

SCHUYLKILL RIVER BASIN

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA

LOCATION.--Lat 40°09'05", long 75°36'06", Chester County, Hydrologic Unit 02040203, on right bank 70 ft downstream from two-span county bridge on French Creek Road, 4.5 mi northwest of Phoenixville, and 7.3 mi upstream from mouth.

DRAINAGE AREA.--59.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 160 ft above sea level, from topographic map. Prior to Nov. 7, 1968, nonrecording gage at site 70 ft upstream at same datum.

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.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Dec. 17	0830	*2,520	*8.92	May 27	0415	910	7.03
Mar. 30	0900	1,090	7.31	Aug. 12	2045	2,360	8.77

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	25	45	e44	e130	79	177	71	72	32	18	30
2	38	25	39	e43	e100	77	152	70	162	38	16	19
3	36	25	36	e45	e90	74	133	68	90	30	15	16
4	47	25	e35	e44	e70	79	123	66	73	32	21	20
5	85	25	e33	e45	e90	96	e113	65	66	36	21	22
6	50	25	e34	e44	e110	86	e122	62	63	34	18	18
7	41	25	e32	e42	e105	93	126	61	61	29	17	16
8	36	25	30	e41	e100	113	121	60	56	28	15	15
9	35	27	30	e42	e95	123	118	60	53	36	15	15
10	34	58	e29	e39	e420	108	135	59	51	32	16	15
11	33	47	e29	e41	167	92	125	56	49	27	58	16
12	32	32	e31	e40	106	85	158	55	50	25	356	15
13	32	28	e31	e39	103	270	120	55	61	24	263	14
14	30	35	e130	e38	111	145	105	52	50	23	51	14
15	29	42	e100	e54	134	109	99	51	51	22	33	15
16	28	31	e60	e49	118	124	182	50	65	22	26	14
17	30	28	e1200	e42	169	171	135	49	87	21	24	13
18	49	26	283	e46	100	129	168	51	56	22	23	13
19	54	25	e100	e220	85	101	127	53	e49	23	21	13
20	36	25	e85	e200	85	92	106	49	46	22	24	23
21	32	25	e70	e110	85	270	109	77	e44	20	24	58
22	30	24	e65	e90	74	349	105	220	e45	19	20	25
23	28	24	e60	e81	e75	156	98	145	e57	18	19	18
24	27	23	e60	e80	74	126	95	79	e57	18	19	17
25	27	23	e58	e70	94	113	86	66	e45	18	19	109
26	27	139	e56	e68	162	105	82	221	e41	18	18	48
27	26	95	e53	e55	104	98	81	460	e37	20	17	28
28	26	55	e51	e50	87	93	79	136	34	19	17	22
29	25	45	e50	e57	---	94	73	92	32	18	16	19
30	25	51	e46	e175	---	670	71	80	32	19	16	18
31	25	---	e45	e160	---	258	---	70	---	19	18	---
TOTAL	1093	1108	3006	2194	3243	4578	3524	2809	1735	764	1254	698
MEAN	35.3	36.9	97.0	70.8	116	148	117	90.6	57.8	24.6	40.5	23.3
MAX	85	139	1200	220	420	670	182	460	162	38	356	109
MIN	25	23	29	38	70	74	71	49	32	18	15	13
CFSM	.60	.62	1.64	1.20	1.96	2.50	1.99	1.53	.98	.42	.68	.39
IN.	.69	.70	1.89	1.38	2.04	2.88	2.22	1.77	1.09	.48	.79	.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2001, BY WATER YEAR (WY)

MEAN	48.9	70.2	99.0	109	123	145	137	105	76.9	59.6	39.7	48.6
MAX	180	166	328	394	266	350	306	250	353	258	110	214
(WY)	1997	1973	1997	1979	1984	1994	1983	1989	1972	1984	1971	1999
MIN	17.9	24.6	19.2	13.7	39.7	40.5	35.6	31.9	22.2	11.1	13.4	14.1
(WY)	1987	1982	1981	1981	1969	1981	1985	1969	1999	1999	1999	1980

