

Water-Data Report 2011

**01401650 PIKE RUN AT BELLE MEAD, NJ**

RARITAN RIVER BASIN

LOCATION.--Lat 40°28'05", long 74°38'56" referenced to North American Datum of 1983, Hillsborough Township, Somerset County, NJ, Hydrologic Unit 02030105, on right bank 20 ft upstream from bridge on Township Line Road, 0.7 mi east of Belle Mead, 0.8 mi upstream from Cruser Brook, and 1.0 mi downstream from bridge on U.S. Route 206.

DRAINAGE AREA.--5.36 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--July 1980 to current year.

REVISED RECORDS.--WDR NJ-01-1: 1994(M), 1996(M), 1997(P), 1999(P).

GAGE.--Water-stage and precipitation recorder and crest-stage gage. Datum of gage is 58.85 ft above NGVD of 1929.

REMARKS.--Records fair, except for estimated daily discharges and daily discharges below 0.5 ft<sup>3</sup>/s, which are poor. Some regulation during summer months, possibly from irrigation. 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 400 ft<sup>3</sup>/s and (or) maximum (\*):

[e, estimated †, from high-water mark in gage]			
Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar 6	2245	501	7.20
Apr 17	0115	945	8.87
Aug 14	0930	512	7.25
Aug 28	0500e	*3,280	*13.10†
Sep 6	2145	900	8.73
Sep 8	0800	1,050	9.19

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## 01401650 PIKE RUN AT BELLE MEAD, NJ—Continued

**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	107	1.6	70	1.2	2.4	16	6.9	6.4	2.1	0.71	0.82	4.3
2	12	1.3	19	7.0	26	9.5	6.7	5.5	1.7	0.58	0.64	3.4
3	4.1	1.4	8.5	7.9	26	6.6	4.8	5.1	1.4	14	0.57	3.0
4	2.4	18	6.0	4.1	e14	5.6	4.5	8.7	1.2	7.3	1.1	2.7
5	3.5	14	4.5	2.9	11	5.2	5.4	7.7	1.2	2.1	0.72	2.5
6	3.7	5.5	3.4	2.3	22	98	5.7	5.0	1.1	1.2	0.57	e192
7	2.4	3.2	2.7	1.9	21	82	5.7	4.1	1.0	4.1	0.62	e140
8	1.6	2.4	2.2	e1.5	30	16	6.6	3.5	0.89	25	0.59	e381
9	0.84	2.2	1.6	1.4	e18	11	15	3.1	0.87	15	15	e37
10	0.63	1.6	1.4	1.2	11	50	6.6	2.6	1.1	3.7	3.5	e13
11	0.69	1.3	1.4	1.1	e6.5	101	5.6	2.4	0.94	2.0	1.00	e7.4
12	3.0	1.1	44	1.5	e5.5	19	8.9	2.3	1.3	1.5	0.55	e5.5
13	1.7	1.1	38	1.2	4.4	13	49	2.0	1.1	1.2	0.37	e4.2
14	1.9	1.0	10	1.1	21	9.2	16	2.0	1.5	1.00	269	e3.3
15	5.6	0.97	5.7	1.2	30	7.5	9.1	27	2.9	0.79	69	e2.9
16	2.1	1.1	3.9	1.1	15	25	87	71	1.2	0.61	20	e3.0
17	1.4	7.6	2.8	1.0	44	14	218	25	25	0.57	8.0	e2.4
18	1.1	3.3	2.4	6.4	66	9.6	19	54	4.5	0.50	4.7	e2.2
19	1.3	2.1	1.9	25	30	7.3	13	25	2.3	0.47	37	e2.2
20	1.4	1.6	1.6	19	13	6.2	11	16	1.7	0.41	26	e2.2
21	1.3	1.3	1.4	12	10	12	8.2	12	1.4	0.37	24	e2.2
22	1.2	1.2	1.3	e6.5	7.8	10	6.5	9.6	1.3	0.30	25	e2.1
23	1.1	1.1	1.2	e4.5	6.0	26	37	8.5	4.4	0.26	6.4	18
24	1.1	1.0	1.1	3.2	5.2	35	32	7.4	5.3	0.24	3.8	15
25	0.98	1.0	1.1	2.7	89	14	40	5.2	4.9	0.39	7.3	4.8
26	0.89	1.4	1.1	2.9	22	9.6	14	4.0	1.7	0.98	5.4	3.3
27	1.5	1.4	1.7	6.0	13	7.3	11	3.3	1.2	0.38	51	2.7
28	2.5	1.1	1.1	3.8	32	6.1	20	3.0	1.0	0.29	e1,180	28
29	2.2	0.98	1.1	2.7	---	5.3	13	2.7	0.92	4.1	24	12
30	1.8	0.92	1.0	2.5	---	4.5	8.0	7.3	0.79	3.7	9.8	8.2
31	1.8	---	1.0	2.6	---	4.4	---	3.1	---	1.1	6.0	---
<b>Total</b>	174.73	83.77	244.1	139.4	601.8	645.9	694.2	344.5	77.91	94.85	1,802.45	910.5
<b>Mean</b>	5.64	2.79	7.87	4.50	21.5	20.8	23.1	11.1	2.60	3.06	58.1	30.4
<b>Max</b>	107	18	70	25	89	101	218	71	25	25	1,180	381
<b>Min</b>	0.63	0.92	1.0	1.0	2.4	4.4	4.5	2.0	0.79	0.24	0.37	2.1
<b>Cfsm</b>	1.05	0.52	1.47	0.84	4.01	3.89	4.32	2.07	0.48	0.57	10.8	5.66
<b>In.</b>	1.21	0.58	1.69	0.97	4.18	4.48	4.82	2.39	0.54	0.66	12.51	6.32

