

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 National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those greater than 400 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Nov. 28	0815	1,370	8.45	Apr. 2	1900	*2,100	*9.87
Jan. 14	1045	888	7.32	June 6	2245	652	6.76
Mar. 28	1845	956	7.48	July 8	1215	656	6.77

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	39	141	41	39	43	54	56	26	24	25	15
2	74	38	65	39	38	40	702	45	26	22	25	15
3	67	37	58	39	38	38	309	43	67	19	25	14
4	61	105	54	40	39	37	130	41	47	18	25	14
5	58	61	52	62	40	37	97	40	30	22	23	14
6	55	44	50	69	41	38	84	39	100	25	23	14
7	53	42	94	47	41	44	76	39	72	20	23	14
8	51	40	59	70	42	58	98	38	32	172	28	14
9	50	38	72	48	45	42	70	36	29	31	24	14
10	49	37	135	45	50	40	65	36	28	24	21	14
11	47	37	77	49	40	39	61	35	27	22	18	13
12	46	96	61	61	38	41	59	34	26	21	17	13
13	46	84	58	46	37	38	58	33	26	20	17	13
14	84	47	54	347	77	36	56	33	25	20	17	15
15	50	44	52	83	79	36	53	32	24	61	22	43
16	53	42	50	66	49	35	51	32	24	26	20	17
17	46	41	50	60	44	35	51	31	23	75	22	28
18	42	40	48	55	41	35	49	30	23	36	17	27
19	82	39	48	53	39	34	48	30	23	23	18	17
20	48	41	46	52	38	38	47	52	23	23	17	16
21	50	43	44	49	44	37	46	35	22	23	17	15
22	45	38	44	49	46	34	45	33	22	22	16	15
23	42	37	133	48	42	119	81	31	21	21	16	15
24	41	43	63	46	41	61	68	30	21	23	15	14
25	40	51	49	45	41	43	48	30	21	26	15	14
26	39	38	46	45	40	40	45	30	20	25	15	15
27	38	37	44	44	39	39	47	29	22	25	15	17
28	38	457	43	42	40	322	44	29	23	27	21	14
29	37	78	43	41	---	110	43	28	21	26	17	15
30	83	61	42	41	---	65	57	28	20	26	16	15
31	41	---	41	40	---	57	---	27	---	25	16	---
TOTAL	1645	1875	1916	1862	1228	1711	2742	1085	914	973	606	493
MEAN	53.1	62.5	61.8	60.1	43.9	55.2	91.4	35.0	30.5	31.4	19.5	16.4
MAX	89	457	141	347	79	322	702	56	100	172	28	43
MIN	37	37	41	39	37	34	43	27	20	18	15	13
CFSM	2.55	3.00	2.97	2.89	2.11	2.65	4.39	1.68	1.46	1.51	0.94	0.79
IN.	2.94	3.35	3.43	3.33	2.20	3.06	4.90	1.94	1.63	1.74	1.08	0.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

