

## SCHUYLKILL RIVER BASIN

## 01473169 VALLEY CREEK AT PENNSYLVANIA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA

**LOCATION.**--Lat 40°04'45", long 75°27'40", Chester County, Hydrologic Unit 02040202, on right bank 100 ft upstream from Pennsylvania turnpike bridge, 0.9 mi downstream from Little Valley Creek, 2.2 mi upstream from mouth, and 1.0 mi south of Valley Forge.

**DRAINAGE AREA.**--20.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--October 1982 to current year.

**GAGE.**--Water-stage recorder and crest-stage gage. Datum of gage is 108.62 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Satellite telemetry at station. Intermittent pumpage from quarry upstream.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)	Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)
Nov. 17	0300	1,200	7.74	Aug. 9	1715	950	7.20
Dec. 11	1800	765	6.83	Aug. 10	0815	1,430	8.31
Feb. 22	1630	1,130	7.57	Sept. 15	1730	*1,720	*8.95
June 20	2000	1,710	8.92	Sept. 19	0230	985	7.27

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	23	18	101	22	29	37	27	68	34	29	20
2	10	21	17	49	22	101	36	27	29	33	20	52
3	10	19	17	50	21	60	35	27	28	39	72	27
4	12	19	16	42	29	38	34	26	188	33	111	44
5	12	19	18	35	22	74	34	27	78	33	54	25
6	9.5	37	17	35	20	140	32	31	41	31	27	22
7	9.1	20	16	32	22	56	38	27	80	37	22	21
8	8.8	18	17	32	21	50	39	43	48	32	32	20
9	8.6	18	17	31	20	84	46	29	39	29	157	20
10	23	18	16	29	20	52	37	27	35	29	290	19
11	155	22	171	27	20	43	81	26	34	30	85	19
12	37	58	69	27	19	46	54	26	39	36	34	18
13	19	34	51	26	e19	49	40	25	90	31	27	52
14	16	24	90	25	19	45	37	25	76	26	24	34
15	15	22	36	25	19	42	36	24	38	25	22	417
16	95	53	31	24	e18	43	35	27	34	25	24	67
17	28	292	27	24	e18	48	34	27	32	23	22	34
18	19	65	25	24	e19	42	37	24	56	24	20	34
19	17	29	24	24	e19	38	33	23	38	24	22	158
20	16	22	70	23	20	120	32	23	514	22	22	34
21	15	20	31	23	23	100	32	29	171	22	21	30
22	15	30	26	23	368	52	34	23	75	23	21	28
23	15	23	25	e22	206	46	31	24	60	23	20	155
24	14	21	24	e22	73	43	30	27	53	27	20	38
25	15	20	104	21	46	41	29	25	47	22	19	32
26	52	19	44	21	36	44	38	160	44	21	19	31
27	19	27	32	21	32	41	31	35	42	21	19	30
28	17	20	29	21	31	37	29	29	39	20	19	52
29	30	19	28	21	---	44	28	26	37	20	18	30
30	65	19	27	21	---	51	28	25	35	19	44	28
31	39	---	27	20	---	41	---	25	---	19	22	---
TOTAL	826.0	1051	1160	921	1224	1740	1097	969	2188	833	1358	1591
MEAN	26.6	35.0	37.4	29.7	43.7	56.1	36.6	31.3	72.9	26.9	43.8	53.0
MAX	155	292	171	101	368	140	81	160	514	39	290	417
MIN	8.6	18	16	20	18	29	28	23	28	19	18	18
CFSM	1.28	1.68	1.80	1.43	2.10	2.70	1.76	1.50	3.51	1.29	2.11	2.55
IN.	1.48	1.88	2.07	1.65	2.19	3.11	1.96	1.73	3.91	1.49	2.43	2.85

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	22.8	27.2	32.0	33.2	33.0	44.5	42.7	36.5	30.1	26.3	23.6	29.3										
MAX	61.8	48.8	103	95.8	53.5	85.9	98.8	77.5	72.9	53.1	43.8	95.5										
(WY)	1997	1987	1997	1996	1984	1994	1983	1984	2003	1996	2003	1999										
MIN	9.91	10.1	12.7	16.8	11.9	17.9	15.8	19.5	15.1	11.1	10.5	14.5										
(WY)	2002	2002	1999	1985	2002	1985	2002	1995	1995	2002	2002	2002										

