



Water-Data Report 2010

01403400 GREEN BROOK AT SEELEY MILLS, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°39'58", long 74°24'14" referenced to North American Datum of 1983, Watchung Borough, Somerset County, NJ, Hydrologic Unit 02030105, on right bank at Seeley Mills, 250 ft downstream from Blue Brook, 300 ft downstream from bridge on New Providence (Diamond Hill) Road, and 0.5 mi northwest of Scotch Plains.

DRAINAGE AREA.--6.23 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1927-38 (in files of Union County Park Commission), 1958-68 (in files of Union County Park Commission), 1969-79. Fragmentary records 1944-53 (in the files of the U.S. Geological Survey). Occasional low-flow measurements, water years 1959-64, 1969. Continuous-record gaging station, June 1979 to current year.

REVISED RECORDS.--WDR NJ-81-1:1979(M). WDR NJ-87-1:1971(M), 1973(M), 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 184.44 ft above NGVD of 1929. From 1944 to 1953, water-stage recorder and masonry dam about 400 ft downstream, above lower Seeley Mills dam at different datum. From July 1969 to May 1979, crest-stage gage about 450 ft downstream below lower Seeley Mills dam (washed out May 29, 1968) at different datum.

REMARKS.--Records fair, except for daily discharges below 1.0 ft³/s, which are poor. Several measurements of water temperature were made during the year. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1938 reached an elevation of 196.5 ft (New Jersey Geological Survey datum; above lower Seeley Mills dam), discharge, 5,840 ft³/s (computed by State Water Policy Commission).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 24	2015	336	2.87
Dec 9	1000	571	3.45
Dec 26	1930	284	2.71
Dec 27	0130	300	2.76
Jan 25	1315	309	2.79
Mar 13	2245	*1,800	*5.58
Mar 14	1100	322	2.84
Mar 29	0545	351	2.92
Mar 30	1245	432	3.13
May 3	0815	271	2.69

