GEOLOGICAL SURVEY CIRCULAR 155

NEW YEAR FLOOD OF 1949 IN NEW YORK AND NEW ENGLAND

Prepared by Water Resources Division

UNITED STATES DEPARTMENT OF THE INTERIOR
Oscar L. Chapman, Secretary

GEOLOGICAL SURVEY
W. E. Wrather, Director

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PREFACE

This report on the New Year Flood of 1949 in New York and New England was prepared by the Geological Survey, Water Resources Division under the general direction of: C. G. Paulsen, Chief Hydraulic Engineer; J. V. B. Wells, Chief, Surface Water Branch; and B. L. Bigwood, Hartford, Conn., A. W. Harrington, Albany, N. Y., and H. B. Kinnison, Boston, Mass., District Engineers (Surface Water).

The records of discharge were collected and compiled in cooperation with the States of Connecticut, Massachusetts, New Hampshire, New York and Vermont, and agencies within those States. The Corps of Engineers furnished financial assistance in the operation of 11 gaging station included in this report.

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NEW YEAR FLOOD OF 1949 IN NEW YORK AND NEW ENGLAND

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INTRODUCTION

Precipitation ranging from 5 to 12 in. in depth fell on a 4,500 square-mile area in eastern New York and southwestern New England during the period December 29, 1948 to January 1, 1949. Most of this precipitation fell as rain. On the morning of December 31 the rain began to freeze; later in the day the rain changed to snow.

Floods resulted in the Hudson River and Connecticut River basins and in the intervening area. On the upper Hudson and upper Housatonic Rivers the flood exceeded all previous floods of record. The flood in the Connecticut River basin was only moderately high. It was exceeded by three great floods of recent years--those of 1927, 1936, and 1938.

At least five persons in Massachusetts and Connecticut lost their lives as a result of the flood. Several hundred families were evacuated from their homes. Direct and indirect damages, consisting mainly of damage to personal and industrial property, and to transportation and communication facilities, have been estimated at 10 million dollars or more.

This report presents records of stage and discharge at 85 gaging stations for the period of the flood, records of change in contents at 12 reservoirs, a summary of peak discharges with comparative data for floods at 125 measurement points, and a brief discussion of the general features of the flood and the associated storm. Figure 1 shows the area covered by this report and the areas in which flooding was most severe. Plate 1 is a map showing lines of equal rainfall and the points at which flood-flow determinations were made. The reference numbers assigned to the measuring points in plate 1 refer to those in table 1.

GENERAL FEATURES OF THE STORM AND FLOOD

An unseasonably warm period of nearly 7 weeks' duration in New York and New England ended on December 18. A snowstorm on December 19 deposited snow ranging in depth from 1½ ft in southwestern Connecticut to an inch or less in New Hampshire and Vermont. In general, mean daily temperatures of less than 32° prevailed from the time of the snowstorm through December 28. Although maximum daily temperatures in excess of 32° were recorded, it is probable that much of the snow, especially at the higher elevations, remained on the ground until December 28

Rain, accompanied by rising temperatures, began to fall on December 29 as a result of a low-pressure area moving toward the middle Atlantic coast from the west. The low-pressure area deepened and intensified as it moved northward from the middle Atlantic coast into New England. Its northward progress was blocked by an area of high pressure over the North Atlantic Ocean, and the intensity of the rainfall increased. The warm, moist air and the cold air were brought together over a relatively small area in eastern New York and western New England. In less than 3 days, rainfall in amounts ranging from 5 to 12 in. had fallen over an area of about 4,500 sq mi.

In the early morning of December 31 the rain began to abate and changed to snow, and when the storm ended on the morning of January 1, several inches of snow lay on the ground. Some of this snow melted during the following few days.

Snow melt was a minor contributing factor early in the flood, but, in general, the snow cover was light and had little effect on the magnitude of the flood discharges. Frost penetration prior to the flood probably was not deep, and its effect on runoff was confined to the beginning of the flood period.

Most of the streams began to rise on December 30 and reached their peaks on December 31 or January 1. By January 5, when the flood had largely receded, the streams began to rise again as a result of additional rainfall and reached secondary peaks on January 6 or 7.

Record-breaking peaks occurred at some gaging stations in the Housatonic and Hudson River basins. The flood in the Connecticut River basin was the most severe in the tributary Farmington River basin, where record or near-record discharges were reached. New maxima were recorded at all gaging stations on Hudson River above the mouth of Sacandaga River. Release of water from Sacandaga Reservoir was discontinued on the morning of December 31 and all inflow to the reservoir during the flood period, which reached a maximum of 74,000 sec-ft, was retained in the reservoir. Because of the control of Sacandaga River and the lower-than-record flood on Mohawk River, the peak stage at Albany did not reach the levels of previous floods. According to the U. S. Weather Bureau, the peak stage at Albany was 17.9 ft, which was slightly lower than in 1936 and 3.6 ft lower than in 1913.

One of the features of the flood was its sharp areal demarcation, especially along the east edge of the flood area. Western tributaries of Connecticut River, such as Burlington Brook, Pequabuck River, and Salmon Brook, reached major flood levels, whereas a few miles to the east, just across the Connecticut River valley, no floods of significance occurred. At the gaging

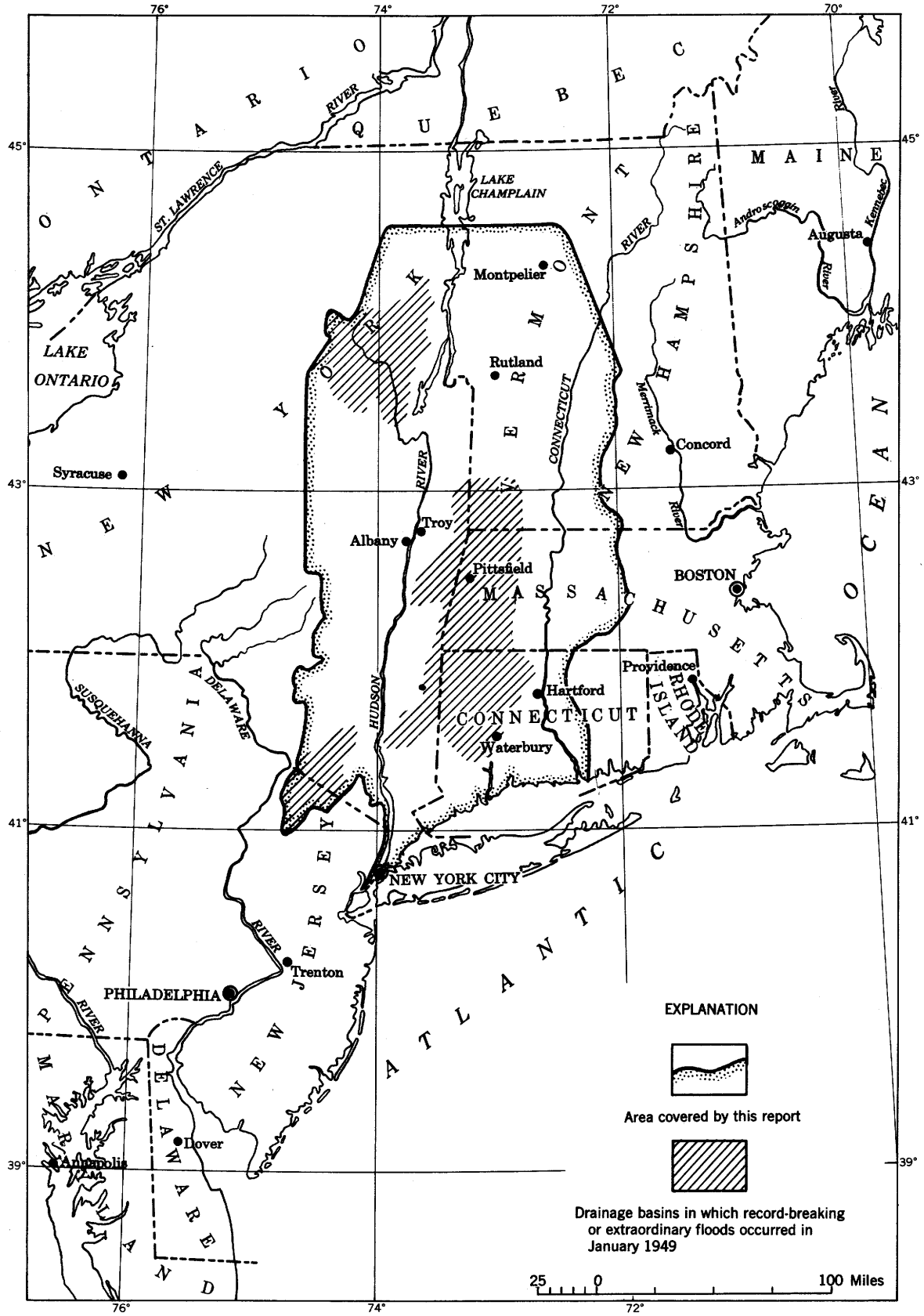

Figure 1.--Map showing location of area covered by this report.

station on Connecticut River near Middletown, Conn. a peak stage of 16.70 ft was recorded on January 2, which was 11.5 ft lower than the record flood of March 1936, and 9.35 ft lower than the hurricane flood of September 1938.

Direct and indirect damages were about $10,000,000, according to the Corps of Engineers. In eastern New York, the heaviest monetary damage was recorded in the Hoosic River basin, where total damage was estimated to exceed $2,000,000. Total damage in eastern New York was estimated to exceed $4,000,000. In New England, total damage was estimated at $1,600,000 in the Connecticut River basin and $4,200,000 in the Housatonic River basin.

The State of Massachusetts was reported to have spent $2,000,000 in the flood area to clean up the river channels.

STAGES AND DISCHARGES AT STREAM-GAGING STATIONS

The foremost purpose of this report is the publication of detailed information concerning stages and discharges of streams in New York and New England during the New Year flood of 1949 that is not published in the Water-Supply Papers of the Geological Survey as part of the annual series on surface-water supply in the United States. The data presented in the following tables include, in general, for each stream-gaging station: a description of the station; the daily discharge throughout the 18-day period December 28,1948 to January 14, 1949; and the stage and discharge at the indicated time during the main flood period in sufficient detail to permit the delineation of graphs of the instantaneous stage and discharge.

The description of the station gives the type, site, and datum of the gage, the area of the drainage basin, information concerning the gage-height and discharge records, information on maxima, and remarks. The statement regarding the stage-discharge relation explains briefly the methods used in the definition of the rating curve through the range in stage that occurred during the New Year flood of 1949, as well as that of the previous maximum flood of record, and gives information on conditions that affected the stage-discharge relation. The maximum stage and discharge at the gaging station are given for the New Year flood of 1949, for the indicated period of record prior thereto, and, at some stations, for floods antedating such period of record.

Figures 2, 3, and 4, are graphs of discharge at stream-gaging stations on Connecticut, Housatonic, and Hudson Rivers respectively. In each figure, a diagram shows the downstream order of the stations and of the principal intervening tributaries. Figures 5, 6, and 7 are graphs of discharge at stream-gaging stations on the tributaries indicated by the diagrams in figures 2, 3, and 4. Detailed records for all the stations shown in figures 2-7 are presented in the tables of stage and discharge.

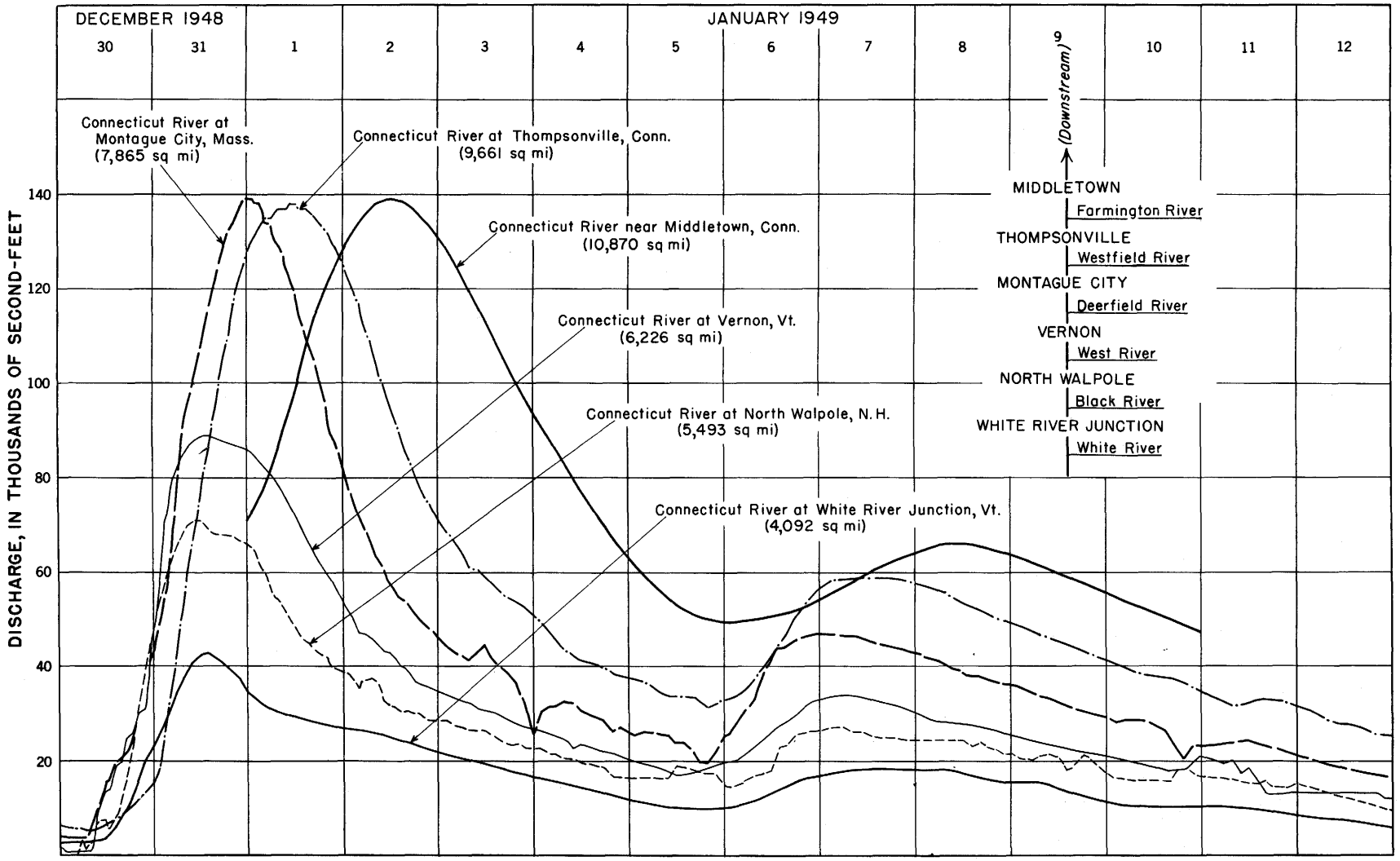

Figure 2.--Graphs of discharge at various stream-gaging stations on Connecticut River.

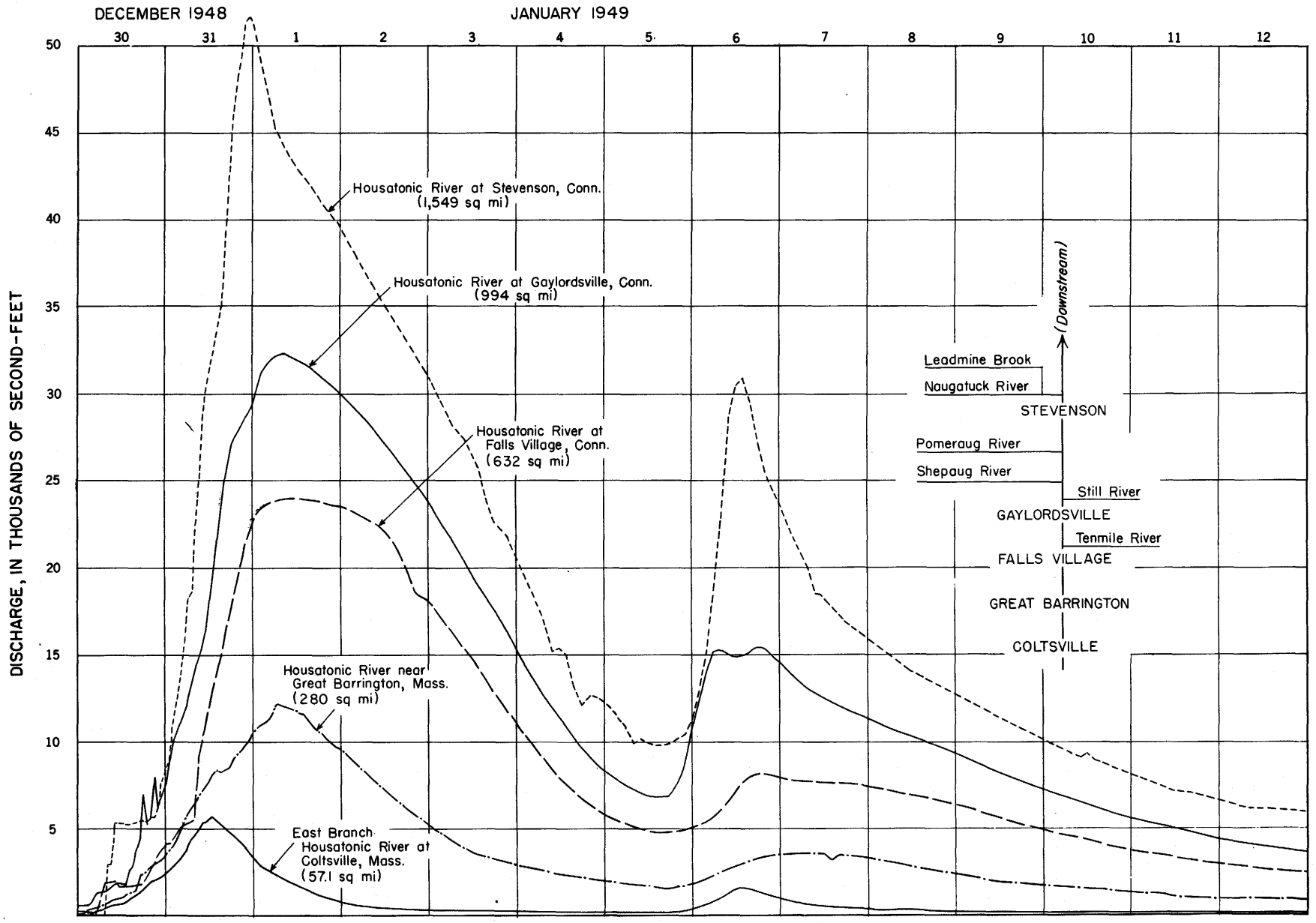

Figure 3.--Graphs of discharge at various stream-gaging stations on Housatonic River.

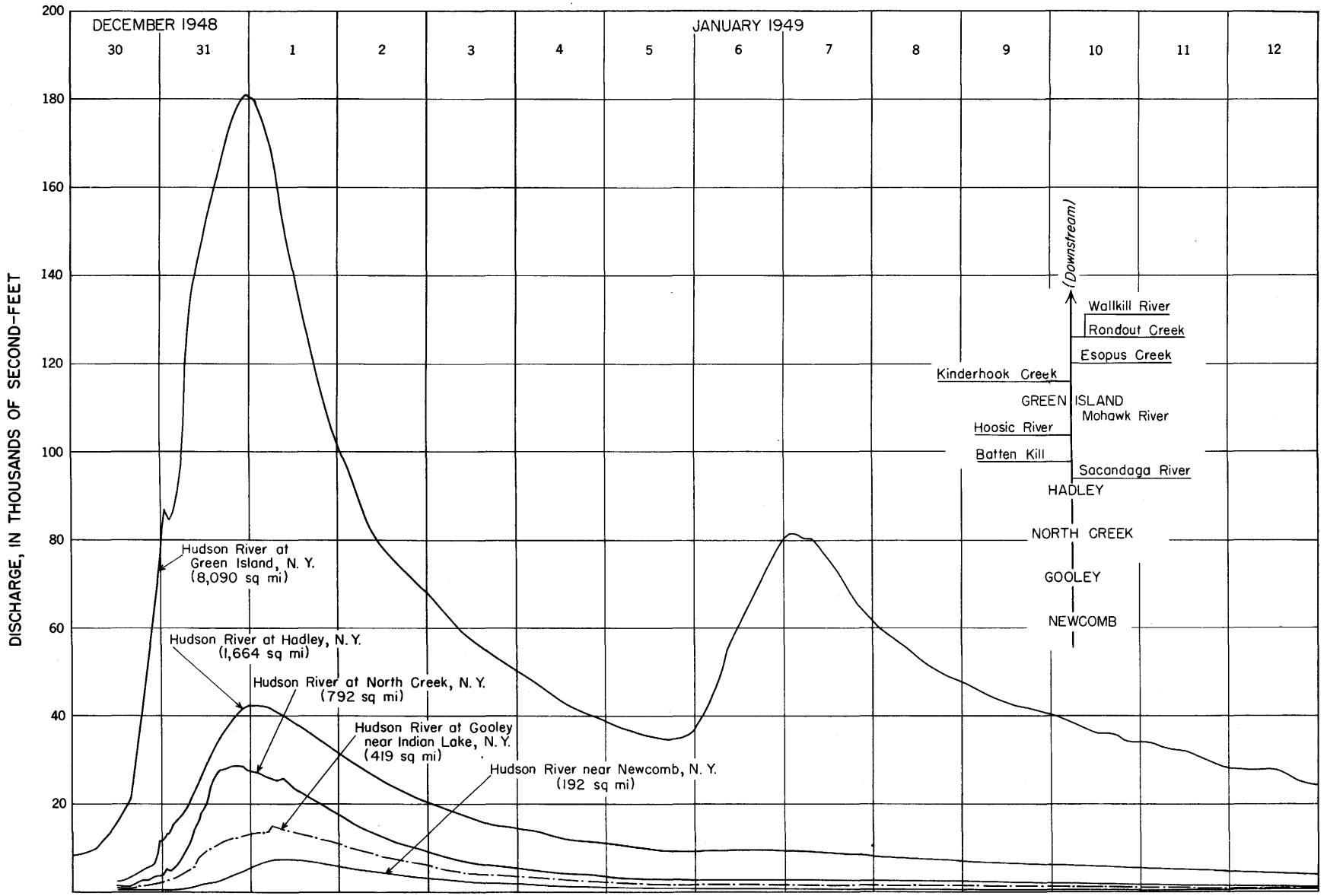

Figure 4.--Graphs of discharge at various stream-gaging stations on Hudson River.

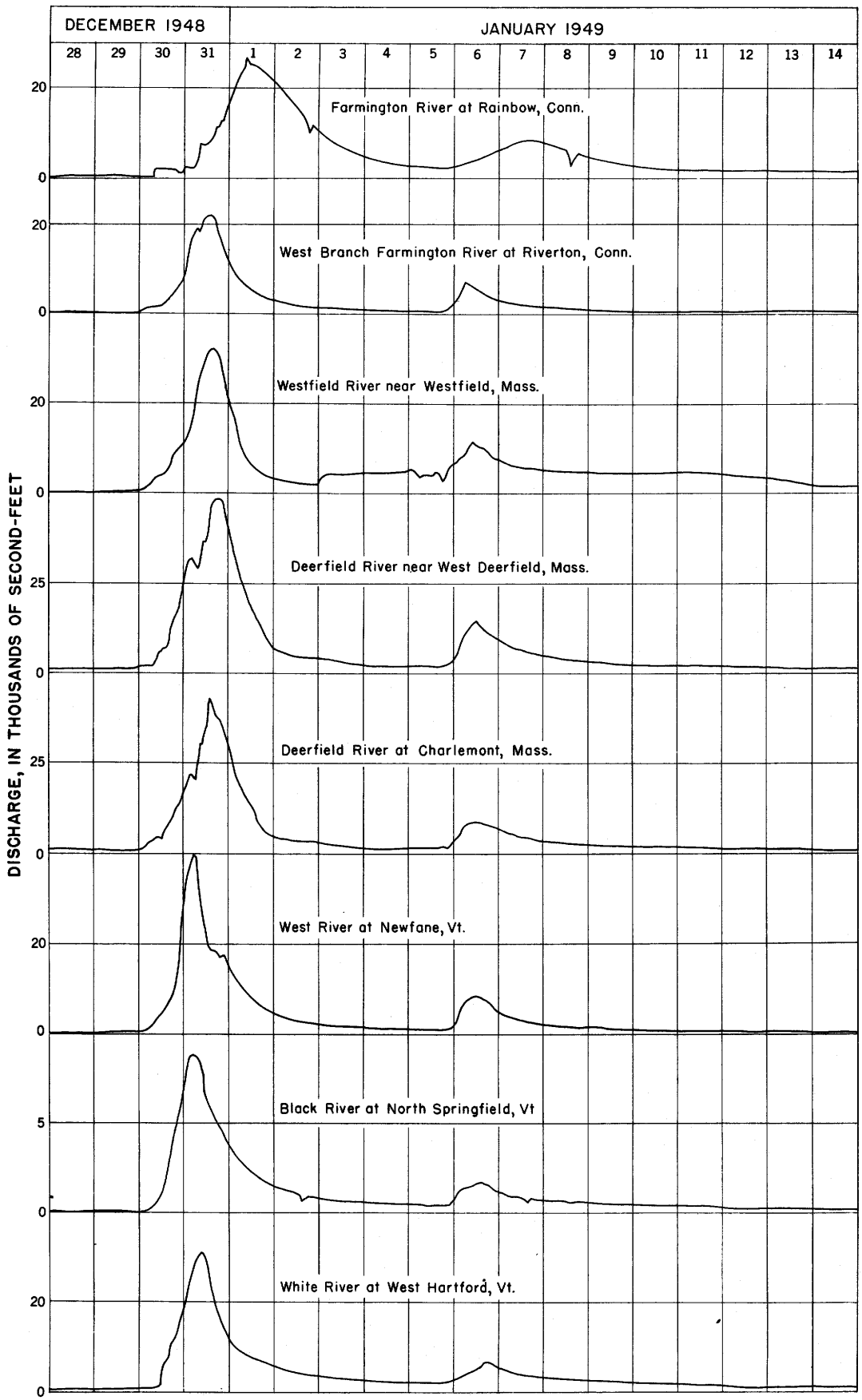

Figure 5.--Graphs of discharge at various stream-gaging stations on tributaries of Connecticut River.

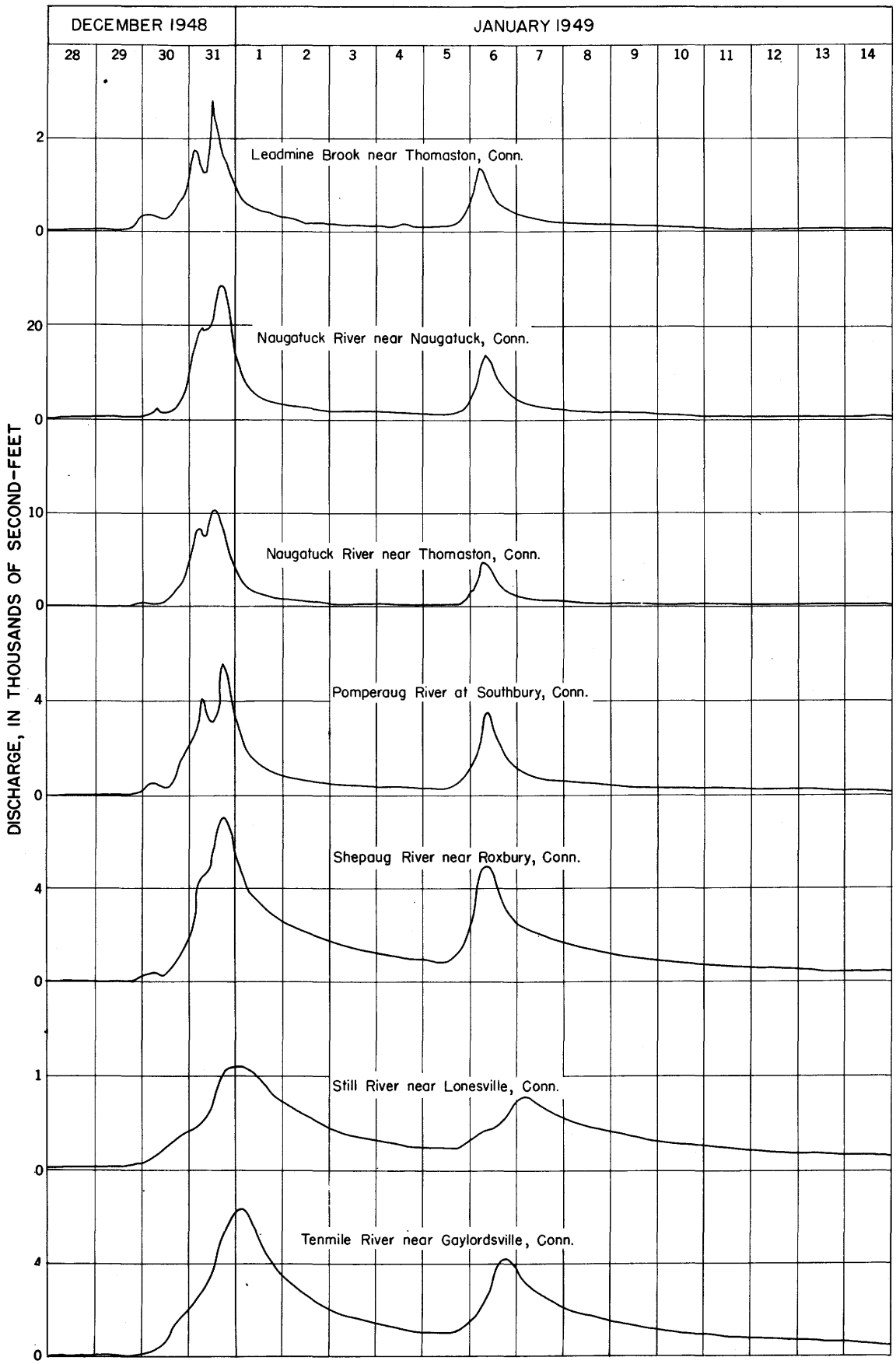

Figure 6.--Graphs of discharge at various stream-gaging stations on tributaries of Housatonic River.

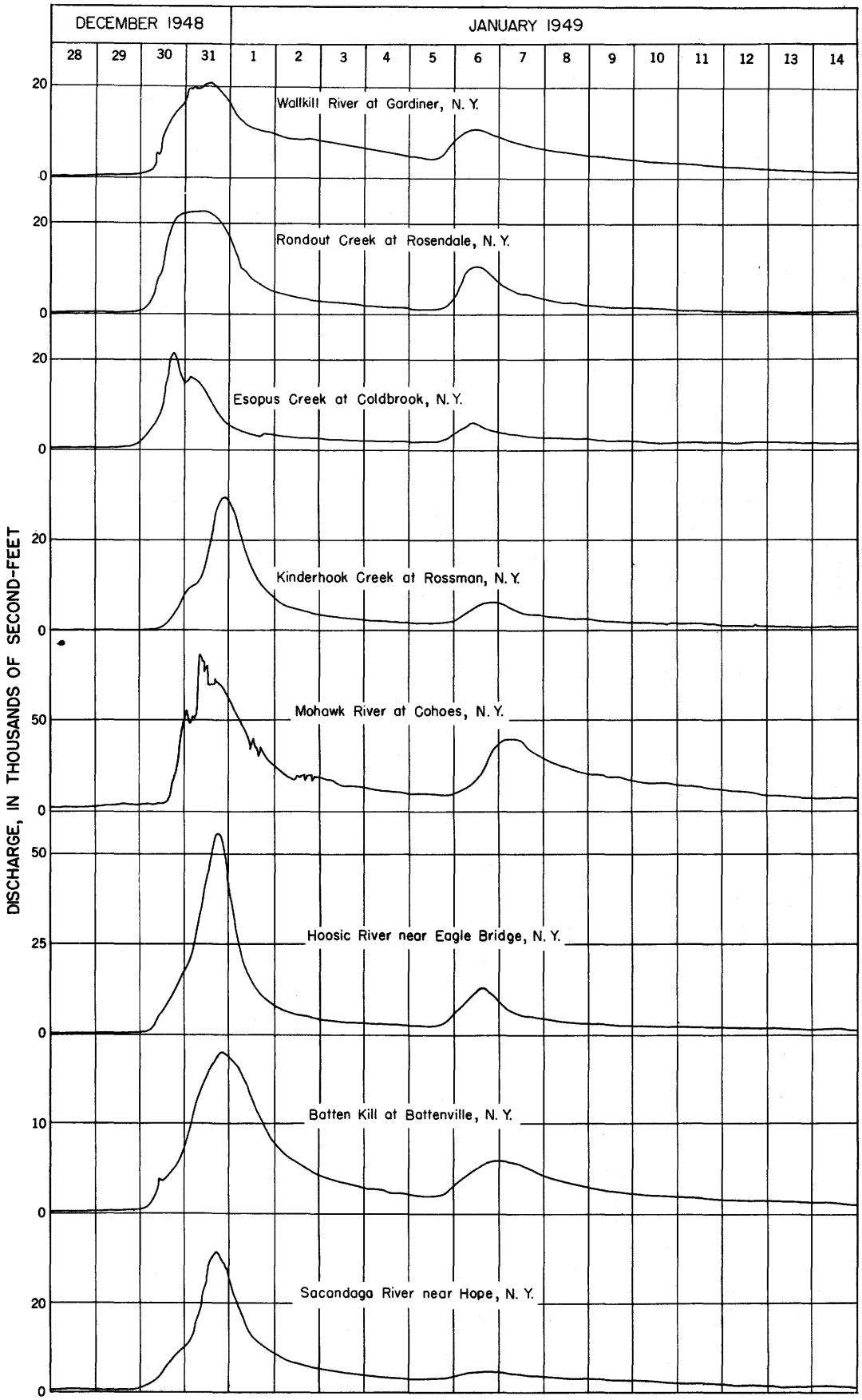

Figure 7.--Graphs of discharge at various stream-gaging stations on tributaries of Hudson River.

Connecticut River at White River Junction, Vt.

Location.- Lat. 43°38'50", long. 72°18'45", at downstream side of railroad bridge at White River Junction, Windsor County, just downstream from White River. Datum of gage is 321.52 feet above mean sea level, datum of 1929.
Drainage area.- 4,092 square miles.
Gage-height record.- Graph based on two or more wire-weight gage readings daily except for Jan. 12 for which day gage readings were interpolated.
Discharge record.- Stage-discharge relation defined by current-meter measurements; affected by ice Dec. 28 to 10 a.m. Dec. 31.
Maxima.- December 1948-January 1949: Discharge, 43,000 second-feet 2 p.m. Dec. 31 (gage height, 18.12 feet).
1911 to November 1948: Discharge, 136,000 second-feet Nov. 4, 1927 (gage height, 35.0 feet, present site), from rating curve extended above 70,000 second-feet by logarithmic plotting.
Remarks.- Flood flow affected by First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, and other reservoirs. These reservoirs have a combined usable capacity of about 10 billion cubic feet. Medium and low flow regulated by power plants above station

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	2,300	Jan. 3	19,400	Jan. 9	14,000
29	2,900	4	14,300	10	10,600
30	7,680	5	10,300	11	9,820
31	36,900	6	13,400	12	7,490
Jan. 1	29,700	7	18,100	13	5,430
2	24,900	8	17,300	14	4,970

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1												
2												
3												
4							15.40	30,000	15.36	31,900		
5												
6					6.43	2,600	16.28	34,000			13.85	26,300
7												
8							17.96	38,000	14.91	30,200		
9												
10							17.83	41,000				
11												
N					7.11	3,400	17.98	42,400	14.63	29,100	13.52	25,100
1												
2							18.12	43,000				
3					12.60	7,500						
4												
5												
6					9.40	11,000			14.34	28,000	13.05	23,500
7												
8					11.90	16,000	17.18	39,100				
9												
10					12.80	20,000	16.90	37,900				
11												
12					13.55	23,000	16.16	34,900	14.07	27,100	12.62	22,000
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4							8.97	10,600			11.56	18,600
6	12.24	20,800	10.66	15,700	9.02	10,800			11.31	17,800		
8							9.32	11,700			11.51	18,400
10												
N	11.85	19,500	10.17	14,200	8.77	10,000	9.80	13,100	11.45	18,200	11.23	17,500
2												
4							10.39	14,900			10.85	16,300
6	11.33	17,900	9.72	12,900	8.61	9,550			11.53	18,500		
8							10.83	16,300			10.75	16,000
10												
12	10.97	16,700	9.36	11,800	8.78	10,000	11.07	17,000	11.56	18,600	10.66	15,700
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	10.62	15,600										
6			9.01	10,700	8.93	10,500	8.08	8,080	7.16	5,860	6.78	5,070
8	10.51	15,200										
10												
N	10.20	14,300	8.92	10,500	8.73	9,900	7.85	7,480	6.92	5,350	6.77	5,050
2												
4												
6	9.68	12,700	8.89	10,400	8.55	9,380	7.60	6,870	6.69	4,890	6.70	4,910
8												
10												
12	9.31	11,600	8.88	10,300	8.32	8,730	7.36	6,310	6.70	4,910	6.65	4,810

Connecticut River at North Walpole, N. H.

Location.- Lat. 43°07'35", long. 72°26'15", at North Walpole, Cheshire County, 100 feet upstream from Saxtons River and 0.7 mile downstream from Vilas Bridge between Bellows Falls, Vt., and North Walpole, N. H. Datum of gage is 218.63 feet above mean sea level, datum of 1929.
Drainage area.- 5,493 square miles, including Saxtons River Basin.
Gage-height record.- Water-stage recorder graph except for period 12 p.m. Dec. 30 to 7 p.m. Dec. 31 for which graph was based on inclined staff-gage readings, records for Saxtons River at Saxtons River, Vt., and power-plant records.
Discharge record.- Stage-discharge relation defined by current-meter measurements.
Maxima.- December 1948-January 1949: Discharge, 71,000 second-feet 10 a.m. to 12 m. Dec. 31 (gage height, 24.95 feet).
1942 to November 1948: Discharge, 93,000 second-feet Mar. 22, 1948 (gage height, 29.55 feet).
Remarks.- Flood flow affected by First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, four reservoirs in Mascoma River Basin, Sunapee Lake, and other reservoirs. These reservoirs have a combined usable capacity of about 12½ billion cubic feet. Medium and low flow regulated by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	3,260	Jan. 3	25,700	Jan. 9	19,900
29	3,260	4	19,700	10	16,700
30	12,100	5	17,100	11	15,700
31	65,500	6	20,400	12	12,300
Jan. 1	49,900	7	25,800	13	7,230
2	33,100	8	23,700	14	4,040

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					5.24	1,160			23.64	65,100	17.60	38,600
2					5.03	913	21.18	54,000	23.47	64,300	17.46	38,000
3					4.35	366			22.82	61,400	17.21	37,000
4					4.16	265	22.50	60,000	22.53	60,100	16.74	35,200
5					4.13	251			22.31	59,100	17.21	37,000
6					6.68	3,530	23.62	65,000	21.62	56,000	17.26	37,200
7					5.29	1,230			21.25	54,300	17.40	37,800
8					5.98	2,240	24.50	69,000	21.20	54,100	17.29	37,400
9					6.70	3,570			20.87	52,600	17.09	36,600
10					8.07	6,690	24.95	71,000	20.58	51,300	16.18	32,900
11					8.48	7,630			20.17	49,500	15.99	32,200
N					8.58	7,860	24.95	71,000	19.92	48,300	15.82	31,500
1					7.55	5,500			19.52	46,500	15.80	31,400
2					8.32	7,270	24.50	69,000	19.36	45,800	15.65	30,800
3					8.60	7,910			19.24	45,300	15.51	30,300
4					9.50	10,200	24.30	68,000	19.11	44,700	15.64	30,800
5					10.93	14,500			18.73	43,100	15.49	30,200
6					12.33	19,200	24.30	68,000	18.61	42,600	15.47	30,100
7					13.66	23,800			18.51	42,200	15.45	30,100
8					14.91	28,200	24.27	67,900	18.40	41,800	15.16	29,100
9					16.30	33,400	24.17	67,500	17.91	39,800	15.09	28,800
10					17.56	38,400	24.07	67,000	17.79	39,400	15.10	28,800
11					18.71	43,000	23.93	66,400	17.72	39,100	15.08	28,800
12					19.60	46,900	23.79	65,800	17.66	38,800	15.07	28,700
	January 3		January 4		January 5		January 6		January 7		January 8	
2	15.08	28,800	13.30	22,600	11.53	16,500	10.96	14,600	14.61	27,100	13.93	24,800
4	14.81	27,800	13.00	21,500	11.51	16,400	11.17	15,300	14.66	27,300	13.92	24,700
6	14.59	27,100	12.97	21,400	11.49	16,400	11.42	16,100	14.61	27,100	13.91	24,700
8	14.49	26,700	12.70	20,400	11.45	16,200	11.70	17,000	14.35	26,200	13.88	24,600
10	14.39	26,400	12.68	20,400	11.42	16,100	11.87	17,600	14.31	26,100	13.87	24,500
N	14.34	26,200	12.54	19,900	12.30	19,000	12.01	18,100	14.22	25,800	13.86	24,500
2	14.09	25,300	12.39	19,400	12.22	18,800	13.43	23,000	14.00	25,000	13.46	23,100
4	13.80	24,300	12.31	19,100	12.04	18,200	13.65	23,800	14.01	25,000	13.72	24,000
6	13.64	23,700	12.20	18,700	11.93	17,800	14.18	25,600	13.96	24,900	13.42	23,000
8	13.62	23,700	11.56	16,600	11.84	17,500	14.25	25,900	13.96	24,900	13.31	22,600
10	13.36	22,800	11.54	16,500	11.76	17,200	14.47	26,600	13.95	24,800	13.03	21,600
12	13.32	22,600	11.54	16,500	10.97	14,600	14.46	26,600	13.93	24,800	13.02	21,600
	January 9		January 10		January 11		January 12		January 13		January 14	
2	12.73	20,600	11.52	16,500	11.58	16,700						
4	12.64	20,200	11.49	16,400	11.52	16,500						
6	12.64	20,200	11.46	16,300	11.46	16,300						
8	12.91	21,200	11.40	16,100	11.39	16,000						
10	12.91	21,200	11.43	16,200	11.34	15,900						
N	12.73	20,600	11.40	16,100	11.26	15,600						
2	12.02	18,100	11.36	15,900	11.23	15,500						
4	12.30	19,000	11.31	15,800	11.38	16,000						
6	12.91	21,200	12.13	18,500	11.03	14,800						
8	12.59	20,100	12.13	18,500	10.96	14,600						
10	12.22	18,800	11.74	17,200	10.94	14,500						
12	11.70	17,000	11.64	16,800	11.15	15,200						

Supplemental records.- Dec. 30, 7:30 a.m., 5:15 ft., 1,050 sec.-ft., 8:30 a.m., 5.70 ft., 1,800 sec.-ft.; Jan. 8, 1:30 p.m., 13.17 ft., 22,100 sec.-ft.; Jan. 9, 11 a.m., 12.10 ft., 18,400 sec.-ft.

Connecticut River at Vernon, Vt.

Location.- Lat. 42°46'10", long. 72°30'50", just downstream from Vernon Dam, at Vernon, Windham County, and 2 miles upstream from Ashuelot River. Datum of gage is at mean sea level, datum of 1929. Prior to Jan. 20, 1948, at datum 94.13 feet higher.
Drainage area.- 6,266 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 69,000 second-feet and extended above.
Maxima.- December 1948-January 1949: Discharge, 88,600 second-feet 1 to 2 p.m. Dec. 31 (gage height, 205.40 feet).
1944 to November 1948: Discharge, 101,000 second-feet Mar. 23, 1948 (gage height, 208.53 feet), from rating curve extended above 69,000 second-feet.
Maximum discharge known, 176,000 second-feet Mar. 19, 20, 1936 (gage height, 128.8 feet, datum then in use), from rating curve extended above 69,000 second-feet.
Remarks.- Flood flow affected by First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, four reservoirs in Mascoma River Basin, Sunapee Lake, and other reservoirs. These reservoirs have a combined usable capacity of about 12¼ billion cubic feet. Medium and low flow regulated by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	4,240	Jan. 3	30,600	Jan. 9	23,400
29	4,750	4	23,500	10	19,500
30	14,200	5	18,600	11	17,200
31	81,700	6	26,000	12	13,200
Jan. 1	70,900	7	32,800	13	6,770
2	42,300	8	28,000	14	6,520

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					179.74	1,220	196.00	51,000				
2					179.30	850	197.90	58,600	204.31	84,200	195.90	50,600
3					179.31	858	200.81	70,200				
4					179.46	978	201.70	73,800	203.90	82,600	195.00	47,000
5					179.39	922	202.85	78,400				
6					179.32	866	203.66	81,600	203.36	80,400	194.98	46,900
7					179.48	994	204.20	83,800				
8					179.52	1,030	204.59	85,400	202.70	77,800	194.59	45,400
9					180.62	2,130	204.90	86,600				
10					184.30	9,420	205.14	87,600	201.88	74,500	194.17	43,700
11					185.30	12,200	205.26	88,000				
N					185.85	13,800	205.35	88,400	201.19	71,800	194.00	43,000
1					185.90	14,000	205.40	88,600				
2					187.00	17,600	205.40	88,600	200.29	68,200	193.41	40,600
3					187.58	19,600	205.34	88,400				
4					187.68	19,900	205.28	88,100	199.51	65,000	193.02	39,100
5					188.73	23,600	205.17	87,700				
6					189.22	25,300	205.10	87,400	198.66	61,600	192.41	36,600
7					189.35	25,800	205.02	87,100				
8					190.30	29,100	204.98	86,900	198.02	59,100	192.28	36,100
9					190.60	30,200	204.94	86,800				
10					190.74	30,600	204.88	86,500	197.46	56,800	192.04	35,200
11					192.42	36,700	204.80	86,200				
12			180.92	2,500	194.78	46,100	204.64	85,600	196.50	53,000	191.91	34,600
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4	191.60	33,400	189.58	25,800	187.67	19,100	188.01	20,300				
6	191.42	32,700							191.71	33,800	190.43	28,800
8	191.30	32,200	189.23	24,600	187.44	18,300	188.86	23,300				
10	191.00	31,000	188.73	22,900								
N	190.97	30,900	188.97	23,700	187.10	17,200	189.79	26,600	191.62	33,500	190.20	28,000
2												
4	190.56	29,300			187.31	17,900	190.33	28,500				
6			188.50	22,000					191.29	32,200	189.94	27,100
8	190.13	27,800			187.59	18,900	191.06	31,200				
10	189.94	27,100										
12	189.83	26,700	188.00	20,300	187.81	19,600	191.52	33,100	190.81	30,200	189.60	25,900
	January 9		January 10		January 11		January 12		January 13		January 14	
2					188.18	20,900						
4			188.16	20,900	188.01	20,300						
6	189.18	24,400			187.89	19,900	186.02	13,400				
8			187.82	19,700	188.11	20,700						
10					187.28	17,800						
N	188.85	23,300	187.55	18,700	187.59	18,900	186.02	13,400				
2					187.12	17,200						
4			187.38	18,100	186.15	13,800						
6	188.50	22,000			185.98	13,200	186.03	13,400				
8			187.44	18,300	185.97	13,200	186.03	13,400				
10					185.99	13,300	185.72	12,500				
12	188.41	21,700	188.30	21,400	185.98	13,200	185.64	12,200				

Connecticut River at Montague City, Mass.

Location.- Lat. 42°34'48", long. 72°34'30", in Montague City, Franklin County, 1,000 feet downstream from Deerfield River. Datum of gage is 99.87 feet above mean sea level, datum of 1929.
Drainage area.- 7,865 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements.
Maxima.- December 1948-January 1949: Discharge, 139,000 second-feet 11 p.m. Dec. 31 to 1 a.m. Jan. 1; maximum gage height, 37.76 feet 12 p.m. Dec. 31.
1904 to November 1948: Discharge, 236,000 second-feet Mar. 19, 1936 (gage height, 49.2 feet, from floodmarks), from rating curve extended above 160,000 second-feet.
Remarks.- Flood flow affected by First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, four reservoirs in Mascoma River Basin, Sunapee Lake, Surry Mountain, Birch Hill, and Tully Reservoirs, two reservoirs in Deerfield River Basin (see pp. 24, 27), and other reservoirs. These reservoirs have a combined capacity of about 25½ billion cubic feet. Medium and low flows regulated by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	5,900	Jan. 3	40,300	Jan. 9	32,600
29	6,880	4	29,600	10	26,400
30	15,900	5	23,800	11	24,300
31	101,000	6	38,600	12	18,900
Jan. 1	116,000	7	45,600	13	14,500
2	60,200	8	39,100	14	12,200

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					7.32	4,080	21.10	46,200	37.68	139,000	28.54	80,000
2					7.17	3,860	22.09	50,300	37.55	138,000	27.90	76,500
3					7.04	3,670	22.85	53,500	37.48	138,000	27.50	74,500
4					6.96	3,550	24.30	59,600	37.30	136,000	27.10	72,500
5					6.90	3,470	26.30	68,700	37.04	134,000	26.64	70,300
6					6.85	3,400	27.90	76,500	36.90	133,000	26.20	68,200
7					6.82	3,360	29.50	85,200	36.55	130,000	25.80	66,400
8					7.81	4,850	30.50	91,000	36.25	129,000	25.10	63,200
9					9.10	7,210	31.20	95,200	35.86	126,000	25.00	62,800
10					10.30	9,910	31.80	98,800	35.60	124,000	24.88	61,900
11					11.50	13,000	32.50	103,000	35.20	121,000	24.30	59,600
N					12.30	15,300	33.05	106,000	34.90	119,000	23.75	57,200
1					12.52	15,900	33.60	110,000	34.52	116,000	23.50	56,200
2					13.30	18,200	34.30	115,000	33.80	112,000	23.15	54,700
3					13.87	19,800	34.90	119,000	33.46	109,000	23.00	54,100
4					14.10	20,500	35.40	123,000	33.10	107,000	22.95	53,900
5					14.40	21,400	35.80	126,000	32.65	104,000	22.70	52,800
6					14.88	22,900	36.30	129,000	32.15	101,000	22.45	51,800
7					15.31	24,300	36.70	132,000	31.70	98,200	22.22	50,800
8					16.50	28,400	36.95	133,000	31.00	94,000	22.00	49,900
9					17.80	33,100	37.20	135,000	30.21	89,300	21.78	49,000
10					19.05	37,900	37.40	137,000	29.95	87,700	21.56	48,100
11					19.90	41,300	37.67	139,000	29.45	85,000	21.31	47,100
12					20.20	42,500	37.76	139,000	29.00	82,500	21.10	46,200
	January 3		January 4		January 5		January 6		January 7		January 8	
2	20.75	44,800	17.09	30,400	15.67	25,500	16.08	26,900	21.29	47,000	20.17	42,400
4	20.47	43,600	17.31	31,200	15.84	26,100	16.70	29,000	21.28	46,900	20.00	41,700
6	20.21	42,600	17.32	31,300	15.81	26,000	17.26	31,100	21.24	46,800	19.85	41,100
8	19.97	41,600	17.70	32,700	15.74	25,700	18.00	33,800	21.18	46,500	19.51	39,700
10	20.30	42,900	17.66	32,500	15.60	25,300	19.20	38,500	21.19	46,600	19.43	39,400
N	20.60	44,200	17.15	30,700	15.20	24,000	19.84	41,100	21.00	45,800	19.34	39,100
2	19.90	41,300	16.82	29,500	15.15	23,800	20.60	44,200	20.86	45,200	19.02	37,800
4	19.55	39,900	16.76	29,300	14.85	22,800	20.71	44,600	20.76	44,800	19.05	37,900
6	19.18	38,400	16.58	28,600	13.85	19,800	20.93	45,500	20.65	44,400	18.88	37,200
8	18.70	36,500	15.90	26,300	13.70	19,300	21.07	46,100	20.55	44,000	18.79	36,900
10	17.65	32,500	16.14	27,100	14.45	21,600	21.10	46,200	20.42	43,400	18.70	36,500
12	15.46	24,800	15.88	26,200	15.59	25,200	21.28	46,900	20.30	42,900	18.63	36,300
	January 9		January 10		January 11		January 12		January 13		January 14	
2	18.54	35,900	16.50	28,400								
4	18.23	34,700	16.50	28,400								
6	18.14	34,300	16.69	29,000								
8	18.01	33,800	16.65	28,900								
10	17.90	33,400	16.64	28,800								
N	17.64	32,500	16.39	28,000								
2	17.48	31,900	16.13	27,100								
4	17.34	31,400	15.70	25,600								
6	17.10	30,500	14.63	22,200								
8	17.02	30,200	14.09	20,500								
10	16.94	29,900	15.00	23,300								
12	16.83	29,500	15.07	23,500								

Supplemental records.- Dec. 30, 11:30 p.m., 20.00 ft., 41,700 sec.-ft.; Jan. 2, 8:30 a.m., 24.85 ft., 62,100 sec.-ft., 3:30 p.m., 23.00 ft., 54,100 sec.-ft.; Jan. 3, 9:30 a.m., 19.84 ft., 41,100 sec.-ft., 11 a.m., 20.74 ft., 44,700 sec.-ft.; Jan. 7, 12:30 a.m., 21.29 ft., 47,000 sec.-ft.

