

## RIVER STAGES AND FLOODS FOR DECEMBER 1948

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River stages during December were above normal in the Ohio River Basin and along the Atlantic and east Gulf of Mexico drainage areas from Maryland to Louisiana. They were below normal in the northeastern New England States and west of the Mississippi River except in the Trinity and Brazos River Basins in Texas. River stages were below normal in the Missouri River Basin for the first time in 6 months. The greatest positive departure was at Demopolis, Ala., where the Tombigbee River averaged 27.2 feet above normal. The monthly mean stage at Cairo, Ill., 30.7 feet, was the highest since 1931 and was 12.8 feet above the 60-year normal.

The most significant flooding during the month developed in eastern New York and southwestern New England during the latter part of December and the early part of January. The floods were of record-breaking proportions in several streams and considerable damage resulted. The serious flood threat that developed in the Willamette Basin on the 11th-12th was averted by the short duration of the storm and the cooler weather and snow that followed. Heavy damages resulted from the severe flooding along the streams in the eastern portion of the southern States during the latter part of November and the first part of December.

The upper reaches of the Missouri and Mississippi Rivers were frozen over by the 10th with 6 inches of ice on the former at Williston, N. Dak. The Mississippi was closed to navigation at La Crosse, Wis., on this date with 2½ inches of ice recorded. During the last decade of the month the ice on the Missouri was reported 18 inches thick at Bismarck, N. Dak., with floating ice at Kansas City. During this same period, the Mississippi was frozen over to a thickness of 9½ inches at Minneapolis, Minn. In the northeastern rivers and lakes the ice ranged from a few inches to around 6 inches.

Precipitation during the month was mostly above normal along the Atlantic and Pacific Slope drainage areas and along the Canadian border from Lake Michigan to eastern Montana. It was also above normal in an irregular belt from southern Nevada east-northeastward through the Ohio Basin. The greatest precipitation (twice normal) occurred along the southwestern portion of the New England States.

Heavy snow accompanied the storm that developed in the far Southwest during the period of December 3 to 6 as it moved across the Central Rockies into the Great Plains with a record snowfall of 11 inches at Salt Lake City, Utah, on the 7th. The snowfall was exceptionally heavy over the Great Salt Lake Basin during the month and increased considerably the water supply outlook for this area. Heavy snows during the second week increased depths considerably in the mountain ranges of the far west and brought snow depths to above normal in the northern Rockies. The snow pack in the Columbia Basin was well above normal on the 31st and considerably above in the Cascade Mountains of Oregon and Washington. Heavy snow in the California mountains during the third week was favorable for irrigation purposes. During this period, the snow cover advanced eastward to the Atlantic coast for the first time during the season. It reached its farthest southern limits during the last decade of the month when it reached a line extending southwestward from Atlantic City, N. J., to northeastern Georgia, west-northwestward to Dodge City, Kans., thence southwestward to the southwestern corner of New Mexico. The snow cover was thin and spotty east of

the 95th meridian and receded to north of the 42d parallel by the 31st.

*Atlantic Slope drainage.*—Steady moderate rain during the last 3 days of the month brought the total precipitation in Maine almost up to normal and caused the Shepard River, a tributary of the Saco, to overflow a section of the State highway near Fryeburg, Maine, to a depth of 2 feet for an 8-hour period on the 31st. Ice jams formed above Hiram, Maine, on the Saco and above Skowhegan, Maine, on the Kennebec. No damage resulted.

Rapid rises occurred on the Pemigewasset and tributaries in New Hampshire. Crests varied from just below to just above bank-full stage as a result of the 3-day rainstorm. The rainfall amounts were the heaviest in the headwaters and ranged up to 4 inches from the 29th-31st. The crest at Plymouth, N. H., was increased slightly by an ice jam which formed below that point. Overflows were minor and were confined mostly to meadow lands adjacent to the banks. No damage was reported.

