

Water-Data Report 2009

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ

SHARK RIVER BASIN

LOCATION.--Lat 40°12'12", long 74°03'57" referenced to North American Datum of 1983, Neptune Township, Monmouth County, NJ, Hydrologic Unit 02030104, on left bank 100 ft downstream from dam on Jumping Brook Reservoir, 500 ft upstream of bridge on Old Corlies Avenue, 0.8 mi upstream from mouth, and 1.4 mi west of Neptune City.

DRAINAGE AREA.--6.46 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1966 to current year. Records for water years 1976-83 are unpublished but are available in the files of New Jersey Water Science Center.

REVISED RECORDS.--WDR NJ-84-1: drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 13.76 ft above NGVD of 1929.

COOPERATION.--Water-stage recorder inspected by and records of diversion provided by New Jersey-American Water Co.

REMARKS.--Records good, except for estimated daily discharges and discharges above 300 ft³/s, which are fair. Diversion above station by New Jersey-American Water Company for municipal supply (see 01407759) and by farmers and golf courses for irrigation. Several measurements of water temperature were made during the year.

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

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	8.9	2.9	34	5.7	6.0	6.0	4.8	5.8	3.6	7.8	25	4.3
2	5.2	2.7	8.8	5.6	5.9	6.5	11	6.4	3.4	5.2	25	3.6
3	4.0	2.7	6.0	5.5	6.6	e5.0	16	13	8.7	4.2	15	3.4
4	3.6	2.7	4.9	5.2	6.7	5.0	11	26	9.5	3.8	5.4	3.2
5	3.4	4.3	4.4	5.3	5.5	5.2	5.8	25	29	3.5	3.9	2.9
6	3.2	36	4.1	5.5	5.1	9.8	19	29	21	3.3	4.2	2.8
7	2.8	10	4.6	131	5.3	16	28	39	6.8	3.3	3.4	2.7
8	2.6	9.1	3.7	33	7.0	11	8.6	19	4.8	3.2	3.0	2.7
9	3.4	8.0	3.9	13	5.9	7.0	6.2	10	12	3.1	3.0	2.8
10	2.7	4.6	4.7	9.3	5.3	5.7	5.4	7.8	7.3	3.0	2.7	3.7
11	2.4	3.7	52	14	5.5	5.1	35	6.6	5.1	2.9	2.4	49
12	2.4	3.4	284	8.8	5.5	4.7	19	6.0	28	38	18	17
13	2.4	11	23	7.4	5.0	4.5	8.0	5.6	8.3	6.1	6.9	7.5
14	2.4	11	11	6.7	4.7	4.4	13	5.7	6.7	4.2	4.2	5.0
15	2.4	29	8.9	6.1	4.6	4.4	75	30	5.7	3.3	3.6	4.1
16	2.3	23	10	5.4	4.5	4.2	20	8.7	4.5	3.0	3.3	9.4
17	2.5	7.5	35	5.1	4.3	4.2	10	6.5	4.2	2.9	2.9	6.4
18	2.4	5.2	12	5.2	5.0	4.1	8.2	5.6	54	2.8	3.0	4.2
19	2.3	4.4	40	5.5	5.6	4.3	7.1	5.1	19	2.6	2.7	3.6
20	2.3	3.9	35	5.2	4.5	4.2	21	5.0	21	2.5	2.9	3.3
21	2.3	3.7	100	5.0	4.2	4.0	66	4.6	38	16	9.1	3.2
22	2.1	3.3	25	4.7	4.7	4.0	21	4.4	21	7.0	21	3.2
23	2.1	3.2	12	4.8	4.5	3.8	15	4.2	9.0	17	53	3.2
24	2.2	3.3	11	5.1	4.2	3.6	9.6	4.2	7.3	19	20	12
25	6.3	24	15	4.6	4.0	3.6	8.1	4.3	6.3	5.3	6.4	4.4
26	15	9.3	9.3	4.5	4.0	5.4	7.3	3.8	8.0	22	4.6	3.3
27	4.2	5.3	8.5	4.4	4.1	9.2	6.7	4.0	10	8.1	4.1	45
28	9.7	4.3	7.9	33	4.2	11	6.2	4.2	6.3	4.6	11	13
29	8.7	3.9	7.2	28	---	16	6.6	11	4.9	4.8	20	9.3
30	4.0	25	6.5	8.8	---	10	6.0	6.0	4.1	7.2	16	5.2
31	3.1	---	6.2	6.8	---	5.6	---	4.1	---	22	5.6	---
Total	123.3	270.4	798.6	398.2	142.4	197.5	484.6	320.6	377.5	241.7	311.3	243.4
Mean	3.98	9.01	25.8	12.8	5.09	6.37	16.2	10.3	12.6	7.80	10.0	8.11
Max	15	36	284	131	7.0	16	75	39	54	38	53	49
Min	2.1	2.7	3.7	4.4	4.0	3.6	4.8	3.8	3.4	2.5	2.4	2.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	8.01	8.93	11.0	12.4	11.4	13.9	14.0	11.5	7.65	7.24	7.26	7.29
Max	45.7	47.4	30.5	55.5	62.1	47.1	66.5	53.8	23.7	21.5	19.0	24.2
(WY)	(2006)	(1978)	(1970)	(1979)	(1979)	(1984)	(1980)	(1989)	(1972)	(1989)	(1992)	(1971)
Min	1.97	1.89	2.78	1.94	3.40	3.86	3.29	2.08	2.11	1.90	1.52	1.25
(WY)	(1982)	(1982)	(1981)	(1981)	(2002)	(1985)	(1985)	(1977)	(1986)	(2002)	(1982)	(1982)

