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A Science Service Feature

? WHY THE WEATHER ?

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PREDICTING RIVER STAGES

Along the principal navigable rivers of the United States the Weather Bureau issues daily predictions of water stages throughout the year. These are at all times useful to navigation, but they assure special interest and importance in time of flood. The bureau has a special branch, known as the River and Flood Service, with headquarters in Washington and subordinate centers at numerous strategic points along the various rivers for conducting the work in question. Measurements of rainfall on the headwaters of the streams and observations of the height of water on the river-gauges at upstream points are collected by telegraph or telephone from about 800 stations operated for this purpose. The information thus gathered serves as the basis for warnings of floods farther downstream.

Thanks to the elaborate system of observations along the Mississippi and its tributaries and to the slow movement of flood crests down the rivers, floods in the lower Mississippi Valley can be predicted weeks in advance with remarkable accuracy, as has been demonstrated during the gigantic inundation now in progress. In one of the biggest of earlier floods the exact time when the crest would reach New Orleans was correctly foretold 28 days in advance, and the prediction of the height of the water at the same place was only 5 inches in error.

When the issue of flood forecasts far in advance for the lower Mississippi was begun, about 30 years ago, the Weather Bureau was accused of unduly alarming the people of the threatened districts. The absolute verification of the forecasts silenced this accusation, and since that time similar predictions have been accepted and acted on without question.

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