

## 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 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 10.4 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)
May 18	1800	*3,440	*5.55	(No peaks above base discharge.)			

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	64	51	151	e77	284	93	930	897	271	149	36	41
2	62	52	144	69	300	90	720	1400	246	134	32	47
3	60	53	109	69	242	498	586	1680	219	123	31	51
4	54	51	96	64	224	473	536	1120	201	110	28	44
5	51	50	88	66	186	281	458	894	230	101	26	34
6	48	49	81	64	187	251	423	743	292	93	30	27
7	41	51	79	70	194	234	389	653	512	86	30	25
8	40	47	90	81	173	215	357	599	303	84	30	22
9	42	52	174	92	156	200	353	712	227	87	28	19
10	44	48	189	92	144	261	452	736	204	100	25	18
11	45	46	138	131	211	284	390	520	182	91	22	18
12	47	45	116	242	225	228	317	483	175	78	21	15
13	48	44	107	253	182	227	310	798	172	71	22	14
14	45	47	141	196	157	234	369	1180	233	67	28	15
15	86	49	234	167	147	207	2020	821	316	71	32	13
16	142	52	180	160	150	196	1450	624	240	65	30	26
17	101	48	148	150	144	191	1040	535	191	54	37	95
18	82	48	290	137	135	341	904	2010	174	50	30	52
19	72	46	358	106	123	614	779	1920	206	47	25	36
20	62	52	251	125	122	1010	751	1330	286	47	24	31
21	55	57	200	152	123	1770	637	1080	173	49	23	28
22	54	56	167	137	122	1100	677	898	150	49	22	38
23	56	51	146	122	115	798	610	727	136	53	27	144
24	51	e81	155	276	107	655	481	617	132	93	30	125
25	58	e140	152	794	103	558	440	529	137	80	39	63
26	55	e396	126	475	104	638	466	483	122	59	49	50
27	50	201	100	359	110	2580	391	452	218	50	36	429
28	48	122	e98	302	105	1620	710	405	747	63	29	934
29	46	101	e95	269	---	1180	1370	364	249	67	46	350
30	47	102	e93	251	---	952	925	322	173	55	61	180
31	52	---	e84	261	---	786	---	299	---	43	54	---
TOTAL	1808	2288	4580	5809	4575	18765	20241	25831	7117	2369	983	2984
MEAN	58.3	76.3	148	187	163	605	675	833	237	76.4	31.7	99.5
MAX	142	396	358	794	300	2580	2020	2010	747	149	61	934
MIN	40	44	79	64	103	90	310	299	122	43	21	13
CFSM	0.17	0.23	0.44	0.56	0.48	1.80	2.00	2.47	0.70	0.23	0.09	0.30
IN.	0.20	0.25	0.51	0.64	0.51	2.07	2.23	2.85	0.79	0.26	0.11	0.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2002, BY WATER YEAR (WY)

MEAN	326	519	695	678	755	1068	879	677	440	301	238	259
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1919 - 2002	
ANNUAL TOTAL	115285		97350			
ANNUAL MEAN	316		267		568	
HIGHEST ANNUAL MEAN					948	1972
LOWEST ANNUAL MEAN					201	1931
HIGHEST DAILY MEAN	2290	Mar 30	2580	Mar 27	42500	Jun 23 1972
LOWEST DAILY MEAN	37	Sep 9	13	Sep 15	6.6	Aug 21 1965
ANNUAL SEVEN-DAY MINIMUM	44	Oct 6	16	Sep 9	10	Sep 19 1932
MAXIMUM PEAK FLOW			3440	May 18	<b>a</b> 66700	Jun 23 1972
MAXIMUM PEAK STAGE			5.55	May 18	<b>b</b> 23.72	Jun 23 1972
INSTANTANEOUS LOW FLOW			12	Sep 15	6.0	Aug 21 1965
ANNUAL RUNOFF (CFSM)	0.94		0.79		1.69	
ANNUAL RUNOFF (INCHES)	12.73		10.75		22.89	
10 PERCENT EXCEEDS	843		731		1280	
50 PERCENT EXCEEDS	178		131		312	
90 PERCENT EXCEEDS	48		33		65	

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

