

## WEST BRANCH SUSQUEHANNA RIVER BASIN

01541000 WEST BRANCH SUSQUEHANNA RIVER AT BOWER, PA  
(Pennsylvania Water-Quality Network Station)

**LOCATION.**--Lat 40°53'49", long 78°40'38", Clearfield County, Hydrologic Unit 02050201, on right bank at downstream side of highway bridge on Township Route 418 at Bower, and 4.6 mi downstream from Chest Creek and Mahaffey.

**DRAINAGE AREA.**--315 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--October 1913 to current year.

**REVISED RECORDS.**--WSP 726: Drainage area: WSP 1302: 1914-17, 1918(M), 1922-23, 1924(M), 1925-29, 1930-31(M), 1933(M).

**GAGE.**--Water-stage recorder. Datum of gage is 1,207.14 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1929, nonrecording gage at same site and datum.

**REMARKS.**--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum stage known prior to 1913, about 18.5 ft, May 13, 1889, discharge, about 27,000 ft<sup>3</sup>/s.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 4,400 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)
Mar. 26	2330	*5,880	*10.86	No other peak greater than 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	54	57	464	e170	1130	304	996	861	659	203	149	58
2	51	55	303	e170	973	315	830	1380	437	184	110	57
3	49	61	222	e170	740	649	722	1410	328	172	92	58
4	47	65	179	e160	623	673	633	990	297	159	84	57
5	45	59	153	e160	490	490	553	799	368	151	79	53
6	42	56	135	e180	439	499	504	666	1840	141	78	49
7	41	55	127	e180	399	455	457	587	2960	129	79	48
8	41	54	121	e170	372	407	424	553	1340	123	78	47
9	40	53	193	e170	331	367	399	1310	879	128	71	46
10	40	50	203	e160	331	348	381	1810	664	e380	67	44
11	41	49	160	e240	1310	305	331	1090	543	189	65	44
12	42	48	137	e450	938	288	297	1070	470	143	64	42
13	45	47	144	e400	731	279	309	2610	408	127	63	42
14	49	46	178	356	568	267	399	3630	743	120	62	43
15	e85	47	239	320	507	251	830	2420	1710	114	59	59
16	e110	47	197	291	464	962	2120	1600	1150	106	58	180
17	e80	46	778	268	438	852	1440	1200	789	101	56	93
18	70	45	2540	246	373	794	991	2650	614	97	55	64
19	60	45	1230	207	332	783	811	2200	494	101	56	58
20	54	57	786	252	338	1120	768	1500	411	137	57	57
21	53	64	574	238	501	1820	634	1150	351	126	e56	56
22	50	55	431	240	500	1280	632	917	302	99	e53	53
23	49	51	362	208	422	1000	599	753	271	110	72	50
24	224	49	429	494	374	842	489	639	242	167	264	48
25	174	185	361	1030	352	734	458	562	336	112	205	46
26	108	384	290	690	352	2200	431	498	251	101	115	50
27	84	198	e250	553	393	4370	377	440	399	147	86	394
28	75	179	e220	481	345	2280	567	397	477	159	73	488
29	67	421	e210	436	---	1530	978	538	317	124	70	193
30	63	404	e190	630	---	1350	746	402	242	133	66	123
31	61	---	e180	836	---	1030	---	382	---	135	61	---
TOTAL	2094	3032	11986	10556	15066	28844	20106	37014	20292	4418	2603	2700
MEAN	67.55	101.1	386.6	340.5	538.1	930.5	670.2	1194	676.4	142.5	83.97	90.00
MAX	224	421	2540	1030	1310	4370	2120	3630	2960	380	264	488
MIN	40	45	121	160	331	251	297	382	242	97	53	42
CFSM	0.21	0.32	1.23	1.08	1.71	2.95	2.13	3.79	2.15	0.45	0.27	0.29
IN.	0.25	0.36	1.42	1.25	1.78	3.41	2.37	4.37	2.40	0.52	0.31	0.32

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

MEAN	251.2	439.9	619.1	702.5	812.5	1203	936.0	650.4	396.0	271.3	199.6	189.7
MAX	915	1707	1958	2136	1924	3369	2080	1480	2446	1522	850	1349
(WY)	1928	1998	1924	1937	1918	1936	1940	1919	1972	1977	1956	1926
MIN	22.5	27.2	51.0	32.9	120	271	202	116	82.0	49.7	25.7	24.1
(WY)	1931	1931	1931	1931	1934	1969	1925	1926	1949	1965	1930	1939

e Estimated.