Heavy to excessive precipitation, varying from 5 to 12 inches over western Connecticut, western Massachusetts, southern Vermont, and eastern New York for two or more days during the period between December 29 and January 1 caused severe floods in that area. Snow melt had little effect on the resulting peaks as the snow cover was very light (3 to 4 inches). Rapid run-off occurred during the early stages of the flood while the ground was frozen. The excessive rainfall during the early morning hours of the 31st had the greatest effect on the final peaks which attained record or near record levels on the upper reaches of many streams. The total precipitation was greater during the 1938 hurricane, but it was not as intense since it was extended over a longer period. The heavy precipitation over the western reaches of the Connecticut River caused all the western tributaries from the West River southward to crest at or near record levels and produced a sharp rise in the Connecticut itself. The stage of 25.52 feet reached at Hartford, Conn., was the highest winter flood on record, although crests of 26 feet or more have occurred at Hartford at other seasons of the year 12 times during the past 100 years. The crests on the Connecticut were well below the three great floods of November 1927, March 1936, and September 1938.

The upper reaches of the Farmington River exceeded the crests of March 1936 but did not exceed the record heights of September 1938. The lower sections peaked at levels just about equal to those of March 1936. The upper Housatonic River broke all previous records, cresting at Falls Village, Conn., more than 2 feet higher than the September 1938 flood. The entire drainage area above this point received over 8 inches of rain. The Naugatuck River attained slightly higher levels than in 1938 in its upper reaches, and equalled the 1938 flood in its lower reaches. The Hudson River at Albany, N. Y., crested at a slightly lower level than during the 1936 flood. It reached flood stage during the night of December 30-31, rising 10.1 feet during the 24-hour period from a stage of 1.7 feet. Rainfall averaged 6.25 inches over the upper Hudson Valley, 4.75 inches over the Mohawk Basin, and 8.63 inches over the Hoosic River Basin. The rainfall at Albany (5.80 inches) was the heaviest for any one storm during this time of the year in more than 100 years.

Damage to both rural and urban property was extensive with damage for the entire area estimated in the millions of dollars. Several bridges were washed out. Much farm land was inundated and roads were undermined and blocked by landslides. Hundreds of families

in low areas of Pittsfield and Great Barrington, Mass., and in Torrington, Waterbury, Farmington, and Unionville, Conn., had to be evacuated. Disruption of normal pursuits was extensive owing to flooding of homes, industrial plants, water supplies, and transportation. Four lives were lost in the flood, one in the Hartford, Conn., area and three in Berkshire County, Mass.

A comparison of the present flood crests with the maximum previously recorded is given in Table 1.

TABLE 1.—Comparative flood crests in southwestern New England and eastern New York

River and station	Current flood		Previous maximum of record	
	Crest	Date	Crest	Date
<b>West:</b>				
Jamaica, Vt.....	14.9	Dec. 31	10.5	Apr. 1947
Newfane, Vt.....	19.5	do	22.8	Sept. 1938
<b>Deerfield:</b>				
Charlton, Mass.....	17.7	do	20.2	do
West Deerfield, Mass.....	15.4	do	9.6	July 1915 Apr. 194
<b>Westfield:</b>				
West Chesterfield, Mass.....	12.0	do	17.8	Mar. 1948
Westfield, Mass.....	22.0	do	29.4 27.2	Sept. 1938 Mar. 1936
<b>Farmington:</b>				
Riverton, Conn.....	14.0	do	17.95 13.4	Sept. 1938 Mar. 1936
Rainbow, Conn.....	13.4	Jan. 1	13.7	Sept. 1938
<b>Connecticut:</b>				
North Walpole, N. H.....	24.5	Dec. 31	26.2	Apr. 1947
Montague City, Mass.....	37.3	Jan. 1	49.2	Mar. 1936
Hartford, Conn.....	25.5	Jan. 2	37.6	do
<b>Housatonic:</b>				
Great Barrington, Mass.....	12.1	Jan. 1	11.7 10.6	Sept. 1938 Mar. 1936
Falls Village, Conn.....	22.9	do	20.7 17.4	Sept. 1938 Mar. 1936
Gaylordsville, Conn.....	14.8	do	14.5	Sept. 1938
Stevenson, Conn.....	19.9	do	23.5 21.5	Mar. 1936 Sept. 1938
<b>Naugatuck:</b>				
Thomaston, Conn.....	12.0	Dec. 31	11.9 9.6	do Jan. 1938
Naugatuck, Conn.....	12.4	do	14.0 12.4	Nov. 1927 Sept. 1938
<b>Hudson: Albany, N. Y.....</b>	17.5	Jan. 1	21.5 18.7	Mar. 1913 Mar. 1936

Moderate precipitation accompanied by some snow melt on the 29th and 30th caused the Lehigh River to crest 1 foot above bank-full stage at Lehigh, Pa., at 8 p. m. on the 30th. No damage was reported.

