



Water-Data Report 2007

01411955 GRAVELLY RUN AT LAUREL LAKE, NJ

MAURICE RIVER BASIN

LOCATION.--Lat 39°20'14", long 75°03'03" referenced to North American Datum of 1983, Commercial Township, Cumberland County, NJ, Hydrologic Unit 02040206, at culvert on Battle Lane, 0.3 mi upstream from mouth and Buckshutem Creek, 1.1 mi west of community of Laurel Lake, and 2.5 mi southeast of Millville Municipal Airport.

DRAINAGE AREA.--3.19 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, water years 1998 to current year.

GAGE.--Staff gage.

**DISCHARGE MEASUREMENTS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Date	Discharge, in ft³/s
Nov 29, 2006	3.37
Feb 13, 2007	1.70
May 1, 2007	4.23
Aug 20, 2007	1.17

01411955 GRAVELLY RUN AT LAUREL LAKE, NJ—Continued

WATER-QUALITY RECORDS

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

REMARKS.--Total nitrogen (00600) equals the sum of filtered ammonia-plus-organic nitrogen (00623), filtered nitrite-plus-nitrate nitrogen (00631), and total particulate nitrogen (49570). Cooperative Network Site Descriptor: Background and Low Level Mercury Assessment special study site, NJ Department of Environmental Protection Watershed Management Area 17. The samples on May 02 and August 21 were for the low-level mercury assessment.

COOPERATION.--Physical measurements and samples for laboratory analysis on May 02 and August 21 were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia, dissolved orthophosphate, suspended residue, ammonia-plus-organic nitrogen in bed sediment, and phosphorus in bed sediment were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 5

[Remark codes: <, less than; E, estimated.]

Date	Time	Sample type	Instan- taneous dis- charge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, wat unf µS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)
Nov												
29...	1220	Environmental	3.4	.7	.279	.215	771	8.9	80	4.2	45	16.0
Feb												
13...	1100	Field Blank	--	--	--	--	--	--	--	--	--	--
13...	1115	Environmental	1.7	1.0	.107	.083	772	12.2	91	4.3	34	-1.0
May												
01...	1210	Environmental	4.2	1.6	.265	.204	761	8.8	85	4.1	40	21.0
02...	0945	Field Blank	--	--	--	--	--	--	--	--	--	--
02...	1000	Environmental	--	--	--	--	--	--	--	--	--	--
02...	1030	Environmental	--	.7	--	--	759	7.0	67	4.5	40	19.0
Aug												
20...	1120	Environmental	1.2	.9	.131	.105	765	7.6	78	4.9	29	18.0
21...	1000	Environmental	--	2.7	--	--	766	6.7	70	4.6	42	17.5
21...	1000	Field Blank	--	--	--	--	--	--	--	--	--	--

01411955 GRAVELLY RUN AT LAUREL LAKE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 5

[Remark codes: <, less than; E, estimated.]

Date	Temperature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue	Residue
							fixed end pt, lab, mg/L as CaCO3 (90410)					on evap. at 180degC wat flt mg/L (70300)	total non- filter- able, mg/L (00530)
Nov 29...	11.1	4	.57	.560	.40	2.83	--	5.29	<.10	7.3	3.43	24	1
Feb 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
Feb 13...	3.6	3	.54	.493	.41	2.52	<5	4.96	<.10	6.9	2.79	23	2
May 01...	13.6	3	.45	.428	.37	2.56	--	4.91	<.10	5.0	3.42	24	3
May 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
May 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
May 02...	13.7	--	--	--	--	--	--	--	--	--	--	--	--
Aug 20...	16.6	4	.63	.624	.55	2.42	<1.7	4.44	<.10	7.6	2.16	20	2
Aug 21...	17.6	--	--	--	--	--	--	--	--	--	--	--	--
Aug 21...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 5

[Remark codes: <, less than; E, estimated.]

