



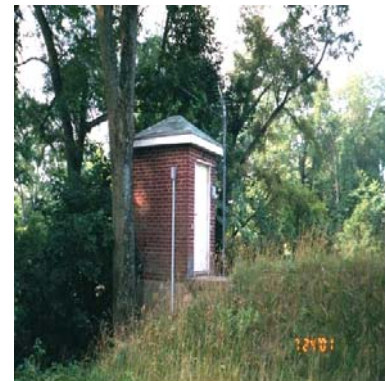
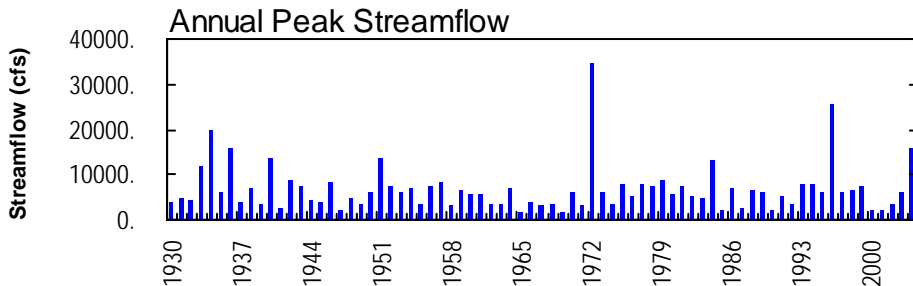
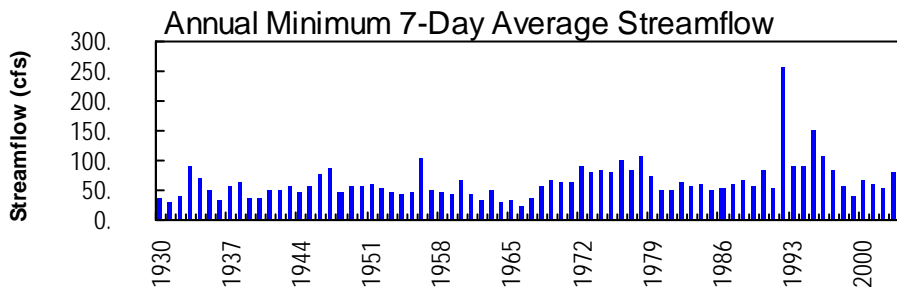
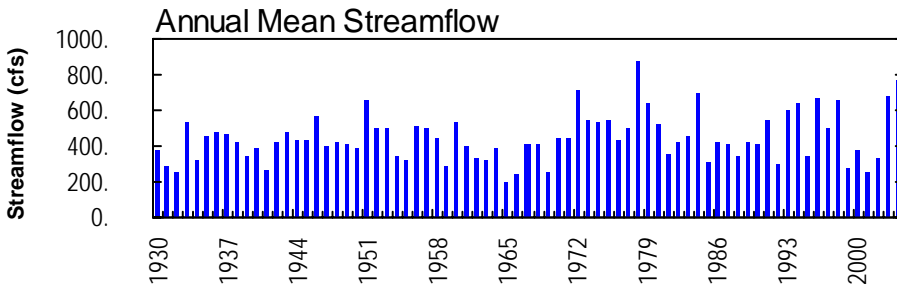
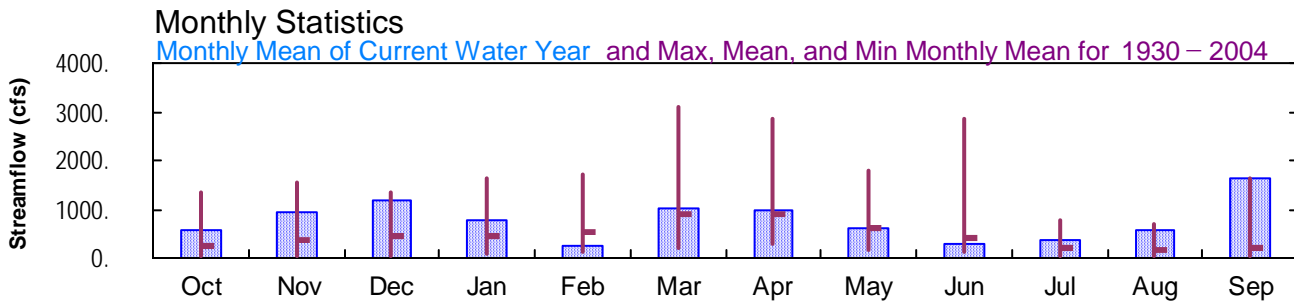
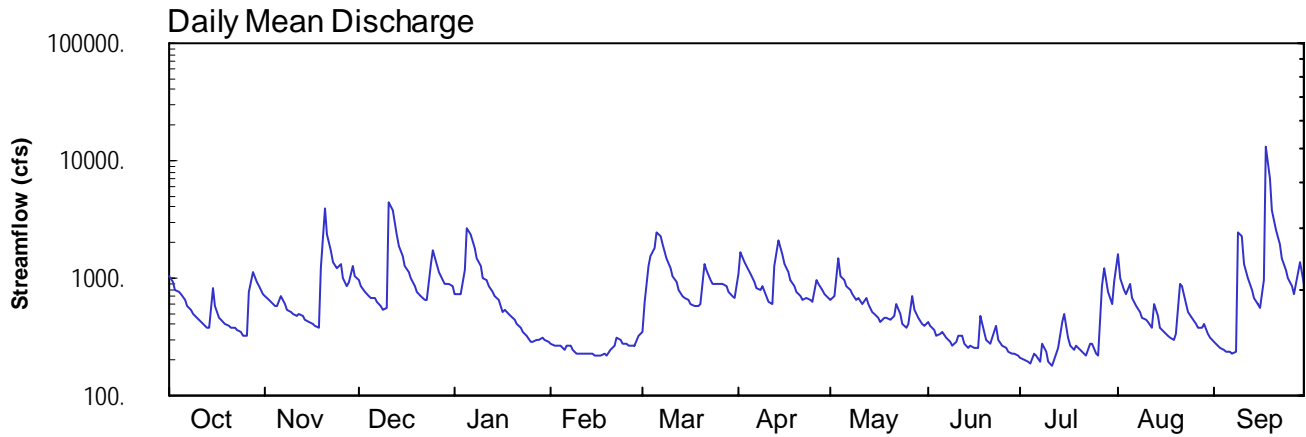
# 2004 Water Year PENNS CREEK BASIN

