



2004 Water Year

### WEST BRANCH SUSQUEHANNA RIVER BASIN

#### 01549700 Pine Creek bl L Pine Creek near Waterville, PA

Latitude: 41° 16' 25"

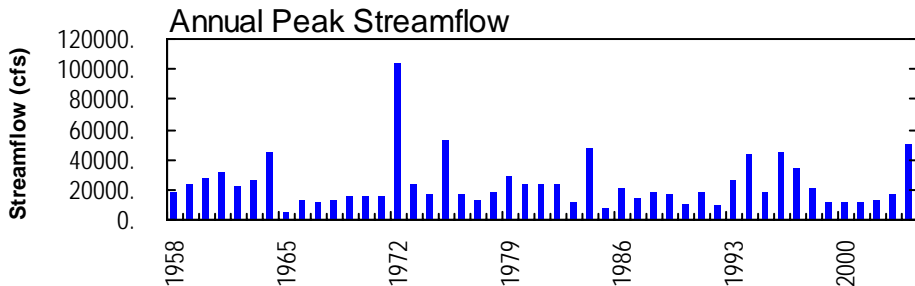
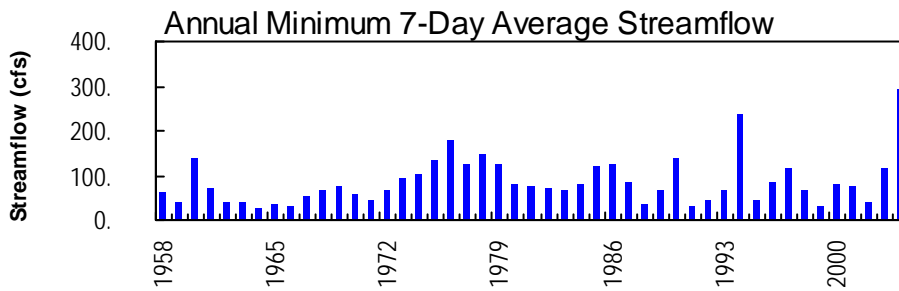
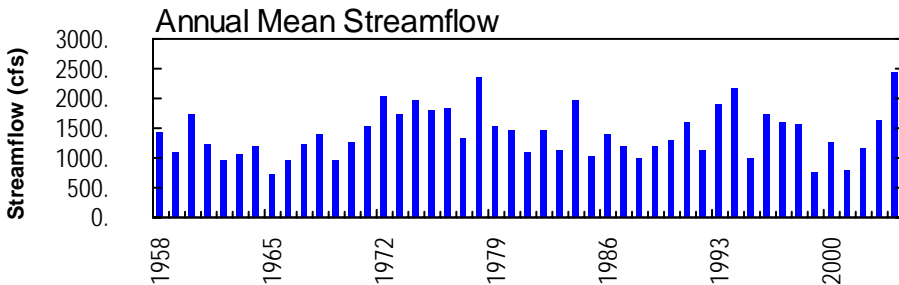
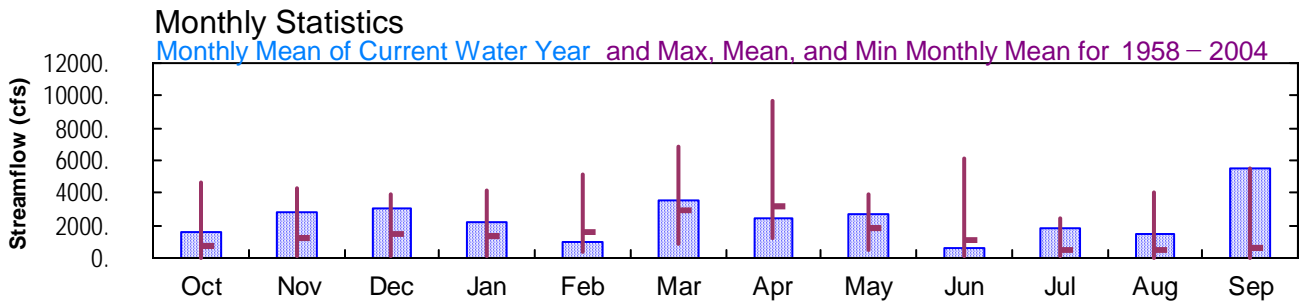
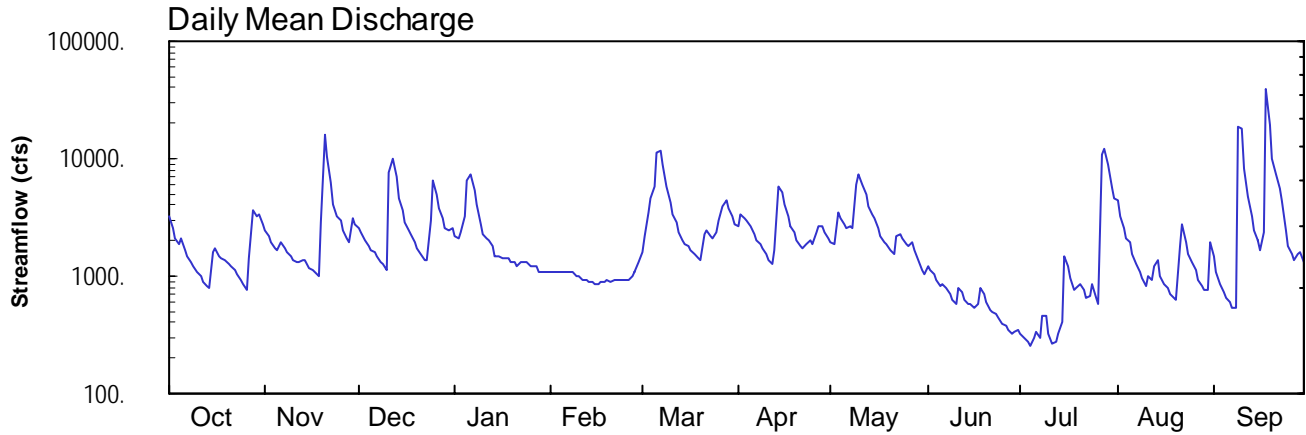
Longitude: 077° 19' 28"