Date	Ammonia		Nitrate + nitrite water, fltrd, mg/L as N (00631)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Total nitro- gen, water, fltrd, mg/L (00602)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd total, mg/L (00694)	Inor- ganic carbon, suspnd total, mg/L (00688)	Organic carbon, suspnd total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Arsenic water, fltrd, µg/L (01000)
	+ org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)											
Nov 29...	.22	.014	.08	<.02	.30	E.006	<.008	E.004	<.1	<.1	<.1	6.0	--
Feb 13...	--	--	--	--	--	--	--	--	--	--	--	--	<.12
Feb 13...	.12	.024	.14	<.02	.25	E.007	<.008	<.008	.2	<.1	.2	2.3	E.07
May 01...	.17	<.010	E.06	<.02	--	<.010	<.008	E.005	.4	<.1	.4	5.6	--
May 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
May 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
May 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
Aug 20...	.12	.032	.13	<.02	.26	E.008	<.008	E.007	.2	<.1	.2	2.7	.12
Aug 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
Aug 21...	--	--	--	--	--	--	--	--	--	--	--	--	--

01411955 GRAVELLY RUN AT LAUREL LAKE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 5

[Remark codes: <, less than; E, estimated.]

Date	Arsenic	Barium,	Beryll-	Boron,	Boron,	Cadmium	Chrom-	Copper,	Copper,	Iron,	Lead,	Lead,	Mangan-
	water, unfltrd µg/L (01002)	water, unfltrd recover- able, µg/L (01007)	ium, water, unfltrd recover- able, µg/L (01012)	water, fltrd, µg/L (01020)	water, recover- able, µg/L (01022)	water, unfltrd µg/L (01027)	ium, water, unfltrd recover- able, µg/L (01034)	water, fltrd, µg/L (01040)	water, recover- able, µg/L (01042)	water, unfltrd recover- able, µg/L (01045)	water, fltrd, µg/L (01049)	water, recover- able, µg/L (01051)	ese, water, unfltrd recover- able, µg/L (01055)
Nov 29...	--	--	--	13	--	--	--	--	--	--	--	--	--
Feb 13...	--	--	--	--	--	--	--	<i>E.23</i>	--	--	<.12	--	--
13...	<.20	17.7	.08	8.4	10	.02	<.60	--	<1.2	61	--	.45	5.1
May 01...	--	--	--	12	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
Aug 20...	E.11	17.3	<.06	10	10	.02	<.60	--	<1.2	119	--	.58	4.2
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 5 of 5

[Remark codes: <, less than; E, estimated.]

Date	Mercury	Mercury	Mercury	Nickel,	Nickel,	Selen-	Silver,	Zinc,	Zinc,	Methyl-
	water, fltrd, µg/L (71890)	water, unfltrd low level ng/L (50286)	water, unfltrd recover- able, µg/L (71900)	water, fltrd, µg/L (01065)	water, recover- able, µg/L (01067)	ium, water, unfltrd µg/L (01147)	water, unfltrd recover- able, µg/L (01077)	water, fltrd, µg/L (01090)	water, recover- able, µg/L (01092)	mercury water, unfltrd low level ng/L (50284)
Nov 29...	--	--	--	--	--	--	--	--	--	--
Feb 13...	<.010	--	--	<i>E.04</i>	--	--	--	<i>E.40</i>	--	--
13...	--	--	E.007	--	.48	E.05	<.02	--	3	--
May 01...	--	--	--	--	--	--	--	--	--	--
02...	--	<.04	--	--	--	--	--	--	--	<.04
02...	--	1.79	--	--	--	--	--	--	--	.06
02...	--	1.81	--	--	--	--	--	--	--	.08
Aug 20...	--	--	.012	--	.47	E.05	<.02	--	E1.9	--
21...	--	3.23	--	--	--	--	--	--	--	E.22
21...	--	<.04	--	--	--	--	--	--	--	<.04

01411955 GRAVELLY RUN AT LAUREL LAKE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 4

[Remark codes: <, less than; E, estimated.]

Date	Time	pH bed sedimnt std units (70310)	Ammonia	Phos-	Total	Inor-	Arsenic	Cadmium	Chrom-	Cobalt	Copper,	Iron,	Lead,
			+ org-N, bed sed total, mg/kg as N (00626)	phorus, bed sedimnt total, mg/kg (00668)	carbon, bed sedimnt total, g/kg (00693)	ganic carbon, bed sedimnt total, g/kg (00686)	bed sedimnt recover -able, ug/g (64847)	bed sedimnt recover -able, ug/g (01028)	ium, bed sedimnt recover -able, ug/g (01029)	bed sedimnt recover -able, ug/g (01038)	bed sedimnt recover -able, ug/g (01043)	bed sedimnt total, ug/g (01170)	bed sedimnt recover -able, ug/g (01052)
Aug 20...	1120	4.90	80	80	1.2	<.2	.1	<.001	1.4	.1	<2	550	2.9

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 4

[Remark codes: <, less than; E, estimated.]

