

Water-Data Report 2007

01463810 SHABAKUNK CREEK NEAR LAWRENCEVILLE, NJ

DELAWARE RIVER BASIN

LOCATION.--Lat 40°15'19", long 74°44'16" referenced to North American Datum of 1983, Lawrence Township, Mercer County, NJ, Hydrologic Unit 02040105, on Princeton Pike (County Route 583), 340 feet north from Graf Avenue, 450 ft south from Fairfield Avenue, and 2,700 ft upstream from Colonial Lake.

DRAINAGE AREA.--11.7 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976-78, 2000, 2007.

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: Statewide Status, NJ Department of Environmental Protection Watershed Management Area 11.

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, 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	Turbdty white light, det ang 90+/-30 corrctd	UV absorb- ance, 254 nm, wat flt units	UV absorb- ance, 280 nm, wat flt units	Baro- metric pres- sure, mm Hg	Dis- solved oxygen, mg/L (00025)	Dis- solved oxygen, percent of sat- uration (00300)	pH, water, unfltrd field, std units	Specif- ic conduc- tance, μS/cm (00400)	Temper- ature, wat unf air, deg C (00095)	Temper- ature, water, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO ₃ (00900)	Calcium water, fltrd, mg/L (00915)
Nov 06...	1200	2.3	.107	.084	772	10.4	85	7.5	389	15.5	7.3	120	32.2	
Feb 15...	1030	7.0	.050	.037	760	13.7	94	7.6	2,020	-5.0	.2	170	45.8	
May 16...	0945	2.0	.100	.077	753	7.7	83	7.5	419	24.5	18.1	120	31.4	
Aug 09...	0900	2.8	.105	.077	757	4.0	47	7.4	412	26.0	24.1	130	33.5	

01463810 SHABAKUNK CREEK NEAR LAWRENCEVILLE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 5

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

Date	Magnes-	Potas-	ANC,			Chlor-	Fluor-	Silica,	Sulfate	Residue	Residue	Residue	Ammonia
	ium, water, fltrd, mg/L (00925)	sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	wat unf fixed	end pt,					water, fltrd, mg/L (70301)	on evap.	total non-filter- able, mg/L (00530)	org-N, water, fltrd, mg/L as N (00623)
Nov 06...	10.2	3.08	25.0	79	50.9	.11	16.1	26.2	217	238	2	.24	.049
Feb 15...	14.5	3.52	320	76	578	.11	13.0	31.8	1,060	1,080	2	.32	.054
May 16...	10.2	3.00	29.7	73	62.5	.11	12.8	26.7	225	233	2	.30	.036
Aug 09...	10.4	3.35	31.1	78	61.8	.27	10.7	25.9	226	245	3	.26	.087

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 5

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

Date	Nitrate + nitrite water fltrd, mg/L as N (00631)	Partic- ulate nitro- gen, water, fltrd, mg/L (49570)	Total nitro- gen, water, fltrd, mg/L (00602)	Total nitro- gen, water, unfltrd mg/L (00600)	Ortho- phosphate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sediment mg/L (00694)	Inor- ganic carbon, suspnd sediment mg/L (00688)	Organic carbon, suspnd sediment mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Arsenic water, fltrd, µg/L (01000)	Arsenic water, unfltrd µg/L (01002)	
Nov 06...	1.31	<.02	1.6	--	.016	.022	.038	<.1	<.1	<.1	2.9	--	--	--
Feb 15...	1.55	.09	1.9	2.0	E.007	E.006	.023	1.0	<.1	1.0	2.3	.24	.48	
May 16...	1.12	.06	1.4	1.5	E.010	.016	.037	.4	<.1	.4	3.1	--	--	
Aug 09...	.35	.05	.60	.66	.028	.046	.081	.4	<.1	.4	3.0	1.1	1.2	

01463810 SHABAKUNK CREEK NEAR LAWRENCEVILLE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 5

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

Date	Barium, water, unfltrd recover -able, µg/L (01007)	Beryll- ium, water, unfltrd recover -able, µg/L (01012)	Boron, water, unfltrd recover -able, µg/L (01020)	Boron, water, unfltrd recover -able, µg/L (01022)	Cadmium water, unfltrd recover -able, µg/L (01027)	Chrom- ium, water, unfltrd recover -able, µg/L (01034)	Copper, water, unfltrd recover -able, µg/L (01042)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan- ese, water, unfltrd recover -able, µg/L (01055)	Mercury water, unfltrd recover -able, µg/L (71900)	Nickel, water, unfltrd recover -able, µg/L (01067)	Selen- ium, water, unfltrd recover -able, µg/L (01147)
Nov 06...	--	--	58	--	--	--	--	--	--	--	--	--	
Feb 15...	168	E.03	42	41	.17	E.57	3.2	390	1.40	126	<.010	3.12	
May 16...	--	--	50	--	--	--	--	--	--	--	--	--	
Aug 09...	100	<.06	59	57	.04	<.60	3.1	438	.96	125	E.005	1.4	

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006
TO SEPTEMBER 2007

Part 5 of 5

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

Date	Silver, water, unfltrd recover -able, µg/L (01077)	Zinc, water, unfltrd recover -able, µg/L (01092)
Nov 06...	--	--
Feb 15...	<.02	26
May 16...	--	--
Aug 09...	E.01	5.6

