

SCHUYLKILL RIVER BASIN

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA

LOCATION.--Lat 40°22'14", long 76°01'32", Berks County, Hydrologic Unit 02040203, on right bank 1.0 mi upstream from Rebers Bridge and Plum Creek, 1.0 mi east of Blue Marsh, 3.0 mi north of Sinking Spring, and 5.5 mi northeast of Reading.

DRAINAGE AREA.--175 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1965 to current year.

REVISED RECORDS.--WDR PA-72-1: 1969-71 (M).

GAGE.--Water-stage recorder. Datum of gage is 230.06 ft above National Geodetic Vertical Datum of 1929 (Western Berks Water Authority datum). Prior to Nov. 25, 1974, water-stage recorder at site 0.3 mi downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since April 1979 by Blue Marsh Lake (station 01470870) 0.8 mi upstream. Satellite and landline telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	50	27	32	89	56	166	362	120	209	48	53
2	111	43	27	47	89	57	100	462	120	122	48	52
3	112	38	27	57	89	58	60	601	120	90	48	51
4	112	37	50	56	103	56	60	459	91	91	48	51
5	113	45	65	56	117	57	60	453	69	82	48	52
6	114	53	65	57	117	57	60	344	161	76	48	52
7	115	52	65	56	101	56	60	218	282	76	48	53
8	117	51	65	66	86	57	86	192	374	67	48	53
9	171	51	65	75	86	57	123	192	264	60	48	72
10	208	51	65	75	86	58	155	192	110	60	48	93
11	208	51	81	62	85	58	136	192	68	60	48	93
12	207	51	97	53	84	58	102	192	68	56	48	96
13	207	51	97	54	84	58	102	315	68	53	47	116
14	208	50	97	81	84	58	102	544	84	54	69	134
15	248	84	97	98	84	58	259	473	93	54	93	135
16	275	109	97	98	84	58	381	311	93	55	93	91
17	273	109	86	98	84	58	355	220	105	55	93	50
18	272	109	68	81	84	59	347	192	115	55	93	51
19	181	96	84	70	68	58	240	192	115	55	94	53
20	114	84	98	70	40	60	176	460	145	55	72	52
21	115	85	98	70	40	110	176	627	141	55	53	51
22	115	84	98	70	40	145	198	560	115	48	53	51
23	82	84	98	70	40	145	217	380	115	44	53	139
24	46	84	98	70	40	145	215	241	76	47	53	152
25	48	85	98	146	40	145	161	208	45	46	53	50
26	49	57	68	198	50	146	114	208	46	48	53	50
27	49	27	39	198	56	400	114	208	47	48	53	51
28	49	27	32	172	56	375	115	143	158	48	53	50
29	50	27	32	105	---	206	210	104	235	48	53	50
30	50	27	32	89	---	166	334	114	235	48	53	51
31	50	---	32	89	---	166	---	120	---	48	53	---
TOTAL	4191	1852	2148	2619	2106	3301	4984	9479	3878	2013	1813	2148
MEAN	135	61.7	69.3	84.5	75.2	106	166	306	129	64.9	58.5	71.6
MAX	275	109	98	198	117	400	381	627	374	209	94	152
MIN	46	27	27	32	40	56	60	104	45	44	47	50

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	203	221	326	337	341	441	326	298	231	176	119	139
MAX	612	484	986	1151	596	1365	1016	1058	606	543	283	379
(WY)	1980	1997	1997	1979	1979	1994	1993	1989	1982	1984	1994	1987
MIN	51.4	61.7	61.3	84.5	75.2	106	49.8	123	69.9	64.9	55.4	54.0
(WY)	1996	2002	1999	2002	2002	2002	1985	1999	1979	2002	1981	1983

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1979 - 2002	
ANNUAL TOTAL	59280		40532			
ANNUAL MEAN	162		111		263	
HIGHEST ANNUAL MEAN					435	
LOWEST ANNUAL MEAN					111	
HIGHEST DAILY MEAN	702	Apr 18	627	May 21	3950	Apr 18 1983
LOWEST DAILY MEAN	27	Nov 27 ^a	27	Nov 27 ^a	25	Oct 7 1995
ANNUAL SEVEN-DAY MINIMUM	27	Nov 27	27	Nov 27	26	Oct 6 1995
MAXIMUM PEAK FLOW			686	May 2,3	^b 4060	Dec 6 1993
MAXIMUM PEAK STAGE			4.15	May 2	8.02	Jun 26 2000
10 PERCENT EXCEEDS	354		212		508	
50 PERCENT EXCEEDS	115		82		168	
90 PERCENT EXCEEDS	49		48		62	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1978, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	180	236	333	333	373	423	363	261	285	233	175	150
MAX	701	464	827	761	790	832	706	423	1244	523	350	536
(WY)	1977	1976	1978	1978	1971	1978	1970	1973	1972	1969	1969	1975
MIN	56.2	58.3	69.9	100	146	163	144	89.2	60.4	45.0	31.9	43.4
(WY)	1967	1966	1966	1966	1969	1969	1966	1965	1965	1966	1966	1966