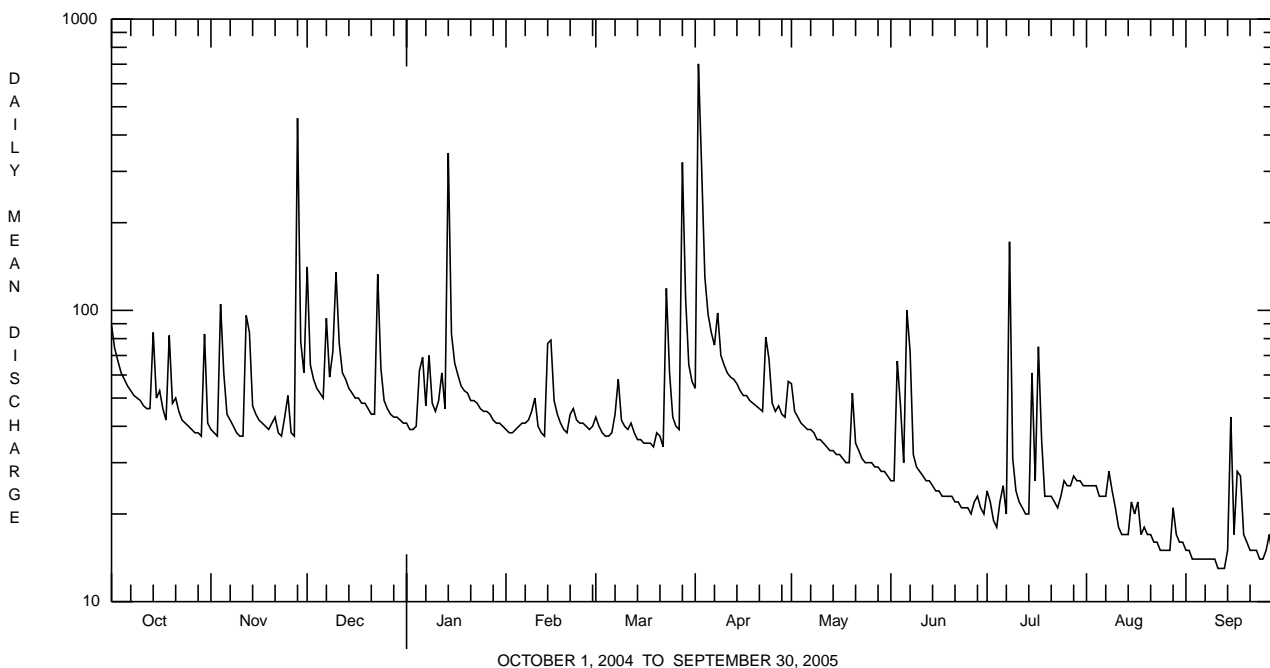
MEAN	25.5	30.1	35.3	34.7	34.7	44.6	45.3	36.6	30.2	27.7	24.4	31.2
MAX	61.8	62.5	103	95.8	60.3	85.9	98.8	77.5	72.9	53.7	46.6	95.5
(WY)	1997	2005	1997	1996	2004	1994	1983	1984	2003	2004	2004	1999
MIN	9.91	10.1	12.7	16.8	11.9	17.9	15.8	19.5	15.1	11.1	10.5	14.5
(WY)	2002	2002	1999	1985	2002	1985	2002	1995	1995	2002	2002	2002

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

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	18964		17050			
ANNUAL MEAN	51.8		46.7		33.3	
HIGHEST ANNUAL MEAN					53.0	2004
LOWEST ANNUAL MEAN					15.2	2002
HIGHEST DAILY MEAN	566	Sep 18	702	Apr 2	2020	Sep 16 1999
LOWEST DAILY MEAN	19	Jul 10	13	Sep 11-13	7.4	Jul 13 1999
ANNUAL SEVEN-DAY MINIMUM	20	Jul 5	14	Sep 7	7.7	Aug 13 2002
MAXIMUM PEAK FLOW			2100	Apr 2	a6280	Sep 16 1999
MAXIMUM PEAK STAGE			9.87	Apr 2	b14.75	Sep 16 1999
INSTANTANEOUS LOW FLOW			13	Sep 10	6.4	Jul 29 1999
ANNUAL RUNOFF (CFSM)	2.49		2.25		1.60	
ANNUAL RUNOFF (INCHES)	33.92		30.49		21.77	
10 PERCENT EXCEEDS	71		70		54	
50 PERCENT EXCEEDS	39		40		24	
90 PERCENT EXCEEDS	26		17		14	

a From rating curve extended above 3,690 ft³/s on basis of slope-area measurement of peak flow.
 b From outside highwater mark.



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WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

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)	pH, water, unfltrd lab, std units (00403)	Specif. conduc- tance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduc- tance, wat unf lab, 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)	
NOV 2004 03...	1230	1028	80020	37	11.9	8.4	8.2	674	692	12.9	58.2	29.5	3.17	
Date		Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	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)
NOV 2004 03...	37.6	203	220	73.5	E.1	6.7	25.7	<.04	1.89	.015	<.02	65	6	

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BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATESREMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 μm . Each sample covered a total area of 2.4 m^2 .

Date	11/03/04
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	66
Nematoda (NEMATODES)	32
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoploneurtea	
Tetrastemmatidae	
<i>Prostoma</i>	26
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Naididae	16
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	103
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
<i>Gammarus</i>	2
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
<i>Caecidotea</i>	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Baetis</i>	6
<i>Acentrella</i>	7
Ephemerellidae	
<i>Dannella</i>	2
Isonychiidae	
<i>Isonychia</i>	1
Plecoptera (STONEFLIES)	
Capniidae	
	1
Trichoptera (CADDISFLIES)	
Glossosomatidae	
<i>Glossosoma</i>	5
Hydropsychidae	
<i>Cheumatopsyche</i>	57
<i>Hydropsyche</i>	153
Philopotamidae	
<i>Chimarra</i>	5

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BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	11/03/04
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	366
<i>Oulimnius</i>	93
<i>Stenelmis</i>	88
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	3
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	
512	
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	11
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	13
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	29
Total organisms	
	1598
Total number of taxa	
	24