Connecticut River at Thompsonville, Conn.

Location.- Lat. 41°59'14", long. 72°36'21", just upstream from Enfield Dam and 1 mile downstream from Thompsonville, Hartford County. Datum of gage is 38.48 feet above mean sea level, datum of 1929.
Drainage area.- 9,661 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements.
Maxima.- December 1948-January 1949: Discharge, 138,000 second-feet 11 a.m. to 12 m. Jan. 1; maximum gage height, 9.30 feet 11 a.m. Jan. 1.
1928 to November 1948: Discharge, 282,000 second-feet Mar. 20, 1936 (gage height, 16.6 feet, from floodmarks).
Remarks.- Flood flow affected by First and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, four reservoirs in Mascoma River Basin, Sunapee Lake, Surry Mountain, Birch Hill, and Tully Reservoirs, two reservoirs in Deerfield River Basin (see pp. 24,27), and other reservoirs. These reservoirs have a combined usable capacity of about 86⅔ billion cubic feet. Slightly affected by diversion from Chicopee River Basin. Figures of discharge include water diverted around station by canal of Connecticut Light and Power Co.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	4,890	Jan. 3	59,300	Jan. 9	45,600
29	5,580	4	42,500	10	38,300
30	8,110	5	34,300	11	32,800
31	74,100	6	43,000	12	28,200
Jan. 1	134,000	7	58,300	13	23,400
2	96,100	8	53,800	14	16,400

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							2.36	17,000	8.87	130,000	8.50	123,000
2					1.25	6,170	2.63	20,900	8.97	131,000	8.38	121,000
3							3.03	26,600	9.05	133,000	8.25	119,000
4	0.96	4,180	1.01	4,480	1.20	5,790	3.30	30,800	9.10	134,000	8.12	116,000
5							3.60	35,700	9.17	135,000	7.97	113,000
6					1.15	5,490	3.95	41,500	9.18	135,000	7.83	111,000
7							4.37	49,600	9.19	136,000	7.67	108,000
8	.90	3,890	.93	4,070	1.10	5,140	4.65	55,200	9.23	137,000	7.52	105,000
9							4.97	61,100	9.26	137,000	7.37	102,000
10					1.16	5,550	5.29	66,700	9.27	137,000	7.22	100,000
11							5.56	71,500	9.30	138,000	7.08	97,400
N	1.04	4,750	1.12	5,270	1.28	6,500	5.85	76,500	9.29	138,000	6.93	94,800
1							6.15	81,600	9.28	137,000	6.80	92,600
2					1.37	7,220	6.43	86,300	9.27	137,000	6.65	90,000
3							6.71	91,100	9.24	137,000	6.50	87,500
4	1.16	5,470	1.28	6,400	1.54	8,680	7.00	96,000	9.20	136,000	6.39	85,600
5							7.29	101,000	9.16	135,000	6.25	83,200
6					1.70	10,300	7.56	106,000	9.11	134,000	6.13	81,200
7							7.78	109,000	9.06	133,000	6.01	79,200
8	1.23	6,020	1.37	7,180	1.87	12,000	8.03	115,000	8.99	132,000	5.90	77,300
9							8.25	119,000	8.92	130,000	5.80	75,600
10					1.99	13,300	8.44	122,000	8.82	129,000	5.71	74,100
11							8.60	125,000	8.72	127,000	5.62	72,600
12	1.16	5,480	1.31	6,670	2.20	15,700	8.73	128,000	8.62	125,000	5.52	70,900
	January 3		January 4		January 5		January 6		January 7		January 8	
2	5.37	68,200					3.46	33,400				
4	5.26	66,200	4.27	47,500	3.66	36,700	3.50	34,000	4.80	58,200	4.72	56,700
6	5.14	64,400					3.58	35,500				
8	4.95	60,800	4.03	43,200	3.53	34,600	3.67	37,000	4.81	58,500	4.68	55,700
10	4.93	60,300					3.83	39,700				
N	4.85	58,800	3.93	41,300	3.46	33,500	3.96	42,100	4.83	58,900	4.58	53,800
2	4.76	57,000					4.10	44,700				
4	4.68	55,500	3.87	40,300	3.47	33,500	4.22	46,900	4.83	58,800	4.51	52,400
6	4.62	54,400					4.40	50,400				
8	4.56	53,200	3.75	38,200	3.39	32,200	4.52	52,800	4.82	58,600	4.42	50,600
10	4.51	52,300					4.62	54,800				
12	4.46	51,200	3.71	37,600	3.44	33,000	4.70	56,300	4.78	57,800	4.36	49,400
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	4.30	48,200	3.88	40,300	3.45	33,200	3.29	30,700	2.96	25,600	2.41	18,000
6												
8	4.23	46,900	3.77	38,700	3.36	31,900	3.15	28,700	2.90	24,800	2.35	17,400
10												
N	4.15	45,400	3.75	38,300	3.38	32,200	3.11	27,900	2.83	23,800	2.25	16,200
2												
4	4.11	44,600	3.73	37,900	3.45	33,200	3.07	27,200	2.77	22,900	2.17	15,200
6												
8	4.03	43,100	3.66	36,700	3.44	33,000	2.98	25,900	2.65	21,200	2.11	14,500
10												
12	3.94	41,400	3.55	34,800	3.36	31,900	2.95	25,400	2.51	19,300	2.20	15,500

Connecticut River near Middletown, Conn.

Location.- Lat. 41°33'40", long. 72°36'45", half a mile upstream from Bodkin Rock, 2 miles downstream from and east of Middletown, Middlesex County, and 30 miles upstream from mouth in Long Island Sound. Datum of gage is mean sea level, datum of 1929.
Drainage area.- 10,870 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements between 40,000 and 125,000 second-feet. Discharge not determined for stages below about 5 feet owing to excessive tidal action. Gage heights used to half-tenths.
Maxima.- December 1928-January 1949: Discharge, 139,000 second-feet 12 m. Jan. 2 (gage height, 16.70 feet).
1947 to November 1948: Discharge, 135,000 second-feet Mar. 24, 1948 (gage height, 16.3 feet, from graph based on twice-daily gage readings).
Flood of March 21, 1936, probably the greatest flood on the Connecticut River in its 300-year history, reached a stage of 28.2 feet at Bodkin Rock (discharge, approximately 267,000 second-feet, from rating curve extended above 125,000 second-feet on basis of stage and discharge determinations of 1927, 1936, and 1938 floods).
Remarks.- Flood discharge affected by storage in major reservoirs having an aggregate capacity of about 92 billion cubic feet.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	-	Jan. 3	113,000	Jan. 9	59,800
29	-	4	77,400	10	51,600
30	-	5	54,200	11	-
31	-	6	50,800	12	-
Jan. 1	99,300	7	59,400	13	-
2	136,000	8	65,100	14	-

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1												
2	0.41	-	1.20	-	2.00	-	3.96	-	9.09	74,200		
3												
4	-.09	-	.73	-	1.44	-	3.44	-	9.59	77,800	16.24	134,000
5												
6	-.17	-	.39	-	1.01	-	3.20	-	10.18	82,600		
7			.43	-	.98	-	3.21	-				
8	.95	-	.96	-	1.11	-	3.40	-	10.81	87,400	16.59	138,000
9												
10	1.66	-	2.06	-	2.40	-	4.90	-	11.52	93,000		
11	1.84	-										
N	1.65	-	2.65	-	3.16	-	6.31	-	12.27	99,000	16.70	139,000
1					3.24	-						
2	1.12	-	2.26	-	2.95	-	6.80	-	13.00	105,000		
3												
4	.60	-	1.67	-	2.32	-	6.92	-	13.67	111,000	16.61	138,000
5												
6	.08	-	1.05	-	1.65	-	7.17	-	14.24	116,000		
7	.01	-	.89	-		-		-				
8	.35	-	.94	-	1.32	-	7.57	-	14.76	121,000	16.30	135,000
9												
10	1.30	-	1.81	-	2.35	-	8.05	-	15.20	125,000		
11												
12	1.62	-	2.48	-	3.50	-	8.55	70,400	15.62	128,000	15.84	131,000
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4	15.24	125,000	10.91	88,200	7.00	59,200	5.55	49,400	6.49	56,000	7.76	65,100
6							5.68	-				
8	14.59	119,000	10.61	82,200	6.50	55,700	5.66	49,700	6.87	57,800	7.94	65,800
10												
N	13.89	113,000	9.42	77,000	5.91	53,000	5.48	50,300	7.05	59,500	7.88	65,800
2					5.79	-						
4	13.17	106,000	8.82	72,100	5.81	51,200	5.71	51,200	7.26	61,200	7.80	65,400
6												
8	12.40	100,000	8.12	66,800	5.48	50,000	5.94	52,400	7.51	62,600	7.74	64,800
10												
12	11.62	93,800	7.43	63,000	5.08	49,400	6.08	54,200	7.62	64,000	7.57	63,700
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	7.37	62,600	6.07	54,200	4.78	-	3.92	-	3.31	-	2.82	-
6					4.65	-	3.82	-	3.04	-		
8	7.34	61,600	6.03	53,000	4.77	-	4.05	-	3.05	-	2.30	-
10					4.90	-	4.51	-				
N	7.13	59,800	5.92	51,500	4.80	-	4.57	-	3.73	-	3.47	-
2												
4	6.81	58,400	5.46	50,300	4.27	-	3.94	-	3.17	-	2.64	-
6					4.08	-						
8	6.63	57,000	5.29	49,100	4.10	-	3.60	-	2.67	-	1.71	-
10					4.26	-					1.87	
12	6.42	55,400	5.18	47,600	4.27	-	3.93	-	3.39	-	2.44	-

Note.- Variable adjustments applied to gage heights from 12 m. Jan. 4 to 12 p.m. Jan. 10, owing to tidal effect.

White River near Bethel, Vt.

Location.- Lat. 43°48'45", long. 72°39'25", a third of a mile upstream from Locust Creek and 1 3/4 miles southwest of Bethel, Windsor County.
Drainage area.- 241 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 4,200 second-feet and extended to peak stage on basis of slope-area determination at gage height 11.46 feet; affected by ice Dec. 28 to 5 a.m. Dec. 30, Jan. 11-14.
Maxima.- December 1948-January 1949: Discharge, 19,900 second-feet 4:30 a.m. Dec. 31 (gage height, 9.53 feet).
1931 to November 1948: Discharge, 32,200 second-feet Sept. 21, 1938 (gage height, 11.46 feet), by slope-area method; maximum gage height, 13.20 feet Mar. 9, 1942 (ice jam).
Remarks.- Flood flow not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	120	Jan. 3	1,290	Jan. 9	966
29	130	4	981	10	826
30	4,710	5	899	11	690
31	11,800	6	2,570	12	470
Jan. 1	3,980	7	1,700	13	450
2	2,020	8	1,200	14	430

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.69	240	8.67	15,400				
2					2.95	360	9.10	17,500	5.72	5,180	4.36	2,560
3					3.18	530	9.30	18,600				
4	2.36	-	2.31	-	5.43	760	9.40	19,200	5.59	4,880	4.27	2,410
5					3.91	1,480	9.41	19,200				
6					4.09	2,140	9.32	18,700	5.46	4,600	4.19	2,280
7					4.39	2,600	9.13	17,700				
8	2.36	-	2.31	-	4.59	2,930	8.85	16,200	5.32	4,300	4.11	2,160
9					4.77	3,250	8.42	14,200				
10					4.88	3,440	8.10	12,900	5.22	4,100	4.04	2,060
11					4.95	3,580	7.75	11,500				
N	2.38		2.33		5.05	3,760	7.50	10,600	5.12	3,900	3.97	1,960
1					5.12	3,900	7.25	9,740				
2					5.27	4,200	7.04	9,030	5.03	3,730	3.91	1,870
3					5.48	4,640	6.86	8,440				
4	2.39	-	2.37	-	5.74	5,230	6.72	7,990	4.93	3,540	3.86	1,800
5					5.96	5,780	6.59	7,580				
6					6.17	6,350	6.46	7,190	4.81	3,320	3.80	1,720
7					6.41	7,040	6.34	6,830				
8	2.33	-	2.44	-	7.08	7,160	6.25	6,570	4.70	3,120	3.76	1,670
9					7.51	10,700	6.16	6,320				
10					8.00	12,500	6.07	6,070	4.58	2,920	3.71	1,600
11					8.22	13,400	5.97	5,800				
12	2.31	-	2.54	-	8.37	14,000	5.88	5,570	4.45	2,700	3.65	1,530
	January 3		January 4		January 5		January 6		January 7		January 8	
2							3.63	1,510				
4	3.57	1,430	3.21	1,050	3.00	850	3.87	1,820	4.07	2,100	3.45	1,300
6							4.00	2,000				
8	3.49	1,340	3.17	1,010	2.99	840	4.02	2,030	3.92	1,890	3.39	1,230
10							4.24	2,360				
N	3.43	1,270	3.12	964	2.98	831	4.87	3,430	3.81	1,730	3.34	1,180
2							5.05	3,760				
4	3.37	1,210	3.09	936	2.98	831	4.91	3,500	3.71	1,600	3.29	1,130
6							4.72	3,160				
8	3.32	1,160	3.08	926	3.12	964	4.54	2,850	3.61	1,480	3.27	1,110
10							4.39	2,600				
12	3.27	1,110	3.04	888	3.43	1,270	4.27	2,410	3.53	1,390	3.24	1,080
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	3.17	1,010	3.01	860	2.89	-	2.74	-	2.64	-	2.56	-
8												
10												
N	3.11	954	2.97	822	2.84		2.57		2.57		2.56	
2												
4												
6	3.07	916	2.94	793	2.77	-	2.56	-	2.58	-	2.63	-
8												
10												
12	3.04	888	2.92	774	2.80	-	2.62	-	2.56	-	2.70	-

Supplemental records.- Dec. 31, 4:30 a.m., 9.53 ft., 19,900 sec.-ft.

White River at West Hartford, Vt.

Location.- Lat. 43°42'45", long. 72°25'10", 500 feet upstream from highway bridge at West Hartford, Windsor County, and 7 miles upstream from mouth. Datum of gage is 374.53 feet above mean sea level, datum of 1929.
Drainage area.- 690 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements; affected by ice Dec. 28 to 2 p.m. Dec. 30, 12 p.m. Jan. 12 to Jan. 14.
Maxima.- December 1948-January 1949: Discharge, 31,000 second-feet 9:30 a.m. Dec. 31 (gage height, 16.58 feet).
1915 to November 1948: Discharge, 120,000 second-feet Nov. 4, 1927 (gage height, 29.3 feet, from floodmarks), by slope-area method.
Remarks.- Flood flow not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	290	Jan. 3	2,870	Jan. 9	2,290
29	310	4	2,190	10	2,020
30	5,980	5	1,980	11	1,760
31	22,900	6	4,810	12	1,140
Jan. 1	7,870	7	4,000	13	1,260
2	4,270	8	2,770	14	1,210

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.78	450	13.71	20,400				
2					3.85	480	14.35	22,600	10.41	10,800	7.86	5,370
3					3.91	510	14.97	24,700				
4	3.35	270	3.44	305	3.95	540	15.36	26,000	10.08	9,880	7.69	5,060
5					3.99	560	15.59	27,100				
6					4.08	600	15.85	28,100	9.76	8,830	7.54	4,800
7					4.27	690	16.14	29,200				
8	3.26	240	3.34	265	4.44	790	16.37	30,200	9.49	8,180	7.39	4,540
9					4.61	880	16.56	30,900				
10					4.78	1,000	16.55	30,900	9.24	7,710	7.26	4,330
11					5.06	1,200	16.36	30,100				
N	3.28	245	3.36	275	8.54	3,900	16.08	29,000	9.04	7,370	7.14	4,130
1					8.81	5,900	15.60	27,100				
2					8.60	6,400	15.10	25,200	8.86	7,080	7.03	3,960
3					8.80	6,980	14.53	23,200				
4	3.48	320	3.42	300	9.42	8,050	13.95	21,200	8.70	6,820	6.93	3,800
5					10.25	10,400	13.41	19,500				
6					10.48	11,000	12.90	17,800	8.56	6,600	6.84	3,670
7					10.79	11,800	12.46	16,500				
8	3.58	360	3.57	350	11.35	13,300	12.11	15,500	8.40	6,330	6.76	3,550
9					11.88	14,800	11.66	14,200				
10					12.35	16,200	11.31	13,200	8.24	6,060	6.68	3,430
11					12.79	17,500	11.04	12,500				
12	3.52	330	3.67	400	13.19	18,800	10.80	11,800	8.05	5,720	6.65	3,390
	January 3		January 4		January 5		January 6		January 7		January 8	
2							6.25	2,840	7.71	5,100		
4					5.53	1,940	6.54	3,240	7.51	4,750		
6	6.42	3,070	5.85	2,320			6.78	3,580	7.34	4,460	6.33	2,940
8					5.48	1,890	7.11	4,090	7.19	4,210		
10							7.36	4,490	7.06	4,010		
N	6.24	2,820	5.70	2,140	5.46	1,870	7.52	4,760	6.96	3,850	6.16	2,720
2							7.72	5,120	6.86	3,700		
4					5.48	1,890	8.33	6,210	6.77	3,560		
6	6.11	2,650	5.64	2,070			8.67	6,770	6.69	3,450	6.05	2,580
8					5.60	2,020	8.52	6,530	6.63	3,360		
10							8.23	6,040	6.56	3,260		
12	5.98	2,480	5.59	2,010	6.00	2,510	7.94	5,520	6.50	3,180	5.99	2,500
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	5.91	2,390	5.65	2,080	5.48	1,890	4.81	1,210	5.01	1,300	4.97	1,250
8												
10												
N	5.82	2,280	5.59	2,010	5.39	1,790	4.62	1,050	4.93	1,230	4.92	1,200
2							4.48	935				
4												
6	5.74	2,190	5.54	1,950	5.31	1,700	4.62	1,050	5.00	1,300	4.91	1,200
8												
10												
12	5.69	2,130	5.51	1,920	5.06	1,440	4.85	1,200	4.95	1,250	4.83	1,120

Supplemental records.- Dec. 31, 9:30 a.m., 16.58 ft., 31,000 sec.-ft.

Ottauquechee River at North Hartland, Vt.

Location.- Lat. 43°36'05", long. 72°21'20", at highway bridge in North Hartland, Windsor County, 1 mile upstream from mouth.
Drainage area.- 221 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 5,400 second-feet and extended to peak stage on basis of computations of flow over dams at gage heights 15.58, 17.68, and 21.5 feet; affected by ice Dec. 28 to 4 p.m. Dec. 30, 1 a.m. Dec. 31, and Jan. 13, 14.
Maxima.- December 1948-January 1949: Discharge, 13,300 second-feet 6 to 6:30 a.m. Dec. 31; maximum gage height, 12.62 feet 6:30 a.m. Dec. 31.
1930 to November 1948: Discharge, 24,400 second-feet Sept. 21, 1938 (gage height, 17.68 feet), from rating curve extended above 5,400 second-feet as explained above.
Maximum discharge known, 30,400 second-feet November 1927 (gage height, 21.5 feet, from floodmarks), by computation of flow over dam.
Remarks.- Flood flow not materially affected by artificial or natural storage. Medium and low flows regulated by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	95	Jan. 3	888	Jan. 9	738
29	75	4	684	10	655
30	2,920	5	664	11	570
31	8,780	6	1,850	12	383
Jan. 1	2,680	7	1,350	13	440
2	1,370	8	893	14	410

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.45	110	12.15	11,500				
2	2.45	-	2.17	-	2.77	170	11.95	12,100	6.97	3,660		
3					2.89	200	12.11	12,400				
4	2.38	-	2.04	-	2.92	210	12.18	12,500	6.72	3,310	5.29	1,650
5					2.93	215	12.38	12,900				
6	2.37	-	1.88	-	2.98	230	12.59	13,300	6.54	3,070		
7					3.07	250	12.51	13,100				
8	2.53	-	2.18	-	3.09	260	12.03	12,200	6.40	2,890	5.11	1,470
9					3.20	300	11.45	11,200				
10	2.52	-	2.33	-	3.70	460	10.90	10,200	6.25	2,710		
11					4.50	800	10.26	9,040				
N	2.42	-	2.29	-	4.90	1,150	9.80	8,260	6.12	2,550	4.97	1,330
1					5.60	1,700	9.42	7,610				
2	2.37	-	2.28	-	7.14	2,700	9.11	7,090	6.01	2,430		
3					8.59	3,500	8.81	6,580				
4	2.31	-	2.26	-	7.82	4,200	8.63	6,270	5.88	2,290	4.82	1,210
5					7.77	4,890	8.50	6,060				
6	2.27	-	2.26	-	8.02	5,290	8.39	5,880	5.78	2,180		
7					8.43	5,950	8.29	5,720				
8	2.21	-	2.25	-	8.89	6,710	8.09	5,400	5.68	2,070	4.72	1,130
9					9.38	7,550	7.85	5,020				
10	2.19	-	2.27	-	9.90	8,430	7.62	4,650	5.58	1,960		
11					10.61	9,640	7.46	4,400				
12	2.18	-	2.29	-	11.01	10,400	7.27	4,120	5.48	1,850	4.61	1,050
	January 3		January 4		January 5		January 6		January 7		January 8	
2			4.12	751	3.89	630	5.10	1,460				
4	4.51	977	4.09	734	3.85	610	5.32	1,680				
6			4.09	734	3.85	610	5.32	1,680	5.16	1,520	4.45	940
8	4.44	934	4.05	712	3.85	610	5.32	1,680				
10			4.05	712	3.86	615	5.34	1,700				
N	4.34	874	4.01	690	3.84	605	5.46	1,830	4.96	1,320	4.34	874
2			3.98	675	3.85	610	5.78	2,180				
4	4.27	834	3.96	665	3.85	610	5.99	2,410				
6			3.94	655	3.90	635	5.79	2,190	4.78	1,170	4.26	828
8	4.21	800	3.78	575	4.00	685	5.63	2,010				
10			3.85	610	4.27	834	5.51	1,880				
12	4.15	768	3.89	630	4.81	1,200	5.40	1,760	4.62	1,050	4.23	812
	January 9		January 10		January 11		January 12		January 13		January 14	
2							3.49	436	3.61	-	3.46	-
4							3.44	413	3.54	-	3.45	-
6	4.14	762	3.97	670	3.84	605	3.30	354	3.51	-	3.45	-
8							3.34	370	3.49	-	3.50	-
10							3.37	383	3.49	-	3.48	-
N	4.10	740	3.94	655	3.79	580	3.32	362	3.56	-	3.46	-
2							3.27	343	3.48	-	3.49	-
4							3.28	346	3.49	-	3.50	-
6	4.03	702	3.91	640	3.73	550	3.14	295	3.49	-	3.43	-
8							3.36	379	3.49	-	3.41	-
10							3.50	440	3.52	-	3.48	-
12	3.99	680	3.89	630	3.56	467	3.60	485	3.50	-	3.46	-

Supplemental records.- Dec. 31, 6:30 a.m., 12.62 ft., 13,300 sec.-ft.

Black River at North Springfield, Vt.

Location.- Lat. 43°20'00", long. 72°30'55", in North Springfield, Windsor County, 1,300 feet upstream from Great Brook. Datum of gage is 445.79 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.- 158 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 2,900 second-feet and extended to peak stage on basis of computations of flow over dams at gage heights 16.41 and 17.68 feet; affected by ice Dec. 28 to 3 p.m. Dec. 30, Jan. 12-14.
Maxima.- December 1948-January 1949: Discharge, 8,780 second-feet 4 a.m. Dec. 31 (gage height, 13.17 feet).
1929 to November 1948: Discharge, 15,500 second-feet Sept. 22, 1938 (gage height, 17.68 feet), from rating curve extended above 3,200 second-feet by method explained above.
Remarks.- Flood flow not materially affected by artificial or natural storage. Medium and low flows regulated by mills above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	55	Jan. 3	657	Jan. 9	495
29	50	4	497	10	436
30	2,140	5	454	11	388
31	6,480	6	1,410	12	260
Jan. 1	2,370	7	850	13	260
2	1,040	8	601	14	230

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.40	-	12.13	7,410				
2					3.39	-	12.68	8,120	8.46	3,450	5.71	1,370
3					3.39	-	13.06	8,620				
4					3.57	130	13.17	8,780	8.08	3,110	5.58	1,290
5					4.30	-	13.14	8,740				
6					4.63	-	13.11	8,690	7.75	2,840	5.46	1,220
7					4.65	-	13.05	8,610				
8					4.61	420	12.85	8,340	7.49	2,630	5.35	1,150
9					4.84	-	12.50	7,890				
10					5.67	-	12.02	7,270	7.27	2,460	5.24	1,080
11					5.34	-	11.54	6,690				
N					5.58	1,000	11.13	6,200	7.04	2,270	5.16	1,040
1					5.95	-	10.92	5,950				
2					8.00	-	10.79	5,810	6.80	2,100	4.90	900
3					7.39		10.65	5,660				
4					7.69	2,790	10.43	5,410	6.58	1,950	4.55	742
5					8.39	3,390	10.22	5,180				
6					8.96	3,900	10.04	4,980	6.37	1,800	4.91	905
7					9.59	4,530	9.83	4,770				
8					10.10	5,050	9.64	4,580	6.19	1,670	4.82	864
9					10.53	5,520	9.42	4,360				
10					10.92	5,950	9.21	4,150	6.01	1,550	4.76	837
11					11.22	6,300	9.01	3,950				
12					11.65	6,820	8.83	3,790	5.84	1,440	4.70	810
	January 3		January 4		January 5		January 6		January 7		January 8	
2					3.88	463	5.25	1,090	5.25	1,090	4.39	670
4	4.53	734	4.07	538	3.85	452	5.63	1,320	5.11	1,010	4.35	652
6					3.83	446	5.73	1,380	5.03	965	4.31	634
8	4.40	675	4.01	514	3.82	442	5.76	1,400	4.94	920	4.27	618
10					3.78	428	5.92	1,490	4.85	878	4.24	606
N	4.33	644	3.94	486	3.70	400	6.08	1,600	4.78	846	4.21	594
2			3.85	452	3.76	421	6.27	1,730	4.56	747	4.03	522
4	4.24	606	3.89	466	3.71	404	6.24	1,710	4.27	618	4.13	562
6					3.79	432	6.05	1,580	4.56	747	4.13	562
8	4.21	594	3.91	474	3.85	452	5.82	1,430	4.49	716	4.23	602
10					4.11	554	5.60	1,300	4.50	720	4.14	566
12	4.14	566	3.90	470	4.43	688	5.42	1,190	4.45	698	4.08	542
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	4.01	514	3.83	446	3.73	410						
8												
10												
N	3.95	490	3.79	432	3.69	397						
2												
4												
6	3.91	474	3.77	424	3.63	378						
8												
10												
12	3.87	460	3.76	421	3.44	317						

Supplemental records.- Jan. 2, 3:30 p.m., 4.32 ft., 639 sec.-ft.; Jan. 5, 9 p.m., 3.84 ft., 449 sec.-ft.; Jan. 6, 3 p.m., 6.27 ft., 1,730 sec.-ft.

Williams River at Brockway Mills, Vt.

Location.- Lat. 43°12'30", long. 72°31'05", just downstream from unnamed tributary, 25 feet upstream from highway bridge at Brockway Mills, Windham County, 4 miles downstream from Hall Brook, and 6.0 miles northwest of Bellows Falls.
Drainage area.- 103 square miles.
Gage-height record.- Water-stage recorder graph except for period Dec. 28 to 3 p.m. Dec. 31. Peak stage from high-water mark in gage well.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 3,300 second-feet and extended to peak stage on basis of slope-area determination at gage height 13.31 feet. Discharge for period of no gage-height record computed on basis of high-water mark in gage well and records for Saxtons River at Saxtons River.
Maxima.- December 1948-January 1949: Discharge, 8,830 second-feet 1 a.m. Dec. 31 (gage height, 13.31 feet, from high-water mark in gage well).
1940 to November 1948: Discharge, 5,950 second-feet Mar. 22, 1948 (gage height, 10.43 feet), from rating curve extended above 3,300 second-feet as explained above.
Flood in September 1938 reached a stage of 22.7 feet, from floodmarks.
Remarks.- Flood flow not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	36	Jan. 3	360	Jan. 9	306
29	70	4	277	10	269
30	2,660	5	305	11	232
31	4,100	6	1,250	12	160
Jan. 1	1,190	7	563	13	188
2	568	8	382	14	168

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							13.31	8,830				
2						190		8,500	5.59	1,570		
3												
4						260		7,400	5.34	1,420	3.88	672
5												
6						360		5,800	5.25	1,370		
7												
8						500		4,300	5.21	1,350	3.69	602
9												
10						700		3,500	5.17	1,320		
11												
N						950		2,900	5.00	1,220	3.55	552
1												
2						1,800		2,600	4.81	1,110		
3												
4						3,600	6.78	2,450	4.66	1,030	3.43	510
5												
6						5,000	6.55	2,270	4.52	950		
7												
8						6,600	6.40	2,150	4.37	885	3.32	474
9												
10						7,600	6.25	2,040	4.23	815		
11												
12						8,600	5.90	1,790	4.10	760	3.21	438
	January 3		January 4		January 5		January 6		January 7		January 8	
2							5.13	1,300				
4	3.08	398			2.53	241	5.30	1,400	3.84	656		
6			2.72	292			5.29	1,390			3.10	404
8	2.95	358			2.53	241	5.33	1,420	3.67	594		
10							5.49	1,510				
N	2.93	352	2.64	270	2.53	241	5.68	1,640	3.52	542	3.00	373
2							5.36	1,440				
4	2.91	346			2.54	243	5.00	1,220	3.42	507		
6			2.62	264	2.60	259	4.74	1,070			2.95	358
8	2.85	328			2.82	320	4.48	940	3.34	480		
10					3.49	532	4.26	830				
12	2.80	314	2.57	251	4.55	975	4.09	756	3.23	445	2.90	343
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4					2.57	251	2.13	145	2.35	195		
6	2.81	317	2.66	275							2.25	172
8					2.54	243	2.04	128	2.32	188		
10							2.01	122	2.30	183		
N	2.75	300	2.63	267	2.51	236	2.09	137	2.41	210	2.25	172
2							2.17	154	2.30	183		
4					2.47	225	2.24	169	2.28	178		
6	2.72	292	2.62	264			2.32	188			2.27	176
8					2.44	217	2.36	197	2.30	183		
10							2.37	200				
12	2.69	283	2.60	259	2.27	176	2.37	200	2.27	176	2.06	131

Supplemental records.- Jan. 1, 8:30 a.m., 5.23 ft., 1,360 sec.-ft.

Saxtons River at Saxtons River, Vt.

Location.- Lat. 43°08'15", long. 72°29'15", 130 feet upstream from highway bridge, 0.8 mile east of Saxtons River, Windham County, and 1.4 miles upstream from Bundy Brook.
Drainage area.- 72.2 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 1,800 second-feet and extended to peak stage on basis of slope-area determination at gage height 10.51 feet; affected by ice Dec. 28 to 10 a.m. Dec. 30, 8 a.m. Jan. 13, and 4 a.m. to 12 m. Jan. 14.
Maxima.- December 1948-January 1949: Discharge, 5,300 second-feet 12 p.m. Dec. 30 (gage height, 10.51 feet).
1940 to November 1948: Discharge, 3,790 second-feet Mar. 22, 1948 (gage height, 9.17 feet), from rating curve extended above 1,800 second-feet by method explained above.
Remarks.- Flood flow not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	27	Jan. 3	234	Jan. 9	211
29	50	4	181	10	184
30	1,690	5	195	11	157
31	2,150	6	905	12	123
Jan. 1	718	7	417	13	135
2	362	8	270	14	117

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							10.35	5,100				
2					3.42	130	10.09	4,760	5.59	905	4.50	452
3							9.91	4,530				
4			2.60	35	3.82	180	9.52	4,070	5.51	865	4.43	428
5							8.93	3,430				
6	2.46	23			4.40	250	8.38	2,890	5.51	865	4.36	405
7							7.88	2,440				
8			2.62	37	4.94	350	7.46	2,110	5.44	830	4.30	385
9							7.12	1,840				
10					4.74	500	6.86	1,650	5.32	774	4.25	369
11							6.63	1,500				
N	2.47	24	2.68	42	4.80	610	6.45	1,390	5.18	712	4.19	350
1					5.11	740	6.29	1,290				
2					5.90	1,130	6.19	1,230	5.06	664	4.15	338
3					6.65	1,580	6.15	1,210				
4			2.76	52	7.55	2,260	6.12	1,190	4.95	620	4.11	325
5					8.14	2,770	6.06	1,160				
6	2.55	31			8.59	3,190	6.00	1,120	4.86	585	4.08	316
7					9.08	3,690	5.95	1,100				
8			2.88	65	9.62	4,280	5.96	1,100	4.76	547	4.03	301
9					9.90	4,590	5.98	1,110				
10					10.02	4,720	5.94	1,090	4.67	513	4.00	292
11					10.31	5,060	5.86	1,050				
12	2.60	35	3.12	100	10.51	5,300	5.76	993	4.58	481	3.97	283
	January 3		January 4		January 5		January 6		January 7		January 8	
2							5.36	792				
4	3.84	246			3.48	159	5.72	971	4.62	495		
6			3.62	190			6.00	1,120			3.99	289
8	3.78	230			3.48	159	6.06	1,160	4.47	442		
10							6.10	1,180				
N	3.78	230	3.56	176	3.47	157	6.03	1,140	4.35	402	3.90	263
2					3.47	157	5.77	998				
4	3.80	235			3.49	161	5.52	870	4.25	369		
6			3.54	172	3.56	176	5.30	765			3.86	252
8	3.73	217			3.71	212	5.11	684	4.18	347		
10					4.11	325	4.95	620				
12	3.68	204	3.51	165	4.78	554	4.82	570	4.09	319	3.80	235
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4					3.53	170	3.19	103	3.44	151	3.28	116
6	3.74	219	3.62	190								
8					3.51	165	3.19	103	3.45	145	3.27	114
10												
N	3.69	207	3.59	183	3.48	159	3.22	109	3.34	131	3.27	116
2												
4					3.45	153	3.37	137	3.34	131	3.29	121
6	3.67	202	3.57	178								
8					3.41	145	3.46	155	3.30	123	3.28	119
10												
12	3.64	195	3.56	176	3.30	123	3.40	143	3.28	119	3.22	109

Supplemental records.- Jan. 6, 11 a.m., 6.11 ft., 1,190 sec.-ft.

West River at Jamaica, Vt.

Location.- Lat. 43°06'30", long. 72°46'30", at Jamaica, Windham County, a quarter of a mile upstream from highway bridge and 0.4 mile upstream from Ball Mountain Brook.
Drainage area.- 179 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 10,000 second-feet and extended to peak stage by logarithmic plotting; affected by ice Dec. 28 to 9 a.m. Dec. 30, 8 p.m. Jan. 12 to Jan. 14.
Maxima.- December 1948-January 1949: Discharge, 29,500 second-feet 3 a.m. Dec. 31 (gage height, 14.87 feet).
1946 to November 1948: Discharge, 10,600 second-feet Mar. 22, 1948 (gage height, 10.96 feet).
Remarks.- Flood runoff not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	75	Jan. 3	793	Jan. 9	577
29	101	4	556	10	477
30	6,480	5	553	11	391
31	15,500	6	3,040	12	247
Jan. 1	3,650	7	1,440	13	272
2	1,420	8	796	14	245

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					4.87	220	14.53	27,500				
2	4.25	68	4.30	78	5.20	340	14.68	28,400	9.46	5,630		
3					5.50	480	14.87	29,500				
4	4.28	74	4.32	80	6.55	640	14.70	28,500	9.19	5,010	7.17	1,780
5					6.90	860	14.21	25,600				
6	4.30	78	4.33	83	6.30	1,100	13.57	21,800	8.98	4,570		
7					7.00	1,500	13.20	20,000				
8	4.30	78	4.34	86	7.50	2,000	12.71	17,600	8.74	4,110	6.94	1,530
9					7.75	2,700	12.35	15,800				
10	4.29	76	4.36	90	8.03	3,330	11.93	13,900	8.51	3,690		
11					8.35	3,900	11.59	12,600				
N	4.30	78	4.37	93	8.51	4,210	11.30	11,400	8.33	3,380	6.78	1,370
1					8.76	4,720	11.15	10,900				
2	4.30	78	4.39	97	9.11	5,480	11.07	10,600	8.14	3,070		
3					9.39	6,150	10.98	10,300				
4	4.30	78	4.43	105	9.74	7,030	10.90	10,000	7.96	2,800	6.64	1,240
5					10.07	7,930	10.82	9,720				
6	4.29	76	4.48	115	10.35	8,720	10.78	9,580	7.81	2,580		
7					10.88	10,400	10.76	9,510				
8	4.28	74	4.53	125	11.50	12,500	10.66	9,170	7.67	2,390	6.49	1,100
9					12.30	15,800	10.47	8,550				
10	4.28	74	4.59	140	13.24	20,200	10.28	7,950	7.52	2,200		
11					13.67	22,400	10.05	7,260				
12	4.29	76	4.69	170	14.25	25,800	9.84	6,640	7.40	2,050	6.34	982
	January 3		January 4		January 5		January 6		January 7		January 8	
2	6.26	918	5.85	640	5.51	455	7.66	2,380				
4	6.19	863	5.82	622	5.48	440	8.04	2,920	7.22	1,830		
6	6.15	835	5.78	598	5.48	440	8.24	3,230			6.20	870
8	6.10	800	5.74	574	5.48	440	8.32	3,360	6.96	1,550		
10	6.06	772	5.69	545	5.49	445	8.41	3,520				
N	6.06	772	5.66	530	5.51	455	8.48	3,640	6.77	1,360	6.06	772
2	6.12	814	5.65	525	5.52	460	8.51	3,690				
4	6.08	786	5.65	525	5.54	470	8.41	3,520	6.62	1,220		
6	6.02	744	5.64	520	5.59	495	8.19	3,150			5.97	712
8	5.97	712	5.63	515	5.78	598	7.94	2,770	6.48	1,090		
10	5.92	682	5.61	505	6.28	934	7.72	2,460				
12	5.88	658	5.55	475	6.95	1,540	7.52	2,200	6.36	998	5.89	664
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4							5.01	247	5.34	295		
6	5.81	616	5.59	495	5.47	435					5.23	255
8							4.89	209	5.28	270		
10												
N	5.73	568	5.55	475	5.40	400	4.86	200	5.19	240	5.21	250
2												
4							5.00	244	5.29	275		
6	5.67	535	5.51	455	5.30	355					5.18	240
8							5.20	285	5.28	270		
10												
12	5.63	515	5.50	450	5.15	296	5.34	295	5.26	265	5.01	205

West River at Newfane, Vt.

Location.- Lat. 42°59'45", long. 72°38'20", 600 feet downstream from highway bridge and 1 mile northeast of Newfane, Windham County. Datum of gage is 384.21 feet above mean sea level, datum of 1929.
Drainage area.- 308 square miles.
Gage-height record.- Water-stage recorder graph except for period Dec. 28 to 2 p.m. Dec. 31. Peak stage from high-water mark in gage well.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 20,000 second-feet and extended to peak stage on basis of contracted-opening determination at gage height 19.3 feet and slope-area determinations at gage heights 19.46 and 22.81 feet. Discharge for period of no gage-height record computed on basis of high-water mark in gage well and records for West River at Jamaica.
Maxima.- December 1948-January 1949: Discharge, 39,600 second-feet 5 a.m. Dec. 31 (gage height, 19.46 feet, from high-water mark in gage well).
1919-23, 1928 to November 1948: Discharge, 52,300 second-feet Sept. 21, 1938 (gage height, 22.81 feet, from floodmarks), from rating curve extended above 20,000 second-feet as explained above.
Flood of Nov. 3, 1927, reached a stage of 23.0 feet, from floodmarks, at chain-gage site at same datum at highway bridge upstream (discharge, 45,000 second-feet, from rating curve extended by logarithmic plotting and on basis of computation of flow over dam at West Dummerston).
Remarks.- Flood flow not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	140	Jan. 3	1,580	Jan. 9	1,090
29	160	4	1,070	10	865
30	7,130	5	916	11	727
31	25,100	6	6,560	12	457
Jan. 1	8,310	7	3,010	13	512
2	2,940	8	1,570	14	472

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1												
2						500		36,000	10.85	12,800		
3												
4						900		39,000	10.50	11,700	7.70	3,700
5							19.46	39,600				
6						1,400		39,000	10.16	10,600		
7												
8						2,500		31,000	9.81	9,530	7.44	3,170
9												
10						4,000		25,000	9.51	8,630		
11												
N						4,800		21,000	9.24	7,820	7.25	2,810
1								19,000				
2						6,000	12.55	18,400	8.99	7,070		
3							12.54	18,300				
4						7,800	12.53	18,300	8.75	6,400	7.08	2,510
5							12.46	18,100				
6						9,500	12.26	17,400	8.55	5,840		
7							12.15	17,000				
8						13,000	12.19	17,100	8.34	5,250	6.94	2,270
9							12.20	17,200				
10						20,000	12.00	16,500	8.15	4,750		
11							11.64	15,300				
12						30,000	11.35	14,400	7.99	4,360	6.80	2,060
	January 3		January 4		January 5		January 6		January 7		January 8	
2	6.73	1,960					7.71	3,720				
4	6.64	1,830					8.51	5,730	7.79	3,900		
6	6.55	1,700	6.11	1,160	5.80	850	8.99	7,070			6.57	1,730
8	6.48	1,600					9.24	7,820	7.50	3,290		
10	6.45	1,560					9.33	8,090				
N	6.40	1,500	6.00	1,040	5.75	808	9.42	8,360	7.25	2,810	6.42	1,530
2	6.36	1,450					9.32	8,060				
4	6.34	1,430			5.77	824	9.18	7,640	7.05	2,460		
6	6.36	1,450	5.92	960	5.80	850	9.00	7,100			6.30	1,380
8	6.34	1,430			5.88	922	8.73	6,340	6.90	2,210		
10	6.28	1,360			6.07	1,120	8.42	5,480				
12	6.24	1,310	5.89	931	6.62	1,800	8.17	4,800	6.76	2,000	6.20	1,260
	January 9		January 10		January 11		January 12		January 13		January 14	
2							5.41	552	5.32	493		
4							5.37	526	5.36	519		
6	6.12	1,170	5.86	904	5.71	774	5.30	480	5.41	552	5.31	486
8							5.27	462	5.42	559		
10							5.25	450	5.40	545		
N	6.03	1,070	5.81	859	5.67	741	5.18	409	5.36	519	5.30	480
2							5.19	414	5.34	506		
4							5.18	409	5.34	506		
6	5.96	1,000	5.77	824	5.61	693	5.18	409	5.32	493	5.29	474
8							5.20	420	5.32	493	5.23	438
10					5.54	643	5.23	438	5.32	493	5.18	409
12	5.91	950	5.74	799	5.43	566	5.27	462	5.32	493	5.26	456

Supplemental records.- Jan. 13, 11 a.m., 5.33 ft., 500 sec.-ft.

Harriman Reservoir on Deerfield River at Davis Bridge, Vt.

Location.- Lat. 42°47'50", long. 72°54'30", at Davis Bridge, Windham County, 3½ miles upstream from West Branch Deerfield River.
Drainage area.- 184 square miles; 30 square miles regulated by Somerset Reservoir on East Branch Deerfield River near Somerset, Vt.
Remarks.- Total usable capacity, 5,060,000,000 cubic feet. Daily figures are from 8 a.m. on day shown to 8 a.m. on following day. Basic data furnished by New England Power Co.

Change in contents, in millions of cubic feet, 1948-49

Dec. 28	-53.2	Jan. 3	+27.4	Jan. 9	0
29	+83.8	4	-54.7	10	-54.3
30	+1,403.7	5	0	11	-45.0
31	-49.4	6	+109.9	12	-62.6
Jan. 1	-36.8	7	-82.6	13	-44.5
2	-55.0	8	-36.4	14	-35.4

Deerfield River at outlet of Harriman Reservoir, at Davis Bridge, Vt.

Location.- Lat. 42°47'50", long. 72°54'30", at Davis Bridge, Windham County, 3½ miles upstream from West Branch Deerfield River.
Drainage area.- 184 square miles; 30 square miles regulated by Somerset Reservoir on East Branch Deerfield River near Somerset, Vt.
Stage-discharge relation.- Observed discharge is computed flow through wheels and over dam.
Remarks.- Flood runoff affected by change in contents of Harriman and Somerset Reservoirs (total usable capacity, 7,560,000,000 cubic feet). Daily discharges adjusted for change in contents in Harriman Reservoir only. Daily figures are from 8 a.m. on day shown to 8 a.m. on following day. Basic data furnished by New England Power Co.

Daily mean discharge, in second-feet, 1948-49

Day	Observed	Adjusted	Day	Observed	Adjusted	Day	Observed	Adjusted
Dec. 28	857	241	Jan. 3	115	432	Jan. 9	619	619
29	945	1,910	4	938	305	10	970	342
30	1,080	17,300	5	1,550	1,550	11	982	461
31	15,900	15,300	6	3,330	4,610	12	1,010	286
Jan. 1	2,780	2,350	7	2,270	1,310	13	922	408
2	1,560	923	8	1,040	615	14	813	404

Deerfield River at Charlemont, Mass.

Location.- Lat. 42°37'33", long. 72°51'20", 1 mile downstream from Charlemont, Franklin County. Datum of gage is 517.36 feet above mean sea level, datum of 1929.
Drainage area.- 362 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 31,000 second-feet and extended to peak stage on basis of slope-area determination at gage height 17.75 feet and slope-area and contracted-opening determinations at gage height 20.17 feet.
Maxima.- December 1948-January 1949: Discharge, 42,600 second-feet 1:30 p.m. Dec. 31 (gage height, 17.75 feet).
1913 to November 1948: Discharge, 56,300 second-feet Sept. 21, 1938 (gage height, 20.17 feet, from floodmarks), from rating curve extended above 31,000 second-feet on basis of slope-area and contracted-opening determinations.
Remarks.- Flood flow affected by Somerset and Harriman Reservoirs (see pp.24,27). Regulation at medium and low flow by several power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	1,100	Jan. 3	1,890	Jan. 9	1,790
29	965	4	1,160	10	1,630
30	6,670	5	1,470	11	1,490
31	31,100	6	7,230	12	1,280
Jan. 1	13,400	7	4,690	13	1,240
2	3,370	8	2,750	14	984

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.17	1,060	11.54	19,100	13.88	27,000	5.45	4,220
2					3.20	1,090	12.00	20,600	13.31	25,000	5.34	4,020
3					3.66	1,580	12.35	21,700	12.80	23,200	5.30	3,950
4					3.85	1,800	12.32	21,600	12.35	21,700	5.26	3,880
5					4.46	2,590	12.00	20,600	11.90	20,300	5.20	3,770
6					4.71	2,970	12.00	20,600	11.44	18,800	5.15	3,680
7					4.88	3,240	12.65	22,700	11.08	17,700	5.10	3,600
8					5.07	3,550	14.72	30,000	10.64	16,400	5.00	3,430
9					5.42	4,170	14.76	30,200	10.32	15,500	4.96	3,370
10					5.66	4,600	15.07	31,400	9.97	14,500	4.93	3,320
11					5.51	4,330	15.73	34,000	9.67	13,700	4.82	3,140
N					5.34	4,020	16.59	37,600	9.27	12,600	4.79	3,090
1					5.97	5,160	17.50	41,500	8.96	11,800	4.80	3,110
2					6.63	6,400	17.65	42,200	8.66	11,000	4.88	3,240
3					7.24	7,670	17.40	41,100	8.16	9,760	4.89	3,250
4					7.57	8,390	17.05	39,500	7.55	8,350	4.81	3,130
5					7.83	8,970	16.76	38,300	7.00	7,140	4.77	3,060
6					8.46	10,500	16.59	37,600	6.70	6,540	4.77	3,060
7					8.85	11,500	16.52	37,300	6.35	5,860	4.76	3,050
8					9.36	12,800	16.24	36,100	6.09	5,370	4.77	3,060
9					9.63	13,600	15.88	34,600	5.88	4,990	4.74	3,010
10					9.81	14,100	15.43	32,800	5.71	4,690	4.72	2,980
11					10.62	16,400	14.85	30,500	5.60	4,490	4.70	2,950
12					11.10	17,800	14.42	28,900	5.28	3,910	4.68	2,920
	January 3		January 4		January 5		January 6		January 7		January 8	
2					3.38	1,270	5.44	4,200	6.54	6,220	4.86	3,210
4					3.39	1,280	6.31	5,780	6.33	5,820	4.77	3,060
6					3.40	1,290	7.14	7,450	6.13	5,440	4.73	3,000
8					3.31	1,200	7.42	8,060	5.96	5,140	4.69	2,940
10					3.42	1,310	7.75	8,790	5.76	4,780	4.56	2,740
N					3.42	1,310	7.68	8,640	5.62	4,530	4.58	2,770
2					3.45	1,340	7.56	8,370	5.49	4,290	4.49	2,640
4					3.38	1,270	7.45	8,130	5.36	4,060	4.42	2,540
6					3.57	1,480	7.32	7,840	5.24	3,840	4.33	2,410
8					3.31	1,200	7.14	7,450	5.16	3,700	4.33	2,410
10					4.29	2,360	6.96	7,060	5.05	3,520	4.34	2,430
12					4.95	3,350	6.76	6,660	4.89	3,250	4.31	2,380
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N												
2												
4												
6												
8												
10												
12												

Supplemental records.- Dec. 30, 9:30 a.m., 5.69 ft., 4,640 sec.-ft., 10:30 a.m., 5.74 ft., 4,740 sec.-ft., 11:30 a.m., 5.31 ft., 3,970 sec.-ft.; Dec. 31, 3:30 a.m., 12.42 ft., 21,900 sec.-ft., 5:30 a.m., 11.91 ft., 20,300 sec.-ft., 8:30 a.m., 14.80 ft., 30,300 sec.-ft., 1:30 p.m., 17.75 ft., 42,600 sec.-ft.

Deerfield River near West Deerfield, Mass.

