



2005 Water Year  
SCHUYLKILL RIVER BASIN  
01471000 Tulpehocken Creek near Reading, PA

Latitude: 40° 22 ' 08"

Longitude: 075° 58 ' 46"

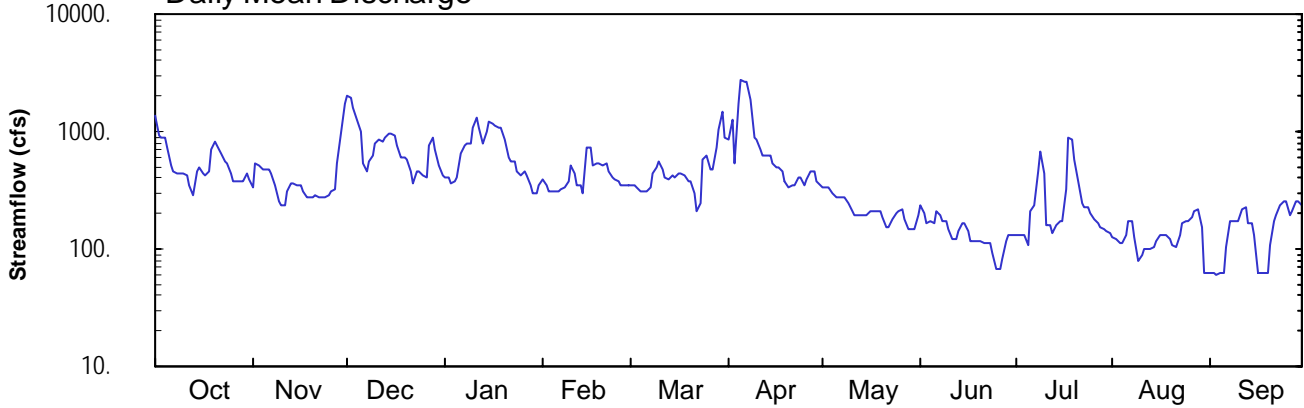
Hydrologic Unit Code: 02040203

Berks County

Datum: 216.60 feet

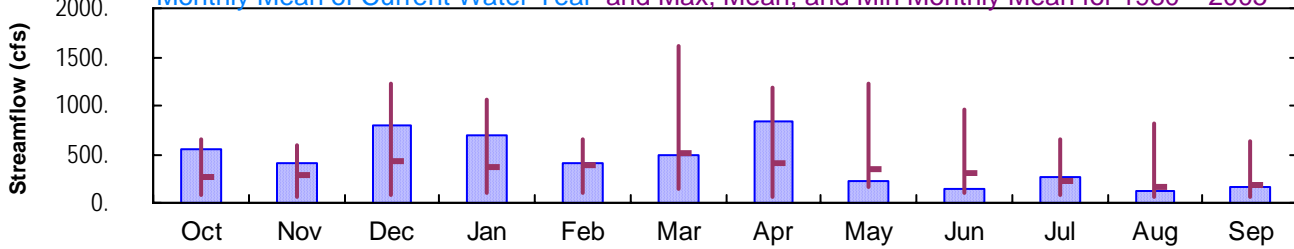
Drainage Area: 211. mi<sup>2</sup>

### Daily Mean Discharge

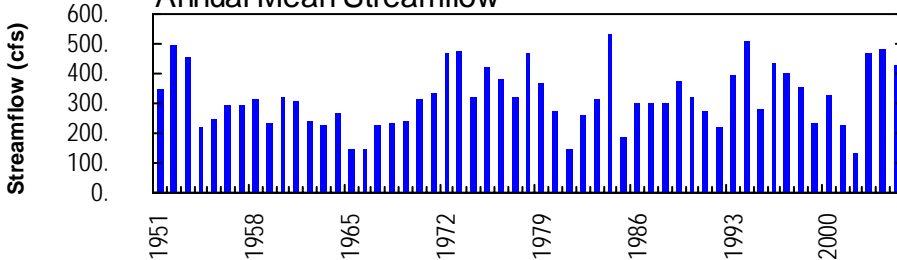


### Monthly Statistics

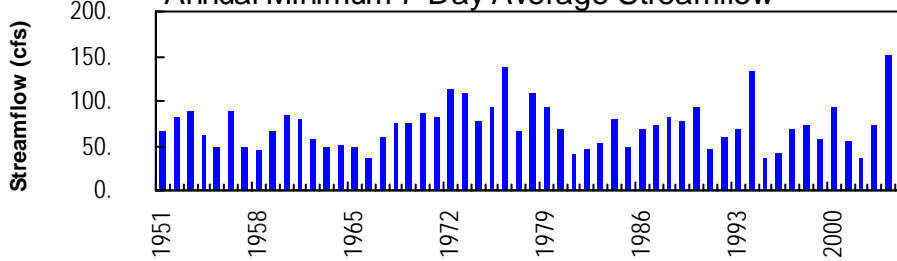
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1980 – 2005