01463810 SHABAKUNK CREEK NEAR LAWRENCEVILLE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 4

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

Date	Time	Ammonia			Inor-			Chrom-					
		pH bed sedimnt std	+ org-N, bed sed total, mg/kg (00626)	Phos- phorus, bed sedimnt total, mg/kg (00668)	Total carbon, bed sedimnt total, g/kg (00693)	Inor- ganic carbon, bed sedimnt total, g/kg (00686)	Arsenic bed sedimnt recover -able, ug/g (64847)	Cadmium bed sedimnt recover -able, ug/g (01028)	ium, bed sedimnt recover -able, ug/g (01029)	Cobalt bed sedimnt recover -able, ug/g (01038)	Copper, bed sedimnt recover -able, ug/g (01043)	Iron, bed sedimnt total, ug/g (01170)	Lead, bed sedimnt recover -able, ug/g (01052)
Aug 09...	0900	6.86	110	280	3.2	.2	1.0	.100	6.7	2.3	9	5,700	17

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 4

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

Date	Mangan- ese, bed sedimnt recover -able, ug/g (01053)			Sele- nium, bed sedimnt recover -able, ug/g (71921)			1,2-Di- methyl- naphth- alene, ug/g (01068)			1,6-Di- methyl- naphth- alene, ug/g (64848)			1Methyl -9H- fluor- ene, ug/g (01093)			1- Methyl- phenan- threne, ug/g (49403)			236Tri- Methyl- naphth- alene, ug/g (49404)			2,6-Di- methyl- naphth- alene, ug/g (49405)			2-Ethy- l naphth- alene, ug/g (49448)		
	Mercu- ry bed sedimnt recover -able, ug/g (71921)	Nickel, bed sedimnt recover -able, ug/g (01068)	Zinc, bed sedimnt recover -able, ug/g (64848)	methyl- naphth- alene, ug/g (01093)	methyl- naphth- alene, ug/g (49403)	methyl- naphth- alene, ug/g (49404)	methyl- naphth- alene, ug/g (49398)	methyl- naphth- alene, ug/g (49410)	methyl- naphth- alene, ug/g (49388)	methyl- naphth- alene, ug/g (49405)	methyl- naphth- alene, ug/g (49406)	methyl- naphth- alene, ug/g (49406)															
Aug 09...	64	<.007	4.1	.1	38	<50	E18	E9	72	70	E20	E22	E17														

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 4

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

Date	2-Methyl- anthra- cene, bed sedimnt <2 mm, bs <2mm			4H-Cyc- lopenta- phenan- threne, <2 mm, bs <2mm			9H- Fluor- ene, <2 mm, bs <2mm			Ace- naphth- ene, <2 mm, bs <2mm			Ace- naphth- ene, <2 mm, bs <2mm			Anthra- cene, bed sedimnt field, ug/kg (49428)			Benz- [a]- anthra- cene, bed sedimnt field, ug/kg (49434)			Benz- [a]- pyrene, bed sed field, ug/kg (49436)			Benz- [b]- fluor- ene, <2 mm, bed sed field, ug/kg (49389)			Benz- [ghi]- anthene, bed sed field, ug/kg (49458)			Benz- [k]- anthene, bed sed field, ug/kg (49408)			Benz- [l]- anthene, bed sed field, ug/kg (49397)			Chry- sene, bed sed field, ug/kg (49450)			Dibenzo- -[a,h]- anthra- cene, bed sedimnt <2 mm, bs <2mm		
	2-Methyl- anthra- cene, bed sedimnt <2 mm, bs <2mm	4H-Cyc- lopenta- phenan- threne, <2 mm, bs <2mm	9H- Fluor- ene, <2 mm, bs <2mm	Ace- naphth- ene, <2 mm, bs <2mm	Ace- naphth- ene, <2 mm, bs <2mm	Anthra- cene, bed sedimnt field, ug/kg (49428)	Benz- [a]- anthra- cene, bed sedimnt field, ug/kg (49434)	Benz- [a]- pyrene, bed sed field, ug/kg (49436)	Benz- [b]- fluor- ene, <2 mm, bed sed field, ug/kg (49389)	Benz- [b]- anthene, bed sed field, ug/kg (49458)	Benz- [b]- anthene, bed sed field, ug/kg (49408)	Benz- [b]- anthene, bed sed field, ug/kg (49397)	Benz- [b]- anthene, bed sed field, ug/kg (49450)																													
Aug 09...	E45	140	63	65	E28	E150	640	690	1,000	E300	390	830	<100																													

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 4

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

Date	Fluor-anthene <2 mm wsv nat field, ug/kg (49466)	Indeno-[1,2,- 3-cd]- bed sed bed sed pyrene, <2 mm, wsv nat bed sed field, ug/kg (49390)	Iso-phorone bed sed <2 mm, wsv nat bed sed field, ug/kg (49400)	Naphth-alene, bed sed <2 mm wsv nat bed sed field, ug/kg (49402)	p-Cresol, PCBs, sedimnt ug/kg (39519)	Phenan-threne, <2 mm, wsv nat bed sed field, ug/kg (49451)	Phenan-threne, <2 mm, wsv nat bed sed field, ug/kg (49409)	Pyrene, bed sed <2 mm, wsv nat field, ug/kg (49393)	Bed sediment, dry svd sve dia percent <.063mm (80164)	
Aug 09...	1,500	<300	<50	<50	33.1	<50	890	E48	1,200	1