Heavy rains over the Schuylkill and Delaware River Basins on the 29th and 30th, caused flood conditions in the Schuylkill on the 30th and in the Delaware on the 31st. The average rainfall along the Schuylkill was 2.89 inches and along the Delaware 3.34 inches. The snow cover over the area ranged from 2 to 5 inches. Considerable overflow occurred along the Perkiomen Creek, especially between Graterford and Collegeville, Pa., but damage was confined to flooded basements in houses near the creek and flooded roads. Only light monetary damage was reported along the Schuylkill.

Moderate rains on the 29th–30th caused light to moderate flooding in the Susquehanna River Basin in New York and minor flooding along the Chenango River in New York and the headwaters of the Juniata River in Pennsylvania. Crests in the lower Susquehanna Basin were 4 to 8 feet below flood stage. No serious damages were reported.

Heavy rains over the Rappahannock River Basin (1.95 inches) on the night of the 3d caused light flooding on the Rapidan River at Rapidan, Va., and on the Rappahannock at Remington on the 4th, and resulted in near bank-full stage at Fredericksburg, Va. (16.1 feet). Some flooding occurred on the Monocacy River in Maryland on the 31st as a result of heavy rain (1.6 inches) on the 29th–30th.

Heavy rain on the 3d–4th caused a major flood in the James River Basin in Virginia from the 3d to the 7th. The rainfall ranged from 5.19 inches at Brems Bluff to 1.21 inches at Richmond, and 1.45 inches at Williamsville in the upper reaches. The run-off was high as the entire basin was saturated from the minor flood of November 28th–30th with initial stages 2 to 5.5 feet above normal. Losses were confined mostly to crops in the field. A minor flood occurred on December 31–January 1 which affected only the reach below Brems Bluff. The rainfall over the basin averaged about 2 inches.

Double crests with widespread flooding occurred on the rivers in eastern North Carolina, as a result of the heavy rains on November 28–29 and December 3–4. The rainfall during the first storm averaged 2 inches. During the latter over an inch was reported over the Cape Fear, Neuse, and Tar Rivers and approximately 3 inches over the headwaters of the Roanoke. Major damage was restricted to highways and bridges in the vicinity of Kinston, N. C., and some loss was incurred by logging interests.

Damage estimates for the floods in the Santee River system in South Carolina during the period November 28–December 3 were the greatest in 3 years. Most of the property damage occurred in the vicinity of Camden, where the rainfall was excessive during the night of November 28. Small streams in that locality did considerable damage, besides the damage along the main stream of the Wateree River. The Seaboard Railroad trestle across this river near Camden was washed out of line. The loss over the entire State was around \$1,000,000. Light flooding occurred on the Broad River during the last 2 days of the month but no damage was reported.

In Georgia the very heavy rains late in November were supplemented by light to moderate falls during the first 7 days of December and by heavy rain (2 to 5 inches) on the 8th day in the southwestern and south-central counties. No rainfall of much importance occurred after this until the 31st when general rains of 1 to 2 inches or more occurred. All stations along the Ocmulgee, Oconee, and Altamaha Rivers exceeded flood stage during the early days of December as a result of heavy rains in November. Some upper stream stations reached crest stages on the last 2 days of November, but most stations had their crests during the first week of December. This flood was one of the biggest to affect this area during periods of record, and numerous stations had crest stages that were very near record height. Flood crests ranged from slightly less than 5 to as much as 10 feet above flood stage and caused a great deal of damage and inconvenience. The greatest loss occurred along the Ocmulgee River in the Macon area.