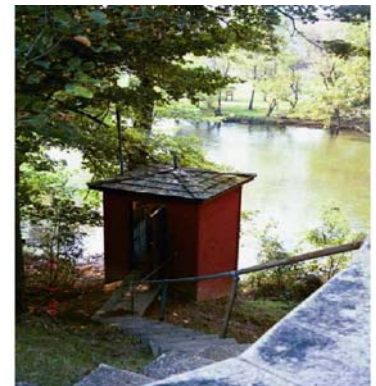
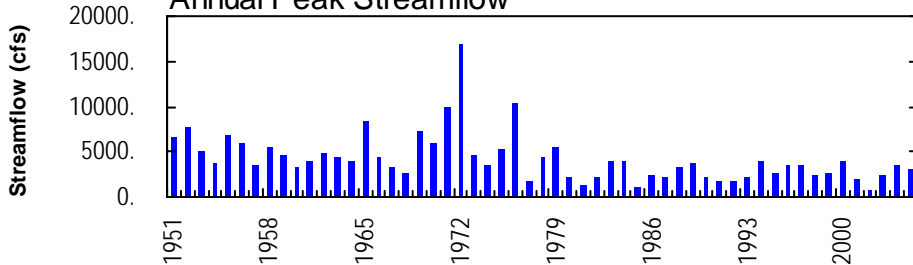
### Annual Mean Streamflow



### Annual Minimum 7-Day Average Streamflow



### Annual Peak Streamflow



01471000--Tulpehocken Creek near Reading

## SCHUYLKILL RIVER BASIN

01471000 TULPEHOCKEN CREEK NEAR READING, PA  
(Pennsylvania Water-Quality Network Station)

**LOCATION.**--Lat 40°22'08", long 75°58'46", Berks County, Hydrologic Unit 02040203, on right bank 15 ft upstream from covered bridge on Township Route 921, 1.0 mi downstream from Cacoosing Creek, 2.5 mi upstream from mouth, and 3.5 mi northwest of town square in Reading.

**DRAINAGE AREA.**--211 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--October 1950 to current year.

**REVISED RECORDS.**--WSP 1382: 1951-53, 1954 (M). WSP 2102: 1965 (M). WDR PA-72-1: 1971 (M).

**GAGE.**--Water-stage recorder. Datum of gage is 216.60 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--No estimated daily discharges. Records good. Flow regulated since April 1979 by Blue Marsh Lake (station 01470870) 3.9 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

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	1390	329	2020	414	399	351	842	338	235	133	128	63
2	918	527	1920	413	346	344	1250	333	199	134	119	62
3	907	515	1580	370	305	333	545	330	169	134	114	61
4	888	480	1250	383	305	313	1750	302	171	134	111	62
5	721	473	981	400	305	312	2770	276	169	109	131	62
6	522	473	541	650	305	313	2650	275	206	213	172	104
7	452	448	456	765	323	340	2650	275	192	233	172	172
8	445	347	549	805	341	433	1900	271	172	457	128	172
9	445	254	630	796	381	493	883	248	173	677	79	172
10	436	233	781	1090	509	555	868	213	147	441	88	172
11	428	232	846	1290	441	472	716	195	123	162	101	218
12	352	305	808	1070	345	404	623	194	122	158	99	226
13	288	369	893	777	343	400	628	194	145	139	100	165
14	451	359	975	1010	301	425	622	193	165	161	104	167
15	488	354	954	1190	723	415	545	193	165	176	115	133
16	435	354	941	1150	728	443	498	206	143	172	130	63
17	430	314	763	1120	519	439	504	212	117	320	131	63
18	456	279	610	1080	536	417	452	212	117	877	130	63
19	700	279	605	1070	529	382	375	211	117	864	120	62
20	834	281	589	844	525	381	340	188	117	573	106	107
21	708	285	466	610	525	300	342	155	114	372	106	176
22	643	279	369	552	457	210	351	152	114	247	131	195
23	550	279	467	555	400	248	403	176	114	224	167	240
24	544	281	450	465	395	568	413	204	92	224	172	257
25	449	290	425	430	379	618	348	212	68	203	172	257
26	382	305	413	455	350	481	394	220	69	179	186	192
27	382	322	767	418	348	474	450	180	83	163	210	208
28	378	540	903	343	350	722	460	148	115	152	214	253
29	376	961	710	300	---	1040	376	148	131	145	156	253
30	442	1740	515	300	---	1500	345	146	133	140	63	232
31	391	---	418	354	---	889	---	196	---	137	63	---
TOTAL	17231	12487	24595	21469	11713	15015	25293	6796	4197	8453	4018	4632
MEAN	556	416	793	693	418	484	843	219	140	273	130	154
MAX	1390	1740	2020	1290	728	1500	2770	338	235	877	214	257
MIN	288	232	369	300	301	210	340	146	68	109	63	61

