



Water-Data Report 2010

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 Records for water years 1976-83 were unpublished but are available online and in the files of New Jersey Water Science Center.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. 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. Satellite telemetry at station.

Water-Data Report 2010

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4.3	7.5	5.6	17	6.1	24	30	7.5	9.8	2.3	12	1.8
2	4.1	6.2	4.8	12	6.0	25	21	7.2	7.3	2.3	4.0	1.7
3	4.5	5.6	51	8.6	7.2	26	17	9.8	4.8	2.3	2.8	1.8
4	3.8	5.1	11	7.5	6.6	23	15	7.5	4.1	2.2	2.4	1.7
5	3.4	5.0	28	7.4	6.2	20	14	6.3	3.8	2.0	2.2	1.6
6	3.4	4.6	34	7.2	6.8	16	13	6.1	3.7	2.1	2.0	1.6
7	4.0	4.2	11	6.8	6.6	14	12	5.5	3.4	2.0	1.9	1.7
8	3.1	4.2	7.9	6.8	6.2	13	11	5.5	3.3	2.2	1.9	1.6
9	3.0	4.3	199	6.3	6.1	12	23	5.1	6.1	2.2	1.9	1.6
10	3.0	4.2	26	5.8	11	11	13	5.1	14	5.4	2.0	1.6
11	2.9	4.2	12	5.6	15	10	11	5.2	5.8	3.6	1.8	1.6
12	2.9	6.5	9.2	5.6	12	15	10	17	4.2	2.6	1.8	4.1
13	2.9	16	25	5.6	9.2	177	9.7	8.0	3.7	10	1.8	5.8
14	2.9	40	27	5.6	8.2	94	9.7	6.2	3.8	12	1.7	5.9
15	12	13	11	5.6	8.3	88	9.7	5.4	3.6	7.8	1.8	2.5
16	16	7.4	8.8	5.7	18	38	9.1	4.9	3.4	3.5	1.9	15
17	6.1	6.0	7.6	21	12	21	9.7	4.8	3.3	2.9	1.8	42
18	11	5.2	6.9	38	9.7	17	8.6	37	3.0	2.4	1.9	6.0
19	6.1	5.1	7.1	12	13	14	8.1	22	3.0	8.7	2.2	4.0
20	4.2	10	8.4	8.6	17	13	8.0	9.0	2.9	4.6	1.7	3.2
21	3.6	6.3	8.0	7.4	16	11	8.5	6.8	2.8	2.9	1.6	2.7
22	3.4	5.1	7.9	6.8	13	17	11	5.8	2.7	2.3	4.6	3.5
23	3.3	4.7	7.5	6.3	152	42	8.2	5.4	2.7	2.1	3.7	3.5
24	12	5.7	7.1	6.1	148	17	7.4	5.6	2.6	2.1	5.4	2.3
25	29	5.0	11	59	53	12	26	5.2	2.3	7.8	15	2.2
26	6.8	5.1	181	25	36	14	34	4.8	2.4	8.4	4.6	2.1
27	13	5.6	134	11	23	10	30	4.7	2.4	3.0	3.0	38
28	105	4.8	24	9.1	19	9.8	12	5.3	2.5	2.3	2.4	14
29	23	4.4	14	7.3	---	164	9.3	11	2.4	4.7	2.1	5.0
30	9.6	5.3	11	6.5	---	233	8.2	6.2	2.3	2.8	2.8	21
31	7.2	---	11	6.2	---	87	---	5.8	---	2.2	1.9	---
Total	319.5	216.3	917.8	349.4	651.2	1,287.8	417.2	251.7	122.1	123.7	98.6	201.1
Mean	10.3	7.21	29.6	11.3	23.3	41.5	13.9	8.12	4.07	3.99	3.18	6.70
Max	105	40	199	59	152	233	34	37	14	12	15	42
Min	2.9	4.2	4.8	5.6	6.0	9.8	7.4	4.7	2.3	2.0	1.6	1.6