Location.- Lat. 42°32'09", long. 72°39'14", 0.4 mile downstream from South River, 1¼ miles west of West Deerfield, Franklin County, and 2½ miles west of Deerfield.
Drainage area.- 558 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements.
Maxima.- December 1948-January 1949: Discharge, 48,500 second-feet 7 p.m. Dec. 31 (gage height, 15.43 feet).
1940 to November 1948: Discharge, 21,300 second-feet Apr. 26, 1945; maximum gage height, 13.56 feet Mar. 20, 1948 (ice jam).
Remarks.- Flood flow affected by Somerset and Harriman Reservoirs (see pp. 24, 27). Medium and low flows regulated by several power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	1,250	Jan. 3	2,920	Jan. 9	2,590
29	1,380	4	1,570	10	2,200
30	8,560	5	1,960	11	1,940
31	38,300	6	10,600	12	1,600
Jan. 1	19,100	7	6,510	13	1,590
2	4,700	8	3,770	14	1,360

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.54	1,980	11.64	29,500	12.94	35,500		
2					3.57	2,030	12.04	31,300	12.59	33,800	5.46	5,820
3					3.58	2,050	12.10	31,600	12.18	31,900		
4					3.63	2,130	12.19	32,000	11.73	29,900	5.36	5,560
5					3.63	2,130	12.04	31,300	11.31	28,000		
6					3.57	2,030	11.76	30,000	10.92	26,200	5.25	5,270
7					3.57	2,030	11.48	28,800	10.55	24,600		
8					4.07	2,900	11.63	29,400	10.17	22,900	5.13	4,960
9					4.42	3,590	12.46	33,200	9.78	21,300		
10					5.00	4,820	13.14	36,500	9.43	19,900	5.02	4,700
11					5.46	5,920	13.13	36,400	9.17	18,900		
N					5.58	6,230	13.28	37,200	8.91	17,800	4.93	4,480
1					5.83	6,900	13.76	39,600	8.63	16,700		
2					5.83	6,900	14.67	44,300	8.41	15,800	4.80	4,180
3					6.08	7,620	15.13	46,800	8.06	14,400		
4					6.94	10,300	15.30	47,800	7.92	13,900	4.79	4,160
5					7.59	12,600	15.37	48,100	7.59	12,600		
6					8.00	14,200	15.42	48,400	7.21	11,300	4.80	4,180
7					8.41	15,800	15.43	48,500	6.89	10,200		
8					8.62	16,700	15.30	47,800	6.49	8,870	4.71	3,980
9					9.13	18,700	14.87	45,400	6.28	8,220		
10					9.70	21,000	14.34	42,500	6.05	7,520	4.68	3,920
11					10.15	22,800	13.86	40,100	5.88	7,010		
12					10.90	26,200	13.36	37,600	5.74	6,610	4.65	3,850
	January 3		January 4		January 5		January 6		January 7		January 8	
2					3.51	1,750	5.68	6,430	6.42	8,650		
4					3.51	1,750	6.18	7,910	6.22	8,030	4.80	4,180
6					3.50	1,730	6.84	10,000	6.05	7,520		
8					3.50	1,730	7.46	12,200	5.89	7,040	4.69	3,940
10					3.50	1,730	7.83	13,500	5.76	6,660		
N					3.54	1,790	8.06	14,400	5.64	6,320	4.61	3,760
2					3.50	1,730	7.75	13,200	5.49	5,900		
4					3.51	1,750	7.43	12,100	5.41	5,690	4.50	3,530
6					3.57	1,840	7.19	11,200	5.30	5,400		
8					3.89	2,370	6.99	10,500	5.18	5,090	4.39	3,310
10					4.12	2,790	6.81	9,900	5.09	4,870		
12					4.52	3,570	6.60	9,220	5.01	4,670	4.31	3,150
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	4.29	3,110										
6												
8	4.13	2,810										
10												
N	3.89	2,370										
2												
4	3.89	2,370										
6												
8	3.80	2,220										
10												
12	3.74	2,120										

Supplemental records.- Jan. 5, 5 p.m., 3.33 ft., 1,480 sec.-ft.

Somerset Reservoir on East Branch Deerfield River near Somerset, Vt.

Location.- Lat. 42°58'25", long. 72°57'00", 2½ miles northeast of Somerset, Windham County.
Drainage area.- 30.0 square miles.
Remarks.- Total usable capacity, 2,500,000,000 cubic feet. Daily figures are from 8 a.m. on day shown to 8 a.m. on following day. Basic data furnished by New England Power Co.

Change in contents, in millions of cubic feet, 1948-49

Dec. 28	-10.4	Jan. 3	+13.9	Jan. 9	+11.1
29	+41.3	4	+10.1	10	+8.5
30	+208.2	5	+62.7	11	+5.2
31	+180.5	6	+47.1	12	+2.6
Jan. 1	+14.4	7	+14.3	13	-11.7
2	+13.8	8	+11.7	14	-13.1

East Branch Deerfield River at outlet of Somerset Reservoir, near Somerset, Vt.

Location.- Lat. 42°58'25", long. 72°57'00", 2½ miles northeast of Somerset, Windham County.
Drainage area.- 30.0 square miles.
Stage-discharge relation.- Observed discharge is computed flow through gates.
Remarks.- Flood runoff affected by change in contents of Somerset Reservoir (total usable capacity, 2,500,000,000 cubic feet). Daily discharges adjusted for change in contents of Somerset Reservoir. Daily figures are from 8 a.m. on day shown to 8 a.m. on following day. Basic data furnished by New England Power Co.

Daily mean discharge, in second-feet, 1948-49

Day	Observed	Adjusted	Day	Observed	Adjusted	Day	Observed	Adjusted
Dec. 28	138	18	Jan. 3	0	160	Jan. 9	0	128
29	67	545	4	0	117	10	0	98
30	0	2,410	5	0	725	11	0	60
31	0	2,090	6	0	545	12	0	30
Jan. 11	0	167	7	0	165	13	180	45
2	0	160	8	0	136	14	200	48

North River at Shattuckville, Mass.

Location.- Lat. 42°38'18",,long. 72°43'32", in Shattuckville, Franklin County, 1¼ miles south of Griswoldville and 1.3 miles upstream from mouth. Datum of gage is 458.36 feet above mean sea level, datum of 1929.
Drainage area.- 88.4 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 3,000 second-feet and extended to peak stage on basis of computation of flow over dam; affected by ice Dec. 28 to 8 a.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 10,000 second-feet 2 a.m. Dec. 31 (gage height, 9.62 feet).
1939 to November 1948: Discharge, 4,570 second-feet Apr. 26, 1945 (gage height, 7.85 feet).
Remarks.- Flood flow not materially affected by artificial or natural storage. Medium and low flows regulated by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	19	Jan. 3	368	Jan. 9	340
29	28	4	276	10	290
30	2,090	5	322	11	247
31	6,290	6	1,890	12	183
Jan. 1	1,870	7	681	13	189
2	603	8	441	14	169

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.05	24	9.30	9,040	6.79	3,540		
2					2.08	26	9.62	10,000	6.67	3,360		
3					2.13	29	9.24	8,870	6.53	3,140		
4					2.19	50	9.00	8,200	6.33	2,860	4.10	730
5					3.40	180	8.57	7,090	6.26	2,760		
6					4.30	500	8.36	6,590	6.13	2,590		
7					4.65	1,000	8.20	6,220	5.96	2,370		
8					4.73	1,100	8.19	6,200	5.80	2,180	3.94	645
9					5.04	1,400	8.09	5,980	5.66	2,030		
10					4.75	1,160	7.80	5,360	5.52	1,870		
11					4.65	1,080	7.53	4,830	5.38	1,730		
N					4.69	1,110	7.40	4,580	5.28	1,630	3.80	575
1					4.80	1,200	7.63	5,020	5.14	1,500		
2					5.20	1,550	7.86	5,490	5.02	1,390		
3					5.65	2,020	7.98	5,740	4.92	1,300		
4					6.50	3,100	8.07	5,930	4.82	1,220	3.71	534
5					6.71	3,420	8.19	6,200	4.75	1,160		
6					7.01	3,900	8.37	6,610	4.66	1,090		
7					6.74	3,460	8.36	6,590	4.59	1,040		
8					6.85	3,640	8.20	6,220	4.52	994	3.61	490
9					7.25	4,310	7.84	5,440	4.46	954		
10					7.70	5,160	7.43	4,640	4.39	908		
11					8.40	6,680	7.13	4,100	4.34	876		
12					8.95	8,060	6.92	3,750	4.28	838	3.53	454
	January 3		January 4		January 5		January 6		January 7		January 8	
2					2.97	247	5.23	1,580	4.37	896		
4	3.43	412			2.95	240	5.57	1,930	4.25	820		
6			3.10	289	2.94	237	6.00	2,420	4.15	760	3.57	472
8	3.29	357			2.94	237	6.15	2,620	4.09	724		
10					2.94	237	6.36	2,900	4.00	675		
N	3.30	361	3.04	269	2.94	237	6.13	2,590	3.95	650	3.48	432
2					2.94	237	5.73	2,100	3.90	625		
4	3.28	354			2.97	247	5.38	1,730	3.85	600		
6			3.02	263	3.10	289	5.10	1,460	3.80	575	3.42	408
8	3.24	339			3.30	361	4.82	1,220	3.75	552		
10					3.86	605	4.64	1,080	3.73	544		
12	3.18	317	2.97	247	4.73	1,140	4.50	980	3.68	521	3.36	384
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	3.28	354	3.13	300								
8												
10												
N	3.22	331	3.10	289								
2												
4												
6	3.20	324	3.07	279								
8												
10												
12	3.17	314	3.05	272								

Supplemental records.- Dec. 31, 6:30 p.m., 8.46 ft., 6,820 sec.-ft.

Mill River at Northampton, Mass.

Location.- Lat. 42°19'05", long. 72°39'21", at Northampton, Hampshire County, 3½ miles above mouth.
Drainage area.- 52.8 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 1,600 second-feet and extended to peak stage by logarithmic plotting; affected by ice 1 a.m. to 5 p.m. Dec. 28, 7 a.m. to 2 p.m., 4 p.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 3,200 second-feet 3 a.m. Dec. 31 (gage height, 7.20 feet).
1938 to November 1948: Discharge, 3,060 second-feet Apr. 26, 1945; maximum gage height, 8.47 feet Feb. 8, 1941 (ice jam).
Remarks.- Flood flow not materially affected by artificial or natural storage. Regulation at medium and low flows by mill above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	20	Jan. 3	169	Jan. 9	159
29	27	4	130	10	130
30	496	5	156	11	119
31	2,150	6	939	12	106
Jan. 1	841	7	328	13	96
2	264	8	200	14	91

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.08	51	6.68	2,680	5.53	1,660		
2					2.04	47	7.05	3,050	5.40	1,560		
3					2.03	46	7.20	3,200	5.30	1,480		
4	1.94	21	1.68	17	2.02	44	6.83	2,830	5.17	1,380	3.19	318
5					2.03	46	6.25	2,280	5.03	1,280		
6					2.33	87	5.78	1,860	4.85	1,160		
7					2.50	117	5.40	1,560	4.67	1,040		
8	1.86	17	1.67	17	2.64	125	5.18	1,390	4.52	952	3.09	283
9					2.78	157	5.16	1,370	4.38	874		
10					2.86	196	5.16	1,370	4.25	805		
11					3.01	241	5.14	1,360	4.13	745		
N	1.79	17	1.69	18	3.24	256	5.23	1,420	4.03	695	2.99	250
1					3.11	266	5.48	1,620	3.94	650		
2					3.14	293	5.88	1,950	3.84	600		
3					3.37	390	6.17	2,210	3.78	571		
4	1.74	20	1.80	25	4.04	620	6.22	2,260	3.70	535	2.93	231
5					4.25	805	6.12	2,170	3.65	512		
6					4.40	885	6.32	2,350	3.59	486		
7					4.47	924	6.65	2,650	3.54	463		
8	1.76	22	2.05	48	4.62	1,010	6.82	2,820	3.48	436	2.88	216
9					4.80	1,120	6.73	2,730	3.44	419		
10					5.08	1,320	6.38	2,400	3.40	402		
11					5.63	1,740	5.99	2,050	3.35	382		
12	1.71	19	2.11	54	6.11	2,160	5.71	1,810	3.32	369	2.83	202
	January 3		January 4		January 5		January 6		January 7		January 8	
2					2.63	150	3.94	650	3.50	445		
4			2.61	145	2.56	134	4.52	952	3.42	411		
6	2.76	183			2.54	130	5.14	1,360	3.35	382	2.88	216
8			2.59	141	2.53	128	5.31	1,490	3.29	357		
10					2.58	139	5.04	1,290	3.24	338		
N	2.69	165	2.58	139	2.59	141	4.98	1,250	3.18	315	2.81	196
2					2.56	134	4.64	1,020	3.12	293		
4			2.55	132	2.52	125	4.34	852	3.09	283		
6	2.64	153			2.63	150	4.09	725	3.01	256	2.77	185
8			2.33	87	2.68	162	3.91	635	2.98	247		
10					2.94	234	3.74	553	2.96	241		
12	2.63	150	2.51	123	3.33	373	3.60	490	2.94	234	2.73	175
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	2.69	165										
8												
10												
N	2.65	155										
2												
4												
6	2.64	153										
8												
10												
12	2.62	148										

Supplemental records.- Dec. 31, 3:30 p.m., 6.25 ft., 2,280 sec.-ft.; Jan. 6, 7 a.m., 5.39 ft., 1,550 sec.-ft.

Westfield River at West Chesterfield, Mass.

Location.- Lat. 42°23'48", long. 72°52'32", a quarter of a mile downstream from West Branch and 0.5 mile downstream from highway bridge at West Chesterfield, Hampshire County.
Drainage area.- 111 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 6,700 second-feet and extended to peak stage on basis of slope-area determination; affected by ice Dec. 28 to 5 a.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 16,000 second-feet 12 m. Dec. 31 (gage height, 11.93 feet).
1946 to November 1948: Discharge, 6,740 second-feet Mar. 22, 1948 (gage height, 7.85 feet).
Remarks.- Flood flow not materially affected by artificial or natural storage. Diurnal fluctuation at low flow caused by mill above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	32	Jan. 3	585	Jan. 9	491
29	52	4	439	10	418
30	2,760	5	511	11	360
31	12,000	6	2,790	12	291
Jan. 1	2,750	7	1,070	13	266
2	977	8	647	14	250

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.40	150	9.27	9,690				
2					2.68	230	9.83	10,900	6.90	5,030		
3					2.89	300	10.36	12,200				
4			1.72	41	3.05	400	10.37	12,200	6.36	4,160		
5					4.53	850	10.39	12,200				
6	1.50	27			3.66	1,000	10.85	13,300	5.91	3,490	3.74	1,110
7					3.96	1,240	11.42	14,800				
8			1.78	43	4.10	1,350	11.54	15,000	5.53	2,990		
9					4.14	1,390	11.42	14,800				
10					4.16	1,400	11.55	15,100	5.20	2,580		
11					4.21	1,450	11.74	15,600				
N	1.57	32	1.84	46	4.43	1,660	11.93	16,000	4.98	2,330	3.51	937
1					4.79	2,050	11.76	15,600				
2					5.12	2,440	11.38	14,600	4.73	2,050		
3					5.49	2,920	10.91	13,500				
4			1.92	50	5.84	3,400	10.34	12,100	4.58	1,890		
5					5.97	3,580	9.98	11,300				
6	1.62	36			6.45	4,300	9.74	10,700	4.41	1,720	3.34	818
7					6.90	5,030	9.41	10,000				
8			2.00	60	7.30	5,720	8.97	9,030	4.29	1,600		
9					7.61	6,280	8.55	8,140				
10					7.96	6,940	8.06	7,140	4.16	1,470		
11					8.43	7,880	7.84	6,720				
12	1.68	39	2.25	110	8.76	8,580	7.45	5,990	4.04	1,370	3.19	719
	January 3		January 4		January 5		January 6		January 7		January 8	
2					2.59	390	4.91	2,250				
4					2.57	382	5.53	2,990	3.99	1,320		
6	3.03	623	2.74	465	2.56	377	5.92	3,510			3.15	695
8					2.56	377	5.97	3,580	3.79	1,150		
10					2.56	377	6.29	4,060				
N	2.91	556	2.67	430	2.56	377	6.12	3,800	3.62	1,020	3.05	635
2					2.58	386	5.66	3,150				
4					2.65	420	5.23	2,620	3.49	923		
6	2.90	550	2.64	415	2.77	480	4.90	2,240			2.98	594
8					3.01	611	4.63	1,940	3.37	839		
10					3.51	937	4.41	1,720				
12	2.81	500	2.60	395	4.32	1,630	4.24	1,550	3.27	770	2.92	561
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	2.83	512	2.68	435	2.56	377	2.33	282	2.30	270	2.26	256
8												
10												
N	2.77	480	2.64	415	2.52	359	2.27	260	2.21	238	2.25	252
2												
4												
6	2.74	465	2.61	400	2.48	342	2.40	310	2.32	278	2.25	252
8												
10												
12	2.72	455	2.58	386	2.46	334	2.35	290	2.29	266	2.14	217

Supplemental records.- Dec. 31, 3:30 a.m., 10.48 ft., 12,500 sec.-ft.; Jan. 6, 10:30 a.m., 6.32 ft., 4,100 sec.-ft.

Knightville Reservoir at Knightville, Mass.

Location.- Lat. 42°17'26", long. 72°51'53", at Knightville Dam on Westfield River at Knightville, Hampshire County, 0.4 mile upstream from Sykes Brook, 2.6 miles upstream from Middle Branch, and 4 miles north of Huntington. Datum of gage is 480.00 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.- 162 square miles.
Gage-height record.- Water-stage recorder graph.
Remarks.- Total usable capacity is 2,130,000,000 cubic feet. Basic data furnished by Corps of Engineers.

Change in contents, in millions of cubic feet, 1948-49

Dec. 28	-0.3	Jan. 3	-208.6	Jan. 9	-261.5
29	+.7	4	-253.8	10	-261.4
30	+176.5	5	-258.0	11	-273.3
31	+1,496.5	6	+106.8	12	-229.6
Jan. 1	+368.5	7	-122.8	13	-89.4
2	+57.4	8	-222.0	14	-32.8

Westfield River at Knightville, Mass.

Location.- Lat. 42°17'16", long. 72°51'53", at Knightville, Hampshire County, 0.2 mile downstream from Knightville Dam, 0.2 mile upstream from Sykes Brook, and 2.4 miles upstream from Middle Branch. Datum of gage is 461.25 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.- 162 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements. Shifting-control method used Dec. 28 to 8 a.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 5,370 second-feet 11:30 a.m. Jan. 4 (gage height, 6.96 feet).
1909 to November 1948: Discharge, 57,900 second-feet Sept. 21, 1938 (gage height, 29.58 feet, from floodmarks, site and datum then in use), from rating curve extended above 3,800 second-feet on basis of slope-area determinations at gage heights 24.07 and 29.58 feet.
Remarks.- Flow regulated by Knightville Reservoir (see p. 31).

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	39	Jan. 3	3,060	Jan. 9	3,540
29	38	4	3,540	10	3,510
30	446	5	3,510	11	3,590
31	42	6	2,470	12	3,160
Jan. 1	20	7	2,920	13	1,590
2	573	8	3,450	14	863

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.10	39					1.86	15
2					2.10	39	2.15	40			1.86	15
3					2.11	40					1.86	15
4					2.11	40	2.06	31	1.99	25	1.85	14
5					2.11	40					1.85	14
6	2.11	40	2.10	39	2.11	40	2.25	52			1.85	14
7					2.12	42					1.85	14
8					3.10	277	2.21	47	1.93	20	1.85	14
9					3.68	539					1.85	14
10					3.83	631	2.28	56			1.85	14
11					3.85	645					1.84	14
N	2.10	39	2.09	38	4.06	795	2.23	50	1.91	18	1.84	14
1					4.10	825					1.84	14
2					4.12	840	2.13	38			1.84	14
3					4.13	848					1.84	14
4					4.14	855	2.21	47	1.88	16	2.05	30
5					4.17	878					3.33	357
6	2.10	39	2.09	38	4.23	924	2.13	38			3.82	624
7					4.30	980					4.30	980
8					4.34	1,020	2.08	33	1.86	15	5.16	1,940
9					2.35	67					5.43	2,320
10					2.27	55	2.06	31			5.67	2,710
11					2.18	44					5.86	3,040
12	2.10	39	2.10	39	2.14	39	2.06	31	1.86	15	5.87	3,060
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4												
6											5.89	3,090
8												
10												
N											5.88	3,070
2												
4												
6											6.30	3,880
8												
10												
12											6.28	3,840
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4					6.02	3,330						
6			6.15	3,580								
8					6.31	3,900						
10												
N			6.12	3,520	6.27	3,820						
2												
4					6.22	3,720						
6			6.08	3,440								
8					6.18	3,640						
10												
12			6.04	3,370	6.13	3,540						

Supplemental records.- Dec. 30, 7:45 a.m., 2.12 ft., 42 sec.-ft., 8:30 p.m., 4.35 ft., 1,020 sec.-ft.; Jan. 8, 1 p.m., 5.87 ft., 3,060 sec.-ft., 1:15 p.m., 6.33 ft., 3,940 sec.-ft.; Jan. 11, 7:45 a.m., 5.98 ft., 3,250 sec.-ft.

Westfield River near Westfield, Mass.

Location.- Lat. 42°06'24", long. 72°41'58", 0.7 mile downstream from Great Brook and 3 miles east of Westfield, Hampden County. Datum of gage is 98.25 feet above mean sea level, datum of 1929.
Drainage area.- 497 square miles.
Gage-height record.- Water-stage recorder graph, except for period Dec. 28 to 7 a.m. Jan. 1. Graph 4 a.m. to 7 a.m. Jan. 1 based on observed gage reading. Peak stage from floodmark in gage well.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 18,000 second-feet and extended to peak stage on basis of computations of flow over dam at gage heights 27.20 and 29.40 feet. Discharge for period of no gage-height record computed on basis of records for other stations in Westfield River Basin.
Maxima.- December 1948-January 1949: Discharge, 32,200 second-feet 3 p.m. Dec. 31 (gage height, 22.00 feet, from floodmark in gage well).
1914 to November 1948: Discharge, 55,500 second-feet Sept. 21, 22, 1938 (gage height, 29.40 feet, from floodmarks), from rating curve extended above 18,000 second-feet as explained above.
Remarks.- Flood flow affected by Knightville, Borden Brook, and Cobble Mountain Reservoirs (see pp. 31, 37), and slightly affected by diversion from Westfield Little River for municipal supply of Springfield.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	140	Jan. 3	4,150	Jan. 9	4,580
29	160	4	4,320	10	4,400
30	4,920	5	4,440	11	4,360
31	24,500	6	9,120	12	4,010
Jan. 1	8,270	7	5,770	13	3,050
2	2,350	8	4,800	14	1,720

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1								12,000		19,000	7.60	3,160
2								13,000		18,000	7.47	3,020
3						800		14,000		16,000	7.38	2,930
4								15,000	14.5	13,900	7.28	2,830
5								17,000	13.75	12,400	7.21	2,760
6						1,900		20,000	13.05	11,100	7.13	2,680
7								22,000	12.35	9,940	7.03	2,580
8								25,000	11.87	9,140	6.96	2,510
9						3,600		27,000	11.34	8,290	6.87	2,420
10								28,000	10.84	7,510	6.80	2,360
11								29,000	10.39	6,840	6.74	2,310
N						4,000		30,000	10.01	6,260	6.69	2,260
1								31,000	9.68	5,800	6.62	2,200
2								32,000	9.39	5,400	6.56	2,140
3						5,000		32,200	9.14	5,050	6.50	2,090
4								32,000	8.92	4,750	6.45	2,040
5								31,500	8.70	4,460	6.40	2,000
6						8,200		31,000	8.53	4,240	6.36	1,960
7								30,000	8.36	4,030	6.31	1,920
8								28,000	8.21	3,850	6.27	1,880
9						10,000		26,000	8.07	3,680	6.23	1,850
10								24,000	7.94	3,530	6.19	1,810
11								22,000	7.83	3,410	6.20	1,820
12						11,500		20,500	7.70	3,270	7.04	2,590
	January 3		January 4		January 5		January 6		January 7		January 8	
2					9.22	5,160	10.44	8,910				
4					8.74	4,510	11.13	7,960				
6					8.18	3,820	11.44	8,450				
8					8.37	4,040	12.50	10,200				
10					8.56	4,030	13.30	11,600				
N					8.56	4,030	12.78	10,700				
2					8.63	4,370	12.53	10,300				
4					8.64	4,380	12.50	10,200				
6					7.14	2,690	12.05	9,440				
8					8.66	4,410	11.51	8,570				
10					9.83	6,010	11.18	8,040				
12					10.10	6,400	10.94	7,660				
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N												
2												
4												
6												
8												
10												
12												

Supplemental records.- Jan. 5, 1 a.m., 9.24 ft., 5,190 sec.-ft., 5:30 a.m., 8.02 ft., 3,620 sec.-ft., 3 p.m., 8.91 ft., 4,730 sec.-ft.; Jan. 6, 3 p.m., 12.56 ft., 10,300 sec.-ft.

Sykes Brook at Knightville, Mass.

Location.- Lat. 42°17'27", long. 72°52'15", at Knightville, Hampshire County, 200 feet downstream from bridge on State Highway 112, 0.4 mile upstream from mouth, and 0.4 mile west of Knightville Dam. Datum of gage is 641.40 feet above mean sea level, datum of 1929.
Drainage area.- 1.64 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 25 second-feet and extended to peak stage; affected by ice Dec. 28 to 1 p.m. Dec. 29. Shifting-control method used 7 p.m. Dec. 30 to 8:30 a.m. Dec. 31.
Maxima.- December 1948-January 1949: Discharge, 187 second-feet 9 a.m. Dec. 31 (gage height, 3.09 feet).
1945 to November 1948: Discharge, 99 second-feet July 29, 1945 (gage height, 2.58 feet), from rating curve extended above 25 second-feet by logarithmic plotting.
Remarks.- Flood flow not affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	0.4	Jan. 3	9.0	Jan. 9	7.3
29	1.3	4	7.1	10	6.2
30	25	5	8.7	11	5.5
31	114	6	29	12	4.7
Jan. 1	34	7	13.0	13	4.2
2	13.6	8	9.2	14	3.9

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					1.735	4.5	2.72	117				
2					1.745	4.8	2.75	124	2.485	57		
3					1.78	5.7	2.715	117				
4					1.80	6.2	2.685	108	2.43	51	2.03	16.2
5					1.79	6.0	2.83	135				
6				0.3	1.785	5.8	2.82	133	2.37	44		
7					1.775	5.6	3.00	173				
8					1.77	5.4	3.05	181	2.315	38	2.00	14.5
9					1.77	5.4	3.09	187				
10					1.80	6.2	2.93	143	2.265	32		
11					1.855	8.0	2.935	145				
N			1.335	.33	1.93	11.2	2.875	130	2.225	29	1.97	13.0
1			1.25	.35	1.96	12.8	2.82	117				
2			1.39	.49	2.03	17.4	2.82	117	2.185	26		
3			1.495	1.12	2.06	19.6	2.835	121				
4			1.52	1.34	2.12	25	2.79	110	2.155	24	1.95	12.2
5			1.53	1.43	2.16	29	2.735	100				
6			1.545	1.58	2.19	32	2.74	100	2.135	23		
7			1.68	3.4	2.28	42	2.735	100				
8			1.67	3.2	2.375	56	2.73	98	2.11	21	1.93	11.4
9			1.67	3.2	2.47	70	2.69	90				
10			1.715	4.1	2.60	92	2.65	84	2.085	18.9		
11			1.735	4.5	2.60	92	2.59	74				
12		0.3	1.74	4.6	2.60	92	2.54	66	2.065	17.8	1.91	10.6
	January 3		January 4		January 5		January 6		January 7		January 8	
2					1.785	6.4	2.205	27				
4					1.78	6.2	2.355	43	2.01	15.0		
6	1.88	9.4	1.82	7.4	1.78	6.2	2.325	38			1.89	9.8
8					1.78	6.2	2.305	36	1.985	13.7		
10					1.775	6.1	2.305	36				
N	1.865	8.9	1.805	7.0	1.775	6.1	2.25	32	1.96	12.6	1.87	9.0
2					1.80	6.8	2.205	27				
4					1.825	7.6	2.165	24	1.94	11.8		
6	1.85	8.4	1.80	6.8	1.855	8.5	2.13	22			1.855	8.5
8					1.945	12.0	2.095	20	1.925	11.2		
10					2.05	17.2	2.07	18.4				
12	1.835	7.8	1.785	6.4	2.15	24	2.045	16.7	1.91	10.6	1.84	8.0
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	1.825	7.6	1.79	6.5	1.76	5.7	1.725	4.8	1.70	4.3	1.685	4.0
8												
10												
N	1.815	7.2	1.78	6.2	1.75	5.4	1.72	4.7	1.69	4.1	1.68	3.9
2												
4												
6	1.805	7.0	1.77	6.0	1.745	5.3	1.715	4.6	1.69	4.1	1.675	3.8
8												
10												
12	1.795	6.6	1.765	5.8	1.735	5.1	1.71	4.5	1.69	4.1	1.665	3.6

Supplemental records.- Dec. 30, 10:30 p.m., 2.615 ft., 95 sec.-ft., 11:15 p.m., 2.535 ft., 77 sec.-ft.; Dec. 31, 1:30 a.m., 2.79 ft., 133 sec.-ft., 5:30 a.m., 2.94 ft., 161 sec.-ft., 6:30 a.m., 2.86 ft., 140 sec.-ft., 8:30 a.m., 3.02 ft., 173 sec.-ft., 9:30 a.m., 3.02 ft., 167 sec.-ft.; Jan. 6, 4:30 a.m., 2.37 ft., 44 sec.-ft., 8:45 a.m., 2.35 ft., 42 sec.-ft.

Middle Branch Westfield River at Goss Heights, Mass.

Location.- Lat. 42°15'31", long. 72°52'23", at highway bridge at Goss Heights, Hampshire County, 0.35 mile upstream from mouth. Datum of gage is 400.30 feet above mean sea level, datum of 1929.
Drainage area.- 52.6 square miles.
Gage-height record.- Water-stage recorder graph except for period Dec. 28 to 8 a.m. Dec. 30.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 3,200 second-feet and extended to peak stage on basis of slope-area determination. Discharge for period of no gage-height record computed on basis of recorded range in stage, weather records, and records for other stations in Westfield River Basin.
Maxima.- December 1948-January 1949: Discharge, 9,600 second-feet 8:30 a.m. Dec. 31 (gage height, 8.65 feet).
1910 to November 1948: Discharge, 19,900 second-feet Sept. 21, 1938, mean of two contracted-opening determinations; maximum gage height, 16.87 feet Mar. 12, 1936 (ice jam).
Remarks.- Flood flow not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	15	Jan. 3	226	Jan. 9	192
29	21	4	174	10	162
30	1,320	5	186	11	140
31	6,240	6	1,230	12	119
Jan. 1	1,010	7	402	13	110
2	349	8	250	14	99

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1						140	6.87	4,410	5.67	2,270		
2						190	7.28	5,150	5.41	1,980		
3						300	7.68	6,240	5.18	1,730		
4				16		450	7.86	6,790	5.00	1,550	3.22	414
5						520	7.91	6,950	4.85	1,400		
6		14				600	8.01	7,270	4.70	1,270		
7						650	8.11	7,610	4.57	1,170		
8				16		700	8.02	7,310	4.45	1,080	3.11	376
9					3.86	698	8.20	7,920	4.34	998		
10					3.79	660	8.21	7,960	4.23	924		
11					3.82	676	8.31	8,320	4.13	860		
N		15		16	3.87	704	8.63	9,520	4.05	810	2.99	336
1					4.03	798	8.52	9,100	3.98	768		
2					4.39	1,030	8.21	7,960	3.90	720		
3					4.82	1,380	7.84	6,730	3.83	682		
4				19	5.24	1,790	7.56	5,900	3.77	650	2.91	310
5					5.37	1,940	7.44	5,570	3.72	625		
6		17			5.55	2,110	7.31	5,230	3.66	597		
7					5.72	2,340	7.13	4,780	3.61	574		
8				21	5.95	2,640	6.91	4,280	3.56	552	2.83	286
9					6.10	2,850	6.70	3,850	3.51	530		
10					6.27	3,100	6.46	3,410	3.46	508		
11					6.45	3,400	6.20	3,000	3.42	491		
12		16		60	6.72	3,890	5.93	2,610	3.38	475	2.77	269
	January 3		January 4		January 5		January 6		January 7		January 8	
2					2.32	155	4.47	1,090				
4					2.31	152	5.01	1,560	3.41	487	2.81	280
6	2.67	241	2.44	183	2.30	150	5.28	1,840				
8					2.29	148	5.12	1,670	3.26	429	2.74	260
10					2.29	148	5.28	1,840				
N	2.60	222	2.39	171	2.29	148	5.04	1,590	3.13	382	2.69	246
2					2.31	152	4.68	1,250				
4					2.33	157	4.38	1,030	3.03	349	2.65	236
6	2.54	207	2.36	164	2.40	173	4.14	866				
8					2.52	202	3.94	744	2.95	323	2.61	225
10					2.81	280	3.77	650				
12	2.49	195	2.33	157	3.59	566	3.64	588	2.87	298	2.57	214
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4									2.12	113		
6	2.51	200	2.38	168	2.27	144	2.17	123			2.06	102
8									2.16	121		
10												
N	2.47	190	2.35	162	2.25	140	2.11	111	2.05	100	2.05	100
2												
4									2.07	104		
6	2.44	183	2.32	155	2.23	135	2.14	117			2.03	96
8									2.09	107		
10												
12	2.41	175	2.30	150	2.21	131	2.15	119	2.08	105	2.00	91

Supplemental records.- Dec. 31, 6:30 a.m., 8.20 ft., 7,920 sec.-ft., 8:30 a.m., 8.65 ft., 9,600 sec.-ft.

West Branch Westfield River at Huntington, Mass.

Location.- Lat. 42°14'14", long. 72°53'46", at Huntington, Hampshire County, 0.4 mile downstream from Roaring Brook and 1½ miles upstream from mouth. Datum of gage is 388.60 feet above mean sea level, datum of 1929.
Drainage area.- 93.7 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 2,700 second-feet and extended to peak stage on basis of computations of flow over dam at gage heights 11.93 and 12.95 feet; affected by ice 5 a.m., 2 p.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 12,200 second-feet 12 m. Dec. 31 (gage height, 11.93 feet).
1935 to November 1948: Discharge, 21,800 second-feet Sept. 21, 1938 (gage height, 15.5 feet, from floodmarks), mean of slope-area determination and computation of flow over dam.
Remarks.- Flood flow not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	28	Jan. 3	496	Jan. 9	423
29	38	4	424	10	358
30	2,080	5	444	11	303
31	9,140	6	2,500	12	252
Jan. 1	2,110	7	868	13	222
2	770	8	549	14	206

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.15	236	8.40	5,900	6.97	4,130		
2			0.92	30	2.27	282	9.22	7,110	6.67	3,800	3.40	950
3					2.51	406	9.75	7,960	6.38	3,480		
4			.92	30	3.27	866	10.30	8,940	6.13	3,220	3.33	904
5					3.72	1,000	10.85	9,930	5.87	2,960		
6	0.85	26	.92	30	3.75	1,200	11.24	10,700	5.65	2,740	3.26	859
7					3.95	1,340	11.34	10,900	5.44	2,550		
8			.92	30	4.02	1,380	11.37	11,000	5.25	2,380	3.21	826
9					4.01	1,380	11.47	11,200	5.03	2,180		
10			.92	30	3.99	1,360	11.72	11,700	4.86	2,030	3.14	781
11					3.99	1,360	11.92	12,100	4.72	1,920		
N	.87	27	.92	30	4.06	1,410	11.93	12,200	4.56	1,790	3.09	748
1					4.39	1,650	11.84	12,000	4.45	1,700		
2			.95	32	5.31	2,020	11.56	11,400	4.32	1,600	3.05	722
3					5.27	2,390	11.19	10,600	4.21	1,520		
4			.99	35	5.62	2,710	10.71	9,680	4.08	1,430	3.01	696
5					5.87	2,960	10.40	9,120	3.99	1,360		
6	.94	32	1.03	38	6.15	3,240	10.12	8,620	3.89	1,290	2.97	672
7					6.43	3,530	9.86	8,150	3.80	1,230		
8			1.06	40	6.76	3,900	9.50	7,560	3.74	1,190	2.94	654
9					6.97	4,130	9.00	6.760	3.66	1,130		
10			1.28	58	7.10	4,270	8.40	5,900	3.61	1,100	2.89	624
11					7.26	4,450	7.81	5,110	3.55	1,060		
12	.93	31	1.67	115	7.70	4,980	7.33	4,540	3.51	1,030	2.83	588
	January 3		January 4		January 5		January 6		January 7		January 8	
2					2.47	384	4.94	2,100				
4	2.74	534			2.46	378	5.90	2,990	3.54	1,050	2.87	612
6			2.58	444	2.45	372	6.42	3,520				
8	2.68	499			2.45	372	6.27	3,360	3.35	918	2.80	570
10					2.44	367	6.29	3,380				
N	2.64	477	2.54	422	2.44	367	6.11	3,200	3.21	826	2.75	540
2					2.44	367	5.71	2,800				
4	2.59	450			2.47	384	5.24	2,370	3.11	762	2.71	516
6			2.50	400	2.52	411	4.78	1,960				
8	2.66	488			2.64	477	4.44	1,690	3.00	690	2.67	494
10					2.93	648	4.11	1,450				
12	2.63	472	2.48	389	3.79	1,220	3.86	1,270	2.93	648	2.64	477
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	2.58	444	2.45	372	2.34	315	2.22	261	2.15	236	2.08	212
8												
10												
N	2.53	416	2.42	356	2.32	305	2.18	246	2.09	215	2.06	206
2												
4												
6	2.50	400	2.40	345	2.29	290	2.19	250	2.11	221	2.04	200
8												
10												
12	2.48	389	2.37	330	2.26	277	2.18	246	2.10	218	2.01	191

Supplemental records.- Jan. 6, 9 a.m., 6.23 ft., 3,320 sec.-ft.

Borden Brook and Cobble Mountain Reservoirs near Westfield, Mass.

Location.- At Borden Brook Reservoir on Borden Brook, 3½ miles south of Blandford, Hampden County, and at Cobble Mountain Reservoir on Westfield Little River, 7½ miles west of Westfield.
Drainage area.- 45.8 square miles above Cobble Mountain Dam.
Remarks.- Total usable capacity is 3,394,000,000 cubic feet. Change in contents is the net change in both reservoirs from 8 a.m. on day shown to 8 a.m. on following day. Basic data furnished by Board of Water Commissioners, Springfield, Mass.

Change in contents, in millions of cubic feet, 1948-49

Dec.	28	0	Jan.	3	+6.6	Jan. 9	+11.6
	29	+22.5		4	+.8	10	-2.5
	30	+293.3		5	+49.1	11	-5.1
	31	+460.9		6	+41.2	12	-15.1
Jan.	1	+69.2		7	-8.3	13	-12.8
	2	+36.4		8	+13.2	14	-6.7

Westfield Little River at outlet of Cobble Mountain Reservoir, near Westfield, Mass.

Location.- Lat. 42°07'34", long. 72°53'37", at Cobble Mountain Dam, 7½ miles west of Westfield, Hampden County.
Drainage area.- 45.8 square miles.
Stage-discharge relation.- Observed discharge is computed flow through venturi meters at outlet tunnel at power house, 2.4 miles downstream from Cobble Mountain Dam. No flow over reservoir spillway or through by-pass tunnel.
Maxima.- December 1948-January 1949: Mean daily discharge adjusted for change in contents, 5,350 second-feet Dec. 31.
1905 to November 1948: Mean daily discharge adjusted for change in contents, 4,760 second-feet Sept. 21, 1938.
Remarks.- Flood runoff affected by change in contents in Borden Brook and Cobble Mountain Reservoirs (total usable capacity 3,394,000 cubic feet). Daily discharges adjusted for change in contents in both reservoirs. Daily figures are from 8 a.m. on day shown to 8 a.m. on following day. Basic data furnished by Board of Water Commissioners, Springfield, Mass.

Mean daily discharge, in second-feet, 1948-49

Day	Observed	Adjusted	Day	Observed	Adjusted	Day	Observed	Adjusted
Dec. 28	29	29	Jan. 3	71	147	Jan. 9	0	135
29	36	296	4	101	110	10	144	115
30	2	3,400	5	291	859	11	155	96
31	16	5,350	6	487	964	12	262	87
Jan. 1	0	801	7	431	335	13	229	80
2	0	421	8	47	200	14	153	75

West Branch Farmington River near New Boston, Mass.
(Formerly published as Farmington River near New Boston)

Location.- Lat. 42°04'45" (revised), long. 73°04'24° (revised), at highway bridge 0.3 mile downstream from Clam River and 1 mile south of New Boston, Berkshire County. Datum of gage is 758.21 feet above mean sea level, datum of 1929.
Drainage area.- 92.0 square miles.
Gage-height record.- Water-stage recorder graph except for period Dec. 28 to 3 p.m. Dec. 31. Peak stage from floodmark.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 9,600 second-feet and extended to peak stage; probably affected by ice Dec. 28-30. Discharge for period of no gage-height record computed on basis of records for Farmington River at Riverton, Conn., West Branch Westfield River at Huntington, and records of elevation and gate operation at Otis Reservoir.
Maxima.- December 1948-January 1949: Discharge, 11,700 second-feet 12 m. Dec. 31 (gage height, 10.50 feet, from floodmarks).
1913 to November 1948: Discharge, 18,500 second-feet Sept. 21, 1938 (gage height, 12.94 feet), from rating curve extended above 1,400 second-feet on basis of contracted-opening and slope-area determinations at gage heights 10.65 and 12.94 feet.
Remarks.- Flood flow affected by Otis Reservoir.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	105	Jan. 3	518	Jan. 9	388
29	110	4	365	10	309
30	2,210	5	425	11	254
31	9,190	6	2,220	12	209
Jan. 1	2,910	7	900	13	184
2	922	8	540	14	163

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1						400		6,400	8.41	5,020		
2						500		7,500	8.27	4,700	6.01	1,300
3						700		8,200	8.16	4,470		
4						900		9,000	8.04	4,220	5.85	1,160
5						950		10,000	7.92	3,980		
6						1,000		10,500	7.80	3,750	5.75	1,080
7						1,100		10,700	7.68	3,520		
8						1,250		10,800	7.57	3,330	5.64	998
9						1,350		11,000	7.46	3,140		
10						1,400		11,300	7.36	2,980	5.53	921
11						1,450		11,500	7.25	2,800		
N						1,600		11,700	7.16	2,670	5.44	864
1						1,900		11,500	7.05	2,510		
2						2,200		11,200	6.98	2,410	5.35	810
3						2,600		10,800	6.88	2,270		
4						2,900	10.10	10,200	6.80	2,170	5.27	765
5						3,200	9.93	9,600	6.72	2,070		
6						3,500	9.68	8,730	6.63	1,960	5.21	735
7						3,700	9.50	8,110	6.55	1,860		
8						4,100	9.31	7,490	6.49	1,790	5.15	705
9						4,300	9.10	6,850	6.40	1,690		
10						4,500	8.91	6,310	6.34	1,620	5.09	675
11						4,800	8.73	5,830	6.25	1,530		
12						5,500	8.56	5,390	6.19	1,470	5.03	645
	January 3		January 4		January 5		January 6		January 7		January 8	
2					4.20	318	6.79	2,160				
4	4.92	594	4.43	396	4.19	315	7.46	3,140	5.76	1,090	4.96	612
6					4.17	309	7.50	3,210				
8	4.81	544	4.39	382	4.15	302	7.25	2,800	5.59	963	4.86	567
10					4.13	296	7.21	2,740				
N	4.73	512	4.34	365	4.14	299	6.99	2,430	5.45	870	4.77	528
2					4.17	309	6.77	2,130				
4	4.65	480	4.29	348	4.24	331	6.56	1,870	5.32	792	4.71	504
6					4.37	375	6.38	1,670				
8	4.57	448	4.24	331	4.64	476	6.22	1,500	5.19	725	4.64	476
10					5.27	765	6.09	1,370				
12	4.50	420	4.20	318	6.40	1,690	5.96	1,250	5.07	665	4.57	448
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	4.48	413	4.22	325	4.03	267	3.84	215	3.73	188	3.65	168
8												
10												
N	4.39	382	4.17	309	3.98	253	3.81	208	3.74	190	3.63	164
2												
4												
6	4.33	361	4.12	293	3.94	242	3.79	202	3.68	175	3.61	159
8												
10											3.59	155
12	4.27	341	4.07	278	3.89	228	3.76	195	3.67	173	3.51	138

Supplemental records.- Jan. 6, 5 a.m., 7.60 ft., 3,380 sec.-ft.

West Branch Farmington River at Riverton, Conn.
(Formerly published as Farmington River at Riverton)

Location.- Lat. 41°57'15", long. 73°00'45", a quarter of a mile downstream from Still River, 1 mile south of Riverton, Litchfield County, and 4 miles northeast of Winsted. Datum of gage is 472.22 feet above mean sea level, datum of 1929.
Drainage area.- 216 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 6,000 second-feet and extended to peak stage by logarithmic plotting; affected by ice Dec. 28, 29, and intermittently to 3 p.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 22,000 second-feet 1 p.m. Dec. 31 (gage height, 13.95 feet).
1929 to November 1948: Discharge, 37,100 second-feet Sept. 21, 1938 (gage height, 17.95 feet, from floodmark), from rating curve extended above 5,700 second-feet on basis of velocity-area study.
Remarks.- Flow regulated by storage in Otis Reservoir (see p. 41) and at low flow by plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	170	Jan. 3	1,150	Jan. 9	931
29	195	4	802	10	735
30	3,030	5	823	11	630
31	17,500	6	4,890	12	536
Jan. 1	5,840	7	2,320	13	486
2	2,100	8	1,340	14	445

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							9.65	10,500				
2					3.25	902	10.85	13,300	9.20	9,520		
3							11.65	15,400				
4					3.50	1,070	12.15	16,700	8.50	8,090		
5							12.45	17,500				
6					3.65	1,180	12.70	18,200	8.05	7,240	4.95	2,460
7							12.95	19,000				
8					4.05	1,520	12.65	18,100	7.65	6,510		
9							13.00	19,100				
10					4.20	1,660	13.45	20,400	7.28	5,870		
11							13.63	21,000				
N					4.40	1,860	13.83	21,600	6.96	5,330	4.53	1,990
1							13.95	22,000				
2					5.00	2,520	13.92	21,900	6.65	4,830		
3							13.86	21,700				
4					5.85	3,620	13.75	21,400	6.38	4,410		
5							13.47	20,500				
6					6.60	4,750	12.75	18,400	6.12	4,020	4.22	1,680
7							12.32	17,200				
8					7.35	5,980	11.85	15,900	5.88	3,660		
9							11.35	14,600				
10					7.80	6,780	10.90	13,400	5.66	3,350		
11							10.40	12,200				
12			2.75	592	8.70	8,490	10.00	11,300	5.47	3,100	3.97	1,450
	January 3		January 4		January 5		January 6		January 7		January 8	
2							5.90	3,690				
4					2.89	685	7.00	5,390				
6	3.74	1,260	3.18	848			7.92	7,000	5.12	2,660	3.98	1,460
8					2.85	665	7.72	6,640				
10							7.40	6,070				
N	3.59	1,140	3.09	794	2.87	675	7.17	5,680	4.74	2,220	3.81	1,320
2					2.90	690						
4					2.97	725	6.55	4,670				
6	3.44	1,030	3.02	752	3.09	794			4.45	1,910	3.65	1,190
8					3.28	916	6.02	3,870				
10					3.75	1,270						
12	3.29	923	2.93	705	4.65	2.120	5.60	3,270	4.21	1,670	3.51	1,080
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	3.28	916										
2												
4												
6												
8												
10												
12	3.12	812										

Farmington River at Rainbow, Conn.

Location.- Lat. 41°54'45", long. 72°41'20", at Rainbow, Hartford County, 0.3 mile downstream from Rainbow Dam of Farmington River Power Co., and 7.4 miles upstream from mouth. Prior to 1939 gaging site was 4 miles upstream, at Tariffville.
Drainage area.- 591 square miles.
Gage-height record.- Water-stage recorder graph except for periods 7:30 p.m. Jan. 6 to 5:30 a.m. Jan. 8, 3 p.m. to 5 p.m. Jan. 8, 7 p.m. to 9 p.m. Jan. 9, and Jan. 10-14.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 8,000 second-feet and extended to peak stage on basis of computations of flow over Rainbow and Tariffville dams at gage height 13.7 feet. Discharge for periods of no record computed on basis of power-plant data furnished by Farmington River Power Co.
Maxima.- December 1948-January 1949: Discharge, 26,500 second-feet 9 a.m. Jan. 1 (gage height, 13.83 feet, result of washing out of flash boards); natural crest discharge, 25,200 second-feet between 11 a.m. and noon Jan. 1 (gage height, 13.39 feet).
1928 to November 1948: Discharge, 29,900 second-feet Sept. 22, 1938 (gage height, 13.7 feet, present site and datum, from floodmarks), by computation of flow over Tariffville Dam.
See Water-Supply Paper 891, p. 180, for crest discharges of some outstanding floods.
Remarks.- Flood flow regulated by power plants, by Otis, Barkhamsted, East Branch, Nepaug, and Whigville Reservoirs having a combined capacity of about 6,450,000,000 cubic feet (see pp. 41,43,46), by diversions for domestic water supply from Barkhamsted, Nepaug, and Whigville Reservoirs and Whites Bridge pumping plant, and by sewage diversion from city of Bristol.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	213	Jan. 3	7,150	Jan. 9	3,650
29	515	4	3,500	10	2,100
30	1,230	5	2,380	11	1,860
31	8,120	6	4,340	12	1,500
Jan. 1	23,200	7	7,870	13	1,350
2	15,400	8	6,020	14	1,330

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							3.21	2,110	11.00	18,500		
2							3.21	2,110	11.42	19,600	11.68	20,200
3							3.22	2,130	11.83	20,600		
4							3.23	2,140	12.31	21,900	11.32	19,300
5							3.57	2,600	12.52	22,600		
6							3.95	3,140	12.97	23,900	10.95	18,400
7					0.76	29	5.40	5,610	13.04	24,100		
8					3.12	2,000	6.42	7,600	13.16	24,500	10.56	17,400
9					3.14	2,020	6.15	7,060	13.83	26,500		
10							6.15	7,060	13.55	25,600	10.20	16,500
11							6.23	7,220	13.40	25,200		
N							6.38	7,520	13.39	25,200	9.83	15,600
1							6.60	7,960	13.33	25,000		
2							6.85	8,470	13.28	24,800	9.44	14,600
3							7.13	9,090	13.21	24,600		
4					3.10	1,970	7.43	9,750	13.14	24,400	9.07	13,700
5							8.12	11,300	13.04	24,100		
6							8.12	11,300	12.95	23,800	7.85	10,700
7					3.11	1,980	8.67	12,700	12.82	23,500		
8					2.30	1,050	8.70	12,800	12.68	23,000	8.11	11,300
9							9.00	13,500	12.53	22,600		
10							9.64	15,100	12.38	22,100	7.95	10,900
11					2.32	1,070	10.75	16,600	12.16	21,500		
12			0.78	34	3.20	2,100	10.77	17,900	12.03	21,100	7.66	10,300
	January 3		January 4		January 5		January 6		January 7		January 8	
2									5.85	6,460	6.45	7,660
4	7.09	9,000							6.0	6,760	6.35	7,460
6									6.3	7,360	6.20	7,160
8	6.57	7,900							6.55	7,860	6.07	6,900
10									6.7	8,160	5.94	6,640
N	6.08	6,920							6.8	8,360	5.84	6,450
2									6.85	8,470	3.80	2,920
4	5.67	6,120							6.9	8,580	4.6	4,170
6									6.9	8,580	5.40	5,610
8	5.30	5,420							6.85	8,470	5.22	5,270
10									6.75	8,260	5.09	5,030
12	4.97	4,820					5.75	6,280	6.6	7,960	4.97	4,820
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N												
2												
4												
6												
8												
10												
12												

Supplemental records.- Jan. 1,,8:30 a.m., 13.20 ft., 24,600 sec.-ft.; Jan. 8, 1 p.m., 5.82 ft., 6,410 sec.-ft., 5 p.m., 4.7 ft., 4,340 sec.-ft.

Otis Reservoir at Cold Spring, Mass.

Location.- Lat. 42°09'35", long. 73°03'33", on unnamed stream three-quarters of a mile upstream from mouth and 1 mile northeast of Cold Spring, Hampden County.
Drainage area.- 17.2 square miles.
Gage-height record.- Staff gage read daily at 8 a.m. except as otherwise noted. Gage height at midnight from graph based on gage readings.
Remarks.- Usable capacity is 780,000,000 cubic feet. Release from reservoir 6.0 m.c.f. Dec. 28, 5.9 m.c.f. Dec. 29, 4.2 m.c.f. Dec. 30. Gates closed 5 p.m. Dec. 30 to Jan. 14. Records furnished by Collins Co., Collinsville, Conn.

Gage height and change in contents, 1948-49

Day	Gage height (feet)†	Change in contents (millions of cubic feet)	Day	Gage height (feet)†	Change in contents (millions of cubic feet)	Day	Gage height (feet)†	Change in contents (millions of cubic feet)
Dec. 28	9.6	-7	Jan. 3	e17.7	e+8	Jan. 9	21.2	+17
29	9.3	-6	4	e17.9	e+7	10	21.3	+4
30	9.5	+4	5	18.2	+12	11	21.5	+9
31	e15.6	e+169	6	19.9	+67	12	21.7	+8
Jan. 1	e17.0	e+50	7	20.4	+21	13	21.8	+4
2	e17.5	e+18	8	20.8	+17	14	22.0	+9

† Gage height at 12 p.m.
e No gage-height record; based on estimated inflow.

