

TABLE I.—Flood stages in the Mississippi drainage, Ohio Basin, during November, 1919—Continued.

Drainage, river, and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.
<i>Mississippi drainage, northern and western tributaries—Continued.</i>					
<i>Meramec—</i>					
Pacific, Mo.....	11	(**)	4	16.6	3
Glencoe, Mo.....	15	(**)	4	26.5	130
Valley Park, Mo.....	14	(**)	4	30.7	130
Bourbeuse, Union, Mo.....	10	2	3	13.5	2
St. Francis, Marked Tree, Ark.....	17	30	30	17.1	30
Red, Alexandria, La.....	36	10	12	36.1	11, 12
<i>Ouachita—</i>					
Arkadelphia, Ark.....	18	11	11	18.0	11
Camden, Ark.....	30	14	18	33.2	16
Petit Jean, Danville, Ark.....	20	2	4	22.1	3
<i>Black—</i>					
Black Rock, Ark.....	14	11	17	18.5	12
Do.....	14	27	(*)	17.0	30
Cache, Jelks, Ark.....	9	26	(*)	9.7	30
<i>Sulphur—</i>					
Finlay, Tex.....	24	(**)	3	28.6	127
Do.....	24	11	16	25.4	11
Ringo Crossing, Tex.....	20	3	5	21.3	3, 4
Do.....	20	11	13	21.3	11
Do.....	20	30	(*)	21.2	30
Cypress, Jefferson, Tex.....	18	13	17	22.5	14

* Continued into October. ** Continued from December. † October.

MEAN LAKE LEVELS DURING NOVEMBER, 1919.

By UNITED STATES LAKE SURVEY.

[Dated: Detroit, Mich., Dec. 5, 1919.]

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

Data.	Lakes.*			
	Superior.	Michigan and Huron.	Erie.	Ontario.
Mean level during November, 1919:				
Above mean sea level at New York.....	<i>Fcet.</i> 602.51	<i>Fcet.</i> 580.43	<i>Fcet.</i> 572.24	<i>Fcet.</i> 246.11
Above or below—				
Mean stage of October, 1919.....	+0.04	-0.20	-0.26	-0.24
Mean stage of November, 1918.....	-0.01	-0.67	+0.11	+0.11
Average stage for November, last 10 years.....	+0.01	+0.17	+0.43	+0.56
Highest recorded November stage.....	-1.00	-2.49	-1.43	-1.71
Lowest recorded November stage.....	+1.01	+1.25	+1.54	+2.70
Average relation to the November level to:				
October level.....		-0.2	-0.3	-0.2
December level.....		+0.2	+0.3	+0.2

* Lake St. Clair's level: In November, — feet.

EFFECT OF WEATHER ON CROPS, NOVEMBER, 1919.

By J. B. KINCER, Acting Chief of Division.

Farm work.—Frequent rains in central and southwestern States seriously interrupted farm work during the first week of November, and the cold, snowy weather in the Northwest was unfavorable, while transportation was hindered by snow in some central districts. The weather was more favorable for field work, however, in the eastern States. The second decade and the first half of the third were more favorable for field work in the interior, resulting in the improved condition of roads and the drying out of fields. There was a return of weather unfavorable for field work during the last few days of the month in central and northwestern States, where there was an almost entire suspension of outdoor operations, as a result of snow and cold weather; more favorable weather conditions prevailed in the South during this period.

Winter grains.—Rain or snow during the first decade of the month was beneficial to winter grains in Rocky Mountain districts and the far Northwest and these crops made satisfactory advance in nearly all other sections of the country. It was too wet for seeding, however, in some sections, particularly in the lower Great Plains and the southern drainage area of the Ohio River, while it was too dry for best results in California and some adjoining localities. The continued rains and wet soil were unfavorable for oat seeding in the west Gulf region, but at the same time the rains in the eastern portion of the winter oat belt were favorable. Weather conditions improved in the southern Great Plains and the Ohio Valley during the second decade, when drier weather favored late seeding which had been greatly delayed. The latter part of the month was favorable for winter grains in nearly all sections of the country, except for too much rain in parts of the Ohio Valley and Tennessee and also in the Southwest. At the close of the month protection was afforded by a good snow cover in the central and northern Great Plains, the upper Mississippi Valley and the far Northwest. Only a small acreage of winter grains was sown in the west Gulf region and a considerable reduction in acreage resulted in some central districts on

account of inability to seed in the wet soil. There was much complaint of fly in the early sown wheat in many sections.

Corn and cotton.—Corn husking was delayed during the first half of the month in many central and southwestern States by frequent rains and considerable damage was done to grain in shock. Better progress was made in this work the latter part, however, under more favorable weather conditions, although the last few days of the month were unfavorable in the northern and western States.

Cotton picking was interrupted by rain during the first 10 days of the month from the Mississippi Valley westward and considerable damage was done to ungathered cotton in the fields, but harvest made satisfactory progress in the eastern districts. By the 10th of the month the early crop had been mostly picked in the Carolinas and picking was practically completed in Georgia. After the first decade the cessation of rains in the western portion of the belt permitted better progress in picking in that section. The freeze in the northern and central portions of the cotton growing area on the 12th to 14th expedited opening, and bolls came out rapidly thereafter. Weather favorable for picking continued in the western and northwestern portions of the belt until the last week in the month when rains again interfered with this work. At the close of the month cotton was nearly all harvested in the eastern portion of the belt, but considerable remained to be picked in Arkansas, northern and northwestern Texas, and in Oklahoma.

Pastures, truck, and fruit.—Pastures were favorably affected by the weather of the month in nearly all central and eastern districts, but in the northern Plains and in northwestern districts the range was mostly snow-covered, preventing grazing and causing suffering of stock, with considerable losses in some sections, particularly in Montana. It was too dry for the range in California and the lack of moisture unfavorably affected pastures in portions of the Southeast also.

Winter truck was somewhat unfavorably affected in the central Gulf region by the unseasonably high temperatures early in the month, and it was much too wet in the lower Mississippi Valley region, but at the same time the rains benefited sugar cane in Florida. The freeze in the central and northern portions of the Gulf States near the middle of the month did considerable damage to gardens and tender truck crops in those localities, but the latter half of the month was generally favorable for truck in the Southern States, except for a lack of moisture in some immediate South Atlantic coast districts.

Rains early in the month benefited citrus fruits in Florida, but under the influence of warm weather they colored slowly and considerable dropping was reported. The cooler weather later in the month was beneficial, but complaints of dropping continued. The weather was generally favorable for citrus fruits in California, except that some damage was done to oranges, lemons, and olives by high winds. The quality of lemons was reported as excellent in that State, and the picking of lemons and oranges was becoming more general at the end of the month.