

Water-Data Report 2010

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ

PASSAIC RIVER BASIN

LOCATION.--Lat 41°04'40", long 74°29'23" referenced to North American Datum of 1983, West Milford Township, Passaic County, NJ, Hydrologic Unit 02030103, on upstream right abutment of southbound bridge on State Route 23, 0.6 mi upstream of Oak Ridge Reservoir, and 2.2 mi north of Oak Ridge.

DRAINAGE AREA.--19.3 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, water years 2001-02, 2005. Continuous-record gaging station, May 2008 to current year.

REVISED RECORDS.--WDR US-2010: 2009(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 880 ft NAVD 88 (from topographic map).

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Flow regulated by Canistear Reservoir (see 01382100) and other small upstream lakes and ponds. Several measurements of water temperature were made during the water year. Satellite telemetry at station.

REVISIONS.--The maximum discharge for the water year 2009 has been revised to 481 ft³/s, Dec 12, 2008, gage height, 5.95 ft.

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued

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

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4.1	40	32	70	e62	30	293	41	10	2.3	48	3.2
2	3.4	31	29	65	e52	27	189	37	9.4	2.0	48	2.5
3	4.5	25	128	e54	47	27	146	65	8.8	1.7	48	1.5
4	8.6	27	103	e44	45	27	115	72	7.7	1.6	47	1.5
5	7.1	21	72	e42	40	27	96	47	6.9	1.4	47	1.1
6	4.7	20	73	e41	38	27	84	35	7.2	1.2	46	0.90
7	4.9	18	57	40	e34	29	72	30	8.2	1.1	44	0.74
8	5.4	16	50	37	e32	36	60	25	6.9	1.0	8.2	0.65
9	5.0	16	98	e33	e30	48	80	23	6.8	0.95	2.0	0.57
10	7.3	16	123	e31	e35	59	65	19	14	15	1.2	0.74
11	9.5	19	80	e29	e36	75	49	18	11	20	0.99	0.51
12	6.0	19	59	e27	e31	113	46	37	8.7	11	0.95	0.54
13	4.8	19	68	e26	e26	443	37	37	11	6.7	1.2	1.1
14	3.8	28	121	e25	e25	e1,540	35	28	19	6.9	0.93	2.9
15	4.8	31	105	e24	e24	e750	34	24	13	21	0.86	1.8
16	18	29	94	26	e26	460	33	19	8.9	52	2.6	1.8
17	15	25	75	30	e26	319	35	18	20	51	1.8	1.5
18	15	21	60	52	25	240	32	29	15	50	1.1	2.0
19	12	20	e50	44	23	194	29	63	9.6	52	0.78	1.7
20	8.7	55	e55	36	22	165	26	41	7.4	52	0.60	0.80
21	5.0	45	50	31	21	136	24	28	6.3	50	0.53	0.67
22	4.8	34	44	27	21	142	23	20	5.9	50	5.6	0.67
23	5.6	30	e38	26	22	456	22	20	7.5	51	22	1.5
24	26	28	e37	e37	33	287	19	19	6.5	53	15	1.3
25	57	26	35	204	33	176	64	18	5.1	54	23	1.2
26	30	28	70	366	e44	162	105	15	4.3	53	24	1.1
27	24	26	250	170	e36	129	127	14	3.8	50	9.5	1.2
28	75	23	180	116	e32	99	80	25	3.7	49	5.4	4.4
29	95	22	108	e85	---	200	57	20	3.6	49	3.5	4.0
30	55	24	e74	e75	---	308	47	16	2.8	49	2.5	13
31	40	---	e70	e68	---	589	---	13	---	48	2.0	---
Total	570.0	782	2,488	1,981	921	7,320	2,124	916	259.0	906.85	464.24	57.09
Mean	18.4	26.1	80.3	63.9	32.9	236	70.8	29.5	8.63	29.3	15.0	1.90
Max	95	55	250	366	62	1,540	293	72	20	54	48	13
Min	3.4	16	29	24	21	27	19	13	2.8	0.95	0.53	0.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2008 - 2010, BY WATER YEAR (WY)