Still River at Robertsville, Conn.

Location.- Lat. 41°58'00", long. 73°02'00", 1,900 feet downstream from Sandy Brook, 0.4 mile southeast of Robertsville, Litchfield County, and 1 mile upstream from mouth at Riverton. Datum of gage is 510.24 feet above mean sea level, datum of 1929.
Drainage area.- 84.4 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 2,600 second-feet and extended to peak stage on basis of slope-area determinations at gage heights 6.14 and 10.12 feet; affected by ice Dec. 28 to 8 a.m. Dec. 30.
Maxima.- July 1948 to January 1949: Discharge, 10,200 second-feet 4 p.m. Dec. 31, 1948 (gage height, 10.12 feet).
Remarks.- Flood flow affected by natural storage in Highland Lake.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	50	Jan. 3	496	Jan. 9	428
29	60	4	346	10	343
30	959	5	398	11	300
31	7,920	6	2,310	12	254
Jan. 1	3,000	7	1,100	13	233
2	902	8	614	14	213

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							7.07	4,160				
2					2.70	195	7.92	5,500	7.75	5,220		
3							8.15	5,910				
4					2.77	290	8.55	6,660	7.33	4,540		
5							9.06	7,710				
6					2.75	350	9.06	7,710	7.01	4,070	4.09	1,050
7							9.00	7,580				
8					2.91	400	9.19	8,000	6.60	3,520		
9							9.33	8,310				
10					3.01	484	9.45	8,580	6.25	3,080		
11							9.60	8,930				
N					3.21	565	9.85	9,530	5.83	2,590	3.77	862
1							9.75	9,290				
2					3.72	832	9.40	8,470	5.56	2,300		
3							10.05	10,000				
4					4.20	1,130	10.12	10,200	5.28	2,020		
5							10.00	9,900				
6					4.64	1,450	9.80	9,410	5.04	1,800	3.52	730
7							9.64	9,030				
8					5.17	1,910	9.44	8,560	4.84	1,620		
9							9.15	7,910				
10					5.56	2,300	8.93	7,430	4.66	1,470		
11							8.64	6,840				
12			2.32	96	6.27	3,100	8.35	6,280	4.50	1,340	3.30	610
	January 3		January 4		January 5		January 6		January 7		January 8	
2							4.84	1,620				
4					2.47	294	5.83	2,590				
6	3.12	528					6.13	2,940	4.42	1,280		
8					2.45	288	6.08	2,880				
10							6.08	2,880				
N	3.06	504			2.55	318	5.97	2,750	4.08	1,050	3.27	595
2							5.78	2,540				
4					2.65	349	5.58	2,320				
6	2.93	452					5.38	2,120	3.81	886		
8					3.00	480	5.18	1,920				
10					3.48	700	5.01	1,770				
12	2.78	393	2.50	303	4.18	1,120	4.86	1,630	3.62	772	3.04	496
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	2.85	420										
2												
4												
6												
8												
10												
12	2.73	376										

Supplemental records.- Dec. 31, 11:30 a.m., 9.30 ft., 8,240 sec.-ft., 2:30 p.m., 9.97 ft., 9,820 sec.-ft.; Jan. 6, 5:30 a.m., 6.14 ft., 2,950 sec.-ft.

Barkhamsted Reservoir near Barkhamsted, Conn.

Location.- Lat. 41°54'55", long. 72°57'05", on East Branch Farmington River 1¼ miles south of Barkhamsted, Litchfield County, and 3⅛ miles upstream from mouth.
Drainage area.- 50.5 square miles.
Remarks.- Elevation of spillway crest is 530.0 feet. Records, furnished by Water Bureau, Metropolitan District Commission, Hartford, Conn., show 8 a.m. elevation and change in contents from 8 a.m. on previous day to 8 a.m. on day shown.

Elevation and change in contents, 1948-49

Day	Elevation (feet)†	Change in contents (millions of gallons)	Day	Elevation (feet)†	Change in contents (millions of gallons)	Day	Elevation (feet)†	Change in contents (millions of gallons)
Dec. 28	518.55	-122	Jan. 3	526.70	+156	Jan. 9	529.41	+125
29	518.29	-166	4	526.83	+94	10	529.55	+104
30	518.51	+140	5	526.97	+100	11	529.67	+89
31	521.80	+2,158	6	528.03	+765	12	529.79	+89
Jan. 1	525.96	+2,876	7	528.93	+657	13	529.89	+74
2	526.48	+369	8	529.24	+227	14	529.79	-74

† Elevation at 8 a.m.

East Branch Reservoir at New Hartford, Conn.

Location.- Lat. 41°52'55", long. 72°57'25", on East Branch Farmington River 1 mile east of New Hartford, Hartford County, and 1¼ miles upstream from mouth.
Drainage area.- 61.2 square miles.
Remarks.- Elevation of spillway crest is 420.5 feet. Records, furnished by Water Bureau, Metropolitan District Commission, Hartford, Conn., show 8:30 a.m. elevation and change in contents from 8:30 a.m. on previous day to 8:30 a.m. on day shown.

Elevation and change in contents, 1948-49

Day	Elevation (feet)†	Change in contents (millions of gallons)	Day	Elevation (feet)†	Change in contents (millions of gallons)	Day	Elevation (feet)†	Change in contents (millions of gallons)
Dec. 28	408.05	+97	Jan. 3	414.98	+13	Jan. 9	417.30	+18
29	409.35	+115	4	415.07	+10	10	417.45	+18
30	409.53	+14	5	415.14	+8	11	417.50	+6
31	411.68	+209	6	416.19	+122	12	417.60	+13
Jan. 1	414.57	+315	7	416.90	+84	13	417.67	+8
2	414.86	+34	8	417.15	+30	14	418.84	+147

† Elevation at 8:30 a.m.

Nepaug Reservoir near Collinsville, Conn.

Location.- Lat. 41°49'40", long. 72°56'05", on Nepaug River three-quarters of a mile upstream from mouth and 1½ miles northwest of Collinsville, Hartford County.
Drainage area.- 32.0 square miles.
Remarks.- Elevation of spillway crest is 485.0 feet. Records, furnished by Water Bureau, Metropolitan District Commission, Hartford, Conn., show 8 a.m. elevation, change in contents, and diversions for Hartford water supply from 8 a.m. on previous day to 8 a.m. on day shown.

Elevation, change in contents, and diversions, 1948-49

Day	Elevation (feet)†	Change in contents (millions of gallons)	Diversions (millions of gallons)	Day	Elevation (feet)†	Change in contents (millions of gallons)	Diversions (millions of gallons)
Dec. 28	466.76	-30	36	Jan. 6	477.04	+185	26
29	466.62	-31	36	7	478.98	+492	26
30	466.74	+26	36	8	479.54	+145	26
31	468.60	+409	36	9	479.80	+68	26
Jan. 1	474.54	+1,378	26	10	479.98	+47	26
2	475.62	+263	26	11	480.12	+37	26
3	475.94	+78	26	12	480.22	+26	26
4	476.14	+49	26	13	480.30	+21	26
5	476.30	+40	26	14	480.40	+26	26

† Elevation at 8 a.m.

Burlington Brook near Burlington, Conn.

Location.- Lat. 41°47'10", long. 72°57'55", 1¼ miles north of Burlington, Hartford County, 2½ miles upstream from mouth, and 3 miles southwest of Collinsville.
Drainage area.- 4.1 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 325 second-feet and extended to peak stage on basis of theoretical formulas; affected by ice 12 p.m. Dec. 27 to 6 a.m. Dec. 28, 2 p.m. to 5 p.m. and 10 p.m. Dec. 29.
Maxima.- December 1948-January 1949: Discharge, 591 second-feet 1 p.m. Dec. 31 (gage height, 6.87 feet).
1931 to November 1948: Discharge, 645 second-feet Sept. 21, 1938 (gage height, 7.24 feet), from rating curve extended above 330 second-feet as described above.
Remarks.- Flood flow not affected by regulation.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	2.0	Jan. 3	19.3	Jan. 9	17.8
29	6.8	4	15.8	10	15.5
30	54	5	22.5	11	13.8
31	325	6	143	12	13.0
Jan. 1	76	7	33.7	13	11.9
2	27.9	8	21.9	14	11.5

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							3.25	146				
2					2.00	46.5	3.93	211				
3							5.04	328				
4					2.15	56	5.51	383	2.89	113		
5					2.16	57	5.42	372				
6			0.71	1.89	2.11	54	5.23	350			1.73	30.6
7							4.97	321				
8					2.06	50	4.73	294	2.49	81		
9							4.56	276				
10					1.98	45.3	4.60	280				
11							5.09	334				
N			.73	1.97	1.89	39.7	6.34	492	2.23	62	1.66	26.8
1							6.87	591				
2			.80	2.25	1.83	36.2	6.47	514				
3							5.91	431				
4			1.00	3.1	1.89	39.7	5.42	372	2.07	51		
5							5.18	344				
6			1.15	5.79	2.06	50	4.99	323			1.61	24.2
7												
8			1.40	14.6	2.32	68	4.64	284	1.94	42.8		
9												
10			1.63	25.3	2.59	89	4.15	233				
11												
12	0.74	2.01	1.82	35.6	2.95	118	3.61	179	1.85	37.4	1.57	22.3
	January 3		January 4		January 5		January 6		January 7		January 8	
2							3.15	136				
4					1.41	15.0	4.10	228				
6							4.87	310	1.86	37.9		
8					1.43	15.9	4.38	256				
10							3.69	187				
N	1.50	18.9	1.42	15.5	1.47	17.6	3.20	141	1.75	31.6	1.56	21.8
2							2.86	111				
4					1.53	20.3	2.63	92				
6							2.44	77	1.68	27.9		
8					1.74	31.1	2.27	65				
10					1.88	39.1	2.16	57				
12	1.46	17.2	1.41	15.0	2.24	63	2.06	50	1.62	24.7	1.51	19.4
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	1.47	17.6										
2												
4												
6												
8												
10												
12	1.45	16.8										

Pequabuck River at Forestville, Conn.

Location.- Lat. 41°40'20", long. 72°54'05", 700 feet upstream from station of New York, New Haven & Hartford Railroad at Forestville, Hartford County, half a mile downstream from North Branch Pequabuck River (Coppermine Brook), and 6 miles upstream from mouth. Datum of gage is 197.7 feet above mean sea level, datum of 1929 (levels by Connecticut State Water Commission).

Drainage area.- 45.2 square miles.

Gage-height record.- Water-stage recorder graph except for periods 1 a.m. to 12 m. Dec. 31 and 4 p.m. Jan. 5 to 12 m. Jan. 6.

Discharge record.- Stage-discharge relation defined by current-meter measurements below 1,200 second-feet and extended to peak stage on basis of slope-area determination and computation of flow over dam at gage height 7.3 feet.

Maxima.- December 1948-January 1949: Discharge, 3,260 second-feet 2 p.m. Dec. 31 (gage height, 6.70 feet).

1941 to November 1948: Discharge, 1,980 second-feet Apr. 27, 1945 (gage height, 5.05 feet).

Flood of September 1938 reached a stage of 7.3 feet, from floodmarks (discharge, 3,800 second-feet, by slope-area method and computation of flow over dam).

Remarks.- Flood flow regulated by storage and diversion at Whigville Reservoir for municipal supply of city of New Britain. Effluent of sewage disposal plant of city of Bristol is diverted into Quinnipiac River Basin.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	21	Jan. 3	233	Jan. 9	198
29	60	4	177	10	172
30	360	5	263	11	146
31	2,120	6	1,200	12	128
Jan. 1	849	7	450	13	118
2	358	8	257	14	108

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1	0.86	-										
2					1.82	209	4.6	1,620	4.20	1,380		
3												
4					1.87	226	5.2	2,040	3.90	1,200		
5												
6	.84	-	0.82	18	1.84	216	4.75	1,720	3.62	1,040	2.35	400
7												
8					1.79	199	4.3	1,440	3.42	931		
9												
10					1.76	190	4.45	1,530	3.21	820		
11												
N			.84	20	1.89	233	5.5	2,260	3.08	755	2.23	344
1							6.55	3,120				
2			.90	26	1.98	266	6.70	3,260				
3							6.60	3,170				
4			1.26	74	2.14	333	6.41	3,000	2.83	630		
5							6.19	2,810				
6	.86	-	1.41	101	2.33	420	6.02	2,680			2.15	308
7					2.53	515						
8			1.52	126	2.61	554	5.62	2,360	2.68	556		
9					2.82	654						
10			1.69	169	3.23	855	5.13	1,990				
11					3.37	925						
12	.85	21	1.77	193	3.75	1,120	4.66	1,660	2.53	485	2.07	272
	January 3		January 4		January 5		January 6		January 7		January 8	
2							3.5	975				
4							4.1	1,320				
6					1.81	176	4.55	1,590	2.60	520		
8							4.7	1,690				
10							4.6	1,620				
N	1.97	232	1.80	173	1.85	190	4.35	1,470	2.41	430	2.02	251
2					1.91	210	4.06	1,300				
4					2.0	243	3.80	1,140				
6					2.1	285	3.50	975	2.27	362		
8					2.31	380	3.25	840				
10					2.6	520	3.05	740				
12	1.87	196	1.78	167	3.0	715	2.90	665	2.15	308	1.93	217
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	1.87	196	1.80	173	1.71	147	1.64	128	1.60	118	1.56	109
2												
4												
6												
8												
10												
12	1.83	183	1.75	158	1.66	134	1.62	123	1.58	113	1.53	102

Whigville Reservoir at Whigville, Conn.

Location.- Lat. 41°44'08", long. 72°57'02", on North Branch Pequabuck River, half a mile northwest of Whigville, Burlington County.
Drainage area.- 4.0 square miles.
Remarks.- Elevation of spillway crest is 507.20 feet. Records, furnished by Board of Water Commissioners, New Britain, Conn., show 8 a.m. elevation, change in contents, and diversions for New Britain water supply from 8 a.m. on previous day to 8 a.m. on day shown.

Elevation, change in contents, and diversions, 1948-49

Day	Elevation (feet)†	Change in contents (millions of gallons	Diversions (millions of gallons)	Day	Elevation (feet)†	Change in contents (millions of gallons	Diversions (millions of gallons)
Dec. 28	562.66	-0.32	1.51	Jan. 6	571.66	+4.74	5.07
29	562.92	+.76	0	7	570.53	-4.12	5.06
30	566.08	+9.99	0	8	570.46	-.26	5.07
31	571.55	+19.20	3.54	9	570.36	-.36	5.09
Jan. 1	570.76	-2.88	5.12	10	570.34	-.08	5.08
2	570.46	-1.10	5.11	11	570.33	-.03	5.07
3	570.40	-.22	5.12	12	570.31	-.08	5.08
4	570.37	-.11	5.07	13	570.30	-.03	5.08
5	570.36	-.03	5.07	14	570.28	-.07	5.06

† Elevation at 8 a.m.

Park River at Hartford, Conn.

Location.- Lat. 41°45'36", long. 72°41'42", at plate-girder footbridge on Riverside Street in Hartford, Hartford County, 1,300 feet downstream from confluence of North and South Branches, 2,200 feet upstream from timber-dam control, 0.9 mile upstream from inlet of Park River conduit, and 2.3 miles upstream from mouth. Datum of gage is 27.13 feet above mean sea level, datum of 1929 (levels by Department of Engineering, city of Hartford).
Drainage area.- 74.0 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements.
Maxima.- December 1948-January 1949: Discharge, 2,100 second-feet at 12 p.m. Dec. 31 (gage height, 6.22 feet).
1936 to November 1948: Discharge, 5,650 second-feet Jan. 25, 1938 (gage height, 9.16 feet).
A stage of 10.7 feet, from floodmarks, was reached Mar. 21, 1936, affected by backwater from Connecticut River.
Remarks.- Some regulation by mills above station and by storage and diversion at Hartford water-supply reservoirs on small headwater streams.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	47	Jan. 3	286	Jan. 9	233
29	65	4	204	10	198
30	384	5	206	11	180
31	1,510	6	1,070	12	162
Jan. 1	1,430	7	680	13	150
2	496	8	337	14	145

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1	2.51	58										
2												
3												
4	2.52	60	2.50	55	3.08	249	4.47	924	6.06	1,980		
5												
6											3.81	570
7												
8	2.46	46	2.44	41	3.31	341	5.02	1,250	5.70	1,730		
9												
10												
11												
N	2.44	41	2.44	41	3.39	376	5.47	1,570	5.27	1,430	3.61	474
1												
2			2.44	41								
3												
4	2.44	41	2.48	50	3.47	412	5.92	1,880	4.81	1,130		
5												
6			2.56	71							3.46	407
7												
8	2.44	41	2.65	98	3.66	497	6.13	2,030	4.40	885		
9												
10			2.75	130								
11												
12	2.49	53	2.85	164	4.06	698	6.22	2,100	4.10	720	3.33	350
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4							3.84	585	4.47	924		
6					2.90	182					3.38	371
8							4.44	907	4.13	736		
10												
N	3.14	273	2.91	186	2.89	178	5.08	1,300	3.90	615	3.28	329
2												
4							5.35	1,480	3.73	530		
6					2.95	200	5.34	1,480			3.20	296
8							5.18	1,370	3.62	479		
10												
12	3.08	249	2.94	197	3.29	333	4.85	1,150	3.53	438	3.13	269
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	3.02	227	2.93	193	2.87	171	2.82	153	2.79	143	2.78	139
2												
4												
6												
8												
10												
12	2.97	208	2.94	197	2.90	182	2.84	160	2.82	153	2.81	150

Supplemental records.- Jan. 6, 5 p.m., 5.36 ft., 1,490 sec.-ft.

Quinnipiac River at Wallingford, Conn.

Location.- Lat. 41°26'58", long. 72°50'29", 0.4 mile downstream from Quinnipiac Street Bridge, in Wallingford, New Haven County, and 2 miles upstream from Worton Brook.
Drainage area.- 109 square miles.
Gage-height record.- Water-stage recorder graph except for period 5 p.m. Jan. 5 to 6 p.m. Jan. 6.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 1,400 second-feet and extended to peak stage on basis of computation of flow over dam 1 mile upstream at gage height 9.55 feet. Gage heights used to hundredths except for period of missing record. Shifting-control method used Dec. 28 to 9 a.m. Dec. 31.
Maxima.- December 1948-January 1949: Discharge, 2,960 second-feet 3 a.m. Jan. 1 (gage height, 7.97 feet).
1930 to November 1948: Discharge, 5,230 second-feet Sept. 21, 1938 (gage height, 9.55 feet), by computation of flow over dam 1 mile above station.
Remarks.- Flood runoff not materially affected by diversions or artificial storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	98	Jan. 3	749	Jan. 9	638
29	115	4	522	10	523
30	248	5	516	11	452
31	1,910	6	1,210	12	425
Jan. 1	2,580	7	1,380	13	396
2	1,290	8	862	14	354

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							3.90	773	7.95	2,940		
2							4.28	885	7.96	2,950	6.45	1,720
3					1.95	231	4.68	1,000	7.97	2,960		
4							5.00	1,100	7.96	2,950	6.22	1,580
5							5.22	1,160	7.95	2,940		
6			1.20	94	1.93	227	5.42	1,230	7.94	2,930	5.99	1,460
7							5.55	1,280	7.92	2,900		
8							5.75	1,350	7.89	2,870	5.76	1,360
9					1.84	208	6.13	1,520	7.86	2,840		
10							6.51	1,760	7.81	2,790	5.65	1,320
11							6.69	1,880	7.75	2,730		
N			1.18	92	1.79	198	6.91	2,040	7.69	2,670	5.35	1,220
1							7.11	2,180	7.62	2,600		
2					1.80	200	7.22	2,260	7.57	2,550		
3			1.31	112			7.34	2,350	7.49	2,470	5.07	1,140
4					1.88	217	7.39	2,390	7.44	2,430		
5							7.47	2,460	7.32	2,340		
6			1.46	136	1.95	231	7.55	2,530	7.23	2,260	4.86	1,080
7					2.07	257	7.64	2,620	7.13	2,190		
8					2.15	275	7.73	2,710	7.05	2,140		
9			1.53	149	2.30	309	7.80	2,780	6.96	2,070	4.59	997
10					2.61	385	7.86	2,840	6.87	2,010		
11					2.84	444	7.90	2,880	6.76	1,930		
12	1.21	96	1.83	206	3.31	585	7.93	2,920	6.66	1,860	4.41	943
	January 3		January 4		January 5		January 6		January 7		January 8	
2							3.85	775	6.19	1,560		
4							4.10	850	6.21	1,580	4.54	982
6	4.00	820	3.10	550	2.81	468	4.45	955	6.19	1,560		
8							4.80	1,060	6.13	1,540	4.28	904
10							5.20	1,180				
N	3.72	736	2.96	510	2.86	482	5.55	1,280	5.87	1,410	4.04	832
2							5.80	1,380				
4					2.98	515	5.95	1,440	5.54	1,280	3.89	787
6	3.48	664	2.89	490			6.01	1,480				
8					3.20	580	6.04	1,490	5.17	1,170	3.81	763
10							6.09	1,520				
12	3.29	607	2.82	471	3.55	685	6.14	1,540	4.85	1,080	3.69	727
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	3.51	673										
8												
10												
N	3.38	634	3.01	524	2.74	449	2.65	424	2.54	395		
2												
4												
6	3.26	598	2.93	501								
8												
10												
12	3.17	571	2.82	471	2.70	438	2.61	414	2.48	380		

East Branch Housatonic River at Coltsville, Mass.
(Formerly published as Housatonic River at Coltsville)

Location.- Lat. 42°28'10", long. 73°11'50", at Coltsville, Berkshire County, 1 mile upstream from Unkamet Brook and 2 miles northeast of Pittsfield. Datum of gage is 993.49 feet above mean sea level, datum of 1929.
Drainage area.- 57.1 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 1,300 second-feet and extended to peak stage on basis of computations of flow over dam at gage heights 10.38 and 10.80 feet.
Maxima.- December 1948-January 1949: Discharge, 5,700 second-feet 1 p.m. Dec. 31 (gage height, 10.38 feet).
1936 to November 1948: Discharge, 6,400 second-feet Sept. 21, 1938 (gage height, 10.80 feet), by computation of flow over dam.
Remarks.- Flood runoff not materially affected by artificial or natural storage. Regulation at medium and low flows by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	32	Jan. 3	302	Jan. 9	219
29	33	4	222	10	198
30	926	5	219	11	161
31	4,350	6	1,170	12	135
Jan. 1	1,820	7	618	13	120
2	518	8	318	14	114

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.24	34	7.93	2,590	8.51	3,140		
2					2.24	34	8.13	2,770	8.29	2,920	4.80	720
3					2.25	34	8.37	3,000	8.09	2,730		
4					2.26	35	8.63	3,270	7.94	2,600	4.61	654
5					3.46	252	8.89	3,570	7.83	2,500		
6					3.62	296	9.19	3,940	7.68	2,380	4.45	598
7					3.86	368	9.59	4,480	7.52	2,260		
8					4.13	449	9.65	4,560	7.38	2,150	4.30	545
9					4.48	563	9.87	4,880	7.23	2,040		
10					4.55	588	10.13	5,290	7.07	1,930	4.20	510
11					4.73	652	10.17	5,350	6.91	1,820		
N	2.22	32	2.22	32	4.82	688	10.32	5,600	6.75	1,710	4.09	473
1					5.06	787	10.38	5,700	6.59	1,610		
2					5.40	945	10.26	5,500	6.44	1,520	4.02	450
3					5.62	1,060	10.14	5,300	6.32	1,450		
4					5.92	1,220	10.04	5,140	6.15	1,350	3.99	440
5					6.17	1,360	9.89	4,920	6.00	1,260		
6					6.45	1,530	9.76	4,720	5.85	1,180	3.95	427
7					6.80	1,740	9.62	4,520	5.72	1,120		
8					7.05	1,920	9.49	4,340	5.57	1,040	3.91	414
9					7.23	2,040	9.38	4,180	5.43	978		
10					7.39	2,150	9.19	3,940	5.29	916	3.85	395
11					7.52	2,260	8.94	3,630	5.17	868		
12	2.22	32	2.24	34	7.68	2,380	8.72	3,370	5.05	820	3.78	373
	January 3		January 4		January 5		January 6		January 7		January 8	
2					3.14	194	4.49	612	5.25	900		
4	3.62	324	3.36	250	3.14	194	4.99	796	5.03	812	3.78	373
6					3.14	194	5.45	988	4.84	736		
8	3.57	309	3.32	239	3.13	191	5.82	1,170	4.67	674	3.73	357
10					3.15	196	6.28	1,430	4.51	618		
N	3.49	286	3.34	245	2.99	159	6.54	1,580	4.41	584	3.60	318
2					3.08	179	6.47	1,540	4.28	538		
4	3.51	292	3.13	191	3.14	194	6.34	1,460	4.17	500	3.52	295
6					3.24	218	6.16	1,360	4.09	473		
8	3.48	283	3.08	179	3.38	256	5.95	1,240	4.01	446	3.45	275
10					3.64	330	5.72	1,120	3.95	427		
12	3.40	261	3.14	194	4.05	460	5.48	1,000	3.89	408	3.40	261
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	3.34	245										
6			3.13	191	3.03	168	2.90	140	2.82	125	2.77	116
8	3.09	182	3.32	239								
10	3.24	218										
N	3.24	218	3.15	196	3.00	161	2.87	134	2.77	116	2.78	117
2									2.76	114		
4	3.21	211										
6			3.10	184	2.98	157	2.85	130	2.80	121	2.74	110
8	3.18	203										
10												
12	3.16	198	3.05	172	2.93	146	2.82	125	2.80	121	2.71	105

Supplemental records.- Dec. 31, 7:30 a.m., 9.73 ft., 4,680 sec.-ft., 10:30 a.m., 10.22 ft., 5,430 sec.-ft.; Jan. 6, 11:30 a.m., 6.56 ft., 1,600 sec.-ft.; Jan. 8, 5 p.m., 3.33 ft., 242 sec.-ft., 10:30 p.m., 3.43 ft., 269 sec.-ft., 11 p.m., 2.99 ft., 159 sec.-ft.; Jan. 9, 6:30 a.m., 3.32 ft., 239 sec.-ft.; Jan. 10, 8:30 a.m., 3.60 ft., 318 sec.-ft., 9 a.m., 3.36 ft., 250 sec.-ft.; Jan. 13, 1 p.m., 2.77 ft., 116 sec.-ft., 1:30 p.m., 2.52 ft., 75 sec.-ft.

Housatonic River near Great Barrington, Mass.

Location (revised).- Lat. 42°13'55", long. 73°21'19", at upstream side of highway bridge, at Van Deusenville, 0.5 mile upstream from Williams River and 2 miles north of Great Barrington, Berkshire County. Datum of gage is 683.04 feet above mean sea level, datum of 1929.

Drainage area.- 280 square miles.

Gage-height record.- Water-stage recorder graph.

Discharge record.- Stage-discharge relation defined by current-meter measurements below 5,300 second-feet and extended to peak stage on basis of computations of flow over dams at gage heights 11.72 and 12.08 feet.

Maxima.- December 1948-January 1949: Discharge, 12,200 second-feet 7 a.m. Jan. 1 (gage height, 12.08 feet).
1913 to November 1948: Discharge, 11,520 second-feet Sept. 22, 1938 (gage height, 11.72 feet), from rating curve extended above 6,200 second-feet on basis of determinations at gage height 11.72 feet by contracted-opening method and by computations of flow over dams.

Remarks.- Flood runoff affected by some artificial and natural storage. Regulation at medium and low flows by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	102	Jan. 3	3,850	Jan. 9	2,050
29	184	4	2,470	10	1,560
30	1,430	5	1,820	11	1,170
31	7,290	6	2,830	12	1,010
Jan. 1	11,100	7	3,510	13	907
2	7,310	8	2,890	14	842

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.71	161	7.95	3,760	11.68	10,800		
2					2.80	193	8.23	4,080	11.73	11,000	11.16	9,180
3					3.11	330	8.55	4,460	11.78	11,100		
4					3.25	395	8.90	4,910	11.80	11,200	11.03	8,790
5					3.34	440	9.22	5,370	11.89	11,500		
6					3.52	531	9.47	5,760	12.02	12,000	10.87	8,380
7					3.70	630	9.68	6,120	12.08	12,200		
8					3.86	721	9.84	6,390	12.05	12,100	10.72	8,000
9					4.03	823	10.08	6,830	12.03	12,000		
10					4.14	891	10.27	7,190	12.01	11,900	10.57	7,630
11					4.31	1,000	10.40	7,450	12.01	11,900		
N					4.43	1,080	10.55	7,750	11.98	11,800	10.40	7,260
1					4.58	1,180	10.73	8,180	11.92	11,600		
2					4.80	1,320	10.79	8,320	11.91	11,600	10.21	6,860
3					5.02	1,460	10.77	8,280	11.83	11,300		
4					5.41	1,720	10.79	8,320	11.74	11,000	10.05	6,540
5					6.35	2,360	10.83	8,420	11.66	10,700		
6					6.43	2,420	10.92	8,650	11.63	10,600	9.87	6,190
7					6.70	2,610	11.13	9,190	11.56	10,400		
8					6.95	2,810	11.16	9,280	11.49	10,200	9.70	5,880
9					7.08	2,910	11.24	9,520	11.45	10,000		
10					7.22	3,040	11.35	9,850	11.41	9,930	9.53	5,580
11					7.37	3,170	11.41	10,000	11.33	9,690		
12					7.62	3,420	11.56	10,500	11.30	9,600	9.34	5,260
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4	8.93	4,640	7.35	2,790	6.40	1,960	6.71	2,210	8.11	3,580	7.75	3,190
6												
8	8.53	4,100	7.17	2,620	6.27	1,860	7.12	2,580	8.12	3,590	7.63	3,070
10												
N	8.22	3,710	6.95	2,420	6.16	1,770	7.42	2,860	8.13	3,610	7.44	2,880
2									7.81	3,250		
4	7.97	3,430	6.78	2,270	6.03	1,670	7.74	3,180	8.05	3,520	7.30	2,740
6					5.98	1,640						
8	7.68	3,120	6.70	2,200	6.09	1,710	7.98	3,440	8.02	3,480	7.12	2,580
10												
12	7.53	2,970	6.56	2,090	6.31	1,890	8.08	3,550	7.92	3,370	6.96	2,430
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	6.80	2,290	6.05	1,680	5.52	1,310						
6							5.15	1,070	4.94	939	4.81	861
8	6.63	2,140	5.99	1,640	5.48	1,290						
10												
N	6.47	2,020	5.86	1,550	5.19	1,090	5.11	1,040	4.91	921	4.79	850
2												
4	6.37	1,940	5.81	1,520	5.23	1,120						
6							5.01	981	4.86	891	4.72	811
8	6.24	1,830	5.67	1,420	5.15	1,070						
10												
12	6.16	1,770	5.54	1,330	5.00	975	4.92	927	4.75	828	4.81	861

Supplemental records.- Dec. 30, 4:30 p.m., 6.41 ft., 2,410 sec.-ft.

Housatonic River at Falls Village, Conn.

Location.- Lat. 41°57'15", long. 73°22'05", at Falls Village, Litchfield County, half a mile downstream from power plant of Connecticut Power Co., and 1½ miles downstream from Hollenbeck River. Datum of gage is 522.41 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.- 632 square miles.
Gage-height record.- Water-stage recorder graph, adjusted for intake lag on basis of four gage readings by engineer and power-plant tailrace gage readings furnished by Connecticut Power Co., except for period 9 p.m. Dec. 31 to 10 p.m. Jan. 2, when recorder float was held at floor of gage house and graph was reconstructed on basis of tailrace gage readings and high-water mark.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 14,500 second-feet and extended graphically to peak stage; affected by ice Dec. 28 and part of Dec. 29. Gage heights used to half-tenths.
Maxima.- December 1948-January 1949: Discharge, 23,900 second-feet 8 a.m. to 4 p.m. Jan. 1 (gage height, 22.9 feet, from floodmark).
1912 to November 1948: Discharge, 19,900 second-feet Sept. 23, 1938 (gage height, 20.7 feet, from floodmark).
Remarks.- Flood flow not materially affected by artificial or natural storage. Low and medium flows regulated by power plant of Connecticut Power Co.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	250	Jan. 3	14,700	Jan. 9	5,670
29	520	4	8,120	10	4,360
30	1,710	5	5,110	11	3,390
31	12,100	6	6,930	12	2,700
Jan. 1	23,700	7	7,680	13	2,320
2	21,400	8	6,950	14	2,140

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					1.45	262						
2					1.2	181	8.6	4,160	22.65	23,400	22.65	23,400
3					1.15	166						
4					1.15	166	9.1	5,010	22.8	23,700	22.55	23,200
5					1.15	166						
6					3.15	1,080	9.5	5,330	22.85	23,800	22.4	22,900
7					4.15	1,630						
8					4.6	1,880	9.8	5,570	22.9	23,900	22.3	22,700
9					4.8	1,990	13.2	8,890				
10					4.9	2,050	14.2	10,100	22.9	23,900	22.15	22,500
11					4.3	1,710						
N					4.3	1,710	15.8	12,200	22.9	23,900	21.9	22,000
1												
2					4.3	1,710	17.0	13,900	22.9	23,900	21.65	21,600
3												
4					4.35	1,740	18.3	15,800	22.9	23,900	21.25	20,800
5												
6					4.6	1,880	19.5	17,800	22.85	23,800	20.7	19,900
7												
8					5.9	2,660	20.6	19,700	22.8	23,700	20.0	18,600
9												
10					7.0	3,420	21.6	21,500	22.75	23,600	19.8	18,300
11												
12			2.2	590	7.95	4,090	22.3	22,700	22.7	23,500	19.7	18,100
	January 3		January 4		January 5		January 6		January 7		January 8	
2	19.4	17,600	14.6	10,600	9.9	5,660	9.4	5,250				
4	19.05	17,000	14.15	10,000	9.7	5,490	9.65	5,450	12.15	7,750	11.7	7,300
6	18.7	16,500	13.7	9,480	9.5	5,330	10.0	5,750				
8	18.35	15,900	13.2	8,890	9.3	5,170	10.5	6,200	12.1	7,700	11.55	7,150
10	18.0	15,400	12.75	8,400	9.1	5,010	11.1	6,740				
N	17.6	14,800	12.3	7,900	9.0	4,930	11.7	7,300	12.1	7,700	11.35	6,960
2	17.2	14,200	11.8	7,400	8.9	4,850	12.15	7,750				
4	16.75	13,500	11.4	7,010	8.85	4,810	12.4	8,010	12.05	7,650	11.15	6,780
6	16.3	12,900	11.05	6,700	8.85	4,810	12.5	8,120				
8	15.85	12,200	10.7	6,380	8.9	4,850	12.5	8,120	12.0	7,600	10.95	6,600
10	15.45	11,700	10.4	6,110	9.0	4,930	12.4	8,010				
12	15.0	11,100	10.2	5,930	9.2	5,090	12.3	7,900	11.85	7,450	10.7	6,380
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	10.5	6,200										
6			8.65	4,650	7.25	3,600					5.15	2,200
8	10.2	5,930										
10												
N	9.9	5,660	8.3	4,370	6.95	3,380	5.9	2,660	5.3	2,290	5.0	2,110
2												
4	9.6	5,410										
6			7.9	4,050	6.65	3,180					4.95	2,080
8	9.3	5,170										
10												
12	9.0	4,930	7.55	3,800	6.4	3,000	5.6	2,470	5.2	2,230	5.0	2,110

Housatonic River at Gaylordsville, Conn.

Location.- Lat. 41°39'15", long. 73°29'20", at Gaylordsville, Litchfield County, half a mile downstream from hydroelectric plant of Connecticut Light & Power Co. (outlet of 1½-mile-long power canal from Bulls Bridge Dam), and 1½ miles downstream from Tenmile River. Datum of gage is 236.78 feet above mean sea level, datum of 1929.
Drainage area.- 994 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements.
Maxima.- December 1948-January 1949: Discharge, 32,300 second-feet at 8 a.m. Jan. 1 (gage height, 14.85 feet).
1900-1914, 1940 to November 1948: Maximum gage height observed, 14.3 feet Mar. 1, 1902, site and datum then in use (discharge, 31,000 second-feet, may have been affected by ice).
Flood of May 1854 reached a stage of 21 feet 3 inches, former site and datum, reported by observed in 1902. Flood of Sept. 22, 1938 reached a stage of 14.5 feet, from flood-marks, at present gage site (discharge, 37,000 second-feet, by computation of flow over dam 2½ miles upstream adjusted for flow from intervening area).
Remarks.- Flood flow not materially affected by artificial or natural storage. Low and medium flows regulated by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	227	Jan. 3	19,700	Jan. 9	8,310
29	441	4	11,500	10	6,450
30	3,080	5	7,630	11	5,070
31	19,000	6	14,600	12	4,060
Jan. 1	31,400	7	12,700	13	3,460
2	27,200	8	10,400	14	3,160

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.37	620	8.10	8,610				
2					2.40	635	8.70	10,000	14.59	31,000		
3					2.40	635	8.90	10,500				
4					2.95	975	9.05	10,900	14.72	31,700		
5					3.35	1,280	9.30	11,600				
6					3.43	1,350	9.61	12,400	14.81	32.100	14.12	28,800
7					3.46	1,370	9.90	13,200				
8					3.66	1,550	10.17	14,000	14.85	32,300		
9					3.73	1,620	10.42	14,700				
10					3.90	1,790	10.68	15,500	14.82	32,200		
11					3.83	1,720	10.95	16,300				
N					3.87	1,760	11.42	17,900	14.79	32,000	13.81	27,300
1					3.87	1,760	11.90	19,500				
2					4.60	2,570	12.39	21,400				
3					4.90	2,930	12.80	23,000	14.72	31,700		
4					5.55	3,790	13.19	24,600				
5					5.97	4,410	13.50	25,900				
6					7.36	7,000	13.77	27,100	14.60	31,100	13.45	25,700
7					6.47	5,270	13.84	27,500				
8					6.69	5,670	13.94	27,900				
9					7.82	7,980	14.02	28,300	14.53	30,700		
10					7.00	6,270	14.10	28,700				
11					7 33	6,930	14.20	29,100				
12			2.36	615	7.56	7,420	14.30	29,600	14.40	30,100	13.03	23,900
	January 3		January 4		January 5		January 6		January 7		January 8	
2							9.55	12,200				
4					7.74	7,810	10.15	13,900				
6	12.52	21,900	9.89	13,200			10.57	15,200	9.95	13,300		
8					7.50	7,290	10.63	15,300				
10							10.53	15,000				
N	11.90	19,500	9.25	11,400	7.37	7,020	10.47	14,900	9.63	12,500	8.84	10,400
2					7.30	6,870	10.53	15,000				
4					7.30	6,870	10.59	15,200				
6	11.37	17,700	8.58	9,740	7.30	6,870	10.66	15,400	9.41	11,900		
8					7.72	7,760	10.66	15,400				
10					8.18	8,790	10.53	15,000				
12	10.63	15,300	8.00	8,380	8.89	10,500	10.42	14,700	9.22	11,400	8.42	9,360
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	7.96	8,290	7.07	6,410	6.35	5,050	5.71	4,020	5.28	3,420	5.09	3,180
2												
4												
6												
8												
10												
12	7.50	7,290	6.70	5,690	6.01	4,480	5.50	3,720	5.18	3,290	4.95	3,000

Zoar Lake at Stevenson, Conn.

Location.- Lat. 41°22'55", long. 73°10'05", at Stevenson dam of Connecticut Light & Power Co. on Housatonic River at Stevenson, Fairfield County, Conn.
Drainage area.- 1,544 square miles.
Remarks.- Change in contents computed from elevations of lake at midnight furnished by Connecticut Light & Power Co., Waterbury, Conn.

Change in contents, 1948-49

Day	Change in contents (equivalent, second-feet)	Day	Change in contents (equivalent, second-feet)	Day	Change in contents (equivalent, second-feet)
Dec. 28	+181	Jan. 3	-654	Jan. 9	-372
29	+467	4	-431	10	-368
30	+848	5	-159	11	-313
31	+2,320	6	+972	12	-512
Jan. 1	-731	7	-435	13	0
2	-609	8	-378	14	-400

Housatonic River at Stevenson, Conn.

Location.- Lat. 41°23'05", long. 73°09'55", in New Haven County, a quarter of a mile upstream from Eightmile Brook, and a quarter of a mile downstream from dam of Connecticut Light & Power Co. at Stevenson, Fairfield County. Datum of gage is 24.98 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).

Drainage area.- 1,545 square miles.

Gage-height record.- Water-stage recorder graph. Occasionally during the flood period sharp fluctuations in stage occurred as a result of power-plant operations. Gage heights listed below were selected to "average" the recorded graph.

Discharge record.- Stage-discharge relation defined by current-meter measurements below 35,000 second-feet and extended to peak stage on basis of determinations of peak flows at dams and by slope-area method for floods of March 1936 and September 1938; affected by ice 9 p.m. Dec. 28 to 1 p.m. Dec. 29.

Maxima.- December 1948-January 1949: Discharge, 51,800 second-feet at 10:30 p.m. Dec. 31 (gage height, 19.97 feet; slightly regulated).

1928 to November 1948: Discharge, 69,500 second-feet Mar. 12, 1936 (gage height, 23.5 feet, from floodmarks) by computations of peak flow at Stevenson and Derby dams and slope-area determination at gaging station.

Remarks.- Flood flow affected by Rocky River, Stevenson and Shepaug Reservoirs (combined usable capacity, 6,600,000,000 cubic feet) and by small diversion from the basin at Shepaug Reservoir.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	196	Jan. 3	25,800	Jan. 9	11,400
29	191	4	15,500	10	9,120
30	3,750	5	10,500	11	7,320
31	30,600	6	23,800	12	6,190
Jan. 1	43,700	7	18,900	13	4,960
2	35,200	8	14,200	14	4,750

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					1.07	98	9.36	9,210				
2					1.00	90	10.08	11,000	19.40	49,000		
3					1.00	90	10.70	12,600				
4					1.00	90	11.25	14,000	19.06	47,300		
5					1.00	90	11.80	15,600				
6					1.00	90	12.67	18,300	18.68	45,400	17.05	37,200
7					1.03	93	12.77	18,700				
8					5.77	2,970	13.78	22,400	18.47	44,400		
9					5.80	3,010	14.24	24,400				
10					7.40	5,360	15.14	28,400	18.33	43,600		
11					7.40	5,360	15.57	30,400				
N					7.37	5,310	15.77	31,300	18.20	43,000	16.62	35,100
1					7.37	5,310	16.08	32,700				
2					7.37	5,310	16.32	33,700				
3					7.40	5,360	16.49	34,500				
4					7.41	5,380	16.90	36,500	17.96	41,800		
5					7.50	5,520	17.76	40,800				
6					7.45	5,440	18.37	43,800			16.17	33,100
7					7.48	5,490	18.91	46,600				
8					7.61	5,720	19.25	48,200	17.73	40,600		
9					7.61	5,720	19.45	49,200				
10					7.90	6,240	19.87	51,400				
11					8.68	7,760	19.93	51,600				
12			1.27	123	8.90	8,200	19.81	51,000	17.51	39,600	15.74	31,100
	January 3		January 4		January 5		January 6		January 7		January 8	
2	15.53	30,200	13.06	19,700	10.45	11,900	10.77	12,700	13.86	22,700		
4	15.34	29,300	12.78	18,700	10.20	11,300	11.70	15,300	13.60	21,700		
6	15.14	28,400	12.52	17,800	10.01	10,800	12.86	19,000	13.38	20,800	11.61	15,000
8	15.00	27,800	12.20	16,800	9.65	9,920	14.02	23,400	13.17	20,100		
10	14.91	27,400	11.65	15,200	9.77	10,200	15.19	28,700	12.71	18,500		
N	14.71	26,500	11.73	15,400	9.63	9,880	15.61	30,500	12.69	18,400	11.31	14,100
2	14.50	25,600	11.61	15,000	9.62	9,850	15.69	30,900				
4	14.10	23,800	10.92	13,100	9.63	9,880	15.37	29,500	12.41	17,400		
6	13.82	22,600	10.57	12,200	9.66	9,950	14.91	27,400			11.04	13,400
8	13.72	22,200	10.77	12,700	9.75	10,200	14.52	25,600	12.13	16,600		
10	13.57	21,600	10.71	12,600	9.86	10,400	14.28	24,600				
12	13.34	20,700	10.61	12,300	10.15	11,200	14.10	23,800	11.93	16,000	10.79	12,800
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4			9.58	9,750								
6					8.64	7,680						
8			9.40	9,300			7.87	6,190				
10			9.34	9,170								
N	10.22	11,400	9.44	9,400	8.38	7,160						
2			9.24	8,950								
4			9.20	8,860			7.82	6,100				
6					8.32	7,040						
8			9.00	8,420								
10												
12	9.76	10,200	8.89	8,180	8.13	6,660	7.72	5,920				

Supplemental records.- Dec. 31, 10:20 p.m., 19.82 ft., 51,100 sec.-ft., 10:30 p.m., 19.97 ft., 51,800 sec.-ft.; Jan. 3, 7 a.m., 14.85 ft., 27,100 sec.-ft., 9 a.m., 14.30 ft., 24,600 sec.-ft.; Jan. 5, 9 a.m., 9.86 ft., 10,400 sec.-ft.; Jan. 6, 1:30 p.m.,

Tenmile River near Gaylordsville, Conn.

Location.- Lat. 41°39'35", long. 73°31'45", 1 mile upstream from Connecticut-New York State line, 1½ miles upstream from mouth, and 2½ miles northwest of Gaylordsville, Litchfield County.
Drainage area.- 204 square miles.
Gage-height record.- Water-stage recorder graph except for period 4 p.m. Jan. 1 to Jan. 14. Peak of Jan. 6 from floodmarks.
Discharge record.- Stage-discharge relation defined by current-meter measurements; affected by ice Dec. 28 to 4 p.m. Dec. 30. Gage-heights used to half-tenths except for period 4 p.m. Dec. 30 to 4 p.m. Jan. 1 when hundredths were used.
Maxima.- December 1948-January 1949: Discharge, 6,360 second-feet at 3:30 a.m. Jan. 1 (gage height, 9.30 feet).
1929 to November 1948: Discharge, 12,500 second-feet Sept. 22, 1938 (gage height, 12.77 feet).
Remarks.- No regulation or diversions.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	46	Jan. 3	1,770	Jan. 9	1,360
29	58	4	1,270	10	1,070
30	820	5	1,150	11	880
31	3,830	6	3,080	12	805
Jan. 1	5,140	7	2,840	13	668
2	2,740	8	1,840	14	600

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1									9.18	6,190		
2							5.57	2,190	9.23	6,260		
3									9.29	6,350		
4							5.87	2,430	9.29	6,350		
5									9.25	6,290		
6			0.95	44	1.95	242	6.13	2,670	9.19	6,210	6.55	3,060
7												
8							6.44	2,950	8.96	5,880		
9												
10							6.69	3,200	8.71	5,550		
11												
N			.95	44	2.8	520	7.01	3,520	8.46	5,230	6.15	2,680
1												
2					3.2	690	7.43	3,980	8.19	4,880		
3												
4					3.95	1,070	7.88	4,510	7.88	4,510		
5												
6			1.1	63	4.54	1,430	8.37	5,110	7.65	4,230	5.8	2,370
7												
8					5.03	1,770	8.68	5,510	7.4	3,950		
9												
10					5.25	1,930	8.91	5,810	7.25	3,780		
11												
12	.96	45	1.4	114	5.37	2,030	9.10	6,080	7.05	3,560	5.5	2,130
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4												
6	5.25	1,930	4.4	1,340	3.95	1,070	5.5	2,130	6.65	3,160	5.3	1,970
8												
10												
N	5.0	1,750	4.25	1,250	3.9	1,040	6.75	3,260	6.2	2,730	5.1	1,820
2												
4												
6	4.8	1,610	4.15	1,190	4.15	1,190	7.65	4,230	5.85	2,420	4.9	1,680
8												
10												
12	4.6	1,470	4.05	1,130	4.6	1,470	7.35	3,900	5.55	2,170	4.75	1,580
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	4.4	1,340	3.95	1,070								
2												
4												
6												
8												
10												
12	4.15	1,190	3.75	955								

Supplemental records.- Jan. 1, 3:30 a.m., 9.30 ft., 6,360 sec.-ft.

Rocky River Reservoir (Candlewood Lake) near New Milford, Conn.

Location.- Lat. 41°35'00", long. 73°26'00", at Rocky River hydroelectric plant of Connecticut Light & Power Co., 1½ miles northwest of New Milford, Litchfield County.
Drainage area.- 40.4 square miles.
Gage-height record.- Gage read daily in the morning. Gage height at midnight from graph based on gage readings.
Remarks.- Reservoir stores both normal runoff of Rocky River and water pumped from Housatonic River at power plant. Water was pumped daily during the flood period, in varying amounts, except Dec. 28. Basic data furnished by Connecticut Light & Power Co.

Change in contents, 1948-49

Day	Change in contents (equivalent, second-feet)	Day	Change in contents (equivalent, second-feet)	Day	Change in contents (equivalent, second-feet)
Dec. 28	-127	Jan. 3	+301	Jan. 9	+440
29	0	4	+312	10	+428
30	+706	5	+544	11	+498
31	+1,940	6	+1,410	12	+556
Jan. 1	+1,180	7	+1,030	13	+567
2	+845	8	+556	14	+440

Still River near Lanesville, Conn.

Location.- Lat. 41°31'14", long. 73°25'09", at highway bridge 1½ miles south of Lanesville, Litchfield County, 2 miles upstream from mouth, and 4 miles south of New Milford. Datum of gage is 213.05 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.- 68.5 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements.
Maxima.- December 1948-January 1949: Discharge, 1,100 second-feet 12 p.m. Dec. 31 to 4 a.m. Jan. 1 (gage height, 8.00 feet).
1931 to November 1948: Discharge, 4,410 second-feet Sept. 22, 1938 (gage height, 10.88 feet).
Remarks.- Flood flow not materially affected by artificial storage or diversions.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	31	Jan. 3	341	Jan. 9	353
29	41	4	287	10	278
30	237	5	243	11	239
31	724	6	469	12	206
Jan. 1	963	7	687	13	184
2	587	8	466	14	167

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1	1.85	24										
2					2.67	80	6.54	438				
3												
4					3.01	98	6.63	458	8.00	1,100		
5												
6	1.95	32	1.99	35	3.46	124	6.71	478				
7												
8					3.87	160	6.81	508	7.94	1,060		
9												
10					4.25	200	6.95	560				
11												
N	2.00	36	1.98	34	4.70	245	7.18	652	7.83	988	6.99	576
1												
2					5.12	280	7.46	780				
3												
4					5.53	316	7.69	904	7.69	904		
5												
6	1.93	30	2.07	42	5.80	341	7.85	1,000				
7												
8					6.03	366	7.94	1,060	7.52	810		
9			2.27	61								
10					6.21	388	7.98	1,090				
11												
12	1.92	30	2.48	72	6.38	412	8.00	1,100	7.36	730	6.66	465
	January 3		January 4		January 5		January 6		January 7		January 8	
2							5.68	329	7.44	770		
4							5.98	360	7.46	780		
6			5.49	312	4.57	235	6.22	390	7.45	775		
8							6.39	414				
10							6.51	432				
N	6.32	404	5.17	284	4.49	228	6.59	448	7.29	696	6.62	455
2					4.50	229	6.67	468				
4					4.55	234	6.75	490				
6			4.87	260	4.66	243	6.86	526	7.10	620		
8					4.85	258	7.03	592				
10					5.08	276	7.22	668				
12	5.80	341	4.68	244	5.38	302	7.35	725	6.93	552	6.31	402
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8							4.30	211	4.03	187	3.85	170
10												
N	5.91	352	5.05	274	4.61	239						
2												
4							4.16	198	3.94	179	3.76	162
6												
8												
10												
12	5.42	306	4.82	256	4.43	223	4.13	196	3.93	178	3.76	162

Shepaug River at Woodville, Conn.

Location.- Lat. 41°43'16", long. 73°17'40", at dam at outlet of Shepaug Reservoir 1 mile north of Woodville, Litchfield County, and 3 miles upstream from Bantam River.

