



Water-Data Report 2010

**01401400 HEATHCOTE BROOK AT KINGSTON, NJ**

RARITAN RIVER BASIN

LOCATION.--Lat 40°22'10", long 74°36'58" referenced to North American Datum of 1983, South Brunswick Township, Middlesex County, NJ, Hydrologic Unit 02030105, at bridge on Mapleton Road, at abandoned railroad bridge, 0.3 mi south of Kingston, and 0.4 mi upstream from mouth.

DRAINAGE AREA.--9.00 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Miscellaneous measurements, water years 1971-72, 1979-84, 1989, 1991-92, 1998 to current year.

GAGE.--Reference point only.

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

<b>Date</b>	<b>Discharge, in ft<sup>3</sup>/s</b>
Nov 17, 2009	4.94
Feb 8, 2010	6.71
Jun 3, 2010	5.75
Jun 14, 2010	4.87
Aug 4, 2010	1.94

## 01401400 HEATHCOTE BROOK AT KINGSTON, NJ—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976-82, 1998 to current year.

REMARKS.--Cooperative Network Site Descriptor: Mixed Land Use Indicator, New Jersey Department of Environmental Protection Watershed Management Area 10.

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)
11-17-2009	0810	Surface water	Replicate	770	10.0	.179	.138	4.9
			<i>Split</i>					
11-17-2009	0810	<i>QC sample - Surface water</i>	<i>Replicate</i>	--	--	--	--	--
			<i>Concurrent</i>					
11-17-2009	0811	<i>QC sample - Surface water</i>	<i>Replicate</i>	--	--	--	--	--
02-08-2010	1110	Surface water	Regular	759	2.0	.064	.049	6.7
06-03-2010	0810	Surface water	Replicate	754	28.0	.213	.166	5.8
			<i>Split</i>					
06-03-2010	0810	<i>QC sample - Surface water</i>	<i>Replicate</i>	--	--	--	--	--
			<i>Concurrent</i>					
06-03-2010	0811	<i>QC sample - Surface water</i>	<i>Replicate</i>	--	--	--	--	--
08-04-2010	1300	Surface water	Regular	753	23.5	.061	.047	1.9

## 01401400 HEATHCOTE BROOK AT KINGSTON, NJ—Continued

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

Part 2 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	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, 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 constituents, milligrams per liter (70301)	Hardness, water, mg/L as CaCO <sub>3</sub> (00900)
11-17-2009	9.7	86	6.7	318	9.8	3.3	179	173	84.9
11-17-2009	--	--	--	--	--	--	220	159	80.4
11-17-2009	--	--	--	--	--	--	210	161	80.4
02-08-2010	12.9	90	6.7	1,200	.8	6.7	647	E 588	119
06-03-2010	7.0	74	6.9	328	18.7	5.2	201	174	82.0
06-03-2010	--	--	6.9	--	--	5.2	210	157	77.5
06-03-2010	--	--	6.9	--	--	5.3	210	158	77.9
08-04-2010	9.1	102	6.6	351	20.9	1.4	217	183	90.8

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

Part 3 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	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)
11-17-2009	3	20.1	8.42	3.01	23.9	40	.20	55.0	< .08	< .06
11-17-2009	< 10	19.0	8.00	2.90	23.0	40	--	58.0	.10	--
11-17-2009	< 10	19.0	8.00	2.90	23.0	43	--	58.0	.10	--
02-08-2010	6	28.2	11.9	2.81	158	33	.41	320	< .08	< .06
06-03-2010	2	19.0	8.38	2.79	26.6	36	.36	60.4	.12	< .06
06-03-2010	< 10	18.0	7.90	2.70	27.0	37	--	55.0	.08	--
06-03-2010	< 10	18.0	8.00	2.70	27.0	38	--	55.0	.08	--
08-04-2010	3	21.3	9.15	3.13	23.4	27	.15	69.3	< .08	< .06

## 01401400 HEATHCOTE BROOK AT KINGSTON, NJ—Continued

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

Part 4 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	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)
11-17-2009	14.8	13.8	.33	--	.024	2.14	.010	E .03	.019
11-17-2009	--	14.0	E .29	E .32	< .050	2.20	.032	--	< .050
11-17-2009	--	14.0	E .27	E .34	.050	2.30	.032	--	< .050
02-08-2010	14.3	21.7	.23	--	.054	2.60	E .005	.04	E .008
06-03-2010	12.4	10.3	.42	--	.057	2.73	--	.04	.033
06-03-2010	--	11.0	E .24	E .41	< .050	3.00	< .010	--	< .050
06-03-2010	--	11.0	E .27	E .36	< .050	3.00	< .010	--	< .050
08-04-2010	12.6	4.71	.20	--	< .010	5.22	--	E .02	.009

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

Part 5 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	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)
11-17-2009	.029	2.5	E 2.5	--	.20	4.3
11-17-2009	< .050	2.5	E 2.5	30	--	4.7
11-17-2009	< .050	E 2.6	2.6	30	--	4.9
02-08-2010	.018	2.8	2.9	--	.41	1.8
06-03-2010	.046	3.2	3.2	--	.36	4.2
06-03-2010	.079	E 3.2	E 3.4	20	--	4.9
06-03-2010	< .050	3.3	3.4	20	--	5.0
08-04-2010	.012	5.4	E 5.4	--	.15	1.7