



Water-Data Report 2011

01399100 MIDDLE BROOK AT BURNT MILLS, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°38'58", long 74°40'54" referenced to North American Datum of 1983, Bedminster Township, Somerset County, NJ, Hydrologic Unit 02030105, on right bank just upstream of low dam, 1,200 ft upstream of bridge on River Road East (Cutting Whitney Road), 2,400 ft downstream of Hoopstick Brook, 1.2 mi northeast of Burnt Mills, and 2.2 mi west of Pluckemin.

DRAINAGE AREA.--6.67 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Low-flow partial-record station, water years 1964-67, 1975. Continuous-record gaging station, June 2006 to current year.

GAGE.--Two water-stage recorders located upstream and downstream of concrete dam with stainless-steel v-notch in the center. Datum of gage is 95 ft above NAVD of 1988 from topographic map.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Flow past station may be affected by irrigation pumpage upstream of gage. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 1	0600	1,490	9.73
Feb 25	1015	645	8.37
Mar 10	2145	711	8.51
Mar 11	0045	718	8.52
Apr 16	2115	1,010	9.11
Apr 28	1345	623	8.51
Aug 28	0215	*2,570	10.79
Aug 28	0915	---	* ^a 12.45
Sep 6	2130	997	9.23
Sep 8	0300	759	8.74
Sep 8	0600	2,110	10.00

a Due to backwater from North Branch
Raritan River.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	208	0.72	109	1.8	2.7	21	8.3	9.7	2.3	e0.80	e1.5	5.2
2	11	0.64	8.9	4.8	38	13	6.9	8.1	1.9	e0.96	e0.66	4.0
3	4.0	0.60	6.6	4.1	31	9.2	5.3	7.0	1.6	e1.3	0.14	3.4
4	2.5	14	5.2	2.5	10	7.9	5.8	14	1.5	e2.0	0.23	3.0
5	4.0	12	4.2	2.1	9.9	7.6	6.2	9.5	1.5	e1.1	0.38	2.8
6	5.4	2.7	3.6	1.8	35	e188	5.1	6.1	1.5	e0.90	0.29	161
7	2.6	1.3	3.2	1.9	25	e215	5.8	5.2	1.2	e0.80	0.56	97
8	1.7	0.84	2.7	1.8	41	27	4.7	4.6	1.1	e2.9	0.55	387
9	1.3	0.77	2.2	1.7	19	17	5.2	4.0	0.99	e3.3	0.93	32
10	1.1	0.79	2.0	1.5	11	175	4.2	3.6	3.4	e1.0	1.3	15
11	1.00	0.74	2.1	1.4	7.7	195	4.3	3.2	2.3	e0.82	0.33	9.5
12	1.5	0.62	16	1.8	6.5	25	39	2.9	2.1	e0.49	0.11	7.1
13	1.1	0.64	13	1.6	5.7	17	105	2.8	1.5	e0.52	0.08	5.1
14	1.0	0.68	6.7	1.4	21	12	19	2.7	3.5	e0.46	117	3.8
15	2.7	0.71	5.2	1.5	31	9.8	11	26	4.5	0.25	46	4.0
16	1.2	0.89	4.3	1.6	14	27	148	34	1.1	0.21	24	3.7
17	0.99	6.5	3.9	1.3	48	14	89	21	16	e0.33	6.9	2.9
18	0.99	2.5	3.1	4.2	96	10	18	72	2.6	e0.30	11	2.6
19	0.92	1.2	2.8	21	41	8.2	15	24	1.4	e0.17	3.8	2.7
20	0.77	0.97	2.5	16	15	6.7	13	16	1.1	e0.14	3.2	2.8
21	0.86	0.86	2.3	8.5	13	17	9.5	12	1.1	e0.20	24	2.7
22	0.86	0.83	2.2	5.1	9.9	15	7.3	8.7	1.1	0.11	15	3.3
23	0.86	0.91	2.0	3.6	7.9	35	37	7.7	1.3	0.17	4.1	35
24	0.73	0.85	1.9	2.7	7.3	55	20	20	2.7	0.09	2.8	31
25	0.61	0.90	1.8	3.2	204	25	20	6.8	1.9	0.35	6.8	8.5
26	0.51	1.9	1.7	3.3	33	16	12	5.2	1.2	2.4	4.8	6.1
27	0.74	1.8	2.0	3.7	20	12	19	4.4	0.98	0.40	45	4.8
28	1.3	1.4	1.8	3.2	52	9.2	92	3.7	0.94	0.18	428	60
29	1.1	1.3	1.8	3.1	---	7.8	20	3.2	e0.94	0.35	23	18
30	0.86	1.4	1.5	3.0	---	6.8	13	4.0	e0.69	e0.72	12	10
31	0.81	---	1.6	2.7	---	6.6	---	2.9	---	e1.1	7.3	---
Total	263.01	61.96	227.8	117.9	855.6	1,210.8	768.6	355.0	65.94	24.82	791.76	934.0
Mean	8.48	2.07	7.35	3.80	30.6	39.1	25.6	11.5	2.20	0.80	25.5	31.1
Max	208	14	109	21	204	215	148	72	16	3.3	428	387
Min	0.51	0.60	1.5	1.3	2.7	6.6	4.2	2.7	0.69	0.09	0.08	2.6
Cfsm	1.27	0.31	1.10	0.57	4.58	5.86	3.84	1.72	0.33	0.12	3.83	4.67
In.	1.47	0.35	1.27	0.66	4.77	6.75	4.29	1.98	0.37	0.14	4.42	5.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2006 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	10.4	7.95	22.1	11.0	17.7	29.3	17.1	7.85	3.68	3.68	8.95	8.15
Max	24.0	22.1	31.9	20.5	35.1	48.9	37.5	11.5	11.4	8.66	25.5	31.1
(WY)	(2007)	(2007)	(2010)	(2007)	(2008)	(2010)	(2007)	(2011)	(2009)	(2006)	(2011)	(2011)
Min	3.67	2.07	7.35	3.80	3.01	4.43	4.31	4.31	1.34	0.80	0.20	0.31
(WY)	(2009)	(2011)	(2011)	(2011)	(2007)	(2009)	(2008)	(2007)	(2008)	(2011)	(2008)	(2010)

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	Calendar Year 2010	Water Year 2011	Water Years 2006 - 2011	
Annual total	3,515.85	5,677.19		
Annual mean	9.63	15.6	12.3	
Highest annual mean			15.6	2011
Lowest annual mean			9.03	2009
Highest daily mean	350	Mar 13	428	Aug 28
Lowest daily mean	0.00	Sep 6	0.08	Aug 13
Annual seven-day minimum	0.00	Sep 6	0.17	Jul 18
Maximum peak flow			^a 2,570	Aug 28, 2011
Maximum peak stage			^b 12.45	Aug 28, 2011
Instantaneous low flow			0.00	Aug 28
Annual runoff (cfsm)	1.44	2.33		1.84
Annual runoff (inches)	19.61	31.66		25.06
10 percent exceeds	15	31		21
50 percent exceeds	2.3	3.4		3.3
90 percent exceeds	0.18	0.72		0.45

a Associated peak stage was 10.79 ft.

b Due to backwater from North Branch Raritan River.