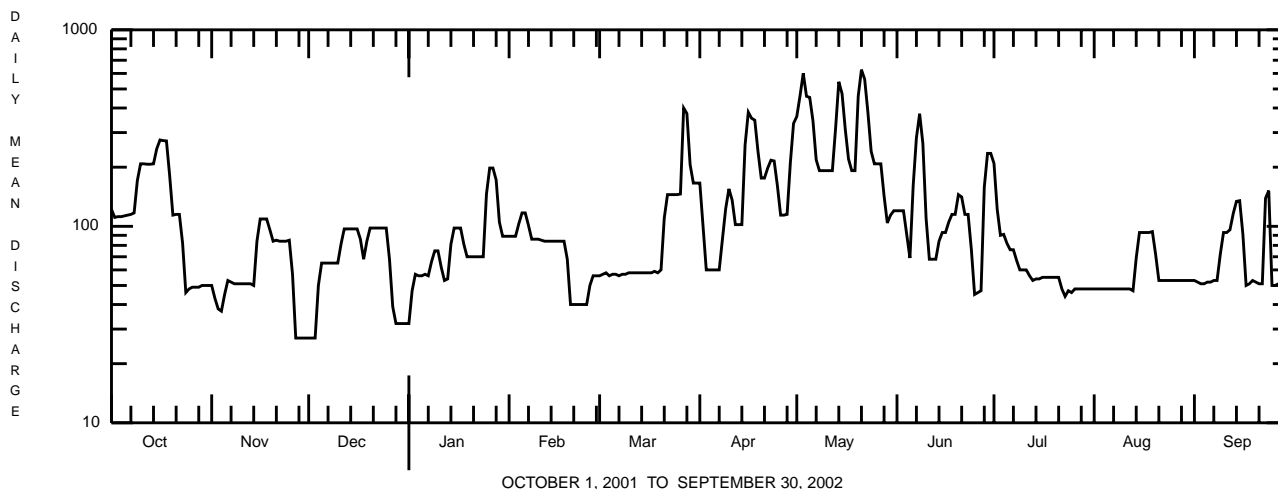
SUMMARY STATISTICS WATER YEARS 1965 - 1978

ANNUAL MEAN	283	
HIGHEST ANNUAL MEAN	416	1978
LOWEST ANNUAL MEAN	122	1966
HIGHEST DAILY MEAN	11000	Jun 23 1972
LOWEST DAILY MEAN	23	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	25	Sep 7 1966
MAXIMUM PEAK FLOW	^b 16100	Jun 22 1972
MAXIMUM PEAK STAGE	^c 18.70	Jun 22 1972
ANNUAL RUNOFF (CFSM)	1.62	
ANNUAL RUNOFF (INCHES)	22.00	
10 PERCENT EXCEEDS	551	
50 PERCENT EXCEEDS	178	
90 PERCENT EXCEEDS	69	

^a Also Nov. 28-30, Dec. 1-3.

^b From rating curve extended above 3,540 ft³/s on basis of runoff comparison with downstream station.

^c From floodmark.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to 1980.**PERIOD OF DAILY RECORD.**--

WATER TEMPERATURE: Water years 1969 to current year.

SUSPENDED-SEDIMENT DISCHARGE.--May 1973 to May 1976.

INSTRUMENTATION.--Temperature recorder since October 1968. Temperature probe interfaced with a data collection platform since 1986 water year.**REMARKS.**--Water temperature records rated good. Temperature records collected at streamgage. Water-quality samples and suspended sediment samples collected at Rebers Bridge 1.0 mi downstream.**EXTREMES FOR PERIOD OF DAILY RECORD.**--

