01549700 PINE CREEK BELOW LITTLE PINE CREEK NEAR WATERVILLE, PA

West Branch Susquehanna Basin
Pine Subbasin

LOCATION.--Lat 41°16′25″, long 77°19′28″ referenced to North American Datum of 1927, Lycoming County, PA, 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^2.

SURFACE-WATER RECORDS

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

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 570.62 ft above National Geodetic Vertical Datum of 1929. Prior to Jun 16, 1982, nonrecording gage at same site and datum. Satellite and landline telemetry at station.

COOPERATION.--Station established and maintained by the U.S. Geological Survey in cooperation with the National Weather Service and the Pennsylvania Department of Environmental Protection.

REMARKS.--Records fair 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,200 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 17	1115	11,100	6.94
Mar 15	1730	*18,300	*8.58

Minimum discharge, 64 ft^3/s, Sept. 26, 27, gage height, 1.38 ft.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	356	2,310	973	1,630	e700	e900	2,330	1,930	437	164	96	352
2	347	2,090	1,280	1,690	e670	e1,200	2,190	3,920	492	138	84	222
3	338	1,850	1,110	1,450	e650	e3,500	1,890	3,970	449	126	73	171
4	317	1,590	999	1,350	e610	e3,800	1,700	3,470	544	120	73	130
5	331	1,410	961	1,380	e590	e2,600	1,610	2,920	836	120	73	112
6	337	1,280	915	2,890	e570	e2,100	1,460	2,420	856	135	73	101
7	312	1,190	890	3,470	e570	e1,800	1,340	2,020	653	241	78	93
8	291	1,160	e820	4,670	e560	e1,750	1,240	1,750	565	175	117	87
9	280	1,210	e760	4,890	e540	e1,700	1,140	1,550	584	139	391	89
10	272	1,100	742	4,120	e520	e1,500	1,080	1,500	593	116	284	121
11	270	1,000	736	3,230	e500	1,320	1,010	1,950	468	107	230	220
12	260	2,620	693	2,680	e480	e1,150	1,090	1,620	414	104	178	211
13	272	3,150	681	2,430	e480	e1,350	1,590	1,450	376	115	144	175
14	290	3,070	691	2,600	e490	e3,400	1,460	1,290	351	123	115	163
15	266	2,910	660	3,960	e520	12,600	1,740	1,190	325	114	101	153
16	259	3,490	631	7,450	e510	13,200	2,940	1,120	301	107	92	111
17	291	10,300	594	6,020	e500	8,270	3,230	1,140	282	111	88	154
18	500	7,970	575	4,420	e480	5,180	3,180	980	257	138	78	124
19	632	5,370	573	3,510	e470	3,720	2,930	866	232	146	73	102
20	1,810	3,870	542	2,870	e500	3,020	2,660	799	262	163	83	92
21	3,320	2,990	514	2,250	e600	2,530	2,450	750	304	170	371	85
22	3,540	2,410	518	1,980	e650	2,390	2,250	686	237	157	939	80
23	3,470	2,060	811	1,770	e600	6,620	2,020	623	199	132	546	76
24	2,640	1,810	1,150	1,570	e620	7,200	1,900	575	182	115	340	71
25	2,120	1,580	1,000	1,390	e650	7,000	1,710	540	172	116	298	67
26	1,770	1,410	1,480	e1,100	e700	6,460	2,160	529	163	118	276	65
27	1,520	1,260	2,050	e1,000	e750	6,160	1,940	603	152	107	227	68
28	2,060	1,150	1,990	e950	e800	5,080	2,120	555	168	123	183	79
29	3,290	1,060	1,890	e900	---	3,900	2,100	470	202	134	157	80
30	2,950	985	1,740	e800	---	3,160	2,040	422	192	129	164	135
31	2,630	---	1,600	e750	---	2,670	---	401	---	109	353	---
Total	37,341	75,655	30,569	81,170	16,280	127,230	58,500	44,009	11,248	4,112	6,378	3,789
Mean	1,205	2,522	986	2,618	581	4,104	1,950	1,420	375	133	206	126
Max	3,540	10,300	2,050	7,450	800	13,200	3,230	3,970	856	241	939	352
Min	259	985	514	750	470	900	1,010	401	152	104	73	65
Cfsm	1.28	2.67	1.04	2.77	0.62	4.35	2.07	1.50	0.40	0.14	0.22	0.13
In.	1.47	2.98	1.20	3.20	0.64	5.01	2.31	1.73	0.44	0.16	0.25	0.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2007, BY WATER YEAR (WY)

