



Water-Data Report 2009

0147212511 UNNAMED TRIBUTARY AT HOPEWELL VILLAGE NEAR PINE SWAMP, PA

Lower Delaware Basin
Schuylkill Subbasin

LOCATION.--Lat 40°12'13.2", long 75°46'29.6" referenced to North American Datum of 1983, Berks County, PA, Hydrologic Unit 02040203.

DRAINAGE AREA.--0.04 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 2008 to current year.

REMARKS.--Samples were collected as part of a study on the Fate and Transport of Toxic Metals at the Hopewell Furnace National Historic Site, Berks and Chester Counties, Pennsylvania. Some values for filtered parameters exceed values for the corresponding parameter. These results are within the limits of analytical precision and methods.

COOPERATION.--Station established and maintained by the U.S. Geological Survey in cooperation with the National Park Service.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 1 of 4

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

Date	Time	Instantaneous discharge, ft ³ /s (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std (00400)	Specific conductance, wat unfltrd, μS/cm @ 25 degC (00095)	Temperature, deg C (00010)	Calcium water unfltrd recover, mg/L (00916)	Magnesium, water, unfltrd recover, mg/L (00927)	Potassium, water, unfltrd recover, mg/L (00937)	Sodium, water, unfltrd recover, mg/L (00929)	ANC, wat unfltrd titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
Nov 12...	1200	.27	11.1	6.8	74	10.7	6.10	2.24	1.09	3.8	25	4.54	<.08

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 2 of 4

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

Date	Silica, water, fltrd, mg/L as SiO2 (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia org-N, water, fltrd, mg/L as N (00623)	Ammonia org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate nitrite water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L as P (00666)	Phosphorus, water, unfltrd, mg/L as P (00665)	Aluminum, water, unfltrd recover, μg/L (01105)	Barium, water, unfltrd recover, μg/L (01007)	Beryllium, water, unfltrd recover, μg/L (01012)
Nov 12...	3.3	5.87	.93	.28	.036	.13	.006	<.008	.010	.020	36	40.6	<.02

0147212511 UNNAMED TRIBUTARY AT HOPEWELL VILLAGE NEAR PINE SWAMP, PA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 4

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

Date	Cadmium water, unfltrd recover μg/L (01027)	Chrom- ium, water, unfltrd recover μg/L (01034)	Cobalt water, unfltrd recover μg/L (01037)	Copper, water, unfltrd recover μg/L (01042)	Iron, water, unfltrd recover μg/L (01045)	Lead, water, unfltrd recover μg/L (01051)	Lithium water, unfltrd recover μg/L (01132)	Mangan- ese, water, unfltrd recover μg/L (01055)	Molyb- denum, water, unfltrd recover μg/L (01062)	Nickel, water, unfltrd recover μg/L (01067)	Silver, water, unfltrd recover μg/L (01077)	Stront- ium, water, unfltrd recover μg/L (01082)	Thall- ium, water, unfltrd μg/L (01059)
Nov 12...	<.06	<.40	.20	<4.0	346	.61	.6	51.4	E.1	.39	<.06	29.9	<.12

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 4

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

Date	Zinc, water, unfltrd recover μg/L (01092)	Anti- mony, water, unfltrd μg/L (01097)	Arsenic water, unfltrd μg/L (01002)	Selen- ium, water, unfltrd μg/L (01147)	Uranium natural water, unfltrd μg/L (28011)
Nov 12...	E1.2	<.4	.36	.14	E.018

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 1 of 2

Date	Time	Mois- ture content frac of dry wgt percent (00495)	Alum- inum, bed sedimnt recover μg/g (01108)	Cadmium bed sedimnt recover μg/g (01028)	Chrom- ium, bed sedimnt recover μg/g (01029)	Cobalt bed sedimnt recover μg/g (01038)	Copper, bed sedimnt recover μg/g (01043)	Iron, bed sedimnt total digest, μg/g (01170)	Mangan- ese, bed sedimnt recover μg/g (01053)	Mercury bed sedimnt recover μg/g (71921)	Nickel, bed sedimnt recover μg/g (01068)	Zinc, bed sedimnt recover μg/g (01093)	Arsenic bed sedimnt recover μg/g (64847)
Nov 12...	1230	40	12,000	.220	60	6.0	37	31,000	730	.032	9.9	120	3.3

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**WATER-QUALITY
DATA
WATER YEAR
OCTOBER 2008 TO
SEPTEMBER 2009**

Part 2 of 2

Date	Boron, bed sedimnt recover -able, µg/g (01023)
Nov 12...	8.8

0147212511 UNNAMED TRIBUTARY AT HOPEWELL VILLAGE NEAR PINE SWAMP, PA—Continued**ECOLOGICAL RECORDS**

PERIOD OF RECORD.--November 2008 to current year.

REMARKS.--Samples were collected using a D-frame net with a mesh size of 500 μm . Three 1-meter kick samples were collected and composited. Counts are based on a 300 organism subsample.

Date	11/12/08
Benthic Macroinvertebrate	Count
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Hydrobiidae	
<i>Amnicola</i>	3
Bivalvia (CLAMS)	
Veneroidea	
Corbiculidae	
<i>Corbicula fluminea</i>	7
Sphaeriidae	
<i>Sphaerium</i>	4
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	18
Tubificida	
Naididae	8
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Crustacea	
Amphipoda (SCUDS)	
Crangonyctidae	
<i>Crangonyx</i>	2
Talitridae	
<i>Hyalolella</i>	4
Cladocera	1
Podocopa (SEED SHRIMP)	3
Insecta	
Ephemeroptera (MAYFLIES)	
Caenidae	
<i>Caenis</i>	1
Ephemerellidae	
<i>Eurylophella</i>	1
Heptageniidae	

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<i>Maccaffertium</i>	29
<i>Stenacron</i>	1
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
<i>Argia</i>	1
Gomphidae	
<i>Arigomphus</i>	1
<i>Gomphus</i>	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	25
<i>Hydropsyche</i>	21
Leptoceridae	
<i>Oecetis</i>	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	1
Diptera (TRUE FLIES)	
Ceratopogonidae (BITING MIDGES)	
<i>Probezzia</i>	2
Chironomidae (MIDGES)	178
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	17
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	3
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	1
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Total Organisms	336
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