



2005 Water Year  
SWATARA CREEK BASIN  
01573000 Swatara Creek at Harper Tavern, PA

Latitude: 40° 24 ' 09"

Longitude: 076° 34 ' 39"

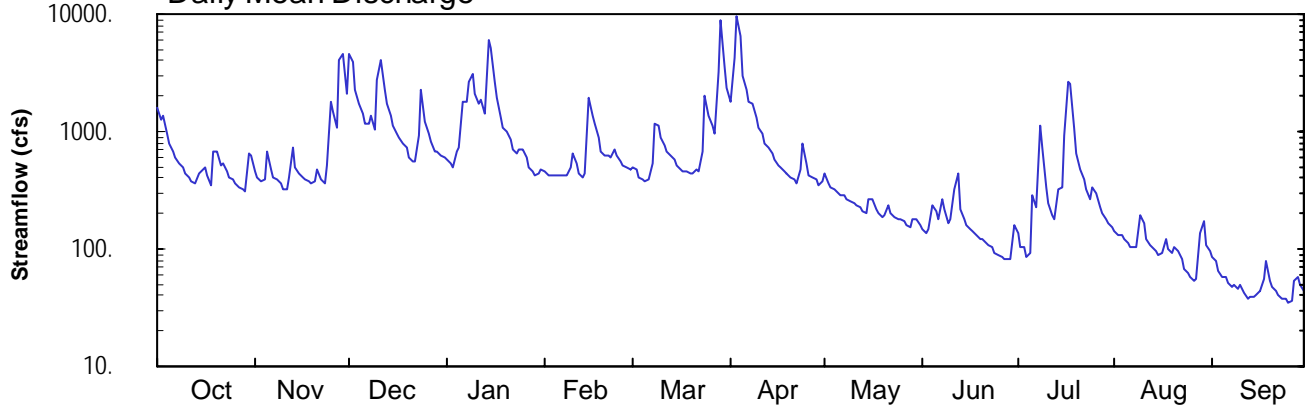
Hydrologic Unit Code: 02050305

Lebanon County

Datum: 356.68 feet

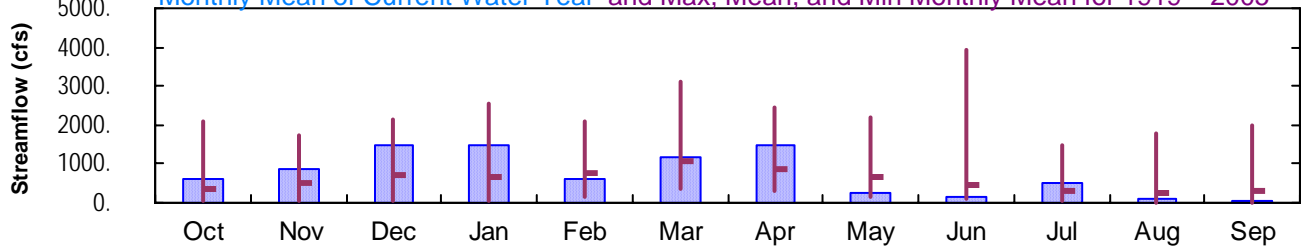
Drainage Area: 337. mi<sup>2</sup>

### Daily Mean Discharge

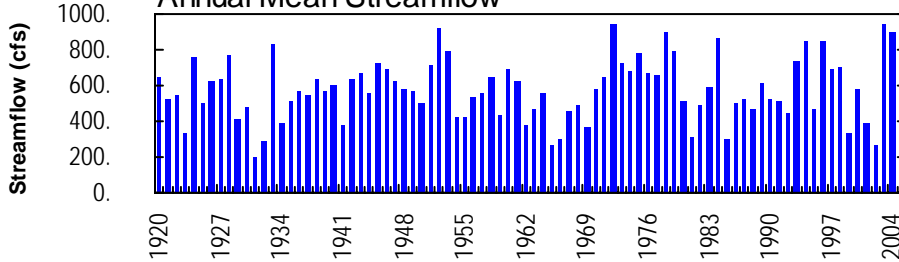


### Monthly Statistics

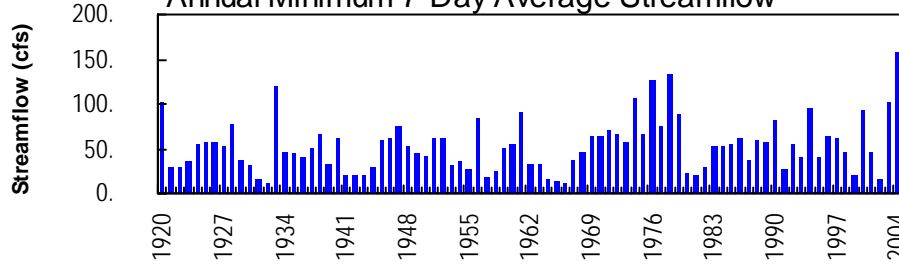
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1919 – 2005



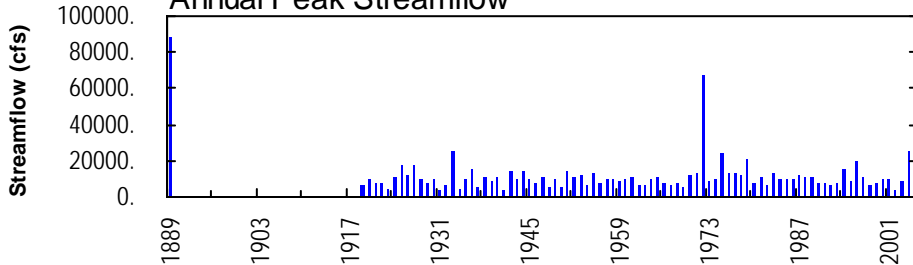
### Annual Mean Streamflow



### Annual Minimum 7-Day Average Streamflow



### Annual Peak Streamflow



01573000-Swatara Creek at Harper Tavern

## SWATARA CREEK BASIN

## 01573000 SWATARA CREEK AT HARPER TAVERN, PA

**LOCATION.**--Lat 40°24'09", long 76°34'39", Lebanon County, Hydrologic Unit 02050305, on left bank 100 ft downstream from bridge on State Highway 934 at Harper Tavern, 6.0 mi northwest of Annville, and 8.5 mi downstream from Little Swatara Creek.

**DRAINAGE AREA.**--337 mi<sup>2</sup>.

**PERIOD OF RECORD.**--January 1919 to current year. Prior to October 1927, published as "at Harpers".

**REVISED RECORDS.**--WSP 1202: 1948. WSP 1302: 1920(M), 1921, 1924-25(M), 1927-28(M), 1930(M). WSP 1903: Drainage area. WDR PA-72-1: 1889 (M). WDR PA-85-2: 1984(P)(m).

**GAGE.**--Water-stage recorder. Datum of gage is 356.68 ft above National Geodetic Vertical Datum of 1929. Prior to July 16, 1931, nonrecording gage at same site and datum.

**REMARKS.**--Records fair except those for estimated daily discharges, which are poor. The Pennsylvania American Water Company diverts water upstream from station for municipal supply of city of Lebanon. Diversion for the year was equivalent to a mean daily discharge of 11.1 ft<sup>3</sup>/s. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood of June 1, 1889, reached a stage of 25.6 ft, from floodmark, discharge, about 88,000 ft<sup>3</sup>/s.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 4,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)	Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)
Nov. 28	2330	7,930	9.56	Jan. 14	2100	8,980	10.29
Dec. 1	2015	7,100	8.94	Mar. 29	1115	10,100	11.02
Dec. 11	0215	5,410	7.53	Apr. 3	Unknown	*11,000	*11.58

