



Water-Data Report 2010

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ

DELAWARE RIVER BASIN

LOCATION.--Lat 39°44'26", long 75°15'33" referenced to North American Datum of 1983, Harrison Township, Gloucester County, NJ, Hydrologic Unit 02040202, on right bank 25 ft downstream from bridge on County Route 607 (Tomlin Station Road), 1.8 mi west of Mullica Hill, and 2.8 mi east of Swedesboro.

DRAINAGE AREA.--26.9 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, May 1965 to April 1966. Continuous-record gaging station, May 1966 to current year.

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage and air temperature recorder and crest-stage gage. Datum of gage is 0.00 ft NGVD of 1929. Prior to Jul 28, 1969, at datum 7.96 ft higher. Jul 28, 1969 to Sep 30, 1969, at datum 5.96 ft higher.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Occasional regulation from irrigation and operation of gates at ponds upstream of gage. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 28	1615	482	12.68
Dec 3	1415	345	12.02
Dec 9	1545	797	13.67
Dec 14	0515	305	11.73
Dec 27	0100	697	13.39
Jan 25	2330	331	11.93
Feb 24	0900	376	12.20
Mar 13	2230	*886	*13.90
Mar 29	1430	387	12.26

Water-Data Report 2010

01477120 RACCOON CREEK NEAR SWEDESBORO, 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	26	49	41	88	42	83	101	45	28	23	18	11
2	25	44	38	73	41	87	76	43	27	21	18	11
3	25	41	230	55	42	85	75	47	27	20	18	11
4	24	39	83	51	42	75	70	42	26	20	18	11
5	23	38	73	50	41	69	64	39	25	19	18	11
6	22	37	131	49	48	61	62	38	24	18	18	11
7	22	36	62	48	51	53	59	37	24	18	17	11
8	22	36	49	48	44	51	55	36	23	18	17	11
9	22	e36	389	46	41	48	107	35	25	18	16	11
10	22	e36	204	42	55	59	68	35	27	21	16	11
11	21	e37	77	41	60	48	56	37	24	21	16	11
12	21	e63	60	42	51	61	53	52	23	19	17	13
13	21	65	105	41	49	343	52	46	30	24	17	12
14	21	48	204	41	46	423	53	43	45	59	16	11
15	30	42	79	41	45	260	50	99	27	35	16	11
16	34	39	60	42	48	158	50	43	25	24	18	e13
17	53	37	53	73	47	100	62	38	e25	37	16	e26
18	103	36	50	98	47	83	50	109	e23	21	18	e14
19	46	36	60	56	54	74	47	104	e23	e24	17	e11
20	33	67	105	47	61	67	46	52	e23	e24	16	e11
21	30	44	55	43	64	63	46	42	e22	e22	15	e11
22	28	38	53	42	64	94	55	37	e22	e22	40	11
23	28	36	51	39	123	192	46	38	28	20	36	16
24	44	44	49	39	332	92	42	38	34	18	15	13
25	165	42	54	166	236	70	56	36	39	41	14	13
26	51	41	370	170	135	86	145	34	24	37	14	12
27	57	38	406	67	92	70	124	33	21	e23	12	15
28	301	36	125	54	83	63	60	33	38	e21	12	14
29	141	34	78	46	---	275	51	31	57	e19	12	13
30	57	37	62	42	---	215	47	31	27	20	12	35
31	48	---	64	44	---	243	---	29	---	19	12	---
Total	1,566	1,252	3,520	1,824	2,084	3,751	1,928	1,402	836	746	535	396
Mean	50.5	41.7	114	58.8	74.4	121	64.3	45.2	27.9	24.1	17.3	13.2
Max	301	67	406	170	332	423	145	109	57	59	40	35
Min	21	34	38	39	41	48	42	29	21	18	12	11
Cfsm	1.88	1.55	4.22	2.19	2.77	4.50	2.39	1.68	1.04	0.89	0.64	0.49
In.	2.17	1.73	4.87	2.52	2.88	5.19	2.67	1.94	1.16	1.03	0.74	0.55

