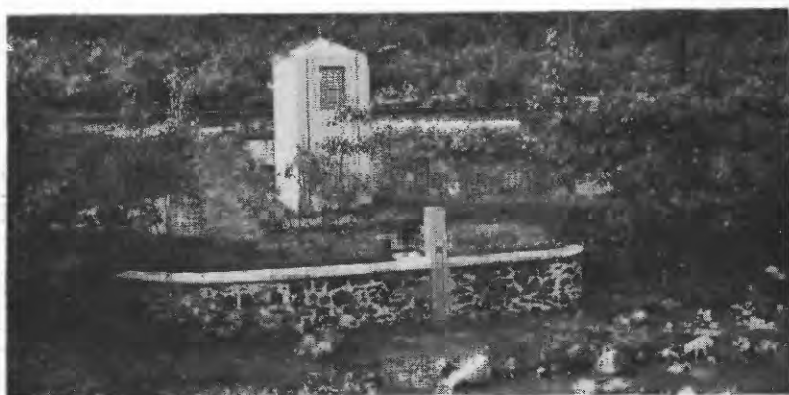




A. OTTER BROOK NEAR KEENE, N. H.



B. PEQUABUCK RIVER AT FORESTVILLE, CONN.



C. LITTLE PATUXENT RIVER AT SAVAGE, MD.

FIGURE 1.—GAGING-STATION STRUCTURES.

tables are published for all stations except those at which the daily discharge for the greater part of the year was determined by the shifting-control method, the slope method, or other special methods.

The description of the station gives the type of gage, its latitude and longitude as determined from the best available maps, and information in regard to diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Under "Average discharge" is given the average discharge for the number of years indicated. It is given only for stations for which there are 10 or more complete years of record. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (unless it is of no importance). Unless otherwise qualified, the maximum discharge corresponds to the crest stage, obtained by use of a water-stage recorder or a nonrecording gage read at the time of the crest. Likewise the minimum discharge represents the lowest stage, unless otherwise qualified. Selected peak discharges with the times of their occurrence are given, below the table of monthly discharge, for some stations. This supplementary information is generally omitted for a station at which the drainage area of the stream is less than 10 or more than 10,000 square miles or at which, on most days, the peak discharge exceeds the mean discharge by less than 10 percent.

For stations equipped with water-stage recorders, except those on streams subject to sudden or rapid fluctuation, the table gives the discharge corresponding to the daily mean gage height. For stations subject to such fluctuation the daily mean gage height may not indicate the true daily mean discharge, which must be obtained by averaging the discharge for parts of the day or by using the discharge integrator, an instrument for obtaining the daily mean discharge from a continuous gage-height graph and containing as an essential element a curve representing the stage-discharge relation at the station. For stations equipped with nonrecording gages, the table of daily discharge gives the discharge in second-feet corresponding to once-daily readings of the gage or the mean of twice-daily readings. For periods of rapidly changing stage the daily mean discharge is determined from gage-height graphs based on gage readings made once or twice daily or oftener, as stated in the station description.

In the table of monthly discharge the column headed "Second-foot-days" gives the sum for each month of the figures given in the table of daily discharge. The column headed "Maximum" gives the maximum daily discharge, not the momentary discharge when the water surface was at crest stage. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" gives the average flow in cubic feet per second during the month.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents is given. A skeleton table of capacity at given stages is usually given in the first report in which data for a station are published but is omitted from succeeding reports.

Millstone River at Blackwells Mills, N. J.

Location.- Water-stage recorder and concrete control, lat. 40°28'30", long. 74°34'34", at highway bridge at Blackwells Mills, Somerset County, a quarter of a mile downstream from Middlebrush Brook. Datum of gage is 26.97 feet above mean sea level, datum of 1929.

Drainage area.- 258 square miles.

Records available.- August 1921 to September 1944. June 1903 to December 1904 (gage heights only) at site at Millstone, 1½ miles downstream.

Average discharge.- 22 years (1922-44), 386 second-feet.

Extremes.- Maximum discharge during year, 6,340 second-feet Jan. 6 (gage height, 10.05 feet), from rating curve extended above 4,000 second-feet on basis of slope-area determination at gage height 15.29 feet; minimum, 13 second-feet Oct. 10, Sept. 7-9 (gage height, 1.22 feet).
1921-44: Maximum discharge, 18,300 second-feet Sept. 21, 1936 (gage height, 15.29 feet, from floodmark), by slope-area method; minimum, about 5 second-feet Sept. 16, 1923.

Remarks.- Records good. Water was probably interchanged between river and Delaware & Raritan Canal at aqueduct 12 miles above station.

