Water-Data Report 2012

01573000 SWATARA CREEK AT HARPERS TAVERN, PA

Lower Susquehanna Basin
Lower Susquehanna-Swatara Subbasin

LOCATION.--Lat 40°24′09″, long 76°34′39″ referenced to North American Datum of 1927, Lebanon County, PA, Hydrologic Unit 02050305, on left bank 100 ft downstream from bridge on State Highway 934 at Harpers Tavern, 6.0 mi northwest of Annville, and 8.5 mi downstream from Little Swatara Creek.

DRAINAGE AREA.--337 mi^2.

SURFACE-WATER RECORDS

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 Jul 16, 1931, non-recording gage at same site and datum. Satellite and landline telemetry at station.

COOPERATION.-- Station established and maintained by the U.S. Geological Survey. Funding for the operation of this station is provided by the Pennsylvania Department of Environmental Protection and the U.S. Geological Survey through the National Streamflow Information Program. Records of water diversion provided by Pennsylvania American Water Company.

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 10.7 ft^3/s. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jun 1, 1889, reached a stage of 25.6 ft, from floodmark, discharge, about 88,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,800 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 23	1900	*8,660	*10.22
Dec 8	0745	5,470	7.56
May 16	0315	7,340	9.13

Minimum discharge, 54 ft^3/s, Sept. 18, gage height, 0.02 ft.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 01573000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/01573000.2012.pdf