*East Gulf of Mexico drainage.*—Heavy rains (2.30 inches) over the Choctawhatchee River Basin on the 7th–8th caused slight flooding in the lower Choctawhatchee River at Caryville, Fla., on the 11th.

The flood damages during the period November 27 through December 12 in Georgia were heaviest along the Chattahoochee River between Atlanta and West Point. A large number of families were forced to leave their homes in low-lying residential areas at both Atlanta and West Point; much damage was done to building foundations and furnishings; many acres were inundated, causing losses to crops, roads, and bridges; and other miscellaneous damage was reported. Losses below Columbus were mainly to livestock, crops, and roadways. Damages along the Flint River were fairly well distributed as far south as Newton, below which little damage occurred. About 30 families had to leave their homes in the Albany

area. In the Newton area a large number of people were moved to higher ground, as high waters practically surrounded the town. Along the Apalachicola River the greatest loss resulted from suspension of business and loss of wages.

The extreme lower Tombigbee in Alabama remained in flood during the entire month at locks 1 and 3. A slight rise beginning on the 19th brought flood stages at locks 2 and 4.

The floodwaters in Mississippi gradually receded after the 8th of December from the near record stages reached during the latter part of November and the early part of December. A brief rise began on the 16th over the headwaters and intermediate reaches of the Pearl River, prolonging the flood in the Jackson reach. No unusual damages resulted from the flooding, but several families were evacuated from the lower areas of Jackson, Miss.

**Ohio Basin.**—General rains which began in the upper Ohio Valley on the evening of the 14th and continued to the 16th caused flooding on the Tygart, West Fork, and Little Kanawha Rivers in West Virginia; on the Hocking River in Ohio, and on the Monongahela River in Pennsylvania. The rainfall over the Tygart and West Fork Rivers averaged 3.25 inches and over the Hocking, Little Kanawha and the upper reaches of the Monongahela Basin around 4 inches. Navigation was interrupted along the entire length of the Monongahela River.

Flood stages were reached on the Scioto River in Ohio as a result of the heavy rain (1.25 to 2.50 inches) over the basin on the 14th–16th. The worst effect of the flooding was the temporary closing of highways in low places.

Rainfall over the Green River Valley, in Kentucky on the 15th–16th averaged slightly over 3 inches and caused moderate flooding from Brownsville to Rumsey, Ky.

Heavy rain ranging from 1 to 3 inches on the 15th–16th caused light flooding on the Wabash and White Rivers in Indiana. Additional heavy rain on the 29th, ranging from 1 to 2 inches, caused another rise with more flooding than before as the ground was saturated and frozen. However, the damage was light.

The First Creek at Knoxville, Tenn., rose to above bank-full stage for a few hours on the 24th–25th as a result of 2.40 inches of rain in approximately 24 hours.

Flood stage was exceeded on the Ohio River below Pittsburgh, Pa., in the vicinity of Dam 7 at Midland, Pa. at Point Pleasant, W. Va., and from Lock No. 47 at Newburgh, Ind., to Lock No. 50 at Fords Ferry, Ky., as a result of the heavy rain from the 14th to the 16th. The rainfall over the Ohio Valley averaged 1.75 inches. River navigation locks were lowered along the Ohio. One person lost his life during the flood by falling from a barge near Point Pleasant, W. Va. Some loss occurred to crops in the Evansville area.

**Columbia Basin.** Heavy rain on the 11th–12th (1.75 inches) over the Willamette Valley caused moderate flooding in the streams in the basin. A serious flood threat already existed as a combination of warm rain and wind caused a substantial melting of snow at low and intermediate elevations. It was also the second storm in the valley during the 11-day period in December with average precipitation of 1.50 inches. The threat of serious flooding was averted by the short duration of the storm which was followed by more snow at intermediate and higher elevations and cooler weather. Considerable damage resulted to agricultural land, highways, bridges, fences, crops, and pastures. The major portion of the damages occurred in the Eugene-Harrisburg section.