## 01555000 Penns Creek at Penns Creek, PA

Latitude: 40° 52' 00"  
Snyder County

Longitude: 077° 02' 55"  
Datum: 506.72 feet

Hydrologic Unit Code: 02050301  
Drainage Area: 301. mi<sup>2</sup>



01555000-Penns Creek at Penns Creek

PENNS CREEK BASIN

01555000 PENNS CREEK AT PENNS CREEK, PA  
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°52'00", long 77°02'55", Union County, Hydrologic Unit 02050301, on left bank 200 ft downstream from bridge on State Highway 104, 2.9 mi upstream from Sweitzers Run, and 0.8 mi northeast of Penns Creek, Pa.

DRAINAGE AREA.--301 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year. Prior to October 1965, published as Penn Creek at Penns Creek.

REVISED RECORDS.--WSP 891: 1934(M). WSP 1502: 1933(M), 1934, 1936(M). WDR PA-72-1: 1933-34(M), 1936(M), 1940(M), 1951(M). WDR PA-79-2: 1978.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 506.72 ft, datum of 1912; 507.38 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges and the discharge on Sept. 18, which are poor. 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 3,100 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	0330	4,560	7.16	Sept. 9	1715	3,820	6.54
Dec. 11	1745	5,950	8.23	Sept. 18	1230	*16,000	*12.27

