



Water-Data Report 2010

01403150 WEST BRANCH MIDDLE BROOK NEAR MARTINSVILLE, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°36'44", long 74°35'27" referenced to North American Datum of 1983, Bridgewater Township, Somerset County, NJ, Hydrologic Unit 02030105, on left bank 150 ft upstream from bridge on Crim Road, 1.4 mi northwest of Martinsville, and 1.8 mi upstream from confluence with East Branch Middle Brook.

DRAINAGE AREA.--1.99 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1979 to current year.

REVISED RECORDS.--WDR NJ-91-1: 1990. WDR NJ-96-1: 1980-94 (P), WDR NJ-99-1: 1990 (M), 1997 (M).

GAGE.--Water-stage and precipitation recorder. Datum of gage is 240.48 ft above NGVD of 1929 (levels by Somerset County).

REMARKS.--Records fair, except for estimated daily discharges and daily discharges below 1 ft³/s, which are poor. 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 200 ft³/s (revised) and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 9	0815	378	5.14
Jan 25	1230	276	4.56
Mar 13	2045	*458	*5.55
Mar 23	0015	240	4.33
Mar 29	0430	224	4.23
Mar 30	1245	217	4.18
May 3	0800	238	4.32
Jul 14	1030	238	4.32

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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	0.32	2.4	1.1	2.8	1.0	8.7	5.3	1.1	0.54	0.28	1.4	0.12
2	0.32	1.7	1.6	2.2	1.0	10	4.1	0.94	0.49	0.28	0.21	0.14
3	0.55	1.4	21	1.4	1.2	15	3.6	23	0.40	0.28	0.14	0.14
4	0.45	1.2	1.8	1.2	1.0	12	3.1	3.1	0.36	0.26	0.12	0.14
5	0.37	1.2	2.9	1.0	0.99	10	2.7	1.8	0.38	0.25	0.14	0.13
6	0.38	e1.0	3.5	1.00	1.1	8.4	2.5	1.4	0.37	0.24	0.14	0.14
7	0.42	e1.0	1.7	0.95	1.0	8.1	2.2	1.1	0.35	0.23	0.13	0.16
8	0.51	e0.90	1.3	0.97	0.91	7.6	2.0	1.3	0.35	0.88	0.17	0.12
9	0.55	e0.90	66	0.76	0.89	6.1	5.5	0.95	1.4	0.31	0.17	0.11
10	0.63	e0.90	4.6	0.64	2.0	4.8	2.1	0.83	2.2	0.33	0.17	0.13
11	0.61	e0.80	1.7	0.61	1.2	4.3	1.8	0.73	0.65	0.30	0.19	0.13
12	0.59	e0.80	1.1	0.65	1.1	6.4	1.6	4.6	0.53	0.27	0.17	0.24
13	0.63	e0.90	18	0.59	1.0	183	1.5	1.5	4.0	2.1	0.13	0.44
14	0.63	2.3	6.2	0.60	0.97	55	1.5	1.2	1.5	16	0.12	0.26
15	2.3	0.90	2.7	0.59	0.96	17	1.4	1.1	0.59	0.77	0.14	0.10
16	1.1	0.69	1.6	0.63	1.2	9.1	3.0	0.91	0.43	0.35	0.14	0.85
17	1.7	0.58	1.4	7.6	1.0	6.7	3.6	0.85	3.3	0.29	0.15	0.47
18	0.77	0.44	1.2	6.1	0.97	5.6	1.5	7.3	0.69	0.23	0.14	0.09
19	0.54	0.62	1.0	2.0	1.4	4.5	1.2	2.0	0.61	0.26	0.12	0.08
20	0.44	8.1	1.1	1.4	2.0	3.7	1.1	1.1	0.54	0.40	0.12	0.07
21	0.41	1.3	1.0	1.1	2.3	3.2	1.1	0.85	0.53	0.55	0.14	0.05
22	0.38	0.91	0.87	1.0	2.1	15	0.97	0.76	1.3	0.25	12	0.21
23	0.48	0.80	0.79	0.86	18	27	0.85	0.72	0.72	0.16	3.0	0.21
24	19	0.78	0.72	0.83	28	4.7	0.75	0.69	0.48	0.14	1.1	0.07
25	3.3	0.75	0.93	61	17	3.5	10	0.61	0.41	0.37	0.38	0.07
26	0.90	0.88	61	8.2	8.8	3.6	18	0.60	0.36	0.20	0.26	0.07
27	8.7	0.78	29	3.5	5.3	2.4	5.8	0.66	0.35	0.13	0.17	0.17
28	24	0.74	4.9	2.7	4.5	2.3	2.1	0.70	0.34	0.13	0.14	0.18
29	3.1	0.63	2.5	1.8	---	48	1.5	0.60	0.32	2.0	0.11	0.10
30	1.6	1.3	1.7	1.3	---	59	1.3	0.52	0.30	0.24	0.14	3.0
31	1.8	---	1.8	1.2	---	11	---	0.47	---	0.18	0.14	---
Total	77.48	37.60	246.71	117.18	108.89	565.7	93.67	63.99	24.79	28.66	21.79	8.19
Mean	2.50	1.25	7.96	3.78	3.89	18.2	3.12	2.06	0.83	0.92	0.70	0.27
Max	24	8.1	66	61	28	183	18	23	4.0	16	12	3.0
Min	0.32	0.44	0.72	0.59	0.89	2.3	0.75	0.47	0.30	0.13	0.11	0.05
Cfsm	1.26	0.63	4.00	1.90	1.95	9.17	1.57	1.04	0.42	0.46	0.35	0.14
In.	1.45	0.70	4.61	2.19	2.04	10.57	1.75	1.20	0.46	0.54	0.41	0.15

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	2.40	3.26	4.47	4.20	3.98	6.21	5.10	3.87	2.24	2.04	1.29	1.74
Max	9.28	10.5	11.5	11.9	9.02	21.4	12.4	19.4	7.91	6.40	6.46	11.7
(WY)	(1990)	(1989)	(1984)	(1996)	(1988)	(1994)	(2007)	(1989)	(2003)	(1984)	(2000)	(1999)
Min	0.12	0.22	0.13	0.12	0.41	1.44	0.74	0.76	0.27	0.08	0.12	0.11
(WY)	(2002)	(2002)	(1999)	(1981)	(2002)	(2006)	(1985)	(1986)	(1999)	(1980)	(1980)	(1980)

01403150 WEST BRANCH MIDDLE BROOK NEAR MARTINSVILLE, NJ—Continued**SUMMARY STATISTICS**

	Calendar Year 2009	Water Year 2010	Water Years 1979 - 2010	
Annual total	1,057.28	1,394.65		
Annual mean	2.90	3.82	3.40	
Highest annual mean			5.48	1989
Lowest annual mean			0.77	2002
Highest daily mean	68	Aug 22	183	Mar 13
Lowest daily mean	0.26	Sep 24	0.05	Sep 21
Annual seven-day minimum	0.29	Sep 19	0.11	Sep 20
Maximum peak flow			458	Mar 13
Maximum peak stage			5.55	Mar 13
Instantaneous low flow			0.04	Sep 20-22
Annual runoff (cfsm)	1.46	1.92		1.71
Annual runoff (inches)	19.76	26.07		23.23
10 percent exceeds	5.3	7.8		6.1
50 percent exceeds	1.1	0.95		0.96
90 percent exceeds	0.47	0.14		0.16

