

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 mi².

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 sea level.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Jan. 3	1230	618	6.64	Sept. 5	2330	667	6.78
Mar. 21	2300	737	6.98	Sept. 16	1800	*6,280	*a14.75
Aug. 26	2315	726	6.95				

a From outside highwater mark.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	15	13	12	17	33	27	22	16	13	9.8	11
2	13	15	13	13	52	21	26	22	16	34	9.5	11
3	13	15	13	206	25	25	25	23	19	22	9.4	11
4	23	15	13	30	21	34	26	22	16	13	9.3	12
5	15	15	13	18	19	22	27	22	15	12	9.3	82
6	14	15	13	16	19	27	24	22	15	12	9.2	64
7	14	15	12	14	19	26	24	23	15	12	9.1	18
8	65	15	16	14	29	21	23	23	15	11	10	15
9	40	15	15	36	20	19	44	22	14	11	9.9	27
10	46	15	14	20	19	22	55	21	15	10	9.3	33
11	18	23	13	15	18	21	43	21	15	11	9.2	15
12	16	16	12	15	26	20	39	20	14	9.5	9.0	13
13	15	15	13	17	31	19	29	25	26	7.4	9.1	13
14	15	15	12	17	20	22	28	21	19	14	78	12
15	14	14	12	85	19	30	27	20	18	14	14	20
16	14	14	12	29	19	30	32	19	15	14	11	2020
17	13	14	12	25	19	33	29	19	15	14	10	171
18	14	14	12	178	79	28	26	19	16	11	9.9	39
19	14	14	12	44	29	24	25	39	14	26	9.8	27
20	14	15	12	29	24	23	26	21	14	20	11	21
21	14	15	12	24	22	112	25	19	16	12	14	46
22	14	14	12	23	21	189	28	18	14	12	11	33
23	14	14	13	25	20	44	32	22	14	11	10	20
24	14	14	12	77	20	36	28	41	13	12	9.8	17
25	14	14	12	31	19	33	24	23	13	11	9.8	16
26	14	32	12	24	19	30	24	19	13	10	93	14
27	14	15	12	22	19	29	23	18	13	10	97	13
28	14	13	12	21	34	30	23	18	13	10	17	12
29	15	13	15	19	---	27	23	17	13	10	15	12
30	15	13	14	18	---	26	22	16	12	10	14	47
31	15	---	12	18	---	26	---	16	---	10	12	---
TOTAL	561	461	395	1135	698	1082	857	673	456	408.9	568.4	2865
MEAN	18.1	15.4	12.7	36.6	24.9	34.9	28.6	21.7	15.2	13.2	18.3	95.5
MAX	65	32	16	206	79	189	55	41	26	34	97	2020
MIN	13	13	12	12	17	19	22	16	12	7.4	9.0	11
CFSM	.87	.74	.61	1.76	1.20	1.68	1.37	1.04	.73	.63	.88	4.59
IN.	1.00	.82	.71	2.03	1.25	1.94	1.53	1.20	.82	.73	1.02	5.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1999, BY WATER YEAR (WY)

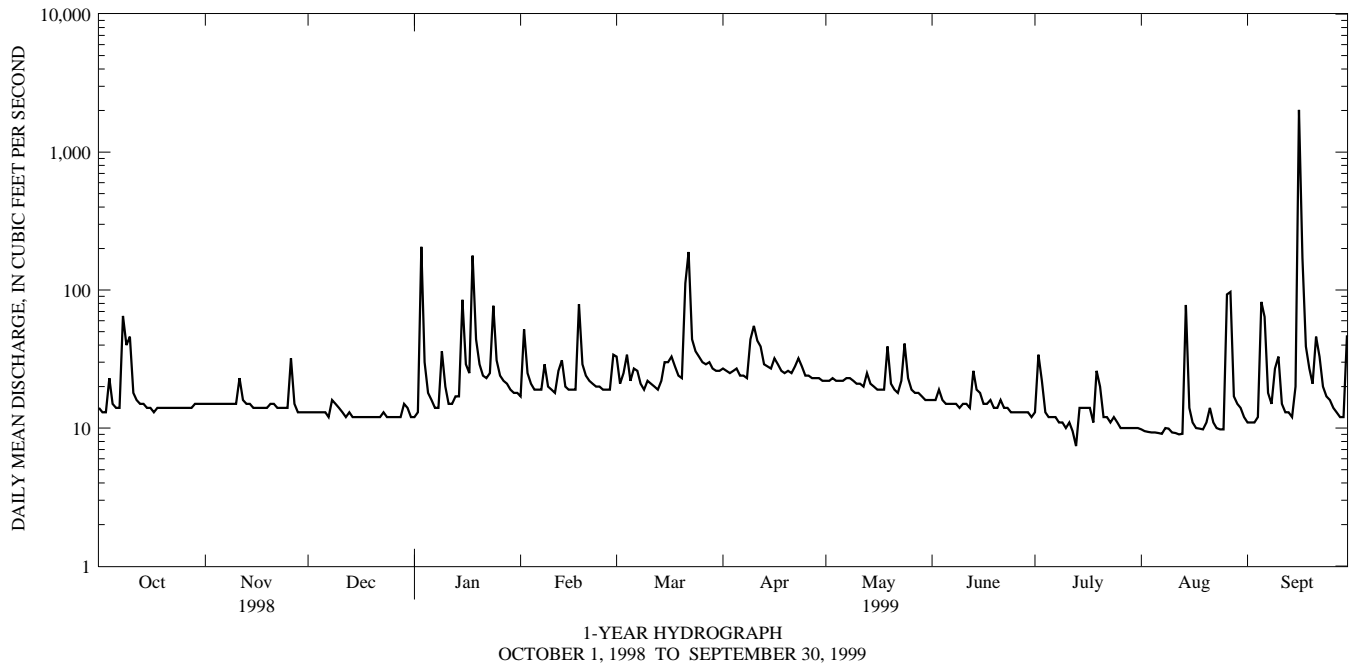
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	23.3	28.1	32.4	35.4	33.3	43.2	44.8	37.7	28.4	27.9	23.7	29.4					
MAX	61.8	48.8	103	95.8	53.5	85.9	98.8	77.5	49.9	53.1	36.6	95.5					
(WY)	1997	1987	1997	1996	1984	1994	1983	1984	1984	1996	1996	1999					
MIN	15.0	15.4	12.7	16.8	19.1	17.9	18.1	19.5	15.1	13.2	11.1	14.5					
(WY)	1987	1999	1999	1985	1992	1985	1985	1995	1995	1999	1995	1998					