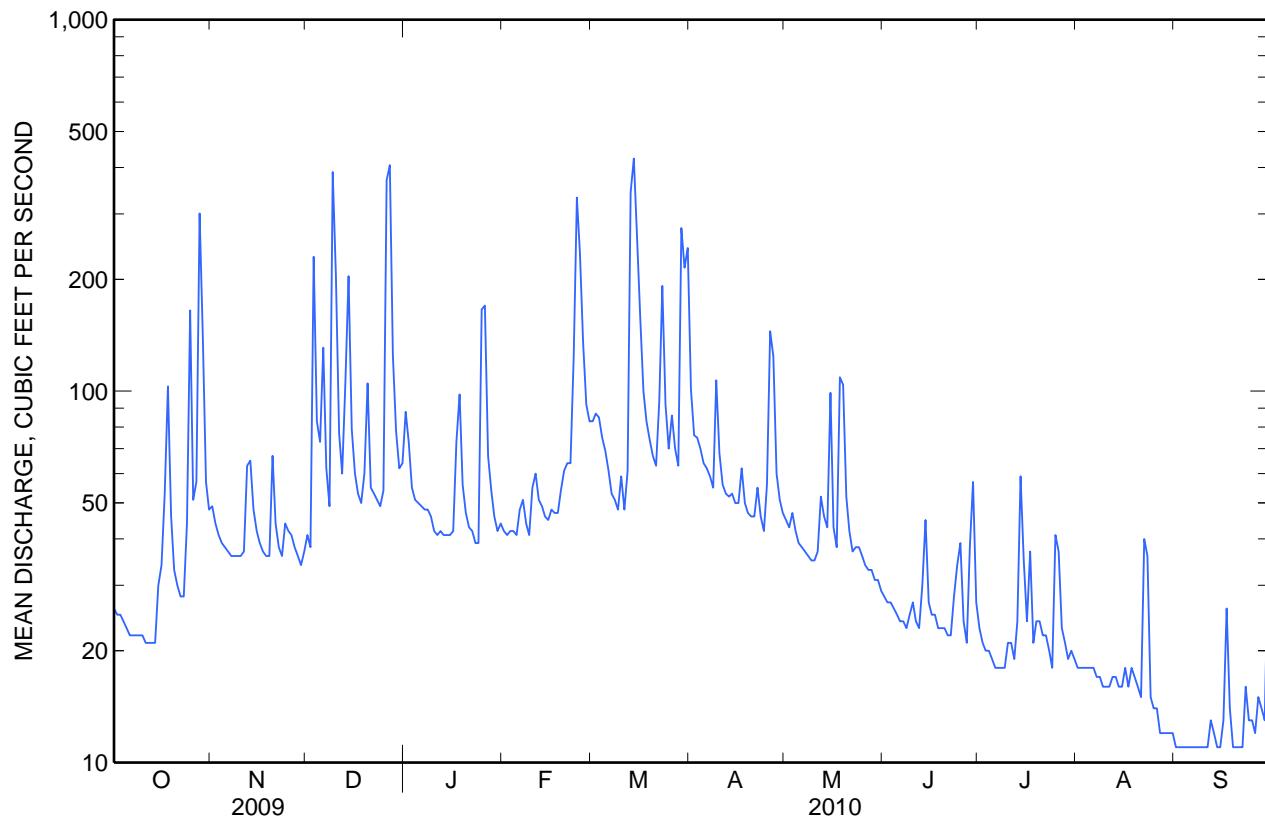
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	29.0	35.1	47.4	49.1	49.5	56.7	52.8	40.0	34.5	30.7	27.5	25.5
Max	65.2	93.9	144	123	115	132	134	72.6	95.5	112	121	71.9
(WY)	(1990)	(1973)	(1997)	(1978)	(1979)	(1994)	(1983)	(1989)	(2003)	(1975)	(1967)	(1971)
Min	13.0	15.3	16.3	20.2	16.5	22.7	21.3	15.9	10.7	6.01	5.89	8.98
(WY)	(1993)	(1999)	(1999)	(2002)	(2002)	(1981)	(1985)	(1977)	(1966)	(1966)	(1966)	(2002)

SUMMARY STATISTICS

	Calendar Year 2009	Water Year 2010		Water Years 1966 - 2010	
Annual total	16,235	19,840		40.0	
Annual mean	44.5	54.4		64.7	1973
Highest annual mean				16.5	2002
Lowest annual mean					
Highest daily mean	406	Dec 27	423	Mar 14	1,260 Aug 28, 1971
Lowest daily mean	16	Jul 11	11	Many days	2.9 Jul 14, 1966
Annual seven-day minimum	17	Jul 5	11	Sep 1	3.3 Aug 25, 1966
Maximum peak flow			886	Mar 13	3,530 Aug 10, 1967
Maximum peak stage			13.90	Mar 13	^a 17.44 Aug 10, 1967
Instantaneous low flow			10	Many days	2.9 Jul 14, 1966
Annual runoff (cfsm)	1.65		2.02		1.49
Annual runoff (inches)	22.45		27.44		20.20
10 percent exceeds	64		98		66
50 percent exceeds	30		41		29
90 percent exceeds	21		16		14

^a Adjusted to current datum.