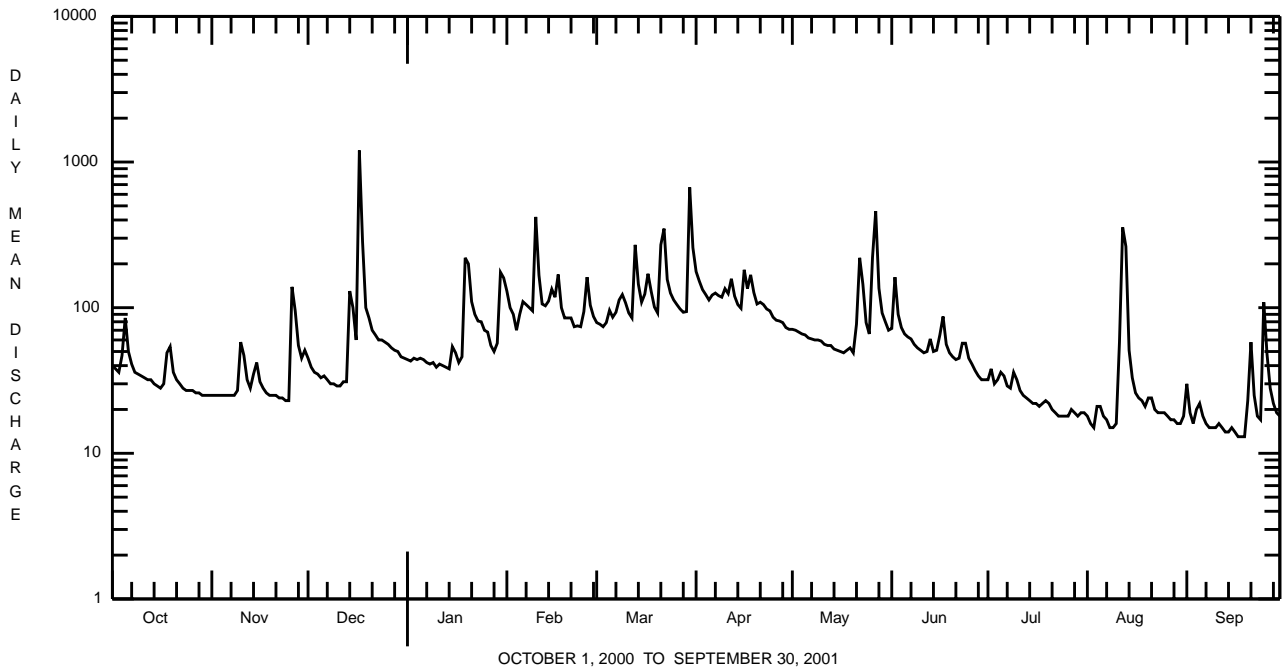
e Estimated.

SCHUYLKILL RIVER BASIN

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1969 - 2001	
ANNUAL TOTAL	29798		26006			
ANNUAL MEAN	81.4		71.2		88.3	
HIGHEST ANNUAL MEAN					155	1984
LOWEST ANNUAL MEAN					36.2	1981
HIGHEST DAILY MEAN	1840	Mar 22	e1200	Dec 17	4530	Jun 22 1972
LOWEST DAILY MEAN	22	Sep 10-12	13	Sep 17-19	7.1	Aug 7 1999
ANNUAL SEVEN-DAY MINIMUM	23	Sep 6	14	Sep 13	7.3	Aug 2 1999
MAXIMUM PEAK FLOW			a2520	Dec 17	a11200	Jun 22 1972
MAXIMUM PEAK STAGE			8.92	Dec 17	13.66	Jun 22 1972
INSTANTANEOUS LOW FLOW			13	Sep 17-20	6.9	Aug 8 1999
ANNUAL RUNOFF (CFSM)	1.38		1.21		1.49	
ANNUAL RUNOFF (INCHES)	18.76		16.37		20.30	
10 PERCENT EXCEEDS	147		131		168	
50 PERCENT EXCEEDS	54		49		56	
90 PERCENT EXCEEDS	27		18		20	

a From rating curve extended above 2,500 ft³/s, on basis of slope-area measurement of peak flow.
 e Estimated.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1950 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1998 to April 1999, June 1999 to August 1999, June 2000 to September 2000.