FLOOD STAGE REPORT FOR DECEMBER 1948

[All dates in December unless otherwise specified]

River and station	Flood stage	Above flood stages—dates		Crest <sup>1</sup>	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE					
	<i>Feet</i>			<i>Feet</i>	
Baker: Rumney, N. H.	7	31	Jan. 1	7.3	31
Pemigewasset: Plymouth, N. H.	11	31	Jan. 1	13.0	31
Connecticut:					
Walpole, N. H.	30	31	31	31.0	31
Montague City, Mass.	30	31	Jan. 1	37.3	31
Holyoke, Mass.	9	31	Jan. 2	11.6	Jan. 1
Hartford, Conn.	16	31	Jan. 4	25.5	Jan. 2
Hudson:					
Troy, N. Y.:					
Upper Gage	24	31	Jan. 1	27.6	31
Lower Gage	19	31	Jan. 1	23.8	31
Albany, N. Y.	11	31	Jan. 2	17.5	Jan. 1
Lehigh: Lehigh, Pa.	9	30	30	10.0	30
Perkiomen Creek: Graterford, Pa.	8			12.8	30
Schuylkill:					
Reading, Pa.	13	30	31	14.8	31
Philadelphia, Pa.	11.5	30	(*)	12.6	30
Delaware: Easton, Pa.	22	31	Jan. 1	24.1	31
Chenango:					
Sherburne, N. Y.	8	30	30	8.4	30
Greene, N. Y.	8	31	31	9.3	31
Binghamton, N. Y.	16	31	31	16.1	31
Little Juniata: Spruce Creek, Pa.	7	30	31	7.3	30
Susquehanna:					
Oneonta, N. Y.	12	30	Jan. 1	15.8	31
Bainbridge, N. Y.	13	31	Jan. 1	15.2	31
Vestal, N. Y.	14	30	Jan. 2	18.5	31
Monocacy: Frederick, Md.	15	31	31	17.1	31
Rapidan: Rapidan, Va.	14	4	4	15.5	4
Rappahannock: Remington, Va.	15	4	4	15.5	4
James:					
Buchanan, Va.	17	4	4	17.0	4
Scottsville, Va.	20	3	5	23.0	5
Bremo Bluff, Va.	19	8	6	30.7	4
Columbia, Va.	18	3	6	33.5	5
State Farm, Va.	12	31	31	19.9	31
Richmond, Va.	8	4	7	25.0	5
		31	31	12.4	31
		4	7	21.6	6
		31	Jan. 1	8.4	31
Roanoke:					
Alta Vista, Va.	10	Nov. 29	Nov. 30	23.0	Nov. 29
		16	16	10.2	16
		30	(*)		
		Nov. 29	1	24.0	Nov. 29
		5	7	28.7	6
		31	(*)		
		Nov. 30	9	41.5	8
		Nov. 30	11	33.2	9
		Nov. 27	27	12.8	11
Tar:					
Rocky Mount, N. C.	9	Nov. 30	3	9.5	3
Tarboro, N. C.	18	2	9	22.4	5
Neuse:					
Neuse, N. C.	14	Nov. 29	7	18.3	2
Smithfield, N. C.	13	Nov. 29	9	18.9	5
		31	(*)		
		Nov. 29	14	20.4	9
		Nov. 30	17	17.8	11
Cape Fear:					
Fayetteville, N. C.	35	Nov. 30	2	44.7	Nov. 30
Lock No. 2, Elizabethtown, N. C.	20	Nov. 29	8	31.7	2
Waccamaw: Conway, S. C.	7	5	22	8.3	11
Pee Dee:					
Cheraw, S. C.	30	Nov. 30	Jan. 1	35.0	Jan. 1
Pee Dee, S. C.	19	Nov. 26	14	24.2	5
		Nov. 27	1	12.3	Nov. 29
		3	3	6.0	3
		5	5	6.0	5
		30	31	17.2	31
Saluda: Pelzer, S. C.					
	6	9	14	9.0	10
		21	21	8.0	21
		Nov. 29	(*)	14.6	3
Edisto:					
Orangeburg, S. C.	8	21	21	8.0	21
Givhans Ferry, S. C.	10	Nov. 29	(*)	14.6	3
Savannah:					
Augusta, Ga.	32	Nov. 29	1	36.2	Nov. 30
Butler Creek, Ga.	21	Nov. 28	3	26.4	Nov. 30
Ogeechee:					
Midville, Ga.	6	Nov. 30	5	7.8	2.3
Dover, Ga.	7	Nov. 30	11	6.2	11
		Nov. 30	12	9.8	6
Ocmulgee:					
Macon, Ga.	18	Nov. 27	2	28.0	Nov. 28–29
Hawkinsville, Ga.	25	1	6	34.2	2.3
Abbeville, Ga.	11	1	14	19.6	4
Lumber City, Ga.	15			22.6	9
Oconee:					
Milledgeville, Ga.	20	Nov. 27	4	38.5	Nov. 29
		30	31	22.2	31
Dublin, Ga.	21	1	8	30.4	3
Mount Vernon, Ga.	16	2	14	22.8	3
Altamaha:					
Charlotte, Ga.	12	2	31	26.2	9
Doortown, Ga.	10	9	15	10.9	12

