



2005 Water Year
SCHUYLKILL RIVER BASIN
01470500 Schuylkill River at Berne, PA

Latitude: 40° 31 ' 21"

Longitude: 075° 59 ' 55"

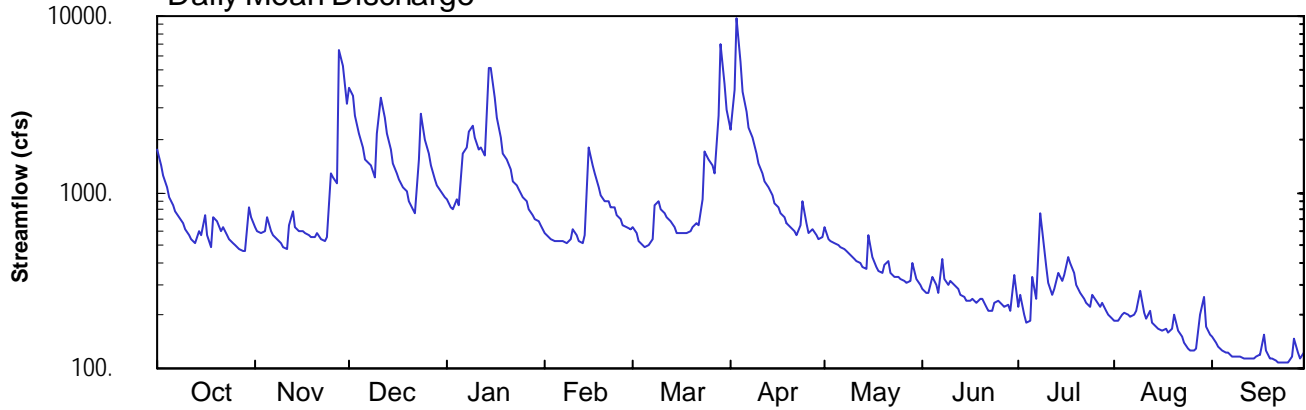
Hydrologic Unit Code: 02040203

Berks County

Datum: 310.65 feet

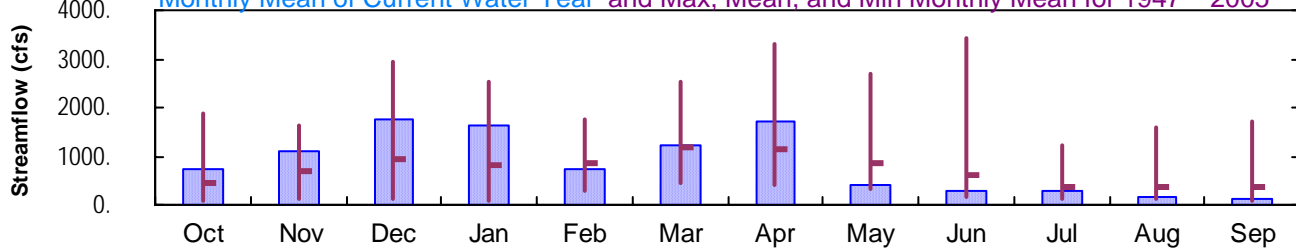
Drainage Area: 355. mi²

Daily Mean Discharge

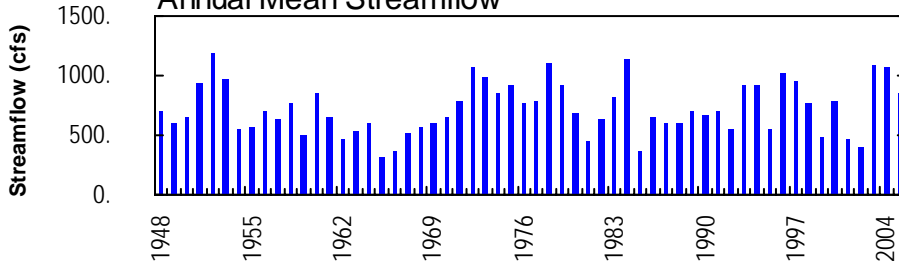


Monthly Statistics

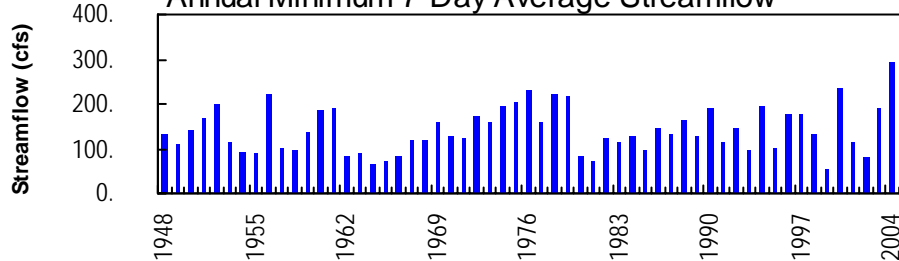
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1947 – 2005



