2004 Water Year

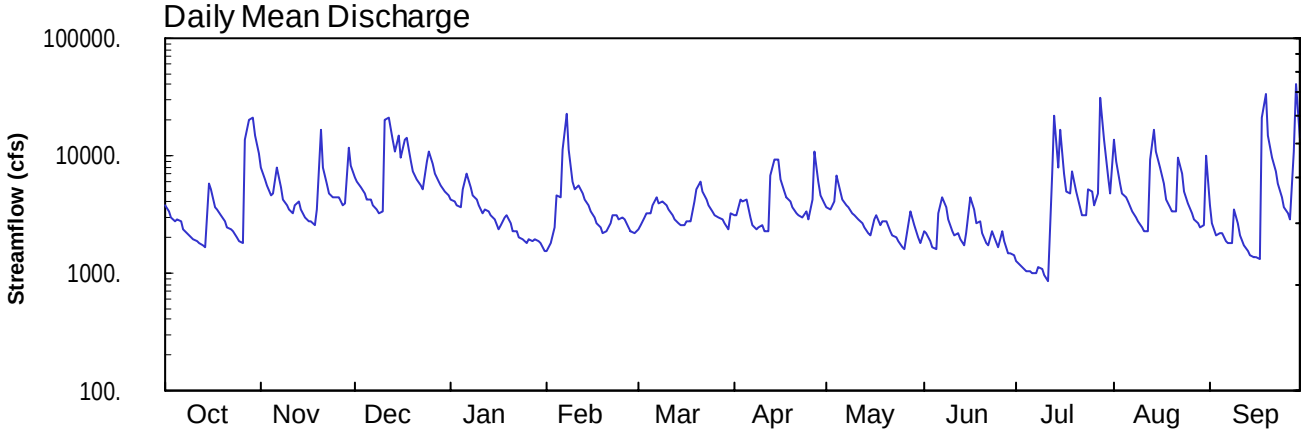
SCHUYLKILL RIVER BASIN

01474500 Schuylkill River at Philadelphia, PA

Latitude: 39°58'04" Longitude: 075°11'20" Hydrologic Unit Code: 02040203

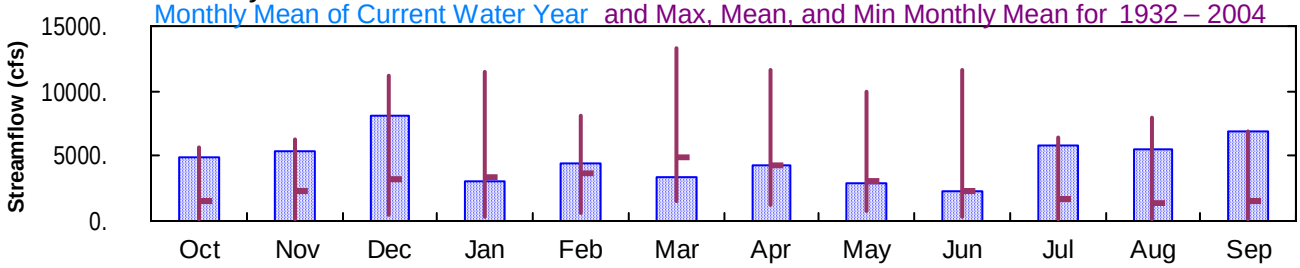
Philadelphia County Datum: 5.74 feet Drainage Area: 1893. mi²

