



Water-Data Report 2007

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 Records for water years 1976-83 are unpublished but are available in the files of New Jersey Water Science Center.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 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.

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[*e*, estimated]

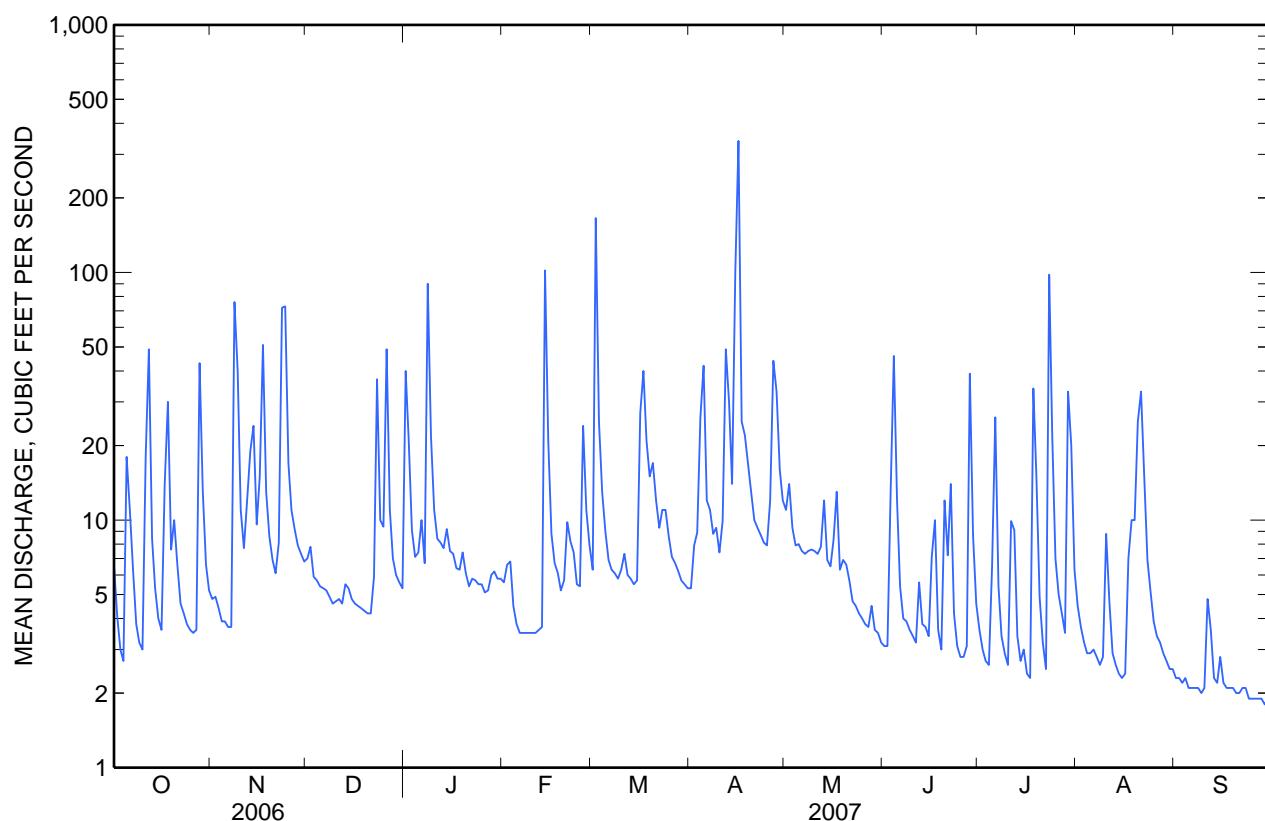
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6.6	4.8	7.0	40	5.6	6.3	5.3	e11	3.1	3.6	4.5	2.3
2	4.1	4.9	7.8	21	6.6	166	7.9	e14	3.1	3.0	3.7	2.3
3	3.0	4.4	5.9	9.1	6.8	25	e8.9	e9.3	13	2.7	3.2	2.2
4	2.7	3.9	5.7	7.1	4.5	13	e26	e7.9	46	2.6	2.9	2.3
5	18	3.9	5.4	7.4	3.8	9.0	e42	e8.0	12	6.5	2.9	2.1
6	11	3.7	5.3	10	3.5	6.9	e12	e7.5	5.4	26	3.0	2.1
7	6.3	3.7	5.2	6.7	3.5	6.3	e11	e7.3	4.0	5.4	2.8	2.1
8	3.8	76	4.9	90	3.5	6.1	e8.8	e7.5	3.9	3.4	2.6	2.1
9	3.2	40	4.6	22	3.5	5.8	e9.3	e7.6	3.6	2.9	2.8	2.0
10	3.0	11	4.7	11	3.5	6.3	e7.4	e7.5	3.4	2.6	8.8	2.1
11	18	7.7	4.8	8.4	3.5	7.3	e9.9	e7.3	3.2	9.9	4.7	4.8
12	49	12	4.6	8.1	3.6	6.0	e49	e7.8	5.6	9.1	2.9	3.6
13	8.4	19	5.5	7.7	3.7	5.8	e30	e12	3.8	3.4	2.6	2.3
14	5.3	24	5.3	9.2	102	5.5	e14	e6.9	3.7	2.7	2.4	2.2
15	4.0	9.6	4.8	7.5	21	5.7	e99	e6.5	3.4	3.0	2.3	2.8
