



Water-Data Report 2010

**01380100 BEAVER BROOK AT ROCKAWAY, NJ**

PASSAIC RIVER BASIN

LOCATION.--Lat 40°54'08", long 74°30'05" referenced to North American Datum of 1983, Rockaway Borough, Morris County, NJ, Hydrologic Unit 02030103, at bridge on Gill Avenue in Rockaway, 0.2 mi above mouth, and 1.5 mi northwest of Denville.

DRAINAGE AREA.--22.2 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Miscellaneous and occasional low-flow measurements, water years 1963-64, 1985-86, and 1998 to current year.

GAGE.--Staff gage.

REMARKS.--Flow regulated by Splitrock Reservoir (see 01379990).

**DISCHARGE MEASUREMENTS  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

<b>Date</b>	<b>Discharge, in ft<sup>3</sup>/s</b>
Nov 18, 2009	23.4
Feb 9, 2010	37.1
Jun 10, 2010	13.5
Jun 28, 2010	4.19
Aug 11, 2010	1.38
Aug 24, 2010	17.7

**01380100 BEAVER BROOK AT ROCKAWAY, NJ—Continued****WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1998 to current year.

REMARKS.--Cooperative Network Site Descriptor: Undeveloped Land Use Indicator, NJ Department of Environmental Protection Watershed Management Area 6.

COOPERATION.--Physical measurements and samples for laboratory analysis were collected in cooperation with 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 2009 TO SEPTEMBER 2010**

Part 1 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; ft<sup>3</sup>/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; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Absorbance, UV, 254 nm, 1 cm path length, water, filtered, units per centimeter (50624)	Absorbance, UV, organic constituents, 280 nm, 1 cm path length, water, filtered, units per centimeter (61726)	Discharge, instantaneous, ft <sup>3</sup> /s (00061)
11-18-2009	1130	Surface water	Regular	760	12.0	.133	.104	23
02-09-2010	1020	Surface water	Replicate	747	.0	.073	.055	37
02-09-2010	1020	<i>QC sample - Surface water</i>	<i>Split Replicate</i>	--	--	--	--	--
			<i>Concurrent</i>					
02-09-2010	1021	<i>QC sample - Surface water</i>	<i>Replicate</i>	--	--	--	--	--
06-10-2010	1200	Surface water	Regular	740	22.0	.184	.147	14
08-24-2010	1130	Surface water	Regular	744	20.5	.199	.155	18

## 01380100 BEAVER BROOK AT ROCKAWAY, NJ—Continued

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

Part 2 of 5

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Date	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, μS/cm at 25 °C (00095)	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broadband light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Dissolved solids, water, filtered, sum of constituents, milligrams per liter (70301)	Hardness, water, mg/L as CaCO <sub>3</sub> (00900)
11-18-2009	11.5	98	7.2	220	8.1	4.9	125	E 115	54.0
02-09-2010	14.2	98	7.1	220	.3	3.0	114	E 113	49.2
02-09-2010	--	--	--	--	--	--	130	109	50.2
02-09-2010	--	--	--	--	--	--	140	111	52.7
06-10-2010	8.2	85	7.7	225	17.2	10	130	119	54.7
08-24-2010	7.6	83	7.1	202	19.4	3.8	111	E 109	51.9

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

Part 3 of 5

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Date	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO <sub>3</sub> (90410)	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)
11-18-2009	< 1	13.8	4.73	1.15	18.7	36	.23	35.7	.09	< .06
02-09-2010	E 1	13.0	4.08	.89	17.8	30	.39	36.0	E .06	< .06
02-09-2010	< 10	13.0	4.30	.93	19.0	29	--	40.0	.10	--
02-09-2010	< 10	14.0	4.30	.88	19.0	31	--	40.0	.10	--
06-10-2010	5	13.9	4.87	.96	19.9	37	.62	39.6	.08	< .06
08-24-2010	2	13.4	4.46	1.27	18.9	32	.57	33.2	E .08	< .06

## 01380100 BEAVER BROOK AT ROCKAWAY, NJ—Continued

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

Part 4 of 5

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Date	Silica, water, filtered, mg/L as SiO <sub>2</sub> (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	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)	Phosphorus, water, filtered, mg/L as P (00666)
11-18-2009	8.9	9.51	.24	--	< .010	.07	E .009	< .03	.015
02-09-2010	8.8	13.2	.18	--	.036	.28	E .004	.04	E .006
02-09-2010	--	13.0	E .13	E .12	< .050	.290	< .010	--	< .050
02-09-2010	--	13.0	E .11	E .12	< .050	.300	< .010	--	< .050
06-10-2010	8.2	7.78	.31	--	.051	.28	--	.06	.028
08-24-2010	7.7	9.90	.32	--	.023	.10	--	.05	.028

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

Part 5 of 5

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Date	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, filtered, mg/L (00602)	Total nitrogen, water, unfiltered, mg/L (00600)	Boron, water, filtered, μg/L (01020)	Organic carbon, suspended sediment, total, mg/L (00689)	Organic carbon, water, filtered, mg/L (00681)
11-18-2009	.026	.31	< .35	--	.23	3.4
02-09-2010	.017	.46	.50	--	.39	2.3
02-09-2010	< .050	E .42	E .41	< 10	--	2.2
02-09-2010	< .050	E .41	E .42	< 10	--	2.3
06-10-2010	.050	.60	.66	--	.62	3.4
08-24-2010	.046	.41	.47	--	.56	4.6