

News of the Week

Current Events in the Civil Engineering and Contracting Fields

Mississippi Record Flood Crest Passes Memphis

Highest Water in History of River—Levee Breaks Flood Large Areas
—Danger Ahead for Several Weeks

THE highest flood on record is passing down the Mississippi River. The situation changes from hour to hour so that reports written as this one some days before it reaches the reader are subject to correction. There can be reported here only the instant condition, but this report, as of April 27, should make it clear that the flood is following a familiar history of submergence. No attempt is made to record losses or areas of the flood; any figures as to these features at the present time are obviously the rankest of guessing.

The general condition is that the crest of the flood, which made itself manifest about April 1, is passing Memphis and is moving south at paces higher than ever recorded. Levee breaks in the main river and in the tributaries have caused backwater flooding of enormous areas, but they have at the same time relieved local conditions, as, for instance, at

Asheville A.S.C.E. Meeting Well Attended

Nearly Five Hundred Eng. Spring Meeting—Student Chapters Emphasized

(Engineering News-Record Staff Report)

Almost five hundred members and guests registered at the spring meeting of the American Society of Civil Engineers held at the Kenilworth Inn, Asheville, N. C., April 20 to 22. It has been some years since the society has had a resort hotel where practically all of the attendance could be housed under one roof and where there was little opportunity for dispersal to attend to private business and social engagements. The return to the earlier practice of having at least one such meeting a year, if an experiment, proved worth while for the large number registered were together practically all of the time, the opportunities for social contact were great and the attendance at the technical sessions more than satisfactory.

No business was transacted at the meeting. There were two general sessions, one devoted to sanitary matters, the other to highways, and the sanitary, construction and power divisions held simultaneous sessions one morning. The rest of the time was devoted to excursions to nearby power developments and the new suburban resort community being built at Lake Lure, near Asheville.

SESSION WITH STUDENTS

One afternoon was given over to the activities of the student chapters. Over a hundred technical school undergraduates from a dozen or more of the institutions in the South were present throughout the meeting. This feature

fallen, but, again, it may reach the river when a secondary crest is arriving and thereby raise the crest. Conditions below the breaks, therefore, can only be guessed at; upon synchronism of these returns to the main river, upon rainfall, upon conditions of the discharge of the lower tributaries will depend the height to be reached in the lower river. However, all authoritative predictions look toward a gage at New Orleans higher than ever before reached.

To date, the major levees of the river have broken in four places—at Dorena, Walnut Bend, Laconia, all on the west bank, and at Stopps Landing on the east bank above Greenville. These are located on the accompanying map. Only one of these, the Stopps Landing break, occurred when the rear of the levee was dry. On the west side, back water had reached the levee in each case. It happened, too, that the one on the east bank, at Stopps Landing, is the most serious of the four, indeed one of the most serious that has ever occurred on the Mississippi, because it has flooded the city of Greenville, a town of 12,000 inhabitants.

History of the Flood—It is difficult at this date to analyze the causes of the flood. Certain facts, however, appear from a study of the gage heights and of the rainfall records. The present Mississippi River flood, as all such floods are, is a combination of synchronized events. A heavily flooded Ohio was met lower down by flood flows in the Arkansas and the White, due to rain coming at just the right time in the corner of Oklahoma, Missouri and Arkansas to bring the rivers draining that territory in concurrent flood with the Mississippi at their mouths. To add to the difficulties the lower Mississippi was itself heavily loaded by the extraordinary rainfall in the area centering on New Orleans when on Apr. 15 the total fall in 24 hr. was 14 to 15 in.

These general conditions can be followed by a study of the gage table given herewith. It will be seen that the Ohio has been high all winter. The upper Mississippi and the Missouri have been normal, in fact, lower than normal most of the winter, so they contributed but little to the present flood. The Ohio flows, however, seem to have been the major cause of high water in the Mississippi since last fall.

The Mississippi at Memphis, for instance, had a maximum stage of 25.1 last September, the highest of record in Memphis in 54 years with one exception. In October it was the highest

Arkansas City on the west bank of the river, where the crest fell 14 ft. the day after the break in the levee at Mounds Landing directly opposite. But the peculiarity of the Mississippi basin is that all of the water which overflows or breaks through the levees eventually reaches the river lower down. The major river valley of the Mississippi has been built up above the neighboring country so that all drainage is away from the river to major streams which, roughly paralleling the main river, enter it farther down. When a break in the levee occurs, therefore, the paralleling river valleys are filled with backwater, sometimes reaching up to the back of the existing Mississippi River levees and that water slowly passes down the secondary valley to join the main river later. This passage may take so long that it reaches the river after main crest has

Engineering Fifty Years Ago

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Annual Convention of Am. Soc. C. E. at New Orleans, April 23, 1877

PROF. FORSHEY spoke of Humphrey's and Abbott's formula in regard to the flow of water in the Mississippi, and of the necessity of further investigation into the flow of water in large rivers. Mr. Cortell had not prepared a formal paper, but offered many interesting remarks on the works at South Pass, as being on the general problem of river hydraulics. Mr. Cortell was exceedingly frank in his remarks, confessing that in a measure they had been