

SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA

LOCATION.--Lat 40°24'48", long 76°10'19", Berks County, Hydrologic Unit, 02040203, on left bank 30 ft downstream from Mill Road bridge at Kricks Mill, 0.4 mi upstream from Mill Creek, and 3.5 mi west of Bernville.

DRAINAGE AREA.--66.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1974 to current year.

REVISED RECORDS.--WDR PA-96-1: 1975-83(P), 1988(P), 1990(P), 1993-94(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 311.26 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Department of Transportation datum).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1972 reached a stage of about 9.5 ft, from information by local resident, discharge about 6,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Mar. 21	0130	1,080	5.15	June 21	0630	*2,840	*7.19

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	92	81	283	97	112	180	100	167	161	109	67
2	41	83	78	532	97	183	172	109	151	156	110	79
3	39	76	75	391	95	359	163	99	133	154	103	71
4	37	71	71	345	120	173	155	96	280	146	104	74
5	35	67	76	296	108	168	161	94	251	140	109	72
6	34	82	73	269	95	370	147	94	202	135	149	65
7	32	73	70	245	96	229	146	93	328	133	102	62
8	32	68	64	234	91	173	149	108	370	132	94	60
9	32	66	66	249	89	358	186	98	264	128	92	60
10	35	64	66	240	88	279	194	94	217	130	97	60
11	100	64	113	208	86	178	339	90	191	127	92	63
12	125	71	284	194	84	162	357	87	179	125	105	66
13	77	89	208	187	82	316	262	84	195	123	91	70
14	66	72	412	177	81	407	228	81	165	119	87	76
15	62	68	332	168	80	319	204	79	150	115	86	73
16	174	80	252	157	e75	304	191	80	140	112	84	81
17	129	200	202	156	e70	304	176	84	132	110	86	72
18	72	234	172	145	e73	266	168	79	147	110	81	64
19	60	166	156	140	e77	220	161	76	144	113	80	109
20	56	142	201	140	e80	329	150	73	524	108	78	88
21	50	130	166	132	83	654	146	77	1750	108	74	83
22	47	142	142	e120	196	376	144	72	554	145	71	80
23	45	133	130	e110	699	302	137	71	377	206	72	346
24	45	115	120	e100	460	257	130	92	292	318	73	165
25	46	106	142	111	245	224	125	93	246	150	73	142
26	77	100	140	109	174	215	138	205	221	133	73	142
27	61	101	124	105	138	221	127	147	202	126	75	129
28	53	91	118	e100	125	186	114	122	187	122	74	144
29	57	81	115	102	---	177	110	111	181	117	69	127
30	98	87	110	100	---	212	105	103	169	112	68	120
31	125	---	108	97	---	204	---	106	---	109	70	---
TOTAL	1986	3014	4467	5942	3884	8237	5165	2997	8509	4223	2731	2910
MEAN	64.1	100	144	192	139	266	172	96.7	284	136	88.1	97.0
MAX	174	234	412	532	699	654	357	205	1750	318	149	346
MIN	32	64	64	97	70	112	105	71	132	108	68	60
CFSM	0.96	1.51	2.17	2.88	2.09	4.00	2.59	1.45	4.27	2.05	1.32	1.46
IN.	1.11	1.69	2.50	3.32	2.17	4.61	2.89	1.68	4.76	2.36	1.53	1.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

MEAN	78.7	92.2	113	128	127	167	146	111	104	85.9	65.4	66.9
MAX	250	181	288	385	264	468	367	277	284	216	129	181
(WY)	1977	1997	1997	1979	1979	1994	1993	1989	2003	1984	1976	1975
MIN	35.1	31.4	29.1	26.5	27.4	51.7	58.8	59.5	41.4	32.1	27.5	29.7
(WY)	2002	2002	2002	2002	2002	2002	1985	1999	1999	1999	2002	2002