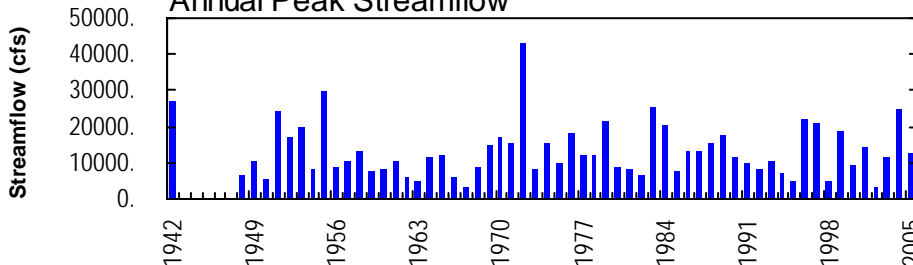
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



01470500--Schuylkill River at Berne

SCHUYLKILL RIVER BASIN

01470500 SCHUYLKILL RIVER AT BERNE, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°31'21", long 75°59'55", Berks County, Hydrologic Unit 02040203, on right bank 50 ft upstream from bridge on Township Route 558 at Berne, 0.5 mi upstream from Mill Creek, and 6.5 mi downstream from Little Schuylkill River.

DRAINAGE AREA.--355 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1947 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 310.65 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation at low flow by mine pumpage and by Still Creek Reservoir (station 01469200) about 25 mi upstream. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Nov. 28	1530	*12,700	*11.43	Mar. 29	0330	8,530	9.89
Dec. 1	1530	5,380	8.51	Apr. 3	0800	11,400	10.99
Jan. 14	1530	7,580	9.50				

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	1750	633	3960	902	586	631	2280	627	280	223	189	153
2	1430	598	3540	831	553	587	3850	549	268	263	187	140
3	1250	588	2730	795	548	534	9750	531	269	200	203	132
4	1080	602	2180	924	528	498	5550	514	330	183	208	127
5	947	729	1810	853	527	492	3740	497	297	186	200	122
6	845	607	1530	1680	533	501	2900	487	267	334	199	122
7	780	568	1460	1800	528	540	2360	475	414	249	203	117
8	720	545	1430	2200	516	838	2070	459	325	770	213	117
9	666	516	1210	2410	544	886	1660	440	295	601	279	118
10	625	493	2160	2030	620	800	1460	423	312	381	205	117
11	575	482	3400	1760	567	757	1290	408	296	305	189	113
12	541	654	2640	1800	534	718	1150	394	285	264	212	113
13	512	772	2140	1600	519	679	1050	373	263	283	180	113
14	594	633	1750	5070	566	639	960	368	252	351	172	114
15	571	610	1480	5070	1780	588	872	576	240	311	169	118
16	750	600	1290	3460	1410	585	813	429	240	337	165	120
17	570	583	1180	2650	1270	580	765	378	248	428	168	155
18	494	574	1070	2030	1080	580	719	360	237	394	160	127
19	730	557	1000	1680	961	594	676	348	249	346	168	115
20	684	550	898	1530	885	628	641	383	251	296	200	112
21	598	593	800	1340	897	669	602	407	227	267	166	110
22	631	537	762	1170	830	657	570	350	211	251	152	108
23	571	523	1550	e1100	813	901	649	335	215	238	140	108
24	536	550	2810	e1050	738	1710	892	329	238	223	129	108
25	520	1290	2010	e930	706	1550	663	326	239	262	126	107
26	501	1210	1660	887	656	1410	593	316	229	245	125	115
27	481	1110	1420	798	635	1290	624	304	223	224	129	148
28	465	6420	1190	e740	612	2740	573	310	230	239	202	122
29	458	5220	1090	e700	---	7030	537	398	215	212	256	115
30	824	3220	1010	693	---	4140	558	320	335	201	171	123
31	730	---	937	646	---	2940	---	299	---	194	156	---
TOTAL	22429	32567	54097	51129	20942	37692	50817	12713	7980	9261	5621	3629
MEAN	724	1086	1745	1649	748	1216	1694	410	266	299	181	121
MAX	1750	6420	3960	5070	1780	7030	9750	627	414	770	279	155
MIN	458	482	762	646	516	492	537	299	211	183	125	107
CFSM	2.04	3.06	4.92	4.65	2.11	3.42	4.77	1.16	0.75	0.84	0.51	0.34
IN.	2.35	3.41	5.67	5.36	2.19	3.95	5.33	1.33	0.84	0.97	0.59	0.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2005, BY WATER YEAR (WY)