Rating table, water year 1943-44 (gage height, in feet, and discharge, in second-feet)

1.2	11	1.8	158	4.0	1,310
1.3	24	2.0	217	5.0	1,710
1.4	39	2.3	362	6.0	2,200
1.5	58	2.6	535	7.0	2,890
1.6	80	3.0	795	8.5	4,320
1.7	106	3.5	1,080	10.0	6,270

Discharge, in second-feet, water year October 1943 to September 1944

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	278	158	112	138	373	722	574	93	48	27	15
2	24	226	158	65	119	297	607	469	103	45	30	17
3	18	252	132	309	135	254	580	399	103	62	57	15
4	17	503	135	3,460	128	240	463	357	93	69	65	15
5	34	357	132	3,450	116	221	433	322	93	67	62	14
6	46	307	125	2,250	109	213	421	288	88	62	110	14
7	30	249	145	3,850	106	1,560	451	283	76	67	73	13
8	19	209	145	1,750	125	1,540	404	332	50	67	45	13
9	15	2,000	142	985	116	753	588	302	36	55	34	13
10	13	1,680	135	505	103	535	362	268	117	56	33	14
11	18	554	122	307	106	378	312	235	689	56	48	15
12	28	427	116	240	101	317	327	288	557	65	46	37
13	43	347	109	196	101	2,910	332	526	505	58	39	596
14	43	268	103	175	103	3,490	288	554	337	48	30	2,400
15	39	235	96	160	-1,350	1,610	393	362	273	50	27	5,750
16	69	222	93	145	1,090	959	1,190	297	175	58	24	4,040
17	99	204	83	122	600	747	1,380	332	119	60	30	2,020
18	88	198	71	106	873	663	920	273	96	50	22	656
19	98	171	69	98	619	505	656	222	118	52	18	399
20	83	164	69	109	362	451	493	300	481	58	15	332
21	78	156	73	122	298	433	415	179	298	50	15	297
22	60	213	60	125	263	535	399	164	240	44	17	249
23	80	222	60	128	322	1,140	410	156	209	43	17	217
24	78	204	76	138	254	2,530	1,240	153	178	43	15	149
25	73	183	71	138	258	1,370	4,100	156	278	58	14	214
26	109	160	75	145	240	795	2,390	160	217	46	14	399
27	642	145	420	160	395	600	1,600	166	183	38	14	352
28	738	135	278	192	568	517	1,060	142	158	30	14	312
29	693	122	192	215	457	433	1,140	116	85	27	14	263
30	457	122	175	192	-	1,340	777	103	65	24	14	183
31	357	-	149	156	-	953	-	96	-	24	14	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
October	4,418	693	13	143		
November	11,103	2,000	122	370		
December	5,967	420	69	128		
Calendar year 1943	95,143	2,820	11	261		
January	20,031	3,850	93	646		
February	9,575	1,380	101	330		
March	28,862	3,490	213	931		
April	25,553	4,100	258	852		
May	5,464	574	96	273		
June	6,083	689	36	203		
July	1,581	69	24	51.0		
August	995	110	14	32.1		
September	19,053	5,780	13	635		
Water year 1943-44	139,685	5,780	13	382		

Peak discharge.- Nov. 9 (12 p.m.) 2,910 sec.-ft.; Jan. 4 (10 to 11 p.m.) 4,210 sec.-ft.; Jan. 6 (6 to 7 p.m.) 5,340 sec.-ft.; Mar. 13 (11 p.m.) 5,000 sec.-ft.; Apr. 25 (12 m.) 4,660 sec.-ft.; Sept. 15 (7 a.m.) 6,160 sec.-ft.

Time basis: Eastern war time. To convert war time to standard time, subtract 1 hour.

Green Brook at Plainfield, N. J.

Location.- Water-stage recorder and concrete control, lat. 40°36'50", long. 74°25'55", just downstream from Sycamore Avenue in Plainfield, Union County, and 1 mile upstream from Stony Brook. Datum of gage is 70.37 feet above mean sea level, datum of 1929.

Drainage area.- 9.75 square miles.

Records available.- May 1938 to September 1944.

Extremes.- Maximum discharge during year, 560 second-feet Mar. 13 (gage height, 3.12 feet), from rating curve extended above 220 second-feet on basis of contracted-opening computation at gage height 5.82 feet; minimum, 0.3 second-foot Sept. 2-6 (gage height, 0.64 foot).

1938-44: Maximum discharge, 2,890 second-feet July 23, 1938 (gage height, 5.82 feet), by contracted-opening method; no flow for many days during November and December 1941.

Remarks.- Records good except those for periods of ice effect, which are fair. Water for municipal supply diverted from Baltusrol well field of Commonwealth Water Co.