SCHUYLKILL RIVER BASIN

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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1983 - 1999	
ANNUAL TOTAL	10362		10160.3			
ANNUAL MEAN	28.4		27.8		32.3	
HIGHEST ANNUAL MEAN					47.7	1996
LOWEST ANNUAL MEAN					20.3	1992
HIGHEST DAILY MEAN	235	Apr 1	2020	Sep 16	2020	Sep 16 1999
LOWEST DAILY MEAN	12	Sep 29 ^b	7.4	Jul 13	7.4	Jul 13 1999
ANNUAL SEVEN-DAY MINIMUM	12	Dec 14	9.4	Aug 1	8.8	Sep 1 1995
INSTANTANEOUS PEAK FLOW			c6280	Sep 16	c6280	Sep 16 1999
INSTANTANEOUS PEAK STAGE			a14.75	Sep 16	a14.75	Sep 16 1999
INSTANTANEOUS LOW FLOW			6.4	Jul 29	6.4	Jul 29 1999
ANNUAL RUNOFF (CFSM)	1.36		1.34		1.55	
ANNUAL RUNOFF (INCHES)	18.53		18.17		21.09	
10 PERCENT EXCEEDS	47		33		52	
50 PERCENT EXCEEDS	23		16		23	
90 PERCENT EXCEEDS	13		11		15	

- a From outside highwater mark.
- b Also Dec. 12, 14-22, 24-28, 31.
- c From rating curve extended above 3,690 ft³/s on basis of slope-area measurement of peak flow.



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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
NOV 1998 02...	1230	80020	1028	15	12.8	8.6	612	10.5	260	52	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 1998 02...	31	2.9	.7	27	18	220	54	<.1	7.9	25	
DATE		NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	ALUM- INUM, DIS- SOLVED (µG/L AS AL) (01106)	ARSENIC DIS- SOLVED (µG/L AS AS) (01000)	BORON, DIS- SOLVED (µG/L AS B) (01020)	CADMIUM DIS- SOLVED (µG/L AS CD) (01025)	
NOV 1998 02...		<.02	1.0	<.01	<.01	333	<10.0	<1	38.7	<1	
DATE		CHRO- MIUM, DIS- SOLVED (µG/L AS CR) (01030)	COPPER, DIS- SOLVED (µG/L AS CU) (01040)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	LEAD, DIS- SOLVED (µG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	MERCURY DIS- SOLVED (µG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (µG/L AS MO) (01060)	NICKEL, DIS- SOLVED (µG/L AS NI) (01065)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)	
NOV 1998 02...		<1.0	1	E5	<1	E4	<.1	<1.0	<1	<20	

SCHUYLKILL RIVER BASIN

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

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

Date	11/02/98
Organism	Count
Platyhelminthes	
Turbellaria (Flatworms)	
Tricladida	
Planariidae	58
Nematoda (Nematodes)	6
Nemertea (Proboscis Worms)	
Enopla	
Hoploneurata	
Tetrastemmatidae	
<i>Prostoma</i>	15
Annelida (Segmented Worms)	
Oligochaeta	4
Tubificida	
Naididae	8
Arthropoda	
Acariformes	
Hydrachnidia (Water Mites)	41
Crustacea	
Amphipoda (Scuds)	
Gammaridae	
Gammarus	2
Insecta	
Ephemeroptera (Mayflies)	
Baetidae	
<i>Baetis</i>	39
<i>Pseudocloeon</i>	2
Ephemerellidae	
<i>Serratella</i>	424
Heptageniidae	
<i>Stenonema</i>	3
Plecoptera (Stoneflies)	
Capniidae	1
Chloroperlidae	2
Megaloptera	
Sialidae (Alderflies)	
<i>Sialis</i>	1
Trichoptera (Caddisflies)	
Glossosomatidae	
<i>Glossosoma</i>	43
Hydropsychidae	
<i>Cheumatopsyche</i>	224
<i>Hydropsyche</i>	636
Coleoptera (Beetles)	
Elmidae (Riffle Beetles)	
<i>Optioservus</i>	781
<i>Oulimnius</i>	89
<i>Stenelmis</i>	74
Psephenidae (Water Pennies)	
<i>Psephenus</i>	4
Diptera (True Flies)	
Chironomidae (Midges)	710
Empididae (Dance Flies)	
<i>Hemerodromia</i>	7
Simuliidae (Black Flies)	
<i>Simulium</i>	13
Tipulidae (Crane Flies)	
<i>Antocha</i>	172
Total count	3,359
Total number of taxa	25