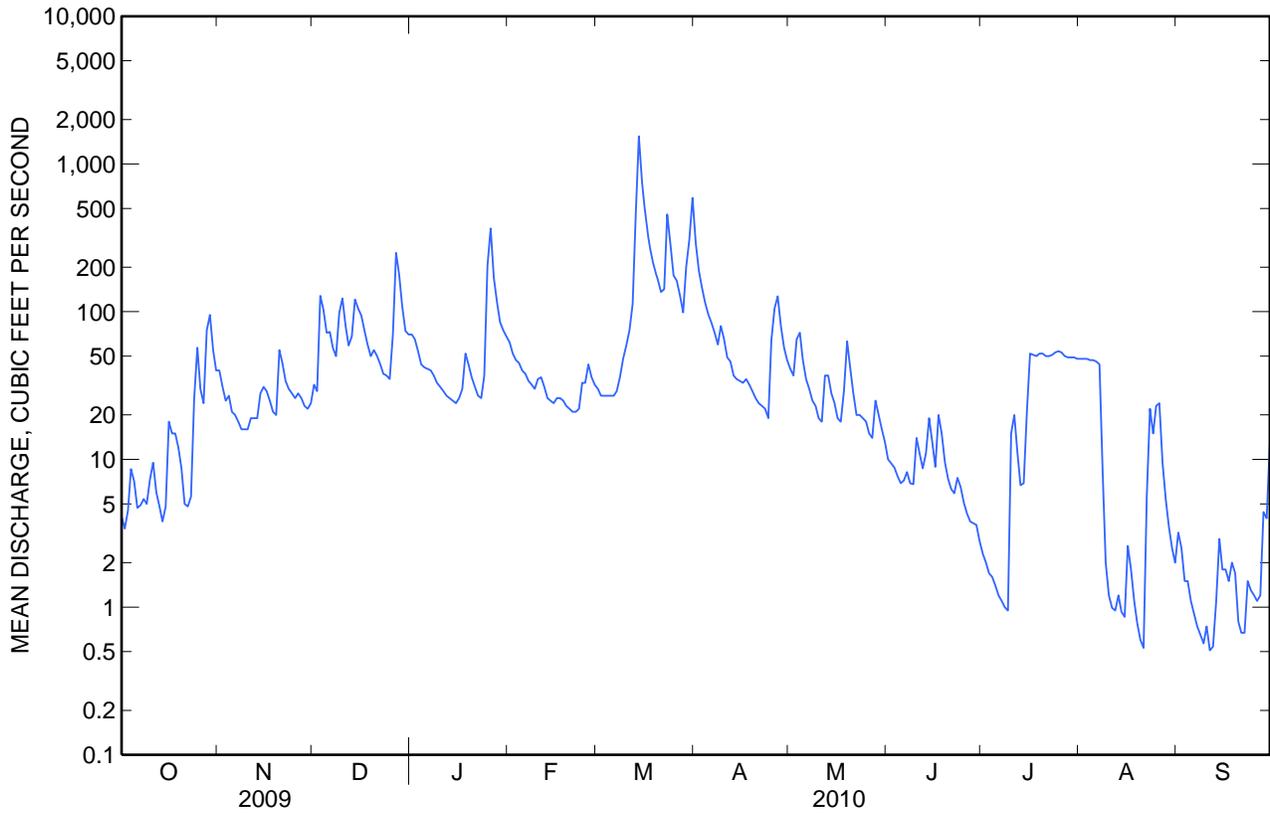
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	23.2	34.0	87.6	50.2	31.3	132	53.6	33.9	23.1	18.0	16.2	10.2
Max	27.9	42.0	94.9	63.9	32.9	236	70.8	39.3	48.8	29.3	23.9	20.0
(WY)	(2009)	(2009)	(2009)	(2010)	(2010)	(2010)	(2010)	(2008)	(2009)	(2010)	(2009)	(2008)
Min	18.4	26.1	80.3	36.6	29.7	28.6	36.4	29.5	8.63	4.14	9.69	1.90
(WY)	(2010)	(2010)	(2010)	(2009)	(2009)	(2009)	(2009)	(2010)	(2010)	(2008)	(2008)	(2010)