MEAN	437	700	952	828	867	1181	1130	861	592	383	361	384
MAX	1896	1631	2932	2547	1735	2525	3319	2689	3410	1240	1594	1715
(WY)	1977	1971	1997	1979	1981	1994	1993	1989	1972	1984	1955	2004
MIN	75.7	120	125	88.4	274	462	424	314	148	104	105	94.6
(WY)	1964	1965	1981	1981	2002	1985	1985	1999	1965	1999	2002	1964

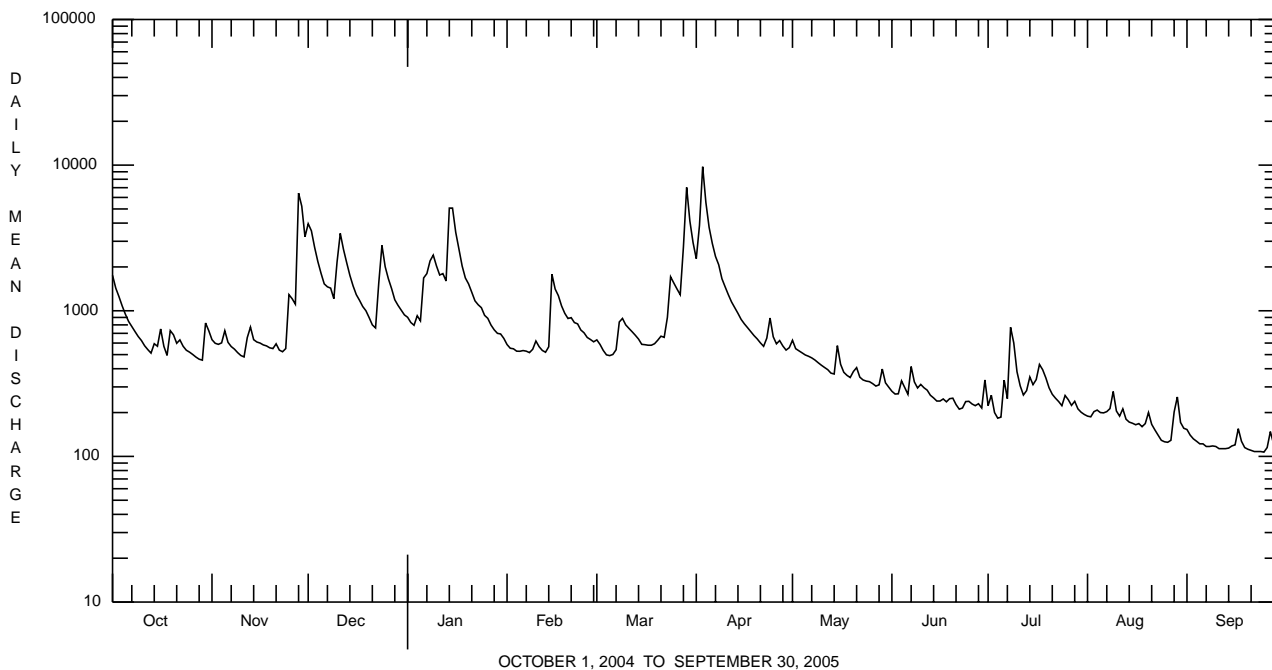
e Estimated.

SCHUYLKILL RIVER BASIN

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1947 - 2005	
ANNUAL TOTAL	372917		308877			
ANNUAL MEAN	1019		846		722	
HIGHEST ANNUAL MEAN					1182	1952
LOWEST ANNUAL MEAN					321	1965
HIGHEST DAILY MEAN	14100	Sep 18	9750	Apr 3	26000	Jun 23 1972
LOWEST DAILY MEAN	257	Jul 11	107	Sep 25	40	Sep 2 1949
ANNUAL SEVEN-DAY MINIMUM	295	Jul 5	110	Sep 19	52	Aug 30 1999
MAXIMUM PEAK FLOW			12700	Nov 28	a 42800	Jun 22 1972
MAXIMUM PEAK STAGE			11.43	Nov 28	b 19.00	Jun 22 1972
INSTANTANEOUS LOW FLOW			104	Sep 24,25	31	Sep 2 1949
ANNUAL RUNOFF (CFSM)	2.87		2.38		2.03	
ANNUAL RUNOFF (INCHES)	39.08		32.37		27.65	
10 PERCENT EXCEEDS	1700		1790		1490	
50 PERCENT EXCEEDS	702		557		460	
90 PERCENT EXCEEDS	459		156		159	

a From rating curve extended above 20,800 ft³/s.
b From floodmark in gage shelter.



