

## SWATARA CREEK BASIN

## 01572190 SWATARA CREEK NEAR INWOOD, PA

**LOCATION.**--Lat 40°28'45", long 76°31'52", Lebanon County, Hydrologic Unit 02050305, on right bank 20 ft downstream from single-span steel-truss bridge on Appalachian Trail, 0.4 mi upstream from steel-truss bridge at Inwood, 0.5 mi downstream from Trout Run, and 2.0 mi north of Lickdale.

**DRAINAGE AREA.**--167 mi<sup>2</sup>.

**PERIOD OF RECORD.**--October 1988 to January 1991, October 1991 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 430 ft above sea level, from topographic map.

**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 9.1 ft<sup>3</sup>/s. Several measurements of water temperature were made during the year. Satellite telemetry at station.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 2,000 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)
Jan. 19	0330	2,340	8.04	Sept. 16	2315	2,630	8.54
Jan. 24	1615	*3,930	*10.53	Sept. 30	1015	2,270	7.92

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	38	47	e27	e300	310	264	182	66	39	19	20
2	26	37	45	e26	692	240	269	170	68	39	17	18
3	24	37	43	e110	762	207	241	163	72	38	17	18
4	33	37	42	e260	608	602	223	162	65	35	17	18
5	41	37	41	e140	519	539	219	156	60	32	17	19
6	37	37	40	e130	437	467	198	149	57	31	17	60
7	33	36	39	e110	e370	437	188	146	54	30	17	226
8	75	35	40	e100	e360	335	175	185	54	27	17	119
9	123	36	43	e190	e350	309	237	185	51	26	21	67
10	242	37	41	549	e320	298	505	149	50	31	20	51
11	139	49	38	e270	e290	280	405	132	50	31	18	42
12	95	54	36	e180	e290	252	492	123	46	29	17	35
13	76	46	35	e150	336	223	420	116	47	29	17	32
14	101	42	34	e160	283	217	373	112	51	29	178	31
15	91	38	35	e155	253	246	339	105	87	27	100	32
16	72	37	35	e150	246	245	332	100	59	27	54	723
17	62	37	35	e145	258	288	316	98	63	23	39	1530
18	58	38	35	e300	291	377	275	96	139	21	33	476
19	54	36	34	e1500	266	366	249	113	82	21	28	257
20	51	36	34	e600	238	321	257	111	64	22	27	176
21	48	37	32	e400	220	355	258	92	58	21	32	164
22	46	37	35	e500	e190	1190	251	86	54	21	30	264
23	46	35	38	e800	e180	899	268	93	50	22	27	203
24	43	35	33	2960	e170	695	319	140	47	23	25	150
25	41	34	30	1870	e160	568	263	154	45	20	24	124
26	41	82	e30	1100	e160	465	251	111	41	19	25	103
27	43	98	e29	819	e150	401	237	94	40	19	32	91
28	43	66	e28	669	e220	372	221	85	39	19	29	89
29	43	55	e28	570	---	339	208	78	48	19	24	103
30	42	50	e28	446	---	295	194	73	43	23	20	1380
31	40	---	e27	363	---	266	---	68	---	20	20	---
TOTAL	1936	1309	1110	15749	8919	12404	8447	3827	1750	813	978	6621
MEAN	62.5	43.6	35.8	508	319	400	282	123	58.3	26.2	31.5	221
MAX	242	98	47	2960	762	1190	505	185	139	39	178	1530
MIN	24	34	27	26	150	207	175	68	39	19	17	18
CFSM	.37	.26	.21	3.04	1.91	2.40	1.69	.74	.35	.16	.19	1.32
IN.	.43	.29	.25	3.51	1.99	2.76	1.88	.85	.39	.18	.22	1.47

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

MEAN	185	328	371	452	371	588	501	407	246	175	92.8	105
MAX	538	662	1098	987	832	1263	1 325	1184	471	576	192	221
(WY)	1997	1993	1997	1996	1998	1994	1993	1989	1989	1989	1994	1999
MIN	45.0	43.6	35.8	108	149	271	165	123	58.3	26.2	31.5	32.7
(WY)	1998	1999	1999	1992	1992	1990	1995	1999	1999	1999	1999	1995

e Estimated.