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued

SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 2008 - 2010	
Annual total	11,905.5		18,789.18			
Annual mean	32.6		51.5		43.7	
Highest annual mean					51.5	2010
Lowest annual mean					36.0	2009
Highest daily mean	250	Dec 27	^a 1,540	Mar 14	^a 1,540	Mar 14, 2010
Lowest daily mean	3.4	Oct 2	0.51	Sep 11	0.51	Sep 11, 2010
Annual seven-day minimum	5.3	Oct 1	0.66	Sep 6	0.66	Sep 6, 2010
Maximum peak flow			^a 1,740	Mar 14	^a 1,740	Mar 14, 2010
Maximum peak stage			^a 8.50	Mar 14	^a 8.50	Mar 14, 2010
Instantaneous low flow			0.47	Aug 21	0.47	Aug 21, 2010
10 percent exceeds	66		104		81	
50 percent exceeds	25		27		26	
90 percent exceeds	7.8		1.7		5.0	

^a Estimated.



01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 2009 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 2009 to current year.

INSTRUMENTATION.--Electronic data logger with integral water temperature probe since July, 2009. Water temperature measurements, in degrees Celsius, recorded at 15-minute intervals.

REMARKS.--Cooperative Network Site Descriptor: Statewide Status, NJ Department of Environmental Protection Watershed Management Area 3.

The accuracy of continuous water-quality data is routinely verified through inspections for fouling and calibration drift. The New Jersey Water Science Center requires that either constant or prorated adjustments be made to the continuous water-quality record when the difference between a sensor's response and a known value exceeds the following criteria: Water Temperature, 0.2 degrees Celsius (+ or -). If the difference between a sensor's response and a known value is within specified criteria, the data are considered to be reliable and are not adjusted. Data from the following periods were adjusted - none.

COOPERATION.--Discrete 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. Continuous records collected in cooperation with the City of Newark.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 28.5°C, Jul 7, 2010; minimum, -0.1°C, on many days during winter.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 28.5°C, Jul 7; minimum, -0.1°C, on many days during winter.

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, organic constituents, 254 nm, 1 cm path length, water, filtered, units per centimeter		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)
				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)				
12-10-2009	0900	725	2.5	.180	.140	10.9	79	7.4	137
03-10-2010	1000	738	10.0	.135	.105	14.3	104	7.6	195
06-17-2010	0915	736	20.5	.266	.210	8.5	90	7.9	212
08-09-2010	1045	740	33.0	.153	.117	9.6	106	7.8	207

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 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	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)
12-10-2009	2.0	2.2	75	E 74	35.2	4	8.47	3.40	.54
03-10-2010	1.9	2.0	117	E 101	43.3	2	10.6	4.12	.58
06-17-2010	18.3	8.9	132	114	61.8	10	15.5	5.59	.68
08-09-2010	20.3	1.6	129	106	54.6	1	13.6	5.00	.65

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 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	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)
12-10-2009	11.5	28	.31	20.2	E .06	< .06	7.2	5.72	.23	.022
03-10-2010	17.6	34	.16	33.5	E .05	< .06	7.3	6.46	.21	.014
06-17-2010	17.6	53	.96	29.7	.14	< .06	7.9	4.47	.30	.015
08-09-2010	17.4	45	.18	31.5	.09	< .06	5.7	5.25	.21	.019

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 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	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)
12-10-2009	.06	E .006	E .03	.008	.016	.30	E .32	--	--
03-10-2010	.13	E .006	E .02	E .008	.013	.34	E .36	8.1	< .04
06-17-2010	.11	--	.07	.021	.052	.42	.49	--	--
08-09-2010	.06	--	E .03	E .007	.014	.28	E .30	8.3	< .04

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 5 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	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)
12-10-2009	--	--	--	--	--	--	--	--	--	--
03-10-2010	E .02	< .42	< 1.4	271	.20	35.2	< .010	E .25	< .02	E 1.8
06-17-2010	--	--	--	--	--	--	--	--	--	--
08-09-2010	< .04	< .42	E .70	387	.11	45.2	< .010	E .24	< .02	< 2.0