INSTRUMENTATION.--Water-temperature data logger (in situ system; measurements recorded every 15 minutes) located at gage.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum 30.5°C, July 5, 6, 1999; minimum, -0.5°C, Dec. 25, 1998, Jan. 31, Mar. 12, 13, 1999..

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
OCT 2000 25...	1230	80020	1028	27	10.9	7.4	176	11.0	17.1	5.42	1.97	7.9
DATE		ANC WATER UNFLTRD IT FIELD CACO3 (00419)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	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)	BORON, DIS- SOLVED (µG/L AS B) (01020)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	
OCT 2000 25...		99	11.2	18.4	12.6	<.041	1.08	E.003	<.018	E8	70	

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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 3.2 m².

Date	Count
10/25/00	
Benthic Macroinvertebrate	Count
Nematoda (NEMATODES)	16
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
<u>Ferrissia</u> sp	5
Planorbidae	
<u>Gyraulus</u> sp	4
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
<u>Musculium</u> sp	10
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	5
Tubificida	
Naididae	2
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	23
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<u>Baetis</u> sp	5
<u>Pseudocloeon</u> sp	12
Ephemerellidae	
<u>Eurylophella</u> sp	43
<u>Serratella</u> sp	77
Heptageniidae	
<u>Epeorus</u> sp	61
<u>Stenonema</u> sp	112
Isonychiidae	
<u>Isonychia</u> sp	45
Odonata	
Coenagrionidae (DAMSELFLIES)	
<u>Argia</u> sp	9
Gomphidae (DRAGONFLIES)	
<u>Lanthus</u> sp	2
<u>Stylogomphus</u> sp	1
Plecoptera (STONEFLIES)	
Chloroperlidae	2
Perlidae	
<u>Acroneuria</u> sp	14
<u>Paragnetina</u> sp	1
Taeniopterygidae	
<u>Strophopteryx</u> sp	15
<u>Taeniopteryx</u> sp	26
Megaloptera	
Sialidae (ALDERFLIES)	
<u>Sialis</u> sp	4

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BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/25/00
Benthic Macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Apataniidae	
<u>Apatania</u> sp	21
Brachycentridae	
<u>Micrasema</u> sp	9
Glossosomatidae	
<u>Glossosoma</u> sp	34
Helicopsychidae	
<u>Helicopsyche</u> sp	2
Hydropsychidae	
<u>Cheumatopsyche</u> sp	160
<u>Hydropsyche</u> sp	175
<u>Macrostemum</u> sp	6
Hydroptilidae	
<u>Leucotrichia</u> sp	61
Lepidostomatidae	
<u>Lepidostoma</u> sp	3
Philopotamidae	
<u>Chimarra</u> sp	48
Polycentropodidae	
<u>Polycentropus</u> sp	5
Psychomyiidae	
<u>Psychomyia</u> sp	4
Lepidoptera	
Pyralididae (MOTHS)	
<u>Petrophila</u> sp	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<u>Optioservus</u> sp	46
<u>Oulimnius</u> sp	7
<u>Promoresia</u> sp	12
<u>Stenelmis</u> sp	4
Hydrophilidae	
<u>Berosus</u> sp	1
Psephenidae (WATER PENNIES)	
<u>Ectopria</u> sp	1
<u>Psephenus</u> sp	21
Diptera (TRUE FLIES)	
Athericidae	
<u>Atherix</u> sp	1
Chironomidae (MIDGES)	
Empididae (DANCE FLIES)	
<u>Hemerodromia</u> sp	7
Simuliidae (BLACK FLIES)	
<u>Simulium</u> sp	21
Tipulidae (CRANE FLIES)	
<u>Antocha</u> sp	6
<u>Tipula</u> sp	1
Total Organisms	1199
Total Taxa	49