



Water-Data Report 2007

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 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 rain and gage-height 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)
Oct 11	2145	222	4.63
Nov 8	1245	261	4.85
Jan 1	0845	193	4.45
Mar 2	0715	242	4.74
Apr 12	1030	198	4.48
Apr 15	1530	359	5.39
Apr 27	0345	403	5.62
Jul 5	0245	176	4.34
Jul 29	1615	*433	*5.77
Aug 8	0530	367	5.43

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.6	1.2	3.0	43	1.5	2.7	2.0	3.0	2.0	0.69	0.98	e0.30
2	0.79	2.6	e2.7	4.8	1.4	58	3.4	13	0.86	0.69	0.86	e0.30
3	0.82	1.4	e1.7	3.0	1.4	3.9	2.2	3.1	4.2	0.66	0.83	e0.30
4	1.3	1.2	e1.4	2.6	1.3	2.5	15	2.5	13	0.72	1.5	e0.30
5	7.0	1.1	e1.3	3.0	1.3	2.0	4.2	2.2	1.7	16	0.81	e0.30
6	0.96	1.1	e1.2	3.2	1.4	1.8	2.9	1.9	1.0	2.6	0.81	e0.30
7	0.82	1.0	e1.1	2.9	1.3	1.8	2.4	1.9	0.87	0.85	0.78	e0.30
8	0.77	59	e1.0	37	1.3	1.7	2.1	1.8	0.85	0.72	25	e0.30
9	0.72	6.8	e1.0	5.1	1.2	1.6	1.9	1.8	0.79	0.69	0.94	e0.20
10	0.72	3.4	e1.0	3.3	1.2	1.7	1.8	1.7	0.80	0.64	6.4	e0.30
11	30	2.8	e1.0	2.7	1.1	3.6	1.8	2.2	0.77	0.88	1.2	e2.0
12	7.0	4.0	e0.90	2.6	1.1	1.9	25	1.6	0.87	0.69	0.87	e0.50
13	1.1	9.6	e1.1	2.5	1.1	2.1	4.1	1.8	0.85	0.64	0.77	e0.30
14	0.82	6.4	e1.1	3.0	1.2	2.5	2.9	1.5	0.78	0.64	0.68	e0.30
15	0.74	3.4	e1.1	2.7	1.1	3.3	139	1.4	0.72	0.62	0.64	e0.30
16	0.68	15	e1.0	2.4	1.2	6.4	41	2.4	0.90	0.61	0.64	e0.30
17	13	9.7	e1.0	2.0	1.1	4.0	6.8	1.6	0.77	0.60	2.6	e0.30
18	4.6	3.7	e1.2	2.0	1.1	3.3	4.7	1.4	0.71	5.6	0.87	e0.30
19	1.2	3.0	e1.2	2.3	1.1	2.8	4.5	1.3	0.73	0.96	0.79	e0.20
20	9.0	2.5	e1.2	2.0	1.0	11	4.0	1.1	1.9	0.69	1.2	0.24
21	1.8	2.3	e1.6	1.8	3.4	7.5	3.5	1.1	0.92	0.64	5.6	0.15
22	1.3	2.4	3.4	1.9	5.7	20	3.3	0.96	0.86	0.61	3.5	0.50
23	1.1	13	20	1.9	2.0	20	3.2	0.90	0.72	20	1.3	0.22
24	1.0	5.7	3.3	1.8	1.5	6.5	3.0	0.89	0.69	1.7	e0.80	0.18
25	1.0	3.5	7.9	1.8	1.4	4.0	3.0	0.90	0.72	0.83	e0.70	0.15
26	1.0	2.9	11	1.6	1.6	3.2	2.9	0.82	0.69	0.72	e1.0	0.15
27	1.0	2.6	3.2	1.6	3.5	3.0	69	0.83	2.2	0.73	e0.60	0.15
28	39	2.4	2.5	1.7	4.7	2.5	6.5	0.87	2.7	0.72	e0.40	0.15
29	2.7	2.3	2.2	1.6	---	2.2	3.9	0.78	0.92	24	e0.40	0.15
30	1.6	2.2	2.1	1.5	---	2.2	3.0	0.73	0.76	2.1	e0.30	0.15
31	1.3	---	2.0	1.5	---	2.0	---	5.1	---	1.2	e0.30	---
Total	136.44	178.2	85.40	150.8	48.2	191.7	373.0	63.08	46.25	89.44	64.07	9.59
Mean	4.40	5.94	2.75	4.86	1.72	6.18	12.4	2.03	1.54	2.89	2.07	0.32
Max	39	59	20	43	5.7	58	139	13	13	24	25	2.0
Min	0.68	1.0	0.90	1.5	1.0	1.6	1.8	0.73	0.69	0.60	0.30	0.15
Cfsm	2.21	2.98	1.38	2.44	0.87	3.11	6.25	1.02	0.77	1.45	1.04	0.16
In.	2.55	3.33	1.60	2.82	0.90	3.58	6.97	1.18	0.86	1.67	1.20	0.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2.48	3.44	4.25	4.35	3.94	5.89	5.36	3.96	2.30	2.08	1.22	1.81
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)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1979 - 2007	
Annual total	1,165.98		1,436.17			
Annual mean	3.19		3.93		3.43	
Highest annual mean					5.48	1989
Lowest annual mean					0.77	2002
Highest daily mean	59	Nov 8	139	Apr 15	318	Sep 16, 1999
Lowest daily mean	0.57	Sep 11	0.15	Many days	0.00	Sep 19, 1980
Annual seven-day minimum	0.62	Sep 7	0.15	Sep 24	0.00	Sep 19, 1980
Maximum peak flow			433	Jul 29	^a 1,490	Sep 16, 1999
Maximum peak stage			5.77	Jul 29	9.30	Sep 16, 1999
Instantaneous low flow			0.15	Many days	0.00	Sep 19, 1980
Annual runoff (cfsm)	1.61		1.98		1.72	
Annual runoff (inches)	21.80		26.85		23.39	
10 percent exceeds	6.8		6.4		6.0	
50 percent exceeds	1.4		1.5		0.94	
90 percent exceeds	0.78		0.61		0.15	

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