Hydrologic Unit Code: 02050205

Lycoming County

Datum: 570.62 feet

Drainage Area: 944. mi<sup>2</sup>



**WEST BRANCH SUSQUEHANNA RIVER BASIN**

**01549700 PINE CREEK BELOW LITTLE PINE CREEK NEAR WATERVILLE, PA  
(Pennsylvania Water-Quality Network Station)**

**LOCATION.**--Lat 41°16'25", long 77°19'28", Lycoming County, Hydrologic Unit 02050205, on left bank on State Highway 44, on abutment of abandoned bridge 0.9 mi downstream from Ramsey Run, 4.0 mi downstream from Little Pine Creek, 4.0 mi south of Waterville, and 9.2 mi upstream from mouth.

**DRAINAGE AREA.**--944 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--October 1957 to current year.

**REVISED RECORDS.**--WDR PA-72-1: 1964(P).

**GAGE.**--Water-stage recorder. Datum of gage is 570.62 ft above National Geodetic Vertical Datum of 1929. Prior to June 16, 1982, nonrecording gage at same site and datum.

**REMARKS.**--Records good except those for estimated daily discharges, which are poor. Flood flows subject to regulation by Little Pine Dam 8.5 mi upstream, capacity 24,900 acre-ft. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 9,200 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)
Nov. 20	0430	18,300	8.59	July 27	2045	15,400	7.97
Dec. 11	1645	13,800	7.60	Sept. 9	1915	33,500	11.39
Mar. 6	2245	13,400	7.52	Sept. 18	0915	*49,600	*14.10
May 9	1530	9,900	6.60				

