



Water-Data Report 2009

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 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 150 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 11	2215	254	4.82
May 7	0315	154	4.15
Aug 2	1315	415	5.51
Aug 22	0215	403	5.45
Aug 22	1700	*436	*5.57

01403150 WEST BRANCH MIDDLE BROOK NEAR MARTINSVILLE, NJ—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.59	0.68	5.5	1.5	1.4	1.1	1.1	1.4	0.62	0.87	2.3	0.73
2	0.47	0.59	1.5	1.4	2.1	1.3	2.4	2.0	0.62	2.4	30	0.61
3	0.41	0.62	0.94	1.3	1.9	1.2	11	2.9	0.80	0.91	2.8	0.57
4	0.36	0.61	0.80	1.2	1.4	1.1	2.7	9.0	8.5	0.76	1.3	0.49
5	0.36	0.77	0.74	1.3	1.2	1.1	1.2	6.4	6.4	0.68	1.0	0.38
6	0.35	2.7	0.66	1.3	1.1	1.9	3.1	16	3.3	0.65	0.85	0.37
7	0.35	1.2	0.70	25	1.1	1.9	1.7	38	1.3	0.62	0.70	0.49
8	0.32	1.1	0.56	4.7	6.4	1.8	1.0	4.4	0.95	0.59	0.61	0.49
9	0.36	1.3	0.58	2.3	1.4	2.8	0.88	4.0	2.0	0.53	0.70	0.42
10	0.36	1.2	4.8	1.8	1.4	1.6	0.72	2.2	1.0	0.49	0.62	0.35
11	0.32	1.3	44	1.9	3.3	1.5	2.6	1.7	4.6	0.53	0.54	2.4
12	0.32	1.3	45	1.5	3.8	1.4	1.2	1.5	4.7	2.4	0.52	2.0
13	0.34	2.9	3.4	1.4	1.8	1.3	0.90	1.3	4.8	0.57	0.95	1.0
14	0.36	3.4	2.0	1.3	1.2	1.3	0.99	1.2	8.0	0.48	0.60	0.63
15	0.36	17	1.7	1.1	1.0	1.3	3.6	1.3	1.7	0.46	0.49	0.49
16	0.37	7.0	1.9	1.0	0.92	1.2	1.2	1.8	1.3	0.44	0.45	0.38
17	0.42	1.2	7.2	0.97	0.87	1.1	0.92	8.5	1.1	1.6	0.43	0.37
18	0.42	0.82	3.3	1.2	1.0	1.1	0.86	1.6	20	0.81	0.43	0.37
19	0.43	0.72	3.9	1.2	1.9	1.1	0.77	1.3	3.8	0.45	0.42	0.32
20	0.44	0.66	4.0	1.1	1.0	1.0	2.6	1.2	7.9	0.40	0.41	0.29
21	0.48	0.56	3.8	0.99	0.88	0.97	6.9	1.1	6.1	4.6	1.7	0.28
22	0.51	0.63	2.1	0.99	1.0	0.96	8.4	0.96	10	0.68	68	0.28
23	0.52	0.73	1.4	0.99	0.95	0.89	2.7	0.91	3.5	1.1	5.9	0.28
24	0.55	0.76	14	1.0	0.88	0.86	1.8	0.93	2.5	0.73	2.1	0.26
25	2.2	4.9	21	0.88	0.88	0.79	1.6	0.87	1.7	0.52	1.2	0.29
26	1.3	1.1	3.8	0.80	0.95	1.1	1.4	0.76	1.9	9.8	0.95	0.44
27	0.42	0.84	5.6	0.79	1.1	1.4	1.2	0.79	1.3	11	0.83	3.1
28	21	0.77	6.1	3.1	1.3	0.96	1.2	0.77	1.0	0.88	13	0.54
29	3.6	0.64	3.0	2.4	---	7.5	1.0	2.0	0.91	9.3	4.1	0.42
30	1.1	6.2	2.2	1.3	---	3.2	0.99	0.83	0.98	1.5	1.7	0.35
31	0.80	---	1.9	1.1	---	0.93	---	0.69	---	12	0.93	---
Total	40.19	64.20	198.08	68.81	44.13	47.66	68.63	118.31	113.28	68.75	146.53	19.39
Mean	1.30	2.14	6.39	2.22	1.58	1.54	2.29	3.82	3.78	2.22	4.73	0.65
Max	21	17	45	25	6.4	7.5	11	38	20	12	68	3.1
Min	0.32	0.56	0.56	0.79	0.87	0.79	0.72	0.69	0.62	0.40	0.41	0.26
Cfsm	0.65	1.08	3.21	1.12	0.79	0.77	1.15	1.92	1.90	1.11	2.38	0.32
In.	0.75	1.20	3.70	1.29	0.82	0.89	1.28	2.21	2.12	1.29	2.74	0.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2.40	3.32	4.35	4.21	3.98	5.81	5.17	3.93	2.29	2.08	1.31	1.78
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)

SUMMARY STATISTICS

	Calendar Year 2008	Water Year 2009	Water Years 1979 - 2009	
Annual total	1,161.72	997.96		
Annual mean	3.17	2.73	3.39	
Highest annual mean			5.48	1989
Lowest annual mean			0.77	2002
Highest daily mean	67 Feb 13	68 Aug 22	318 Sep 16, 1999	
Lowest daily mean	0.13 Sep 5	0.26 Sep 24	0.00 Sep 19, 1980	
Annual seven-day minimum	0.15 Aug 22	0.29 Sep 19	0.00 Sep 19, 1980	
Maximum peak flow		436 Aug 22	^a 1,490	Sep 16, 1999
Maximum peak stage		5.57 Aug 22	9.30	Sep 16, 1999
Instantaneous low flow		0.20 Sep 24	0.00	Sep 19, 1980
Annual runoff (cfsm)	1.60	1.37	1.70	
Annual runoff (inches)	21.72	18.66	23.13	
10 percent exceeds	6.1	5.7	6.0	
50 percent exceeds	1.1	1.1	0.96	
90 percent exceeds	0.27	0.43	0.16	

^a From rating curve extended above 400 ft³/s on basis of indirect computation of peak flow.