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.8	5.6	3.5	10	4.7	16	36	7.2	2.7	1.2	1.4	1.0
2	1.7	4.2	3.9	9.1	4.7	18	26	6.5	2.5	1.2	1.4	0.86
3	2.7	3.6	32	7.3	4.8	21	20	45	2.2	1.1	1.0	0.87
4	2.0	3.3	8.3	6.7	4.7	22	17	14	2.1	1.0	0.81	0.79
5	1.7	3.3	7.5	6.2	4.5	21	15	8.1	2.1	0.96	0.67	0.69
6	1.7	3.2	9.7	5.9	4.6	18	13	6.7	2.0	0.85	0.51	0.79
7	1.8	3.1	6.2	5.6	4.2	19	12	5.8	1.9	0.74	0.41	0.68
8	1.7	3.2	5.4	5.6	4.0	20	10	6.1	1.7	0.80	0.50	0.68
9	1.8	3.1	154	5.2	4.2	17	17	5.0	5.8	2.4	0.52	0.64
10	2.0	3.0	29	4.7	4.5	13	9.9	4.6	12	1.3	0.52	0.70
11	1.8	2.8	12	4.6	4.8	11	8.5	4.3	4.3	1.1	0.51	0.62
12	1.7	2.9	9.2	4.7	5.1	16	7.9	12	2.8	0.83	0.59	1.8
13	1.9	3.2	37	4.5	5.0	560	7.4	5.9	3.2	2.9	0.84	2.7
14	2.0	7.8	24	4.5	4.9	317	7.1	6.5	2.7	4.1	0.41	1.9
15	5.1	4.2	13	4.5	4.7	82	6.5	5.4	2.3	2.1	1.2	1.2
16	3.8	3.5	8.6	4.5	4.8	42	12	4.2	2.6	1.7	1.8	4.4
17	4.2	3.3	7.6	10	5.0	27	17	3.7	14	1.4	1.3	3.0
18	4.1	3.0	7.3	13	4.9	21	8.1	25	3.3	1.1	0.63	1.4
19	2.9	3.2	6.9	7.4	4.7	17	6.8	12	2.4	1.3	0.55	1.3
20	2.6	21	6.6	6.1	5.2	14	6.4	5.8	2.1	2.0	0.42	1.1
21	2.5	7.1	6.3	5.4	5.7	13	6.8	4.5	1.8	1.1	0.36	1.0
22	2.3	4.7	5.9	5.2	5.9	28	6.3	3.9	5.0	0.89	21	1.6
23	2.5	3.8	5.7	5.0	50	73	5.5	4.0	3.2	1.5	11	1.9
24	48	3.5	5.4	4.8	78	23	4.9	3.6	2.1	1.1	2.7	1.6
25	18	3.4	5.6	88	39	16	29	3.5	1.7	2.3	7.8	1.2
26	5.1	3.5	96	30	24	17	50	3.1	1.6	1.6	2.3	1.2
27	11	3.2	114	11	15	13	30	3.3	1.5	0.91	1.8	5.2
28	54	3.0	26	8.2	13	11	14	3.2	1.4	0.84	1.6	5.8
29	14	3.1	14	7.0	---	112	9.4	3.0	1.4	3.1	1.4	2.4
30	7.6	4.1	10	5.4	---	206	8.0	2.7	1.2	1.3	1.4	35
31	5.8	---	9.9	4.9	---	82	---	2.6	---	0.84	1.1	---
Total	219.8	129.9	690.5	305.0	324.6	1,886	427.5	231.2	95.6	45.56	68.45	84.02
Mean	7.09	4.33	22.3	9.84	11.6	60.8	14.2	7.46	3.19	1.47	2.21	2.80
Max	54	21	154	88	78	560	50	45	14	4.1	21	35
Min	1.7	2.8	3.5	4.5	4.0	11	4.9	2.6	1.2	0.74	0.36	0.62
Cfsm	1.14	0.70	3.58	1.58	1.86	9.77	2.29	1.20	0.51	0.24	0.35	0.45
In.	1.31	0.78	4.12	1.82	1.94	11.26	2.55	1.38	0.57	0.27	0.41	0.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	7.63	9.08	12.6	11.6	11.3	17.4	17.2	11.6	7.57	6.11	4.78	8.13
Max	31.9	22.4	46.9	27.1	22.3	60.8	47.1	42.0	28.3	18.9	16.1	97.1
(WY)	(1997)	(1986)	(1984)	(1996)	(1998)	(2010)	(2007)	(1989)	(2003)	(1984)	(1990)	(1999)
Min	1.21	1.48	1.62	1.67	2.24	4.37	3.50	2.44	0.35	0.32	1.16	1.46
(WY)	(1995)	(1999)	(1999)	(1981)	(2002)	(2009)	(1985)	(1999)	(1999)	(1999)	(2005)	(2007)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1979 - 2010	
Annual total	3,204.2		4,508.13			
Annual mean	8.78		12.4		10.4	
Highest annual mean					18.2	1984
Lowest annual mean					3.25	2002
Highest daily mean	154	Dec 9	560	Mar 13	1,470	Sep 16, 1999
Lowest daily mean	1.4	Sep 22	0.36	Aug 21	0.00	Sep 11, 1981
Annual seven-day minimum	1.6	Sep 20	0.51	Aug 6	0.05	Sep 24, 1981
Maximum peak flow			1,800	Mar 13	6,240	Aug 2, 1973
Maximum peak stage			5.58	Mar 13	^a 16.10	Aug 2, 1973
Instantaneous low flow			0.23	Many days	0.00	Sep 11, 1981
Annual runoff (cfsm)	1.41		1.98		1.67	
Annual runoff (inches)	19.13		26.92		22.70	
10 percent exceeds	15		21		20	
50 percent exceeds	4.9		4.5		4.8	
90 percent exceeds	2.1		1.0		1.4	

^a Site and datum then in use.