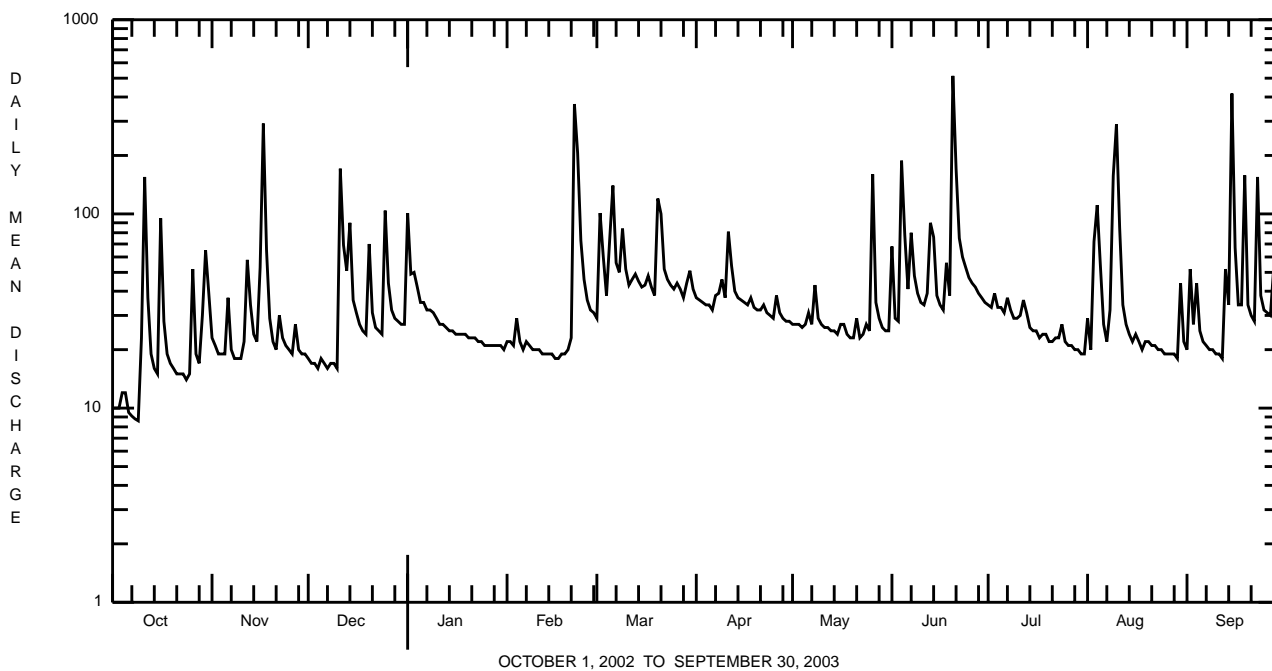
e Estimated.

SCHUYLKILL RIVER BASIN

01473169 VALLEY CREEK AT PENNSYLVANIA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003	
ANNUAL TOTAL	7568.4		14958.0			
ANNUAL MEAN	20.7		41.0		31.7	
HIGHEST ANNUAL MEAN					47.7	
LOWEST ANNUAL MEAN					15.2	
HIGHEST DAILY MEAN	292	Nov 17	514	Jun 20	2020	Sep 16 1999
LOWEST DAILY MEAN	7.5	Aug 17	8.6	Oct 9	7.4	Jul 13 1999
ANNUAL SEVEN-DAY MINIMUM	7.7	Aug 13	10	Oct 3	7.7	Aug 13 2002
MAXIMUM PEAK FLOW			1720	Sep 15	a6280	Sep 16 1999
MAXIMUM PEAK STAGE			8.95	Sep 15	b14.75	Sep 16 1999
INSTANTANEOUS LOW FLOW			8.4	Oct 9,10	6.4	Jul 29 1999
ANNUAL RUNOFF (CFSM)	1.00		1.97		1.53	
ANNUAL RUNOFF (INCHES)	13.54		26.75		20.74	
10 PERCENT EXCEEDS	33		68		52	
50 PERCENT EXCEEDS	15		28		23	
90 PERCENT EXCEEDS	9.2		19		14	

a From rating curve extended above 3,690 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.  
 b From outside highwater mark.



## SCHUYLKILL RIVER BASIN

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## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1984, 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Instan- taneous dis- charge, cfs (00061)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f µS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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 un- f incrm. titr., field, mg/L as CaCO3 (00419)
OCT 2002 24...	1130	1028	80020	14	13.1	8.3	656	10.1	54.8	29.0	3.06	36.4	211
			Chlor- ide, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, µg/L (01020)	Iron, water, fltrd, µg/L (01046)		
			OCT 2002 24...	68.8	7.4	26.9	<.04	1.83	E.006	<.02	70	12	

## SCHUYLKILL RIVER BASIN

01473169 VALLEY CREEK AT PENNSYLVANIA TURNPIKE BRIDGE NEAR VALLEY FORGE, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATESREMARKS.--Samples were collected using a Hess sampler with a mesh size of 500  $\mu\text{m}$ . Each sample covered a total area of 2.4  $\text{m}^2$ .

Date	10/24/02
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	45
Nemertea (PROBOSAS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
<u>Prostoma</u> sp	27
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancyliidae	
<u>Ferrissia</u> sp	4
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	24
Tubificida	
Naididae	2
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	56
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
<u>Gammarus</u> sp	5
Podocopa (SEED SHRIMP)	2
Insecta	
Ephemeroptera (MAYFLIES)	
Ephemerellidae	
<u>Eurylophella</u> sp	2
<u>Serratella</u> sp	13
Heptageniidae	
<u>Stenonema</u> sp	2
Isonychiidae	
<u>Isonychia</u> sp	1
Plecoptera (STONEFLIES)	
Taeniopterygidae	
<u>Taeniopteryx</u> sp	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<u>Cheumatopsyche</u> sp	145
<u>Hydropsyche</u> sp	57
Philopotamidae	
<u>Chimarra</u> sp	45

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BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	10/24/02
Benthic Macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<u>Optioservus</u> sp	329
<u>Oulimnius</u> sp	87
<u>Stenelmis</u> sp	32
Psephenidae (WATER PENNIES)	
<u>Psephenus</u> sp	15
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	
Chironomidae (MIDGES)	32
Empididae (DANCE FLIES)	
<u>Hemerodromia</u> sp	1
Simuliidae (BLACK FLIES)	
<u>Simulium</u> sp	3
Tipulidae (CRANE FLIES)	
<u>Antocha</u> sp	52
Total organisms	
	982
Total number of taxa	
	24