01477120 RACCOON CREEK NEAR SWEDESBORO, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1965 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: June 1966 to September 1969.

WATER TEMPERATURE: May 1966 to September 1973, daily maximum-minimum; October 1998 to October 2001, recorded hourly.

REMARKS.--Cooperative Network Site Descriptor: Watershed Integrator, NJ Department of Environmental Protection Watershed Management Area 18.

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)	Tempera-ture, 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, instantane-ous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
12-02-2009	1000	766	10.5	.138	.112	37	11.2	92	7.2
03-09-2010	0930	762	11.0	.084	.067	49	11.5	94	7.2
06-10-2010	0930	759	19.0	.164	.131	28	8.3	88	7.2
08-11-2010	0930	758	27.5	.091	.073	16	7.7	91	7.2

**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 conduc-tance, water, µS/cm at 25 °C (00095)	Tempera-ture, 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, 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)	Magne-sium, water, filtered, mg/L (00925)
12-02-2009	229	6.7	6.1	138	E 134	69.6	8	19.4	5.11
03-09-2010	228	6.4	5.2	158	E 134	65.5	4	17.3	5.42
06-10-2010	247	17.4	8.6	160	132	74.4	9	22.3	4.55
08-11-2010	241	22.8	4.4	139	131	71.4	4	19.0	5.80

01477120 RACCOON CREEK NEAR SWEDESBORO, 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)	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO ₃ (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)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	
12-02-2009	4.58	12.4	31	E .08	26.0	.12	< .06	9.7	26.6	.82
03-09-2010	4.33	13.3	23	.32	28.8	E .08	< .06	7.9	28.6	.25
06-10-2010	3.95	12.3	38	.51	25.9	.18	< .06	9.6	23.8	.38
08-11-2010	4.94	10.8	37	.23	26.0	.16	< .06	9.1	22.6	.26

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	Nitrate plus nitrite, water, filtered, mg/L as N (00608)		Orthophos- phate, water, filtered, mg/L as P (00631)	Particulate nitrogen, suspended sediment, mg/L (00671)	Phosphorus, water, filtered, mg/L as P (49570)	Phosphorus, water, unfiltered, 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)
12-02-2009	.054	2.64	E .008	< .03	.030	.072	3.5	< 3.5	< .12	
03-09-2010	.036	3.25	E .009	E .03	.021	.058	3.5	E 3.5	.32	
06-10-2010	.056	1.60	--	.05	.065	.097	2.0	2.0	.50	
08-11-2010	.043	2.50	--	E .03	.041	.086	2.8	E 2.8	.23	

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ—Continued

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

Part 5 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	Organic carbon, water, filtered, mg/L (00681)
12-02-2009	2.7
03-09-2010	2.0
06-10-2010	3.3
08-11-2010	2.0

**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 millimeter s, wet sieved (native water), field, recoverabl e, 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 (00668)	Cadmium, bed sediment, recoverabl e, dry weight, milligrams per kilogram (01028)	Chromium, bed sediment, recoverabl e, dry weight, milligrams per kilogram (01029)	Cobalt, bed sediment, recoverabl e, dry weight, milligrams per kilogram (01038)	Copper, bed sediment, recoverabl e, dry weight, milligrams per kilogram (01043)
08-11-2010	0930	23	7.00	1.8	<.2	1,800	.320	70	5.3	<10

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ—Continued

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 milligrams per kilogram (01170)	Lead, bed sediment, recoverabl e, dry weight, milligrams per kilogram (01052)	Manganese, e, bed sediment, recoverabl e, dry weight, milligrams per kilogram (01053)	Mercury, bed sediment, recoverabl e, dry weight, milligrams per kilogram (71921)	Nickel, bed sediment, recoverabl e, dry weight, milligrams per kilogram (01068)	Zinc, bed sediment, recoverabl e, dry weight, milligrams per kilogram (01093)	Arsenic, bed sediment, recoverabl e, dry weight, milligrams per kilogram (64847)	Selenium, bed sediment, recoverabl e, dry weight, milligrams per kilogram (64848)	p-Cresol, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49451)	PCBs, bed sediment, recoverabl e, dry weight, microgram s per kilogram (39519)
08-11-2010	43,000	7.6	150	<.007	8.7	95	12.5	.3	<55	<5.00

