



Water-Data Report 2011

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 and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 1	0445	335	4.90
Mar 6	1945	218	4.59
Apr 17	0030	304	5.11
Apr 24	2045	368	5.46
May 16	1130	544	6.27
Aug 28	0145	*1,510	*9.35
Sep 6	2015	392	5.58
Sep 8	0600	488	6.03

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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	46	e0.20	36	0.58	0.81	5.8	4.5	12	1.9	0.23	0.53	1.2
2	1.0	e0.20	3.4	3.6	7.2	3.6	3.0	13	1.5	0.22	0.15	1.2
3	0.37	e0.20	1.2	1.8	5.5	2.5	2.3	12	1.3	4.3	0.15	1.1
4	0.38	8.4	0.82	0.89	2.5	2.1	2.4	13	1.3	0.58	0.27	1.1
5	0.63	1.8	0.66	0.63	3.7	2.1	3.5	8.5	1.2	0.32	0.16	1.1
6	0.53	0.57	0.56	0.50	7.1	45	2.4	7.1	1.1	0.26	0.13	48
7	0.31	0.38	0.47	0.50	5.5	20	2.8	5.8	0.95	0.24	0.62	21
8	0.23	e0.50	0.39	0.44	9.4	5.2	2.6	4.6	0.89	11	0.16	60
9	0.21	e0.35	0.34	0.37	4.0	3.4	3.1	3.8	1.1	3.1	6.3	8.3
10	0.17	e0.30	0.31	0.31	2.5	28	2.3	4.3	0.93	0.43	0.45	4.6
11	0.17	e0.30	0.34	0.32	1.8	34	2.1	5.1	1.1	0.30	0.16	3.3
12	0.58	e0.30	20	0.40	1.5	6.8	9.7	4.4	0.93	0.26	0.13	2.9
13	0.23	e0.30	8.9	0.32	1.3	4.4	21	4.2	0.75	0.21	0.12	2.4
14	0.91	e0.30	1.6	0.29	4.2	3.5	5.1	4.5	1.6	0.17	65	2.0
15	0.89	e0.30	0.89	0.31	5.1	3.1	3.4	23	1.5	0.15	19	2.2
16	0.21	e0.40	0.68	0.31	2.8	11	46	65	0.68	0.16	10	1.5
17	0.17	3.3	0.59	0.28	12	5.0	39	27	23	0.16	1.6	1.3
18	0.14	0.47	0.46	1.7	28	3.8	8.5	42	1.9	0.16	0.77	1.1
19	0.22	0.34	0.43	4.7	13	2.9	6.9	18	0.85	0.16	0.84	1.0
20	0.18	0.29	0.40	3.3	5.0	2.4	6.1	16	0.59	0.16	0.71	1.1
21	0.18	0.27	0.40	2.1	5.0	7.9	5.2	9.3	0.51	0.15	7.0	0.92
22	0.20	0.27	0.37	1.4	3.7	4.5	4.6	6.1	0.45	0.16	2.6	1.1
23	0.20	0.28	0.39	1.2	2.3	13	18	5.5	0.46	0.15	0.55	18
24	0.20	0.40	0.38	1.0	1.9	15	36	4.9	0.71	0.15	0.32	10
25	0.22	0.47	0.36	1.0	51	7.1	24	3.6	0.56	2.6	7.8	4.8
26	0.27	0.74	0.37	1.1	8.3	4.6	13	3.1	0.36	0.49	1.2	3.7
27	0.43	0.59	0.52	1.2	5.2	3.5	12	2.8	0.33	0.15	36	3.3
28	e0.50	0.50	0.40	0.80	20	2.9	21	3.2	0.30	0.13	199	10
29	e0.25	0.49	0.40	0.80	---	2.5	14	2.4	0.28	2.1	7.0	9.1
30	e0.20	0.54	0.39	0.79	---	2.2	13	8.3	0.25	0.19	2.6	3.4
31	e0.20	---	0.41	0.75	---	2.4	---	2.2	---	0.15	1.6	---
Total	56.38	23.75	82.83	33.69	220.31	260.2	337.5	344.7	49.28	28.99	372.92	230.72
Mean	1.82	0.79	2.67	1.09	7.87	8.39	11.2	11.1	1.64	0.94	12.0	7.69
Max	46	8.4	36	4.7	51	45	46	65	23	11	199	60
Min	0.14	0.20	0.31	0.28	0.81	2.1	2.1	2.2	0.25	0.13	0.12	0.92
Cfsm	0.91	0.40	1.34	0.55	3.95	4.22	5.65	5.59	0.83	0.47	6.05	3.86
In.	1.05	0.44	1.55	0.63	4.12	4.86	6.31	6.44	0.92	0.54	6.97	4.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2.38	3.18	4.41	4.10	4.10	6.28	5.29	4.10	2.23	2.01	1.61	1.92
Max	9.28	10.5	11.5	11.9	9.02	21.4	12.4	19.4	7.91	6.40	12.0	11.7
(WY) (1990)	(1989)	(1984)	(1996)	(1988)	(1994)	(2007)	(1989)	(2003)	(1984)	(2011)	(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 2010		Water Year 2011		Water Years 1979 - 2011	
Annual total	1,195.82		2,041.27			
Annual mean	3.28		5.59		3.47	
Highest annual mean					5.59	2011
Lowest annual mean					0.77	2002
Highest daily mean	183	Mar 13	199	Aug 28	318	Sep 16, 1999
Lowest daily mean	0.05	Sep 21	0.12	Aug 13	0.00	Sep 19, 1980
Annual seven-day minimum	0.11	Sep 20	0.16	Jul 18	0.00	Sep 19, 1980
Maximum peak flow			1,510	Aug 28	1,510	Aug 28, 2011
Maximum peak stage			9.35	Aug 28	9.35	Aug 28, 2011
Instantaneous low flow			0.09	Aug 13	0.00	Sep 19, 1980
Annual runoff (cfsm)	1.65		2.81		1.74	
Annual runoff (inches)	22.35		38.16		23.70	
10 percent exceeds	6.5		13		6.3	
50 percent exceeds	0.61		1.2		0.97	
90 percent exceeds	0.14		0.20		0.16	