Drainage area.- 38.0 square miles.

Gage-height record.- Non-recording gage read daily at noon; additional readings made during periods of rapid change in stage; gage height at midnight determined by interpolation or, for days of rapid change in stage, from graph based on gage readings.

Discharge record.- Observed discharge is computed from flow over reservoir spillway. Diversion from Shepaug Reservoir computed from noon readings of Parshall flume.

Maxima.- December 1948-January 1949: Discharge, 5,160 second-feet 4 to 5 p.m. Dec. 31.
1935 to November 1948: Discharge, 6,000 second-feet 7 p.m. Sept. 21, 1938.

Remarks.- Mean daily discharges adjusted for change in contents in Shepaug Reservoir and diversion from Shepaug Reservoir to Naugatuck River Basin. Basic data furnished by Bureau of Engineering, city of Waterbury.

Mean daily discharge and change in contents, 1948-49

Day	Observed (second-feet)	Change in contents (equivalent, second-feet)	Adjusted (second-feet)	Day	Observed (second-feet)	Change in contents (equivalent, second-feet)	Adjusted (second-feet)
Dec. 28	*14	-6	*8	Jan. 6	1,890	+10	1,900
29	*14	+71	*85	7	605	-21	584
30	*18	+369	*387	8	400	-11	389
31	*3,420	+356	*3,780	9	268	-9	259
Jan. 1	1,730	-84	1,650	10	206	-6	200
2	585	-25	560	11	158	-5	153
3	438	-11	317	12	131	-3	128
4	250	-7	243	13	119	-2	117
5	218	+32	250	14	101	-3	98

*Includes diversion from Shepaug Reservoir.

Shepaug River near Roxbury, Conn.

Location.- Lat. 41°32'53", long. 73°19'51", at highway bridge 0.7 mile south of Roxbury Station, 1¼ miles southwest of village of Roxbury, Litchfield County, and 2 miles upstream from Jacks Brook. Datum of gage is 282.07 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.- 133 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 3,500 second-feet and extended by logarithmic plotting on basis of computations of flow over dam for floods of March 1936 and September 1938; affected by ice Dec. 28 to 9 p.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 7,010 second-feet at 5:30 p.m. Dec. 31 (gage height, 10.42 feet).
1930 to November 1948: Discharge, 10,500 second-feet Sept. 21, 1938 (gage height, 12.8 feet, from floodmark), from rating curve extended above 3,500 second-feet as described above.
Remarks.- Flood flows affected by storage in and diversion from Shepaug Reservoir (see p. 58) and by storage in Bantam Lake.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	34	Jan. 3	1,470	Jan. 9	1,080
29	69	4	1,060	10	872
30	653	5	1,120	11	715
31	5,110	6	3,760	12	604
Jan. 1	3,590	7	2,090	13	520
2	2,160	8	1,440	14	462

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							5.73	2,030	9.03	5,230		
2							5.95	2,210	8.76	4,930		
3					2.95	342	6.30	2,490	8.51	4,650		
4							7.65	3,720	8.31	4,430		
5							8.04	4,130	8.11	4,210		
6					3.1	400	8.27	4,390	7.97	4,060	6.14	2,360
7							8.40	4,530	7.83	3,900		
8							8.45	4,580	7.72	3,790		
9					2.95	342	8.50	4,640	7.61	3,680		
10							8.61	4,760	7.51	3,580		
11							8.74	4,900	7.43	3,500		
N			1.9	50	2.85	305	9.10	5,310	7.34	3,410	5.87	2,150
1					2.98	353	9.52	5,810				
2					3.20	440	9.75	6,100	7.17	3,250		
3					3.46	557	9.97	6,390				
4					3.77	710	10.19	6,690	7.00	3,100		
5					4.05	862	10.35	6,910				
6			2.0	67	4.27	984	10.39	6,970	6.85	2,960	5.64	1,960
7					4.48	1,110	10.36	6,920				
8					4.65	1,220	10.26	6,780	6.71	2,840		
9			2.2	109	4.80	1,320	10.10	6,560				
10					4.95	1,420	9.87	6,260	6.58	2,720		
11					5.18	1,590	9.60	5,910				
12	1.85	43	2.6	219	5.45	1,810	9.31	5,560	6.47	2,630	5.38	1,750
	January 3		January 4		January 5		January 6		January 7		January 8	
2							6.72	2,850				
4							7.91	3,990				
6							8.53	4,670	6.03	2,270		
8							8.75	4,920				
10					4.11	896	8.79	4,960				
N	5.00	1,460	4.36	1,040	4.12	901	8.50	4,640	5.77	2,070	4.95	1,420
2					4.19	940	8.04	4,130				
4					4.33	1,020	7.58	3,650				
6					4.54	1,140	7.13	3,220	5.54	1,880		
8					4.94	1,420	6.80	2,920				
10					5.45	1,810	6.57	2,710				
12	4.65	1,220	4.20	945	6.15	2,370	6.39	2,560	5.30	1,690	4.65	1,220
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	4.41	1,070	4.06	868	3.77	710	3.56	605	3.38	521	3.26	467
2												
4												
6												
8												
10												
12	4.23	962	3.92	791	3.65	650	3.46	557	3.29	480	3.19	436

Supplemental records.- Dec. 31, 5:30 p.m., 10.42 ft., 7,010 sec.-ft.; Jan. 6, 9 a.m., 8.82 ft., 4,990 sec.-ft.

Pomperaug River at Southbury, Conn.

Location.- Lat. 41°28'50", long. 73°13'30", 200 feet upstream from highway bridge, three-quarters of a mile west of Southbury, New Haven County, and 5½ miles upstream from mouth. Datum of gage is 165.64 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.- 75.3 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 1,500 second-feet and extended to peak stage on basis of computation of flow over dam at gage height 16.0 feet.
Maxima.- December 1948-January 1949: Discharge, 5,600 second-feet at 6 p.m. Dec. 31 (gage height, 13.62 feet).
1932 to November 1948: Discharge, 7,420 second-feet Sept. 21, 1938 (gage height, 16.0 feet, from floodmarks), by computation of flow over dam 2 miles downstream.
Remarks.- Flood flows not materially affected by storage or diversion.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	20	Jan. 3	448	Jan. 9	399
29	35	4	348	10	336
30	751	5	463	11	292
31	3,790	6	2,130	12	256
Jan. 1	1,560	7	807	13	231
2	649	8	516	14	208

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1	2.76	21			4.52	344	8.28	2,160				
2					4.62	377	8.72	2,410	9.26	2,720		
3					4.82	447	9.04	2,580				
4					4.90	475	9.31	2,750	8.50	2,280		
5					4.94	491	10.03	3,180				
6					4.90	475	10.95	3,760	7.86	1,930	5.48	716
7					4.86	461	11.42	4,070				
8					4.79	436	11.38	4,040	7.37	1,660		
9					4.71	408	11.08	3,850				
10					4.68	398	10.60	3,540	7.01	1,480		
11					4.56	357	10.13	3,240				
N	2.75	20	2.78	23	4.53	347	9.91	3,110	6.73	1,340	5.27	623
1					4.59	367	10.00	3,160				
2			2.81	25	4.68	398	10.24	3,300	6.50	1,220		
3					4.88	468	10.98	3,780				
4			2.87	30	5.23	607	12.30	4,670	6.32	1,130		
5					5.70	820	13.24	5,330				
6			3.00	40	6.17	1,060	13.62	5,600	6.16	1,050	5.14	571
7					6.65	1,300	13.53	5,540				
8			3.10	50	7.20	1,570	13.16	5,270	6.01	975		
9					7.43	1,700	12.50	4,810				
10			3.23	65	7.53	1,750	11.69	4,240	5.88	910		
11			3.33	77	7.77	1,880	11.00	3,800				
12	2.76	21	3.87	172	8.00	2,010	10.25	3,310	5.76	850	5.01	519
	January 3		January 4		January 5		January 6		January 7		January 8	
2							7.01	1,480				
4							7.65	1,820				
6					4.44	318	8.80	2,450	5.87	905		
8							10.30	3,340				
10							10.58	3,520				
N	4.80	440	4.50	337	4.53	347	9.50	2,860	5.59	766	4.98	507
2					4.60	370	8.65	2,370				
4					4.73	416	8.01	2,020				
6					5.00	515	7.42	1,690	5.41	684		
8					5.35	658	6.95	1,440				
10					5.80	870	6.60	1,270				
12	4.66	391	4.47	328	6.42	1,180	6.34	1,140	5.23	607	4.81	444
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	4.67	394	4.49	334	4.35	292	4.21	253	4.11	227	4.03	207
2												
4												
6												
8												
10												
12	4.58	363	4.43	315	4.27	269	4.19	247	4.09	222	3.98	196

Supplemental records.- Dec. 31, 7:30 a.m., 11.50 ft., 4,120 sec.-ft.; Jan. 6, 9 a.m., 10.77 ft., 3,650 sec.-ft.

Naugatuck River near Thomaston, Conn.

Location.- Lat. 41°42'11", long. 73°03'56", at highway bridge half a mile upstream from Leadmine Brook, and 2 miles north of Thomaston, Litchfield County. Datum of gage is 389.44 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.- 71.9 square miles.
Gage-height record.- Water-stage recorder graph except for periods 7 a.m. Jan. 1 to 8 a.m. Jan. 3 and 4 p.m. Jan. 5 to 6 p.m. Jan. 6 when intake was partly clogged.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 6,500 second-feet and extended to peak stage by logarithmic plotting; affected by ice Dec. 28 to 3 a.m. Dec. 30. Gage heights used to hundredths, except for periods of partly clogged intake.
Maxima.- December 1948-January 1949: Discharge, 10,200 second-feet 2 p.m. Dec. 31 (gage height, 12.03 feet).
1930 to November 1948: Discharge, 9,970 second-feet Sept. 21, 1938 (gage height, 11.89 feet).
Remarks.- Flood flow not materially affected by artificial storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	22	Jan. 3	432	Jan. 9	368
29	92	4	337	10	302
30	1,140	5	477	11	256
31	7,610	6	2,820	12	220
Jan. 1	1,680	7	870	13	196
2	633	8	500	14	179

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							8.23	5,250	6.70	3,600		
2					2.85	465	8.97	6,110	6.28	3,180		
3							9.63	6,910	5.96	2,860		
4					2.76	420	10.15	7,580	5.67	2,580		
5							10.56	8,120	5.44	2,380		
6					2.68	382	10.71	8,310	5.17	2,130	3.34	704
7							10.55	8,100	4.93	1,920		
8					2.58	342	10.20	7,650	4.75	1,760		
9							10.20	7,650	4.59	1,620		
10					2.52	318	10.50	8,040	4.47	1,530		
11							11.14	8,920	4.36	1,440		
N			1.07	21	2.87	475	11.43	9,320	4.26	1,360	3.20	620
1					3.18	630	11.90	9,980				
2					3.47	802	12.03	10,200				
3			1.15	26	3.71	957	11.80	9,840	4.02	1,170		
4					4.10	1,230	11.55	9,490				
5					4.40	1,470	11.15	8,930				
6			1.5	62	4.74	1,750	10.65	8,240	3.83	1,030	3.07	545
7					5.10	2,070	10.15	7,580				
8			2.1	180	5.45	2,380	9.50	6,750				
9					5.73	2,640	8.80	5,910	3.67	919		
10			2.75	415	5.92	2,820	8.25	5,280				
11					6.40	3,300	7.63	4,590				
12	1.1	23	2.92	500	7.45	4,400	7.16	4,080	3.54	828	2.97	495
	January 3		January 4		January 5		January 6		January 7		January 8	
2							5.0	1,980				
4							5.9	2,800				
6					2.54	305	7.8	4,780	3.78	996		
8							7.8	4,780				
10							7.2	4,120				
N	2.83	427	2.60	328	2.56	313	6.60	3,500	3.52	814	2.96	490
2							6.00	2,900				
4					2.65	348	5.40	2,340				
6							4.95	1,940	3.33	698		
8					2.95	485	4.65	1,670				
10					3.55	835	4.43	1,490				
12	2.72	378	2.56	313	4.45	1,510	4.24	1,340	3.18	608	2.80	413
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	2.69	365	2.53	301	2.41	258	2.29	220	2.21	196	2.15	180
2												
4												
6											2.14	177
8												
10												
12	2.60	328	2.46	276	2.33	233	2.25	208	2.17	185	2.10	166

Supplemental records.- Dec. 31, 8:30 a.m., 9.80 ft., 7,130 sec.-ft.; Jan. 6, 7 a.m., 8.0 ft. (from floodmark), 5,000 sec.-ft.

Naugatuck River near Naugatuck, Conn.

Location.- Lat. 41°28'15", long. 73°03'10", 0.2 mile upstream from Beacon Hill Brook, 1.3 miles downstream from Naugatuck, New Haven County, and 12 miles upstream from mouth. Datum of gage is 155.17 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).

Drainage area.- 246 square miles.

Gage-height record.- Water-stage recorder graph except for periods 10:05 a.m. to 4:25 p.m. Dec. 30 and 3 p.m. Jan. 1 to 5 p.m. Jan. 2.

Discharge record.- Stage-discharge relation defined by current-meter measurements below 9,000 second-feet and extended to peak stage on basis of slope-area determination at gage height 12.40 feet. Gage heights used to hundredths except for periods of no record.

Maxima.- December 1948-January 1949: Discharge, 28,500 second-feet at 5 p.m. Dec. 31 (gage height, 12.40 feet).

1918-24, 1928 to November 1948: Discharge, 25,300 second-feet (revised) Sept. 21, 1938 (gage height, 12.40 feet), from rating curve based on shape of that explained above.

Flood of November 1927 reached a stage of 14 feet (discharge, about 31,000 second-feet, revised), from rating curve based on shape of that explained above.

Remarks.- Flood flow regulated by storage in Morris, Wigwam, and Pitch Reservoirs having a combined capacity of 550,000,000 cubic feet. Occasional diversion from Shepaug Reservoir into Naugatuck River basin.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	141	Jan. 3	1,600	Jan. 9	1,310
29	219	4	1,220	10	1,120
30	2,420	5	1,520	11	974
31	20,200	6	8,340	12	854
Jan. 1	6,020	7	2,920	13	770
2	2,420	8	1,750	14	707

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					1.61	515	7.63	9,940				
2					1.78	608	8.40	12,200	8.08	11,200		
3					2.07	789	8.98	14,100				
4			0.60	136	2.43	1,040	9.50	16,000	7.20	8,800		
5					2.81	1,360	9.87	17,400				
6					2.71	1,270	10.12	18,400	6.58	7,300	4.05	2,740
7					2.77	1,320	10.34	19,300				
8			.55	124	3.50	2,050	10.25	18,900	6.11	6,270		
9			.55	124	3.02	1,550	10.31	19,100				
10			.62	141	2.91	1,450	10.40	19,500	5.73	5,500		
11			.57	129	3.0	1,530	10.46	19,700				
N			.65	149	3.05	1,580	10.53	20,000	5.44	4,950	3.75	2,350
1			.71	165	3.15	1,680	10.90	21,600				
2			.75	176	3.2	1,730	11.50	24,200				
3			.82	197	3.3	1,830	12.00	26,500				
4			.90	222	3.4	1,940	12.30	28,000				
5			1.05	270	3.73	2,330	12.40	28,500				
6			1.23	342	4.15	2,870	12.34	28,200	4.75	3,760	3.53	2,090
7			1.27	358	4.67	3,630	12.06	26,800				
8			1.31	374	5.05	4,260	11.70	25,200				
9			1.35	392	5.44	4,950	11.10	22,400				
10			1.39	410	5.93	5,900	10.50	19,900				
11			1.43	428	6.52	7,170	9.95	17,700				
12	0.65	149	1.51	465	7.22	8,850	9.10	14,600	4.35	3,150	3.34	1,870
	January 3		January 4		January 5		January 6		January 7		January 8	
2							5.95	5,940				
4							7.12	8,600	4.67	3,630		
6	3.17	1,700	2.71	1,270	2.50	1,100	8.10	11,300			3.35	1,880
8							8.76	13,400	4.36	3,160		
10							8.60	12,900				
N	3.06	1,590	2.63	1,200	2.67	1,240	7.98	10,900	4.07	2,760	3.21	1,740
2					2.76	1,310	7.17	8,720				
4					2.89	1,430	6.61	7,370				
6	2.96	1,490	2.58	1,160	3.05	1,580	6.14	6,330	3.78	2,390	3.07	1,600
8					3.44	1,980	5.70	5,440				
10					3.92	2,570	5.36	4,800				
12	2.83	1,380	2.52	1,120	4.85	3,920	5.07	4,290	3.53	2,090	2.95	1,480
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	2.88	1,420										
6												
8	2.81	1,360										
10												
N	2.75	1,300	2.54	1,130	2.34	978	2.16	852	2.04	768	1.95	710
2												
4	2.66	1,230										
6												
8	2.65	1,220										
10												
12	2.61	1,190	2.42	1,040	2.23	901	2.10	810	1.99	734	1.89	674

Supplemental records.- Jan. 6, 8:40 a.m., 8.87 ft., 13,800 sec.-ft.

Leadmine Brook near Thomaston, Conn.

Location.- Lat. 41°42'10", long. 73°03'36", at highway bridge half a mile upstream from mouth, and 2¼ miles northeast of Thomaston, Litchfield County. Datum of gage is 401.23 feet above mean sea level, datum of 1929 (levels by Corps of Engineers).
Drainage area.- 24.0 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 800 second-feet and extended to peak stage by logarithmic plotting; affected by ice Dec. 28 to 10 p.m. Dec. 29.
Maxima.- December 1948-January 1949: Discharge, 2,780 second-feet at 12:30 p.m. Dec. 31 (gage height, 10.63 feet).
1930 to November 1948: Discharge, 3,050 second-feet Sept. 21, 1938 (gage height, 11.14 feet), from rating curve extended above 800 second-feet by logarithmic plotting. Maximum gage height, 11.2 feet Sept. 17, 1934, from floodmarks.
Remarks.- Flood flows not affected by diversion or artificial storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	12	Jan. 3	140	Jan. 9	116
29	51	4	104	10	96
30	440	5	178	11	83
31	1,620	6	802	12	74
Jan. 1	502	7	264	13	66
2	221	8	158	14	61

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							7.7	1,380				
2					4.82	347	8.17	1,600				
3							8.44	1,720	6.08	732		
4					4.80	341	8.40	1,700				
5							8.17	1,600				
6					4.78	336	7.83	1,440	5.72	588		
7							7.50	1,300				
8					4.65	301	7.38	1,250			4.50	235
9							7.39	1,260	5.47	511		
10					4.55	276	7.80	1,430				
11							8.65	1,810				
N			2.7	17	4.55	276	10.05	2,500	5.29	457		
1							9.95	2,440				
2					4.72	319	9.70	2,320				
3							9.23	2,080	5.13	409		
4			2.8	22	4.95	385	8.76	1,860			4.33	195
5							8.48	1,740				
6					5.5	550	8.30	1,660	4.98	364		
7							8.06	1,550				
8			3.4	71	5.85	658	7.73	1,400				
9							7.48	1,290	4.86	328		
10					6.14	759	7.19	1,180				
11							6.90	1,060				
12	2.6	13	4.72	319	7.10	1,140	6.63	952	4.75	298	4.20	167
	January 3		January 4		January 5		January 6		January 7		January 8	
2							6.50	900				
4			3.87	110			7.33	1,230				
6					3.80	100	7.63	1,350	4.76	300		
8			3.77	96			7.22	1,190				
10							6.68	972				
N	4.04	138	3.84	106	3.87	110	6.28	812	4.57	252	4.14	156
2					3.95	123	5.95	680				
4			3.83	104	4.09	146	5.67	571				
6					4.28	184	5.47	511	4.43	218		
8			3.80	100	4.61	262	5.30	460				
10					5.22	436	5.16	418				
12	3.92	118	3.77	96	5.83	632	5.04	382	4.31	190	3.99	129
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N	3.90	115	3.77	96	3.68	83	3.60	73	3.54	66	3.50	62
2												
4												
6												
8												
10												
12	3.83	104	3.72	89	3.64	78	3.57	70	3.52	64	3.44	57

Supplemental records.- Dec. 31, 12:30 p.m., 10.63 ft., 2,780 sec.-ft.; Jan. 6, 5:30 a.m., 7.65 ft., 1,360 sec.-ft.

Branch of Naugatuck River at outlet of Wigwam Reservoir, near Thomaston, Conn.

Location.- Lat. 41°39'45", long. 73°07'35", 2½ miles west of Thomaston, Litchfield County, and 3 miles upstream from mouth.
Drainage area.- 18.0 square miles.
Gage-height record.- Water-stage recorder and venturi-meter graphs. Midnight elevations at Wigwam Reservoir from water-stage recorder graph; at Morris Reservoir computed from graph based on daily readings at 10 a.m.; and at Pitch Reservoir computed from graph based on weekly readings.
Discharge record.- Observed discharge computed from flow over spillways and through venturi meters, adjusted for diversion from Shepaug Reservoir. Water diverted from Wigwam and Morris Reservoirs computed from noon readings of venturi meters.
Maxima.- December 1948-January 1949: Discharge observed, 2,240 second-feet 12 m. to 1:30 p.m. December 31.
1935 to November 1948: Discharge observed, 3,610 second-feet Sept. 21, 1938.
Remarks.- Mean daily discharges adjusted for change in contents in Wigwam, Morris, and Pitch Reservoirs, and for diversions from Shepaug River Basin to Pitch Reservoir. Basic data furnished by Bureau of Engineering, city of Waterbury, Conn.

Mean daily discharge and change in contents, 1948-49

Day	Observed (second-feet)	Change in contents (equivalent, second-feet)	Adjusted (second-feet)	Day	Observed (second-feet)	Change in contents (equivalent, second-feet)	Adjusted (second-feet)
Dec. 28	*6	+2	*8	Jan. 6	980	-57	923
29	*7	+64	*71	7	163	-25	138
30	*7	+953	*960	8	89	-17	72
31	*1,340	+3	*1,340	9	66	-4	62
Jan. 1	345	-103	242	10	53	-3	50
2	124	-17	107	11	42	-3	39
3	77	-9	68	12	38	-1	37
4	58	-4	54	13	35	-2	33
5	134	+101	235	14	34	-2	32

* Includes diversion from Shepaug Reservoir.

Hudson River near Newcomb, N. Y.

Location.- Water-stage recorder, lat. 43°58'00", long. 74°07'55", 100 feet upstream from highway bridge, half a mile downstream from outlet of Harris Lake, 2 miles east of Newcomb, Essex County, and 4 miles upstream from Wolf Creek. Datum of gage is 1,550.38 feet above mean sea level, datum of 1929.
Drainage area.- 192 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 5,200 second-feet and extended to peak stage. Doubtful gage-height record 4 a.m. to 12 m., 5 p.m. to 12 p.m. Jan. 1, Jan. 3; discharge computed on basis of reconstructed gage-height graph.
Maxima.- December 1948-January 1949: Discharge, 7,440 second-feet 8:30 a.m. Jan. 1 (gage height, 11.40 feet).
1925 to November 1948: Discharge, 6,250 second-feet Apr. 9, 1928 (gage height, 8.0 feet, at site and datum then in use).
Remarks.- Flood flow not affected by storage or diversion.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	101	Jan. 3	2,420	Jan. 9	705
29	103	4	1,500	10	600
30	187	5	1,050	11	492
31	2,270	6	908	12	405
Jan. 1	6,780	7	948	13	363
2	4,270	8	845	14	332

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							3.16	466	9.85	5,680		
2							3.32	530	10.34	6,210	9.60	5,400
3							3.51	611	10.61	6,510		
4					2.07	120	3.69	692	10.83	6,760	9.29	5,070
5							3.92	801	11.07	7,040		
6							4.14	912	11.24	7,250	9.05	4,830
7							4.41	1,070	11.36	7,390		
8	1.98	101	1.98	101	2.12	131	4.69	1,230	11.39	7,430	8.79	4,570
9							4.95	1,390	11.39	7,430		
10							5.47	1,730	11.38	7,420	8.68	4,460
11							5.62	1,820	11.36	7,390		
N					2.23	156	5.89	2,010	11.31	7,330	8.46	4,240
1							6.03	2,110	11.24	7,250		
2							6.27	2,300	11.13	7,120	8.22	4,000
3							6.53	2,500	11.08	7,060		
4	1.98	101	1.99	103	2.37	193	6.74	2,670	10.99	6,950	8.02	3,800
5							7.27	3,120	10.89	6,830		
6							7.62	3,440	10.78	6,700	7.87	3,660
7							7.90	3,690	10.66	6,570		
8					2.59	260	8.27	4,050	10.53	6,420	7.67	3,480
9							8.65	4,430	10.42	6,300		
10							9.01	4,790	10.31	6,180	7.48	3,310
11							9.37	5,150	10.14	5,990		
12	1.98	101	2.03	111	3.03	416	9.73	5,540	9.89	5,720	7.31	3,160
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4	6.98	2,860			4.55	1,150	4.12	902	4.22	955		
6												
8	6.67	2,620	5.25	1,580	4.43	1,080	4.11	896	4.23	961	4.05	866
10												
N	6.38	2,380			4.35	1,030	4.10	891	4.23	961		
2												
4	6.12	2,180	4.92	1,370	4.28	989	4.12	902	4.21	950	3.97	825
6												
8	5.88	2,010			4.21	950	4.16	923	4.18	933		
10												
12	5.65	1,840	4.68	1,230	4.16	923	4.20	944	4.15	918	3.86	772
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8	3.76	724	3.52	616	3.26	506	3.01	409	2.90	368	2.82	339
10												
N												
2												
4	3.67	682	3.44	581	3.16	466	2.96	390	2.87	357	2.79	328
6												
8												
10												
12	3.59	647	3.38	556	3.12	451	2.93	379	2.85	350	2.74	311

Supplemental records.- Jan. 1, 8:30 a.m., 11.40 ft., 7,440 sec.-ft.

Hudson River at Gooley, near Indian Lake, N. Y.

Location.- Water-stage recorder, lat. 43°49'55", long. 74°11'45", half a mile upstream from Gooley, Essex County, 1 mile upstream from Indian River, and 5 miles northeast of village of Indian Lake, Hamilton County.
Drainage area.- 419 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 9,200 second-feet and extended to peak stage by logarithmic plotting; affected by ice Dec. 28 to 2 p.m. Dec. 30, Jan. 14.
Maxima.- December 1948-January 1949: Discharge, 15,000 second-feet 6 a.m. Jan. 1 (gage height, 10.44 feet), release from ice jam.
1916 to November 1948: Discharge, 13,900 second-feet Apr. 12, 1922 (gage height, 10.0 feet).
Remarks.- Flood flow not affected by storage or diversion.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	260	Jan. 3	4,660	Jan. 9	1,490
29	350	4	3,040	10	1,290
30	880	5	2,090	11	1,100
31	8,200	6	1,920	12	985
Jan. 1	13,200	7	1,950	13	910
2	8,360	8	1,740	14	740

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							4.48	2,520	9.93	13,500		
2					2.71		4.69	2,800	9.95	13,600	8.79	10,500
3							4.90	3,080	9.96	13,600		
4					2.72		5.15	3,430	10.00	13,700	8.58	10,000
5							5.34	3,720	10.07	13,900		
6					2.73		5.69	4,260	10.44	15,000	8.36	9,530
7							6.02	4,810	10.29	14,600		
8					2.76		6.22	5,150	10.20	14,300	8.16	9,070
9							6.59	5,810	10.14	14,100		
10					2.79		7.59	7,800	10.08	13,900	7.96	8,610
11							7.87	8,410	10.04	13,800		
N	2.77		2.70		2.81		8.16	9,070	9.98	13,600	7.76	8,170
1							8.42	9,670	9.94	13,500		
2					2.93		8.65	10,200	9.88	13,300	7.59	7,800
3							8.88	10,800	9.80	13,100		
4					3.15	1,090	9.04	11,200	9.74	12,900	7.44	7,480
5							9.21	11,600	9.66	12,700		
6					3.54	1,460	9.38	12,000	9.58	12,500	7.28	7,150
7							9.49	12,300	9.48	12,200		
8					3.77	1,690	9.54	12,400	9.39	12,000	7.15	6,890
9							9.58	12,500	9.29	11,800		
10					3.97	1,910	9.64	12,600	9.20	11,600	6.97	6,530
11							9.73	12,900	9.10	11,300		
12					4.30	2,300	9.83	13,200	8.99	11,000	6.74	6,100
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4	6.34	5,360										
6			5.10	3,360	4.21	2,190	3.91	1,850	4.03	1,980	3.87	1,800
8	6.10	4,950										
10												
N	5.86	4,540	4.84	3,000	4.09	2,050	3.96	1,900	4.01	1,960	3.81	1,740
2												
4	5.69	4,260										
6			4.68	2,780	4.02	1,970	4.02	1,970	3.98	1,920	3.75	1,670
8	5.51	3,980										
10												
12	5.30	3,660	4.40	2,420	3.95	1,890	4.04	1,990	3.93	1,870	3.69	1,610
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4							2.96	928	2.97	936		
6												
8	3.61	1,530	3.39	1,310	3.21	1,140	2.94	912	2.96	928		
10												
N							3.01	970	2.96	928	2.77	
2												
4	3.53	1,450	3.34	1,260	3.13	1,070	3.19	1,130	2.94	912		
6												
8							3.07	1,020	2.88	863		
10												
12	3.45	1,370	3.28	1,210	2.99	953	2.99	953	2.85	840		

Supplemental records.- Jan. 12, 1 p.m., 3.12 ft., 1,060 sec.-ft.

Hudson River at North Creek, N. Y.

Location.- Water-stage recorder, lat. 43°42'00", long. 73°59'00", just upstream from highway bridge at village of North Creek, Warren County, 500 feet upstream from North Creek. Datum of gage is 987.52 feet above mean sea level, datum of 1929.
Drainage area.- 792 square miles; 131 square miles affected by storage in Indian Lake Reservoir.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 20,000 second-feet and extended to peak stage by logarithmic plotting; affected by ice Dec. 28, 29.
Maxima.- December 1948-January 1949: Discharge, 28,900 second-feet 8:30 p.m. Dec. 31 (gage height, 12.14 feet).
1907 to November 1948: Discharge, 27,400 second-feet Mar. 27, 1913 (gage height, 11.5 feet).
Remarks.- Flow partly regulated by Indian Lake (see p. 71) and other reservoirs.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	800	Jan. 3	7,000	Jan. 9	2,240
29	900	4	4,450	10	1,940
30	1,740	5	3,160	11	1,680
31	18,800	6	2,920	12	1,350
Jan. 1	23,300	7	2,960	13	1,280
2	12,900	8	2,620	14	1,180

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							6.33	5,490	11.85	27,300		
2					3.49	964	6.10	4,950	11.83	27,200	9.76	16,800
3							6.37	5,590	11.79	26,900		
4	3.46	938	3.40	888	3.52	990	6.67	6,340	11.74	26,700	9.53	15,800
5							7.14	7,590	11.67	26,300		
6					3.57	1,030	7.64	9,020	11.58	25,800	9.30	14,900
7							8.14	10,600	11.53	25,500		
8	3.49	964	3.42	905	3.64	1,100	8.80	12,900	11.49	25,300	9.06	13,900
9							9.21	14,500	11.54	25,600		
10					3.71	1,160	9.68	16,500	11.44	25,000	8.87	13,200
11							10.14	18,500	11.31	24,300		
N	3.44		3.42		3.83	1,280	10.55	20,400	11.20	23,700	8.68	12,500
1							11.24	23,900	11.09	23,200		
2					3.96	1,420	11.60	25,900	10.99	22,600	8.51	11,900
3							11.86	27,300	10.88	22,100		
4	3.41	896	3.41	896	4.25	1,750	11.94	27,800	10.77	21,600	8.35	11,300
5							11.98	28,000	10.67	21,000		
6					4.62	2,250	12.03	28,300	10.58	20,600	8.19	10,800
7							12.08	28,600	10.49	20,200		
8	3.39	880	3.44	922	4.93	2,720	12.13	28,900	10.41	19,800	8.03	10,200
9							12.12	28,800	10.29	19,200		
10					5.58	3,850	12.07	28,500	10.18	18,700	7.89	9,770
11							11.97	27,900	10.08	18,300		
12	3.39	880	3.46	938	5.59	3,870	11.90	27,600	9.95	17,700	7.73	9,290
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4	7.36	8,210										
6												
8	7.07	7,400	5.97	4,650	5.22	3,190	5.02	2,860	5.11	3,010	4.91	2,690
10												
N	6.83	6,760										
2												
4	6.67	6,340	5.72	4,130	5.11	3,010	5.07	2,940	5.06	2,930	4.82	2,550
6												
8	6.51	5,940										
10												
12	6.32	5,470	5.49	3,680	5.04	2,890	5.13	3,040	5.00	2,830	4.74	2,430
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4					4.27	1,770	3.94	1,390				
6												
8	4.65	2,300	4.42	1,970	4.29	1,800	3.87	1,320	3.81	1,260	3.74	1,190
10					4.25	1,750						
N					4.13	1,610	3.81	1,260				
2												
4	4.56	2,160	4.37	1,900	4.10	1,570	3.76	1,210	3.77	1,220	3.71	1,160
6												
8					4.18	1,670	3.98	1,440				
10							4.03	1,490	3.82	1,270		
12	4.49	2,070	4.31	1,820	4.08	1,550	4.00	1,460	3.81	1,260	3.63	1,090

Supplemental records.- Dec. 30, 9:30 p.m., 5.05 ft., 2,910 sec.-ft., 10:30 p.m., 6.01 ft., 4,740 sec.-ft., 11:30 p.m., 5.53 ft., 3,760 sec.-ft.; Dec. 31, 12:30 a.m., 6.58 ft., 6,110 sec.-ft., 1:30 a.m., 5.99 ft., 4,700 sec.-ft., 8:30 p.m., 12.14 ft., 28,900 sec.-ft.; Jan. 11, 5:30 p.m., 4.17 ft., 1,650 sec.-ft.; Jan. 14, 9 p.m., 3.72 ft., 1,170 sec.-ft.

Hudson River at Hadley, N. Y.

Location.- Water-stage recorder, lat. 43°19'10", long. 73°50'40", at Hadley, Saratoga County, 400 feet downstream from outlet of Lake Luzerne and a quarter of a mile upstream from Sacandaga River. Datum of gage is 563.99 feet above mean sea level, datum of 1929.
Drainage area.- 1,664 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Defined by current-meter measurements below 31,000 second-feet, and extended to peak stage by logarithmic plotting.
Maxima.- December 1948-January 1949: Discharge, 42,700 second-feet 1:30 a.m. Jan. 1 (gage height, 21.21 feet).
1921 to November 1948: Discharge, 41,200 second-feet Mar. 18, 1936 (gage height, 19.59 feet), from rating curve extended above 27,200 second-feet by logarithmic plotting.
Remarks.- Flow affected by storage in Indian Lake (see p. 71) and other reservoirs above station. Some diurnal fluctuation caused by power plants on Schroon River.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	1,460	Jan. 3	16,900	Jan. 9	6,830
29	1,580	4	12,600	10	6,060
30	3,590	5	10,100	11	5,410
31	28,200	6	9,560	12	4,620
Jan. 1	38,100	7	8,830	13	4,220
2	25,300	8	7,770	14	3,850

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.26	1,730	9.22	13,500	21.18	42,600		
2					3.31	1,780	9.30	13,700	21.20	42,700	16.18	30,200
3					3.34	1,810	10.06	15,500	21.16	42,600		
4	2.93	1,420	3.09	1,560	3.36	1,830	10.42	16,400	21.03	42,300	15.71	29,100
5					3.36	1,830	10.65	17,000	20.90	42,000		
6					3.35	1,820	11.24	18,400	20.74	41,600	15.23	28,000
7					3.35	1,820	11.89	19,900	20.56	41,100		
8	2.90	1,390	3.09	1,560	3.41	1,880	12.55	21,500	20.35	40,600	14.82	27,000
9					3.49	1,970	13.26	23,200	20.15	40,100		
10					3.59	2,080	14.01	25,000	19.95	39,600	14.39	25,900
11					3.70	2,210	14.84	27,000	19.72	39,000		
N	2.91	1,400	3.10	1,570	3.82	2,360	15.63	28,900	19.50	38,400	14.00	25,000
1					3.99	2,590	16.39	30,700	19.24	37,800		
2					4.19	2,880	17.09	32,400	19.03	37,300	13.64	24,100
3					4.43	3,250	17.74	34,000	18.80	36,700		
4	3.02	1,500	3.11	1,580	4.72	3,730	18.28	35,400	18.58	36,200	13.28	23,300
5					4.97	4,180	18.74	36,600	18.33	35,500		
6					5.20	4,600	19.22	37,800	18.09	34,900	12.95	22,500
7					5.65	5,470	19.72	39,000	17.84	34,300		
8	3.06	1,530	3.14	1,610	5.74	5,650	20.14	40,000	17.60	33,700	12.64	21,700
9					5.95	6,080	20.48	40,900	17.36	33,100		
10					5.99	6,160	20.78	41,600	17.11	32,500	12.34	21,000
11					8.46	11,700	20.98	42,200	16.87	31,900		
12	3.07	1,540	3.22	1,690	8.50	11,800	21.11	42,500	16.64	31,300	12.07	20,400
	January 3		January 4		January 5		January 6		January 7		January 8	
2	11.80	19,700										
4	11.55	19,100	9.32	13,800	8.02	10,700	7.56	9,620				
6	11.30	18,500										
8	11.02	17,800	9.05	13,100	7.86	10,300	7.58	9,660	7.31	9,040	6.82	7,940
10	10.74	17,200										
N	10.50	16,600	8.80	12,500	7.70	9,940	7.55	9,600				
2	10.28	16,100										
4	10.11	15,700	8.58	12,000	7.56	9,620	7.54	9,570	7.13	8,630	6.66	7,590
6	9.96	15,300										
8	9.83	15,000	8.38	11,500	7.51	9,500	7.50	9,480				
10	9.70	14,700										
12	9.58	14,400	8.20	11,100	7.54	9,570	7.43	9,320	6.98	8,300	6.51	7,260
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4			6.06	6,310	5.75	5,670	5.32	4,830	4.99	4,210	4.84	3,940
6												
8	6.38	6,980	6.00	6,180	5.69	5,550	5.30	4,790	5.07	4,360	4.84	3,940
10												
N			5.90	5,970	5.63	5,430	5.24	4,680	5.06	4,340	4.80	3,870
2												
4	6.23	6,660	5.90	5,970	5.56	5,290	5.12	4,450	4.98	4,190	4.76	3,800
6												
8			5.84	5,850	5.50	5,170	5.06	4,340	4.93	4,100	4.72	3,730
10												
12	6.12	6,430	5.79	5,750	5.41	5,000	5.02	4,270	4.88	4,010	4.63	3,580

Supplemental records.- Dec. 30, 11:30 p.m., 8.80 ft., 12,500 sec.-ft.; Jan. 1, 1:30 a.m., 21.21 ft., 42,700 sec.-ft.

Hudson River at Green Island, N. Y.

Location.- Water-stage recorder, lat. 42°25'10", long. 73°41'20", at Green Island, Albany County, just upstream from Troy Lock and Dam and half a mile downstream from 5th Branch Mohawk River. Datum of gage is 0.31 foot below mean sea level, datum of 1929 (Corps of Engineers bench mark).

Drainage area.- 8,090 square miles (including 6th Branch Mohawk River above Arch Street Bridge in Green Island).

Gage-height record.- Water-stage recorder graph except for period 10 p.m. Dec. 31 to 1 a.m. Jan. 1, for which graph was reconstructed on basis of adjacent gage-height record and high-water mark in gage well.

Discharge record.- Stage-discharge relation of spillway defined by current-meter measurements below 135,000 second-feet and extended to peak stage on basis of determinations of peak flow of 1936 and 1948 floods computed from discharge at Hudson River at Mechanicville and Mohawk River at Cohoes. Rating of power-plant wheels based on discharge measurements.

Maxima.- December 1948-January 1949: Discharge, 181,000 second-feet 11 p.m. Dec. 31 (gage height, 27.05 feet, from high-water mark in gage well).

Flood of Mar. 19, 1936 reached a stage of 29.48 feet at gage on opposite bank, from information by Corps of Engineers (discharge, 215,000 second-feet).

Remarks.- Flood flows appreciably affected by storage in Sacandaga Reservoir (see p. 73), Indian Lake Reservoir (see p. 71), and Delta, Hinckley, and Schoharie Reservoirs (combined capacity 8,738,000,000 cubic feet). Gage heights published are those of main river channel. Discharge record includes flow over spillway and through power plant (no flow through lock), but does not include flow in By-Pass Channel (6th Branch Mohawk River). Diurnal fluctuation at low flows caused by power plants above station. Record of power-plant operation furnished by Ford Motor Company.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	7,240	Jan. 3	58,100	Jan. 9	43,700
29	7,770	4	48,700	10	36,800
30	25,200	5	35,900	11	31,800
31	141,000	6	59,500	12	27,000
Jan. 1	141,000	7	73,900	13	23,100
2	80,600	8	53,900	14	21,500

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					15.86	8,650	21.80	86,700	27.00	180,000		
2	14.91	5,740	15.25	7,340	15.92	8,860	21.70	84,600	26.90	178,000	22.55	96,700
3					15.97	8,850	21.78	86,100	26.78	176,000		
4	14.93	4,850	14.96	6,010	16.04	9,410	21.92	88,800	26.61	173,000	22.34	92,500
5					16.10	9,580	22.16	93,600	26.43	170,000		
6	15.03	5,240	14.99	5,520	16.15	9,840	22.80	106,000	26.22	167,000	22.12	88,000
7					16.25	10,600	23.77	125,000	25.99	163,000		
8	15.04	6,710	15.06	6,530	16.35	11,200	24.26	135,000	25.75	158,000	21.89	83,300
9					16.46	12,200	24.57	140,000	25.48	153,000		
10	15.28	7,730	15.49	8,440	16.70	13,000	24.92	144,000	25.21	149,000	21.75	80,300
11					16.89	14,400	25.13	147,000	24.97	144,000		
N	15.58	8,580	15.69	8,740	17.06	15,700	25.32	151,000	24.75	140,000	21.64	78,000
1					17.21	16,600	25.54	155,000	24.53	136,000		
2	15.49	8,430	15.61	8,570	17.35	18,400	25.75	158,000	24.30	132,000	21.57	76,500
3					17.50	19,700	25.96	162,000	24.10	128,000		
4	15.50	8,250	15.62	8,370	17.86	23,000	26.14	165,000	23.95	125,000	21.47	74,500
5					18.46	29,900	26.33	169,000	23.75	121,000		
6	15.44	8,940	15.62	8,690	18.97	36,800	26.55	172,000	23.58	118,000	21.37	72,500
7					19.40	43,100	26.72	175,000	23.42	114,000		
8	15.45	7,750	15.63	8,750	19.80	49,600	26.84	177,000	23.28	111,000	21.30	71,100
9					20.20	56,300	26.94	179,000	23.14	109,000		
10	15.39	7,670	15.58	8,260	20.53	62,100	27.01	180,000	23.00	106,000	21.21	69,300
11					21.03	71,500	27.05	181,000	22.86	103,000		
12	15.53	7,740	15.76	8,340	21.57	82,100	27.04	180,000	22.75	101,000	21.12	67,500
	January 3		January 4		January 5		January 6		January 7		January 8	
2							19.33	39,500	21.62	81,600		
4	20.96	64,400	19.92	47,600	19.21	37,400	19.58	43,200	21.59	81,000	20.42	58,600
6							19.86	47,800	21.54	80,100		
8	20.74	60,300	19.72	46,000	19.10	36,100	20.16	53,400	21.48	80,400	20.28	56,200
10							20.37	57,400	21.33	77,300		
N	20.48	57,600	19.57	43,000	19.03	35,100	20.54	60,600	21.23	75,400	20.12	53,600
2							20.71	63,700	21.11	73,100		
4	20.34	54,800	19.44	41,100	19.01	34,600	20.89	67,100	20.95	70,100	19.98	50,900
6							21.07	70,900	20.83	67,700		
8	20.22	52,900	19.37	40,200	19.02	34,800	21.26	74,500	20.74	65,700	19.78	49,300
10							21.42	77,800	20.64	63,600		
12	20.06	50,200	19.25	38,400	19.16	36,700	21.54	80,000	20.57	61,500	19.71	47,800
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	19.63	46,200	19.10	39,100	18.72	33,900						
6							18.32	28,000	17.92	23,400	17.73	21,800
8	19.57	44,800	19.00	37,500	18.66	32,700						
10												
N	19.55	43,300	18.91	36,500	18.61	32,200	18.20	28,000	17.89	23,500	17.74	22,000
2												
4	19.49	42,500	18.88	36,100	18.50	30,800						
6							18.03	25,400	17.77	22,100	17.62	21,200
8	19.27	41,600	18.80	34,300	18.46	29,900						
10												
12	19.1[illegible]	40,200	18.7[illegible]	34,300	18.4[illegible]	28,80[illegible]	18.01	24,300	17.80	22,200	17.75	20,100

Cedar River below Chain Lakes, near Indian Lake, N. Y.

Location.- Water-stage recorder, lat. 43°51'20", long. 74°14'20", in Essex County, 1½ miles downstream from Rock River, 2 miles east of outlet of Chain Lakes, 3 miles upstream from mouth, and 5½ miles northeast of village of Indian Lake, Hamilton County.
Drainage area.- 160 square miles.
Gage-height record.- Water-stage recorder graph except for period Jan. 3-14, when there was no gage-height record.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 2,500 second-feet and extended to peak stage of Sept. 28, 1942 on basis of slope-area determination; affected by ice Dec. 28. Discharge for Jan. 3-14 computed on basis of records for Hudson River near Newcomb, and at Gooley, near Indian Lake.
Maxima.- December 1948-January 1949: Discharge, 7,370 second-feet 10:45 p.m. Dec. 31 (gage height, 12.37 feet).
1930 to November 1948: Discharge, 10,200 second-feet Sept. 28, 1942 (gage height, 14.40 feet, from floodmark).
Remarks.- Flood flow slightly affected by storage for log-driving operations.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	100	Jan. 3	1,400	Jan. 9	490
29	128	4	960	10	430
30	483	5	640	11	380
31	4,490	6	620	12	360
Jan. 1	5,210	7	620	13	340
2	2,810	8	560	14	250

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.11	133	6.10	1,560	12.22	7,180		
2					2.14	137	6.26	1,660	12.06	6,980	8.77	3,510
3					2.17	142	6.41	1,750	11.83	6,710		
4	2.04	122	2.02	119	2.21	149	6.60	1,860	11.64	6,480	8.57	3,350
5					2.26	157	6.79	1,990	11.45	6,250		
6					2.30	164	7.13	2,230	11.25	6,020	8.36	3,180
7					2.35	173	7.12	2,220	11.06	5,820		
8	2.08	128	2.06	125	2.42	186	7.31	2,360	10.87	5,610	8.18	3,030
9					2.50	200	9.36	4,050	10.74	5,460		
10					2.61	221	9.56	4,250	10.60	5,310	8.00	2,890
11					2.73	245	9.74	4,430	10.47	5,170		
N	2.08		2.10	131	2.87	275	9.96	4,650	10.33	5,020	7.85	2,770
1					3.06	319	10.26	4,950	10.21	4,900		
2					3.29	377	10.52	5,220	10.10	4,790	7.73	2,670
3					3.62	470	10.78	5,510	9.99	4,680		
4	2.13	136	2.13	136	3.88	551	11.13	5,890	9.85	4,540	7.59	2,560
5					4.12	631	11.50	6,310	9.74	4,430		
6					4.37	721	11.75	6,610	9.62	4,310	7.45	2,460
7					4.80	891	11.95	6,850	9.51	4,200		
8	2.11	133	2.11	133	5.10	1,020	12.13	7,070	9.41	4,100	7.27	2,330
9					5.29	1,120	12.31	7,290	9.30	3,990		
10					5.47	1,200	12.36	7,360	9.20	3,900	7.01	2,150
11					5.69	1,320	12.36	7,360	9.09	3,800		
12	2.03	120	2.10	131	5.89	1,430	12.30	7,280	8.99	3,710	6.86	2,040
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4												
6												
8												
10												
N												
2												
4												
6												
8												
10												
12												
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N												
2												
4												
6												
8												
10												
12												

Supplemental records.- Dec. 31, 6:30 a.m., 7.07 ft., 2,190 sec.-ft., 10:45 p.m., 12.37 ft., 7,370 sec.-ft.

Indian Lake Reservoir near Indian Lake, N. Y.

Location.- Lat. 43°45'20", long. 74°16'35", at Indian Lake Dam on Indian River, 2 miles south of village of Indian Lake, Hamilton County. Datum of gage is 1,617.95 feet above mean sea level, adjustment of 1912.

Drainage area.- 131 square miles.

Gage-height record.- Wire-weight gage read to hundredths daily at 8 a.m.; gage height at midnight obtained by interpolation.

Maxima.- December 1948-January 1949: Maximum gage height observed, 27.71 feet Jan. 24. 1900 to November 1948: Maximum gage height observed, 38.8 feet Mar. 28, 1913.

Remarks.- Flow from reservoir regulated by operation of sluice gates; gates closed 3:45 p.m. Dec. 30. Daily discharge at Indian River near Indian Lake, N. Y., 453 second-feet Dec. 29, 333 second-feet Dec. 30, 85 second-feet Dec. 31, 52 second-feet Jan. 1, 45 second-feet Jan. 2, 44 second-feet Jan. 3-12, 45 second-feet Jan. 13, 14. Reservoir capacity, about 4,500,000,000 cubic feet between gage heights 0.00 foot and 33.38 feet (crest of spillway). Figures given herein represent usable contents; dead storage unknown.

Cooperation.- Gage-height record furnished by Indian River Co.

Gage height and contents, 1948-49

Day	Gage height (feet) †	Contents (billions of cubic feet)	Day	Gage height (feet) †	Contents (billions of cubic feet)	Day	Gage height (feet) †	Contents (billions of cubic feet)
Dec. 27	18.74	2.209	Jan. 3	24.91	3.192	Jan. 9	26.32	3.426
28	18.52	2.176	4	25.19	3.237	10	26.44	3.447
29	18.28	2.139	5	25.42	3.276	11	26.52	3.460
30	19.11	2.266	6	25.73	3.328	12	26.61	3.476
31	21.78	2.684	7	25.95	3.364	13	26.69	3.489
Jan. 1	23.72	2.996	8	26.14	3.397	14	26.77	3.502
2	24.50	3.124						

† Gage height at 12 p.m.

Sacandaga River near Hope, N. Y.

