

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 11.3 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)
Dec. 17	2300	*9,950	*10.94	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	e100	248	e285	1020	504	1410	357	188	170	85	77
2	153	e101	210	e273	1030	488	1170	335	323	285	73	79
3	147	e98	180	e249	889	469	971	317	381	190	69	53
4	140	96	183	e225	702	457	916	295	337	165	118	45
5	364	94	184	e231	659	528	752	277	240	314	130	47
6	270	90	182	e249	638	464	837	253	202	332	123	57
7	210	90	175	e225	662	449	1160	238	187	214	86	49
8	165	90	169	e225	675	594	963	237	167	173	72	43
9	144	92	152	e201	593	649	919	234	151	240	64	37
10	135	159	135	e201	879	612	1120	228	139	180	70	47
11	132	250	151	e201	920	570	1100	211	135	180	101	57
12	125	148	144	e182	712	545	1340	202	132	148	90	59
13	117	119	139	e164	646	1320	1110	194	193	128	81	48
14	111	116	249	e164	625	1330	953	179	172	119	78	61
15	106	119	475	e183	704	1080	845	171	160	110	72	67
16	102	111	451	e183	706	972	1390	165	183	103	66	50
17	116	106	6980	e183	881	1110	1300	159	406	101	61	39
18	202	100	5930	e183	666	1040	1380	163	264	98	58	39
19	313	95	2240	e334	580	842	1130	167	183	92	50	38
20	217	92	1600	e910	571	760	985	155	162	93	77	46
21	166	93	1160	619	550	785	893	178	328	76	79	58
22	143	88	972	448	475	1090	805	441	439	71	61	57
23	128	80	722	382	442	835	711	486	646	67	58	47
24	122	95	e631	386	435	710	640	303	481	66	65	70
25	121	94	e558	384	483	643	568	221	337	63	55	625
26	120	198	e486	320	748	587	514	214	269	145	46	302
27	116	452	e443	316	639	532	475	250	225	133	44	152
28	114	262	e401	288	551	494	444	364	200	96	45	114
29	107	210	e383	261	---	474	394	326	178	81	46	92
30	99	254	e352	540	---	2290	368	271	165	84	46	74
31	98	---	e322	1230	---	1900	---	205	---	85	48	---
TOTAL	4760	4092	26607	10225	19081	25123	27563	7796	7573	4402	2217	2629
MEAN	154	136	858	330	681	810	919	251	252	142	71.5	87.6
MAX	364	452	6980	1230	1030	2290	1410	486	646	332	130	625
MIN	98	80	135	164	435	449	368	155	132	63	44	37
CFSM	.46	.40	2.55	.98	2.02	2.40	2.73	.75	.75	.42	.21	.26
IN.	.53	.45	2.94	1.13	2.11	2.77	3.04	.86	.84	.49	.24	.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2001, BY WATER YEAR (WY)

MEAN	329	524	701	684	762	1073	881	675	443	304	241	261
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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1919 - 2001	
ANNUAL TOTAL	206139		142068			
ANNUAL MEAN	563		389		572	
HIGHEST ANNUAL MEAN					948	1972
LOWEST ANNUAL MEAN					201	1931
HIGHEST DAILY MEAN	9340	Mar 22	6980	Dec 17	42500	Jun 23 1972
LOWEST DAILY MEAN	80	Nov 23	37	Sep 9	6.6	Aug 21 1965
ANNUAL SEVEN-DAY MINIMUM	91	Nov 19	46	Sep 17	10	Sep 19 1932
MAXIMUM PEAK FLOW			9950	Dec 17	a 66700	Jun 23 1972
MAXIMUM PEAK STAGE			10.94	Dec 17	b 23.72	Jun 23 1972
INSTANTANEOUS LOW FLOW			35	Sep 9,10,19	6.0	Aug 21 1965
ANNUAL RUNOFF (CFSM)	1.67		1.15		1.70	
ANNUAL RUNOFF (INCHES)	22.75		15.68		23.04	
10 PERCENT EXCEEDS	1220		912		1280	
50 PERCENT EXCEEDS	288		202		317	
90 PERCENT EXCEEDS	112		66		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.