SCHUYLKILL RIVER BASIN

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

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

REMARKS.--Some values for "dissolved" parameters exceed values for the corresponding "total" parameter. These results are within the limits of analytical precision and methods.

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, µS/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, unfltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)
NOV 03... 2004	1010	1028	9813	592	11.3	7.4	7.1	250	247	11.8	93	19	20
JAN 26... 2005	1000	1028	9813	892	15.6	7.2	7.4	282	286	1.2	110	20	22
MAR 03... 2005	0900	1028	9813	534	16.1	7.2	7.6	334	338	1.4	120	23	24
MAY 19... 2005	1100	1028	9813	350	10.6	7.7	7.7	352	346	16.9	140	27	29
JUL 14... 2005	0900	1028	9813	431	7.4	7.6	7.6	322	337	24.7	130	27	27
SEP 20... 2005	0920	1028	9813	113	8.8	7.8	7.0	492	481	21.5	210	37	39

Date	Magnesium, water, unfltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, unfltrd, mg/L (00945)	Residue on evap. at 105 degC, 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)	Orthophosphate, water, unfltrd, mg/L as P (70507)	Phosphorus, water, unfltrd, mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC, mg/L (00310)
NOV 03... 2004	11	10	21	71	130	<2.0	<.020	1.1	<.040	1.2	.01	.02	1.0
JAN 26... 2005	13	14	22	90	190	4.0	.320	.80	<.040	1.3	<.01	.01	.7
MAR 03... 2005	14	14	27	92	250	10	.090	.98	<.040	1.1	.01	.01	1.0
MAY 19... 2005	16	17	30	120	270	2.0	<.020	.73	<.040	.76	.01	.02	.6
JUL 14... 2005	16	16	25	100	260	6.0	.030	.83	<.040	.99	.01	.03	1.1
SEP 20... 2005	25	26	51	170	390	8.0	.020	.79	<.040	.85	.02	.04	.5

SCHUYLKILL RIVER BASIN

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

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

Date	Alum- inum, water, fltrd, µg/L (01106)	Alum- inum, water, unfltrd recover- able, µg/L (01105)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover- able, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover- able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover- able, µg/L (01051)	Mangan- ese, water, fltrd, µg/L (01056)	Mangan- ese, water, unfltrd recover- able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover- able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)
NOV 2004 03...	10	50	<4	<4	40	220	<1.0	2.0	210	220	8.2	8.4	21
JAN 2005 26...	<10	150	<4	<4	60	500	<1.0	<1.0	790	870	16	21	43
MAR 03...	10	80	<4	<4	20	290	<1.0	<1.0	580	620	11	14	23
MAY 19...	20	90	<4	<4	40	220	<1.0	<1.0	150	320	5.8	8.0	6.1
JUL 14...	60	160	<4	<4	20	340	<1.0	1.5	40	150	<4.0	4.8	<5.0
SEP 20...	20	40	<4	<4	<20	50	<1.0	<1.0	10	40	<4.0	<4.0	<5.0

Date	Zinc, water, unfltrd recover- able, µg/L (01092)
NOV 2004 03...	19
JAN 2005 26...	58
MAR 03...	30
MAY 19...	13
JUL 14...	8.1
SEP 20...	<5.0

SCHUYLKILL RIVER BASIN

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

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

Date	10/13/04
Benthic macroinvertebrate	Count
Nematoda (NEMATODES)	1
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Corbiculidae	
<i>Corbicula fluminea</i>	11
Sphaeriidae	
<i>Pisidium</i>	1
<i>Sphaerium</i>	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Crustacea	
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
<i>Caecidotea</i>	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Naididae	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Acentrella</i>	1
Ephemerellidae	
<i>Ephemerella</i>	1
Heptageniidae	
<i>Stenacron</i>	7
<i>Stenonema</i>	13
Plecoptera (STONEFLIES)	
Taeniopterygidae	
<i>Taeniopteryx</i>	1
Trichoptera (CADDISFLIES)	
Glossosomatidae	
<i>Protophila</i>	2
Hydropsychidae	
<i>Cheumatopsyche</i>	15
<i>Hydropsyche</i>	24
Hydroptilidae	
<i>Hydroptila</i>	2
Psychomyiidae	
<i>Psychomyia</i>	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	2

SCHUYLKILL RIVER BASIN

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	10/13/04
Benthic macroinvertebrate	Count
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	33
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	1
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	1
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	1
Total Organisms	123
Total Taxa	22