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 6 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	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)
12-10-2009	--	--	--	--	.31	4.3
03-10-2010	.19	.28	< 14	< .10	.16	3.1
06-17-2010	--	--	--	--	.96	5.4
08-09-2010	.32	.48	< 14	E .08	.18	3.8

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 1 of 5

[<, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Moisture content, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, percent (49282)	pH, bed sediment, standard units (70310)	Carbon (inorganic plus organic), bed sediment, total, dry weight, grams per kilogram (00693)	Inorganic carbon, bed sediment, total, dry weight, grams per kilogram (00686)	Phosphorus, bed sediment, total, dry weight, milligrams per kilogram as phosphorus (00668)	Cadmium, bed sediment, recoverable, dry weight, milligrams per kilogram (01028)	Chromium, bed sediment, recoverable, dry weight, milligrams per kilogram (01029)	Cobalt, bed sediment, recoverable, dry weight, milligrams per kilogram (01038)	Copper, bed sediment, recoverable, dry weight, milligrams per kilogram (01043)
08-09-2010	1030	16	7.40	1.3	< .2	560	.070	6.4	2.9	< 10

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 5

[<, less than; E, estimated; M, presence verified but not quantified]

Date	Iron, bed sediment, total digestion, dry weight, milligrams per kilogram (01170)	Lead, bed sediment, recoverable, dry weight, milligrams per kilogram (01052)	Manganese, bed sediment, recoverable, dry weight, milligrams per kilogram (01053)	Mercury, bed sediment, recoverable, dry weight, milligrams per kilogram (71921)	Nickel, bed sediment, recoverable, dry weight, milligrams per kilogram (01068)	Zinc, bed sediment, recoverable, dry weight, milligrams per kilogram (01093)	Arsenic, bed sediment, recoverable, dry weight, milligrams per kilogram (64847)	Selenium, bed sediment, recoverable, dry weight, milligrams per kilogram (64848)	p-Cresol, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49451)	PCBs, bed sediment, recoverable, dry weight, micrograms per kilogram (39519)
08-09-2010	16,000	5.4	530	< .007	4.0	52	3.8	< .1	< 50	< 5.00

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 5

[<, less than; E, estimated; M, presence verified but not quantified]

Date	1,2-Dimethylnaphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49403)	1,6-Dimethylnaphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49404)	1-Methyl-9H-fluorene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49398)	1-Methylphenanthrene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49410)	1-Methylpyrene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49388)	2,3,6-Trimethylnaphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49405)	2,6-Dimethylnaphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49406)	2-Ethyl-naphthalene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49948)	2-Methylanthracene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49435)	4H-Cyclopenta[def]phenanthrene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49411)
08-09-2010	< 50	< 50	< 50	M	E 2	< 50	< 50	< 50	< 50	M

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 5

[<, less than; E, estimated; M, presence verified but not quantified]

Date	9H-Fluorene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49399)	Acenaphthene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49429)	Acenaphthylene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49428)	Anthracene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49434)	Benzo[a]anthracene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49436)	Benzo[a]pyrene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49389)	Benzo[b]fluoranthene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49458)	Benzo[ghi]perylene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49408)	Benzo[k]fluoranthene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49397)	Chrysene, bed sediment smaller than 2 millimeters, wet sieved (native water), field, recoverable, dry weight, micrograms per kilogram (49450)
08-09-2010	< 50	< 50	E 3	E 2	< 50	E 15	E 19	E 4	E 8	E 8

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 5 of 5

[<, less than; E, estimated; M, presence verified but not quantified]

Date	Dibenzo[a, h]anthracene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49461)	Fluoranthene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49466)	Indeno[1,2, 3- cd]pyrene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49390)	Isophorone, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49400)	Naphthalene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49402)	Phenanthrene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49409)	Phenanthridine, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49393)	Pyrene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49387)	Bed sediment, dry sieved, sieve diameter, percent smaller than 0.0625 millimeter s (80164)
	08-09-2010	< 50	E 14	E 5	< 50	< 50	E 2	< 50	E 14