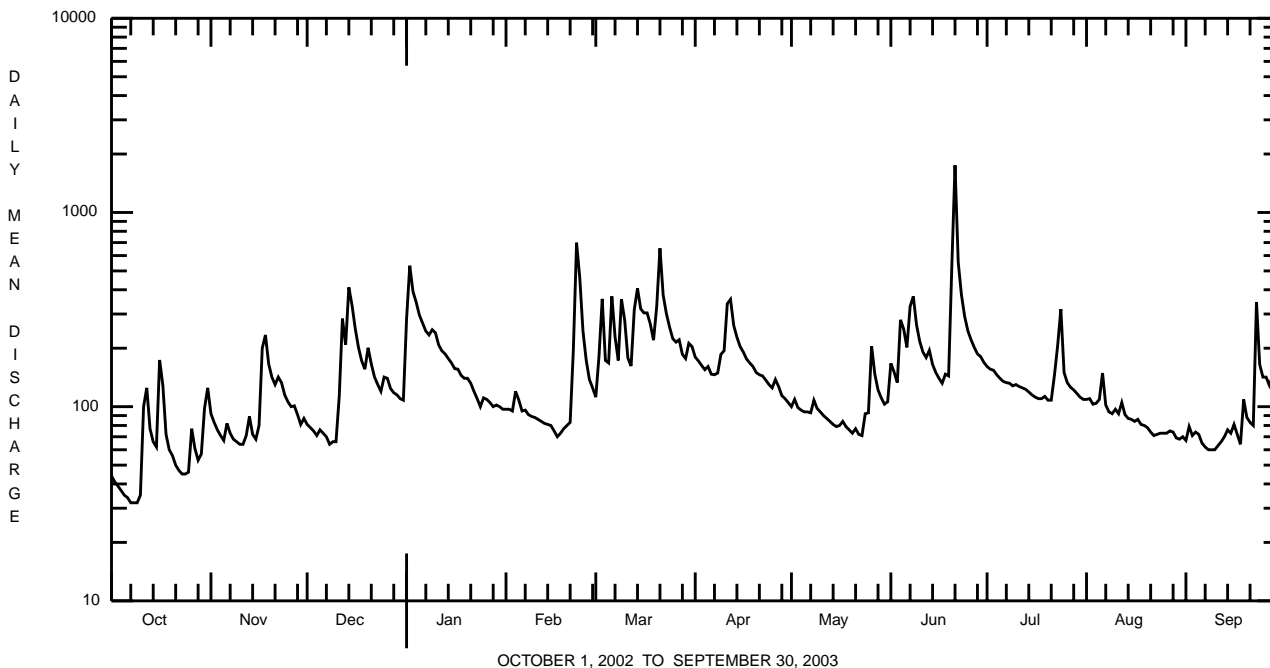
e Estimated.

SCHUYLKILL RIVER BASIN

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1975 - 2003	
ANNUAL TOTAL	22132		54065			
ANNUAL MEAN	60.6		148		106	
HIGHEST ANNUAL MEAN					164	1994
LOWEST ANNUAL MEAN					42.7	2002
HIGHEST DAILY MEAN	412	Dec 14	1750	Jun 21	2140	Jan 26 1978
LOWEST DAILY MEAN	15	Sep 8	32	Oct 7-9	15	Sep 8 2002
ANNUAL SEVEN-DAY MINIMUM	16	Sep 7	34	Oct 4	16	Sep 7 2002
MAXIMUM PEAK FLOW			a2840	Jun 21	a7140	Jan 24 1979
MAXIMUM PEAK STAGE			7.19	Jun 21	10.16	Jan 24 1979
INSTANTANEOUS LOW FLOW			29	Oct 7	14	Sep 8 2002
ANNUAL RUNOFF (CFSM)	0.91		2.23		1.60	
ANNUAL RUNOFF (INCHES)	12.38		30.24		21.67	
10 PERCENT EXCEEDS	119		267		179	
50 PERCENT EXCEEDS	47		114		82	
90 PERCENT EXCEEDS	24		67		40	

a From rating curve extended above 740 ft³/s on basis of contracted-opening measurement at 3,900 ft³/s, gage height 8.01 ft.



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01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Water years 1978 to current year.