Rating table, water year 1943-44, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

0.6	0.2	1.1	12.0	1.6	68
.7	.7	1.2	17.8	1.6	110
.8	2.0	1.5	26	2.0	162
.9	4.3	1.4	37	2.2	219
1.0	7.5	1.5	51		

Discharge, in second-feet, water year October 1943 to September 1944

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	5.7	3.5	1.7	6.7	10.4	19.9	15.8	2.0	2.0	1.1	0.5
2	5.2	7.3	3.5	1.7	5.1	8.1	21	14.1	6.2	1.7	3.6	.3
3	1.9	26	3.3	19.3	5.7	7.6	21	12.5	6.8	1.6	11.2	.3
4	1.2	10.9	3.1	89	5.4	7.5	15.8	11.4	2.4	2.4	2.4	.3
5	.8	7.5	3.1	30	4.9	6.3	17.1	10.0	2.0	1.5	1.5	.8
6	.5	6.0	3.3	206	5.1	5.5	16.3	9.1	1.9	1.3	1.9	.6
7	.4	5.1	3.8	46	4.4	117	19.2	20	1.7	1.3	2.7	.8
8	.4	5.7	3.1	18.3	4.0	30	14.6	15.3	1.6	1.2	1.3	.8
9	.8	127	2.6	11.6	3.4	15.8	13.5	9.5	1.5	1.3	1.1	.8
10	.7	23	2.6	68.0	3.3	11.3	12.5	8.3	24	1.3	1.0	.8
11	.5	13.5	2.0	66.8	2.2	9.3	10.9	7.1	23	1.2	1.0	.8
12	.5	10.0	61.6	66.0	3.6	9.1	13.0	7.1	4.1	1.3	1.0	15.5
13	.5	8.7	61.4	65.7	3.5	204	10.9	7.1	2.6	1.6	1.0	33
14	.5	7.1	61.3	5.6	4.6	45	9.1	7.3	2.6	1.5	1.0	86
15	6.2	6.0	61.2	5.4	52	27	38	5.7	3.2	1.2	1.0	58
16	9.0	5.7	1.2	5.1	13.1	22	84	6.6	2.9	2.5	4.7	4.5
17	7.5	5.4	1.2	4.0	9.4	33	36	6.4	2.2	1.6	2.7	2.4
18	2.9	4.5	1.2	4.5	46	27	21	4.5	1.9	1.2	2.4	1.9
19	1.9	4.5	1.3	4.5	11.7	17.8	16.4	3.8	16.4	1.1	1.1	2.0
20	1.5	4.3	1.5	4.3	7.8	15.8	14.6	3.8	26	3.6	1.0	1.9
21	1.1	6.0	1.6	4.5	7.5	17.1	13.5	3.5	10.9	4.9	1.0	1.9
22	1.9	14.6	61.4	4.3	11.7	15.2	12.5	3.3	5.8	1.7	1.0	2.0
23	1.6	7.1	61.2	7.1	19.8	79	15.2	3.3	3.8	1.3	1.0	1.6
24	1.3	5.4	61.1	7.2	12.0	121	140	4.3	7.2	1.2	.8	1.2
25	1.5	4.8	1.1	5.1	10.0	50	108	4.0	18.3	1.1	1.0	1.1
26	37	4.5	6.1	6.3	9.1	32	38	4.1	5.7	1.0	1.0	.8
27	97	4.3	12.3	9.5	12.4	26	48	3.7	3.6	1.1	.8	.6
28	56	4.0	4.7	23	20	23	34	3.1	2.9	9.0	.8	2.4
29	25	5.8	2.6	15.2	16.8	20	22	2.4	2.6	3.3	1.0	1.2
30	10.4	3.5	2.2	10.9	-	60	18.5	2.4	2.6	1.6	.8	.6
31	7.9	-	1.9	7.8	-	27	-	2.2	-	1.2	.5	-

Month	Observed				Adjusted†		
	Second-foot-days	Maximum	Minimum	Mean	Mean	Per square mile	Runoff in inches
October.....	314.6	97	0.4	10.1	12.5	1.28	1.48
November.....	351.2	127	3.5	11.7	14.1	1.45	1.62
December.....	82.0	12.3	1.1	2.65	4.84	.496	.57
Calendar year 1943 ..	3,941.6	218	.4	10.8	13.5	1.38	18.79
January.....	584.4	206	1.7	18.9	21.0	2.15	2.48
February.....	321.5	52	2.2	11.1	13.4	1.37	1.48
March.....	1,099.8	204	5.5	35.5	37.7	3.87	4.46
April.....	874.5	140	8.1	29.2	31.6	3.24	3.62
May.....	221.7	20	2.2	7.15	9.51	.975	1.12
June.....	198.4	26	1.5	6.51	9.03	.932	1.04
July.....	59.8	9.0	1.0	1.93	4.33	.444	.51
August.....	55.0	11.2	.8	1.77	4.16	.427	.49
September.....	230.2	86	.3	7.67	10.2	1.05	1.17
Water year 1943-44 ..	4,393.1	206	.3	12.0	14.3	1.47	20.04

Peak discharge.- Oct. 27 (2:30 a.m.) 336 sec.-ft.; Nov. 9 (5:30 a.m.) 343 sec.-ft.; Jan. 6 (5:30 a.m.) 461 sec.-ft.; Mar. 13 (9:30 a.m.) 560 sec.-ft.; Apr. 24 (10 p.m.) 607 sec.-ft.; Sept. 14 (11 p.m.) 425 sec.-ft.

† Adjusted for diversion from Baltusrol well field.

b Stage-discharge relation affected by ice.

Time basis: Eastern war time. To convert war time to standard time, subtract 1 hour.