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	11.9	10.4	11.1	12.6	9.8	11.5	5.4	4.2	4.7	1.1	0.3	0.7
2	12.0	9.1	10.6	9.8	8.5	9.2	5.9	3.1	4.1	0.6	-0.1	0.2
3	14.5	12.0	13.2	8.9	7.1	8.1	9.3	5.9	8.2	-0.1	-0.1	-0.1
4	15.2	13.0	14.1	7.8	6.5	7.2	8.0	6.0	6.6	-0.1	-0.1	-0.1
5	14.3	12.2	13.2	7.9	6.7	7.3	6.0	3.1	4.7	-0.1	-0.1	-0.1
6	13.0	10.2	11.9	7.0	5.6	6.4	3.1	2.4	2.8	0.0	-0.1	0.0
7	14.4	12.3	13.2	5.7	4.2	5.1	2.6	1.7	2.2	0.5	0.0	0.2
8	13.1	10.9	12.0	7.1	4.8	6.1	3.0	2.0	2.5	0.7	-0.1	0.3
9	13.5	11.8	12.5	8.2	5.5	7.1	2.9	0.4	1.5	-0.1	-0.1	-0.1
10	14.1	11.4	13.2	9.8	8.0	8.9	2.7	1.3	2.1	-0.1	-0.1	-0.1
11	12.3	9.5	10.9	9.3	8.2	8.9	1.3	0.1	0.5	-0.1	-0.1	-0.1
12	10.4	8.6	9.6	8.2	6.8	7.5	1.0	0.0	0.4	0.0	-0.1	-0.1
13	11.8	9.2	10.2	7.9	6.5	7.3	1.2	0.1	0.7	0.3	-0.1	0.0
14	10.1	7.5	8.8	9.3	7.9	8.6	2.6	1.0	1.8	0.5	-0.1	0.1
15	8.6	5.9	7.3	10.9	9.3	10.1	3.5	2.6	3.0	1.0	-0.1	0.4
16	6.5	5.4	6.0	10.2	8.5	9.4	2.9	0.7	1.7	1.1	0.3	0.6
17	7.4	6.1	6.6	8.5	7.2	8.0	0.7	-0.1	0.4	0.7	0.1	0.4
18	7.1	6.0	6.7	7.2	5.6	6.6	0.5	-0.1	0.1	1.1	0.3	0.6
19	7.2	4.8	6.0	9.1	6.8	7.8	0.3	-0.1	0.1	1.0	0.3	0.7
20	8.8	5.2	7.0	10.3	8.7	9.7	0.1	-0.1	0.0	1.3	0.5	0.9
21	10.4	7.2	8.7	8.7	7.2	7.9	0.5	0.0	0.1	1.1	-0.1	0.5
22	11.6	8.3	9.8	7.2	6.1	6.7	0.7	-0.1	0.2	1.4	-0.1	0.6
23	10.5	9.6	10.1	7.2	6.1	6.7	0.1	-0.1	-0.1	1.0	-0.1	0.3
24	12.7	9.6	11.0	8.5	7.1	7.7	0.5	-0.1	0.1	1.2	-0.1	0.4
25	12.5	10.9	11.7	8.1	7.4	7.7	0.9	0.0	0.5	2.8	1.2	2.1
26	10.9	8.9	9.8	9.0	8.0	8.4	1.0	0.5	0.7	2.0	1.0	1.6
27	9.7	8.8	9.3	8.2	6.4	7.5	1.1	0.4	0.7	1.4	0.3	0.8
28	10.7	9.7	10.2	6.4	5.6	6.1	1.2	0.2	0.7	1.7	-0.1	0.7
29	11.7	10.0	10.8	6.0	4.5	5.4	0.2	-0.1	0.0	-0.1	-0.1	-0.1
30	11.2	10.7	11.0	6.8	5.4	6.2	0.0	-0.1	0.0	-0.1	-0.1	-0.1
31	12.8	11.0	11.8	---	---	---	0.6	-0.1	0.2	-0.1	-0.1	-0.1
Month	15.2	4.8	10.3	12.6	4.2	7.7	9.3	-0.1	1.7	2.8	-0.1	0.4

