

RIVERS AND FLOODS

By R. E. SPENCER

No floods of importance occurred during October, 1928. In the Atlantic drainage, the high stages were mainly continuations of the August-September floods previously reported upon, and were attended by no additional damage.

Because of frequent previous floods this summer along the Grand River of Missouri, no crops remained to be damaged by the rise of October 18-20 in that stream; and it had no other consequence except some slight inconvenience to transportation.

[All dates in October except as otherwise specified]

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
ATLANTIC DRAINAGE					
Connecticut: Bellows Falls, Vt.-----	<i>Feet</i> 12	(1) 21	18 24	<i>Feet</i> 13.0 12.8	2 and 10, 22, 31.
Tar: Greenville, N. C.-----	14	(1) (2)	(3) 11	13.4 12.8	Sept. 30, Sept. 23.
Waccanaw: Conway, S. C.-----	7	(1)	6	29.6	
Peedee: Mars Bluff, S. C.-----	17	(1)			
Santee:					
Rimini, S. C.-----	12	(1)	13	30.4	Aug. 21.
Ferguson, S. C.-----	12	(1)	15	20.6	Aug. 22.
Saluda: Three Miles Post (near Columbia), S. C.-----	8	5	6	12.1	5.
		18	20	16.75	19.
Altamaha: Everett City, Ga.-----	10	(1)	1	15.0	Aug. 27-28.
MISSISSIPPI DRAINAGE					
Tippecanoe: Norway, Ind.-----	6	29	29	6.0	29.
Elk: Fayetteville, Tenn.-----	14	18	18	20.4	18.
Grand:					
Gallatin, Mo.-----	20	18	19	25.4	18.
Chillicothe, Mo.-----	18	18	20	23.7	19.

¹ Continued from last month.² Continued at end of month.³ Below flood stage at 8 a. m., Oct. 1, 1928.

MEAN LAKE LEVELS DURING OCTOBER, 1928

By UNITED STATES LAKE SURVEY

[Detroit, Mich., November 5, 1928]

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

Data	Lakes ¹			
	Superior	Michigan and Huron	Erie	Ontario
Mean level during October, 1928:				
Above mean sea level at New York.-----	<i>Feet</i> 603.55	<i>Feet</i> 580.45	<i>Feet</i> 571.86	<i>Feet</i> 245.76
Above or below—				
Mean stage of September, 1928.-----	+0.15	+0.03	-0.26	-0.41
Mean stage of October, 1927.-----	+0.91	+1.33	+0.52	+0.77
Average stage for October, last 10 years.-----	+1.37	+0.83	+0.16	+0.49
Highest recorded October stage.-----	-0.09	-2.59	-1.84	-2.05
Lowest recorded October stage.-----	+2.16	+2.54	+1.26	+2.09
Average departure (since 1860) of the October level from the September level.-----	-0.05	-0.23	-0.31	-0.34

¹ Lake St. Clair's level: In October, 1928, 575.02 feet.

EFFECT OF WEATHER ON CROPS AND FARMING OPERATIONS, OCTOBER, 1928

By J. B. KINCER

General summary.—During the first decade, except where plowing and fall seeding were retarded by dry soil, the weather was mostly favorable for seasonal farm operations and good progress was reported quite generally. The prevailing warmth and much sunshine were espe-

cially helpful in drying out the corn crop, for harvesting operations, picking cotton, and for fall plowing and seeding wherever the soil moisture was sufficient. There were no damaging frosts, but additional reports of harm to some late crops—mostly minor—by frosts of the preceding month were received from some of the Northern States.

The second decade was warm over the eastern half of the country and, although the prevailing weather had some unfavorable aspects, conditions were generally favorable. Little or no harm was reported from low temperatures, although freezing weather extended south to extreme northwestern Oklahoma and northern New Mexico, with light frost in parts of northern Texas. The geographic distribution of rainfall was mostly favorable; in the upper Mississippi Valley, the Lake region, and the Northeast, showers delayed field work, but were otherwise helpful, while in the central valley States further rains were very beneficial with the drought largely relieved.

During the last decade rain hindered outdoor operations to some extent in the Lake region and the Northeast; otherwise field work made good advance until near the close of the month, when widespread rains in the Southwest stopped outside operations. The first general freezing weather of the season overspread the Eastern States as far south as southern Virginia and in the West to portions of Oklahoma, but little damage resulted.

Small grains.—During the first decade moderate to generous showers in the central and eastern portions of the Winter Wheat Belt were very beneficial in conditioning the soil for seeding and for germination of the grain already sown, but in western parts more moisture was needed, with seeding suspended in western Kansas and delayed in Oklahoma. Conditions continued favorable in Atlantic coast sections and the outlook was improved by generous rains in the Pacific Northwest.

During the second decade the dry conditions were generally relieved, but over the western half of the belt it was still unfavorably dry in some districts. Missouri, Iowa, Kansas, and Nebraska were well supplied with soil moisture as a result of the rains, but in parts of the Southwest it continued dry. Unfavorable drought continued in the Pacific Northwest, but in the Atlantic Coast States conditions were generally satisfactory.

During the last decade rains in the southwestern Wheat Belt were of much benefit, especially in breaking the drought in western Oklahoma and northern Texas. The main producing area had sufficient moisture rather generally, with this relief, and the crop was making favorable advance. The Pacific Northwest continued droughty, but in the Atlantic area satisfactory conditions prevailed.

Corn.—During the first decade the warm, dry, sunny weather over the main producing sections made generally excellent conditions for drying out the corn crop. Rapid drying was reported in the Ohio Valley and in Iowa, with cribbing begun in many counties of the latter and hogging active. The crop was all made and being cribbed in Missouri, while in the Great Plains it was drying rapidly, with cribbing begun in Kansas.

During the second decade corn dried out rapidly in the eastern Ohio Valley and husking advanced well, but in the western part there was some delay by wet weather. In Iowa heavy rains interrupted husking; some corn was fit to crib, but mostly for immediate use only; high winds caused much down corn with husking difficult and many ears molding or sprouting. In the Great Plains and Missouri harvesting made good advance.