



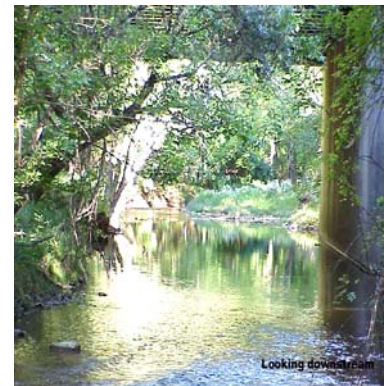
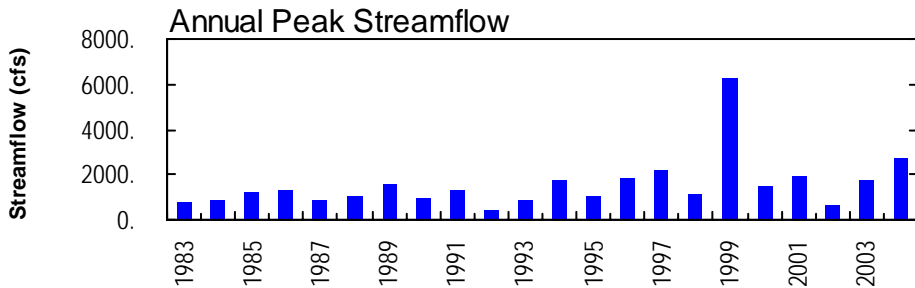
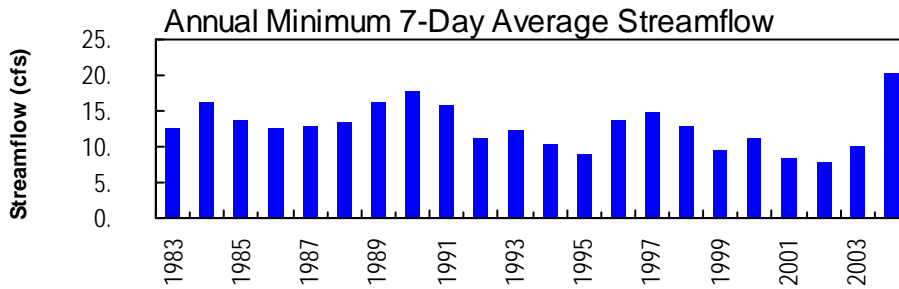
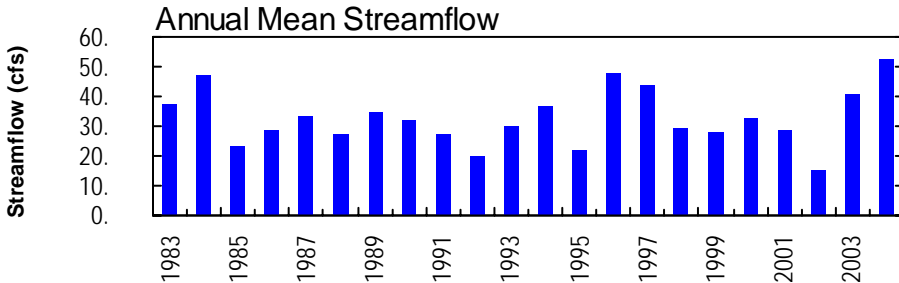
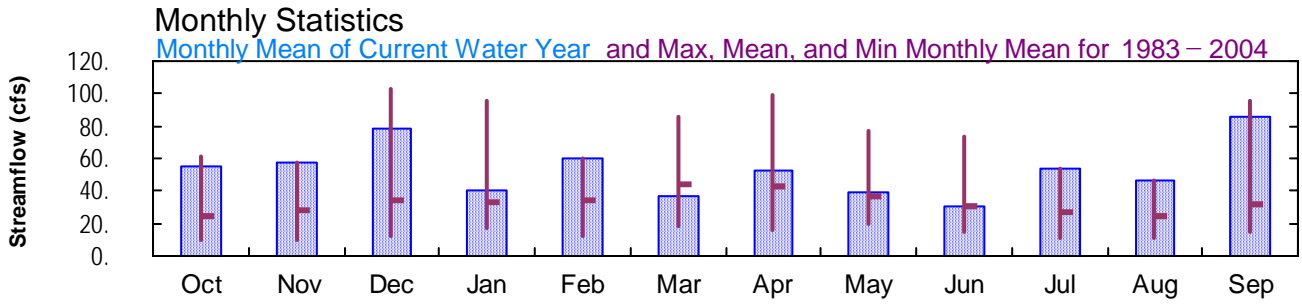
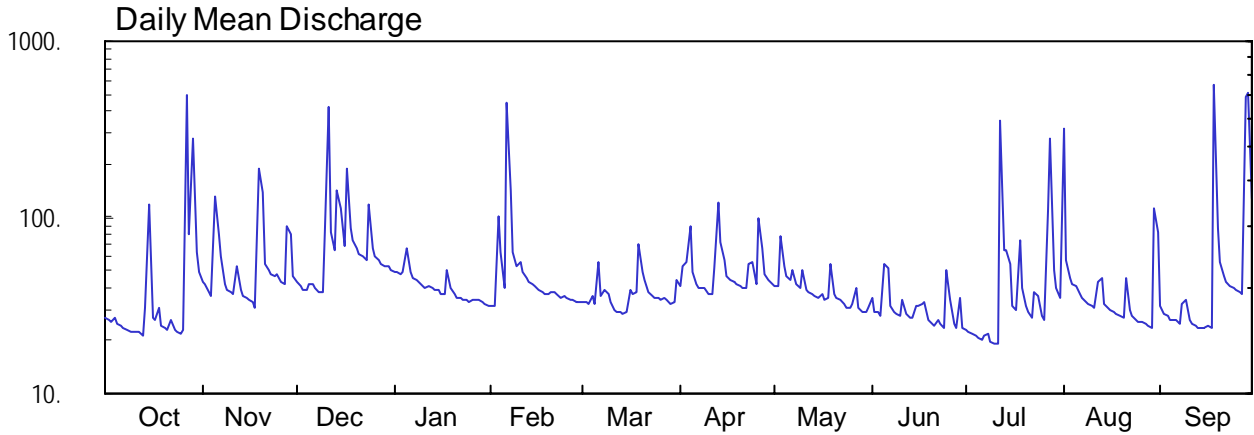
# 2004 Water Year SCHUYLKILL RIVER BASIN