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	0.0	-0.1	-0.1	1.6	-0.1	0.7	12.2	6.3	9.0	18.2	13.2	15.7
2	0.6	-0.1	0.2	2.0	0.2	1.2	14.2	8.7	11.4	20.7	16.2	18.4
3	1.1	0.1	0.5	1.8	0.7	1.2	14.1	9.6	12.0	19.9	17.9	18.9
4	0.9	-0.1	0.3	3.1	0.7	1.8	14.4	10.3	12.4	19.0	15.8	17.5
5	0.9	-0.1	0.4	3.5	1.2	2.2	15.0	9.9	12.5	18.8	14.3	16.7
6	0.6	-0.1	0.2	3.2	0.4	1.9	15.9	11.3	13.6	19.1	16.1	17.5
7	-0.1	-0.1	-0.1	3.7	0.8	2.3	17.6	12.7	15.1	17.8	14.4	16.2
8	-0.1	-0.1	-0.1	4.1	1.3	2.7	18.0	13.6	15.9	16.9	14.7	15.8
9	1.1	-0.1	0.4	4.2	1.4	2.7	16.8	11.8	14.6	14.7	10.1	11.9
10	0.6	-0.1	0.1	3.4	1.1	2.3	13.2	9.0	11.2	12.3	8.4	10.5
11	0.1	-0.1	-0.1	3.6	1.8	2.6	13.8	10.1	12.0	11.1	8.8	10.2
12	0.6	-0.1	0.1	2.4	1.6	1.9	13.9	9.8	11.9	10.4	9.2	9.5
13	0.6	-0.1	0.1	1.6	0.8	1.0	12.3	10.1	11.0	13.8	8.3	11.0
14	1.0	-0.1	0.3	2.4	0.8	1.6	13.2	7.8	10.6	16.9	12.8	14.7
15	1.4	-0.1	0.6	2.5	2.0	2.2	13.4	9.2	11.4	17.5	14.8	16.2
16	0.7	-0.1	0.4	5.9	1.8	3.5	13.9	10.4	12.3	16.9	13.9	15.6
17	0.6	-0.1	0.2	6.8	2.0	4.3	12.6	10.0	11.4	16.1	13.2	15.0
18	1.2	0.2	0.6	7.8	2.8	5.2	11.1	8.5	9.8	15.3	12.3	13.5
19	1.9	0.3	1.0	8.6	3.6	6.1	11.8	7.9	10.1	13.9	11.8	12.8
20	2.1	0.7	1.3	9.7	4.6	7.1	13.4	8.5	11.2	18.4	13.2	15.6
21	2.3	0.3	1.3	10.3	5.8	8.0	13.8	10.2	12.3	19.2	15.6	17.6
22	2.0	0.0	1.1	9.2	7.4	8.0	14.8	11.3	13.3	19.0	16.6	17.9
23	1.3	-0.1	0.8	8.5	7.4	8.0	14.5	10.4	12.7	18.4	17.0	17.7
24	1.1	-0.1	0.5	9.6	5.7	7.5	14.8	10.1	12.8	18.9	16.9	17.8
25	0.9	-0.1	0.2	9.1	5.0	7.1	14.0	10.5	11.7	21.1	17.3	19.2
26	-0.1	-0.1	-0.1	8.8	6.4	7.6	11.0	10.2	10.6	23.1	18.5	20.9
27	0.0	-0.1	-0.1	7.2	3.4	5.4	12.6	10.4	11.2	22.8	19.7	21.5
28	0.3	-0.1	0.1	5.8	4.1	5.1	10.6	8.2	9.4	19.7	18.1	18.9
29	---	---	---	7.2	5.8	6.5	13.2	7.7	10.4	20.8	17.7	19.2
30	---	---	---	7.2	5.6	6.1	15.9	10.4	13.1	22.1	18.3	20.4
31	---	---	---	9.2	5.5	7.0	---	---	---	22.5	18.8	21.0
Month	2.3	-0.1	0.4	10.3	-0.1	4.2	18.0	6.3	11.9	23.1	8.3	16.3

