Mountain region and the eastern parts of the middle Plateau were indicated in some districts to have sufficient snow to promise an average water supply, though the outlook as a whole for a good late water flow was discouraging.

RELATIVE HUMIDITY

The relative amount of moisture in the atmosphere was well below the normal as deduced from previous records over important areas, the deficiencies being large in many southern districts, where they ranged up to as much as 25 per cent. They were also less than normal, but to a slightly less degree, in portions of the Great Plains, Rocky Mountain, and Plateau districts, though in these areas there were small localities having values somewhat above normal, and similar conditions existed over the Pacific Coast States, along the middle Gulf coast, over portions of New England and in the upper Lake region.

SEVERE LOCAL STORMS, FEBRUARY, 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	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Berrien County, Ga.	4					Wind	Trees blown down; old barns unroofed	Official, U. S. Weather Bureau.
Mint Hill, N. C.	4	7.30 p. m.	200		$2,000	Tornadic wind	Damage mainly to small houses, barns, and timber. Path 4 miles long.	Do.
Toole County, Mont.	10					High wind	Character of damage not reported	Do.
Central City, Ind. (near)	12				10,000	Electrical and wind.	Considerable damage to power plant at coal mine. Power lines to towns in vicinity damaged.	Do.
Cascade County, Mont.	18					Destructive wind	Many thousands of dollars damage in and near Browning.	Do.
Springfield, Ill., and vicinity.	23-24					Severe thunderstorm.	Basements flooded; street light affected; 3 barns burned.	Do.
Indianapolis and Richmond, Ind.	24					Hail and thunderstorm.	Much glass in greenhouses broken; some roofs damaged.	Do.
Roseville, Ohio (near)	24	5:30 p. m.	100-200		150,000	Severe thunderstorm and tornadic wind.	Heavy property loss; 4 persons injured; 300 people suffered temporary loss of work. Path about 1 mile long.	Do.
San Francisco, Calif.	24					Thunderstorm and wind.	Some damage by lightning	Do.
Cairo, Ill.	25	P. m.			1,300	do	Pumping plant damaged	Do.
San Jose, Calif.	26	4 p. m.				Hail and wind	Street car service interrupted, some roofs damaged and trees broken.	Do.

RIVERS AND FLOODS

By R. E. SPENCER

Details of overflow and damage caused by the flood in the Wabash system in January, 1930, which had not been received in time for inclusion in the REVIEW for that month, are given below. The quotation, taken from the report of Mr. J. H. Armington, official in charge of the Indianapolis, Ind., office of the Weather Bureau, includes also some further comment on precipitation and stages, with particular reference to comparative features of the 1913 and 1930 floods:

The stages reached in the great flood of March, 1913, except at Vincennes on the Wabash and at Decker on the White, considerably exceeded those of January, 1930. At most points on the White the crests of the January flood were exceeded also by those of February, 1916; and the same was the case at a few points on the middle Wabash, particularly at Terre Haute, although the difference at Terre Haute was but 0.4 foot. Therefore, as the severity of flooding was not so great above the junction of the forks of the White and above the middle-upper Wabash, estimates on areas inundated are confined to the Wabash Valley from Tippecanoe County downstream to the mouth.

Along that stretch of the river a total of approximately 684 square miles were overflowed, 293 square miles being in Illinois and 391 square miles in Indiana. The most extensive and most severe flooding, however, was from Knox County southward on the Indiana side and from Lawrence County southward on the Illinois side of the river. Lawrence County heads the list with 121 square miles of flooded territory, while Gibson and Knox Counties are second and third, with 91 and 87 square miles, respectively, and Posey County is fourth, with 86 square miles.

Had it not been for the breaking of levees from Vincennes upstream past Terre Haute and for the further stage diminution caused by the opening of levee gates above Terre Haute and by the severe cold which overspread the entire region just as the water was approaching its highest points, the stages reached above Vincennes would undoubtedly have been considerably higher than they were. As it was, the crests were not only reduced, but their occurrence was considerably hastened in point of time; so that, from source to mouth, they occurred within a period of about three days, whereas ordinarily the flood wave requires somewhat more than a week to run its course.

Even without the reduction thus produced, however, it is practically certain that the crests of the January flood would not have been as high as those of the flood of March, 1913, unless the building and changing of levees since that time has materially altered flood heights. This conclusion is based on the fact that the average rainfall over the entire Wabash Valley in the flood of March, 1913, was more than 1 inch greater in its period of five days than was the average rainfall over the same region in the flood of January, 1930, over its period of eight days. Even the somewhat higher initial stages which at most places preceded the period of rainfall in 1930 would not balance the greater amount of rainfall and shorter period in 1913. It may be noted in passing that careful study of the 1913 situation at Vincennes has placed the crest of the flood in that year at 28 feet at least had it not been for wide breaks in the levees of both Wabash and tributary streams. The same statements are applicable to the main stream of White River from the junction of the forks to its mouth.

Damage and loss caused by flooding.—Data on damage and loss by flooding are given below for the Wabash and the White Valleys separately:

Losses and damage in the Wabash Valley proper:

Item No. 1, tangible property—	
Levees	$75,930
Public utilities	4,000
Industries	111,463
Railroads	240,301
Cities and communities	34,600
Fences	510,850
Roads and bridges	113,000
Total	1,090,144
Item No. 2, farm property—	
(*a*) Matured crops	3,818,550
(*b*) Prospective crops	463,530
(*c*) Equipment, livestock, etc	601,110
Total	4,883,190