WATER TEMPERATURE: Maximum, 34.0°C, Oct. 2, 1968; minimum, 0.0°C, on several days during December 1970, January and March 1971, and February 1979.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,400 mg/L, June 22, 1973; minimum daily mean, 2 mg/L on many days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 8,570 tons, Jan. 27, 1976; minimum daily, 0.45 tons, July 13.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.5°C, July 12, 25; minimum, 1.5°C, Jan. 6.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	20.0	19.0	19.5	13.5	12.5	13.0	10.5	8.5	9.5	4.0	3.0	3.0
2	19.5	18.5	19.0	14.0	12.5	13.0	10.0	8.5	9.0	3.5	2.5	3.0
3	19.5	18.5	18.5	13.5	12.0	13.0	10.0	8.5	9.0	3.5	2.5	3.0
4	19.0	18.0	18.5	13.5	12.0	12.5	10.0	8.5	9.0	3.5	2.5	3.0
5	19.0	18.0	18.5	13.0	11.5	12.0	10.0	9.5	9.5	3.5	2.5	3.0
6	19.0	17.5	18.0	13.0	12.0	12.0	10.0	9.5	9.5	3.0	1.5	2.5
7	18.5	17.5	18.0	13.0	12.0	12.0	10.5	9.5	10.0	3.0	2.5	2.5
8	18.5	17.5	18.0	13.0	11.5	12.0	9.5	9.0	9.5	3.0	2.0	2.5
9	18.0	17.5	17.5	12.5	11.5	12.0	9.5	9.0	9.5	3.0	2.5	2.5
10	18.0	17.5	17.5	12.5	11.5	11.5	9.5	9.0	9.0	3.0	2.0	2.5
11	17.5	17.0	17.0	12.0	11.0	11.5	9.5	9.0	9.0	3.0	2.5	2.5
12	17.0	16.5	16.5	12.0	10.5	11.0	9.5	9.0	9.0	3.0	2.5	2.5
13	17.0	16.0	16.5	11.5	10.5	11.0	9.0	9.0	9.0	3.5	2.5	3.0
14	17.0	16.0	16.5	11.5	10.5	11.0	9.0	8.5	9.0	3.0	2.5	2.5
15	17.5	16.0	16.5	11.0	10.5	10.5	9.0	8.5	8.5	3.0	2.5	3.0
16	17.0	16.5	16.5	11.0	10.0	10.5	8.5	8.0	8.5	3.0	2.5	3.0
17	17.0	16.5	16.5	10.5	9.5	10.0	8.5	8.5	8.5	3.5	2.5	3.0
18	16.5	16.0	16.0	10.0	9.5	10.0	8.5	8.0	8.5	3.5	2.5	2.5
19	16.5	15.5	16.0	10.0	9.5	9.5	8.5	8.0	8.0	3.0	2.0	2.5
20	16.5	15.5	16.0	10.0	9.0	9.5	8.0	7.5	8.0	3.0	2.5	2.5
21	16.5	15.5	15.5	10.0	9.0	9.5	7.5	7.0	7.5	3.0	2.5	2.5
22	16.0	15.0	15.5	10.0	9.0	9.5	7.0	7.0	7.0	3.0	2.5	2.5
23	16.0	15.0	15.5	10.0	9.0	9.5	7.0	6.5	7.0	3.0	2.5	3.0
24	16.0	14.5	15.5	10.0	9.0	9.5	7.0	6.5	7.0	3.0	2.5	3.0
25	16.0	14.5	15.0	10.0	9.5	10.0	6.5	6.0	6.5	3.0	2.5	3.0
26	15.5	14.5	15.0	10.0	8.5	9.5	6.5	5.5	6.0	3.5	3.0	3.0
27	15.0	14.0	14.5	10.0	8.5	9.5	6.0	5.0	5.5	3.5	3.0	3.0
28	14.5	13.0	14.0	10.0	9.0	9.5	6.0	4.5	5.0	3.5	3.0	3.0
29	14.5	13.0	13.5	9.5	9.0	9.5	5.5	4.0	5.0	4.0	3.0	3.5
30	14.5	13.0	13.5	10.0	9.0	9.5	4.5	3.5	4.0	4.0	3.5	3.5
31	13.5	12.5	13.0	---	---	---	4.0	3.0	3.5	4.0	3.5	3.5
MONTH	20.0	12.5	16.4	14.0	8.5	10.8	10.5	3.0	7.9	4.0	1.5	2.8

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CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAMPLE LOC- ATION, CROSS SECTION (FT FM R BK) (72103)	SAM- PLING DEPTH (FEET) (00003)	TEMPER- ATURE WATER (DEG C) (00010)
JUN 2002					
04...	1200	68	100	--	--
04...	1201	--	95	.2	18.8
04...	1202	--	90	.4	18.7
04...	1203	--	85	.4	18.6
04...	1204	--	80	.4	18.6
04...	1205	--	75	.4	18.5
04...	1206	--	70	.5	18.6
04...	1207	--	65	.5	18.6
04...	1208	--	60	.5	18.6
04...	1209	--	55	.5	18.7
04...	1210	--	50	.5	18.9
04...	1211	--	45	.5	18.9
04...	1212	--	40	.5	19.0
04...	1213	--	35	.5	19.1
04...	1214	--	30	.5	19.2
04...	1215	--	25	.5	19.4
04...	1216	--	20	.4	19.4
04...	1217	--	15	.3	19.5
04...	1218	--	10	.2	19.8
04...	1219	--	5	.1	20.4
04...	1220	--	0	--	--