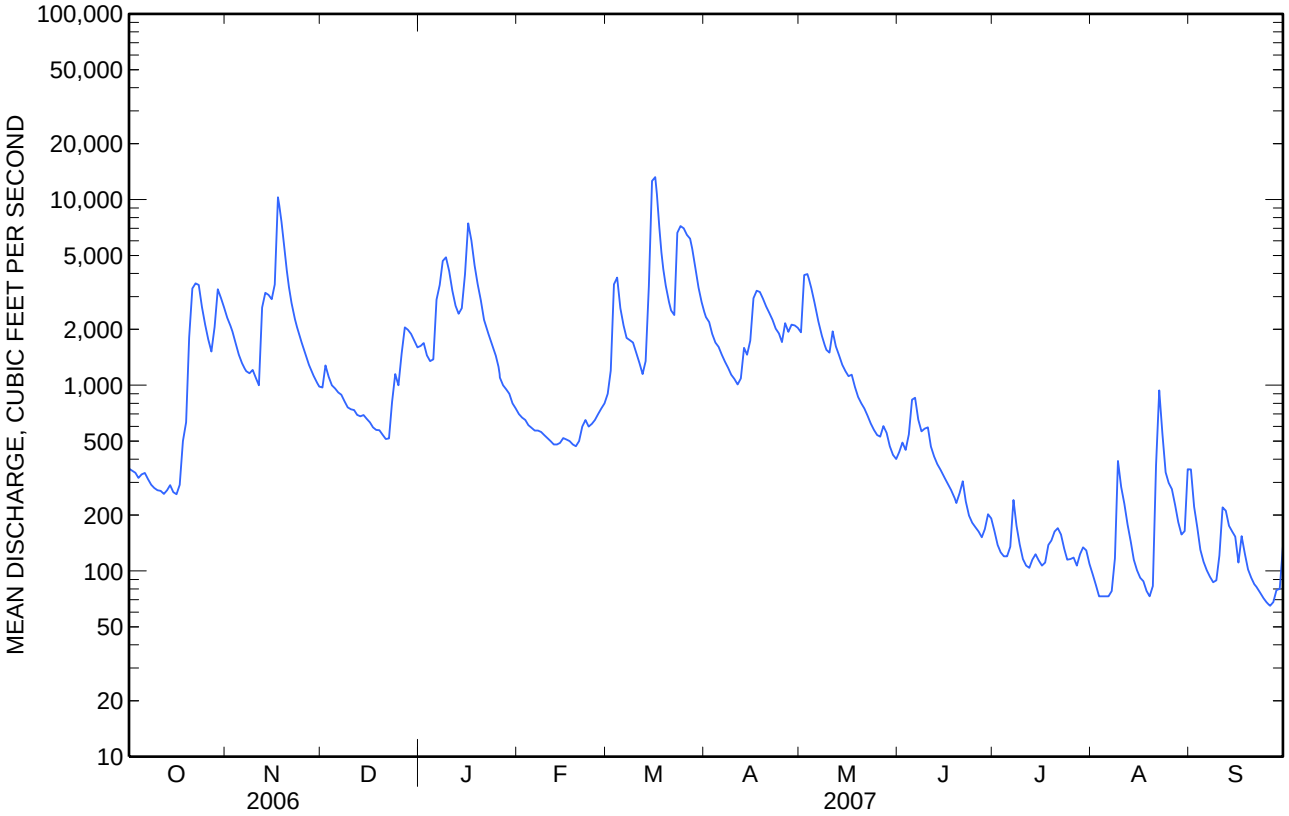
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	695	1,315	1,533	1,401	1,622	2,871	3,139	1,802	1,112	537	434	549
Max	4,597	4,337	3,860	4,114	5,148	6,840	9,683	3,919	6,070	2,423	4,096	5,547
(WY)	(1991)	(1978)	(1974)	(1996)	(1981)	(1964)	(1993)	(1960)	(1972)	(1972)	(1994)	(2004)
Min	46.7	66.3	107	93.7	410	850	1,136	446	153	73.4	51.7	30.4
(WY)	(1964)	(1965)	(1961)	(1961)	(1987)	(1969)	(2006)	(1985)	(1991)	(1964)	(1966)	(1964)