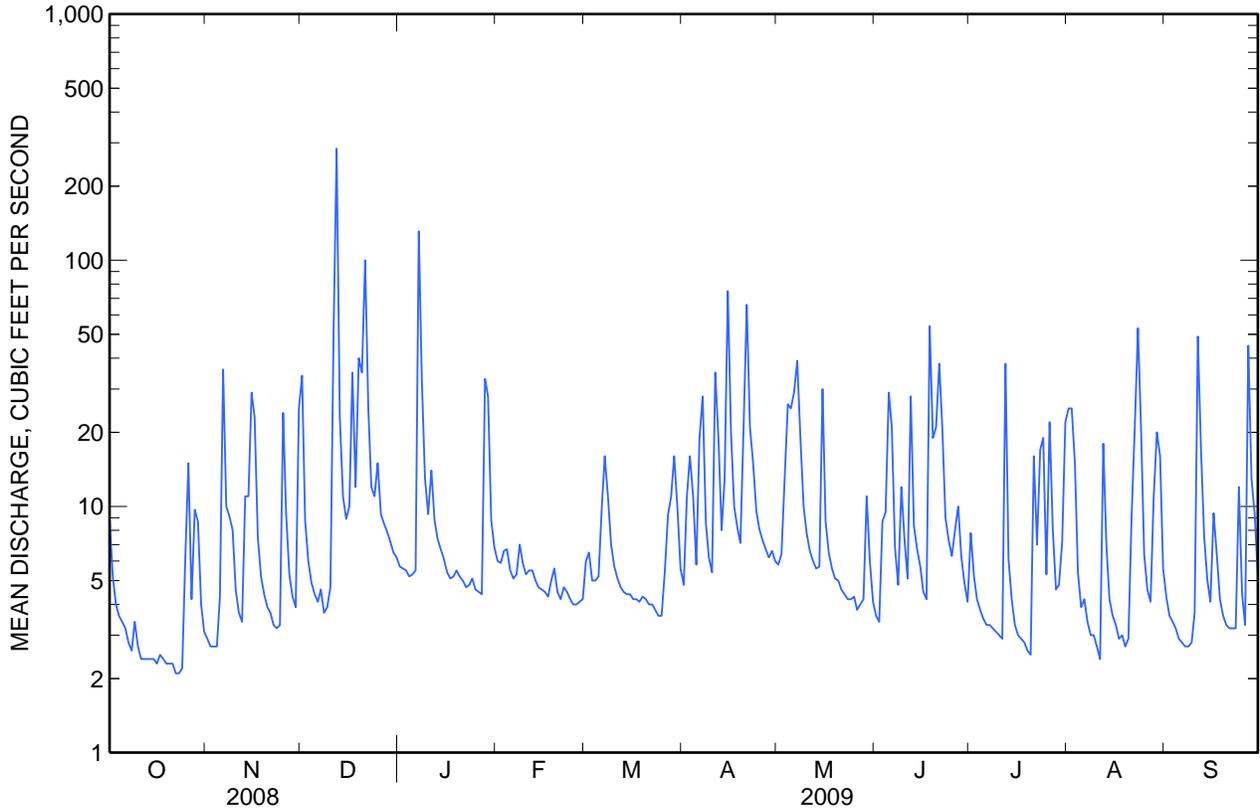
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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1967 - 2009	
Annual total	3,698.4		3,909.5			
Annual mean	10.1		10.7		10.0	
Highest annual mean					20.4	1979
Lowest annual mean					4.05	1981
Highest daily mean	284	Dec 12	284	Dec 12	954	Jan 21, 1979
Lowest daily mean	1.3	Sep 4	2.1	Oct 22, 23	0.12	Sep 15, 1981
Annual seven-day minimum	1.6	Aug 30	2.2	Oct 18	0.51	Oct 7, 1966
Maximum peak flow			^a 681	Dec 12	^b 1,830	Sep 12, 1971
Maximum peak stage			6.82	Dec 12	8.44	Oct 14, 2005
Instantaneous low flow			2.1	Oct 21-24	0.00	Jun 7, 1971
10 percent exceeds	23		23		18	
50 percent exceeds	4.9		5.5		5.0	
90 percent exceeds	2.0		3.0		2.0	

