

weather hazard. The situation with respect to forest fires in California was critical at all times, and the number of fires was greatly beyond that of an average year. Many of the forest reserves were closed to campers in order to decrease the number of fires caused by neglect and carelessness.

It was not necessary during July to issue warnings of any kind other than for fire weather.—*E. H. Bowie.*

627.41 (73) RIVERS AND FLOODS

By ROBIN E. SPENCER, Principal Observer

Floods in the Atlantic drainage area during July, 1924, were confined to the first half of the month and to the rivers of the Carolinas, rainfall in those States having been heavy during, and in some cases following, the first week. Warnings, which were in the main timely and well verified, resulted in a saving of movable property valued at upwards of \$20,000. Losses were estimated at about \$80,000, including \$20,000 in crops.

In the Mississippi Valley floods of some importance occurred in the Illinois, Grand, and Osage Rivers. Considerable losses in crops occurred along the Illinois, at and below Peru, where the river continued above flood stage from late June until July 20; while the result of overflow along the Grand and Osage was less costly in direct damage than in the effect of finally preventing for the present season the planting of a considerable extent of bottom lands which had hitherto remained unplanted on account of wet weather.

Reports received too late for inclusion in the June number of this REVIEW place unavoidable losses in prospective crops for the Des Moines and Mississippi flood which occurred between June 28 and July 1 from Keokuk, Iowa, to Louisiana, Mo., and at Cape Girardeau, Mo., on July 4, at \$100,000, the total saving through warnings being about \$11,000.

The record of run-off of the Colorado River for the month of July, 1924, clearly indicates the deficiency in the water supply of the present season over the Far West. The total discharge at Yuma, Ariz., for July was 1,134,900 acre-feet, as compared with 2,633,000 acre-feet in July, 1923, and a normal discharge of 2,292,880 acre-feet. There is no prospect of increased flow for some months unless a series of good rains occurs over the upper drainage area.

River, and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
ATLANTIC DRAINAGE					
Black:	<i>Feet</i>			<i>Feet</i>	
Kingstree, S. C.....	12	3	13	14.6	6
Santee:					
Rimini, S. C.....	12	2	21	16.8	13
Ferguson, S. C.....	12	3	26	13.8	13-15
Wateree:					
Camden, S. C.....	24	9	10	24.5	9
Broad:					
Blairs, S. C.....	15	7	9	16.9	7
Saluda:					
Chappells, S. C.....	14	8	10	16.8	9
GREAT LAKES DRAINAGE					
St. Joseph:					
Montpelier, Ohio.....	10	(¹)	1	11.4	June 30
MISSISSIPPI DRAINAGE					
Mississippi:					
Quincy, Ill.....	14	(¹)	1	15.2	June 30
Hannibal, Mo.....	13	(¹)	2	15.2	June 30
Louisiana, Mo.....	12	(¹)	3	14.0	1
Alton, Ill.....	21	(¹)	5	22.8	3
Cape Girardeau, Mo.....	30	(¹)	4	30.1	4
Illinois:					
Morris, Ill.....	13	(¹)	2	14.5	June 29
Peru, Ill.....	14	(¹)	18	18.4	June 30- July 1
Henry, Ill.....	7	(¹)	29	12.7	2-3
Peoria, Ill.....	16	(¹)	19	19.7	3-4
Havana, Ill.....	14	(¹)	20	18.0	3
Beardstown, Ill.....	12	(¹)	23	14.1	24
Pearl, Ill.....	12	(¹)	(²)	19.1	4-5
Missouri:					
Hermann, Mo.....	21	(¹)	1	21.5	June 30
St. Charles, Mo.....	25	June 29	4	27.1	June 30- July 1
Grand:					
Gallatin, Mo.....	20	18	19	26.2	18
Chillicothe, Mo.....	18	(¹)	2	28.1	June 29
Brunswick, Mo.....	10	(¹)	5	19.6	19
		20	23	14.3	June 30- July 1
				10.7	21
Osage:					
Osceola, Mo.....	20	14	16	21.8	14
Warsaw, Mo.....	22	15	17	25.1	16
WEST GULF DRAINAGE					
Colorado:					
Parker, Ariz.....	7	(¹)	10	9.4	June 22

¹ Continued from last month.

² Continued at end of month.

MEAN LAKE LEVELS DURING JULY, 1924

By UNITED STATES LAKE SURVEY

[Detroit, Mich., August 7, 1924]

The following data are reported in the "Notice to Mariners" of the above date:

River, and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
ATLANTIC DRAINAGE					
Roanoke:	<i>Feet</i>			<i>Feet</i>	
Weldon, N. C.....	30	11	11	33.5	11
Tar:					
Tarboro, N. C.....	18	5	7	19.5	6
Greenville, N. C.....	14	6	10	15.8	7-8
Fishing Creek:					
Enfield, N. C.....	15	2	4	16.8	2
Neuse:					
Neuse, N. C.....	15	2	3	16.6	3
Smithfield, N. C.....	14	1	5	17.4	3
Cape Fear:					
Elizabethtown, N. C.....	22	3	5	24.8	3
Waccamaw:					
Conway, S. C.....	7	7	27	9.0	15-17
Peedee:					
Mars Bluff, S. C.....	17	11	15	18.4	13

Data	Lakes ¹			
	Superior	Michigan and Huron	Erie	Ontario
Mean level during July, 1924.....	<i>Feet</i>	<i>Feet</i>	<i>Feet</i>	<i>Feet</i>
Above mean sea level at New York.....	601.39	579.52	572.45	246.21
Above or below—				
Mean stage of June, 1924.....	+0.11	+0.14	+0.09	-0.06
Mean stage of July, 1923.....	-0.48	-0.36	+0.46	+0.41
Average stage for July last 10 years.....	-1.17	-1.39	-0.37	-0.45
Highest recorded July stage.....	-2.43	-4.00	-1.96	-2.51
Lowest recorded July stage.....	-0.09	-0.36	+0.99	+1.62
Average relation of the July level to—				
June level.....		+0.1	(²)	(²)
August level.....		+0.1	+0.2	+0.3

¹ Lake St. Clair's level: In July, 1924, 574.94 feet.

² Practically no difference.