See footnotes at end of table.

FLOOD STAGE REPORT FOR DECEMBER 1948—Continued

FLOOD STAGE REPORT FOR DECEMBER 1948—Continued

River and station	Flood stage	Above flood stages—dates		Crest <sup>1</sup>	
		From—	To—	Stage	Date
<b>EAST GULF OF MEXICO DRAINAGE</b>					
<b>Chattahoochee:</b>					
West Point, Ga.....	19	Nov. 27	2	22.4	Nov. 29
Columbus, Ga.....	34	Nov. 27	1	42.0	Nov. 28
Eufaula, Ala.....	40	Nov. 28	4	55.1	Nov. 30
Columbia, Ala.....	42	Nov. 29	4	49.4	1
<b>Flint:</b>					
Montezuma, Ga.....	20	Nov. 30	3	25.0	1
Albany, Ga.....	20	1	9	31.5	4
Bainbridge, Ga.....	25	4	12	31.0	7
<b>Apalachicola:</b>					
Chattahoochee, Fla.....	20	1	10	25.4	5
Blountstown, Fla.....	15	1	31	23.5	6
Choctawhatchie: Caryville, Fla.....	12	11	11	12.1	11
<b>Tombigbee:</b>					
Lock No. 4, Demopolis, Ala.....	39	19	24	44.8	21
Lock No. 3.....	33	Nov. 21	(*)	58.2	8
Lock No. 2.....	46	19	25	47.2	22
Lock No. 1.....	31	Nov. 24	Jan. 1	49.0	22
Pascagoula: Merrill, Miss.....	22	Nov. 25	11	40.1	12-13
<b>Pearl:</b>					
Edinburg, Miss.....	20	Nov. 27	Jan. 7	25.7	Nov. 28
Jackson, Miss.....	18	Nov. 20	(*)	26.0	1
Monticello, Miss.....	15	Nov. 26	18	32.9	6
Columbia, Miss.....	17	Nov. 17	19	22.9	2
Pearl River, La.....	12	Nov. 24	(*)	21.2	3
				16.7	Nov. 30
<b>MISSISSIPPI SYSTEM</b>					
<i>Ohio Basin</i>					
Buckhannon: Hall, W. Va.....	11	16	16	11.0	16
<b>Tygart:</b>					
Daily, W. Va.....	9	15	17	10.4	16
Belington, W. Va.....	14	16	17	15.0	16
Philippi, W. Va.....	17	16	17	19.8	16
<b>West Fork:</b>					
Weston, W. Va.....	17	15	17	20.0	16
Clarksburg, W. Va.....	7	16	17	8.8	16
<b>Monongahela:</b>					
Lock No. 8 (Lower gage), Point Marion, Pa.....	27	16	16	29.7	16
Lock No. 6 (Lower gage), Rices Landing, Pa.....	27	15	17	33.6	16
Lock No. 5 (Lower gage), Brownsville, Pa.....	29	16	17	37.4	16
Lock No. 4 (Lower gage), Charleroi, Pa.....	28	16	17	33.1	16
Lock No. 3 (Lower gage), Elizabeth, Pa.....	26	16	17	32.3	16
<b>Little Kanawha:</b>					
Glenville, W. Va.....	23	15	17	28.9	16
Creston, W. Va.....	20	15	17	24.6	16
Hocking: Athens, Ohio.....	17	16	17	18.2	17
<b>Scioto:</b>					
La Rue, Ohio.....	11	16	17	12.6	16
Prospect, Ohio.....	10	17	18	11.2	18
Circleville, Ohio.....	14	17	17	14.0	17
Piketon, Ohio.....	15	16	18	19.6	16
Middle Fork: Midvale, W. Va.....	11	16	16	11.0	16
Barren: Bowling Green, Ky.....	28	17	19	31.5	18
<b>Green:</b>					
Lock No. 6, Brownsville, Ky.....	28	17	19	32.4	18
Lock No. 4, Woodbury, Ky.....	33	16	22	41.6	19
Lock No. 2, Rumsey, Ky.....	34	19	29	38.8	24