Location.- Water-stage recorder, lat. 43°21'10", long. 74°16'15", 1½ miles downstream from confluence of East and West Branches and 4½ miles upstream from Hope, Hamilton County.
Drainage area.- 491 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 14,000 second-feet and extended to peak stage by logarithmic plotting; affected by ice Dec. 28, 29.
Maxima.- December 1948-January 1949: Discharge, 31,400 second-feet 5:15 p.m. Dec. 31 (gage height, 10.55 feet).
1911 to November 1948: Discharge, 32,000 second-feet Mar. 27, 1913 (gage height, 11.0 feet, from floodmarks, at site then in use), from rating curve extended above 8,500 second-feet by logarithmic plotting.
Remarks.- Flood flow not affected by storage or diversion. Occasional diurnal fluctuation at low flow caused by small reservoirs above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	470	Jan. 3	4,310	Jan. 9	2,690
29	520	4	3,320	10	2,330
30	4,810	5	2,880	11	1,980
31	22,700	6	4,190	12	1,620
Jan. 1	14,200	7	3,850	13	1,510
2	6,520	8	3,150	14	1,360

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							6.90	10,500				
2					3.01	1,120	7.01	10,900	9.22	22,300	6.24	8,080
3							7.22	11,800				
4					3.37	1,550	7.39	12,500	8.86	20,200	6.11	7,640
5							7.70	14,000				
6					3.66	1,940	8.01	15,600	8.48	17,900	5.99	7,260
7							8.25	16,800				
8					3.93	2,360	8.54	18,200	8.09	16,000	5.89	6,940
9							8.97	20,800				
10					4.33	3,060	9.26	22,600	7.65	13,800	5.79	6,630
11							9.49	23,900				
N	2.80		2.90		4.82	4,070	9.70	25,400	7.39	12,500	5.70	6,360
1							10.18	28,800				
2					5.37	5,430	10.31	29,700	7.16	11,500	5.62	6,130
3							10.43	30,500				
4					5.80	6,660	10.49	30,900	6.96	10,700	5.55	5,930
5							10.51	31,100				
6					6.15	7,780	10.49	30,900	6.79	10,100	5.47	5,710
7							10.33	29,800				
8					6.44	8,770	10.22	29,000	6.63	9,460	5.40	5,510
9							10.09	28,100				
10					6.66	9,570	10.04	27,800	6.49	8,950	5.32	5,290
11							9.93	27,000				
12					6.81	10,100	9.68	25,300	6.37	8,520	5.24	5,080
	January 3		January 4		January 5		January 6		January 7		January 8	
2							4.57	3,530				
4	5.10	4,730	4.60	3,590	4.23	2,870	4.65	3,700				
6							4.74	3,890				
8	4.97	4,420	4.51	3,410	4.18	2,780	4.84	4,110	4.79	4,000	4.41	3,210
10							4.93	4,320				
N	4.89	4,230	4.44	3,270	4.15	2,730	4.98	4,440				
2							5.00	4,490				
4	4.84	4,110	4.40	3,190	4.18	2,780	5.01	4,510	4.64	3,670	4.34	3,080
6							5.02	4,540				
8	4.77	3,950	4.35	3,100	4.29	2,980	5.00	4,490				
10							4.98	4,440				
12	4.68	3,760	4.27	2,950	4.48	3,350	4.94	4,350	4.52	3,430	4.25	2,910
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4							3.45	1,660	3.39	1,580		
6												
8	4.16	2,750	3.94	2,370	3.73	2,040	3.39	1,580	3.34	1,510	3.24	1,390
10												
N							3.36	1,540	3.30	1,460		
2												
4	4.09	2,620	3.88	2,280	3.66	1,940	3.42	1,620	3.34	1,510	3.22	1,360
6												
8							3.44	1,640	3.32	1,490		
10												
12	4.02	2,500	3.81	2,170	3.53	1,760	3.41	1,600	3.29	1,450	3.12	1,240

Supplemental records.- Dec. 31, 5:15 p.m., 10.55 ft., 31,400 sec.-ft.; Jan. 6, 5 p.m., 5.02 ft., 4,540 sec.-ft.; Jan. 12, 5 p.m., 3.46 ft., 1,670 sec.-ft.

Sacandaga Reservoir at Conklingville, N. Y.

Location.- Lat. 43°18'55", long. 73°55'35", at Conklingville, Saratoga County, 800 feet upstream from right end of Conklingville Dam on Sacandaga River. Datum of gage is at mean sea level, adjustment of 1912.
Drainage area.- 1,044 square miles.
Gage-height record.- Water-stage recorder graph.
Maxima.- December 1948-January 1949: Elevation, 759.43 feet 12 m. Jan. 8 (contents, 25,020,000,000 cubic feet). Peak 4-hour inflow, 73,000 second-feet 1 to 5 p.m. Dec. 31.
1930 to November 1948: Elevation, 769.34 feet July 11, 1935 (contents, 35,800,000,000 cubic feet).
Remarks.- Flow of Sacandaga River regulated at Conklingville by this reservoir. Usable capacity for stream regulation 29,670,000,000 cubic feet between elevations 735.0 and 768.0 feet. Between elevations 768.0 feet and 771.0 feet (spillway crest) an additional 3,450,000,000 cubic feet is exclusively available for flood storage. Figures of contents given herein represent those above elevation 715.0 feet. Area of water surface of reservoir filled to capacity (elevation 771.0 feet) is 41.7 square miles. Release from reservoir of 21 second-feet 10:30 a.m. Dec. 31 to 6 a.m. Jan. 2. Records furnished by Board of Hudson River Regulating District.

Mean daily elevation and contents, 1948-49

Day	Elevation (feet)	Contents (billions of cubic feet)	Day	Elevation (feet)	Contents (billions of cubic feet)	Day	Elevation (feet)	Contents (billions of cubic feet)
Dec. 27	748.99	15.04	Jan. 3	758.54	24.12	Jan. 9	759.32	24.91
28	748.75	14.83	4	758.54	24.12	10	759.22	24.81
29	748.67	14.76	5	758.66	24.24	11	759.06	24.64
30	750.00	15.94	6	759.11	24.69	12	758.86	24.44
31	755.17	20.77	7	759.38	24.97	13	758.60	24.18
Jan. 1	757.75	23.32	8	759.37	24.96	14	758.34	23.91
2	758.40	23.97						

East Branch Sacandaga River at Griffin, N. Y.

Location.- Staff gage, lat. 43°28'25", long. 74°13'25", 300 feet upstream from highway bridge at Griffin, Hamilton County, and 7 miles upstream from Wells.
Drainage area.- 114 square miles.
Gage-height record.- Graph based on twice-daily staff-gage readings, gage height of floodmarks, and water-stage recorder graph for Sacandaga River near Hope.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 4,400 second-feet and extended to peak stage on basis of contracted-opening and slope-area determinations.
Maxima.- December 1948-January 1949: Discharge, 10,700 second-feet 4 p.m. Dec. 31 (gage height, 14.35 feet, from floodmarks):
1933 to November 1948: Discharge, 8,830 second-feet Mar. 18, 1936 (gage height, 12.6 feet, from floodmarks).
Remarks.- Flow not affected by storage or diversion.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	49	Jan. 3	614	Jan. 9	328
29	55	4	418	10	264
30	1,300	5	341	11	211
31	7,910	6	627	12	146
Jan. 1	4,570	7	573	13	162
2	1,300	8	425	14	154

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							8.86	3,570	12.56	8,040		
2					2.24	103	9.18	3,890	12.29	7,670	6.85	1,840
3							9.60	4,350	12.01	7,280		
4					2.56	149	10.00	4,790	11.74	6,930	6.60	1,660
5							10.41	5,270	11.45	6,560		
6					3.01	227	10.84	5,790	11.14	6,150	6.38	1,530
7							11.28	6,330	10.82	5,760		
8	1.63	48	1.63	48	3.60	360	11.74	6,930	10.52	5,400	6.18	1,410
9							12.18	7,510	10.22	5,040		
10					4.32	562	12.58	8,070	9.95	4,740	5.99	1,300
11							13.04	8,720	9.68	4,440		
N					5.20	901	13.49	9,380	9.48	4,220	5.83	1,220
1							13.80	9,850	9.19	3,900		
2					6.18	1,410	14.10	10,300	8.95	3,660	5.70	1,150
3							14.28	10,600	8.73	3,440		
4	1.65	50	1.68	52	7.24	2,110	14.35	10,700	8.51	3,220	5.58	1,090
5							14.30	10,600	8.31	3,030		
6					7.63	2,420	14.13	10,300	8.12	2,860	5.48	1,040
7							13.94	10,100	7.94	2,700		
8					7.92	2,680	13.74	9,760	7.78	2,550	5.38	990
9							13.51	9,420	7.60	2,400		
10					8.20	2,930	13.29	9,080	7.42	2,260	5.23	916
11							13.05	8,730	7.28	2,140		
12	1.64	49	2.02	79	8.58	3,300	12.81	8,390	7.12	2,020	5.08	846
	January 3		January 4		January 5		January 6		January 7		January 8	
2							3.98	460				
4	4.71	695	3.98	460	3.44	321	4.08	489				
6							4.19	522				
8	4.43	598	3.87	430	3.38	306	4.34	569	4.44	601	3.92	444
10							4.52	628				
N	4.39	585	3.80	411	3.39	309	4.70	691				
2							4.83	741				
4	4.40	588	3.76	401	3.50	335	4.85	749	4.25	540	3.77	403
6							4.80	729				
8	4.27	547	3.69	382	3.69	382	4.75	710				
10							4.70	691				
12	4.12	501	3.56	350	3.88	433	4.64	669	4.08	489	3.62	365
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4					2.99	223	2.49	138	2.62	158		
6												
8	3.51	338	3.22	270	2.96	217	2.39	124	2.59	154	2.57	150
10												
N					2.93	212	2.38	122	2.58	152		
2												
4	3.42	316	3.17	260	2.93	212	2.61	157	2.73	176	2.61	157
6												
8					2.88	202	2.67	166	2.68	168		
10												
12	3.32	293	3.03	231	2.68	168	2.67	166	2.62	158	2.59	154

Bond Brook at Dunham Basin, N. Y.

Location.- Water-stage recorder, lat. 43°18'25", long. 73°32'55", at Dunham Basin, Washington County, a quarter of a mile upstream from Glens Falls feeder and abandoned Champlain Canal, half a mile upstream from Barge Canal, 2 miles east of Hudson Falls, and 4 miles upstream from mouth.
Drainage area.- 14.7 square miles.
Gage-height record.- Water-stage recorder graph. Station established June 28, 1947.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 1,000 second-feet and extended to peak stage on basis of contracted-opening determination; affected by ice at intervals Dec. 30, Jan. 2-5, 11, 12.
Maximum.- December 1948-January 1949: Discharge, 1,370 second-feet 8:15 a.m. Dec. 31 (gage height, 8.52 feet).
Remarks.- No diversion or regulation above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	3.2	Jan. 3	96	Jan. 9	40
29	15	4	46	10	29
30	540	5	47	11	21
31	908	6	242	12	16
Jan. 1	213	7	84	13	11
2	112	8	57	14	8.8

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.25		6.46	736				
2					3.40		6.76	821				
3					3.48		7.18	944				
4			1.87	3.0	3.71		7.58	1,060	4.59	299	3.47	118
5					4.09		7.85	1,140				
6					4.41		8.19	1,250				
7					4.92		8.37	1,310				
8	1.88	3.2	1.87	3.0	5.55		8.49	1,360	4.14	215	3.44	
9					5.87		8.41	1,330				
10					5.87		8.31	1,290				
11					5.87		8.06	1,210				
N			1.88	3.2	5.88		7.78	1,120	3.86	170	3.36	105
1					6.04	620	7.51	1,040				
2					6.30	691	7.24	966				
3					6.62	781	6.87	861				
4	1.88	3.2	1.95	5.4	6.94	874	6.53	767	3.84	167	3.49	121
5					7.09	917	6.25	692				
6					7.19	947	6.05	640				
7					7.16	938	5.92	606				
8			2.66	40	7.05	906	5.81	578	3.74	153	3.34	103
9					6.92	868	5.66	541				
10					6.82	839	5.49	499				
11					6.66	792	5.31	455				
12	1.87	3.0	3.12	72	6.47	739	5.14	416	3.56	129	3.37	106
	January 3		January 4		January 5		January 6		January 7		January 8	
2	3.33	102					3.90	176				
4	3.31		2.93	63	2.64		4.00	192	3.29	97		
6	3.33						4.16	218				
8	3.34		2.74	48	2.61		4.48	277	3.10	78	2.90	60
10	3.36						4.69	319				
N	3.33		2.65	41	2.44	27	4.75	332	2.99	68		
2	3.16	84					4.75	332				
4	3.32	100	2.64	40	2.48	30	4.65	311	3.08	76	2.78	50
6	3.55	128					4.35	252				
8	3.35	104	2.53	33	3.12	80	4.03	197	3.12	80		
10	3.17	85					3.77	157				
12	3.07	75	2.60		3.76	155	3.57	130	3.05	74	2.73	47
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8	2.66	42	2.49	30	2.37	23	2.27		2.11	11	2.07	9.4
10												
N												
2												
4	2.59	37	2.44	27	2.26	18	2.25	17	2.10	11	2.07	9.4
6												
8												
10												
12	2.56	35	2.44	27	2.34		2.15	13	2.08	9.8	1.96	5.5

Supplemental records.- Dec. 30, 6:15 p.m., 7.21 ft., 953 sec.-ft.; Dec. 31, 12:30 a.m., 6.38 ft., 713 sec.-ft., 8:15 a.m., 8.52 ft., 1,370 sec.-ft.; Jan. 3, 5:30 p.m., 3.55 ft., 128 sec.-ft.; Jan. 6, 11 a.m., 4.75 ft., 332 sec.-ft., 12:30 p.m., 4.76 ft., 334 sec.-ft., 3 p.m., 4.73 ft., 327 sec.-ft.

Batten Kill at Arlington, Vt.

Location.- Lat. 43°04'40", long. 73°09'30", at Arlington, Bennington County, just upstream from bridge and 0.9 mile downstream from Warm Brook. Datum of gage is 597.68 feet above mean sea level.
Drainage area.- 152 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 3,000 second-feet and extended to peak stage on basis of slope-area determination at gage height 10.8 feet, present site, and computation of flow over dam at gage height 11.3 feet, present site; affected by ice 1 to 7 a.m. Dec. 28, 1 a.m. Dec. 31.
Maxima.- December 1948-January 1949: Discharge, 7,000 second-feet 1 p.m. Dec. 31 (gage height, 9.77 feet).
1928 to November 1948: Discharge, 11,100 second-feet Mar. 18, 1936 (gage height, 11.3 feet, present site, from floodmarks), from rating curve extended above 5,200 second-feet as described above.
Remarks.- Flood flow not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	109	Jan. 3	1,060	Jan. 9	881
29	165	4	738	10	690
30	3,230	5	766	11	576
31	5,960	6	2,780	12	459
Jan. 1	3,430	7	2,040	13	434
2	1,740	8	1,240	14	397

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					4.48	894	8.66	5,100	8.31	4,680		
2			2.28	104	5.12	1,300	8.66	5,190	8.19	4,520	6.26	2,310
3					5.59	1,660	8.91	5,570	8.06	4,340		
4			2.27	103	6.00	2,020	8.99	5,690	7.95	4,200	6.09	2,160
5					6.26	2,270	9.04	5,770	7.83	4,040		
6	2.34	110	2.26	101	6.56	2,570	9.06	5,810	7.71	3,880	5.91	2,000
7					6.77	2,800	9.16	5,970	7.60	3,750		
8			2.26	101	6.94	2,980	9.26	6,130	7.50	3,630	5.74	1,860
9					7.11	3,170	9.44	6,430	7.39	3,500		
10			2.27	103	7.23	3,310	9.56	6,630	7.31	3,400	5.62	1,770
11					7.33	3,430	9.57	6,650	7.28	3,370		
N	2.31	110	2.29	106	7.37	3,470	9.65	6,780	7.23	3,310	5.51	1,680
1					7.39	3,500	9.77	7,000	7.14	3,210		
2			2.33	114	7.44	3,560	9.67	6,820	7.11	3,180	5.38	1,590
3					7.52	3,650	9.57	6,650	7.04	3,100		
4			2.38	124	7.58	3,730	9.43	6,410	7.00	3,060	5.27	1,510
5					7.64	3,800	9.34	6,260	6.96	3,020		
6	2.30	108	2.51	151	7.69	3,860	9.22	6,060	6.89	2,940	5.19	1,450
7					7.85	4,060	9.07	5,820	6.81	2,850		
8			2.82	226	8.19	4,520	8.95	5,630	6.71	2,750	5.10	1,390
9					8.30	4,670	8.84	5,460	6.65	2,690		
10			3.23	349	8.33	4,710	8.69	5,240	6.58	2,620	5.02	1,330
11					8.37	4,770	8.56	5,040	6.51	2,550		
12	2.29	106	4.07	686	8.49	4,940	8.44	4,870	6.44	2,480	4.93	1,280
	January 3		January 4		January 5		January 6		January 7		January 8	
2	4.86	1,240	4.21	860	3.72	615	6.44	2,480	6.62	2,660	5.17	1,440
4	4.79	1,190	4.15	830	3.70	605	6.61	2,650	6.48	2,520	5.11	1,400
6	4.72	1,150	4.09	800	3.68	596	6.64	2,680	6.34	2,390	5.04	1,350
8	4.66	1,120	4.04	775	3.67	592	6.71	2,750	6.18	2,240	4.96	1,300
10	4.61	1,090	3.99	750	3.65	582	6.89	2,940	6.02	2,100	4.90	1,260
N	4.56	1,060	3.93	720	3.63	574	6.92	2,970	5.87	1,970	4.84	1,220
2	4.49	1,010	3.89	700	3.63	574	6.88	2,930	5.73	1,850	4.77	1,180
4	4.42	976	3.87	690	3.67	592	6.86	2,910	5.62	1,770	4.72	1,150
6	4.37	948	3.84	675	3.85	680	6.86	2,910	5.52	1,690	4.68	1,130
8	4.33	926	3.81	660	4.45	992	6.86	2,910	5.42	1,610	4.63	1,100
10	4.28	899	3.78	645	5.20	1,460	6.82	2,860	5.33	1,550	4.56	1,060
12	4.23	872	3.75	630	5.95	2,040	6.72	2,760	5.25	1,500	4.50	1,020
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	4.36	943	3.95	730	3.70	605	3.35	448	3.35	448	3.27	412
8												
10												
N	4.23	872	3.85	680	3.64	578	3.34	443	3.31	430	3.25	403
2												
4												
6	4.12	815	3.79	650	3.58	551	3.38	461	3.29	421	3.22	390
8												
10												
12	4.03	770	3.75	630	3.48	506	3.38	461	3.28	416	3.13	353

Batten Kill at Battenville, N. Y.

Location.- Water-stage recorder, lat. 43°06'05", long. 73°25'55", 1 mile southwest of Battenville, Washington County, and 3 miles downstream from Whitaker Brook.
Drainage area.- 394 square miles.
Gage-height record.- Water-stage recorder graph except for period 11 a.m. Dec. 31 to 9 a.m. Jan. 1, for which graph was reconstructed on basis of high-water mark in gage house and records for stations on nearby streams.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 16,000 second-feet and extended to peak stage; affected by ice Dec. 28 to 12 m. Dec. 29.
Maxima.- December 1948-January 1949: Discharge, 18,000 second-feet 8 p.m. Dec. 31 (gage height, 15.88 feet, from high-water mark in gage house).
1922 to November 1948: Discharge, 21,300 second-feet Nov. 4, 1927 (gage height, 17.7 feet, from floodmarks).
Remarks.- Flood flow not affected by storage or diversion. Diurnal fluctuation during low flow caused by mills above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	220	Jan. 3	3,430	Jan. 9	2,530
29	270	4	2,440	10	1,980
30	3,340	5	2,120	11	1,660
31	14,500	6	4,790	12	1,370
Jan. 1	12,800	7	5,210	13	1,250
2	5,730	8	3,520	14	1,140

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.88	464	10.01	8,160	15.43	17,100		
2					2.95	508	10.55	8,980	15.30	16,900	9.44	7,360
3					3.03	559	11.06	9,740	15.14	16,600		
4			2.77		3.19	666	11.62	10,600	14.99	16,300	9.14	6,940
5					3.40	815	12.12	11,400	14.81	16,000		
6					3.80	1,120	12.62	12,200	14.62	15,600	8.85	6,530
7					4.04	1,300	13.04	12,900	14.41	15,200		
8			2.74		4.56	1,710	13.38	13,400	14.18	14,800	8.58	6,170
9					5.22	2,350	13.70	14,000	13.96	14,400		
10					6.22	3,370	14.03	14,600	13.71	14,000	8.32	5,840
11					6.50	3,680	14.33	15,100	13.37	13,400		
N	2.90		2.69		6.42	3,590	14.58	15,500	13.05	12,900	8.10	5,550
1					6.55	3,740	14.83	16,000	12.71	12,300		
2					6.73	3,920	15.04	16,400	12.41	11,900	7.88	5,280
3					6.93	4,140	15.23	16,700	12.04	11,300		
4			2.52	270	7.18	4,440	15.31	17,100	11.73	10,800	7.73	5,100
5					7.38	4,680	15.57	17,400	11.41	10,300		
6					7.68	5,040	15.71	17,600	11.13	9,840	7.52	4,840
7					7.92	5,320	15.82	17,900	10.88	9,470		
8			2.64	329	8.14	5,600	15.88	18,000	10.63	9,100	7.35	4,640
9					8.45	6,000	15.82	17,900	10.42	8,780		
10					8.76	6,410	15.74	17,700	10.19	8,440	7.17	4,420
11					9.11	6,890	15.64	17,500	9.97	8,100		
12			2.85	446	9.50	7,440	15.54	17,300	9.79	7,850	7.02	4,240
	January 3		January 4		January 5		January 6		January 7		January 8	
2					4.97	2,100	6.20	3,350	8.31	5,820		
4	6.72	3,910	5.54	2,670	4.94	2,070	6.59	3,780	8.26	5,760	6.77	3,970
6					4.90	2,030	6.87	4,080	8.19	5,670		
8	6.45	3,620	5.42	2,550	4.86	1,990	7.12	4,360	8.10	5,550	6.52	3,700
10					4.83	1,960	7.36	4,650	8.00	5,420		
N	6.22	3,370	5.30	2,430	4.81	1,940	7.66	5,010	7.88	5,280	6.31	3,470
2					4.81	1,940	7.87	5,260	7.77	5,140		
4	6.02	3,160	5.18	2,310	4.85	1,980	8.02	5,450	7.66	5,010	6.12	3,270
6					4.96	2,090	8.14	5,600	7.50	4,820		
8	5.85	2,980	5.09	2,220	5.12	2,250	8.26	5,760	7.33	4,620	5.95	3,090
10					5.41	2,540	8.31	5,820	7.17	4,420		
12	5.69	2,820	5.00	2,130	5.83	2,960	8.32	5,840	7.03	4,260	5.79	2,920
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	5.65	2,780	4.99	2,120	4.61	1,760	4.24	1,450	4.04	1,300	3.88	1,180
6												
8	5.51	2,640	4.91	2,040	4.55	1,700	4.15	1,380	4.01	1,270	3.86	1,160
10												
N	5.38	2,510	4.84	1,970	4.50	1,660	4.09	1,330	3.97	1,240	3.84	1,140
2											3.87	1,170
4	5.27	2,400	4.78	1,910	4.44	1,610	4.08	1,320	3.94	1,220	3.82	1,130
6												
8	5.18	2,310	4.72	1,860	4.39	1,570	4.07	1,320	3.92	1,200	3.78	1,100
10												
12	5.08	2,210	4.66	1,800	4.31	1,510	4.06	1,310	3.89	1,180	3.74	1,070

Supplemental records.- Dec. 30, 10:30 a.m., 6.63 ft., 3,920 sec.-ft.; Jan. 7, 1:30 a.m., 8.34 ft., 5,860 sec.-ft.

Kayaderosseras Creek near West Milton, N. Y.

Location.- Water-stage recorder, lat. 43°02'25", long. 73°54'30", 500 feet downstream from Glowegee Creek and 1 mile east of West Milton, Saratoga County.
Drainage area.- 90 square miles.
Gage-height record.- Water-stage recorder graph except for period 12 m. to 5 p.m. Dec. 31, for which gage-height graph based on high-water mark in gage house was drawn.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 4,300 second-feet; affected by ice Dec. 28 to 12 m. Dec. 30, 1 a.m. to 8 a.m. Jan. 12.
Maxima.- December 1948-January 1949: Discharge, 4,340 second-feet 2 p.m. Dec. 31 (gage height, 10.31 feet, from high-water mark in gage house).
1927 to November 1948: Maximum gage height, 10.78 feet (from floodmarks) Mar. 18, 1936; discharge previously published subject to revision.
Remarks.- Flood flow not affected by storage or diversion.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	48	Jan. 3	409	Jan. 9	318
29	56	4	294	10	265
30	1,060	5	364	11	229
31	3,490	6	980	12	175
Jan. 1	1,740	7	621	13	173
2	691	8	408	14	162

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.57		7.13	2,260	8.28	2,950		
2					2.74		7.19	2,290	8.08	2,830	4.51	914
3					2.98		7.32	2,370	7.89	2,710		
4					3.32		7.57	2,520	7.69	2,590	4.35	850
5					3.18		7.88	2,710	7.49	2,470		
6					3.37		8.31	2,970	7.26	2,340	4.19	786
7					3.56		8.77	3,260	7.03	2,200		
8					3.70		9.21	3,570	6.82	2,070	4.06	736
9					3.80		9.54	3,800	6.59	1,930		
10					3.88		9.78	3,970	6.37	1,810	3.95	693
11					4.08		9.96	4,090	6.17	1,700		
N	1.77		1.85		4.83		10.11	4,200	5.92	1,570	3.86	659
1					4.91	1,080	10.24	4,290	5.69	1,440		
2					5.27	1,240	10.31	4,340	5.49	1,340	3.79	632
3					5.55	1,380	10.25	4,300	5.32	1,260		
4					5.69	1,440	10.16	4,230	5.19	1,210	3.73	610
5					6.07	1,650	10.06	4,160	5.08	1,160		
6					6.29	1,770	9.90	4,050	4.96	1,100	3.66	584
7					6.49	1,880	9.68	3,900	4.88	1,070		
8					6.66	1,980	9.43	3,720	4.82	1,040	3.59	558
9					6.82	2,070	9.18	3,550	4.76	1,010		
10					6.94	2,140	8.96	3,390	4.71	994	3.54	540
11					7.03	2,200	8.73	3,230	4.68	982		
12					7.09	2,230	8.51	3,090	4.64	966	3.44	504
	January 3		January 4		January 5		January 6		January 7		January 8	
2	3.37	480			2.65	256	4.59	946				
4	3.31	458			2.64	253	4.72	998	4.08	743	3.28	448
6	3.27	445			2.63	251	4.77	1,020				
8	3.19	418	2.83	305	2.62	248	4.79	1,030	3.87	663	3.19	418
10	3.14	401			2.61	246	4.82	1,040				
N	3.15	404			2.62	248	4.86	1,060	3.71	603	3.10	388
2	3.18	414			2.66	259	4.82	1,040				
4	3.06	375	2.73	277	2.87	316	4.72	998	3.53	537	3.07	378
6	3.04	369			3.15	404	4.64	966				
8	3.05	372			3.64	577	4.55	930	3.48	519	3.09	385
10	2.99	353			4.08	743	4.43	882				
12	2.95	340	2.67	261	4.40	870	4.31	834	3.39	486	3.05	372
	January 9		January 10		January 11		January 12		January 13		January 14	
2							2.34					
4									2.28	169		
6					2.60	243						
8	2.90	325	2.69	266			2.26		2.21	154	2.26	165
10												
N					2.55	230	2.28	169	2.39	193		
2												
4	2.81	299	2.65	256			2.40	195	2.32	177	2.27	167
6					2.51	220						
8							2.37	188	2.30	173		
10												
12	2.77	288	2.65	256	2.37	188	2.32	177	2.27	167	2.13	138

Supplemental records.- Dec. 30, 2:30 p.m., 5.76 ft., 1,480 sec.-ft.; Jan. 6, 11:30 a.m., 4.86 ft., 1,060 sec.-ft.

Glowegee Creek at West Milton, N. Y.

Location.- Water-stage recorder, lat. 43°01'50", long. 73°55'40", at highway bridge half a mile south of West Milton, Saratoga County, 1½ miles upstream from Kayaderosseras Creek, and 4 miles northwest of Ballston Spa.
Drainage area.- 26.0 square miles.
Gage-height record.- Water-stage recorder graph. Station established Apr. 4, 1948.
Discharge record.- Stage-discharge relation defined by current-meter measurements; affected by ice 1 a.m. to 1 p.m. Dec. 30.
Maximum.- December 1948-January 1949: Discharge, 1,670 second-feet 8:30 a.m. Dec. 31 (gage height, 7.04 feet).
Remarks.- Flow not affected by storage or diversion.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	5.3	Jan. 3	103	Jan. 9	107
29	9.7	4	77	10	84
30	500	5	118	11	70
31	1,080	6	373	12	47
Jan. 1	299	7	191	13	44
2	147	8	133	14	41

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.24		5.38	812				
2					2.62		5.39	816	4.37	457	3.10	173
3					2.91		5.53	872				
4			1.26	6.0	3.20		5.71	946	4.16	399	3.05	165
5					3.28		6.08	1,110				
6					3.80		6.47	1,310	3.96	348	3.01	159
7					3.59		6.82	1,520				
8	1.22	5.1	1.26	6.0	3.68		7.01	1,650	3.85	322	2.96	151
9					4.26		6.98	1,630				
10					4.21		6.84	1,540	3.71	291	2.93	146
11					4.25		6.76	1,480				
N			1.27	6.3	4.64		6.62	1,400	3.63	274	2.94	148
1					4.75		6.46	1,300				
2					4.88	623	6.34	1,240	3.57	262	2.92	145
3					5.06	688	6.22	1,180				
4	1.24	5.6	1.29	6.8	5.31	784	6.08	1,110	3.49	245	2.87	138
5					5.46	844	5.87	1,010				
6					5.60	901	5.64	917	3.39	225	2.84	134
7					5.64	917	5.40	820				
8			1.39	9.9	5.67	930	5.21	745	3.33	214	2.80	128
9					5.66	926	5.02	673				
10					5.59	897	4.87	620	3.24	197	2.76	123
11					5.51	864	4.74	575				
12	1.25	5.8	1.97	41	5.44	836	4.60	528	3.18	187	2.66	110
	January 3		January 4		January 5		January 6		January 7		January 8	
2	2.63	107			2.28	68	4.10	383	3.49	245		
4	2.63	107			2.27	67	4.19	406	3.39	225	2.90	142
6	2.62	105			2.26	66	4.20	409	3.32	212		
8	2.60	103	2.39	79	2.25	66	4.20	409	3.25	199	2.81	129
10	2.60	103			2.24	65	4.21	412	3.17	185		
N	2.77	124			2.24	65	4.23	417	3.12	176	2.74	120
2	2.64	108			2.29	69	4.13	391	3.07	168	2.72	118
4	2.55	97	2.33	73	2.46	87	4.05	370	3.05	165	2.76	123
6	2.54	96			2.86	136	3.97	351	3.06	167		
8	2.52	93			3.38	223	3.87	327	3.06	167	2.89	141
10	2.50	91			3.74	298	3.72	293	3.05	165		
12	2.48	89	2.29	69	2.96	348	3.59	266	3.02	160	2.82	131
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4					2.39	79	2.00	45	1.92	39	1.97	43
6												
8	2.64	108	2.44	84	2.35	75	1.87	36	1.84	34	1.98	44
10												
N					2.30	70	1.95	42	1.95	42	2.00	45
2												
4	2.56	98	2.39	79	2.28	68	2.18	59	2.13	55	2.02	47
6												
8					2.21	62	2.09	52	2.04	48	1.84	34
10												
12	2.56	98	2.42	82	2.02	47	1.98	44	1.98	44	1.67	26

Supplemental records.- Dec. 31, 8:30 a.m., 7.04 ft., 1,670 sec.-ft.; Jan. 6, 11 a.m., 4.24 ft., 420 sec.-ft.; Jan. 11, 10:30 p.m., 2.02 ft., 47 sec.-ft.; Jan. 12, 2:30 p.m., 2.17 ft., 59 sec.-ft.

Hoosic River at Adams, Mass.

Location.- Lat. 42°36'37" (revised), long. 73°07'32" (revised), at Adams, Berkshire County, just downstream from Dry Brook and 0.5 mile upstream from Pecks Brook. Datum of gage is 837.01 feet above mean sea level, datum of 1929.
Drainage area.- 46.3 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 1,100 second-feet and extended to peak stage on basis of computation of flow over dam. Shifting-control method used Jan. 7-14.
Maxima.- December 1948-January 1949: Discharge, 3,100 second-feet 12:30 p.m. Dec. 31 (gage height, 7.81 feet).
1951 to November 1948: Discharge, 5,080 second-feet Sept. 21, 1938 (gage height, 8.25 feet), by computation of flow over dam.
Remarks.- Small diversion above station for municipal supply of Adams. Flood flow affected by Cheshire Reservoir.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	33	Jan. 3	294	Jan. 9	254
29	40	4	216	10	226
30	763	5	216	11	201
31	2,390	6	843	12	176
Jan. 1	697	7	410	13	161
2	344	8	297	14	152

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.26	107	5.69	1,700	5.15	1,380		
2					2.50	179	6.03	1,910	4.94	1,260		
3					2.53	190	6.29	2,060	4.72	1,150		
4	1.85	31	1.86	32	2.71	255	6.47	2,170	4.51	1,040	3.03	382
5					2.93	342	6.86	2,430	4.31	945		
6					3.11	414	7.10	2,600	4.12	850		
7					3.21	454	7.29	2,730	3.98	786		
8	1.86	32	1.87	34	3.24	466	7.29	2,730	3.86	732	2.97	358
9					3.27	478	7.56	2,920	3.74	678		
10					3.28	482	7.56	2,920	3.63	628		
11					3.40	530	7.71	3,030	3.55	592		
N	1.89	36	1.90	38	3.63	628	7.78	3,080	3.48	562	2.92	338
1					3.90	750	7.72	3,030	3.43	542		
2					4.17	875	7.42	2,820	3.39	526		
3					4.31	945	7.29	2,730	3.35	510		
4	1.89	36	1.92	41	4.40	990	7.09	2,590	3.31	494	2.87	318
5					4.59	1,080	6.92	2,470	3.27	478		
6					4.85	1,220	6.72	2,330	3.23	462		
7					5.07	1,330	6.49	2,180	3.20	450		
8	1.88	35	1.96	47	5.15	1,380	6.29	2,060	3.17	438	2.85	310
9					5.25	1,440	6.07	1,930	3.15	430		
10					5.25	1,440	5.85	1,800	3.13	422		
11					5.37	1,510	5.62	1,660	3.11	414		
12	1.85	31	2.08	67	5.54	1,610	5.38	1,520	3.09	406	2.85	310
	January 3		January 4		January 5		January 6		January 7		January 8	
2					2.53	190	3.70	660	3.34	510		
4	2.87	318	2.64	229	2.53	190	4.10	840	3.26	478		
6					2.52	186	4.38	980	3.20	454	2.84	314
8	2.86	314	2.63	225	2.52	186	4.50	1,040	3.14	430		
10					2.51	182	4.61	1,100	3.09	410		
N	2.83	302	2.60	214	2.50	179	4.52	1,050	3.05	394	2.79	294
2					2.50	179	4.38	980	3.02	382		
4	2.79	286	2.58	207	2.52	186	4.19	885	2.99	370		
6					2.55	196	3.95	772	2.96	358	2.75	278
8	2.74	267	2.56	200	2.62	221	3.75	682	2.94	350		
10					2.95	350	3.58	606	2.92	342		
12	2.68	244	2.54	193	3.31	494	3.45	550	2.90	334	2.73	270
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	2.70	263	2.62	236	2.54	210	2.45	182	2.39	166	2.35	156
8												
10												
N	2.68	255	2.59	225	2.51	200	2.42	172	2.37	159	2.34	153
2												
4												
6	2.65	244	2.57	218	2.50	196	2.42	172	2.36	156	2.33	149
8												
10												
12	2.64	240	2.55	210	2.47	186	2.41	169	2.36	156	2.31	143

Supplemental records.- Dec. 31, 12:30 p.m., 7.81 ft., 3,100 sec.-ft.

Hoosic River near Williamstown, Mass.

Location.- Lat. 42°42'21" (revised), long. 73°10'50", 1.0 mile (revised) upstream from Green River and 1¼ miles east of Williamstown, Berkshire County.
Drainage area.- 132 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 4,300 second-feet and extended to peak stage on basis of contracted-opening determination. Shifting-control method used Jan. 10-14.
Maxima.- December 1948-January 1949: Discharge, 13,000 second-feet 2:30 p.m. Dec. 31 (gage height, 14.85 feet).
1940 to November 1948: Discharge, 5,500 second-feet Nov. 9, 1943 (gage height, 10.51 feet), from rating curve extended above 2,100 second-feet by logarithmic plotting.
Remarks.- Flood flow affected by Cheshire Reservoir.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	77	Jan. 3	704	Jan. 9	548
29	97	4	570	10	483
30	3,760	5	702	11	433
31	10,400	6	3,100	12	368
Jan. 1	3,230	7	1,170	13	346
2	1,010	8	698	14	327

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.39	316	11.83	7,560	11.83	7,040		
2			2.56	75	3.93	544	12.20	8,120	11.39	6,390	6.30	1,300
3					4.80	970	12.53	8,650	10.98	5,810		
4			2.55	73	5.76	1,540	12.91	9,260	10.48	5,150	6.13	1,200
5					6.30	1,900	13.16	9,690	10.02	4,590		
6	2.55	73	2.54	71	6.90	2,320	13.37	10,100	9.64	4,150	6.00	1,120
7					7.15	2,510	13.53	10,400	9.29	3,770		
8			2.55	73	7.49	2,780	13.71	10,700	9.04	3,520	5.91	1,070
9					7.63	2,890	13.94	11,100	8.77	3,250		
10			2.55	73	7.71	2,960	14.20	11,600	8.52	3,020	5.83	1,030
11					7.75	2,990	14.43	12,100	8.30	2,820		
N	2.56	75	2.56	75	7.96	3,160	14.60	12,400	8.09	2,630	5.74	977
1					8.25	3,420	14.73	12,700	7.94	2,500		
2			2.59	80	8.77	3,890	14.79	12,900	7.74	2,330	5.68	945
3					9.24	4,360	14.82	12,900	7.56	2,190		
4			2.68	99	9.77	4,940	14.65	12,500	7.38	2,040	5.60	905
5					10.32	5,580	14.38	11,900	7.23	1,920		
6	2.60	82	2.71	105	10.66	5,990	14.06	11,200	7.09	1,820	5.54	875
7					10.86	6,230	13.79	10,600	6.97	1,740		
8			2.79	124	11.08	6,510	13.56	10,100	6.86	1,660	5.48	845
9					11.29	6,810	13.22	9,440	6.77	1,600		
10			2.92	158	11.36	6,900	12.88	8,780	6.67	1,530	5.42	815
11					11.41	6,970	12.49	8,080	6.57	1,460		
12	2.57	77	3.19	243	11.59	7,230	12.21	7,640	6.47	1,400	5.36	787
	January 3		January 4		January 5		January 6		January 7		January 8	
2					4.75	525	7.71	2,310	6.84	1,650		
4	5.28	751	4.91	589	4.73	517	8.36	2,870	6.62	1,490	5.32	769
6					4.73	517	9.10	3,580	6.44	1,380		
8	5.23	728	4.87	573	4.72	513	9.65	4,160	6.26	1,280	5.22	724
10					4.72	513	9.87	4,410	6.09	1,170		
N	5.18	706	4.86	569	4.73	517	9.68	4,200	5.94	1,090	5.14	688
2					4.74	521	9.13	3,610	5.79	1,000		
4	5.13	684	4.84	561	4.86	569	8.62	3,110	5.72	966	5.07	656
6					5.13	684	8.17	2,700	5.64	925		
8	5.05	648	4.81	549	5.75	982	7.76	2,350	5.57	890	5.02	634
10					6.40	1,360	7.39	2,050	5.51	860		
12	4.99	621	4.77	533	7.19	1,890	7.09	1,820	5.44	825	4.95	605
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	4.86	569	4.66	494	4.52	446	4.24	353	4.24	353	4.18	338
8												
10												
N	4.80	545	4.63	484	4.52	446	4.27	362	4.17	332	4.15	329
2												
4												
6	4.75	525	4.59	470	4.43	414	4.32	379	4.21	344	4.13	323
8												
10												
12	4.70	505	4.56	460	4.36	390	4.29	368	4.20	341	4.03	293

Supplemental records.- Dec. 31, 2:30 p.m., 14.85 ft., 13,000 sec.-ft.; Jan. 6, 10:30 a.m., 9.90 ft., 4,450 sec.-ft.

Hoosic River near Eagle Bridge, N. Y.

Location.- Water-stage recorder, lat. 42°56'10", long. 73°22'30", three-quarters of a mile downstream from Walloomsac River and 1¼ miles southeast of village of Eagle Bridge, Rensselaer County.
Drainage area.- 510 square miles.
Gage-height record.- Water-stage recorder graph except for period 1 p.m. to 10 p.m. Dec. 31, for which graph was reconstructed on basis of high-water mark in gage house and gage-height records for stations on nearby streams.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 13,000 second-feet and extended to peak stage on basis of determinations of peak flow by computations of flow over dams and by contracted-opening method; affected by ice 1 a.m. to 6 a.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 55,400 second-feet 5 p.m. Dec. 30 (gage height, 21.15 feet, from high-water mark in gage house).
1910-22, 1923 to November 1948: Discharge, 35,300 second-feet, Sept. 22, 1938 (gage height 17.78 feet).
Remarks.- Flood flow not affected by storage or diversion. Diurnal fluctuation at low and medium flow caused by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	302	Jan. 3	3,520	Jan. 9	2,690
29	326	4	2,720	10	2,290
30	7,200	5	2,850	11	1,990
31	39,000	6	10,100	12	1,690
Jan. 1	16,900	7	5,780	13	1,570
2	5,510	8	3,540	14	1,460

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.98		13.93	19,800	17.59	35,400		
2					4.10		14.16	20,600	16.67	30,800	9.33	7,160
3					4.20		14.35	21,200	15.93	27,400		
4					4.23		14.66	22,300	15.35	25,100	9.08	6,680
5					4.53		14.98	23,600	14.86	23,100		
6					5.83		15.48	25,600	14.39	21,400	8.84	6,250
7					5.86	2,100	16.01	27,700	13.95	19,800		
8					7.77	4,640	16.79	31,400	13.60	18,600	8.62	5,860
9					7.63	4,420	17.56	35,300	13.25	17,400		
10					8.06	5,080	18.13	38,200	12.97	16,400	8.43	5,530
11					8.53	5,830	18.68	40,900	12.71	15,600		
N					8.94	6,520	19.15	43,400	12.41	14,700	8.27	5,260
1					9.29	7,110	19.59	46,000	12.14	13,900		
2					9.72	7,910	20.07	48,900	11.89	13,200	8.14	5,040
3					10.06	8,600	20.52	51,600	11.64	12,400		
4					10.40	9,320	21.00	54,500	11.34	11,600	8.02	4,830
5					10.83	10,300	21.15	55,400	11.08	10,900		
6					11.22	11,200	21.11	55,200	10.85	10,300	7.92	4,670
7					11.69	12,600	21.00	54,500	10.62	9,810		
8					12.09	13,800	20.74	52,900	10.40	9,320	7.82	4,510
9					12.55	15,200	20.18	49,600	10.18	8,850		
10					13.01	16,500	19.60	46,100	9.97	8,410	7.71	4,340
11					13.35	17,700	19.04	42,700	9.79	8,050		
12					13.64	18,700	18.32	39,100	9.63	7,730	7.62	4,190
	January 3		January 4		January 5		January 6		January 7		January 8	
2					6.39	2,470	9.24	6,990	9.72	7,910		
4	7.43	3,900	6.72	2,900	6.37	2,440	9.77	8,010	9.32	7,140	7.47	3,960
6					6.34	2,410	10.17	8,830	9.02	6,580		
8	7.27	3,660	6.64	2,790	6.32	2,380	10.56	9,670	8.77	6,130	7.30	3,710
10					6.30	2,360	10.93	10,500	8.56	5,750		
N	7.14	3,480	6.57	2,700	6.27	2,320	11.24	11,300	8.37	5,430	7.17	3,520
2					6.30	2,360	11.55	12,200	8.22	5,170		
4	7.02	3,310	6.49	2,600	6.41	2,490	11.70	12,600	8.10	4,970	7.03	3,320
6					6.65	2,800	11.53	12,100	7.96	4,740		
8	6.91	3,150	6.46	2,560	7.17	3,520	11.22	11,200	7.86	4,580	6.90	3,140
10					7.85	4,560	10.79	10,200	7.74	4,380		
12	6.82	3,030	6.42	2,510	8.51	5,670	10.25	9,000	7.65	4,240	6.80	3,000
	January 9		January 10		January 11		January 12		January 13		January 14	
2					6.10	2,120						
4					6.09	2,110	5.80	1,780				
6					6.07	2,080						
8	6.61	2,750	6.28	2,340	6.04	2,050	5.72	1,690	5.65	1,620	5.52	1,470
10					5.92	1,910						
N					5.99	1,990	5.67	1,640				
2					5.97	1,970						
4	6.48	2,580	6.19	2,230	5.99	1,990	5.67	1,640	5.57	1,530	5.50	1,450
6					5.93	1,920						
8					5.92	1,910	5.69	1,660				
10					5.89	1,880						
12	6.38	2,460	6.12	2,140	5.87	1,860	5.68	1,650	5.54	1,490	5.46	1,410

Supplemental records.- Jan. 6, 3:30 p.m., 11.72 ft., 12,700 sec.-ft.; Jan. 11, 9:30 a.m., 6.02 ft., 2,020 sec.-ft., 10:30 a.m., 6.10 ft., 2,120 sec.-ft., 2:30 p.m., 5.96 ft., 1,960 sec.-ft., 3:30 p.m., 5.80 ft., 1,780 sec.-ft.

North Branch Hoosic River at North Adams, Mass.

Location.- Lat. 42°42'08" (revised), long. 73°05'37" (revised), at North Adams, Berkshire County, 0.4 mile downstream from Hudson Brook and 1⅞ miles upstream from mouth. Datum of gage is 820.46 feet above mean sea level, datum of 1929.
Drainage area.- 39.0 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 2,100 second-feet and extended to peak stage on basis of computation of flow over dam; affected by ice 5 a.m. Dec. 30, 8 a.m. Dec. 31.
Maxima.- December 1948-January 1949: Discharge, 6,300 second-feet 1:30 p.m. Dec. 31 (gage height, 9.42 feet).
1931 to November 1948: Discharge, 8,950 second-feet Sept. 21, 1938 (gage height, 12.05 feet, from floodmarks), by computation of flow over dam.
Maximum discharge known, 9,980 second-feet in November 1927, by computation of flow over dam.
Remarks.- Flood flow not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	19	Jan. 3	212	Jan. 9	178
29	28	4	151	10	142
30	1,820	5	269	11	115
31	4,200	6	1,370	12	87
Jan. 1	1,030	7	443	13	80
2	386	8	255	14	70

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.77	212	7.03	3,250	5.97	2,040		
2					4.41	607	7.30	3,570	5.74	1,790		
3					4.78	894	7.47	3,770	5.57	1,620		
4			3.06	17	5.01	1,090	7.62	3,950	5.44	1,490	4.23	481
5					5.27	1,220	7.57	3,890	5.32	1,370		
6	3.07	18			5.26	1,310	7.65	3,990	5.21	1,270		
7					5.40	1,450	7.85	4,230	5.11	1,180		
8			3.06	17	5.51	1,560	8.20	4,550	5.04	1,120	4.14	420
9					5.54	1,590	8.35	4,860	4.95	1,040		
10					5.53	1,580	8.65	5,260	4.88	974		
11					5.52	1,570	8.75	5,380	4.82	926		
N	3.08	20	3.06	17	5.57	1,620	8.70	5,320	4.76	878	4.07	376
1					5.71	1,760	9.10	5,850	4.71	838		
2					6.00	2,070	9.21	6,000	4.67	806		
3					6.25	2,340	8.65	5,260	4.62	766		
4			3.09	21	6.39	2,500	8.25	4,740	4.58	734	4.00	333
5					6.43	2,540	8.08	4,510	4.54	702		
6	3.08	20			6.47	2,590	7.82	4,190	4.51	678		
7					6.64	2,780	7.50	3,810	4.47	649		
8			3.17	31	6.74	2,900	7.19	3,440	4.44	628	3.93	294
9					6.60	2,730	6.89	3,080	4.41	607		
10					6.56	2,690	6.62	2,750	4.38	586		
11					6.54	2,660	6.39	2,500	4.35	565		
12	3.06	17	3.52	114	6.69	2,840	6.19	2,280	4.33	551	3.88	267
	January 3		January 4		January 5		January 6		January 7		January 8	
2					3.58	134	5.42	1,470				
4					3.57	131	5.65	1,700	4.33	551	3.93	294
6	3.81	231	3.65	161	3.57	131	5.86	1,920				
8					3.57	131	5.86	1,920	4.22	474	3.88	267
10					3.56	127	5.97	2,040				
N	3.76	208	3.61	145	3.56	127	5.57	1,620	4.13	414	3.84	246
2					3.58	134	5.24	1,300				
4					3.63	153	5.02	1,100	4.08	382	3.82	236
6	3.72	190	3.61	145	3.78	217	4.83	934				
8					4.14	420	4.68	814	4.03	351	3.79	222
10					4.78	894	4.57	726				
12	3.68	173	3.58	134	5.04	1,120	4.47	649	3.98	322	3.76	208
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	3.71	186	3.62	149	3.56	127	3.36	68	3.40	78	3.38	73
8												
10												
N	3.68	173	3.59	138	3.52	114	3.45	92	3.40	78	3.38	73
2												
4												
6	3.67	169	3.58	134	3.51	110	3.48	101	3.41	81	3.37	71
8												
10												
12	3.65	161	3.57	131	3.43	87	3.43	87	3.39	76	3.26	46

Supplemental records.- Dec. 31, 1:30 p.m., 9.42 ft., 6,300 sec.-ft.; Jan. 6, 9:30 a.m., 5.99 ft., 2,060 sec.-ft.

Walloomsac River near North Bennington, Vt.

Location.- Lat. 42°54'47" (revised), long. 73°15'25", 0.6 mile downstream from Paran Creek and 1.4 miles south of North Bennington, Bennington County.
Drainage area.- 111 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 2,800 second-feet and extended to peak stage on basis of slope-area and contracted-opening determinations and computation of flow over dam at gage height 12.04 feet.
Maxima.- December 1948-January 1949: Discharge, 7,920 second-feet 3 p.m. Dec. 31 (gage height, 11.60 feet).
1931 to November 1948: Discharge, 8,450 second-feet Sept. 21, 1938 (gage height, 12.04 feet), from rating curve extended above 2,800 second-feet as described above.
Remarks.- Flood flow not materially affected by artificial or natural storage. Diurnal fluctuation at medium and low flows caused by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	67	Jan. 3	512	Jan. 9	429
29	73	4	391	10	365
30	2,130	5	492	11	318
31	6,350	6	2,020	12	256
Jan. 1	2,130	7	918	13	238
2	815	8	553	14	223

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					2.29	130	8.90	4,850	8.22	4,170		
2					2.33	141	9.11	5,060	7.82	3,800		
3					2.42	167	9.36	5,340	7.43	3,450		
4	2.02	67	2.02	67	2.98	372	9.56	5,560	7.11	3,170	4.07	967
5					3.33	535	9.81	5,830	6.76	2,880		
6					3.65	715	9.92	5,950	6.51	2,680		
7					3.83	823	9.98	6,020	6.27	2,490		
8	2.02	67	2.00	63	4.08	973	10.13	6,180	6.05	2,320	3.91	871
9					4.39	1,170	10.39	6,470	5.84	2,160		
10					4.64	1,330	10.71	6,850	5.67	2,030		
11					4.91	1,510	10.95	7,140	5.51	1,920		
N	2.03	69	2.05	73	5.13	1,650	11.24	7,490	5.37	1,820	3.78	793
1					5.37	1,820	11.42	7,700	5.23	1,720		
2					5.67	2,030	11.48	7,780	5.12	1,640		
3					6.03	2,300	11.60	7,920	5.00	1,560		
4	1.99	61	2.01	65	6.40	2,590	11.47	7,760	4.89	1,490	3.68	733
5					7.01	3,090	11.19	7,430	4.80	1,440		
6					7.62	3,620	10.91	7,090	4.71	1,380		
7					8.11	4,070	10.62	6,740	4.61	1,310		
8	2.04	71	2.08	79	8.74	4,690	10.21	6,270	4.53	1,260	3.58	673
9					9.15	5,100	9.82	5,840	4.47	1,220		
10					9.02	4,970	9.41	5,390	4.38	1,160		
11					8.87	4,820	9.02	4,970	4.33	1,130		
12	2.03	69	2.22	112	8.80	4,750	8.61	4,560	4.27	1,090	3.49	620
	January 3		January 4		January 5		January 6		January 7		January 8	
2							5.11	1,640	4.47	1,220		
4	3.40	570			2.93	351	5.56	1,950	4.32	1,120	3.51	681
6			3.08	416			5.83	2,150	4.20	1,040		
8	3.33	535			2.90	338	6.07	2,330	4.10	985	3.32	530
10							6.43	2,610	4.01	931		
N	3.26	500	3.00	380	2.91	342	6.61	2,760	3.92	877	3.37	555
2							6.21	2,440	3.86	841		
4	3.22	480			3.04	398	5.80	2,130	3.80	805	3.31	525
6			2.98	372			5.40	1,840	3.73	763		
8	3.18	461			3.60	685	5.10	1,630	3.68	733	3.26	500
10							4.83	1,450	3.63	703		
12	3.13	438	2.94	355	4.63	1,320	4.62	1,320	3.59	679	3.22	480
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	3.15	448	2.99	376	2.88	330	2.65	242	2.65	242	2.61	228
8												
10												
N	3.10	425	2.96	363	2.85	318	2.67	249	2.63	235	2.61	228
2												
4												
6	3.06	407	2.93	351	2.82	306	2.71	264	2.62	231	2.59	221
8												
10												
12	3.03	394	2.92	346	2.77	287	2.68	253	2.62	231	2.53	201

Supplemental records.- Jan. 6, 11:30 a.m., 6.65 ft., 2,790 sec.-ft.