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3210	2410	2540	2160	e1100	e1600	2650	1920	1230	318	4380	1460
2	2540	2140	2330	2110	e1100	e2200	3390	1840	1110	297	3250	1090
3	2100	1940	2060	2380	e1100	e3500	3110	3510	1050	271	2540	863
4	1850	1710	1820	3180	e1100	e4600	2940	3110	931	252	2070	745
5	2070	1630	1680	6570	e1100	e5800	2630	2770	818	300	1940	660
6	1650	1950	1600	7260	e1100	11100	2300	2550	840	329	1560	598
7	1450	1700	1460	5370	e1100	11600	2060	2620	778	293	1280	537
8	1320	1580	1330	4010	e1100	8740	1860	2520	694	455	1100	531
9	1200	1480	1250	e2800	e990	5830	1700	6100	624	453	947	18800
10	1090	1390	1140	e2300	e1000	4160	1520	7270	581	319	836	18300
11	990	1340	7480	e2100	e930	3290	1370	5960	791	266	1000	8280
12	900	1310	10000	e2000	e910	2860	1260	4900	726	276	915	4850
13	829	1340	7010	e1800	e900	2380	1650	3950	618	323	1200	3280
14	780	1350	4530	e1500	e890	2020	5720	3300	575	410	1380	2440
15	1590	1190	3590	e1500	e860	1880	5090	3100	571	1480	990	1990
16	1750	1130	2860	e1400	e840	1780	4000	2570	538	1220	844	1680
17	1470	1070	2480	e1400	e890	1660	3250	2200	585	952	791	2390
18	1420	1020	2270	e1400	e880	1540	2700	1940	780	771	706	39700
19	1360	2850	1960	e1300	e920	1430	2320	1870	698	802	650	19200
20	1280	15900	1720	e1300	e890	1370	2020	1660	597	868	616	10200
21	1210	10200	1520	e1200	e930	2300	1800	1530	518	765	1800	7210
22	1130	6300	1380	e1300	e930	2410	1750	2150	503	656	2770	5580
23	1040	4130	1370	e1300	e920	2150	1870	2280	479	689	1970	4350
24	939	3230	3010	e1300	e920	2130	2040	2120	441	843	1560	2460
25	846	2990	6430	e1200	e920	2380	1850	1860	398	652	1310	1830
26	776	2420	4930	e1200	e940	2970	2340	1780	370	586	1100	1570
27	1420	2080	3790	e1200	e1000	3880	2690	1940	345	10700	940	1340
28	3670	1970	3050	e1100	e1100	4470	2600	1630	326	11900	829	1560
29	3240	3080	2580	e1100	e1300	3830	2380	1370	332	8850	765	1610
30	3310	2730	2500	e1100	---	3190	2140	1140	350	5480	749	1320
31	2720	---	2560	e1100	---	2780	---	1040	---	4590	1970	---
TOTAL	51150	85560	94230	66940	28660	111830	75000	84500	19197	56366	44758	166424
MEAN	1650	2852	3040	2159	988	3607	2500	2726	640	1818	1444	5547
MAX	3670	15900	10000	7260	1300	11600	5720	7270	1230	11900	4380	39700
MIN	776	1020	1140	1100	840	1370	1260	1040	326	252	616	531
CFSM	1.75	3.02	3.22	2.29	1.05	3.82	2.65	2.89	0.68	1.93	1.53	5.88
IN.	2.02	3.37	3.71	2.64	1.13	4.41	2.96	3.33	0.76	2.22	1.76	6.56

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)**

MEAN	678	1273	1506	1294	1639	2903	3194	1857	1142	546	449	554
MAX	4597	4337	3860	4114	5148	6840	9683	3919	6070	2423	4096	5547
(WY)	1991	1978	1974	1996	1981	1964	1993	1960	1972	1972	1994	2004
MIN	46.7	66.3	107	93.7	410	850	1171	446	153	73.4	51.7	30.4
(WY)	1964	1965	1961	1961	1987	1969	1988	1985	1991	1964	1966	1964

e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01549700 PINE CREEK BELOW LITTLE PINE CREEK NEAR WATERVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1958 - 2004	
ANNUAL TOTAL	761010		884615			
ANNUAL MEAN	2085		2417		1417	
HIGHEST ANNUAL MEAN					2417	
LOWEST ANNUAL MEAN					739	
HIGHEST DAILY MEAN	16000	Mar 22	39700	Sep 18	75000	Jun 23 1972
LOWEST DAILY MEAN	255	Jul 18	252	Jul 4	23	Sep 5 1999
ANNUAL SEVEN-DAY MINIMUM	283	Jul 15	294	Jul 1	26	Sep 21 1964
MAXIMUM PEAK FLOW			a49600	Sep 18	a104000	Jun 23 1972
MAXIMUM PEAK STAGE			14.10	Sep 18	b22.76	Jun 23 1972
ANNUAL RUNOFF (CFSM)	2.21		2.56		1.50	
ANNUAL RUNOFF (INCHES)	29.99		34.86		20.39	
10 PERCENT EXCEEDS	4080		4590		3360	
50 PERCENT EXCEEDS	1440		1580		690	
90 PERCENT EXCEEDS	451		622		113	

- a From rating curve extended above 22,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- b From floodmark.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01549700 PINE CREEK BELOW LITTLE PINE CREEK NEAR WATERVILLE, PA--Continued  
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

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

REMARKS.--Some values for "dissolved" parameters exceed values for the corresponding "total" parameter. These results are within the limits of analytical precision and methods.

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 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, unfltrd, mg/L (00915)	Calcium water, unfltrd recoverable, mg/L (00916)
OCT 2003	15...	1028	9813	1430	10.7	7.4	6.8	85	84	11.3	32	8.5	8.6
DEC 15...	1545	1028	9813	3450	12.7	7.0	6.8	62	63	2.2	21	5.7	5.8
APR 2004	22...	1028	9813	1700	10.3	7.2	7.0	72	72	14.7	26	7.6	7.4
JUN 17...	1130	1028	9813	524	9.3	7.9	7.4	97	96	24.1	36	9.9	10.4
AUG 26...	1145	1028	9813	1100	10.6	8.2	7.6	85	82	19.7	33	9.9	9.7