INSTRUMENTATION.--Temperature recorder since October 1977. Temperature probe interfaced with a data collection platform since 1986 water year.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 28.5°C, July 6, 1999; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 21.5°C, Aug. 14, 15, 22, 23; minimum, 0.0°C, several days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	18.0	15.5	16.5	9.0	8.0	8.5	6.0	3.5	4.5	7.0	4.5	6.5
2	20.0	17.0	18.0	8.0	7.0	7.5	4.5	3.0	3.5	6.5	4.5	5.5
3	20.5	18.5	19.5	8.0	7.0	7.5	4.5	2.0	3.5	6.0	5.0	5.0
4	19.5	19.0	19.0	8.5	7.0	7.5	2.5	1.0	2.0	6.0	5.0	5.5
5	20.5	18.5	19.5	8.5	7.5	8.0	3.0	1.5	2.0	6.0	5.5	5.5
6	18.5	16.5	17.5	9.5	8.5	9.0	4.0	2.0	3.0	6.5	5.5	6.0
7	18.0	16.0	17.0	9.0	8.0	8.5	3.0	1.0	1.5	6.0	4.5	5.0
8	16.0	13.5	14.5	8.5	6.5	7.5	2.5	1.0	1.5	6.0	4.5	5.5
9	14.0	12.0	13.0	9.5	7.5	8.5	2.5	1.0	2.0	6.5	5.5	6.0
10	14.5	13.5	14.0	13.0	9.5	11.0	1.5	0.5	1.0	6.5	5.5	6.0
11	14.5	14.5	14.5	14.5	13.0	14.0	3.0	1.5	2.0	5.5	3.5	4.0
12	15.0	14.5	15.0	13.5	11.0	12.0	5.5	3.0	4.0	3.5	2.5	3.5
13	15.0	15.0	15.0	11.0	9.0	10.5	5.5	4.5	5.0	4.0	3.0	3.5
14	15.0	12.0	13.5	9.0	7.5	8.5	5.5	5.0	5.5	4.0	2.5	3.0
15	12.0	10.5	11.5	10.0	8.5	9.0	7.0	5.5	6.5	4.0	3.0	3.5
16	12.5	11.5	12.0	9.5	8.0	9.0	7.0	5.5	6.5	3.0	1.5	2.5
17	13.0	12.0	12.5	8.5	7.5	8.0	5.5	4.0	4.5	3.5	2.5	3.0
18	13.0	11.5	12.0	8.5	8.0	8.0	5.0	3.5	4.0	3.0	1.0	1.5
19	11.5	10.5	11.0	8.0	7.0	7.5	7.0	5.0	6.0	2.5	1.0	2.0
20	12.0	11.0	11.5	9.0	7.5	8.0	9.0	7.0	8.0	3.5	2.5	3.0
21	12.0	11.0	11.5	8.5	7.5	8.0	7.5	5.5	6.5	2.5	1.5	2.0
22	11.0	9.5	10.5	9.5	8.5	9.0	7.0	5.0	6.0	2.0	1.0	1.5
23	11.0	9.5	10.5	9.0	7.0	7.5	7.0	6.0	6.5	1.0	0.0	0.5
24	10.0	9.0	9.5	8.0	7.0	7.5	6.0	5.0	5.5	0.5	0.0	0.0
25	9.0	9.0	9.0	8.5	6.5	7.5	5.5	3.0	4.0	2.5	0.5	1.5
26	11.0	9.0	10.0	8.5	7.5	8.0	5.0	3.0	4.0	3.5	2.5	2.5
27	11.5	10.5	11.0	8.0	6.5	7.0	5.0	4.5	5.0	3.0	0.5	1.5
28	11.0	9.5	10.5	6.5	4.5	5.0	5.0	3.5	4.5	2.0	0.0	0.5
29	9.5	7.0	8.5	5.0	4.0	4.5	6.5	5.0	5.5	3.5	2.0	2.5
30	7.5	7.0	7.0	6.5	5.0	5.5	5.5	4.0	5.0	3.5	2.0	2.5
31	9.0	7.5	8.0	---	---	---	7.0	5.5	6.5	4.5	3.5	4.0
MONTH	20.5	7.0	13.0	14.5	4.0	8.2	9.0	0.5	4.4	7.0	0.0	3.4

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CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Instan- taneous dis- charge, cfs (00061)	Sample loc- ation, cross section ft from rt bank (72103)	Sam- pling depth, feet (00003)	Temper- ature, water, deg C (00010)
SEP 2003							
09...	0938	1028	1028	61	62	0.0	--
09...	0939	1028	1028	--	60	0.4	18.6
09...	0940	1028	1028	--	55	0.8	18.6
09...	0941	1028	1028	--	50	0.9	18.6
09...	0942	1028	1028	--	45	0.8	18.6
09...	0943	1028	1028	--	40	0.8	18.6
09...	0944	1028	1028	--	35	1.0	18.6
09...	0945	1028	1028	--	30	1.1	18.6
09...	0946	1028	1028	--	25	1.0	18.6
09...	0947	1028	1028	--	20	0.7	18.6
09...	0948	1028	1028	--	15	0.5	18.6
09...	0949	1028	1028	--	10	0.7	18.6
09...	0950	1028	1028	--	5	0.6	18.6
09...	0951	1028	1028	--	0	0.0	--