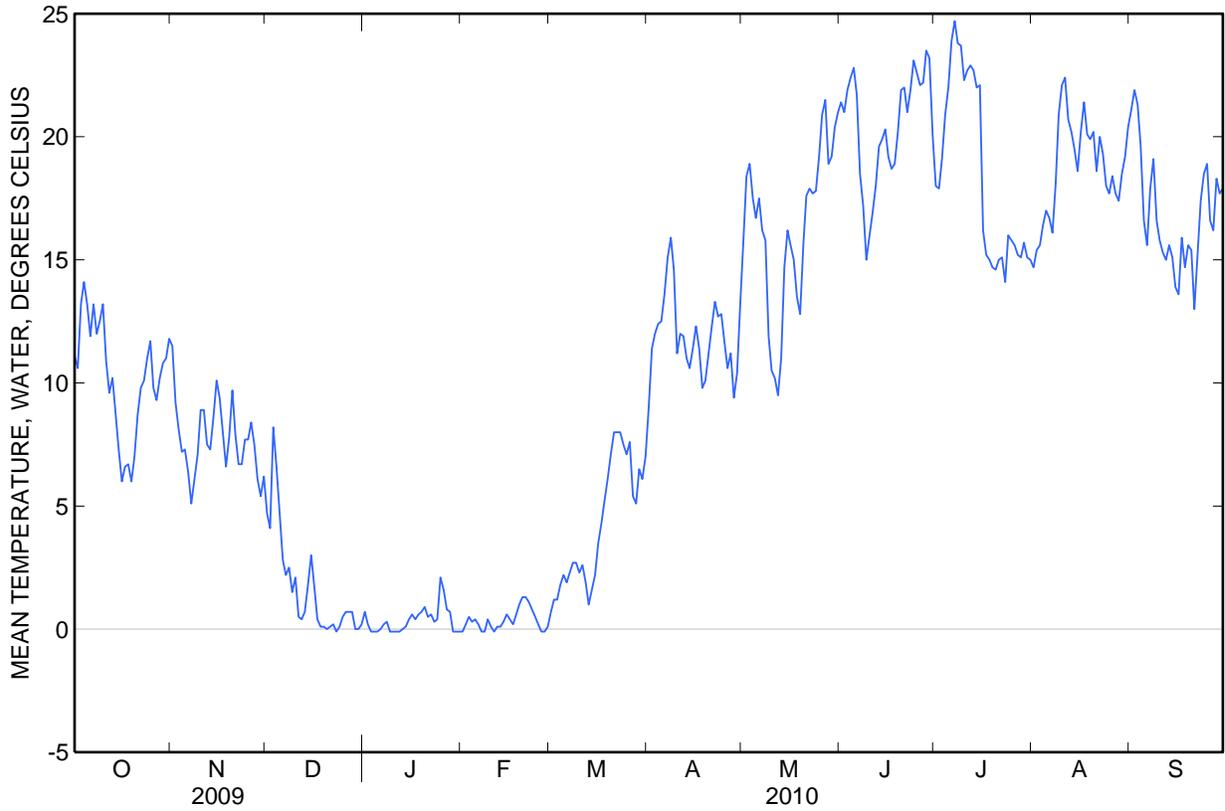
01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	22.6	20.0	21.4	20.3	15.6	18.0	15.4	13.7	14.7	23.8	18.8	21.1
2	22.7	18.7	21.0	21.2	14.8	17.9	17.2	13.9	15.4	24.5	19.8	21.9
3	23.6	20.0	21.9	23.6	15.2	19.1	16.8	14.5	15.6	22.6	20.2	21.3
4	24.0	20.4	22.4	25.2	17.3	20.9	18.0	15.0	16.4	21.2	17.2	19.6
5	24.0	21.5	22.8	26.4	18.3	22.0	18.6	15.5	17.0	18.6	14.6	16.6
6	23.2	19.0	21.7	28.3	20.6	23.9	18.1	15.4	16.7	18.5	12.7	15.6
7	20.3	16.8	18.5	28.5	21.7	24.7	18.0	14.4	16.1	21.2	15.4	17.9
8	18.8	15.4	17.2	25.8	21.9	23.8	20.4	15.7	18.1	21.5	17.7	19.1
9	16.3	14.2	15.0	26.0	21.7	23.7	24.1	18.4	20.9	17.7	15.6	16.6
10	17.7	14.5	16.0	23.4	21.2	22.3	24.4	20.4	22.1	17.1	14.7	15.8
11	18.0	15.4	16.9	24.8	20.7	22.7	25.6	19.8	22.4	17.8	13.1	15.3
12	19.7	16.3	18.0	24.3	21.1	22.9	22.6	19.4	20.7	15.6	14.6	15.0
13	20.8	19.0	19.6	23.2	22.1	22.7	22.9	18.7	20.2	18.2	14.5	15.6
14	21.1	19.0	19.9	22.6	21.6	22.0	21.8	17.7	19.5	17.3	13.4	15.1
15	21.7	18.6	20.3	25.4	17.9	22.1	19.4	17.7	18.6	15.9	12.3	13.9
16	20.3	18.5	19.2	17.9	14.4	16.2	22.2	18.5	20.2	15.4	11.5	13.6
17	19.2	18.1	18.7	16.9	13.4	15.2	24.3	19.3	21.4	17.5	14.7	15.9
18	21.1	16.4	18.9	16.8	13.2	15.0	22.3	18.2	20.1	16.6	13.3	14.7
19	21.9	17.8	20.2	16.6	12.8	14.7	23.4	16.9	19.9	18.2	13.4	15.6
20	23.9	20.4	21.9	15.8	13.3	14.6	23.2	18.1	20.2	16.9	13.8	15.4
21	24.1	20.0	22.0	17.1	13.2	15.0	21.1	16.0	18.6	15.4	10.7	13.0