Daily Mean Discharge

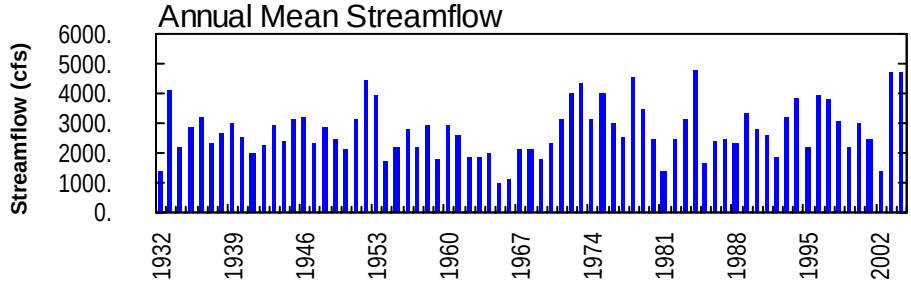


Monthly Statistics

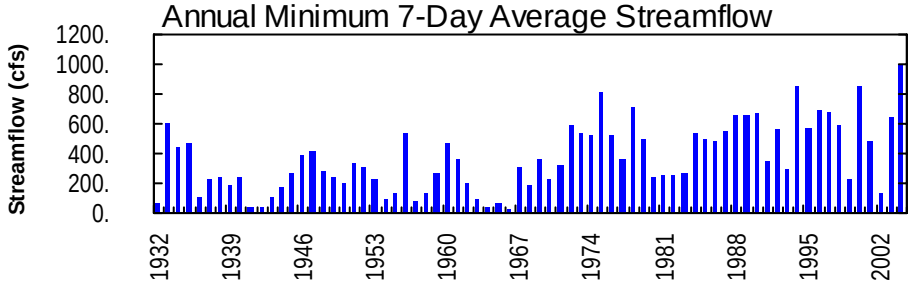
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1932 – 2004



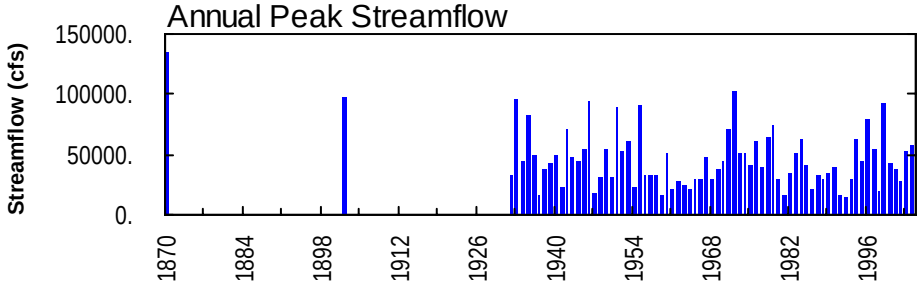
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA
(National Water-Quality Assessment Station)

LOCATION.--Lat 39°58'04", long 75°11'20", Philadelphia County, Hydrologic Unit 02040203, on right bank 150 ft upstream from Fairmount Dam, 1,500 ft upstream from bridge on Spring Garden Street in Philadelphia, and 8.7 mi upstream from mouth.

DRAINAGE AREA.--1,893 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1931 to current year. Records for January 1898 to December 1912, published in WSP 35, 48, 65, 82, 97, 125, 166, 202, 214, 261, 301, and 381 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1936(M). WSP 1432: 1945. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 5.74 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1956, water-stage recorder at site on right bank just upstream from Fairmount Dam at same datum. Nov. 26, 1956, to Oct. 6, 1966, water-stage recorder at site on left bank 40 ft upstream from Fairmount Dam at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue Marsh Lake (station 01470870) since April 1979, Green Lane Reservoir (station 01472200) since December 1956 and to some extent by Lake Ontelaunee. Daily mean discharges do not include diversion above station by city of Philadelphia for municipal water supply. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion provided by Philadelphia Water Department.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1869 reached a stage of 17.0 ft, discharge, about 135,000 ft^3/s. Flood of Mar. 1, 1902 reached a stage of 14.8 ft, discharge, about 98,000 ft^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 18,000 ft^3/s and maximum (*****):

Date	Time	Discharge ft^3/s	Gage Height (ft)
Oct. 28	0000	32,600	9.85
Oct. 29	1530	26,600	9.29
Nov. 20	0800	22,400	8.87
Dec. 11	1630	29,100	9.53
Dec. 17	2030	22,900	8.92
Feb. 7	0200	30,100	9.62
July 13	0200	33,000	9.89
July 15	0630	23,400	8.97
July 28	0800	44,600	10.84
July 29	0300	21,900	8.81
Aug. 1	0930	21,500	8.77
Aug. 14	0430	20,000	8.62
Sept. 18	2230	51,100	11.33
Sept. 29	0400	*58,500	*11.86