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-Dimethyl naphthalen e, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49403)	1,6-Dimethyl naphthalen e, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49404)	1-Methyl-9H-fluorene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49398)	1-Methylphe nanthrene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49410)	1-Methylpyr ene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49388)	2,3,6-Trimethyl naphthalen e, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49405)	2,6-Dimethyl naphthalen e, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49406)	2-Ethynapht halene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49948)	2-Methylnaphthalene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49435)	4H-Cyclopent a[def]phenanthrene, bed sediment smaller than 2 millimeter s, wet sieved (native water), field, recoverabl e, dry weight, microgram s per kilogram (49411)
08-11-2010	<55	<55	<55	M	<55	<55	<55	<55	<55	<55

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 5

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

9H-				Benzo[a]a		Benzo[b]fl		Benzo[ghi]		Benzo[k]fl			
Fluorene, bed sediment	Acenaphthene, bed sediment	Acenaphthylene, bed sediment	Anthracene, bed sediment	benzene, bed sediment	anthracene, bed sediment	benzo[a]pyrene, bed sediment	uranthenene, bed sediment	benzo[ghi]perylene, bed sediment	benzo[ghi]perylene, bed sediment	benzo[k]fluranthenene, bed sediment	benzo[k]fluranthenene, bed sediment	Chrysene, bed sediment	
smaller than 2 millimeter													
(native water), field, recoverable weight, microgram s per kilogram (49399)	(native water), field, recoverable weight, microgram s per kilogram (49429)	(native water), field, recoverable weight, microgram s per kilogram (49428)	(native water), field, recoverable weight, microgram s per kilogram (49434)	(native water), field, recoverable weight, microgram s per kilogram (49436)	(native water), field, recoverable weight, microgram s per kilogram (49438)	(native water), field, recoverable weight, microgram s per kilogram (49458)	(native water), field, recoverable weight, microgram s per kilogram (49408)	(native water), field, recoverable weight, microgram s per kilogram (49397)	(native water), field, recoverable weight, microgram s per kilogram (49450)	(native water), field, recoverable weight, microgram s per kilogram (49408)	(native water), field, recoverable weight, microgram s per kilogram (49397)	(native water), field, recoverable weight, microgram s per kilogram (49450)	
Date	08-11-2010	< 55	E 1	M	< 55	E 4	E 5	< 55	E 1	E 2			

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 5 of 5

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

Indeno[1,2,3-				Dibenzo[a,h]anthracene, bed sediment		Fluoranthene, bed sediment		cd]pyrene, bed sediment		Isophorone, bed sediment		Naphthalene, bed sediment		Phenanthrene, bed sediment	
Dibenzo[a,h]anthracene, bed sediment	Fluoranthene, bed sediment	cd]pyrene, bed sediment	Isophorone, bed sediment	Naphthalene, bed sediment	Phenanthrene, bed sediment	Phenanthrene, bed sediment	Phenanthrene, bed sediment	Phenanthrene, bed sediment	Phenanthrene, bed sediment	Phenanthrene, bed sediment	Phenanthrene, bed sediment	Pyrene, bed sediment			
smaller than 2 millimeter	smaller than 2 millimeter														
(native water), field, recoverable weight, microgram s per kilogram (49461)	(native water), field, recoverable weight, microgram s per kilogram (49466)	(native water), field, recoverable weight, microgram s per kilogram (49390)	(native water), field, recoverable weight, microgram s per kilogram (49400)	(native water), field, recoverable weight, microgram s per kilogram (49402)	(native water), field, recoverable weight, microgram s per kilogram (49409)	(native water), field, recoverable weight, microgram s per kilogram (49393)	(native water), field, recoverable weight, microgram s per kilogram (49387)	(native water), field, recoverable weight, microgram s per kilogram (80164)	(native water), field, recoverable weight, microgram s per kilogram (49387)	(native water), field, recoverable weight, microgram s per kilogram (80164)	(native water), field, recoverable weight, microgram s per kilogram (49387)	(native water), field, recoverable weight, microgram s per kilogram (80164)	Bed sediment, dry sieved, sieve diameter, percent smaller than 0.0625 millimeter		
Date	08-11-2010	< 55	E 4	< 55	< 55	< 55	E 1	< 55	E 4				1.0		