22	22.2	19.8	21.0	16.9	13.4	15.1	21.1	19.4	20.0	18.7	12.7	15.2
23	23.9	20.1	21.9	15.6	13.3	14.1	19.8	18.5	19.3	19.8	15.3	17.4
24	25.2	21.6	23.1	17.9	14.3	16.0	18.5	17.6	18.0	20.9	16.6	18.5
25	24.4	20.9	22.6	17.0	14.6	15.8	18.2	17.3	17.7	20.7	17.6	18.9
26	24.9	19.7	22.1	17.3	13.9	15.6	19.7	17.2	18.4	17.9	15.1	16.6
27	24.8	20.0	22.2	17.2	13.3	15.2	18.6	16.2	17.7	17.3	15.6	16.2
28	26.2	21.7	23.5	16.8	13.5	15.1	19.2	15.3	17.4	19.2	17.3	18.3
29	25.3	21.2	23.2	17.2	14.6	15.7	21.1	16.1	18.5	19.2	16.1	17.7
30	22.8	17.7	20.1	16.8	13.4	15.1	21.9	16.8	19.2	19.2	16.9	17.9
31	---	---	---	16.9	13.2	15.0	23.4	18.1	20.4	---	---	---
Month	26.2	14.2	20.4	28.5	12.8	18.5	25.6	13.7	18.8	24.5	10.7	16.8

	Max	Min	Mean
Year	28.5	-0.1	10.6

01382170 PEQUANNOCK RIVER AT STATE ROUTE 23, NEAR OAK RIDGE, NJ—Continued



CROSS-SECTIONAL WATER-QUALITY MEASUREMENTS WITH RECORDED MONITOR VALUES, AT NOTED TIME, ON OCTOBER 4, 2010.

[Cross sectional measurements were made to document river variability and verify that recorded monitor values were representative of river conditions. Water-quality measurements acquired at increments of 2 to 5 feet. The daily mean discharge of 18 ft³/s for the Pequannock River at Route 23, near Oak Ridge on October 4, 2010 was equaled or exceeded 70 percent of the time by all daily mean discharges for the Pequannock River at Route 23, near Oak Ridge between water years 2009-2010.]