^a From rating curve extended above 400 ft³/s.

^b From rating curve extended above 150 ft³/s.



01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-71, 1974-91, 2001 to current year.

REMARKS.--Cooperative Network Site Descriptor: Urban Land Use Indicator site, New Jersey Department of Environmental Protection Watershed Management Area 12.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia, dissolved orthophosphate, and suspended residue were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 1 of 3

[Remark codes: <, less than; E, estimated.]

Date	Time	Baro- metric pres- sure, mm Hg (00025)	Temper- ature, air, deg C (00020)	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Instan- taneous dis- charge, ft ³ /s (00061)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, wat unf μS/cm @ 25 degC (00095)	Temper- ature, water, deg C (00010)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis- solved solids dried @ 180degC wat flt mg/L (70300)
Dec 04...	1000	763	8.0	.196	.153	4.9	11.3	88	6.5	205	5.0	3.7	117
Feb 17...	0930	769	2.5	.046	.036	4.4	13.2	98	6.6	436	2.7	2.7	232
May 27...	0930	762	13.5	.131	.101	4.0	8.6	84	6.5	283	13.8	6.3	192
Aug 19...	0930	761	26.0	.130	.102	2.7	7.0	80	6.5	239	21.4	15	140

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 3

[Remark codes: <, less than; E, estimated.]

Date	Dis- solved solids, sum of consti- tuents, mg/L (70301)	Hard- ness, water, mg/L as CaCO3 (00900)	Sus- pended solids, water, unfltrd mg/L (00530)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Total carbon, suspnd sedimnt total, mg/L (00694)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Silica, water, fltrd, mg/L as SiO2 (00955)
Dec 04...	E105	36	1	10.3	2.56	2.52	19.3	9	.5	32.2	E.05	<.04	8.0
Feb 17...	E222	45	3	12.7	3.15	2.76	62.1	E8	.5	98.5	E.08	<.04	8.4
May 27...	148	42	1	12.1	2.85	2.99	32.5	11	.7	57.5	.10	<.04	8.1
Aug 19...	E127	42	2	12.2	2.81	2.90	23.0	13	.8	43.9	E.06	<.04	9.1

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 3

[Remark codes: <, less than; E, estimated.]

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia	Ammonia	Nitrate	Ortho-	Partic-	Phos-	Phos-	Total	Total	Organic	Organic
		+ org-N, water, fltrd, mg/L as N (00623)	water, fltrd, mg/L as N (00608)	+ nitrite water, fltrd, mg/L as N (00631)	phos- phate, water, fltrd, mg/L as P (00671)	ulate nitro- gen, susp, water, mg/L (49570)	phorus, water, fltrd, mg/L as P (00666)	phorus, water, unfltrd mg/L as P (00665)	nitro- gen, water, fltrd, mg/L (00602)	nitro- gen, water, unfltrd mg/L (00600)	carbon suspnd sedimnt total, mg/L (00689)	carbon, water, fltrd, mg/L (00681)
Dec 04...	23.3	.44	.101	.25	E.005	.04	.010	.024	.69	.73	.53	4.0
Feb 17...	27.1	.28	.193	.45	<.010	.03	<.008	.020	.73	.76	.50	1.6
May 27...	24.1	.42	.130	.33	<.010	.07	<.008	.024	.75	.82	.72	3.2
Aug 19...	23.6	.31	.087	.27	.022	.07	E.006	.030	.58	.64	.76	3.2