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3740	7850	6620	4220	1550	2320	3050	3650	2250	1270	13700	3730
2	3340	6320	5940	4010	1770	2540	3080	3450	2220	1150	8960	2640
3	3000	5480	5360	3810	2480	2930	4230	4140	1850	1090	5860	2120
4	2780	4660	4700	3680	4650	3160	4080	6860	1650	1020	4790	2160
5	2870	4850	4270	5130	4470	3170	4270	4970	1590	1030	4360	2220
6	2720	7820	4170	7090	11500	3830	3010	4290	3190	986	4080	1890
7	2360	5260	3840	5440	22900	4470	2530	3780	4400	1010	3390	1780
8	2200	4310	3530	4590	11200	3930	2350	3610	3570	1150	2990	1780
9	2090	3750	3270	4200	6040	4120	2490	3290	2870	1060	2770	3460
10	1960	3440	3330	3710	5140	3810	2570	3130	2280	945	2470	2630
11	1870	3220	20300	3200	5610	3480	2230	2900	2070	844	2240	2120
12	1800	3730	21000	3520	4740	3150	2310	2670	2210	7050	2260	1760
13	1700	4130	13400	3390	4160	2890	6870	2410	1960	21800	9110	1560
14	1680	3430	11000	3120	3810	2690	9240	2200	1740	7810	16900	1420
15	5900	3030	14900	2850	3400	2590	9250	2140	2210	16900	10600	1340
16	5060	2770	9780	2390	2990	2560	6250	2920	4470	7160	7880	1340
17	3680	2740	13700	2550	2700	2720	4960	3110	3460	4980	5710	1320
18	3530	2550	14300	3000	2430	2720	4410	2600	2640	4750	4290	21200
19	3150	3430	9060	3150	2220	4020	4120	2790	2780	7270	3610	33900
20	2730	16600	7290	2660	2310	5220	3670	2750	2200	5030	3350	14700
21	2480	7880	6190	2310	2640	5960	3290	2260	1820	3690	3310	9430
22	2340	5750	5530	2250	3050	4950	3110	2120	1710	3040	9640	7280
23	2300	4830	5170	2040	3150	4220	3010	2010	2270	3130	7070	5800
24	2030	4390	8870	1930	2850	3760	3340	1880	1990	5150	4950	4420
25	1880	4350	10800	1820	3020	3400	2860	1650	1660	4890	3880	3640
26	1800	4480	8620	1940	2830	3160	4240	1600	2310	3810	3260	3200
27	13600	3820	7060	1860	2480	2970	10700	2510	1870	4720	2840	2890
28	19900	3860	6060	1980	2250	2870	5910	3320	1470	30700	2620	10700
29	20600	11700	5490	1840	2200	2670	4640	2510	1490	13600	2440	40100
30	15000	8320	4950	1790	---	2400	3940	2000	1440	6400	2540	14300
31	10500	---	4570	1570	---	3260	---	1800	---	4850	10200	---
TOTAL	150590	158750	253070	97040	130540	105940	130010	91320	69640	178285	172070	206830
MEAN	4858	5292	8164	3130	4501	3417	4334	2946	2321	5751	5551	6894
MAX	20600	16600	21000	7090	22900	5960	10700	6860	4470	30700	16900	40100
MIN	1680	2550	3270	1570	1550	2320	2230	1600	1440	844	2240	1320
(†)	199	186	199	211	208	200	182	184	190	197	196	192

† Diversion for municipal supply of City of Philadelphia, equivalent in cubic feet per second.