01573000 SWATARA CREEK AT HARPERS TAVERN, PA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

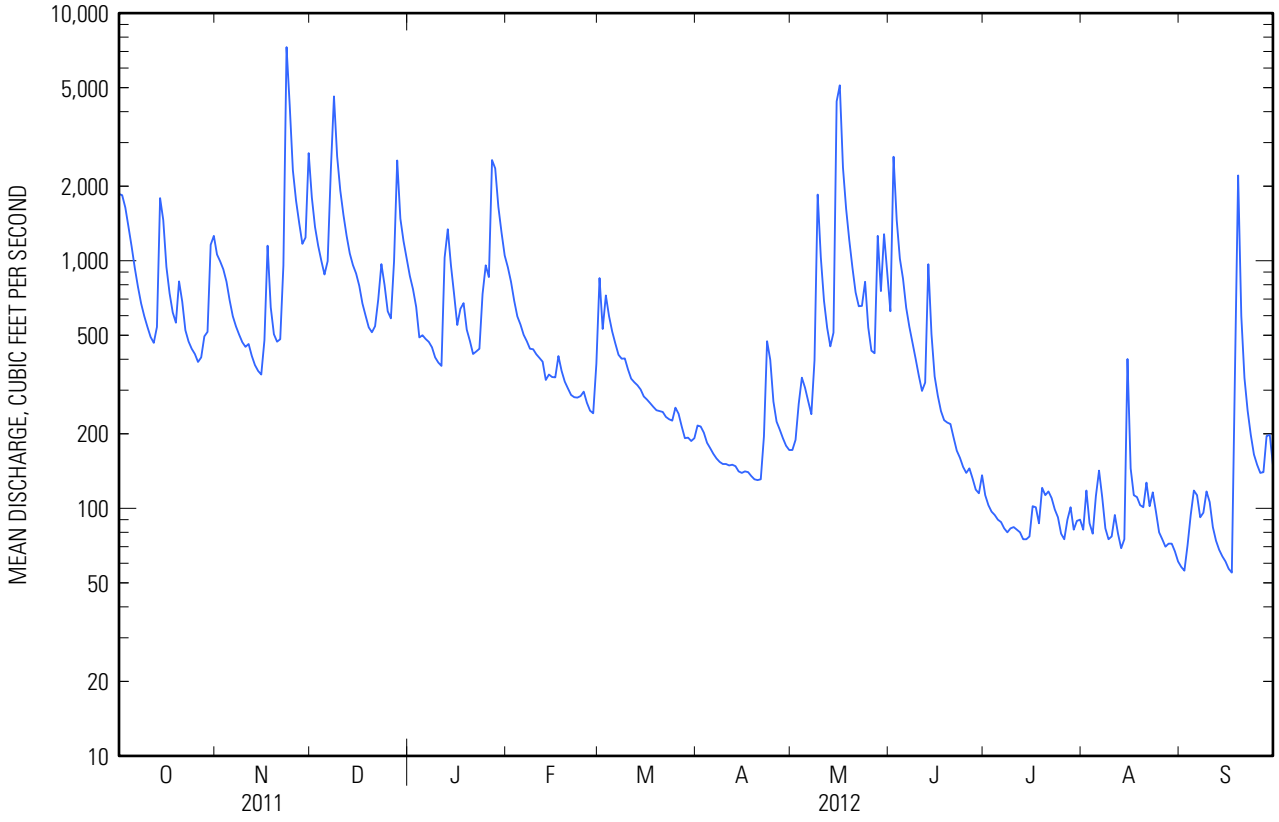
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,860	1,060	e1,800	868	941	851	216	172	625	113	82	58
2	1,840	994	e1,370	767	822	530	214	189	2,630	103	118	56
3	1,640	923	e1,150	651	690	724	202	264	1,460	97	87	71
4	1,370	823	e1,000	e490	596	598	184	337	1,020	94	79	94
5	1,140	692	e880	e500	552	518	175	307	845	90	112	118
6	934	597	996	483	502	463	166	271	646	88	142	113
7	784	543	2,310	470	473	417	159	240	541	83	111	92
8	672	503	4,610	447	441	402	154	396	466	80	83	96
9	597	469	2,640	407	439	403	151	1,850	401	83	75	117
10	540	449	1,920	388	419	364	151	1,030	343	84	77	106
11	492	461	1,530	376	405	334	149	689	298	82	94	84
12	466	413	1,260	1,030	391	323	150	536	322	80	79	74
13	540	379	1,070	1,340	e330	314	148	451	968	75	69	68
14	1,790	359	960	958	347	302	141	512	505	75	75	64
15	1,460	347	888	731	339	283	139	4,400	341	77	401	61
16	944	477	792	e550	338	275	141	5,110	285	102	145	57
17	739	1,150	672	640	412	266	140	2,380	247	101	113	55
18	618	648	600	674	359	257	135	1,620	227	87	111	359
19	562	505	538	527	325	249	131	1,210	222	121	103	2,210
20	825	471	514	474	305	247	130	937	219	113	101	598
21	684	482	544	e420	287	245	131	745	193	117	127	336
22	524	956	697	e430	281	234	195	655	171	110	102	248
23	472	7,290	969	441	280	229	473	657	160	99	116	198
24	441	4,240	798	734	284	226	398	822	147	92	97	165
25	420	2,320	625	958	296	255	270	538	139	79	80	150
26	390	1,750	585	859	267	241	224	433	145	75	75	139
27	407	1,420	994	2,550	248	214	208	423	132	90	70	140
28	495	1,170	2,540	2,360	242	192	192	1,260	119	101	72	196
29	516	1,240	1,480	1,650	384	193	179	754	115	82	72	198
30	1,160	2,720	1,200	1,300	---	187	172	1,280	136	89	67	150
31	1,260	---	1,020	1,050	---	192	---	896	---	90	61	---
Total	26,582	35,851	38,952	25,523	11,995	10,528	5,618	31,364	14,068	2,852	3,196	6,471
Mean	857	1,195	1,257	823	414	340	187	1,012	469	92.0	103	216
Max	1,860	7,290	4,610	2,550	941	851	473	5,110	2,630	121	401	2,210
Min	390	347	514	376	242	187	130	172	115	75	61	55
Cfsm	2.54	3.55	3.73	2.44	1.23	1.01	0.56	3.00	1.39	0.27	0.31	0.64
In.	2.93	3.96	4.30	2.82	1.32	1.16	0.62	3.46	1.55	0.31	0.35	0.71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	359	538	738	687	745	1,076	880	670	473	304	256	326
Max	2,104	1,752	2,168	2,538	2,097	3,096	2,466	2,189	3,952	1,472	1,772	4,927
(WY)	(1977)	(1927)	(1997)	(1996)	(1925)	(1994)	(1983)	(1989)	(1972)	(1945)	(1933)	(2011)
Min	28.1	35.9	60.0	42.1	162	248	187	154	80.2	30.8	22.0	15.9
(WY)	(1942)	(1932)	(1931)	(1981)	(1980)	(2009)	(2012)	(1926)	(1965)	(1966)	(1966)	(1932)

01573000 SWATARA CREEK AT HARPERS TAVERN, PA—Continued

SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1919 - 2012	
Annual total	485,428		213,000			
Annual mean	1,330		582		586	
Highest annual mean					1,216	2011
Lowest annual mean					201	1931
Highest daily mean	[a]57,000	Sep 8	7,290	Nov 23	[a]57,000	Sep 8, 2011
Lowest daily mean	65	Jul 24[b]	55	Sep 17	6.6	Aug 21, 1965
Annual seven-day minimum	74	Jul 19	65	Aug 27	10	Sep 19, 1932
Maximum peak flow			8,660	Nov 23	[c] 74,800	Sep 8, 2011
Maximum peak stage			10.22	Nov 23	[d]24.46	Sep 8, 2011
Instantaneous low flow			54	Sep 18	6.0	Aug 21, 1965
Annual runoff (cfsm)	3.95		1.73		1.74	
Annual runoff (inches)	53.58		23.51		23.64	
10 percent exceeds	2,380		1,260		1,300	
50 percent exceeds	642		378		321	
90 percent exceeds	130		84		66	

[a] Estimated.
[b] Also Aug 1.
[c] From rating curve extended above 25,000 ft³/s on basis of slope-area measurement of 66,700 ft³/s at gage height 23.72 ft.
[d] From floodmark in gage.