

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 mi².

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 sea level. Prior to July 16, 1931, nonrecording gage at same site and datum.

REMARKS.--Records good 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 10.8 ft³/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 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 4,800 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Mar. 22	1245	*10,400	*11.23	June 26	1245	8,080	9.67

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1740	149	362	282	e270	1480	1110	362	424	728	437	204
2	937	180	319	268	e260	1210	975	366	446	571	1340	364
3	638	423	297	271	e250	1020	889	341	366	486	778	221
4	621	298	281	287	e230	839	1270	308	308	484	1720	168
5	929	215	260	347	e210	727	1260	296	290	414	669	137
6	690	191	311	283	e190	628	930	301	716	349	462	108
7	494	175	377	237	e180	554	814	275	771	305	490	98
8	439	162	292	222	e170	509	778	253	438	267	357	95
9	390	159	251	206	e170	478	1810	236	347	242	281	93
10	1140	157	257	440	e180	459	1480	223	297	243	240	89
11	1310	155	321	1270	e190	557	1200	300	260	229	206	87
12	755	148	267	757	e180	1920	1080	265	259	193	183	90
13	598	140	250	610	e200	1240	905	242	569	179	177	331
14	642	138	857	482	e500	959	789	608	834	179	175	277
15	476	138	2220	427	e1100	821	715	392	696	316	163	432
16	384	131	1450	e360	e900	729	682	284	642	618	229	237
17	346	125	1050	e280	e800	1510	714	250	504	322	188	163
18	347	122	815	e230	e660	1200	827	231	468	236	147	139
19	303	118	669	e280	e580	980	669	324	594	201	142	237
20	299	119	616	e320	e520	865	574	665	476	205	130	1140
21	321	126	761	e260	e470	1980	600	671	431	185	115	487
22	268	126	597	e250	e430	9340	823	518	1280	197	109	308
23	252	124	497	e230	e500	4380	648	859	729	170	112	239
24	231	125	444	e240	e600	2590	571	1450	511	147	135	218
25	208	232	376	e240	e800	1980	520	2050	484	145	131	211
26	194	293	417	e230	e1300	1760	488	1290	6080	140	109	360
27	184	1110	382	e230	e1100	1380	483	917	2040	142	98	306
28	174	769	338	e230	2680	3080	477	775	1280	142	114	233
29	166	535	325	e240	1970	2050	435	646	1130	133	149	194
30	159	430	298	e220	---	1600	397	543	1150	151	114	171
31	153	---	300	e230	---	1320	---	467	---	485	104	---
TOTAL	15788	7313	16257	10459	17590	50145	24913	16708	24820	8804	9804	7437
MEAN	509	244	524	337	607	1618	830	539	827	284	316	248
MAX	1740	1110	2220	1270	2680	9340	1810	2050	6080	728	1720	1140
MIN	153	118	250	206	170	459	397	223	259	133	98	87
CFSM	1.51	.72	1.56	1.00	1.80	4.80	2.46	1.60	2.45	.84	.94	.74
IN.	1.74	.81	1.79	1.15	1.94	5.54	2.75	1.84	2.74	.97	1.08	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2000, BY WATER YEAR (WY)

MEAN	332	529	699	688	763	1076	881	680	445	306	243	263
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.

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SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1919 - 2000	
ANNUAL TOTAL	151169		210038			
ANNUAL MEAN	414		574		574	
HIGHEST ANNUAL MEAN					948	
LOWEST ANNUAL MEAN					201	
HIGHEST DAILY MEAN	e4300	Jan 24	9340	Mar 22	42500	Jun 23 1972
LOWEST DAILY MEAN	19	Aug 6	87	Sep 11	6.6	Aug 21 1965
ANNUAL SEVEN-DAY MINIMUM	21	Aug 2	94	Sep 6	10	Sep 19 1932
INSTANTANEOUS PEAK FLOW			10400	Mar 22	a66700	Jun 23 1972
INSTANTANEOUS PEAK STAGE			11.23	Mar 22	b23.72	Jun 23 1972
INSTANTANEOUS LOW FLOW			86	Sep 11	6.0	Aug 21 1965
ANNUAL RUNOFF (CFSM)	1.23		1.70		1.70	
ANNUAL RUNOFF (INCHES)	16.69		23.19		23.13	
10 PERCENT EXCEEDS	874		1220		1290	
50 PERCENT EXCEEDS	272		347		319	
90 PERCENT EXCEEDS	36		142		66	

- a From rating curve extended above 25,000 ft³/s on basis of slope-area measurement of peak flow.
- b From floodmark in gage.
- e Estimated.