16	3.6	15	4.6	7.3	8.8	27	e340	e8.3	7.1	2.4	2.4	2.2
17	14	51	4.5	6.4	6.7	40	e25	e13	10	2.3	7.0	2.1
18	30	13	4.4	6.3	6.1	21	e22	e6.3	3.6	34	10	2.1
19	7.6	8.6	4.3	7.4	5.2	15	e17	e6.9	3.0	15	10	2.1
20	10	6.9	4.2	6.1	5.7	17	e13	e6.6	12	4.9	25	2.0
21	6.6	6.1	4.2	5.4	9.8	12	e10	5.7	7.2	3.2	33	2.0
22	4.6	8.1	5.9	5.8	8.2	9.3	e9.3	4.7	14	2.5	15	2.1
23	4.2	72	37	5.7	7.4	11	e8.7	4.5	4.2	98	6.9	2.1
24	3.8	73	10	5.5	5.5	11	e8.1	4.2	3.1	22	5.1	1.9
25	3.6	17	9.4	5.5	5.4	8.6	e7.9	4.0	2.8	7.0	3.9	1.9
26	3.5	11	49	5.1	24	7.1	e12	3.8	2.8	5.0	3.4	1.9
27	3.6	9.2	11	5.2	11	6.7	e44	3.7	3.1	4.2	3.2	1.9
28	43	7.9	7.0	6.0	7.9	6.2	e33	4.5	39	3.5	2.9	1.9
29	13	7.3	6.0	6.2	---	5.7	e16	3.6	8.7	33	2.7	1.8
30	6.6	6.8	5.6	5.8	---	5.5	e12	3.5	4.6	20	2.5	1.9
31	5.2	---	5.3	5.8	---	5.3	---	3.2	---	6.3	2.5	---
Total	309.3	541.5	253.9	360.7	290.3	489.4	918.5	214.6	242.4	350.1	187.6	67.2
Mean	9.98	18.1	8.19	11.6	10.4	15.8	30.6	6.92	8.08	11.3	6.05	2.24
Max	49	76	49	90	102	166	340	14	46	98	33	4.8
Min	2.7	3.7	4.2	5.1	3.5	5.3	5.3	3.2	2.8	2.3	2.3	1.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	8.13	9.03	10.6	12.5	11.5	14.2	14.1	11.6	7.56	7.18	7.31	7.09
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)