SCHUYLKILL RIVER BASIN

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2005, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	257	287	424	375	392	514	417	352	301	226	173	186
MAX	651	589	1220	1069	663	1604	1191	1226	968	661	812	628
(WY)	1997	1997	1997	1996	1986	1994	1983	1989	2003	1984	2004	2004
MIN	78.3	67.6	80.1	99.8	94.5	134	64.2	155	98.8	80.2	63.1	63.0
(WY)	1996	2002	1999	1981	2002	2002	1985	1999	1999	2002	1981	1983

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1980 - 2005

ANNUAL TOTAL	181693	155899	
ANNUAL MEAN	496	427	325
HIGHEST ANNUAL MEAN			531
LOWEST ANNUAL MEAN			133
HIGHEST DAILY MEAN	3240	Aug 15	2770
LOWEST DAILY MEAN	139	Jul 10,11	61
ANNUAL SEVEN-DAY MINIMUM	150	Jul 5	62
MAXIMUM PEAK FLOW			3010
MAXIMUM PEAK STAGE			4.80
10 PERCENT EXCEEDS	903		872
50 PERCENT EXCEEDS	413		343
90 PERCENT EXCEEDS	178		117

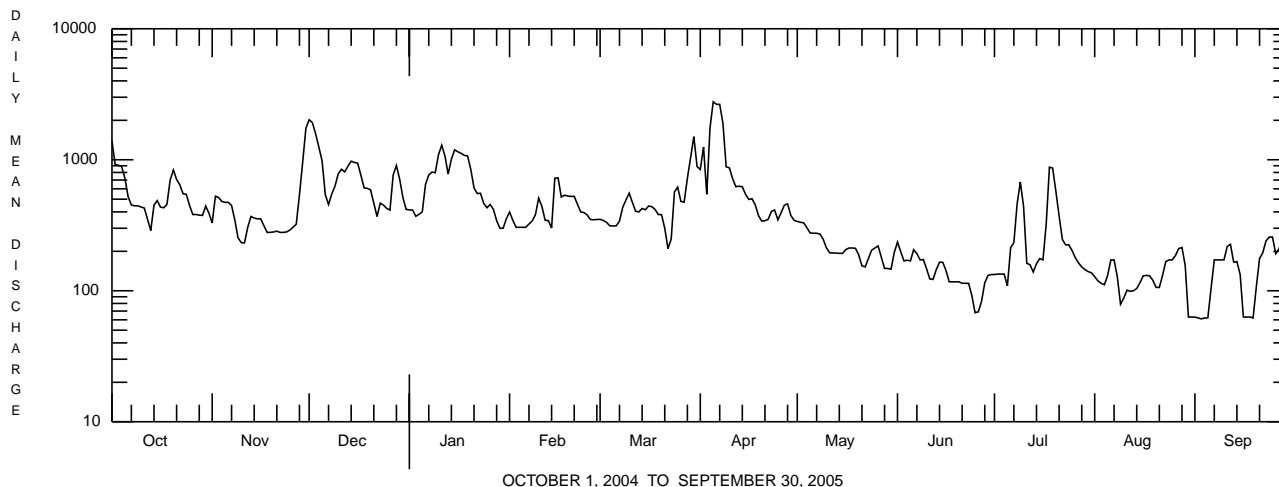
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1979, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	178	259	360	405	444	522	451	318	263	210	178	192
MAX	689	490	829	1193	917	914	806	712	1434	645	481	588
(WY)	1977	1973	1978	1979	1971	1978	1970	1953	1972	1969	1955	1975
MIN	55.8	67.5	84.4	124	178	202	170	116	72.8	57.5	41.9	54.8
(WY)	1964	1966	1966	1966	1969	1969	1966	1965	1965	1966	1966	1957

