

RIVERS AND FLOODS, MAY, 1911.

By H. C. FRANKENFIELD, Professor of Meteorology.

At the end of April, 1911, the lower Mississippi River was in flood, with the crest a short distance above Arkansas City, Ark. On May 2 and 3 the crest passed this place with a stage of 48 feet, 1 foot above the flood stage, and crest stages below were as follows: Greenville, Miss., 41.6 feet, 0.4 foot below the flood stage, on May 3 and 4; Vicksburg, Miss., 44.8 feet, 0.2 foot below the flood stage, on May 5-8; Natchez, Miss., 44.3 feet, 1.7 feet below the flood stage, on May 8-12; Baton Rouge, La., 32.5 feet, 2.5 feet below the flood stage, on May 12-15; Donaldsonville, La., 25.4 feet, 2.6 feet below the flood stage, on May 12 and 13; and New Orleans, La., 16 feet, 2 feet below the flood stage, on May 16. The river was above the flood stage at New Madrid, Mo., for 12 days, at Memphis, Tenn., for 14 days, at Helena, Ark., for 12 days, and at Arkansas City, Ark., for 9 days. Warnings were issued whenever necessary, and the flood caused practically no damage, except that occasioned by the slight delay in spring planting.

The flood in the Yazoo River was more severe, and at Swan Lake, Miss., the river was above the flood stage of 24 feet for 33 days, with a crest stage of 29.9 feet, or 5.9 feet above the flood stage, on April 25-27. This stage was 0.6 foot higher than the previous high-water record of December 2, 1906. At Greenwood, Miss., the crest stage was 36.5 feet, 1.5 feet below the flood stage, on May 2, and at Yazoo City, Miss., 25.1 feet, 0.1 foot above the flood stage, on May 12-18. Warnings for this flood were first issued on April 17. Some lands were overflowed and planting delayed, but on the other hand the flood was of immense importance to the lumber interests, as millions of feet of lumber were rafted to the mills. In the year

1910 it was necessary to haul the logs to the water, a very expensive process.

Losses were as follows:

Property, excluding crops	\$5,000
Crops.....	30,000
Erosion.....	None.
Suspension of business.....	30,000
Total.....	65,000

Value of property saved through Weather Bureau warnings about \$15,000.

Heavy rains on April 30 over the watershed of the upper Cumberland River caused a rise at Burnside, Ky., of 41.9 feet in 24 hours, to a stage of 50.3 feet, 0.3 foot above the flood stage. The high stage was of short duration, and, although there were decided rises below, flood stages were not reached, as the excessive rainfall was confined to the headwaters only. Very little damage was done.

Stages in the Missouri and Ohio Rivers were moderate, while in the upper Mississippi River they continued low. Low stages were also the rule in the rivers of the Atlantic systems.

The annual rise of the Columbia River was not marked by any unusual occurrence, and the stages were somewhat lower than usual.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.