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

SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1958 - 2007	
Annual total	499,977		496,281			
Annual mean	1,370		1,360		1,415	
Highest annual mean					2,417	2004
Lowest annual mean					739	1965
Highest daily mean	[a]11,600	Jan 18	13,200	Mar 16	75,000	Jun 23, 1972
Lowest daily mean	136	Aug 25	65	Sep 26	23	Sep 5, 1999
Annual seven-day minimum	168	Aug 13	72	Sep 22	26	Sep 21, 1964
Maximum peak flow			18,300	Mar 15	[b]104,000	Jun 23, 1972
Maximum peak stage			8.58	Mar 15	[c]22.76	Jun 23, 1972
Instantaneous low flow			64	Sep 26[d]	23	Sep 4, 1999[e]
Annual runoff (cfsm)	1.45		1.44		1.50	
Annual runoff (inches)	19.70		19.56		20.36	
10 percent exceeds	2,890		3,250		3,340	
50 percent exceeds	981		693		700	
90 percent exceeds	332		113		115	

[a] Estimated.
[b] From rating curve extended above 22,000 ft³/s on basis of slope-area measurement of peak flow.
[c] From floodmark.
[d] Also Sep 27.
[e] Also Sep 5, 1999.



WATER-QUALITY RECORDS

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

REMARKS.--Analysis for pH, water temperature, specific conductance, and dissolved oxygen is performed on site. All other sample analyses were performed at the Pennsylvania Department of Environmental Protection laboratory in Harrisburg, Pa. Some values for filtered parameters exceed values for the corresponding unfiltered parameter. These results are within the limits of analytical precision and methods.

COOPERATION.--Water-quality 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 2006 TO SEPTEMBER 2007

Part 1 of 3

[Remark codes: <, less than; M, presence verified but not quantified.]

Date	Time	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 unf lab, µS/cm 25 degC (90095)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)
Nov													
06...	1230	1,290	14.2	7.9	7.3	70	71	5.7	26	7.47	7.4	1.79	1.8
Jan													
09...	1440	4,830	14.4	7.4	7.2	59	61	4.7	22	6.06	6.3	1.37	1.4
Mar													
08...	1400	2,010	15.0	7.0	7.2	83	85	.1	28	7.77	7.7	2.04	2.0
May													
15...	1400	1,180	12.0	8.9	7.6	67	71	15.4	27	7.29	7.6	1.87	1.9
Jul													
12...	1230	111	9.2	8.1	7.9	129	136	24.5	47	13.1	13.2	3.37	3.3
Sep													
17...	1330	167	10.9	8.2	8.1	143	147	17.3	52	14.4	15.1	--	--

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
Part 2 of 3
[Remark codes: <, less than; M, presence verified but not quantified.]

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total non-filter-able, 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)	Total nitro-gen, water, unfltrd mg/L (00600)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover-able, µg/L (01105)
Nov													
06...	16	12.2	104	<2	<.020	.19	<.040	.29	<.01	<.010	.9	<10	M
Jan													
09...	10	10.1	<2	18	<.020	.34	<.040	.49	.01	.019	1.3	12	200
Mar													
08...	12	13.8	132	6	<.020	.50	<.040	.61	<.01	.012	1.3	<10	M
May													
15...	13	12.9	38	<2	<.020	.04	<.040	.13	<.01	.010	.3	38	M
Jul													
12...	31	19.8	94	80	.020	.04	<.040	.28	<.01	.016	.3	14	M
Sep													
17...	37	20.2	120	8	.020	<.04	<.040	.19	<.01	.015	.3	12	M

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
Part 3 of 3
[Remark codes: <, less than; M, presence verified but not quantified.]

Date	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover-able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover-able, µg/L (01092)
Nov												
06...	<4	<4	<20	50	<1.0	<1.0	M	M	<4.0	<4.0	<5.0	<5.0
Jan												
09...	<4	<4	<20	280	<1.0	M	M	30	<4.0	<4.0	<5.0	<5.0
Mar												
08...	<4	<4	<20	80	<1.0	<1.0	10	20	<4.0	<4.0	<5.0	<5.0
May												
15...	<4	<4	40	80	<1.0	<1.0	10	20	<4.0	<4.0	<5.0	<5.0
Jul												
12...	<4	<4	40	80	<1.0	<1.0	30	50	<4.0	<4.0	<5.0	20
Sep												
17...	<4	<4	20	60	<1.0	<1.0	10	20	<4.0	<4.0	<5.0	<5.0