SUMMARY STATISTICS WATER YEARS 1951 - 1979

ANNUAL MEAN	314
HIGHEST ANNUAL MEAN	491
LOWEST ANNUAL MEAN	144
HIGHEST DAILY MEAN	12000
LOWEST DAILY MEAN	33
ANNUAL SEVEN-DAY MINIMUM	35
MAXIMUM PEAK FLOW	a17000
MAXIMUM PEAK STAGE	b15.65
INSTANTANEOUS LOW FLOW	23
ANNUAL RUNOFF (CFSM)	1.49
ANNUAL RUNOFF (INCHES)	20.23
10 PERCENT EXCEEDS	613
50 PERCENT EXCEEDS	211
90 PERCENT EXCEEDS	86

- a From rating curve extended above 3,600 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow.
- b From floodmark in gage shelter.



## SCHUYLKILL RIVER BASIN

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued  
(Pennsylvania Water-Quality Network Station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

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

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, 25 degC (90095)	Specif. conductance, wat unfltrd lab, 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
NOV 2004 03...	1120	1028	9813	512	11.1	8.0	8.3	396	391	12.7	170	48	12
JAN 2005 26...	1130	1028	9813	458	15.6	8.0	8.1	402	401	3.7	180	50	13
MAR 03...	1040	1028	9813	343	17.1	8.2	8.3	417	369	3.4	180	52	13
MAY 19...	1230	1028	9813	212	12.3	8.4	8.4	393	386	17.2	170	48	13
JUL 14...	1000	1028	9813	134	8.1	7.5	7.8	411	421	20.0	190	51	14
SEP 20...	1120	1028	9813	61	8.1	7.7	8.0	448	442	20.6	200	51	16

Date	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat fltrd, mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water, unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Total nitrogen, water, unfltrd mg/L (00600)	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover-able, mg/L (01105)	Copper, water, unfltrd recover-able, mg/L (01042)
NOV 2004 03...	134	20	240	2.0	<.020	5.3	.050	5.7	.01	.04	2.4	<200	<10
JAN 2005 26...	128	21	260	4.0	.310	6.7	<.040	6.6	--	--	1.5	260	<10
MAR 03...	132	22	310	14	.030	6.4	<.040	6.5	.03	.05	1.6	<200	<10
MAY 19...	126	23	300	4.0	.030	5.6	<.040	5.5	.04	.06	--	<200	<10
JUL 14...	142	23	320	8.0	.170	4.2	<.040	4.7	.07	.10	--	220	<10
SEP 20...	148	26	300	8.0	.030	3.9	.060	4.0	.15	.17	--	<200	<10

Date	Iron, water, unfltrd recover-able, mg/L (01045)	Lead, water, unfltrd recover-able, mg/L (01051)	Manganese, water, unfltrd recover-able, mg/L (01055)	Nickel, water, unfltrd recover-able, mg/L (01067)	Zinc, water, unfltrd recover-able, mg/L (01092)
NOV 2004 03...	20	<1.0	30	<50	<10
JAN 2005 26...	270	<1.0	30	<50	<10
MAR 03...	80	<1.0	20	<50	<10
MAY 19...	100	<1.0	40	<50	<10
JUL 14...	280	<1.0	40	<50	30
SEP 20...	50	<1.0	40	<50	<10

## SCHUYLKILL RIVER BASIN

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500  $\mu$ m. Samples represent counts per 100 animal (approximate) subsamples.

Date	10/13/04
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	17
Nematoda (NEMATODES)	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancyliidae	
<i>Ferrissia</i>	4
Planorbidae	
<i>Planorbella</i>	1
Bivalvia (CLAMS)	
Veneroidea	
Corbiculidae	
<i>Corbicula fluminea</i>	15
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Naididae	4
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	14
Crustacea	
Amphipoda (SCUDS)	1
Insecta	
Ephemeroptera (MAYFLIES)	
Caenidae	
<i>Caenis</i>	3
Ephemerellidae	
<i>Serratella</i>	15
Heptageniidae	1
<i>Stenonema</i>	4
Tricorythidae	
<i>Tricorythodes</i>	1
Plecoptera (STONEFLIES)	
Taeniopterygidae	
<i>Taeniopteryx</i>	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	29
<i>Hydropsyche</i>	15
Hydroptilidae	
<i>Leucotrichia</i>	7
Lepidoptera (MOTHS AND BUTTERFLIES)	
Pyralidae	
<i>Petrophila</i>	1

## SCHUYLKILL RIVER BASIN

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	10/13/04
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	1
<i>Stenelmis</i>	8
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	50
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	3
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	17
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	2
Total Organisms	216
Total Taxa	25