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	1630	466	4600	579	e450	497	1830	443	145	138	144	84
2	1270	410	3890	532	e430	479	e4200	368	135	104	133	78
3	1340	384	2240	503	e420	412	e9500	335	145	103	133	65
4	958	399	1700	673	e425	389	e6600	317	236	87	124	57
5	789	667	1400	736	e430	378	3040	299	211	93	112	57
6	666	478	1170	1820	e430	392	2250	288	176	291	105	51
7	593	412	1180	1790	e425	528	1830	282	263	227	106	48
8	532	388	1360	e2700	e430	1190	1690	269	216	1110	105	50
9	486	357	1030	e3150	e500	1120	1310	253	165	728	194	46
10	447	328	2720	e2100	645	888	1090	243	181	330	163	49
11	407	319	4150	e1700	534	774	945	236	317	241	122	42
12	379	413	2270	e1850	435	689	802	229	446	197	106	38
13	358	720	1720	1400	400	633	731	212	215	182	104	39
14	444	502	1390	6000	444	569	655	203	182	320	98	39
15	457	444	1140	5160	1910	513	584	266	157	337	88	40
16	500	415	981	2610	1360	477	524	261	145	931	93	44
17	418	398	890	1940	1180	462	493	215	144	2610	124	55
18	354	382	790	e1300	878	451	466	199	131	2530	100	78
19	683	367	725	e1100	679	442	438	189	124	1070	91	54
20	689	372	608	e1000	621	447	412	194	120	655	102	47
21	519	474	551	e850	622	476	388	236	113	469	96	43
22	528	398	548	e700	609	450	365	204	107	393	81	40
23	465	365	938	e650	702	682	478	186	103	328	68	38
24	410	506	2300	e700	630	2010	781	181	92	270	63	37
25	394	1760	1220	e700	565	1380	525	177	91	329	59	35
26	367	1470	950	e600	515	1110	420	172	85	301	55	37
27	340	1070	823	e500	500	958	404	160	82	228	55	54
28	324	4150	679	e450	480	3180	391	155	82	204	138	58
29	308	4550	674	e420	---	8800	348	183	83	179	171	50
30	659	2140	626	e440	---	3680	372	176	157	165	108	45
31	636	---	593	e470	---	2370	---	160	---	151	95	---
TOTAL	18350	25504	45856	45123	17649	36826	43862	7291	4849	15301	3336	1498
MEAN	592	850	1479	1456	630	1188	1462	235	162	494	108	49.9
MAX	1630	4550	4600	6000	1910	8800	9500	443	446	2610	194	84
MIN	308	319	548	420	400	378	348	155	82	87	55	35
CFSM	1.76	2.52	4.39	4.32	1.87	3.53	4.34	0.70	0.48	1.46	0.32	0.15
IN.	2.03	2.82	5.06	4.98	1.95	4.07	4.84	0.80	0.54	1.69	0.37	0.17

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2005, BY WATER YEAR (WY)

MEAN	340	532	718	687	751	1072	888	670	457	309	252	281
MAX	2104	1752	2168	2538	2097	3096	2466	2189	3952	1472	1772	2000
(WY)	1977	1927	1997	1996	1925	1994	1983	1989	1972	1945	1933	1975
MIN	28.1	35.9	60.0	42.1	162	358	297	154	80.2	30.8	22.0	15.9
(WY)	1942	1932	1931	1981	1980	1985	1988	1926	1965	1966	1966	1932

e Estimated.

SWATARA CREEK BASIN

01573000 SWATARA CREEK AT HARPER TAVERN, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1919 - 2005	
ANNUAL TOTAL	310653		265445			
ANNUAL MEAN	849		727		578	
HIGHEST ANNUAL MEAN					948	1972
LOWEST ANNUAL MEAN					201	1931
HIGHEST DAILY MEAN	16500	Sep 19	<b>e</b> 9500	Apr 3	42500	Jun 23 1972
LOWEST DAILY MEAN	129	Jul 11	35	Sep 25	6.6	Aug 21 1965
ANNUAL SEVEN-DAY MINIMUM	158	Jul 5	40	Sep 20	10	Sep 19 1932
MAXIMUM PEAK FLOW			11000	Apr 3	<b>a</b> 66700	Jun 23 1972
MAXIMUM PEAK STAGE			<b>b</b> 11.58	Apr 3	<b>c</b> 23.72	Jun 23 1972
INSTANTANEOUS LOW FLOW			34	Sep 25,26	6.0	Aug 21 1965
ANNUAL RUNOFF (CFSM)	2.52		2.16		1.72	
ANNUAL RUNOFF (INCHES)	34.29		29.30		23.30	
10 PERCENT EXCEEDS	1580		1740		1290	
50 PERCENT EXCEEDS	536		420		320	
90 PERCENT EXCEEDS	239		82		66	

- a** From rating curve extended above 25,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- b** From peak indicator.
- c** From floodmark in gage.
- e** Estimated.