SUMMARY STATISTICS

	Calendar Year 2006	Water Year 2007	Water Years 1967 - 2007			
Annual total	4,020.3	4,225.5				
Annual mean	11.0	11.6	10.1			
Highest annual mean			20.4	1979		
Lowest annual mean			4.05	1981		
Highest daily mean	215	Jan 3	^a 340	Apr 16	954	Jan 21, 1979
Lowest daily mean	1.5	Aug 22	1.8	Sep 29	0.12	Sep 15, 1981
Annual seven-day minimum	1.7	Aug 17	1.9	Sep 24	0.51	Oct 7, 1966
Maximum peak flow			^b 428	Apr 16	^c 1,830	Sep 12, 1971
Maximum peak stage			^d 5.13	Apr 16	8.44	Oct 14, 2005
Instantaneous low flow			1.8	Many days	0.00	Jun 7, 1971
10 percent exceeds	20		23		18	
50 percent exceeds	5.3		6.0		5.0	
90 percent exceeds	2.8		2.6		2.0	

^a Estimated.^b From rating curve extended above 400 ft³/s.^c From rating curve extended above 150 ft³/s.^d From crest-stage gage.

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water year 2001 to current year.

REMARKS.--Total nitrogen (00600) equals the sum of filtered ammonia-plus-organic nitrogen (00623), filtered nitrite-plus-nitrate nitrogen (00631), and total particulate nitrogen (49570). Cooperative Network Site Descriptor: Urban Land Use Indicator and Perchlorate Assessment special study site, New Jersey Department of Environmental Protection Watershed Management Area 12. The sample on July 24 was for the perchlorate assessment.

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. Analysis of the split and concurrent replicate samples was performed by the Laboratory Branch of the U.S. EPA, Region II, Division of Environmental Science and Assessment.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 1 of 4

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

Date	Time	Sample type	Turbdty	UV	UV	Baro-	Dis-	pH,	Specif-	
			white light, det ang 90+/-30 dis- charge, corrctd	absorb- ance, 254 nm, wat flt corrcrd	absorb- ance, 280 nm, wat flt units			water, field, std units (00400)		
Nov 15...	0905	Environmental	9.7	4.2	.388	.303	762	8.2	79	6.7
Feb 14...	0900	Environmental	67	190	.060	.044	744	13.3	92	6.2
May 23...	0945	Environmental	4.5	5.9	.162	.125	773	7.8	75	6.6
Jul 24...	1000	Environmental	19	7.0	--	--	766	8.1	86	7.3
Sep 10...	0900	Environmental	2.0	7.9	.076	.060	763	6.6	73	6.5
	<i>0900 Split Replicate</i>		--	--	--	--	--	--	--	--
	<i>0901 Concurrent Replicate</i>		--	--	--	--	--	--	--	--

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 4

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

Date	Temperature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO ₃ (00900)	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			Chlor- ide, lab, mg/L as CaCO ₃ (90410)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)
							end pt,	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)						
Nov 15...	13.8	31	8.99	2.10	2.66	18.0	11	30.1	E.06	6.4	17.4	94	109		
Feb 14...	.2	45	13.6	2.63	2.67	306	<5	550	<.10	2.4	15.9	--	904		
May 23...	14.2	39	11.2	2.67	3.05	33.5	11	59.1	E.06	7.2	22.6	148	154		
Jul 24...	18.4	--	--	--	--	--	--	--	--	--	--	--	--		
Sep 10...	20.6	44	12.1	3.26	3.23	23.4	10	42.6	E.08	10.0	24.7	127	144		
10...	--	42	12.0	3.00	3.30	23.0	10	46.0	.06	--	26.0	121	110		
10...	--	43	12.0	3.10	3.30	23.0	10	46.0	.06	--	26.0	121	110		

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 4

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

Date	Ammonia Ammonia				Nitrate			Partic- ulate		Ortho- phosphate		Phos- phorus	
	Residue total non- filter- able, mg/L (00530)	+ org-N, water, fltrd, mg/L as N (00623)	+ org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	+ nitrite water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite water, fltrd, mg/L as N (49570)	Total nitro- gen, water, fltrd, mg/L as P (00602)	Total nitro- gen, water, unfltrd mg/L as P (00600)	nitro- gen, water, fltrd, mg/L as P (00671)	nitro- gen, water, fltrd, mg/L as P (00666)	nitro- gen, water, fltrd, mg/L as P (00665)
Nov 15...	8	.40	--	.076	--	.24	--	.09	.64	.73	E.006	.013	.039
Feb 14...	174	.56	--	.286	--	.46	--	1.29	1.0	2.3	E.006	<.008	.25
May 23...	4	.47	--	.133	--	.41	--	.06	.89	.94	E.003	<.008	.050
Jul 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
Sep 10...	2	.24	--	.103	--	.25	--	.04	.49	.53	<.010	<.008	.013
10...	<10	E.20	E.18	.090	.066	.250	<.050	--	--	--	.037	<.050	<.050
10...	<10	E.17	E.35	.089	.070	.250	<.050	--	--	--	.034	<.050	<.050

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
 Part 4 of 4
 [Remark codes: <, less than; E, estimated.]

Date	Inor-					
	Total carbon, suspd sedimnt total,	ganic carbon, suspnd sedimnt total,	Organic carbon, suspnd sedimnt total,	Organic water, fltrd,	Boron, water, fltrd,	Per-chlorate, unfltrd
	mg/L (00694)	mg/L (00688)	mg/L (00689)	mg/L (00681)	µg/L (01020)	µg/L (61209)
Nov						
15...	1.5	<.1	1.5	7.8	27	--
Feb						
14...	24.0	<.1	23.9	3.4	13	--
May						
23...	1.0	<.1	1.0	3.6	31	--
Jul						
24...	--	--	--	--	--	E.0940
Sep						
10...	.6	<.1	.6	1.9	30	--
10...	--	--	--	2.0	30	--
10...	--	--	--	2.1	30	--