SWATARA CREEK BASIN

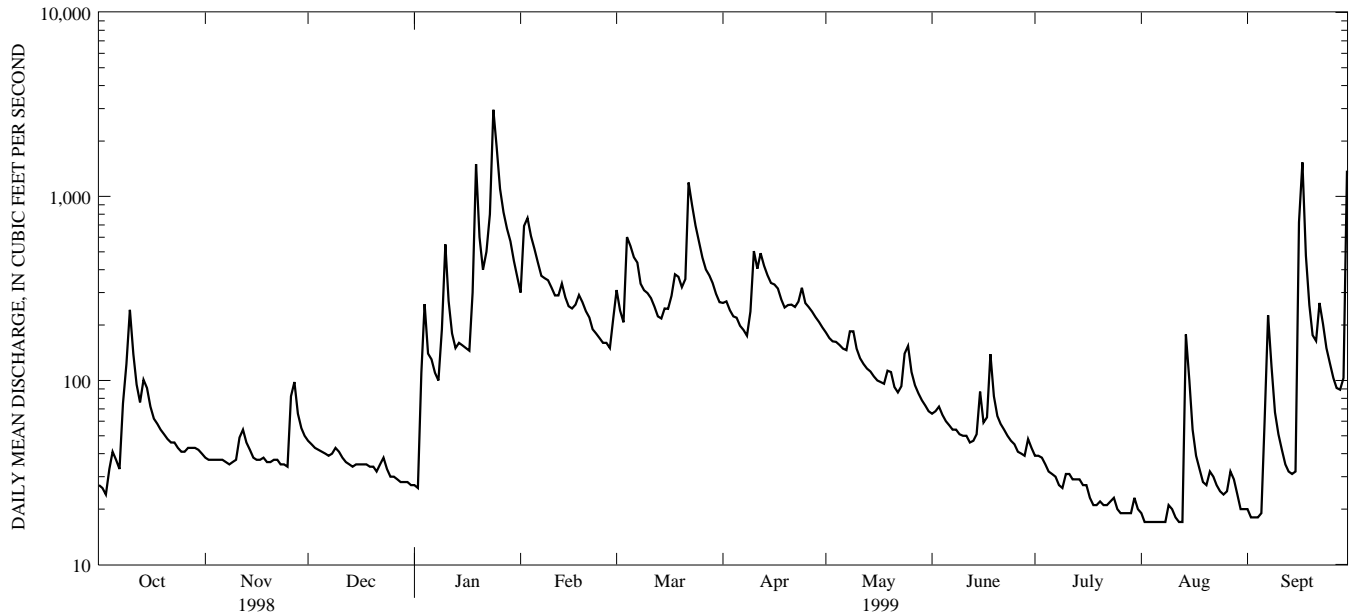
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SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		FOR PERIOD OF DAILY RECORD	
ANNUAL TOTAL	123924		63863		313	
ANNUAL MEAN	340		175		394	
HIGHEST ANNUAL MEAN					1994	
LOWEST ANNUAL MEAN					1999	
HIGHEST DAILY MEAN	2690	Jan 9	2960	Jan 24	6200	Jan 20 1996
LOWEST DAILY MEAN	24	Oct 3	17	Aug 2 <sup>a</sup>	17	Aug 2 1999 <sup>a</sup>
ANNUAL SEVEN-DAY MINIMUM	28	Sep 27	17	Aug 2	17	Aug 2 1999
INSTANTANEOUS PEAK FLOW			3930	Jan 24	b9510	Nov 28 1993
INSTANTANEOUS PEAK STAGE			10.53	Jan 24	16.20	Nov 28 1993
INSTANTANEOUS LOW FLOW			17	Aug 2 <sup>c</sup>	17	Aug 2 1999 <sup>c</sup>
ANNUAL RUNOFF (CFSM)	2.03		1.05		1.87	
ANNUAL RUNOFF (INCHES)	27.60		14.23		25.46	
10 PERCENT EXCEEDS	907		386		710	
50 PERCENT EXCEEDS	134		68		173	
90 PERCENT EXCEEDS	35		24		46	

<sup>a</sup> Also Aug. 3-8, 12, 13.

<sup>b</sup> From rating curve extended above 4,500 ft<sup>3</sup>/s.

<sup>c</sup> Also Aug. 3-8, 12, 13, Sept. 5.



1-YEAR HYDROGRAPH  
OCTOBER 1, 1998 TO SEPTEMBER 30, 1999