



Water-Data Report 2009

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 at concrete dam with stainless-steel v-notch in the center. Datum of gage is 95 ft above NAVD of 1988 from topographic map. Several measurements of water temperature were made during the year.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Flow past station may be affected by irrigation pumpage upstream of gage. 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)
Dec 11	2345	938	9.18
May 7	0500	821	8.94
Aug 2	1400	*1,710	*10.02

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES
[*e*, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.3	1.8	28	5.9	9.9	2.4	4.8	2.7	1.1	3.3	7.5	1.7
2	0.79	1.4	7.9	5.5	14	2.8	13	3.9	1.0	62	211	1.5
3	0.41	1.2	5.0	4.9	8.1	2.1	46	3.5	1.8	8.3	18	1.3
4	0.37	1.1	4.2	4.2	4.0	2.0	23	7.9	23	5.2	7.4	1.1
5	0.42	0.90	3.8	4.5	2.7	2.1	11	11	15	3.8	5.1	0.99
6	0.40	1.5	3.1	4.1	2.2	3.5	11	32	15	3.2	3.8	0.88
7	0.33	1.3	3.0	82	2.6	5.7	11	171	4.8	2.7	3.0	0.99
8	0.33	1.1	2.2	22	17	5.8	7.7	19	3.1	2.3	2.4	1.0
9	e0.40	1.2	2.2	10	7.3	9.4	6.6	13	3.7	1.9	2.4	0.77
10	e0.40	1.3	9.4	7.4	5.5	7.3	5.7	8.6	3.1	1.8	2.6	0.65
11	e0.40	1.2	167	7.4	9.3	5.5	7.4	6.5	4.8	1.5	1.9	0.85
12	e0.40	1.2	239	5.7	13	4.5	6.5	5.4	9.6	5.8	1.5	4.7
13	e0.50	2.0	20	5.1	7.9	3.7	4.9	4.5	15	2.2	1.8	3.3
14	e0.40	7.2	12	4.4	5.0	3.8	5.0	4.1	44	1.3	2.1	1.4
15	e0.40	55	9.3	3.6	4.3	3.9	13	4.3	8.1	1.1	1.4	0.98
16	e0.41	28	8.5	2.7	3.9	3.5	6.8	3.5	5.4	1.0	1.2	0.83
17	e0.40	7.5	28	2.1	3.4	3.3	5.3	8.5	4.3	3.4	1.1	0.77
18	e0.40	4.8	16	2.8	3.3	3.2	4.7	3.6	44	8.7	0.83	0.82
19	e0.40	3.4	16	3.1	5.8	3.5	4.3	2.9	19	1.5	0.72	0.62
20	e0.30	2.9	19	2.9	3.9	3.5	4.7	2.6	27	1.1	1.2	0.46
21	e0.40	2.4	15	2.4	2.8	2.9	11	2.2	25	3.3	2.3	0.41
22	e0.40	1.9	9.9	2.2	2.8	2.8	14	1.9	16	2.7	19	0.40
23	e0.30	1.7	6.3	2.3	2.5	2.7	7.2	1.7	8.8	2.3	11	0.76
24	e0.20	1.7	80	2.6	2.1	2.5	5.3	1.7	6.8	2.5	3.6	0.70
25	1.5	15	126	1.9	2.0	2.4	4.6	1.7	5.4	1.5	2.4	0.45
26	5.9	6.1	23	1.7	2.1	2.8	4.0	1.4	8.6	11	2.0	0.32
27	1.1	3.7	25	1.7	2.3	4.7	3.4	1.5	8.2	9.9	2.0	e4.0
28	74	3.0	31	15	2.9	3.1	3.0	1.5	4.1	2.4	7.6	e0.90
29	14	2.5	17	18	---	10	2.6	4.0	3.4	15	12	e0.90
30	4.4	13	11	5.1	---	16	2.4	2.1	3.0	9.1	5.2	e0.60
31	2.4	---	8.8	2.8	---	5.8	---	1.4	---	7.9	2.4	---
Total	113.76	177.00	956.6	246.0	152.6	137.2	259.9	339.6	342.1	189.7	346.45	35.05
Mean	3.67	5.90	30.9	7.94	5.45	4.43	8.66	11.0	11.4	6.12	11.2	1.17
Max	74	55	239	82	17	16	46	171	44	62	211	4.7
Min	0.20	0.90	2.2	1.7	2.0	2.0	2.4	1.4	1.0	1.0	0.72	0.32
Cfsm	0.55	0.88	4.63	1.19	0.82	0.66	1.30	1.64	1.71	0.92	1.68	0.18
In.	0.63	0.99	5.34	1.37	0.85	0.77	1.45	1.89	1.91	1.06	1.93	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2006 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	11.3	11.6	23.7	12.6	14.8	19.5	16.8	7.11	4.85	4.75	6.80	4.37
Max	24.0	22.1	31.1	20.5	35.1	31.2	37.5	11.0	11.4	8.66	14.5	11.5
(WY)	(2007)	(2007)	(2008)	(2007)	(2008)	(2008)	(2007)	(2009)	(2009)	(2006)	(2007)	(2006)
Min	3.67	5.90	9.18	7.94	3.01	4.43	4.31	4.31	1.34	1.26	0.20	1.11
(WY)	(2009)	(2009)	(2007)	(2009)	(2007)	(2009)	(2008)	(2007)	(2008)	(2008)	(2008)	(2007)

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	Calendar Year 2008		Water Year 2009		Water Years 2006 - 2009	
Annual total	4,041.03		3,295.96			
Annual mean	11.0		9.03		11.4	
Highest annual mean					13.7	2007
Lowest annual mean					9.03	2009
Highest daily mean	390	Feb 13	239	Dec 12	516	Apr 15, 2007
Lowest daily mean	0.00	Aug 20	0.20	Oct 24	0.00	Aug 20, 2008
Annual seven-day minimum	0.00	Aug 20	0.34	Oct 18	0.00	Aug 20, 2008
Maximum peak flow			1,710	Aug 2	1,710	Aug 2, 2009
Maximum peak stage			10.05	Aug 2	10.05	Aug 2, 2009
Instantaneous low flow			b		0.00	Aug 20, 2008
Annual runoff (cfsm)	1.66		1.35		1.70	
Annual runoff (inches)	22.54		18.38		23.15	
10 percent exceeds	19		16		19	
50 percent exceeds	2.8		3.4		3.5	
90 percent exceeds	0.27		0.81		0.49	

a Estimated.

b Unknown. Occurred during period of estimated record.

