



Water-Data Report 2010

01407280 BIG BROOK AT ROUTE 79 AT MARLBORO, NJ

SHREWSBURY RIVER BASIN

LOCATION.--Lat 40°19'26", long 74°14'40" referenced to North American Datum of 1983, Marlboro Township, Monmouth County, NJ, Hydrologic Unit 02030104, at bridge on North Main Street (State Route 79) 0.6 mi north of Marlboro, 2.0 mi east of Claytons Corner, and 4.7 mi upstream from Swimming River Reservoir.

DRAINAGE AREA.--2.58 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2009-10.

REMARKS.--Cooperative Network Site Descriptor: Statewide Status, NJ 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 6

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; 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	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)	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)
11-12-2009	0900	765	8.0	.054	.042	11.1	97	7.5	345
02-22-2010	0930	759	2.5	.047	.038	13.1	97	7.5	405
05-24-2010	0900	767	15.0	.092	.072	8.3	84	7.6	311
08-12-2010	0800	757	24.0	.061	.047	7.7	86	7.7	358

01407280 BIG BROOK AT ROUTE 79 AT MARLBORO, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 6

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Date	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band 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 constit- uents, 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)	Magne- sium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)
11-12-2009	9.1	5.5	220	199	124	< 1	42.9	3.97	3.66
02-22-2010	2.2	5.9	236	216	93.2	3	31.4	3.59	2.70
05-24-2010	15.0	9.1	185	171	94.1	7	32.3	3.28	3.04
08-12-2010	21.1	4.7	248	208	125	1	44.0	3.75	3.77

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 6

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Date	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO ₃ (90410)	Carbon plus (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)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia, water, filtered, mg/L as N (00608)
11-12-2009	17.0	56	.33	38.3	.28	< .06	14.6	43.0	.18	.024
02-22-2010	33.3	36	.48	66.4	.23	< .06	10.8	41.4	.28	.057
05-24-2010	18.8	47	.76	37.0	.27	< .06	11.5	33.6	.25	.033
08-12-2010	15.8	58	.42	37.6	.36	E .03	16.4	48.8	.15	.011

01407280 BIG BROOK AT ROUTE 79 AT MARLBORO, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 6

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Date	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phosphorus, 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)	Barium, water, unfiltered, recoverable, μg/L (01007)	Beryllium, water, unfiltered, recoverable, μg/L (01012)
11-12-2009	.42	.011	E .03	.012	.046	.60	E .63	--	--
02-22-2010	.95	< .010	.04	E .008	.059	1.2	1.3	21.0	< .04
05-24-2010	.71	--	.09	.020	.092	.97	1.1	--	--
08-12-2010	.51	--	.06	.040	.067	.65	.71	21.1	< .04

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 5 of 6

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Date	Cadmium, water, unfiltered, μg/L (01027)	Chromium, water, unfiltered, recoverable, μg/L (01034)	Copper, water, unfiltered, recoverable, μg/L (01042)	Iron, water, unfiltered, recoverable, μg/L (01045)	Lead, water, unfiltered, recoverable, μg/L (01051)	Manganese, water, unfiltered, recoverable, μg/L (01055)	Mercury, water, unfiltered, recoverable, μg/L (71900)	Nickel, water, unfiltered, recoverable, μg/L (01067)	Silver, water, unfiltered, recoverable, μg/L (01077)	Zinc, water, unfiltered, recoverable, μg/L (01092)
11-12-2009	--	--	--	--	--	--	--	--	--	--
02-22-2010	.05	E .29	E .91	1,200	.26	140	< .010	4.2	< .02	18.3
05-24-2010	--	--	--	--	--	--	--	--	--	--
08-12-2010	< .04	< .42	< 1.4	569	.12	39.9	< .010	1.7	E .02	2.6

WATER-QUALITY DATA
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Part 6 of 6

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Date	Arsenic, water, filtered, μg/L (01000)	Arsenic, water, unfiltered, μg/L (01002)	Boron, water, unfiltered, recoverable, micrograms per liter (01022)	Selenium, water, unfiltered, μg/L (01147)	Organic carbon, suspended sediment, total, mg/L (00689)	Organic carbon, water, filtered, mg/L (00681)
11-12-2009	--	--	--	--	.33	2.3
02-22-2010	.45	.85	26	E .07	.46	1.4
05-24-2010	--	--	--	--	.74	2.5
08-12-2010	.70	1.4	31	< .10	.39	2.0