## 01473169 Valley Creek at PA Turnpike Br near Valley Forge

Latitude: 40° 04' 45"  
Chester County

Longitude: 075° 27' 40"  
Datum: 108.62 feet

Hydrologic Unit Code: 02040203  
Drainage Area: 20.8 mi<sup>2</sup>



01473169-Valley Creek at PA Turnpike Br. Near Valley Forge

**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.**--No estimated daily discharges. Records good except those greater than 400 ft<sup>3</sup>/s, 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)
Oct. 27	1615	1,120	7.56	July 28	0045	1,370	8.16
Nov. 19	2030	935	7.17	Aug. 1	0945	1,360	8.13
Dec. 11	0700	1,090	7.48	Sept. 18	1530	1,580	8.64
Feb. 6	1400	1,310	8.02	Sept. 28	2245	*2,730	*10.92
July 12	1945	1,160	7.65				

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	43	43	49	31	33	41	41	35	23	319	31
2	26	42	41	48	31	33	53	41	29	22	58	28
3	25	38	39	47	101	32	55	78	29	22	45	27
4	27	36	39	49	63	36	88	53	27	21	42	26
5	25	130	41	67	39	32	49	47	54	21	41	26
6	24	81	42	49	449	55	42	44	51	20	36	26
7	23	60	40	45	144	36	40	51	31	21	35	25
8	23	42	38	44	63	38	40	42	29	22	33	32
9	22	39	38	43	52	37	39	40	28	20	32	34
10	22	38	83	41	56	33	37	50	28	19	31	26
11	22	37	419	40	48	30	37	39	34	19	31	25
12	22	52	82	40	45	29	52	37	28	349	43	24
13	22	38	65	40	43	29	122	36	27	65	45	24
14	30	35	143	39	42	29	72	36	27	65	32	24
15	119	35	111	38	41	29	57	35	31	55	31	24
16	27	34	69	37	38	39	47	37	32	31	30	24
17	26	33	187	36	37	37	44	34	32	30	29	24
18	31	31	87	51	37	38	43	35	33	74	28	566
19	24	191	73	40	37	70	42	55	26	40	28	86
20	23	139	67	36	37	49	40	37	25	31	27	55
21	23	54	62	35	38	44	40	35	24	29	46	47
22	26	50	60	35	36	38	40	34	26	27	30	43
23	23	48	58	34	35	36	54	32	25	37	27	41
24	22	46	120	34	36	35	56	31	24	36	26	40
25	22	47	67	33	35	35	42	30	50	27	26	38
26	23	43	60	34	34	34	100	32	34	26	25	38
27	497	41	57	34	34	35	68	39	25	109	25	37
28	80	90	54	34	33	34	48	31	24	277	24	477
29	279	81	53	33	33	33	44	29	35	51	24	510
30	63	46	52	33	---	33	42	29	24	40	113	127
31	48	---	50	32	---	44	---	31	---	35	82	---
TOTAL	1696	1720	2440	1250	1748	1145	1574	1221	927	1664	1444	2555
MEAN	54.7	57.3	78.7	40.3	60.3	36.9	52.5	39.4	30.9	53.7	46.6	85.2
MAX	497	191	419	67	449	70	122	78	54	349	319	566
MIN	22	31	38	32	31	29	37	29	24	19	24	24
CFSM	2.63	2.76	3.78	1.94	2.90	1.78	2.52	1.89	1.49	2.58	2.24	4.09
IN.	3.03	3.08	4.36	2.24	3.13	2.05	2.82	2.18	1.66	2.98	2.58	4.57