Date	Magnesium, water, unfltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat unfltrd fixed end pt, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Sulfate water, unfltrd, mg/L (00945)	Residue on evap. at 105degC, wat fltrd, mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, unfltrd, mg/L as N (00610)	Nitrate water, unfltrd, mg/L as N (00620)	Nitrite water, unfltrd, mg/L as N (00615)	Orthophosphate, water, unfltrd, mg/L as P (70507)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, water, unfltrd, mg/L (00600)
OCT 2003	2.5	2.5	17	.00	15.3	62	<2	<.020	.17	<.040	.01	.014	.38
DEC 15...	1.5	1.5	11	.00	11.5	46	18	<.020	.41	<.040	.01	.020	.45
APR 2004	22...	1.9	1.9	14	3.8	13.1	72	<2	.23	<.040	<.01	.022	.46
JUN 17...	2.3	2.5	21	3.6	16.5	98	<2	<.020	<.04	<.040	<.01	.012	.26
AUG 26...	2.3	2.3	23	1.0	11.5	92	2	<.020	.19	<.040	.01	.017	.28

Date	BOD, water, unfltrd 5 day, 20 degC, mg/L (00310)	Aluminum, water, unfltrd, µg/L (01106)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Copper, water, unfltrd, µg/L (01040)	Copper, water, unfltrd recoverable, µg/L (01042)	Iron, water, unfltrd, µg/L (01046)	Iron, water, unfltrd, µg/L (01045)	Lead, water, unfltrd, µg/L (01049)	Lead, water, unfltrd recoverable, µg/L (01051)	Manganese, water, unfltrd, µg/L (01056)	Manganese, water, unfltrd recoverable, µg/L (01055)	Nickel, water, unfltrd, µg/L (01065)	Nickel, water, unfltrd recoverable, µg/L (01067)	
OCT 2003	15...	1.0	10	60	<4	<4	40	110	<1.0	<1.0	20	30	<4.0	<4.0
DEC 15...	2.8	10	100	<4	<4	<20	130	<1.0	<1.0	30	40	<4.0	<4.0	
APR 2004	22...	1.0	30	90	<4	<4	--	--	<1.0	<1.0	20	40	<4.0	<4.0
JUN 17...	.9	40	50	<4	<4	40	80	<1.0	<1.0	20	30	<4.0	<4.0	
AUG 26...	.5	30	90	<4	<4	60	150	<1.0	<1.0	10	30	<4.0	<4.0	

Date	Zinc, water, unfltrd, µg/L (01090)	Zinc, water, unfltrd recoverable, µg/L (01092)	
OCT 2003	15...	<5.0	<5.0
DEC 15...	<5.0	<5.0	
APR 2004	22...	<5.0	<5.0
JUN 17...	<5.0	<5.0	
AUG 26...	<5.0	<5.0	

WEST BRANCH SUSQUEHANNA RIVER BASIN

01549700 PINE CREEK BELOW LITTLE PINE CREEK NEAR WATERVILLE, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	10/15/03
Benthic Macroinvertebrate	Count
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoplonemertea	
Tetrastemmatidae	
<i>Prostoma</i>	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
<i>Ferrissia</i>	2
Bivalvia (CLAMS)	
Sphaeriidae	
<i>Sphaerium</i>	3
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Tubificidae	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Acentrella</i>	3
<i>Baetis</i>	1
Caenidae	
<i>Caenis</i>	4
Ephemerellidae	
<i>Eurylophella</i>	1
<i>Serratella</i>	7
Heptageniidae	
<i>Epeorus</i>	2
<i>Stenacron</i>	4
<i>Stenonema</i>	28
Isonychiidae	
<i>Isonychia</i>	18
Potamanthidae	
<i>Anthopotamus</i>	1
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
<i>Argia</i>	2
Gomphidae	
<i>Lanthus</i>	1
Plecoptera (STONEFLIES)	
Taeniopterygidae	
<i>Taeniopteryx</i>	13

WEST BRANCH SUSQUEHANNA RIVER BASIN

01549700 PINE CREEK BELOW LITTLE PINE CREEK NEAR WATERVILLE, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	10/15/03
Benthic Macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Glossosomatidae	
<i>Glossosoma</i>	3
<i>Protoptila</i>	1
Hydropsychidae	
<i>Cheumatopsyche</i>	14
<i>Hydropsyche</i>	14
Lepidostomatidae	
<i>Lepidostoma</i>	5
Leptoceridae	
<i>Mystacides</i>	1
Polycentropodidae	
<i>Neureclipsis</i>	1
Psychomyiidae	
<i>Psychomyia</i>	1
Uenoidae	
<i>Neophylax</i>	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	1
<i>Stenelmis</i>	1
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	9
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	14
Total Organisms	159
Total Taxa	31