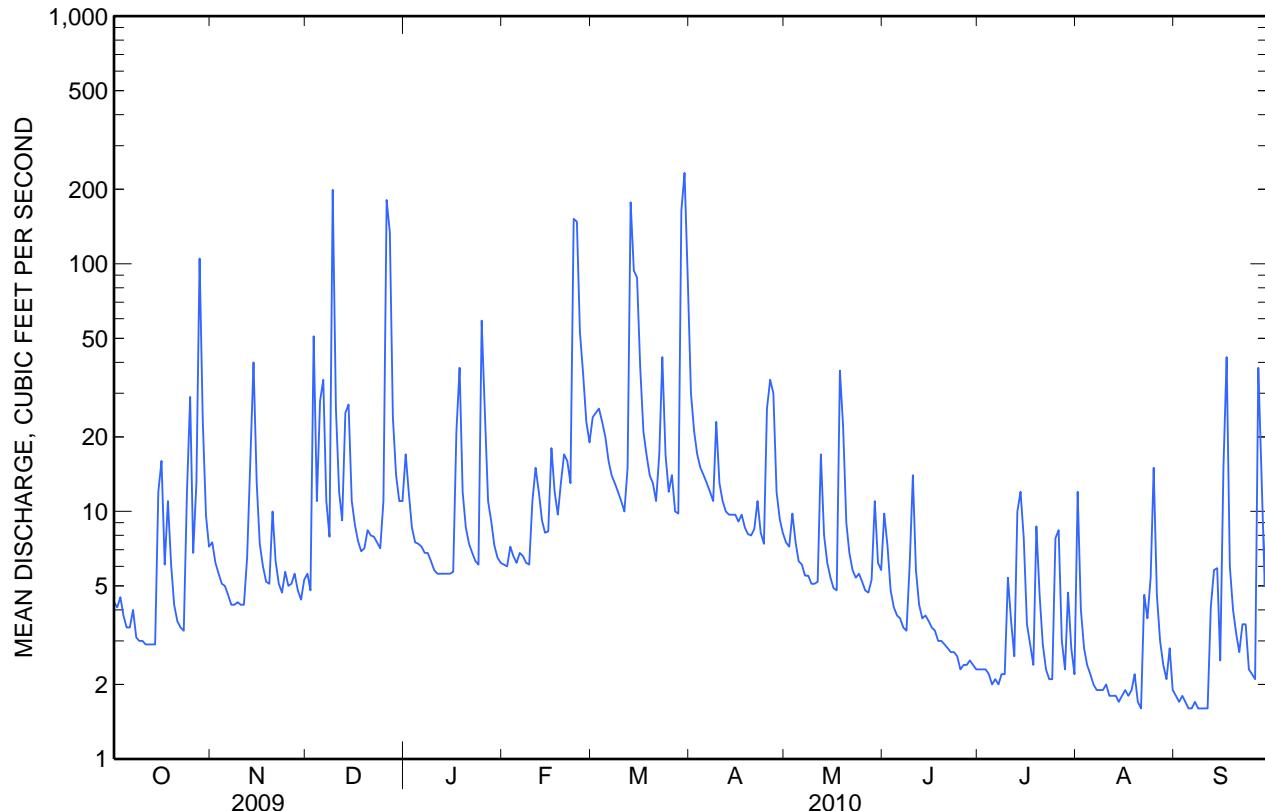
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	8.06	8.89	11.4	12.4	11.7	14.6	14.0	11.4	7.57	7.16	7.17	7.28
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 2009		Water Year 2010		Water Years 1967 - 2010	
Annual total	4,170.8		4,956.4			
Annual mean	11.4		13.6		10.1	
Highest annual mean					20.4	1979
Lowest annual mean					4.05	1981
Highest daily mean	199	Dec 9	233	Mar 30	954	Jan 21, 1979
Lowest daily mean	2.4	Aug 11	1.6	Many days	0.12	Sep 15, 1981
Annual seven-day minimum	2.9	Sep 3	1.6	Sep 5	0.51	Oct 7, 1966
Maximum peak flow			536	Dec 9	^a 1,830	Sep 12, 1971
Maximum peak stage			5.87	Dec 9	8.44	Oct 14, 2005
Instantaneous low flow			1.6	Many days	0.00	Jun 7, 1971
10 percent exceeds	23		24		18	
50 percent exceeds	5.7		6.2		5.0	
90 percent exceeds	3.3		2.2		2.0	