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2011, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	7.01	8.23	12.3	12.4	12.6	15.2	13.1	8.20	5.63	5.62	5.27	5.51
<b>Max</b>	41.9	24.1	35.5	43.3	27.5	46.2	46.3	26.2	31.4	26.1	58.1	56.9
(WY)	(2006)	(2007)	(1997)	(1996)	(1994)	(2010)	(2007)	(1989)	(2003)	(1984)	(2011)	(1999)
<b>Min</b>	0.40	0.28	0.12	0.04	1.97	2.59	2.18	1.54	0.37	0.00	0.17	0.02
(WY)	(2002)	(1999)	(1999)	(1981)	(2002)	(2006)	(1985)	(2005)	(1995)	(1999)	(1980)	(2005)

**01401650 PIKE RUN AT BELLE MEAD, NJ—Continued****SUMMARY STATISTICS**

	<b>Calendar Year 2010</b>	<b>Water Year 2011</b>	<b>Water Years 1980 - 2011</b>	
<b>Annual total</b>	2,943.72	5,814.11		
<b>Annual mean</b>	8.06	15.9	9.28	
<b>Highest annual mean</b>			15.9	2011
<b>Lowest annual mean</b>			3.32	2002
<b>Highest daily mean</b>	450	Mar 13	<sup>a</sup> 1,180	Aug 28
<b>Lowest daily mean</b>	0.00	Aug 1	0.24	Jul 24
<b>Annual seven-day minimum</b>	0.00	Aug 1	0.35	Jul 19
<b>Maximum peak flow</b>			<sup>b</sup> 3,280	Aug 28
<b>Maximum peak stage</b>			<sup>c</sup> 13.10	Aug 28
<b>Instantaneous low flow</b>			0.21	Jul 23-25
<b>Annual runoff (cfsm)</b>	1.50	2.97		1.73
<b>Annual runoff (inches)</b>	20.43	40.35		23.53
<b>10 percent exceeds</b>	12	26		16
<b>50 percent exceeds</b>	1.9	3.7		2.8
<b>90 percent exceeds</b>	0.10	0.98		0.30

<sup>a</sup> Estimated.<sup>b</sup> From rating curve extended above 968 ft<sup>3</sup>/s on basis of step-backwater computation.<sup>c</sup> From high-water mark in gage.