River and station	Flood stage	Above flood stages—dates		Crest <sup>1</sup>	
		From—	To—	Stage	Date
<b>MISSISSIPPI SYSTEM—continued</b>					
<b>West Fork:</b>					
Anderson, Ind.....	10	16	17	11.0	1
Elliston, Ind.....	18	30	30	10.4	3
Edwardsport, Ind.....	12	16	Jan. 2	19.9	Jan. 1
East Fork: Seymour, Ind.....	14	16	21	15.4	1
White: Petersburg, Ind.....	16	30	(*)	17.8	Jan. 16
Wabash:				14.2	18-19
Wabash, Ind.....	12	17	22	16.9	
La Fayette, Ind.....	11	16	17	12.8	16
Covington, Ind.....	16	29	30	14.0	29
First Creek: Mineral Springs, Tenn.....	5	18	18	11.0	18
<b>Ohio:</b>					
Dam No. 7, Midland, Pa.....	30	29	Jan. 1	15.3	31
Point Pleasant, W. Va.....	40	31	Jan. 2	17.6	Jan. 1
Dam No. 47, Newburgh, Ind.....	38	21	25	5.7	25
Dam No. 48, near Henderson, Ky.....	38	23	25	38.6	24
Mount Vernon, Ind.....	35	23	26	35.8	25
Shawneetown, Ill.....	33	22	28	36.0	25
Dam No. 60, Fords Ferry, Ky.....	34	21	28	38.0	25-26
<i>Lower Mississippi Basin</i>					
Tallahatchie: Swan Lake, Miss.....	26	Nov. 23	13	28.6	1, 2
<b>PACIFIC SLOPE DRAINAGE</b>					
<i>Columbia Basin</i>					
Coast Fork: Saginaw, Oreg.....	9	12	12	9.6	12
<b>McKenzie:</b>					
Leaburg, Oreg.....	12	11	13	19.4	12
Hendricks Bridge, Oreg.....	13	12	12	13.1	12
Coburg Bridge, Oreg.....	11	12	12	14.5	12
Calapooya: Holley, Oreg.....	10.5	12	12	11.1	12
Santiam: Jefferson, Oreg.....	13	8	8	13.4	12
Yamhill: Whiteson, Oreg.....	38	11	12	41.6	12
Tualatin: Dilley, Oreg.....	12	2	15	12.7	12
<b>Willamette:</b>					
Eugene, Oreg.....	12	12	12	14.5	12
Harrisburg, Oreg.....	12	11	15	17.8	13
Corvallis, Oreg.....	20	13	14	24.1	13
Albany, Oreg.....	20	13	15	25.8	13-14
Salem, Oreg.....	20	13	15	21.8	14
Oregon City, Oreg.....	12	13	16	14.5	15
<i>Chehalis Basin</i>					
Satsop: Satsop, Wash.....	29	2	2	32.4	2
Chehalis: Grand Mound, Wash.....	12	2	4	14.0	3
		10	14	14.4	11
<i>Puget Sound</i>					
Snoqualmie: Tolt, Wash.....	50	2	2	50.3	2
Snohomish: Snohomish, Wash.....	20	2	2	20.7	2

<sup>1</sup> Provisional.

<sup>2</sup> Continued at end of month.