Mohawk River at Cohoes, N. Y.

Location.- Water-stage recorder, lat. 42°47'05", long. 73°42'25", at School Street plant of New York Power & Light Corp., in Cohoes, Albany County.
Drainage area.- 5,456 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 70,000 second-feet.
Maxima.- December 1948-January 1949: Discharge, 86,300 second-feet 7:30 a.m. Dec. 31 (gage height, 20.18 feet).
1917 to November 1948: Discharge, 130,000 second-feet Mar. 19, 1936 (gage height, 22.57 feet), from rating curve extended above 84,500 second-feet by logarithmic plotting.
Remarks.- Flow partly regulated by storage principally in Delta, Hinckley, and Schoharie Reservoirs (combined capacity, 8,738,000,000 cubic feet). Diversion above station both out of and into basin. Discharge not adjusted for storage or diversion. Diurnal fluctuation caused by School Street plant.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	2,250	Jan. 3	14,800	Jan. 9	18,700
29	2,570	4	10,800	10	15,300
30	12,600	5	8,730	11	12,900
31	66,800	6	19,600	12	10,000
Jan. 1	39,300	7	36,000	13	7,740
2	19,000	8	24,200	14	7,020

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					10.08	3,370	17.60	54,900	17.98	59,100	14.18	23,100
2					10.11	3,430	17.07	49,300	17.79	57,000	14.07	22,300
3					10.12	3,460	16.97	48,300	17.57	54,600	13.98	21,600
4					10.14	3,500	17.17	50,400	17.36	52,400	13.81	20,400
5					10.11	3,430	17.23	51,000	17.14	50,100	13.73	19,800
6					10.10	3,410	17.45	53,300	16.94	48,000	13.62	19,000
7					10.07	3,350	19.85	81,900	16.73	45,900	13.53	18,400
8					10.14	3,500	20.06	84,700	16.50	43,600	13.47	18,000
9					10.32	3,940	19.87	82,100	16.30	41,600	13.41	17,600
10					10.31	3,920	19.87	82,100	16.03	38,900	13.34	17,200
11					10.28	3,840	19.72	80,200	15.51	34,100	13.45	17,900
N					10.32	3,940	19.00	71,100	16.12	39,800	13.63	19,100
1					10.50	4,420	18.87	69,500	15.71	35,900	13.43	17,800
2					10.61	4,720	18.92	70,100	15.57	34,600	13.65	19,200
3					10.65	4,830	18.90	69,900	15.03	29,900	13.72	19,700
4					12.10	10,500	19.15	73,000	15.65	35,400	13.33	17,100
5					13.01	15,300	19.03	71,500	15.33	32,500	13.62	19,000
6					13.42	17,700	18.90	69,900	15.15	30,900	13.59	18,800
7					14.13	22,700	18.83	69,000	15.03	29,900	13.59	18,800
8					14.86	28,400	18.72	67,700	14.83	28,200	13.23	16,500
9					15.47	33,700	18.65	66,900	14.67	26,900	13.55	18,600
10					16.03	38,900	18.51	65,200	14.52	25,700	13.46	18,000
11					16.98	48,400	18.32	63,000	14.45	25,200	13.44	17,800
12					17.50	53,900	18.17	61,300	14.41	24,800	13.47	18,000
	January 3		January 4		January 5		January 6		January 7		January 8	
2							12.03	10,100	15.98	38,400		
4	13.28	16,800	12.42	12,100	11.77	8,940	12.19	10,900	16.09	39,500	14.68	27,000
6							12.53	12,700	16.12	39,800		
8	13.13	15,900	12.24	11,200	11.69	8,580	12.71	13,600	16.15	40,100	14.47	25,300
10							13.00	15,200	16.09	39,500		
N	12.65	13,300	12.11	10,500	11.66	8,450	13.25	16,600	15.99	38,500	14.31	24,100
2							13.65	19,200	15.76	36,400		
4	12.72	13,700	12.03	10,100	11.68	8,530	14.13	22,700	15.51	34,100	14.11	22,600
6							14.64	26,600	15.23	32,500		
8	12.67	13,400	11.94	9,720	11.71	8,660	15.09	30,400	15.15	30,900	13.95	21,400
10							15.54	34,400	15.01	29,700		
12	12.56	12,800	11.84	9,250	11.83	9,210	15.80	36,700	14.88	28,600	13.83	20,500
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	13.78	20,100	13.14	16,000	12.74	13,800	12.17	10,800	11.58	8,110	11.31	7,000
6												
8	13.70	19,600	13.00	15,200	12.71	13,600	12.12	10,600	11.58	8,110	11.32	7,040
10												
N	13.45	17,900	13.05	15,500	12.64	13,200	12.12	10,600	11.52	7,850	11.19	6,540
2												
4	13.52	18,400	13.03	15,400	12.50	12,500	11.96	9,800	11.45	7,560	11.39	7,320
6												
8	13.39	17,500	12.86	14,400	12.38	11,900	11.71	8,660	11.35	7,160	11.37	7,240
10												
12	13.23	16,500	12.80	14,100	12.25	11,200	11.62	8,280	11.30	6,960	11.31	7,000

Supplemental records.- Dec. 31, 12:30 a.m., 17.63 ft., 55,300 sec.-ft., 2:30 a.m., 16.96 ft., 48,200 sec.-ft., 3:30 a.m., 17.28 ft., 51,500 sec.-ft., 7:30 a.m., 20.18 ft., 86,300 sec.-ft., 10:30 a.m., 19.35 ft., 75,500 sec.-ft., 11:30 a.m., 19.64 ft., 79,200 sec.-ft., 4:30 p.m., 18.98 ft., 70,900 sec.-ft.

Poesten Kill near Troy, N. Y.

Location.- Water-stage recorder, lat. 42°44'00", long. 73°38'00", 500 feet downstream from bridge on Troy-Eagle Mills road, 1½ miles west of Eagle Mills, 3 miles east of Troy, Rensselaer County, and 5 miles downstream from Quacken Kill.
Drainage area.- 89 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 8,250 second-feet.
Maxima.- December 1948-January 1949: Discharge, 10,100 second-feet 2:30 p.m. Dec. 31 (gage height, 11.26 feet).
1923 to November 1948: Discharge, 11,900 second-feet Sept. 22, 1938 (gage height, 12.1 feet, from floodmarks in gage house), from rating curve extended above 7,200 second-feet by logarithmic plotting on basis of computation of peak flow over two dams and slope-area determination.
Remarks.- Flood flow not appreciably affected by storage or diversion.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	23	Jan. 3	558	Jan. 9	446
29	31	4	395	10	350
30	1,440	5	528	11	281
31	7,330	6	2,160	12	215
Jan. 1	2,510	7	1,070	13	192
2	857	8	633	14	169

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					1.49	56	6.68	3,740	7.95	5,240		
2					1.52	62	6.88	3,960	7.58	4,790		
3					1.58	73	7.19	4,320	7.27	4,410		
4					1.64	86	7.73	4,970	7.01	4,100	3.60	989
5					1.73	107	8.19	5,560	6.73	3,790		
6					1.78	120	8.65	6,160	6.47	3,510		
7					2.32	307	9.16	6,870	6.21	3,220		
8	1.22	23	1.24	25	2.57	417	9.47	7,320	5.88	2,890	3.47	909
9					2.80	530	9.79	7,800	5.64	2,650		
10					2.88	572	10.28	8,540	5.42	2,430		
11					3.13	708	10.63	9,100	5.22	2,250		
N					3.56	964	10.86	9,470	4.92	1,980	3.36	842
1					3.90	1,180	10.97	9,640	4.79	1,860		
2					4.25	1,420	11.03	9,740	4.65	1,740		
3					4.64	1,730	11.07	9,810	4.50	1,610		
4	1.23	24	1.31	31	5.02	2,070	10.96	9,630	4.39	1,520	3.27	789
5					5.38	2,390	10.73	9,260	4.27	1,430		
6					5.79	2,800	10.50	8,890	4.18	1,370		
7					5.99	3,000	10.18	8,380	4.06	1,290		
8					6.42	3,450	9.84	7,870	3.99	1,240	3.16	725
9					6.41	3,440	9.43	7,260	3.92	1,190		
10					6.51	3,550	9.05	6,720	3.87	1,160		
11					6.58	3,630	8.65	6,160	3.82	1,130		
12	1.22	23	1.46	52	6.61	3,660	8.29	5,690	3.77	1,100	3.08	680
	January 3		January 4		January 5		January 6		January 7		January 8	
2					2.40	341	4.33	1,480				
4					2.38	333	4.62	1,710	4.08	1,300		
6					2.38	333	4.93	1,990				
8	2.91	587	2.56	413	2.37	329	5.23	2,260	3.83	1,140	3.06	669
10					2.37	329	5.77	2,780				
N					2.40	341	5.97	2,980	3.65	1,020		
2					2.51	390	5.79	2,800				
4	2.78	520	2.47	372	2.76	510	5.54	2,550	3.51	933	2.90	582
6					3.08	680	5.23	2,260				
8					3.43	884	4.93	1,990	3.37	848		
10					3.73	1,070	4.63	1,720				
12	2.65	455	2.41	345	4.00	1,250	4.41	1,540	3.25	777	2.78	520
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6							2.04	204	2.03	200		
8	2.66	460	2.44	359	2.29	296					1.95	174
10												
N							2.05	207	1.98	184		
2												
4	2.58	422	2.39	337	2.22	269					1.92	165
6							2.10	224	1.99	187		
8												
10												
12	2.52	394	2.34	316	2.14	239	2.06	210	1.98	184	1.88	153

Supplemental records.- Dec. 31, 2:30 p.m., 11.26 ft., 10,100 sec.-ft.; Jan. 6, 12:15 p.m., 6.01 ft., 3,020 sec.-ft.

Kinderhook Creek at Rossman, N. Y.

Location.- Water-stage recorder, lat. 42°19'50", long. 73°44'40", at highway bridge in Rossman, Columbia County, 1 mile upstream from Claverack Creek.
Drainage area.- 329 square miles.
Gage-height record.- Water-stage recorder graph except for period 2 p.m. Dec. 31 to 12:45 p.m. Jan. 2, when it was based on two outside-gage readings on rising stage, high-water mark in gage house, and records for stations on nearby streams.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 27,200 second-feet; affected by ice Dec. 28, 29, 2 p.m. to 7 p.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 29,800 second-feet 9 p.m. Dec. 31 (gage height, 19.80 feet, from high-water mark in gage house).
1906-14, 1928 to November 1948: Discharge, 27,800 second-feet Sept. 22, 1938 (gage height, 18.4 feet, from floodmarks).
Remarks.- Flood flow not affected by storage or diversion. Diurnal fluctuation and some regulation at low and medium flow caused by power and industrial plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	80	Jan. 3	2,870	Jan. 9	2,010
29	90	4	2,070	10	1,580
30	1,900	5	1,730	11	1,290
31	18,500	6	4,950	12	968
Jan. 1	15,000	7	4,240	13	842
2	4,740	8	2,680	14	733

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					0.76	58	7.96	8,820	17.90	27,000	6.85	6,670
2					.75	56	8.18	9,260	17.10	25,800	6.70	6,400
3					.74	55	8.38	9,680	16.25	24,500	6.55	6,040
4					.62	36	8.44	9,800	15.45	23,200	6.35	5,780
5					.41	13	8.55	10,000	14.65	21,800	6.20	5,530
6					.40	12	8.62	10,200	13.85	20,400	6.05	5,280
7					.39	11	8.78	10,500	13.05	19,000	5.95	5,120
8					.39	11	9.20	11,400	12.30	17,600	5.87	4,990
9					.71	50	9.77	12,600	11.65	16,300	5.79	4,860
10					2.02	521	10.39	13,900	11.05	15,200	5.72	4,750
11					2.29	686	11.18	15,400	10.55	14,200	5.65	4,640
N	0.90		0.96		2.37	741	12.03	17,100	10.10	13,300	5.58	4,530
1					2.62	924	12.98	18,900	9.70	12,400	5.52	4,440
2					3.62		14.00	20,700	9.30	11,600	5.43	4,300
3					4.00		15.15	22,700	8.95	10,900	5.38	4,230
4					3.91		16.45	24,800	8.65	10,200	5.33	4,160
5					4.75		17.55	26,500	8.35	9,620	5.27	4,060
6					3.65		18.45	27,900	8.10	9,100	5.22	3,990
7					3.55		19.15	28,800	7.85	8,600	5.16	3,900
8					5.78	4,850	19.60	29,500	7.65	8,200	5.11	3,820
9					6.11	5,380	19.80	29,800	7.45	7,800	5.05	3,740
10					6.55	6,130	19.60	29,500	7.30	7,510	5.01	3,680
11					7.13	7,190	19.20	28,900	7.15	7,220	4.95	3,590
12					7.55	8,000	18.60	28,100	7.00	6,940	4.91	3,530
	January 3		January 4		January 5		January 6		January 7		January 8	
2	4.81	3,390	4.03	2,360	3.53	1,780	4.30	2,700	6.28	5,670	4.59	3,090
4	4.71	3,250	3.97	2,280	3.50	1,750	4.68	3,210	6.04	5,260	4.52	2,990
6	4.62	3,130	3.92	2,220	3.48	1,730	5.19	3,940	5.79	4,860	4.46	2,910
8	4.54	3,020	3.86	2,150	3.45	1,700	5.49	4,400	5.57	4,520	4.39	2,820
10	4.48	2,930	3.83	2,120	3.43	1,670	5.79	4,860	5.38	4,230	4.33	2,740
N	4.40	2,830	3.79	2,070	3.29	1,530	6.08	5,330	5.23	4,000	4.27	2,660
2	4.32	2,730	3.73	2,000	3.38	1,620	6.32	5,730	5.11	3,820	4.21	2,580
4	4.26	2,650	3.67	1,940	3.42	1,660	6.51	6,060	5.01	3,680	4.15	2,500
6	4.20	2,570	3.64	1,900	3.46	1,710	6.65	6,310	4.90	3,520	4.10	2,440
8	4.15	2,500	3.60	1,860	3.52	1,770	6.72	6,440	4.81	3,390	4.06	2,390
10	4.12	2,470	3.56	1,820	3.65	1,920	6.63	6,270	4.74	3,300	4.02	2,340
12	4.07	2,400	3.54	1,790	3.85	2,140	6.51	6,060	4.66	3,180	3.98	2,300
	January 9		January 10		January 11		January 12		January 13		January 14	
2	3.93	2,240	3.50	1,750	3.18	1,420	2.79	1,060			1.68	344
4	3.89	2,190	3.48	1,730	3.15	1,390	2.76	1,040			2.40	761
6	3.85	2,140	3.45	1,700	3.12	1,360	2.74	1,020	2.56	878	2.41	768
8	3.81	2,090	3.42	1,660	3.11	1,350	2.72	1,000			2.41	768
10	3.74	2,010	3.40	1,640	3.09	1,330	2.71	994			2.56	878
N	3.73	2,000	3.37	1,610	3.06	1,300	2.69	978	2.53	856	2.43	783
2	3.70	1,970	3.30	1,540	3.04	1,280	2.66	955			2.41	768
4	3.65	1,920	3.34	1,580	3.00	1,240	2.53	856			2.38	747
6	3.57	1,830	3.00	1,240	3.01	1,250	2.73	1,010	2.41	768	2.36	734
8	3.59	1,850	3.22	1,460	2.93	1,180	2.56	878			2.36	734
10	3.56	1,820	3.19	1,430	2.87	1,130	2.50	833			2.35	727
12	3.53	1,780	3.17	1,410	2.83	1,090	2.57	886	2.52	848	2.35	727

Supplemental records.- Jan. 5, 11 a.m., 3.43 ft., 1,670 sec.-ft., 11:30 a.m., 3.28 ft., 1,520 sec.-ft., 5 p.m., 3.36 ft., 1,600 sec.-ft.; Jan. 6, 7 p.m., 6.70 ft., 6,400 sec.-ft.; Jan. 9, 5 p.m., 3.63 ft., 1,890 sec.-ft., 5:30 p.m., 3.47 ft., 1,720 sec.-ft.; Jan. 10, 5 p.m., 3.32 ft., 1,560 sec.-ft., 7 p.m., 3.22 ft., 1,460 sec.-ft.; Jan. 11, 5 p.m., 2.98 ft., 1,230 sec.-ft., 5:30 p.m., 3.20 ft., 1,440 sec.-ft.; Jan. 12, 2:30 p.m., 2.66 ft., 955 sec.-ft., 5 p.m., 3.01 ft., 1,250 sec.-ft.; Jan. 14, 1:30 a.m., 2.51 ft., 840 sec.-ft., 8:30 a.m., 2.92 ft., 1,170 sec.-ft.

Catskill Creek at Oak Hill, N. Y.

Location.- Water-stage recorder, lat. 42°24'20", long. 74°09'05", just downstream from highway bridge in southernmost part of Oak Hill, Greene County. Datum of gage is 612.89 feet above mean sea level, unadjusted.
Drainage area.- 98 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 1,600 second-feet and extended to peak stage on basis of slope-area determination at gage height 12.83 feet; affected by ice Dec. 28 to 5 a.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 4,020 second-feet 5:30 a.m. Dec. 31 (gage height, 8.98 feet).
1929 to November 1948: Discharge, 8,880 second-feet Mar. 18, 1936 (gage height, 12.83 feet, from floodmarks), by slope-area method.
New York City Board of Water Supply reports a discharge of 12,300 second-feet occurred Nov. 9, 1913.
Remarks.- Flood flow not affected by storage or diversion.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	19	Jan. 3	368	Jan. 9	426
29	22	4	287	10	372
30	1,600	5	321	11	339
31	2,480	6	1,420	12	261
Jan. 1	826	7	711	13	220
2	515	8	535	14	192

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1						64	7.90	2,810				
2						80	8.31	3,260				
3						106	8.54	3,510				
4						150	8.73	3,720	5.79	988	5.01	581
5						340	8.92	3,940				
6					4.76	449	8.87	3,880				
7					4.78	458	8.78	3,780				
8					4.99	557	8.57	3,550	5.61	886	4.92	538
9					5.06	591	8.40	3,360				
10					5.26	692	8.15	3,080				
11					5.74	957	7.89	2,800				
N					6.48	1,490	7.61	2,510	5.45	800	4.85	506
1					7.38	2,280	7.40	2,300				
2					8.08	3,010	7.17	2,080				
3					8.41	3,370	6.90	1,840				
4					8.41	3,370	6.72	1,690	5.32	733	4.80	483
5					8.31	3,260	6.60	1,590				
6					8.18	3,120	6.48	1,490				
7					8.03	2,950	6.38	1,410				
8					7.83	2,730	6.32	1,370	5.20	673	4.74	457
9					7.62	2,520	6.22	1,290				
10					7.41	2,310	6.15	1,230				
11					7.36	2,260	6.07	1,170				
12					7.46	2,360	6.01	1,130	5.09	619	4.67	426
	January 3		January 4		January 5		January 6		January 7		January 8	
2					4.24	263	5.74	959	5.57	864	5.02	586
4					4.23	259	5.88	1,040	5.49	821	4.98	567
6					4.22	256	6.14	1,220	5.40	774	4.94	548
8	4.56	381	4.33	294	4.21	252	7.26	2,160	5.30	723	4.89	524
10					4.20	249	7.26	2,160	5.24	693	4.85	506
N					4.21	252	6.92	1,860	5.18	663	4.82	492
2					4.22	256	6.66	1,640	5.16	653	4.83	497
4	4.48	349	4.28	276	4.27	273	6.54	1,540	5.18	663	4.91	534
6					4.39	315	6.26	1,320	5.17	658	4.95	552
8					4.65	418	5.99	1,110	5.13	639	4.93	543
10					4.95	552	5.82	1,010	5.09	619	4.88	520
12	4.40	319	4.24	263	5.36	754	5.68	925	5.06	605	4.83	497
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	4.75	461	4.54	373							4.06	205
6												
8	4.68	431	4.50	357	4.49	353	4.22	256	4.12	223	4.04	199
10												
N	4.63	410	4.46	342							4.03	196
2												
4	4.62	405	4.52	365	4.41	323	4.23	259	4.09	214	4.01	190
6												
8	4.62	405	4.62	405							3.98	181
10												
12	4.58	389	4.58	389	4.33	294	4.17	239	4.07	208	3.87	151

Supplemental records.- Dec. 30, 3:15 p.m., 8.48 ft., 3,450 sec.-ft.; Dec. 31, 5:30 a.m., 8.98 ft., 4,020 sec.-ft.; Jan. 6, 8:30 a.m., 7.53 ft., 2,430 sec.-ft.

Esopus Creek at Coldbrook, N. Y.

Location.- Water-stage recorder, lat. 42°00'45", long. 74°16'10", at highway bridge at Coldbrook, Ulster County, 1½ miles upstream from Ashokan Reservoir. Datum of gage is 621.89 feet above mean sea level, unadjusted.
Drainage area.- 192 square miles.
Gage-height record.- Water-stage recorder graph except for period 1 a.m. to 1 p.m. Dec. 28, for which graph based on tape-gage reading was drawn.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 12,700 second-feet and extended to peak stage on basis of slope-area determinations at gage heights 12.39 feet and 15.15 feet.
Maxima.- December 1948-January 1949: Discharge, 21,500 second-feet 6 p.m. Dec. 30 (gage height, 14.37 feet).
1914 to November 1948: Discharge, 55,000 second-feet Aug. 24, 1933 (gage height, 20.40 feet), determined by New York City Board of Water Supply.
Remarks.- 14,508 second-foot-days diverted into basin during period Dec. 28 to Jan. 14. No diversion 11:30 a.m. Dec. 30 to 11 a.m. Jan. 1. Water diverted through Shandaken Tunnel from Schoharie Creek enters Esopus Creek about 6 miles above this station. Records of diversion collected by New York City Department Water Supply, Gas, and Electricity and furnished by that organization and New York City Board of Water Supply.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	390	Jan. 3	2,180	Jan. 9	2,090
29	606	4	1,850	10	1,870
30	11,400	5	2,000	11	1,730
31	11,600	6	4,890	12	1,600
Jan. 1	3,780	7	3,300	13	1,500
2	2,750	8	2,470	14	1,430

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					7.01	2,270	12.74	15,100				
2			4.58	347	7.39	2,720	12.92	15,700	8.99	4,970		
3					7.80	3,240	13.02	16,100				
4			4.57	342	8.19	3,790	13.00	16,000	8.73	4,530	7.73	3,040
5					8.59	4,380	12.92	15,700				
6			4.57	342	8.96	4,980	12.84	15,400	8.50	4,160		
7					9.23	5,470	12.76	15,200				
8			4.57	342	9.51	6,010	12.61	14,600	8.32	3,880	7.60	2,870
9					9.80	6,610	12.48	14,200				
10			4.59	351	10.14	7,350	12.34	13,700	8.14	3,610		
11					10.62	8,490	12.18	13,100				
N			4.67	386	11.26	10,200	11.93	12,300	7.96	3,350	7.47	2,700
1					12.01	12,500	11.67	11,400				
2			4.78	437	12.87	15,500	11.41	10,600	7.80	3,130		
3					13.54	18,200	11.13	9,840				
4			5.10	605	14.04	20,200	10.88	9,150	7.66	2,950	7.37	2,580
5					14.30	21,200	10.64	8,520				
6			5.32	739	14.37	21,500	10.40	7,920	8.13	3,600		
7					14.22	20,900	10.18	7,390				
8			5.59	927	13.87	19,500	9.95	6,870	8.08	3,520	7.29	2,490
9					13.48	17,900	9.76	6,470				
10			6.12	1,370	13.10	16,400	9.58	6,090	7.98	3,380		
11					12.80	15,300	9.43	5,790				
12	4.60	355	6.57	1,800	12.69	14,900	9.28	5,500	7.89	3,260	7.21	2,390
	January 3		January 4		January 5		January 6		January 7		January 8	
2					6.60	1,740	8.54	4,220				
4	7.14	2,310	6.77	1,910	6.59	1,730	8.84	4,720	8.22	3,730		
6					6.58	1,720	8.99	4,970			7.37	2,580
8	7.07	2,240	6.73	1,870	6.57	1,710	9.23	5,410	8.04	3,470		
10					6.56	1,700	9.52	5,970				
N	7.00	2,160	6.70	1,840	6.56	1,700	9.43	5,790	7.87	3,230	7.25	2,440
2					6.59	1,730	9.20	5,350				
4	6.97	2,130	6.67	1,810	6.76	1,890	9.01	5,010	7.72	3,030		
6					6.97	2,130	8.85	4,740			7.18	2,360
8	6.90	2,050	6.66	1,800	7.28	2,480	8.70	4,480	7.62	2,900		
10					7.63	2,910	8.55	4,240				
12	6.81	1,950	6.60	1,740	8.05	3,480	8.43	4,050	7.52	2,770	7.09	2,260
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8	6.97	2,130	6.75	1,890								
10												
N					6.59	1,730	6.46	1,600	6.36	1,500	6.28	1,430
2												
4	6.89	2,040	6.70	1,840								
6												
8												
10												
12	6.82	1,960	6.67	1,810	6.52	1,660	6.41	1,550	6.32	1,470	6.23	1,390

Supplemental records.- Dec. 31, 3:15 a.m., 13.04 ft., 16,200 sec.-ft.; Jan. 1, 4:15 p.m., 7.64 ft., 2,920 sec.-ft.; Jan. 6, 10:45 a.m., 9.54 ft., 6,010 sec.-ft.

Rondout Creek at Rosendale, N. Y.

Location.- Water-stage recorder, lat. 41°50'35", long. 74°05'10", 150 feet upstream from upper highway bridge in Rosendale, Ulster County. Datum of gage is 42.81 feet above mean sea level, adjustment of 1912.
Drainage area.- 386 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 14,800 sec.-ft. and extended to peak stage by logarithmic plotting.
Maxima.- December 1948-January 1949: Discharge, 22,600 second-feet 6 a.m. Dec. 31 (gage height, 17.65 feet).
1901-3, 1906-19, 1926 to November 1948: Discharge, 27,300 second-feet Aug. 27, 1928 (gage height, 21.9 feet), from rating curve extended above 15,000 second-feet by logarithmic plotting.
Remarks.- Flood flow not affected by storage. Diurnal fluctuation at low and medium flow caused by power plant above station. 4,356 second-foot-days diverted from basin at Lackawack, N. Y. during period Dec. 28 to Jan. 14. Records of diversion furnished by New York City Board of Water Supply.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	172	Jan. 3	2,290	Jan. 9	1,670
29	233	4	1,440	10	1,330
30	11,400	5	1,420	11	1,040
31	21,400	6	8,740	12	839
Jan. 1	8,740	7	4,790	13	724
2	3,600	8	2,590	14	641

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.16	674	17.41	22,100				
2					3.46	884	17.46	22,200	13.74	14,900	7.20	4,560
3					3.80	1,140	17.51	22,300				
4					4.43	1,620	17.55	22,400	12.55	12,800	7.01	4,310
5					5.18	2,270	17.59	22,500				
6					5.74	2,830	17.65	22,600	11.43	10,900	6.85	4,100
7					6.42	3,580	17.58	22,500				
8					7.52	4,980	17.56	22,400	10.58	9,480	6.69	3,910
9					9.40	7,650	17.53	22,400				
10					9.70	8,100	17.49	22,300	9.90	8,400	6.55	3,740
11					10.25	8,950	17.46	22,200				
N					11.28	10,600	17.42	22,100	9.31	7,520	6.41	3,570
1					12.43	12,600	17.36	22,000				
2					13.53	14,600	17.30	21,900	8.88	6,870	6.28	3,420
3					14.48	16,300	17.24	21,800				
4					15.30	17,900	17.15	21,600	8.51	6,340	6.08	3,200
5					15.93	19,200	16.99	21,300				
6					16.50	20,300	16.79	20,900	8.20	5,910	5.90	3,000
7					16.89	21,100	16.57	20,400				
8					17.19	21,700	16.30	19,900	7.94	5,550	5.78	2,870
9					17.36	22,000	16.04	19,400				
10					17.39	22,100	15.71	18,700	7.68	5,180	5.68	2,770
11					17.40	22,100	15.31	17,900				
12			2.78	435	17.40	22,100	14.90	17,100	7.43	4,860	5.60	2,690
	January 3		January 4		January 5		January 6		January 7		January 8	
2					3.85	1,170	8.07	5,730	8.61	6,480		
4	5.47	2,560	4.42	1,620	3.81	1,140	9.25	7,420	8.25	5,980	5.92	3,020
6					3.77	1,110	10.32	9,060	7.94	5,550		
8	5.33	2,420	4.28	1,500	3.74	1,090	10.93	10,000	7.66	5,160	5.72	2,810
10					3.72	1,080	11.24	10,600	7.42	4,850		
N	5.18	2,270	4.18	1,420	3.72	1,080	11.29	10,700	7.22	4,590	5.54	2,630
2					3.75	1,100	11.14	10,400	7.05	4,360		
4	5.08	2,180	4.11	1,370	3.83	1,160	10.88	9,960	6.89	4,160	5.28	2,370
6					4.05	1,320	10.50	9,350	6.71	3,930		
8	4.97	2,080	3.95	1,250	4.62	1,780	9.99	8,540	6.52	3,700	4.99	2,100
10					5.48	2,570	9.46	7,740	6.35	3,500		
12	4.67	1,820	3.89	1,200	6.57	3,760	9.01	7,060	6.18	3,310	4.83	1,960
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4					3.77	1,110						
6	4.64	1,790										
8			4.12	1,380	3.70	1,060						
10												
N	4.46	1,650			3.66	1,030						
2												
4			3.99	1,280	3.62	1,000						
6	4.33	1,540										
8					3.57	964						
10												
12	4.23	1,460	3.88	1,200	3.52	928						

Supplemental records.- Dec. 30, 8:30 a.m., 6.37 ft., 3,520 sec.-ft., 9:30 a.m., 9.97 ft., 8,500 sec.-ft.; Jan. 6, 11:30 a.m., 11.30 ft., 10,700 sec.-ft.

Wallkill River at Gardiner, N. Y.

Location.- Water-stage recorder, lat. 41°41'10", long. 74°09'55", 400 feet upstream from new highway bridge, 500 feet downstream from Shawangunk Kill, and three-quarters of a mile northwest of Gardiner, Ulster County. Datum of gage is 185.70 feet above mean sea level, adjustment of 1912.
Drainage area.- 711 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 13,000 second-feet and extended by logarithmic plotting to peak stage on basis of study of overflow below station; affected by ice Dec. 28 to 8 a.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 21,000 second-feet 1:30 p.m. Dec. 31 (gage height, 14.81 feet).
1924 to November 1948: Discharge, 18,000 second-feet Mar. 12, 1936 (gage height, 15.16 feet), from rating curve extended above 11,200 second-feet by logarithmic plotting; maximum gage height, 18.83 feet Mar. 7, 1945 (ice jam).
Remarks.- Large diurnal fluctuations during low and medium stages caused by power-plant operations. Natural storage occurs in swampy areas and small lakes above Pellets Island Mountain, and artificial and natural storage in lakes and ponds in the intervening area.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	230	Jan. 3	7,200	Jan. 9	4,600
29	300	4	5,520	10	3,740
30	8,080	5	4,870	11	3,070
31	19,400	6	9,970	12	2,460
Jan. 1	11,600	7	7,650	13	1,950
2	8,600	8	5,670	14	1,620

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1						660	13.80	17,600	13.00	15,400		
2						760	14.12	18,600	12.73	14,700	9.95	9,340
3						900	14.44	19,700	12.45	14,000		
4						1,040	14.48	19,800	12.17	13,400	9.80	9,090
5						1,250	14.56	20,100	11.96	13,000		
6						1,550	14.45	19,700	11.73	12,600	9.65	8,840
7						2,000	14.48	19,800	11.54	12,200		
8						2,700	14.48	19,800	11.36	11,900	9.52	8,610
9					7.28	5,210	14.50	19,900	11.20	11,600		
10					7.41	5,400	14.59	20,200	11.07	11,300	9.42	8,440
11					8.36	6,830	14.65	20,400	10.96	11,100		
N					9.76	9,050	14.74	20,700	10.85	10,900	9.29	8,220
1					10.19	9,770	14.79	20,900	10.79	10,800		
2					10.70	10,700	14.77	20,900	10.71	10,700	9.35	8,320
3					11.15	11,500	14.71	20,600	10.65	10,600		
4					11.63	12,400	14.62	20,300	10.60	10,500	9.45	8,500
5					12.01	13,100	14.53	20,000	10.53	10,400		
6					12.35	13,800	14.39	19,500	10.48	10,300	9.44	8,480
7					12.61	14,400	14.23	19,000	10.44	10,200		
8					12.81	14,900	14.07	18,500	10.38	10,100	9.38	8,380
9					12.93	15,200	13.90	17,900	10.30	9,940		
10					13.06	15,600	13.71	17,400	10.22	9,800	9.29	8,220
11					13.23	16,000	13.51	16,800	10.14	9,670		
12					13.60	17,000	13.26	16,100	10.08	9,570	9.17	8,020
	January 3		January 4		January 5		January 6		January 7		January 8	
2			8.04	6,210	6.92	4,560	9.71	8,940				
4	8.99	7,720	7.92	6,030	6.83	4,430	10.15	9,680	9.52	8,610		
6			7.82	5,880	6.75	4,320	10.35	10,000			7.89	5,980
8	8.82	7,450	7.69	5,680	6.66	4,190	10.58	10,400	9.19	8,050		
10			7.67	5,660	6.64	4,170	10.76	10,800				
N	8.66	7,200	7.64	5,610	6.61	4,120	10.75	10,800	8.89	7,560	7.65	5,620
2			7.47	5,360	6.63	4,150	10.66	10,600				
4	8.50	6,940	7.41	5,260	6.80	4,390	10.53	10,400	8.61	7,120		
6			7.33	5,140	7.19	4,940	10.39	10,100			7.46	5,340
8	8.33	6,670	7.22	4,980	7.82	5,880	10.23	9,820	8.36	6,720		
10			7.12	4,840	8.52	6,970	10.07	9,550				
12	8.16	6,400	7.01	4,680	9.13	7,950	9.89	9,240	8.16	6,400	7.29	5,080
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8	7.06	4,750										
10												
N			6.33	3,730	5.82	3,070	5.34	2,440	4.92	1,930	4.64	1,610
2												
4	6.84	4,450										
6												
8												
10												
12	6.62	4,140	6.05	3,360	5.59	2,770	5.14	2,200	4.76	1,750	4.53	1,490

Supplemental records.- Dec. 30, 9:30 a.m., 7.08 ft., 4,920 sec.-ft., 11:30 a.m., 9.80 ft., 9,110 sec.-ft.; Dec. 31, 2:30 a.m., 14.47 ft., 19,800 sec.-ft., 9:30 a.m., 14.61 ft., 20,300 sec.-ft., 1:30 p.m., 14.81 ft., 21,000 sec.-ft.; Jan. 4, 11:30 a.m., 7.71 ft., 5,720 sec.-ft.

Rutgers Creek at Gardnerville, N. Y.

Location.- Water-stage recorder and modified concrete control, lat. 41°20'40", long. 72°29'10", at Gardnerville, Orange County, 0.1 mile downstream from a masonry dam, and 8 miles southwest of Middletown. Datum of gage is 404.48 feet above mean sea level, unadjusted.
Drainage area.- 59.7 square miles.
Gage-height record.--Water-stage recorder graph except for period 9 p.m. Dec. 31 to 11:30 a.m. Jan. 1, for which graph was reconstructed on basis of partial record.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 1,420 second-feet and extended to peak stage on basis of determinations of peak flow by computation of flow over dam and by contracted-opening method; affected by ice 3 a.m. to 10 a.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge 3,600 second-feet, 2 a.m. Dec. 31 (gage height, 8.88 feet).
1943 to November 1948: Discharge, 1,940 second-feet Nov. 9, 1943, from rating curve extended above 1,200 second-feet by logarithmic plotting; maximum gage height, 8.1 feet, from floodmarks, Mar. 17, 1948 (ice jam).
Remarks.- Flood flow not affected by storage or diversion.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	23	Jan. 3	320	Jan. 9	253
29	35	4	199	10	197
30	1,690	5	376	11	165
31	2,740	6	1,410	12	136
Jan. 1	1,010	7	818	13	115
2	559	8	386	14	101

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.12	132	8.82	3,550				
2					3.25	170	8.88	3,600	5.35	1,250	4.33	647
3						215	8.85	3,580				
4			2.48	24		280	8.81	3,550	5.20	1,160	4.24	598
5						360	8.76	3,510				
6						430	8.70	3,470	5.08	1,090	4.17	560
7						620	8.65	3,440				
8			2.47	23		760	8.55	3,360	4.99	1,030	4.11	529
9						900	8.45	3,300				
10						1,000	8.35	3,220	4.92	992	4.08	514
11					5.20	1,160	8.21	3,130				
N	2.46	23	2.48	24	5.53	1,360	8.05	3,020	4.86	956	4.16	555
1					5.83	1,540	7.85	2,880				
2					6.55	1,970	7.60	2,700	4.87	962	4.17	560
3					7.00	2,280	7.32	2,500				
4			2.55	30	7.50	2,630	7.06	2,320	4.88	968	4.18	566
5					7.95	2,940	6.80	2,140				
6					8.19	3,110	6.55	1,970	4.84	944	4.16	555
7					8.40	3,260	6.34	1,840				
8			2.70	46	8.45	3,300	6.10	1,700	4.74	884	4.12	534
9					8.55	3,360	5.95	1,610				
10					8.67	3,450	5.81	1,530	4.60	801	4.05	499
11					8.76	3,510	5.67	1,440				
12	2.48	24	3.02	105	8.79	3,530	5.55	1,370	4.45	714	3.97	460
	January 3		January 4		January 5		January 6		January 7		January 8	
2					3.28	180	5.15	1,130	5.15	1,130		
4	3.81	385	3.39	216	3.28	180	5.32	1,230	5.03	1,060	3.98	464
6					3.30	186	5.57	1,380	4.92	992		
8	3.69	332	3.29	183	3.34	199	5.84	1,540	4.80	920	3.87	412
10					3.39	216	5.99	1,630	4.69	854		
N	3.62	302	3.27	177	3.48	248	6.00	1,640	4.59	795	3.78	371
2					3.63	307	5.92	1,590	4.49	737		
4	3.57	282	3.36	206	3.82	389	5.83	1,540	4.40	686	3.71	340
6					4.09	519	5.72	1,470	4.31	636		
8	3.53	267	3.34	199	4.36	664	5.57	1,380	4.23	592	3.66	319
10					4.65	830	5.44	1,300	4.15	550		
12	3.47	244	3.30	186	4.92	992	5.29	1,210	4.08	514	3.63	307
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6	3.54	271										
8			3.35	202								
10												
N	3.48	248			3.23	164	3.12	132	3.05	113	3.00	100
2												
4			3.31	189								
6	3.43	230										
8												
10												
12	3.40	219	3.28	180	3.19	152	3.10	126	3.03	108	2.98	96

Supplemental records.- Jan. 6, 10:30 a.m., 6.02 ft., 1,650 sec.-ft.

Wappinger Creek near Wappingers Falls, N. Y.

Location.- Water-stage recorder, lat. 41°39'05", long. 73°52'20", 4½ miles northeast of village of Wappingers Falls, Dutchess County.
Drainage area.- 182 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 3,010 second-feet and extended to peak stage on basis of determinations of peak flow by computation of flow over dam and by contracted-opening method at gage height 18.02 feet; affected by ice Dec. 28.
Maxima.- December 1948-January 1949: Discharge, 7,730 second-feet 1:45 a.m. Jan. 1 (gage height, 12.52 feet)
1928 to November 1948: Discharge 15,900 second-feet Sept. 22, 1938 (gage height, 18.02 feet, from floodmarks).
Remarks.- Flood flow not affected by storage or diversion.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	38	Jan. 3	1,430	Jan. 9	1,120
29	43	4	1,040	10	907
30	738	5	918	11	771
31	5,120	6	2,570	12	660
Jan. 1	5,280	7	2,350	13	579
2	2,340	8	1,510	14	520

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.09	68	7.84	2,700	12.44	7,620		
2					3.13	74	8.26	3,060	12.48	7,670	8.14	2,960
3					3.20	84	8.55	3,320	12.42	7,600		
4			2.81	38	3.29	99	8.91	3,650	12.32	7,470	7.95	2,790
5					3.37	115	9.24	3,950	12.14	7,230		
6					3.47	137	9.52	4,230	11.92	6,950	7.77	2,650
7					3.64	183	9.77	4,480	11.65	6,600		
8			2.81	38	3.79	230	9.96	4,670	11.36	6,250	7.61	2,520
9					3.91	271	10.10	4,820	11.06	5,890		
10					4.01	307	10.19	4,920	10.77	5,560	7.46	2,400
11					4.30	423	10.31	5,050	10.49	5,250		
N			2.82	39	4.47	498	10.41	5,160	10.25	4,980	7.32	2,290
1					4.66	586	10.52	5,280	10.00	4,710		
2					4.78	644	10.62	5,390	9.76	4,470	7.19	2,180
3					5.02	765	10.77	5,560	9.54	4,250		
4			2.87	44	5.25	887	10.91	5,710	9.37	4,080	7.08	2,090
5					5.54	1,050	11.07	5,900	9.18	3,890		
6					5.83	1,220	11.24	6,110	9.02	3,750	6.98	2,010
7					6.11	1,390	11.41	6,310	8.88	3,620		
8			2.92	49	6.35	1,550	11.64	6,590	8.76	3,510	6.86	1,920
9					6.61	1,730	11.84	6,840	8.65	3,420		
10					6.91	1,960	12.02	7,080	8.56	3,330	6.76	1,840
11					7.21	2,200	12.17	7,270	8.45	3,240		
12			3.04	62	7.46	2,400	12.33	7,480	8.35	3,140	6.66	1,770
	January 3		January 4		January 5		January 6		January 7		January 8	
2					5.31	920	6.27	1,500				
4	6.44	1,610	5.67	1,120	5.27	898	6.65	1,760	7.94	2,780		
6					5.24	882	6.98	2,010			6.46	1,630
8	6.30	1,520	5.55	1,050	5.22	871	7.36	2,320	7.62	2,530		
10					5.20	860	7.69	2,580				
N	6.12	1,400	5.43	1,090	5.19	855	8.00	2,830	7.34	2,300	6.24	1,480
2					5.20	860	8.22	3,030				
4	5.99	1,310	5.39	964	5.23	876	8.35	3,140	7.10	2,110		
6					5.29	909	8.40	3,190			6.07	1,370
8	5.89	1,250	5.38	958	5.42	980	8.39	3,180	6.90	1,950		
10					5.64	1,000	8.32	3,120				
12	5.79	1,190	5.35	942	5.91	1,270	8.22	3,030	6.73	1,820	5.92	1,270
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8	5.74	1,160	5.33	930								
10												
N					5.03	771	4.81	659	4.64	576	4.52	520
2												
4	5.58	1,070	5.23	876								
6												
8												
10												
12	5.45	997	5.15	834	4.91	709	4.72	615	4.58	548	4.46	493

Supplemental records.- Jan. 1, 1:45 a.m., 12.52 ft., 7,730 sec.-ft.; Jan. 6, 7 p.m., 8.43 ft., 3,220 sec.-ft.

Fishkill Creek at Beacon, N. Y.

Location.- Water-stage recorder, lat. 41°30'40", long. 73°56'55", at Bridge Street Bridge in Beacon, Dutchess County, and 2⅔ miles upstream from mouth.
Drainage area.- 186 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 2,440 second-feet.
Maxima.- December 1948-January 1949: Discharge, 3,020 second-feet 3 p.m. Jan. 1 (gage height, 7.03 feet).
1944 to November 1948: Discharge, 2,970 second-feet Mar. 18, 1948 (gage height, 6.96 feet).
Remarks.- Flood flow not affected by storage or diversion. Diurnal fluctuations at low and medium flow caused by research laboratories and manufacturing plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	34	Jan. 3	1,220	Jan. 9	1,170
29	44	4	842	10	923
30	489	5	758	11	766
31	2,120	6	1,790	12	650
Jan. 1	2,900	7	2,480	13	573
2	2,020	8	1,660	14	511

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					1.62	87			6.79	2,830		
2					1.65	94	4.80	1,490	6.81	2,850	6.37	2,530
3									6.83	2,860		
4					1.80	130	5.03	1,630	6.84	2,870	6.21	2,420
5									6.86	2,890		
6					1.93	165	5.19	1,720	6.86	2,890	6.01	2,280
7									6.86	2,890		
8					2.06	202	5.37	1,830	6.87	2,900	5.83	2,150
9									6.89	2,910		
10					2.27	268	5.52	1,930	6.91	2,930	5.71	2,070
11									6.93	2,940		
N					2.53	360	5.73	2,080	6.95	2,960	5.62	2,000
1									6.98	2,980		
2					2.90	505	5.96	2,240	7.00	3,000	5.49	1,910
3									7.03	3,020		
4					3.16	616	6.22	2,420	7.01	3,010	5.35	1,820
5									6.99	2,990		
6					3.46	756	6.43	2,570	6.96	2,970	5.22	1,740
7									6.93	2,940		
8					3.86	955	6.60	2,690	6.88	2,900	5.10	1,670
9									6.81	2,850		
10					4.19	1,130	6.71	2,770	6.73	2,780	4.98	1,600
11									6.62	2,700		
12			1.18	10	4.52	1,320	6.77	2,820	6.52	2,630	4.87	1,530
	January 3		January 4		January 5		January 6		January 7		January 8	
2					3.37	713	4.18	1,130	6.51	2,630		
4	4.65	1,400	3.83	940	3.36	708	4.37	1,230	6.57	2,670	5.45	1,880
6					3.34	699	4.60	1,370	6.60	2,690		
8	4.47	1,290	3.72	885	3.33	694	4.82	1,500	6.55	2,660	5.24	1,750
10					3.33	694	5.08	1,660	6.49	2,610		
N	4.29	1,190	3.61	830	3.34	699	5.32	1,800	6.41	2,560	5.06	1,650
2					3.38	718	5.50	1,920	6.31	2,490		
4	4.16	1,120	3.53	790	3.44	746	5.72	2,070	6.21	2,420	4.88	1,540
6					3.52	785	5.90	2,200	6.08	2,330		
8	4.05	1,060	3.45	751	3.65	850	6.09	2,330	5.94	2,230	4.73	1,450
10					3.80	925	6.26	2,450	5.82	2,140		
12	3.94	997	3.39	722	3.97	1,010	6.41	2,560	5.70	2,060	4.60	1,370
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	4.46	1,290										
6												
8	4.35	1,220	3.85	950	3.52	785	3.27	666				
10												
N	4.24	1,160							3.06	573	2.91	509
2												
4	4.15	1,110	3.73	890	3.43	741	3.19	630				
6												
8	4.07	1,070										
10												
12	3.99	1,020	3.63	840	3.35	704	3.13	603	2.99	543	2.85	484

Supplemental records.- Jan. 7, 5:30 a.m., 6.62 ft., 2,700 sec.-ft.

West Branch Ausable River near Newman, N. Y.

Location.- Water-stage recorder, lat. 44°18'40", long. 73°55'00", 4 miles northeast of Newman, Essex County, and 4 miles downstream from Lake Placid Outlet.
Drainage area.- 116 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 3,200 second-feet and extended to peak stage by logarithmic plotting; affected by ice intermittently Jan. 3-5, 11-14.
Maxima.- December 1948-January 1949: Discharge, 7,020 second-feet 4:45 p.m. Dec. 31 (gage height, 10.13 feet).
1916-17, 1919 to November 1948: Discharge, 10,800 second-feet, Sept. 22, 1938 (gage height, 12.20 feet), from rating curve extended above 3,200 second-feet by logarithmic plotting.
Remarks.- Flood flow affected by natural storage in Lake Placid and several small ponds. Diurnal fluctuation at low and medium flow caused by mills.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	90	Jan. 3	540	Jan. 9	309
29	93	4	400	10	262
30	256	5	330	11	220
31	3,620	6	729	12	190
Jan. 1	2,290	7	579	13	175
2	869	8	408	14	160

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							3.77	373	8.30	4,230		
2					2.92	115	3.79	381	8.01	3,850	5.08	1,070
3							3.81	389	7.74	3,520		
4			2.74	83	2.96	123	3.84	403	7.50	3,230	5.01	1,030
5							3.93	443	7.30	3,010		
6	2.74	83			3.04	140	4.08	513	7.10	2,790	4.92	970
7							4.33	636	6.89	2,580		
8			2.78	90	3.15	166	4.75	868	6.91	2,600	4.85	928
9							4.70	839	6.73	2,420		
10					3.23	187	7.26	2,970	6.53	2,220	4.79	892
11							8.01	3,850	6.62	2,310		
N	2.80	93	2.79	91	3.34	218	8.65	4,720	6.65	2,340	4.73	857
1			2.79	91			9.19	5,500	6.46	2,150		
2					3.48	262	9.64	6,200	6.20	1,920	4.65	810
3							9.93	6,680	6.01	1,750		
4			2.97	125	3.79	381	10.10	6,970	5.86	1,630	4.59	776
5							10.11	6,990	5.76	1,550		
6	2.81	95			3.93	443	10.01	6,820	5.65	1,470	4.56	760
7							9.84	6,530	5.56	1,400		
8			2.67	73	3.88	420	9.63	6,190	5.48	1,340	4.51	732
9							9.37	5,780	5.40	1,280		
10					3.79	381	9.11	5,380	5.33	1,240	4.45	699
11							8.83	4,970	5.25	1,180		
12	2.76	87	2.89	109	3.77	373	8.54	4,570	5.20	1,150	4.40	672
	January 3		January 4		January 5		January 6		January 7		January 8	
2							3.81	389				
4	4.30	620	3.91				3.94	447				
6							4.17	556	4.30	620		
8	4.21	575	3.92		3.65	324	4.41	677			3.89	425
10							4.62	793				
N	4.15	546	3.78				4.88	946	4.20	570		
2							4.94	983				
4	4.11	527	3.77		3.66	328	4.87	940			3.80	385
6							4.78	886	4.11	527		
8	4.07		3.78	377			4.68	828				
10							4.57	765				
12	3.98				3.74	360	4.48	715	4.01	480	3.71	348
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8	3.61	309	3.49	266	3.40	234	3.77		3.20		3.17	
10												
N	3.57	294										
2												
4	3.59	301	3.46	256	3.29	201	3.20	179	3.26	195	3.20	
6												
8												
10												
12	3.54	283	3.43	246	3.50		3.24	190	3.18		3.13	

Supplemental records.- Dec. 31, 4:45 p.m., 10.13 ft., 7,020 sec.-ft.; Jan. 1, 10:45 a.m., 6.43 ft., 2,130 sec.-ft., 11:30 a.m., 6.74 ft., 2,430 sec.-ft.; Jan. 4, 7:30 a.m., 3.86 ft., 411 sec.-ft., 9:45 a.m., 4.01 ft., 480 sec.-ft.; Jan. 6, 1:30 p.m., 4.95 ft., 989 sec.-ft.

Ausable River near Au Sable Forks, N. Y.