^a 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 2009 TO SEPTEMBER 2010**

Part 1 of 5

[%; percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Absorbance, UV, 254 nm, 1 cm path length, water, filtered, units		Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
				Absorbance, UV, organic constituents, 280 nm, 1 cm path length, water, filtered, units	per centimeter (50624)				
11-23-2009	1000	772	10.0	.174	.138	4.6	9.8	87	6.5
02-22-2010	1000	760	4.0	.134	.105	13	13.2	98	6.7
05-17-2010	0930	767	18.0	.148	.114	4.6	8.4	84	6.8
09-02-2010	0900	762	25.0	.083	.065	1.7	6.6	75	6.4

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 2 of 5

[%; percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 °C ± 30 degrees, ratiometric correction, NTRU (63676)		Dissolved solids, dried at 180 °C, water, filtered, milligrams per liter (70300)	Dissolved solids, sum of constituents, milligrams per liter (70301)	Hardness, water, mg/L as CaCO ₃ (00900)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Manganese, water, filtered, mg/L (00925)
			Dissolved solids, dried at 180 °C, water, filtered, milligrams per liter (70300)	Dissolved solids, sum of constituents, milligrams per liter (70301)						
11-23-2009	223	10.0	6.6	130	E 118	37.7	5	10.8	2.60	
02-22-2010	883	3.0	8.5	471	E 465	48.0	6	14.0	3.15	
05-17-2010	328	14.2	6.5	197	169	42.6	2	12.5	2.76	
09-02-2010	259	21.0	12	147	138	46.1	4	12.9	3.37	

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	CaCO ₃ (90410)	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO ₃	Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)
	11-23-2009	2.78	23.2	12	.56	40.0	.09	<.06	8.7	21.7
02-22-2010	2.71	145	10	1.08	268	E .06	<.06	5.0	18.3	.32
05-17-2010	2.70	39.7	14	.73	72.9	.09	<.06	6.8	20.9	.31
09-02-2010	3.32	27.7	12	.57	49.0	.09	<.06	9.2	23.6	.23

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than; E, estimated]

Date	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Orthophos phate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phosphoru s, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, filtered, mg/L (00602)	Total nitrogen, water, unfiltered, mg/L (00600)	Organic carbon, suspended sediment, total, mg/L (00689)
	11-23-2009	.112	.25	E .004	<.03	.014	.023	1.1	<1.1
02-22-2010	.148	.44	<.010	.07	E .006	.024	.76	.83	1.07
05-17-2010	.122	.46	--	.06	E .006	.021	.77	.83	.73
09-02-2010	.086	.20	--	.05	<.008	.021	.43	.48	.57

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

**WATER-QUALITY DATA
WATER YEAR OCTOBER
2009 TO SEPTEMBER
2010**

Part 5 of 5
 [%; percent; ANC, acid
 neutralizing capacity;
 CaCO_3 , calcium carbonate;
 N, nitrogen; NTRU,
 nephelometric turbidity
 ratio unit; P, phosphorus;
 SiO_2 , silicon dioxide; cm,
 centimeter; ft^3/s , cubic
 feet per second; mg/L,
 milligrams per liter; mm
 Hg, millimeters of
 mercury; nm, nanometers;
 $^{\circ}\text{C}$, degrees Celsius;
 $\mu\text{S}/\text{cm}$, microsiemens per
 centimeter; <, less than; E,
 estimated]

Date	Organic carbon, water, filtered, mg/L (00681)
11-23-2009	3.7
02-22-2010	3.2
05-17-2010	3.5
09-02-2010	2.0