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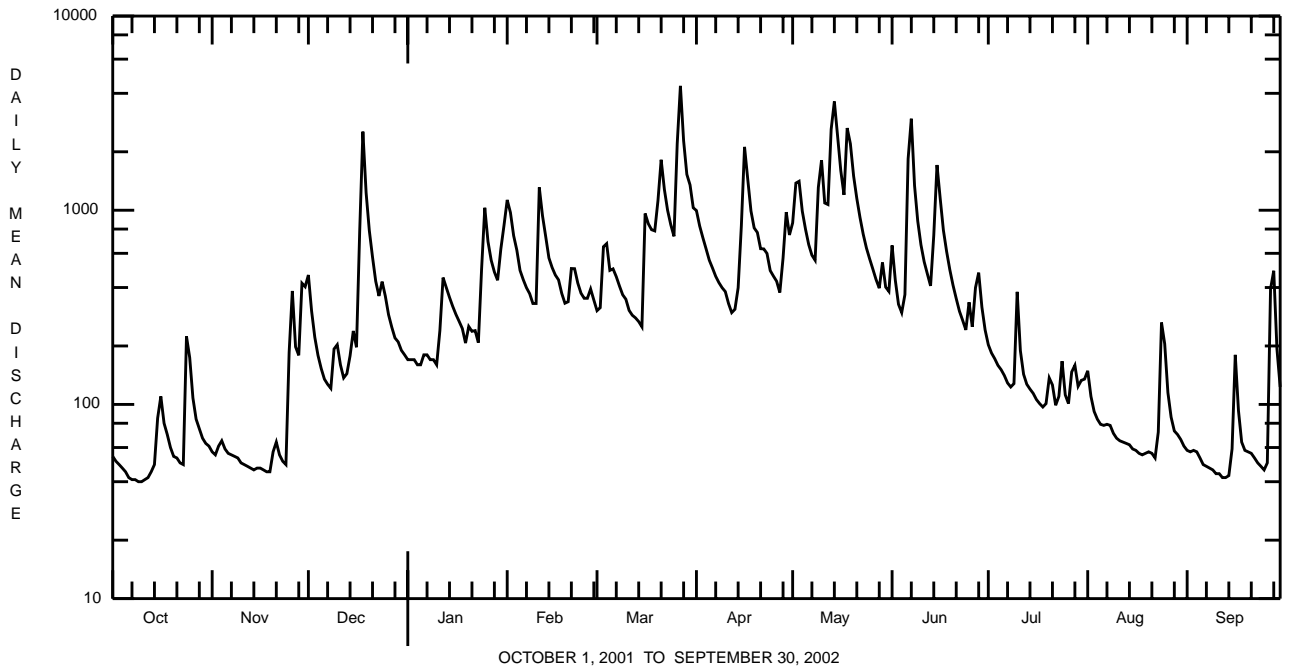
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SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1914 - 2002	
ANNUAL TOTAL	125666		158711		955	
ANNUAL MEAN	344		435		294	
HIGHEST ANNUAL MEAN					1928	
LOWEST ANNUAL MEAN					1931	
HIGHEST DAILY MEAN	2590	Feb 10,15	4370	Mar 27	23200	Jun 23 1972
LOWEST DAILY MEAN	40	Oct 9,10	40	Oct 9,10	16	Aug 29 1939 <sup>a</sup>
ANNUAL SEVEN-DAY MINIMUM	41	Oct 6	41	Oct 6	17	Aug 28 1939
MAXIMUM PEAK FLOW			5880	Mar 26	<sup>b</sup> 31500	Mar 18 1936
MAXIMUM PEAK STAGE			10.86	Mar 26	<sup>c</sup> 19.74	Mar 18 1936
INSTANTANEOUS LOW FLOW					14	Aug 29 1939
ANNUAL RUNOFF (CFSM)	1.09		1.38		1.76	
ANNUAL RUNOFF (INCHES)	14.84		18.74		23.93	
10 PERCENT EXCEEDS	928		1010		1290	
50 PERCENT EXCEEDS	170		250		282	
90 PERCENT EXCEEDS	51		50		62	

<sup>a</sup> Also Aug. 31 to Sept. 2, 1939.

<sup>b</sup> From rating curve extended above 7,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

<sup>c</sup> From floodmark in gage.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 306-334.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	ANC WATER UNFLTRD FET LAB (MG/L AS CACO3) (00417)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
APR 2002													
30...	0745	9813	715	30	11.9	7.5	245	7.9	91	23.1	8.0	26	70.6
JUN													
25...	0730	9813	369	30	8.5	7.7	460	21.5	200	52.3	17.4	50	161
AUG													
27...	1045	9813	86	30	8.9	8.0	547	21.0	230	59.6	20.4	60	188

Date	RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L) (00515)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	COPPER, TOTAL RECOV-ERABLE (µG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (µG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (µG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (µG/L AS MN) (01055)
APR 2002													
30...	166	14	<.020	.47	<.040	.71	.02	.020	2.1	<10	880	<1.0	200
JUN													
25...	364	18	<.020	.49	<.040	.52	.01	.020	1.5	<10	640	<1.0	310
AUG													
27...	390	2	.030	.36	<.040	.50	<.01	<.010	2.2	<10	210	<1.0	50

Date	NICKEL, TOTAL RECOV-ERABLE (µG/L AS NI) (01067)	ZINC, TOTAL RECOV-ERABLE (µG/L AS ZN) (01092)
APR 2002		
30...	<50	<10
JUN		
25...	<50	<10
AUG		
27...	<50	<10