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2004, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1464	2350	3249	3338	3619	4864	4236	3115	2227	1684	1446	1561
MAX	5624	6272	11150	11400	8136	13320	11620	9943	11640	6434	7980	6894
(WY)	1997	1973	1997	1979	1939	1936	1983	1989	1972	1984	1933	2004
MIN	89.4	223	444	340	647	1552	1237	693	261	116	140	117
(WY)	1942	1932	1981	1981	1934	1981	1985	1965	1965	1966	1966	1932

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1932 - 2004	
ANNUAL TOTAL	1898487		1744085			
ANNUAL MEAN	5201		4765		2758	
HIGHEST ANNUAL MEAN					4791	1984
LOWEST ANNUAL MEAN					1014	1965
HIGHEST DAILY MEAN	41200	Jun 21	40100	Sep 29	93400	Jun 23 1972
LOWEST DAILY MEAN	370	Feb 18	844	Jul 11	0.60	Sep 2 1966
ANNUAL SEVEN-DAY MINIMUM	880	Feb 13	1000	Jul 5	24	Sep 28 1941
MAXIMUM PEAK FLOW			58500	Sep 29	**a**103000	Jun 23 1972
MAXIMUM PEAK STAGE			11.86	Sep 29	14.65	Jun 23 1972
INSTANTANEOUS LOW FLOW			760	Jul 6,12	0.00	Sep 2 1966**b**
10 PERCENT EXCEEDS	10900		9300		5930	
50 PERCENT EXCEEDS	3840		3320		1700	
90 PERCENT EXCEEDS	1450		1800		446	

a From rating curve extended above 92,000 ft^3/s.
b No flow over dam at times.

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued
(National Water-Quality Assessment Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998, revised, to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1998 to April 1999, July 1999 to September 1999.
WATER TEMPERATURE: September 1998 to September 2001.

REMARKS.--These samples were collected as part of the Delaware River Basin National Water-Quality Assessment Program (NAWQA). For the definition of the type of quality-control data listed under SAMPLE TYPE refer to "Water-Quality-Control Data" in the "Introduction."

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)
NOV											
19...	1050	Environmental	2,600	756	11.6	102	7.8	367	19.0	10.0	78
DEC											
10...	0930	Environmental	3,240	762	15.6	117	7.6	381	8.0	3.2	67
FEB											
12...	*1039*	*Field Blank*	--	--	--	--	--	--	--	--	--
12...	1040	Environmental	4,960	766	14.6	109	7.5	385	5.0	3.2	59
MAR											
17...	1130	Environmental	2,860	758	13.3	107	8.6	403	2.0	6.2	65
APR											
13...	1100	Environmental	7,180	751	12.6	111	7.5	381	11.0	10.0	63
MAY											
11...	1130	Environmental	3,020	763	8.9	98	7.6	350	30.5	20.0	56
JUN											
15...	1140	Environmental	1,850	761	8.3	94	7.6	391	26.5	21.7	65
JUL											
06...	1050	Environmental	1,090	759	7.9	100	7.7	469	32.0	27.0	80
SEP											
02...	0900	Environmental	2,810	768	7.9	93	7.5	285	22.0	23.4	60

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV										
19...	29.1	43.5	.07	3.13	.023	.124	.166	3.64	7	49
DEC										
10...	39.3	41.4	.09	3.26	.020	.103	.107	3.31	1	8.7
FEB										
12...	*<.20*	*<.2*	*<.04*	*<.06*	*<.008*	*<.006*	*<.004*	*<.03*	*<1*	--
12...	51.7	28.6	.18	3.32	.040	.087	.141	3.90	8	107
MAR										
17...	49.9	35.8	.09	2.96	.043	.093	.169	3.37	3	23
APR										
13...	44.5	33.5	.18	2.70	.080	.175	.27	3.22	24	465
MAY										
11...	34.3	37.7	.08	2.54	.049	.129	.180	2.94	8	65
JUN										
15...	40.6	42.0	.08	3.29	.047	.206	.23	3.51	5	25
JUL										
06...	45.4	60.5	E.04	3.09	.031	.283	.32	3.39	5	15
SEP										
02...	23.2	27.9	.09	2.00	.030	.160	.18	2.59	16	121