Location.- Water-stage recorder, lat. 44°27'05", long. 73°38'35", 1 3/4 miles downstream from confluence of East and West Branches and Au Sable Forks, Clinton County. Datum of gage is 505.65 feet above mean sea level, datum of 1929.
Drainage area.- 448 square miles.
Gage-height record.- Water-stage recorder graph. Doubtful gage-height record 4 p.m. to 8 p.m. Dec. 31; gage-height record reconstructed on basis of high-water mark in gage house.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 9,100 second-feet and extended to peak stage on basis of slope-area determination; affected by ice Dec. 28 to 10 a.m. Dec. 31, Jan. 12-14.
Maxima.- December 1948-January 1949: Discharge, 23,200 second-feet 7 p.m. Dec. 31 (gage height, 11.39 feet, from high-water mark in gage house).
1910 to November 1948: Discharge, 24,200 second-feet Sept. 22, 1938, from rating curve extended above 9,100 second-feet by logarithmic plotting; maximum gage height, about 14.0 feet Mar. 27, 1934 (ice jam).
Remarks.- Flow partly regulated, principally by Taylor Pond and Fern Lake. Diurnal fluctuations at low and medium flow caused by power plants.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	350	Jan. 3	1,770	Jan. 9	1,100
29	500	4	1,240	10	986
30	780	5	1,030	11	740
31	11,200	6	2,280	12	580
Jan. 1	8,680	7	2,000	13	480
2	3,030	8	1,400	14	440

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							4.19		9.62	16,100		
2							4.22		9.37	15,100	5.20	4,070
3							4.17		9.04	14,000		
4							4.30		8.73	13,100	5.03	3,780
5							4.46		8.42	12,200		
6							4.59		8.10	11,200	4.84	3,470
7							4.04		7.83	10,400		
8							4.50		7.57	9,610	4.70	3,250
9							5.76		7.34	8,920		
10							6.58		7.18	8,460	4.57	3,060
11							7.04	8,070	7.00	7,960		
N	3.05		2.91		3.26		7.86	10,500	6.85	7,570	4.46	2,890
1							8.69	13,000	6.70	7,190		
2							9.49	15,600	6.53	6,780	4.36	2,740
3							10.12	18,100	6.46	6,620		
4							10.54	19,800	6.36	6,390	4.28	2,630
5							10.84	21,000	6.19	6,010		
6							11.12	22,100	6.04	5,680	4.21	2,530
7							11.39	23,200	5.89	5,370		
8							11.30	22,800	5.76	5,110	4.13	2,420
9							10.96	21,400	5.62	4,840		
10							10.63	20,100	5.50	4,610	4.05	2,320
11							10.22	18,500	5.38	4,390		
12							9.92	17,300	5.33	4,300	3.97	2,210
	January 3		January 4		January 5		January 6		January 7		January 8	
2							2.99	1,130				
4	3.81	2,000	3.25	1,380	2.88	1,040	3.09	1,220	4.05	2,320		
6							3.27	1,400				
8	3.68	1,850	3.15	1,280	2.82	986	3.56	1,710	3.88	2,090	3.31	1,440
10							3.97	2,210				
N	3.56	1,710	3.08	1,210	2.86	1,020	4.29	2,650	3.74	1,920		
2							4.55	3,020				
4	3.52	1,660	3.05	1,180	2.91	1,060	4.67	3,200	3.66	1,820	3.20	1,330
6							4.64	3,160				
8	3.41	1,540	2.97	1,110	2.86	1,020	4.53	3,000	3.58	1,730		
10							4.40	2,800				
12	3.34	1,470	2.92	1,070	2.93	1,080	4.27	2,620	3.50	1,640	3.11	1,240
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8	2.98	1,120	2.85	1,010	2.68	874						
10												
N							2.28		2.45		2.36	
2												
4	2.89	1,040	2.77	945	2.57	791						
6												
8												
10												
12	2.91	1,060	2.77	945	2.48							

East Branch Ausable River at Au Sable Forks, N. Y.

Location.- Water-stage recorder, lat. 44°26'20", long. 73°40'55", 700 feet upstream from upper highway bridge in Au Sable Forks, Essex County, and half a mile upstream from confluence with West Branch. Datum of gage is 545.37 feet above mean sea level, datum of 1929.

Drainage area.- 198 square miles.

Gage-height record.- Water-stage recorder graph.

Discharge record.- Stage-discharge relation defined by current-meter measurements below 5,800 second-feet and extended to peak stage on basis of velocity-area studies and logarithmic plotting; affected by ice Dec. 28 to 6 a.m. Dec. 31, 4 p.m. Jan. 10 to Jan. 14. Partially obstructed intake 7 a.m. to 1 p.m. Dec. 31; discharge computed on basis of reconstructed gage-height graph.

Maxima.- December 1948-January 1949: Discharge, 16,500 second-feet 3:45 p.m. Dec. 31 (gage height, 11.60 feet).
1924 to November 1948: Discharge, 20,100 second-feet Sept. 22, 1938 (gage height, 12.91 feet), from rating curve extended above 5,800 second-feet by method described above.

Remarks.- Flood flow not affected by storage or diversion. Diurnal fluctuation at low flow caused by power plants.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	98	Jan. 3	727	Jan. 9	483
29	120	4	500	10	420
30	245	5	416	11	310
31	8,200	6	1,230	12	215
Jan. 1	4,350	7	937	13	200
2	1,290	8	621	14	180

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							2.91		8.85	9,270		
2							3.03		8.49	8,440	4.34	1,720
3							3.15		8.14	7,660		
4							3.27		7.80	6,930	4.21	1,600
5							3.50		7.48	6,280		
6							3.78		7.20	5,740	4.09	1,490
7							3.50	1,020	6.93	5,240		
8							5.50	3,020	6.70	4,840	3.98	1,390
9							7.30	5,930	6.48	4,470		
10							8.00	7,350	6.27	4,130	3.87	1,300
11							8.80	9,150	6.07	3,820		
N	1.90		1.92		2.14		9.50	10,900	5.89	3,560	3.78	1,230
1							10.25	12,800	5.73	3,330		
2							11.10	15,100	5.58	3,120	3.71	1,170
3							11.47	16,100	5.44	2,940		
4							11.55	16,300	5.31	2,770	3.64	1,120
5							11.40	15,900	5.20	2,640		
6							11.16	15,300	5.08	2,500	3.57	1,070
7							10.90	14,600	4.97	2,370		
8							10.62	13,800	4.87	2,260	3.50	1,020
9							10.31	13,000	4.76	2,140		
10							9.94	12,000	4.66	2,030	3.43	969
11							9.57	11,000	4.57	1,940		
12							9.21	10,100	4.49	1,860	3.35	914
	January 3		January 4		January 5		January 6		January 7		January 8	
2	3.29	873					2.65	494	3.72	1,180		
4	3.23	834	2.76	552	2.45	398	2.78	563	3.63	1,110	2.98	677
6	3.17	795					3.04	713	3.54	1,050		
8	3.11	756	2.67	505	2.45	398	3.50	1,020	3.46	990	2.90	630
10	3.07	732					3.92	1,340	3.40	948		
N	3.04	713	2.66	500	2.49	416	4.22	1,610	3.33	900	2.85	602
2	3.00	689					4.45	1,820	3.28	867		
4	2.96	665	2.61	474	2.53	435	4.39	1,760	3.24	840	2.83	591
6	2.94	654					4.27	1,650	3.20	814		
8	2.91	636	2.58	459	2.48	412	4.12	1,520	3.16	788	2.82	585
10	2.88	619					3.96	1,380	3.11	756		
12	2.84	596	2.51	426	2.55	445	3.83	1,270	3.07	732	2.76	552
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8	2.64	489	2.54	440								
10												
N					2.32		1.98		2.19		2.12	
2												
4	2.56	450	2.48	412								
6												
8												
10												
12	2.60	469	2.48									

Supplemental records.- Dec. 31, 3:45 p.m., 11.60 ft., 16,500 sec.-ft.; Jan. 5, 3 p.m., 2.55 ft., 445 sec.-ft.; Jan. 6, 2:30 p.m., 4.46 ft., 1,830 sec.-ft.

Poultney River below Fair Haven, Vt.

Location.- Lat. 43°37'40", long. 73°18'50", a third of a mile downstream from Carver Falls, 1.9 miles upstream from Hubbardton River, and 3¼ miles northwest of Fair Haven, Rutland County.
Drainage area.- 187 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 2,400 second-feet and extended to peak stage on basis of computations of flow over dam at gage heights 16.10, 21.40, and 24.36 feet; affected by ice Dec. 28 to 2 p.m. Dec. 30.
Maxima.- December 1948-January 1949: Discharge, 6,920 second-feet 9 a.m. Dec. 31 (gage height, 17.71 feet).
1928 to November 1948: Discharge, 14,800 second-feet July 20, 1945 (gage height, 24.36 feet, from high-water mark in gage well), from rating curve extended above 1,900 second-feet by method explained above.
Remarks.- Flood flow affected by Lake Bomoseen. Medium and low flow regulated by power plant above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	65	Jan. 3	827	Jan. 9	621
29	80	4	619	10	551
30	1,420	5	524	11	557
31	5,400	6	1,520	12	472
Jan. 1	2,430	7	1,220	13	440
2	1,240	8	789	14	401

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					3.20	20	14.55	4,420	13.28	3,600		
2					3.19	20	14.90	4,660	13.00	3,430	8.56	1,570
3					3.25	25	15.25	4,900	12.72	3,260		
4					3.34	35	15.46	5,050	12.21	2,980	8.32	1,500
5					3.46	50	15.64	5,190	12.18	2,970		
6					3.60	65	15.94	5,430	11.96	2,860	8.06	1,420
7					4.50	200	16.37	5,780	11.72	2,740		
8					6.44	720	16.75	6,080	11.51	2,640	7.61	1,290
9					5.72	630	17.71	6,920	11.24	2,500		
10					6.31	730	17.43	6,670	11.14	2,460	7.43	1,240
11					6.82	920	17.41	6,650	10.96	2,380		
N					7.46	1,100	17.31	6,560	10.77	2,310	7.27	1,190
1					8.24	1,300	17.13	6,400	10.58	2,230		
2					8.92	1,500	16.90	6,200	10.41	2,160	7.22	1,180
3					9.28	1,780	16.61	5,970	10.24	2,100		
4					10.06	2,040	16.31	5,730	10.10	2,060	7.08	1,140
5					10.74	2,300	16.02	5,500	10.00	2,020		
6					11.42	2,590	15.69	5,230	9.81	1,950	6.93	1,100
7					11.79	2,780	15.32	4,950	9.64	1,890		
8					12.30	3,030	14.98	4,720	9.46	1,830	6.81	1,060
9					12.52	3,140	14.63	4,470	9.31	1,790		
10					12.94	3,390	14.29	4,230	9.16	1,740	6.66	1,020
11					13.48	3,720	13.96	4,010	9.00	1,700		
12					13.94	3,990	13.60	3,790	8.85	1,650	6.54	987
	January 3		January 4		January 5		January 6		January 7		January 8	
2							5.71	756	8.86	1,650		
4					4.84	523	6.23	900	8.43	1,530	6.10	864
6	6.22	898	5.33	653			6.88	1,080	8.02	1,410		
8					4.76	503	7.82	1,350	7.54	1,270	5.95	822
10							8.60	1,580	7.36	1,220		
N	5.90	808	5.18	613	4.72	492	9.00	1,700	7.13	1,150	5.80	780
2							9.29	1,780	6.95	1,100		
4					4.72	492	9.75	1,930	6.76	1,050	5.67	745
6	5.72	758	5.09	588			10.01	2,020	6.61	1,010		
8					4.88	534	10.01	2,020	6.48	970	5.58	721
10							9.72	1,920	6.38	942		
12	5.51	702	4.91	542	5.33	653	9.32	1,790	6.28	914	5.48	694
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4	5.38	667	4.93	547	5.10	591	4.59	458	4.58	456	4.44	420
6												
8	5.28	640	4.85	526	5.04	575	4.60	461	4.54	445	4.42	415
10												
N	5.19	615	4.80	513	4.96	555	4.70	487	4.51	438	4.40	410
2												
4	5.12	596	4.95	552	4.90	539	4.64	471	4.47	428	4.39	408
6												
8	5.06	581	5.09	588	4.86	529	4.60	461	4.46	425	4.32	390
10												
12	5.00	565	5.12	596	4.80	513	4.63	469	4.46	425	3.98	306

Supplemental records.- Jan. 2, 10:30 a.m., 6.64 ft., 1,020 sec.-ft.

Otter Creek at Center Rutland, Vt.

Location.- Lat. 43°36'15", long. 73°00'50", at highway bridge in Center Rutland, Rutland County, 200 feet downstream from dam, 1.2 miles downstream from East Creek, and 1½ miles west of Rutland.
Drainage area.- 307 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 2,700 second-feet and extended above on basis of computation of flow over dam at gage height 11.51 feet.
Maxima.- December 1948-January 1949: Discharge, 10,000 second-feet 12 m. to 1 p.m. Dec. 31; gage height, 11.45 feet 12 m. Dec. 31.
1928 to November 1948: Discharge, 13,700 second-feet Sept. 22, 1938 (gage height, 12.45 feet), by computation of flow over dam.
Remarks.- Flood flow affected by Chittenden Reservoir on East Creek. Medium and low flows regulated by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	180	Jan. 3	1,940	Jan. 9	1,200
29	189	4	1,220	10	1,020
30	1,600	5	1,020	11	848
31	9,160	6	2,440	12	606
Jan. 1	6,650	7	2,790	13	620
2	3,520	8	1,940	14	588

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					1.63	350	8.65	6,230				
2					1.48	304	9.72	7,590	10.19	8,220	7.31	4,690
3					1.32	259	10.30	8,370				
4					1.27	245	10.67	8,890	9.93	7,860	7.06	4,420
5					1.33	261	10.90	9,210				
6					1.53	319	11.02	9,380	9.69	7,550	6.81	4,150
7					1.88	435	11.17	9,600				
8					2.61	766	11.25	9,720	9.42	7,200	6.57	3,910
9					3.19	1,100	11.32	9,830				
10					3.65	1,420	11.40	9,950	9.15	6,840	6.34	3,680
11					3.95	1,620	11.41	9,960				
N					4.17	1,800	11.45	10,000	8.92	6,550	6.11	3,450
1					4.27	1,880	11.43	10,000				
2					4.34	1,930	11.39	9,940	8.70	6,290	5.77	3,130
3					4.36	1,950	11.37	9,900				
4					4.47	2,040	11.27	9,760	8.47	6,010	5.52	2,910
5					4.54	2,090	11.21	9,660				
6					4.77	2,280	11.13	9,540	8.27	5,770	5.46	2,850
7					4.96	2,430	11.03	9,400				
8					5.08	2,520	10.92	9,240	8.03	5,490	5.31	2,720
9					5.45	2,840	10.80	9,070				
10					5.87	3,220	10.67	8,890	7.79	5,220	5.18	2,600
11					6.32	3,660	10.57	8,750				
12					7.71	5,130	10.43	8,550	7.56	4,970	4.93	2,400
	January 3		January 4		January 5		January 6		January 7		January 8	
2	4.72	2,240	3.72	1,460	3.09	1,040	4.00	1,660	5.37	2,770	4.86	2,350
4	4.60	2,140	3.52	1,320	3.04	1,010	4.27	1,880	5.38	2,780	4.72	2,240
6	4.65	2,180	3.35	1,200	3.00	990	4.51	2,070	5.43	2,830	4.68	2,200
8	4.46	2,030	3.41	1,250	2.97	972	4.72	2,240	5.47	2,860	4.57	2,120
10	4.48	2,040	3.43	1,260	2.94	954	4.88	2,360	5.53	2,920	4.43	2,000
N	4.39	1,970	3.23	1,130	2.85	900	5.14	2,570	5.54	2,930	4.29	1,890
2	4.28	1,880	3.34	1,200	2.70	815	5.46	2,850	5.53	2,920	4.23	1,840
4	4.11	1,750	3.29	1,160	2.72	826	5.57	2,950	5.45	2,840	4.09	1,730
6	4.11	1,750	3.26	1,150	3.14	1,070	5.53	2,920	5.36	2,760	3.97	1,640
8	3.98	1,650	3.26	1,150	3.22	1,120	5.50	2,890	5.27	2,680	3.98	1,650
10	3.91	1,600	3.20	1,110	3.39	1,230	5.44	2,840	5.18	2,600	3.91	1,600
12	3.80	1,520	3.17	1,090	3.68	1,440	5.38	2,780	5.05	2,500	3.77	1,500
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N												
2												
4												
6												
8												
10												
12												

Supplemental records.- Jan. 3, 5 a.m., 4.69 ft., 2,210 sec.-ft., 8:30 a.m., 4.55 ft., 2,100 sec.-ft., 5 p.m., 4.17 ft., 1,800 sec.-ft.; Jan. 4, 7:30 a.m., 3.28 ft., 1,160 sec.-ft.; Jan. 5, 11 a.m., 2.96 ft., 966 sec.-ft., 5 p.m., 3.10 ft., 1,050 sec.-ft.

Otter Creek at Middlebury, Vt.

Location.- Lat. 44°00'45", long. 73°10'05", 150 feet upstream from highway bridge in Middlebury, Addison County, and 3½ miles downstream from Middlebury River.
Drainage area.- 628 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements; affected by backwater from ice or debris Dec. 28 to 12 p.m. Jan. 2.
Maxima.- December 1948-January 1949: Discharge, 6,220 second-feet 3 p.m. Jan. 4 (gage height, 7.26 feet).
1903-7, 1910-20, 1928 to November 1948: Discharge, 11,000 second-feet Mar. 20, 21, 1936 (gage height, 10.3 feet).
Maximum discharge known, 13,600 second-feet Nov. 4, 1927 (gage height, 13.3 feet, present datum, at chain-gage site 1,800 feet upstream), from rating curve extended above 9,000 second-feet by logarithmic plotting.
Remarks.- Flood flow affected by natural storage and by Chittenden Reservoir on East Creek.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	223	Jan. 3	5,290	Jan. 9	4,210
29	249	4	6,140	10	3,980
30	515	5	5,860	11	3,670
31	1,690	6	5,560	12	3,440
Jan. 1	2,190	7	5,060	13	3,120
2	3,270	8	4,530	14	2,780

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1							3.86	1,070				
2					1.75	300	3.94	1,110	4.89	2,030	5.77	2,700
3							3.99	1,190				
4					1.78	318	4.12	1,260	4.91	2,050	5.82	2,790
5							4.29	1,330				
6	1.55	225	1.62	245	1.88	337	4.49	1,400	4.95	2,080	5.86	2,870
7							4.74	1,480				
8					2.00	370	4.40	1,560	4.96	2,100	5.91	2,940
9							4.47	1,640				
10					2.18	405	4.46	1,710	4.97	2,110	5.98	3,010
11							4.68	1,770				
N	1.53	222	1.59	239	2.32	447	4.81	1,820	4.97	2,110	6.04	3,110
1							4.73	1,890				
2					2.14	510	4.77	1,930	4.98	2,140	6.15	3,240
3							4.81	1,960				
4					2.38	566	4.83	1,980	5.10	2,180	6.25	3,360
5							4.81	1,960				
6	1.56	225	1.64	249	2.97	643	4.83	1,970	5.16	2,270	6.37	3,590
7							4.84	1,980				
8					3.35	748	4.85	2,000	5.35	2,370	6.55	3,930
9							4.86	2,010				
10					3.68	885	4.86	2,010	5.65	2,480	6.71	4,210
11							4.87	2,020				
12	1.62	245	1.72	284	3.93	1,010	4.88	2,020	5.72	2,590	6.88	4,410
	January 3		January 4		January 5		January 6		January 7		January 8	
2	5.98	4,590										
4	6.10	4,730										
6	6.21	4,860	7.18	6,110	7.09	5,990	6.81	5,610	6.50	5,210	6.02	4,630
8	6.27	4,930										
10	6.45	5,150										
N	6.58	5,310	7.23	6,180	6.99	5,850	6.78	5,570	6.37	5,050	5.94	4,540
2	6.69	5,460										
4	6.81	5,610										
6	6.92	5,760	7.25	6,210	6.89	5,720	6.74	5,520	6.24	4,900	5.84	4,420
8	7.02	5,890										
10	7.07	5,960										
12	7.10	6,000	7.18	6,110	6.85	5,660	6.63	5,380	6.12	4,750	5.77	4,330
	January 9		January 10		January 11		January 12		January 13		January 14	
2			5.56	4,080							4.60	2,940
4			5.54	4,060	5.30	3,770					4.58	2,920
6	5.70	4,250	5.52	4,030			5.07	3,490	4.83	3,210	4.55	2,880
8			5.50	4,010	5.20	3,650					4.52	2,850
10			5.49	4,000							4.50	2,830
N	5.67	4,210	5.41	3,900	5.18	3,630	5.03	3,450	4.76	3,120	4.47	2,800
2			5.46	3,960							4.45	2,780
4			5.45	3,950	5.19	3,640					4.39	2,710
6	5.63	4,170	5.53	4,050			4.97	3,370	4.69	3,040	4.30	2,610
8			5.42	3,910	5.18	3,630					4.27	2,580
10			5.39	3,880							4.35	2,660
12	5.57	4,090	5.36	3,840	5.13	3,570	4.90	3,290	4.62	2,960	4.35	2,660

Supplemental records.- Jan. 3, 12:30 a.m., 5.98 ft., 4,590 sec.-ft.; Jan. 4, 3 p.m., 7.26 ft., 6,220 sec.-ft.

East Creek at Rutland, Vt.

Location.- Lat. 43°37'40", long. 72°59'20", at Rutland, Rutland County, on grounds of Rutland Country Club, 280 feet downstream from Grove Street bridge and 2 miles upstream from mouth.
Drainage area.- 51.1 square miles.
Gage-height record.- Water-stage recorder graph.
Discharge record.- Stage-discharge relation defined by current-meter measurements below 340 second-feet and extended above on basis of computation of flow over dam and slope-area determination at gage height 7.10 feet and two slope-area determinations at gage height 20.3 feet.
Maxima.- December 1948-January 1949: Discharge, 1,450 second-feet 5 a.m. Dec. 31 (gage height, 4.26 feet).
1940 to November 1948: Discharge, 36,500 second-feet June 3, 1947 (gage height, 20.3 feet, from high-water mark in gage house), mean of two slope-area determinations.
Remarks.- Flood flow affected by Chittenden Reservoir (capacity, 819,800,000 cubic feet). Medium and low flows regulated by power plants above station.

Mean discharge, in second-feet, 1948-49

Day	Discharge	Day	Discharge	Day	Discharge
Dec. 28	78	Jan. 3	140	Jan. 9	80
29	92	4	136	10	134
30	469	5	145	11	125
31	930	6	397	12	110
Jan. 1	298	7	204	13	133
2	142	8	104	14	128

Gage height, in feet, and discharge, in second-feet, at indicated time, 1948-49

Hour	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
	December 28		December 29		December 30		December 31		January 1		January 2	
1					0.68	4.9	4.02	1,280				
2					.68	4.9	4.03	1,290				
3					.69	5.2	4.09	1,330				
4					.70	5.5	4.18	1,400	2.46	387		
5					.71	5.8	4.26	1,450				
6					1.90	171	4.13	1,360				
7					2.41	364	3.89	1,190				
8					2.47	392	3.65	1,030	2.36	344		
9					2.63	465	3.62	1,010				
10					2.67	485	3.60	1,000				
11					2.70	500	3.55	970				
N					2.64	470	3.35	850	2.26	303		
1					2.62	460	3.38	868				
2					2.64	470	3.32	832				
3					2.70	500	3.26	798				
4					2.87	585	3.19	760	2.12	249		
5					2.87	585	3.11	716				
6					2.82	560	3.00	655				
7					3.12	721	2.91	606				
8					3.32	832	2.83	565	1.98	198		
9					3.45	910	2.77	535				
10					3.70	1,060	2.72	510				
11					3.87	1,180	2.67	485				
12					3.98	1,260	2.53	418	1.98	198		
	January 3		January 4		January 5		January 6		January 7		January 8	
2												
4												
6												
8												
10												
N												
2												
4												
6												
8												
10												
12												
	January 9		January 10		January 11		January 12		January 13		January 14	
2												
4												
6												
8												
10												
N												
2												
4												
6												
8												
10												
12												

Supplemental records.- Dec. 30, 5:30 a.m., 1.89 ft., 168 sec.-ft., 3:30 p.m., 2.39 ft., 356 sec.-ft., 6:30 p.m., 2.70 ft., 500 sec.-ft.

SUMMARY OF FLOOD STAGES AND DISCHARGES

The result of the determinations of maximum discharge at existing stream-gaging stations and at miscellaneous points covered by this report are summarized in table 1, Summary of flood discharges during the New Year floods of 1949. The map reference numbers in this table refer to those in plate 1.

The maximum discharge at gaging stations during the present flood was obtained from the stage-discharge relation unless otherwise indicated in the tables by letter symbol. The special methods, such as slope-area measurement (S), contracted opening (C), flow through Venturi meter (V) or over a dam (D), were used mainly at points other than gaging stations.

Figure 8 shows the maximum discharge, in second-feet per square mile as listed in table 1, plotted against the corresponding drainage area.

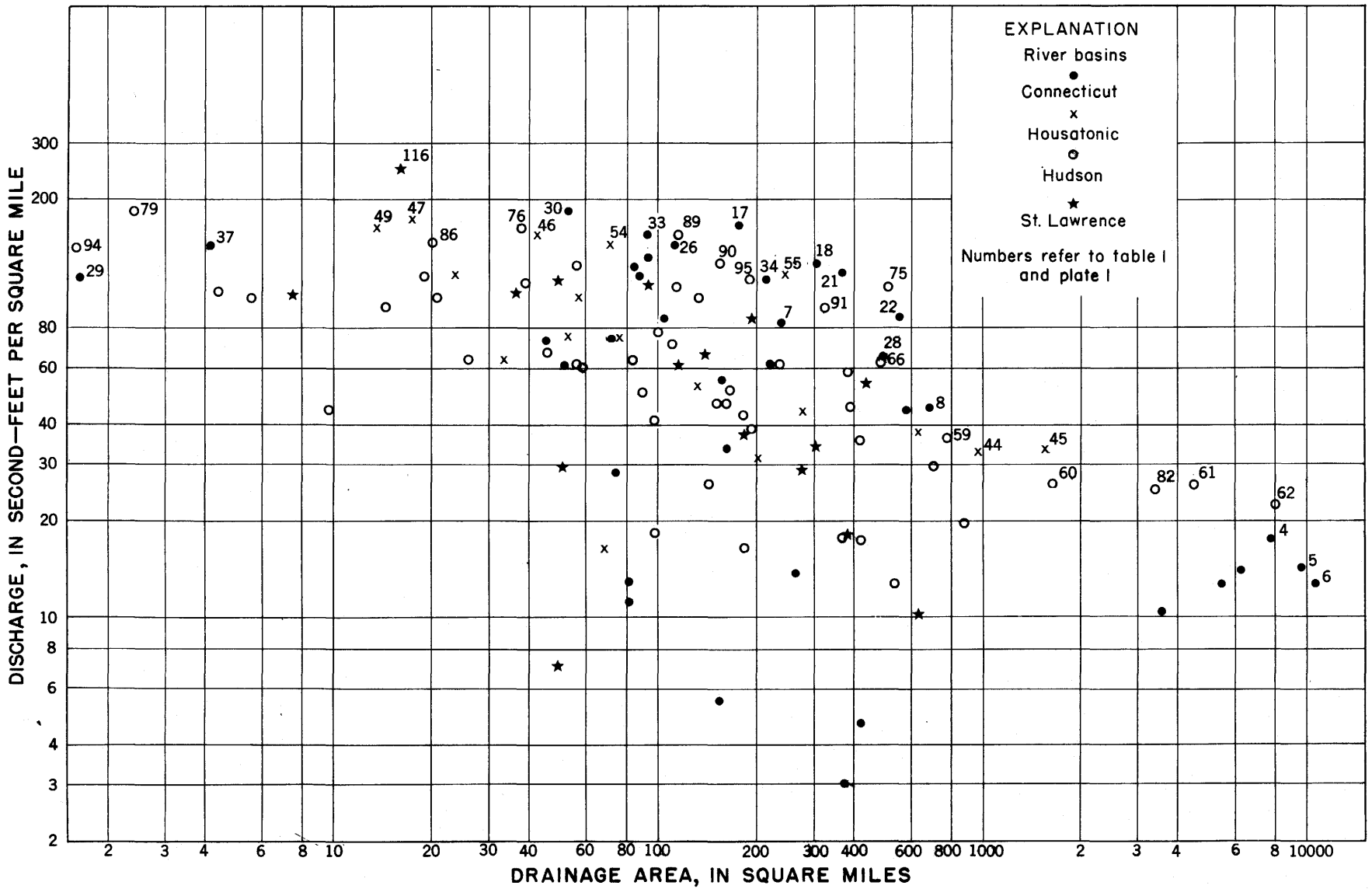

Figure 8.--Relation of unit discharge to size of drainage basin.

Table 1.--Summary of flood discharges during the New Year floods of 1949

[Maximum discharges were obtained from gaging-station records, except as otherwise indicated by the following symbols: C, contracted-opening measurement; D, computed flow over dam; P, computed flow through power plant; S, slope-area measurement; V, measurement with Venturi meter]

No. on Pl. 1	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (second-feet)	Sec.-ft. per sq. mi.	Date and hour	Gage height (feet)	Discharge (second-feet)	Sec.-ft. per sq. mi.
	Connecticut River basin										
1	Connecticut River at White River Junction, Vt.	4,092	1911-	Nov. 4, 1927	35.0	136,000	33.2	2 p.m. Dec. 31	18.12	43,000	10.5
2	Connecticut River at North Walpole, N. H.	5,493	1942-	Mar. 22, 1948	29.55	93,000	16.9	10 a.m. to 12 m. Dec. 31	24.95	71,000	12.9
3	Connecticut River at Vernon, Vt.	6,266	1944-	Mar. 19, 20, 1936	a128.8	176,000	28.1	1 to 2 p.m. Dec.31	205.40	88,600	14.1
4	Connecticut River at Montague City, Mass.	7,865	1904-	Mar. 19, 1936	49.2	236,000	30.0	11 p.m. Dec. 31 to 1 a.m. Jan. 1	37.76	139,000	17.7
5	Connecticut River at Thompsonville, Conn.	9,661	1928-	Mar. 20, 1936	16.6	282,000	29.2	11 a.m. to 12 m. Jan. 1	9.30	138,000	14.3
6	Connecticut River near Middletown, Conn.	10,870	1947-	Mar. 21, 1936	28.2	267,000	24.6	12 m. Jan. 2	16.70	139,000	12.8
7	White River near Bethel, Vt.	241	1931-	Sept. 21, 1938	11.46	32,200	134	4:30 a.m. Dec. 31	9.53	19,900	82.6
8	White River at West Hartford, Vt.	690	1915-	Nov. 4, 1927	29.3	120,000	174	9:30 a.m. Dec. 31	16.58	31,000	44.9
9	Mascoma River at West Canaan, N. H.	80.5	1939-	September 1938	9.6	4,310	53.5	5 a.m. Jan. 1	4.94	1,040	12.9
10	Mascoma River at Mascoma, N. H.	153	1923-	Mar. 19, 1936	7.50	5,840	38.2	10 a.m. to 7 p.m. Jan. 2	3.80	845	5.52
11	Ottauquechee River at North Hartland, Vt.	221	1930-	November 1927	21.5	30,400	138	6 to 6:30 a.m. Dec. 31	12.62	13,300	60.2
12	Sugar River at West Claremont, N. H.	269	1928-	March 19, 1936	10.92	14,000	52.0	2 a.m. Jan. 1	5.45	3,700	13.8
13	Black River at North Springfield, Vt.	158	1929-	Sept. 22, 1938	17.68	15,500	98.1	4 a.m. Dec. 31	13.17	8,780	55.6
14	Williams River at Brockway Mills, Vt.	103	1940-	Mar. 22, 1948	10.43	5,950	57.8	1 a.m. Dec. 31	13.31	8,830	85.7
15	Saxtons River at Saxtons River, Vt.	72.2	1940-	Mar. 22, 1948	9.17	3,790	52.5	12 p.m. Dec. 30	10.51	5,300	73.4
16	Cold River at Drewsville, N. H.	82.7	1940-	Mar. 22, 1948	8.08	3,290	39.8	8:30 p.m. Dec. 31	5.93	928	11.2
17	West River at Jamaica, Vt.	179	1946-	Mar. 22, 1948	10.96	10,600	59.2	3 a.m. Dec. 31	14.87	29,500	165
18	West River at Newfane, Vt.	308	1919-23 1928-	Sept. 21, 1938	22.81	52,300	170.	5 a.m. Dec. 31	19.46	39,600	129
19	Ashuelot River at Hinsdale, N. H.	420	1907-11 1914-	Mar. 29, 1920	d9.98	18,000	42.9	4:30 a.m. Jan. 1	5.84	1,950	4.64
20	Millers River at Erving, Mass.	375	1914-	Sept. 22, 1938	b13.37	29,000	78.4	4:30 p.m. Dec. 31	4.10	1,130	3.01
21	Deerfield River at Charlemont, Mass.	362	1913-	Sept. 21, 1938	20.17	56,300	c316	1:30 p.m. Dec. 31	17.75	42,600	118

22	Deerfield River near West Deerfield, Mass.	558	1940-	Apr. 26, 1945	9.56	21,300	38.2	7 p.m. Dec. 31	15.43	48,500	86.9
23	North River at Shattuckville, Mass.	88.4	1939-	Apr. 26, 1945	7.85	4,570	51.7	2 a.m. Dec. 31	9.62	10,000	113
24	Mill River at Northampton, Mass.	52.8	1938-	Apr. 26, 1945	7.06	3,060	58.0	3 a.m. Dec. 31	7.20	3,200	60.6
25	Chicopee River at Indian Orchard (Bircham Bend), Mass.	688	1928	Sept. 21, 1938	-	d45,200	d64.3	1 a.m. Jan. 1	7.12	2,070	3.01
26	Westfield River at West Chesterfield, Mass.	111	1946-	Mar. 22, 1948	7.85	6,740	60.7	12 m. Dec. 31	11.93	16,000	144
27	Westfield River at Knightville, Mass.	162	1909-	Sept. 21, 1938	b29.58	37,900	234	11:30 a.m. Jan. 4	6.96	5,370	33.1
28	Westfield River near Westfield, Mass.	497	1914-	Sept. 21, 22, 1938	29.40	55,500	112	3 p.m. Dec. 31	22.00	32,200	64.8
29	Sykes Brook at Knightville, Mass.	1.64	1945-	July 29, 1945	2.58	99	60.4	9 a.m. Dec. 31	3.09	187	114
30	Middle Branch Westfield River at Goss Heights, Mass.	52.6	1910-	Sept. 21, 1938	10.61	19,900	378	8:30 a.m. Dec. 31	8.65	9,600	183
31	West Branch Westfield River at Huntington, Mass.	93.7	1935-	Sept. 21, 1938	15.5	21,800	233	12 m. Dec. 31	11.93	12,200	130
32	Westfield Little River at outlet of Cobble Mountain Reservoir, near Westfield, Mass.	45.8	1905-	Sept. 21, 1938	-	e4,760	-	Dec. 31	-	e5,350 V	-
33	West Branch Farmington River near New Boston, Mass.	92.0	1913-	Sept. 21, 1938	12.94	18,500	f247	12 m. Dec. 31	10.50	11,700	f156
34	West Branch Farmington River at Riverton, Conn.	216	1929-	Sept. 21, 1938	17.95	37,100	f186	1 p.m. Dec. 31	13.95	22,000	f111
35	Farmington River at Rainbow (Tariffville), Conn.	591	1928-	Sept. 22, 1938	13.7	d29,900	dg51.7	9 a.m. Jan. 1	13.83	26,500	g44.8
36	Still River at Robertsville, Conn.	84.4	1948-	-	-	-	-	4 p.m. Dec. 31	10.12	10,200	121
37	Burlington Brook near Burlington, Conn.	4.1	1931-	Sept. 21, 1938	7.24	645	157	1 p.m. Dec. 31	6.87	591	144
38	Pequabuck River at Forestville, Conn.	45.2	1941-	September 1938	7.3	3,800	84.1	2 p.m. Dec. 31	6.70	3,260	72.1
39	Park River at Hartford, Conn.	74.0	1936-	Jan. 25, 1938	9.16	5,650	76.4	12 p.m. Dec. 31	6.22	2,100	28.4
	Quinnipiac River basin										
40	Quinnipiac River at Wallingford, Conn.	109	1930-	Sept. 21, 1938	9.55	5,230	48.0	3 a.m. Jan. 1	7.97	2,960	27.2

a Datum then in use 94.13 feet higher.
b Site and datum then in use.
c Exclusive of drainage area above Harriman Reservoir.
d Site then in use.
e Mean daily discharge adjusted for change in reservoir contents.
f Exclusive of drainage area above Otis Reservoir.
g Includes area above all reservoirs.

Table 1.--Summary of flood discharges during the New Year floods of 1949--Continued

No. on Pl. 1	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (second-feet)	Sec.-ft. per sq. mi.	Date and hour	Gage height (feet)	Discharge (second-feet)	Sec.-ft. per sq. mi.
	Housatonic River basin										
41	East Branch Housatonic River at Coltsville, Mass.	57.1	1936-	Sept. 21, 1938	10.80	6,400	112	1 p.m. Dec. 31	10.38	5,700	99.8
42	Housatonic River near Great Barrington, Mass.	280	1913-	Sept. 22, 1938	11.72	11,520	41.1	7 a.m. Jan. 1	12.08	12,200	43.6
43	Housatonic River at Falls Village, Conn.	632	1912-	Sept. 23, 1938	20.7	19,900	31.5	8 a.m. to 4 p.m. Jan. 1	22.9	23,900	37.8
44	Housatonic River at Gaylordsville, Conn.	994	1900-1914 1940-	Sept. 22, 1938	14.5	37,000	30.8	8 a.m. Jan. 1	14.85	32,300	32.5
45	Housatonic River at Stevenson, Conn.	1,545	1928-	iMar. 12, 1936	23.5	69,500	45.0	10:30 p.m. Dec. 31	19.97	51,800	33.5
46	Blackberry River at East Canaan, Conn.	42.4	-	-	-	-	-	Dec. 31	-	6,500 S	153
47	Hollenbeck River at Huntsville, Conn.	17.7	-	-	-	-	-	Dec. 31	-	3,100 C	175
48	Salmon Creek at Limerock, Conn.	33.0	-	-	-	-	-	Dec. 31	-	2,100 CD	63.6
49	Furnace Brook at Cornwall Bridge, Conn.	13.5	-	June 18, 1945	-	1,650	122	Dec. 31	-	2,200 C	163
50	Tenmile River near Gaylordsville, Conn.	204	1929-	Sept. 22, 1938	12.77	12,500	61.3	3:30 a.m. Jan. 1	9.30	6,360	31.2
51	Still River near Lanesville, Conn.	68.5	1931-	Sept. 22, 1938	10.88	4,410	64.4	12 p.m. Dec. 31 to 4 a.m. Jan. 1	8.00	1,100	16.1
52	Shepaug River near Roxbury, Conn.	133	1930-	Sept. 21, 1938	12.8	10,500	78.9	5:30 p.m. Dec. 31	10.42	7,010	52.7
53	Pomperaug River at Southbury, Conn.	75.3	1932-	Sept. 21, 1938	16.0	7,420	98.5	6 p.m. Dec. 31	13.62	5,600	74.4
54	Naugatuck River near Thomaston, Conn.	71.9	1930-	Sept. 21, 1938	11.89	9,970	139	2 p.m. Dec. 31	12.03	10,200	142
55	Naugatuck River near Naugatuck, Conn.	246	1918-24 1928-	jNovember 1927	14	h31,000	126	5 p.m. Dec. 31	12.40	28,500	116
56	Leadmine Brook near Thomaston, Conn.	24.0	1930-	Sept. 21, 1938	11.14	3,050	127	12:30 p.m. Dec. 31	10.63	2,780	116
	Hudson River basin										
57	Hudson River near Newcomb, N. Y.	192	1925-	Apr. 9, 1928	b8.0	6,250	32.6	8:30 a.m. Jan. 1	11.40	7,440	38.8
58	Hudson River at Gooley, near Indian Lake, N. Y.	419	1916-	Apr. 12, 1922	10.0	13,900	33.2	6 a.m. Jan. 1	10.44	k15,000	35.8
59	Hudson River at North Creek, N. Y. m/	792	1907-	Mar. 27, 1913	11.5	27,400	34.6	8:30 p.m. Dec. 31	12.14	28,900	36.5

60	Hudson River at Hadley, N. Y. m/	1,664	1921-	Mar. 18, 1936	19.59	41,200	24.8	1:30 a.m. Jan. 1	21.21	42,700	25.7
61	Hudson River at Mechanicville, N. Y. n/	4,500	1887-	Mar. 28, 1913	-	120,000	26.7	1 a.m. Jan. 1	-	118,000 DP	26.2
62	Hudson River at Green Island, N. Y.	8,090	1946-	Mar. 19, 1936	o29.48	o215,000	26.6	11 p.m. Dec. 31	27.05	181,000	22.4
63	Cedar River below Chain Lakes, near Indian Lake, N. Y.	160	1930-	Sept. 28, 1942	14.40	10,200	63.8	10:45 p.m. Dec. 31	12.37	7,370	46.1
64	Schroon River near Severance, N. Y.	169	-	-	-	-	-	Dec. 31	-	8,620 C	51.0
65	Schroon River at Riverbank, N. Y.	527	1907-	Mar. 21, 1936	12.18	12,100	23.0	10:15 a.m. Jan. 2	9.25	6,680	12.7
66	Sacandaga River near Hope, N. Y.	491	1911-	Mar. 27, 1913	11.0	32,000	65.2	5:15 p.m. Dec. 31	10.55	31,400	64.0
67	East Branch Sacandaga River at Griffin, N. Y.	114	1933-	Mar. 18, 1936	12.6	8,830	77.5	4 p.m. Dec. 31	14.35	10,700	108
68	Bond Brook at Dunham Basin, N. Y.	14.7	1947-	-	-	-	-	8:15 a.m. Dec. 31	8.52	1,370	93.2
69	Batten Kill at Arlington, Vt.	152	1928-	Mar. 18, 1936	11.3	11,100	73.0	1 p.m. Dec. 31	9.77	7,000	46.1
70	Batten Kill at Battenville, N. Y.	394	1922-	Nov. 4, 1927	17.7	21,300	54.1	8 p.m. Dec. 31	15.88	18,000	45.7
71	Kayaderosseras Creek near West Milton, N.Y.	90	1927-	Mar. 18, 1936	10.78	h4,890	54.3	2 p.m. Dec. 31	10.31	4,340	50.1
72	Glowegee Creek at West Milton, N. Y.	26	1948-	-	-	-	-	8:30 a.m. Dec. 31	7.04	1,670	64.2
73	Hoosic River at Adams, Mass.	46.3	1931-	Sept. 21, 1938	8.25	5,080	110	12:30 p.m. Dec. 31	7.81	3,100	67.0
74	Hoosic River near Williamstown, Mass.	132	1940-	Nov. 9, 1943	10.51	5,500	41.7	2:30 p.m. Dec. 31	14.85	13,000	98.5
75	Hoosic River near Eagle Bridge, N. Y.	510	1910-22 1923-	Sept. 22, 1938	17.78	35,300	70.6	5 p.m. Dec. 31	21.15	55,400	109
76	North Branch Hoosic River at North Adams, Mass.	39.0	1931-	November 1927	-	9,980	256	1:30 p.m. Dec. 31	9.42	6,300	162
77	Little Hoosic River at Cherry Plain, N. Y.	5.6	-	-	-	-	-	Dec. 31	-	549 C	98.0
78	Little Hoosic River near Petersburg, N. Y.	56.0	-	-	-	-	-	Dec. 31	-	7,020 C	125
79	Unnamed Creek in Barber Hollow near Berlin, N. Y.	2.4	-	-	-	-	-	Dec. 31	-	442 C	184
80	Walloomsac River near North Bennington, Vt.	111	1931-	Sept. 21, 1938	12.04	8,450	76.1	3 p.m. Dec. 31	11.60	7,920	71.4
81	Owl Kill at Eagle Bridge, N. Y.	56.4	-	-	-	-	-	Dec. 31	-	3,440 C	61.0
82	Mohawk River at Cohoes, N. Y. p/	3,456	1917-	Mar. 19, 1936	22.57	130,000	37.6	7:30 a.m. Dec. 31	20.18	86,300	25.0
83	Schoharie Creek at Prattsville, N. Y.	236	1902-	Sept. 21, 1938	15.6	45,000	191	6 p.m. Dec. 30	10.21	14,500	61.4

b Site and datum then in use.
h Revised.
i Sept. 21, 22, 1938: 21.5 feet, 59,500 sec.-ft.
j Sept. 21, 1938: 12.40 feet, 25,300 sec.-ft. (revised).
k Release from ice jam.

m Not adjusted for storage in Indian Lake and other small reservoirs.
n Records furnished by West Virginia Pulp & Paper Co.
o Furnished by Corps of Engineers; gage on opposite bank.
p Affected by storage and diversion.

Table 1.--Summary of flood discharges during the New Year floods of 1949--Continued

No. on Pl. 1	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum flood previously known				Maximum during present flood			
				Date	Gage height (feet)	Discharge (second-feet)	Sec.-ft. per sq. mi.	Date and hour	Gage height (feet)	Discharge (second-feet)	Sec.-ft. per sq. mi.
	Hudson River basin--Continued										
84	Schoharie Creek at Burtonsville, N. Y.	q569 883	- 1939-	- Mar. 31, 1940	- 6.77	- 25,200	- 28.5	8:45 a.m. Dec. 31 7:30 p.m. Jan. 6	5.68 5.73	q17,000 r17,300	q29.9 r19.6
85	Poesten Kill near East Poestenkill, N. Y.	4.4	-	-	-	-	-	Dec. 31	-	456 c	104
86	Poesten Kill at East Poestenkill, N. Y.	20.1	-	-	-	-	-	Dec. 31	-	2,930 c	146
87	Poesten Kill near Troy, N. Y.	89	1923-	Sept. 22,,1938	12.1	11,900	134	2:30 p.m. Dec. 31	11.26	10,100	113
88	Kinderhook Creek at Stephentown, N. Y.	19.2	-	-	-	-	-	Dec. 31	-	2,190 c	114
89	Kinderhook Creek at East Nassau, N. Y.	116	-	-	-	-	-	Dec. 31	-	18,300 c	158
90	Kinderhook Creek near Brainard, N. Y.	154	-	-	-	-	-	Dec. 31	-	19,600 c	127
91	Kinderhook Creek at Rossman, N. Y.	329	1906-14 1928-	Sept. 22, 1938	18.4	27,800	84.5	9 p.m. Dec. 31	19.80	29,800	90.6
92	Taghkanick Creek near Claverack, N. Y.	83.0	-	-	-	-	-	Dec. 31	-	5,260 c	63.4
93	Catskill Creek at Oak Hill, N. Y. s/	98	1929-	Nov. 9, 1913	-	12,300	126	5:30 a.m. Dec. 31	8.98	4,020	41.0
94	Stony Brook near Palenville, N. Y.	1.6	-	-	-	-	-	Dec. 31	-	230 c	144
95	Esopus Creek at Coldbrook, N. Y.	192	1914-	Aug. 24, 1933	20.40	t55,000	286	6 p.m. Dec. 30	14.37	21,500	112
96	Rondout Creek near Lowes Corners, N. Y.	39.4	1937-	July 22, 1938	b8.2	7,600	197	3:30 p.m. Dec. 30	5.72	4,250	108
97	Rondout Creek near Lackawack, N. Y.	100	1906-	Aug. 26, 1928	-	t26,700	267	5 p.m. Dec. 30	9.08	7,810	78.1
98	Rondout Creek at Rosendale, N. Y.	386	1901-3 1906-19 1926-	Aug. 27, 1928	21.9	27,300	70.7	6 a.m. Dec. 31	17.65	22,600	58.5
99	Chestnut Creek at Grahamsville, N. Y.	20.9	1938-	July 19, 1945	4.07	2,200	105	3 p.m. Dec. 30	3.85	2,060	98.6
100	Wallkill River near Unionville, N. Y.	144	1937-	Sept. 22, 1938	11.2	3,120	21.7	9 to 10 p.m. Dec. 31	u11.4	3,500	24.3
101	Wallkill River at Pellets Island Mountain, N. Y.	385	1919-	Mar. 14, 1936	20.0	12,400	32.2	3:15 p.m. Dec. 31	16.60	6,750	17.5
102	Wallkill River near Phillipsburg, N. Y.	432	1936-	Sept. 21, 1938	v9.67	7,090	16.4	12:30 p.m. Dec. 31	9.94	7,380	17.1
103	Wallkill River at Gardiner, N. Y.	711	1924-	Mar. 12, 1936	15.16	18,000	25.3	1:30 p.m. Dec. 31	14.81	21,000	29.5
104	Rutgers Creek at Gardnerville, N. Y.	59.7	1943-	Nov. 9, 1943	6.6	1,940	32.5	2 a.m. Dec. 31	8.88	3,600	60.3
105	Pochuck Creek near Pine Island, N. Y.	98.0	1937-	Sept. 22, 1938	7.80	2,070	21.1	About 8 a.m. Jan. 1	7.25	1,780	18.2

106	Quaker Creek at Florida, N. Y.	9.74	1937-	Sept. 21, 1938	6.0	1,050	108	About 10 p.m. Dec. 30	4.7	432	44.4
107	Wappinger Creek near Wappingers Falls, N. Y.	182	1928-	Sept. 22, 1938	18.02	15,900	87.4	1:45 a.m. Jan. 1	12.52	7,730	42.5
108	Fishkill River at Beacon, N. Y.	186	1944-	Mar. 18, 1948	6.96	2,970	16.0	3 p.m. Jan. 1	7.03	3,020	16.2
	Streams tributary to St. Lawrence River										
109	West Branch Ausable River near Newman, N. Y.	116	1916-17 1919-	Sept. 22, 1938	12.20	10,800	93.1	4:45 p.m. Dec. 31	10.13	7,020	60.5
110	West Branch Ausable River at Wilmington, N. Y.	140	-	Sept. 22, 1938	-	13,000	92.9	Dec. 31	-	9,170	65.5
111	Ausable River near Au Sable Forks, N.Y. w/	448	1910-	Sept. 22, 1938	11.65	24,200	54.0	7 p.m. Dec. 31	11.39	23,200	51.8
112	Black Brook at Black Brook, N. Y. x/	49.4	1924-	Apr. 6, 1937	6.95	1,050	21.3	1:30 p.m. Jan. 1	4.19	351	7.11
113	East Branch Ausable River at Keene Valley, N. Y.	49.2	-	-	-	-	-	Dec. 31	-	5,330 C	108
114	East Branch Ausable River at Keene, N. Y.	93.1	-	Sept. 22, 1938	-	12,000	129	Dec. 31	-	9,800 CD	105
115	East Branch Ausable River at Au Sable Forks, N. Y.	198	1924-	Sept. 22, 1938	12.91	20,100	102	3:45 p.m. Dec. 31	11.60	16,500	83.3
116	Johns Brook at Keene Valley, N. Y.	16.2	-	-	-	-	-	Dec. 31	-	3,890 C	240
117	Unnamed Creek near Keene, N. Y.	7.5	-	-	-	-	-	Dec. 31	-	748 C	99.7
118	Bouquet River at New Russia, N. Y.	37.6	-	-	-	-	-	Dec. 31	-	3,780 C	101
119	Bouquet River at Willsboro, N. Y.	275	1923-	Oct. 1, 1924	10.85	11,800	42.9	12 m. Dec. 31	8.86	7,790	28.3
120	Poultney River below Fair Haven, Vt.	187	1928-	July 20, 1945	24.36	14,800	79.1	9 a.m. Dec. 31	17.71	6,920	37.0
121	Otter Creek at Center Rutland, Vt.	307	1928-	Sept. 22, 1938	12.45	13,700	44.6	12 m. to 1 p.m. Dec. 31	11.45	10,000	32.6
122	Otter Creek at Middlebury, Vt.	628	1903-7 1910-20 1928-	Nov. 4, 1927	d13.3	13,600	21.7	3 p.m. Jan. 4	7.26	6,220	9.90
123	East Creek at Rutland, Vt.	51.1	1940-	June 3, 1947	20.3	36,500	71.4	5 a.m. Dec. 31	4.26	1,450	28.4
124	Winooski River at Montpelier, Vt.	397	1909-23 1928-	Nov. 3, 1927	27.1	57,000	144	7 a.m. Dec. 31	10.46	6,950	17.5
125	Mad River near Moretown, Vt.	139	1928-	Nov. 3, 1927	19.4	23,000	165	3 a.m. Dec. 31	10.75	8,780	63.2

b Site and datum then in use.
d Site then in use.
q Exclusive of noncontributing drainage area above Schoharie
r Schoharie Reservoir contributing.
s Records of New York City Board of Water Supply, 1910-28.
t Furnished by New York City Board of Water Supply.
u Backwater from overbank storage.
v Maximum stage known, 11.3 feet Mar. 13, 1936.
w At Au Sable Forks 1910-24; drainage area, 445 square miles.
x Affected by storage.

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