.	Do.
Fort Scott, Kans. (4 miles east) to Richards, Mo. (near).	25	5 p. m.		2	53,760	Probably tornado.	9 freight cars blown from train; other property damage.	Do.
Clinton County, Iowa.	25	5:45 p. m.			51,000	Tornado and wind	Character of damage not reported.	Do.
Monmouth, Ill., and vicinity.	25	do.			10,000	Wind	Buildings, poles and trees damaged.	Do.
Dodge City, Kans.	25				9,000	do.	Great Southwest Fair suffers considerable loss.	Do.
Grand Haven, Mich. (23 counties)	25					Wind squall.	Roof of refrigerator plant partially destroyed.	Do.
	25					Wind and hail.	Extensive damage to buildings and crops over wide area.	Do.
Siloam Springs, Ark.	25				35,000	Wind	No details reported.	Do.
Springfield, Ill.	25				8,000	do.	Trees blown down caused minor damage to buildings.	Do.
Tulsa, Okmulgee, and Cherokee Counties, Okla.	25				51,900	Three windstorms.	Crops and residences damaged; 14 tents at fairgrounds destroyed; trees uprooted.	Do.
Wyoming, Ill., and vicinity.	25				10,000	Wind	Buildings damaged.	Do.
Iowa (13 counties)	25-26					Wind and hail.	Overhead wires damaged; crops prostrated.	Do.
Wisconsin (southeast) and southern Lake Michigan.	25-26			10		Wind and small tornado.	Hangar damaged; small buildings blown over; 3 vessels lost.	Do.
Adair, Butler, Clayton, Greene, Hancock, and Pocahontas Counties, Iowa.	26					Wind and hail.	Damage chiefly to crops.	Do.
Ganges, Mich.	26					Wind	Three-fourths of winter apples and pears blown off.	Do.
Indiana	26					do.	Damage confined chiefly to trees and wires.	Do.
Ludington, Mich.	26					do.	Wires and cables blown down; windows broken; trees uprooted; heavy loss to apple crop.	Do.
Tuscola County, Mich. (central).	26		50		12,000	Probably tornado.	Number of buildings wrecked and plate glass windows broken in village of Caro. Path 1 mile.	Do.
Buffalo, N. Y., and vicinity.	26-27					Wind	Wires blown down; trees uprooted; some damage on lake front.	Do.
Greene County, Iowa.	28-29				3,500	Wind and hail.	Crops damaged.	Do.

RIVERS AND FLOODS

By R. E. SPENCER

No floods occurred in the principal rivers of the United States during September, except that the Trinity River

remained above the flood stage of 25 feet at Dallas, Tex., from September 1 to 27. This high (artificial) stage was an effect of a temporary dam constructed to aid levee work below that city; the maximum reached was 27.3 feet on September 1.