Date	Mangan-	Mercury	Nickel,	Sele-	Zinc,	1,2-Di-	1,6-Di-	1Methyl	1-	1-	236Tri-	2,6-Di-	2-Ethyl
	ese, bed sedimnt recover -able, ug/g (01053)	bed sedimnt recover -able, ug/g (71921)	bed sedimnt recover -able, ug/g (01068)	nium, bed sedimnt recover -able, ug/g (64848)	bed sedimnt recover -able, ug/g (01093)	methyl- naphth- alene, bed sed <2 mm, ug/kg (49403)	methyl- naphth- alene, bed sed <2 mm, ug/kg (49404)	-9H- fluor- ene, bed sed <2 mm, ug/kg (49398)	Methyl- phenan- threne, bed sed <2 mm, ug/kg (49410)	Methyl- pyrene, bed sed <2 mm, ug/kg (49388)	methyl- naphth- alene, bed sed <2 mm, ug/kg (49405)	methyl- naphth- alene, bed sed <2 mm, ug/kg (49406)	naphth- alene bed sed <2 mm wsv nat ug/kg (49948)
Aug 20...	3.1	.013	.6	<.1	<3.1	<50	<50	<50	<50	<50	<50	<50	<50

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 4

[Remark codes: <, less than; E, estimated.]

Date	2-	4H-Cyc-	9H-	Ace-	Ace-	Anthra-	Benzo-	Benzo-	Benzo-	Benzo-	Benzo-	Chry-	Dibenzo
	Methyl- anthra- cene, bed sed <2 mm, ug/kg (49435)	lopenta -[def]- phenan- threne, bs <2mm ug/kg (49411)	Fluor- ene, bed sed <2 mm, wsv nat ug/kg (49399)	naphth- ene, bed sed <2 mm, wsv nat ug/kg (49429)	naphth- ylene, bed sed <2 mm, wsv nat ug/kg (49428)	cene, bed sed <2 mm, wsv nat field, ug/kg (49434)	[a]- anthra- cene, bed sed <2 mm, ug/kg (49436)	[a]- pyrene, bed sed <2 mm, wsv nat ug/kg (49389)	[b]- fluor- anthene bed sed <2 mm ug/kg (49458)	[ghi]- peryl- ene, bed sed <2 mm, ug/kg (49408)	[k]- fluor- anthene bed sed <2 mm ug/kg (49397)	sene, bed sed <2 mm, wsv nat field, ug/kg (49450)	-[a,h]- anthra- cene, bed sed <2 mm, ug/kg (49461)
Aug 20...	<50	<50	<50	<50	<50	<50	E15	<50	<50	<50	<50	E6	<50

01411955 GRAVELLY RUN AT LAUREL LAKE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 4

[Remark codes: <, less than; E, estimated.]

Date	Fluor-anthene bed sed <2 mm wsv nat field, ug/kg (49466)	Indeno-[1,2,3-cd]- pyrene, bed sed <2 mm ug/kg (49390)	Iso-phorone bed sed <2 mm, wsv nat field, ug/kg (49400)	Naphthalene, bed sed <2 mm wsv nat ug/kg (49402)	PCBs, bed sedimnt ug/kg (39519)	p-Cresol, bed sed <2 mm, wsv nat field, ug/kg (49451)	Phenanthrene, bed sed <2 mm, wsv nat field, ug/kg (49409)	Phenanthrene, thri-dine, bed sed <2 mm, wsv nat ug/kg (49393)	Pyrene, bed sed <2 mm, wsv nat field, ug/kg (49387)	Bed sediment, dry svd sve dia percent <.063mm (80164)
Aug 20...	<50	<50	<50	<50	<5.00	<50	<50	<50	<50	.0