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 mi^2.

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. Several measurements of water temperature were made during the year.

REMARKS.--Records fair, except for daily discharges for the period encompassing Nov 4-30, and 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 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 24	2100	651	8.37
Dec 3	0445	714	8.41
Dec 9	0830	1,100	8.97
Dec 27	0245	652	8.55
Jan 25	1230	802	8.78
Mar 13	2030	*1,300	*9.82
Mar 23	0100	833	8.74
Mar 29	0500	676	8.42
Mar 30	1315	927	8.89

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

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e0.50	8.8	2.1	8.5	4.5	35	22	4.4	1.9	0.26	9.8	0.22
2	e0.70	5.8	1.7	7.6	4.3	34	15	4.3	2.2	0.23	3.4	0.15
3	e1.0	4.6	106	5.3	4.7	44	12	69	1.3	0.23	0.92	0.06
4	e0.70	3.8	9.7	4.3	4.2	32	9.9	12	1.6	0.24	0.61	0.03
5	e0.60	3.6	11	3.9	3.7	21	8.4	7.3	1.2	0.18	0.50	0.02
6	e0.60	3.0	18	3.8	3.9	15	7.5	5.7	0.90	0.14	0.42	0.00
7	e0.90	2.6	8.5	3.6	3.5	12	6.6	4.5	0.77	0.13	0.24	0.00
8	e0.70	2.4	6.5	3.5	3.1	11	5.8	4.2	0.64	0.11	0.18	0.00
9	e0.50	2.7	216	2.9	3.3	8.9	9.0	3.3	0.99	0.22	0.15	0.00
10	e1.0	2.1	24	2.3	3.6	7.7	5.4	3.1	3.6	1.1	0.15	0.00
11	e0.70	1.9	11	2.2	4.3	6.9	4.6	2.9	1.5	0.71	0.13	0.00
12	e0.70	1.8	7.7	2.5	3.4	7.2	4.2	9.1	0.95	0.34	0.11	0.00
13	e0.60	1.6	101	2.3	3.2	350	3.8	4.0	7.1	8.0	0.14	0.02
14	e0.50	2.0	31	2.2	3.1	125	3.6	3.1	6.1	41	0.16	0.46
15	e2.2	2.0	16	2.2	3.0	48	3.3	3.2	1.8	7.1	0.14	0.20
16	e2.3	1.7	10	2.5	3.4	28	4.3	2.4	1.1	2.0	0.74	0.11
17	e1.8	1.5	7.6	14	3.1	18	12	2.2	4.8	1.1	0.93	0.54
18	e1.6	1.4	6.1	21	3.0	14	4.4	18	1.5	0.70	0.42	0.32
19	e0.80	1.4	5.6	7.3	4.5	11	3.6	9.2	1.0	e0.70	0.25	0.14
20	e0.90	10	6.3	5.2	9.5	9.2	3.2	4.0	1.0	e0.70	0.18	0.08
21	e0.90	3.6	5.1	4.0	14	8.1	3.4	2.9	0.85	e0.60	0.11	0.05
22	e0.80	2.4	4.6	3.7	11	63	2.9	2.4	0.70	0.58	1.0	0.09
23	e0.90	2.0	4.1	3.2	71	136	2.5	2.3	2.1	0.37	4.2	0.12
24	66	2.0	3.8	3.0	101	20	2.2	2.2	0.89	0.44	2.9	0.35
25	24	1.9	3.9	214	51	14	13	2.0	0.59	0.63	0.72	0.13
26	6.4	2.4	147	33	30	13	62	2.3	0.51	0.81	0.43	0.05
27	21	2.1	168	15	18	9.2	25	1.7	0.49	0.45	0.45	0.05
28	121	1.8	21	11	16	8.2	9.2	3.1	0.46	0.21	0.33	0.30
29	18	1.5	11	7.4	---	158	6.9	1.8	0.42	1.0	0.21	0.24
30	8.9	1.8	8.2	5.8	---	207	5.1	2.3	0.33	0.89	0.17	5.6
31	7.3	---	7.6	5.0	---	43	---	2.0	---	0.43	0.17	---
Total	294.50	86.2	990.1	412.2	391.3	1,517.4	280.8	200.9	49.29	71.60	30.26	9.33
Mean	9.50	2.87	31.9	13.3	14.0	48.9	9.36	6.48	1.64	2.31	0.98	0.31
Max	121	10	216	214	101	350	62	69	7.1	41	9.8	5.6
Min	0.50	1.4	1.7	2.2	3.0	6.9	2.2	1.7	0.33	0.11	0.11	0.00
Cfsm	1.42	0.43	4.79	1.99	2.10	7.34	1.40	0.97	0.25	0.35	0.15	0.05
In.	1.64	0.48	5.52	2.30	2.18	8.46	1.57	1.12	0.27	0.40	0.17	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2006 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	10.9	9.42	25.8	12.8	14.6	26.9	14.9	6.95	4.05	4.26	5.63	3.56
Max	24.0	22.1	31.9	20.5	35.1	48.9	37.5	11.0	11.4	8.66	14.5	11.5
(WY)	(2007)	(2007)	(2010)	(2007)	(2008)	(2010)	(2007)	(2009)	(2009)	(2006)	(2007)	(2006)
Min	3.67	2.87	9.18	7.94	3.01	4.43	4.31	4.31	1.34	1.26	0.20	0.31
(WY)	(2009)	(2010)	(2007)	(2009)	(2007)	(2009)	(2008)	(2007)	(2008)	(2008)	(2008)	(2010)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 2006 - 2010	
Annual total	3,419.40		4,333.88			
Annual mean	9.37		11.9		11.5	
Highest annual mean					13.7	2007
Lowest annual mean					9.03	2009
Highest daily mean	216	Dec 9	350	Mar 13	516	Apr 15, 2007
Lowest daily mean	0.32	Sep 26	0.00	Sep 6-12	0.00	Many days
Annual seven-day minimum	0.50	Sep 20	0.00	Sep 6	0.00	Aug 20, 2008
Maximum peak flow			1,300	Mar 13	1,710	Aug 2, 2009
Maximum peak stage			10.07	Mar 13	10.07	Mar 13, 2010
Instantaneous low flow			0.00	Many days	0.00	Many days
Annual runoff (cfsm)	1.40		1.78		1.72	
Annual runoff (inches)	19.07		24.17		23.41	
10 percent exceeds	15		21		19	
50 percent exceeds	3.5		3.0		3.3	
90 percent exceeds	0.90		0.18		0.42