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)**

MEAN	24.2	28.6	34.1	33.5	34.3	44.1	43.2	36.7	30.1	27.5	24.6	31.9
MAX	61.8	57.3	103	95.8	60.3	85.9	98.8	77.5	72.9	53.7	46.6	95.5
(WY)	1997	2004	1997	1996	2004	1994	1983	1984	2003	2004	2004	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

**SCHUYLKILL RIVER BASIN**

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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	17777		19384			
ANNUAL MEAN	48.7		53.0		32.7	
HIGHEST ANNUAL MEAN					53.0	2004
LOWEST ANNUAL MEAN					15.2	2002
HIGHEST DAILY MEAN	514	Jun 20	566	Sep 18	2020	Sep 16 1999
LOWEST DAILY MEAN	e18	Feb 16	19	Jul 10,11	7.4	Jul 13 1999
ANNUAL SEVEN-DAY MINIMUM	a19	Feb 12	20	Jul 5	7.7	Aug 13 2002
MAXIMUM PEAK FLOW			2730	Sep 28	b6280	Sep 16 1999
MAXIMUM PEAK STAGE			10.92	Sep 28	c14.75	Sep 16 1999
INSTANTANEOUS LOW FLOW			18	Jul 10-12	6.4	Jul 29 1999
ANNUAL RUNOFF (CFSM)	2.34		2.55		1.57	
ANNUAL RUNOFF (INCHES)	31.79		34.67		21.37	
10 PERCENT EXCEEDS	81		75		52	
50 PERCENT EXCEEDS	33		37		24	
90 PERCENT EXCEEDS	21		24		14	

**a** Computed using estimated daily discharges.

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

**c** From outside highwater mark.

SCHUYLKILL RIVER BASIN

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

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 01...	1200	1028	80020	27	10.7	8.0	8.1	660	690	13.6	61.9	29.7	3.25

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd, titr., field, mg/L as CaCO3 (00419)	Chloride, 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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, µg/L (01020)	Iron, water, fltrd, µg/L (01046)
OCT 01...	39.1	230	76.7	7.8	27.0	<.04	2.10	.020	<.02	82	E5

SCHUYLKILL RIVER BASIN

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

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m<sup>2</sup>.

Date	10/01/03
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	46
Nemertea (PROBOSAS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
<i>Prostoma</i>	12
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	63
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	14
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
<i>Gammarus</i>	30
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
<i>Caecidotea</i>	2
<i>Lirceus</i>	1
Decapoda (CRAYFISH)	
Cambaridae	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Baetis</i>	19
<i>Acentrella</i>	4
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Gomphidae	
<i>Omphigomphus</i>	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	127
<i>Hydropsyche</i>	276
Philopotamidae	
<i>Chimarra</i>	77

SCHUYLKILL RIVER BASIN

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

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	10/01/03
Benthic Macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	752
<i>Oulimnius</i>	113
<i>Stenelmis</i>	308
Psephenidae (WATER PENNIES)	
<i>Ectopria</i>	1
<i>Psephenus</i>	13
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	91
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	6
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	84
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	38
Total organisms	2080
Total number of taxa	24