Remark codes used in this table:
< -- Less than
E -- Estimated value

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

WATER-COLUMN PESTICIDE ANALYSES

REMARKS.--The following were determined using laboratory schedule 2001 (listed in its entirety, with laboratory reporting levels, on page 215). Only pesticides detected in one or more surface-water sample are listed in the following table.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Sample type	CIAT, water, fltrd, µg/L (04040)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	alpha-HCH, water, fltrd, µg/L (34253)	Atra-zine, water, fltrd, µg/L (39632)	Ben-flur-alin, water, fltrd 0.7µ GF µg/L (82673)	Car-baryl, water, fltrd 0.7µ GF µg/L (82680)	Chlor-pyrifos water, fltrd, µg/L (38933)	DCPA, water fltrd 0.7µ GF µg/L (82682)
NOV											
19...	1050	Environmental	E.009	<.006	<.005	<.005	.030	<.010	<.041	<.005	<.003
FEB											
12...	1040	Environmental	E.033	<.006	<.005	<.005	.036	<.010	E.005	<.005	<.003
MAR											
17...	1130	Environmental	E.024	<.006	<.005	<.005	.029	<.010	<.041	<.005	<.003
APR											
13...	1100	Environmental	E.021	<.006	<.005	<.005	.024	<.010	E.016	<.005	<.003
MAY											
11...	1130	Environmental	E.035	.008	<.005	<.005	.068	<.010	<.041	<.005	<.003
11...	*1131*	*Split Replicate*	*E.026*	*.007*	*<.005*	*<.005*	*.063*	*<.010*	*E.008*	*<.005*	*<.003*
JUN											
15...	*1139*	*Field Blank*	*<.006*	*<.006*	*<.005*	*<.005*	*<.007*	*<.010*	*<.041*	*<.005*	*<.003*
15...	1140	Environmental	E.041	.008	<.005	<.005	.141	<.010	E.009	<.005	<.003
JUL											
06...	1050	Environmental	E.034	<.006	<.005	<.005	.088	<.010	<.041	<.005	<.003
SEP											
02...	0900	Environmental	E.022	<.006	<.005	<.005	.041	<.010	E.058	<.005	<.003

Date	Desulf-inyl fipro-nil, water, fltrd, µg/L (62170)	Diazi-non, water, fltrd, µg/L (39572)	Desulf-inyl-fipro-nil amide, wat flt µg/L (62169)	Fipro-nil sulfide water, fltrd, µg/L (62167)	Fipro-nil sulfone water, fltrd, µg/L (62168)	Fipro-nil, water, fltrd, µg/L (62166)	Lindane water, fltrd, µg/L (39341)	Metola-chlor, water, fltrd, µg/L (39415)	Pendi-meth-alin, water, fltrd 0.7µ GF µg/L (82683)	Prome-ton, water, fltrd, µg/L (04037)	Sima-zine, water, fltrd, µg/L (04035)	Tebu-thiuron water fltrd 0.7µ GF µg/L (82670)	Tri-flur-alin, water, fltrd 0.7µ GF µg/L (82661)
NOV													
19...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	E.013	<.022	.01	.009	E.01	<.009
FEB													
12...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.022	<.022	.01	.020	<.02	<.009
MAR													
17...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.014	<.022	.01	.011	<.02	<.009
APR													
13...	E.004	.006	<.029	<.013	<.024	E.010	<.004	E.012	E.012	.01	.016	E.02	<.009
MAY													
11...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.029	<.022	.01	.028	<.02	<.009
11...	*<.012*	*<.005*	*<.029*	*<.013*	*<.024*	*E.004*	*<.004*	*.029*	*<.022*	*.01*	*.025*	*<.02*	*<.009*
JUN													
15...	*<.012*	*<.005*	*<.029*	*<.013*	*<.024*	*<.016*	*<.004*	*<.013*	*<.022*	*<.01*	*<.005*	*<.02*	*<.009*
15...	E.004	.007	<.029	<.013	E.003	E.011	<.004	.063	<.022	.03	.022	E.01	<.009
JUL													
06...	<.012	<.005	<.029	<.013	<.024	<.016	<.004	.031	<.022	.03	.017	<.02	<.009
SEP													
02...	<.012	<.010	<.029	<.013	<.024	<.016	<.004	.021	<.022	.05	.018	<.02	<.009