

SEVERE LOCAL STORMS, FEBRUARY, 1929

[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	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Charlotte to Raleigh, N. C.	20-21					Glaze	Telegraph, telephone, and trees damaged	Official, U. S. Weather Bureau. Dallas Morning News (Tex.).
Dallas County, Tex.	25	4:05 a. m.	60	2	\$200,000	Tornado and hail.	Many homes and small buildings demolished; 3 persons injured; path 4 miles.	Do.
Cooper, Tex.	25	6:30 a. m.	60	2	40,000	do	A number of buildings destroyed over path ½ mile long; 9 persons injured.	Do.
Mesquite, Tex. (3 miles east of).	25	A. m.				Probably tornado.	Farm property damaged; 1 person injured.	Do.
Darling, Miss. (3 miles west of).	25	P. m.		2		do	Considerable property damage.	Official, U. S. Weather Bureau.
Duncan, Miss., and vicinity.	25	P. m.		17		do	The town of Duncan practically demolished; 40 persons injured.	Do.
Gibson, Carroll, Montgomery, Wilson Counties, Tenn.	25-26				25,000	High winds.	Houses unroofed or blown down; many trees and telephone poles broken off; barns and other buildings damaged.	Do.

627.41(73) RIVERS AND FLOODS

By R. E. SPENCER

Reports received too late for inclusion in the January issue of this REVIEW indicate that the losses in the Tombigbee River flood of that month amounted to \$4,100 instead of \$700, as printed, and that a saving of \$31,000 was effected through Weather Bureau flood warnings.

During February floods were numerous; but, except in the case of those of the interior rivers of Ohio, no very destructive overflow occurred.

Atlantic drainage.—In Connecticut heavy rains, beginning on the evening of the 6th, caused sharp rises in several small streams, resulting in considerable inconvenience, some flooding of streets and sewers, and three deaths by drowning. Crop losses in the Peedee rise following the 19th approximated \$10,000, while savings to the amount of \$100,000 were effected through flood warnings to lumber interests and cattle raisers. Other rises in the Atlantic drainage, practically none of which assumed proportions of real importance until March, will be discussed in the REVIEW for that month.

East Gulf drainage.—As was the case in most of the floods of the South Atlantic drainage, the east Gulf floods, rising from the rains of the latter half—and especially the last two days—of February, continued with increasing proportions into March, and will be discussed in the REVIEW for that month.

Great Lakes drainage.—These moderate rises, the result of a period of light rains and thaw following the 23d, were without consequence.

Ohio drainage.—Except in the interior rivers of the State of Ohio, the floods of the Ohio River drainage were in the main of minor importance. In the Ohio River itself, owing to the presence of ice, navigation was partly suspended between the 2d and the 5th and again from the 6th to the 10th. At Pittsburgh, \$5,000 damage was done by the flooding of a warehouse. In and below the Parkersburg district some inconvenience was experienced and minor overflows of lowlands and roads occurred, but losses were negligible. It is noteworthy, however, that possibly serious damage to the Ohio River dams was prevented only by the greatest care in operation during the movement of the ice, full information of which was made available to the United States Engineer Corps by the Weather Bureau.

The floods of the interior rivers of Ohio, which were by far the most damaging of the month, resulted from an unusual combination of snow, frozen ground, ice, high

temperature, and heavy rain. The official in charge of the Weather Bureau office at Columbus, Ohio, describes this condition as follows:

The month began with a snow covering, varying in depth from 1 to 3 inches, quite general over the State; and during the first three weeks this covering was increased by subsequent falls considerably in excess of the total monthly normal amount. Moreover, persistent subnormal temperature during this period allowed but little melting of the snow, so that on the 23d there remained a covering of from 1 to 8 inches over the State. The rivers were also frozen over with several inches of ice. On the 24th a warm wave of marked intensity overspread the State, culminating in numerous thunder storms and warm heavy rains which, beginning on the afternoon of the 25th, became heavy during the night of the 25th-26th. Owing to the frozen condition of the ground this precipitation, greatly augmented by the melting snow cover, quickly found its way into the streams, so that in 24 hours time practically all the streams in the State were changed from dead frozen rivers near the low water mark to near bankful stage, and some even to flood stage.

Warnings were of course issued as early as possible and were given distribution by every means available; but in spite of them the rise, naturally sudden and inevitably destructive, did damage reported or conservatively estimated at \$1,938,775. Of this total, \$1,812,800 was in tangible property—bridges, buildings, factories, highways, municipal plants, etc.—\$25,000 to wheat fields and lowlands, and \$100,000 to suspension of business. Of the savings effected through flood warnings nothing definite could be determined except that the figure would exceed \$2,000,000.

From the character of the damage it is evident that the greatest destruction was done in towns and cities, details as to some of which—i.e., the Miami River drainage basin—are not yet available, and will doubtless considerably increase the total figure of losses for the State. The Miama flood will be discussed in the REVIEW for March.

Except for the destruction of a \$10,000 bridge in Lee County, Ky., on the Kentucky River, and the temporary suspension of ferry service at several points on the Wabash other Ohio tributary rises were without material consequence. The explanation of this in the case of the Wabash flood, which rose from the same causes as those of the interior Ohio rivers and involved practically the entire Wabash system, is that there had been no time for reconstruction since the earlier and greater Wabash flood of January.

Miscellaneous.—Of the flood in the Illinois River of Illinois, the official in charge of the Weather Bureau office at St. Louis, Mo., reports in part as follows:

The alluvial Illinois was abnormally high throughout the winter. A rise in January was subsiding when February opened, and flood