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	1040	700	951	727	e280	343	1070	643	424	208	1620	290
2	919	660	862	724	e265	614	1640	713	385	200	1010	272
3	803	627	775	746	e270	1250	1370	1460	364	192	803	259
4	757	586	713	1190	e270	1540	1250	1050	329	187	742	249
5	744	587	683	2640	e250	1770	1080	952	336	226	896	240
6	640	702	671	2360	e265	2410	929	865	347	222	669	235
7	576	607	617	1790	e265	2270	835	787	316	195	577	228
8	531	545	571	1450	e250	1950	778	728	290	276	516	233
9	493	508	540	1250	e230	1490	844	661	270	238	461	2490
10	459	487	548	1020	e230	1210	696	677	283	196	435	2260
11	430	481	4420	949	e230	1030	631	596	316	183	429	1320
12	406	488	3760	859	e225	928	608	677	325	229	384	988
13	384	476	2360	773	e225	802	1280	611	281	254	605	797
14	384	441	1830	696	e225	717	2140	524	258	425	479	678
15	827	421	1530	641	e220	677	1620	489	263	492	380	604
16	570	402	1260	e520	e220	648	1310	463	250	311	345	552
17	466	388	1120	e530	e215	614	1130	419	258	263	324	963
18	438	373	999	e500	e225	571	976	454	471	243	306	13000
19	412	1200	867	e470	e220	581	860	466	349	262	295	6920
20	390	3960	772	e440	e245	613	771	442	296	247	332	3800
21	383	2380	690	e400	e270	1330	707	486	271	228	902	2590
22	374	1730	640	e380	e315	1150	657	607	309	214	851	1910
23	357	1370	647	e350	e300	973	676	496	390	281	600	1480
24	343	1190	1310	e320	e280	895	657	413	299	271	511	1170
25	328	1290	1740	e290	e275	899	625	376	265	231	458	986
26	323	989	1310	e290	e270	898	955	410	254	217	413	842
27	764	871	1120	e300	e270	888	897	694	239	843	377	735
28	1130	930	974	e300	e270	843	796	538	230	1230	383	1090
29	919	1270	874	e310	323	763	740	453	229	748	403	1390
30	858	1020	896	e300	---	709	688	401	218	602	338	905
31	745	---	841	e290	---	688	---	398	---	920	312	---
TOTAL	18193	27679	36891	23805	7398	32064	29216	18949	9115	10834	17156	49476
MEAN	587	923	1190	768	255	1034	974	611	304	349	553	1649
MAX	1130	3960	4420	2640	323	2410	2140	1460	471	1230	1620	13000
MIN	323	373	540	290	215	343	608	376	218	183	295	228
CFM	1.95	3.07	3.95	2.55	0.85	3.44	3.24	2.03	1.01	1.16	1.84	5.48
IN.	2.25	3.42	4.56	2.94	0.91	3.96	3.61	2.34	1.13	1.34	2.12	6.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)

MEAN	225	364	455	454	525	902	882	615	397	196	162	196
MAX	1355	1567	1359	1627	1697	3093	2855	1793	2845	759	684	1649
(WY)	1991	1978	1997	1996	1984	1936	1993	1978	1972	1989	1984	2004
MIN	35.9	34.1	46.3	76.0	108	195	278	179	107	57.2	37.0	36.4
(WY)	1931	1931	1999	1981	1940	1931	1995	1941	1962	1962	1966	1964

e Estimated.

PENNS CREEK BASIN

01555000 PENNS CREEK AT PENNS CREEK, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1930 - 2004	
ANNUAL TOTAL	286556		280776			
ANNUAL MEAN	785		767		447	
HIGHEST ANNUAL MEAN					878	
LOWEST ANNUAL MEAN					205	
HIGHEST DAILY MEAN	4950	Sep 23	13000	Sep 18	24600	Jun 23 1972
LOWEST DAILY MEAN	218	Feb 18	183	Jul 11	21	Aug 30 1966
ANNUAL SEVEN-DAY MINIMUM	231	Feb 12	204	Jul 1	24	Aug 28 1966
MAXIMUM PEAK FLOW			a16000	Sep 18	a34600	Jun 23 1972
MAXIMUM PEAK STAGE			12.27	Sep 18	b14.85	Jun 23 1972
INSTANTANEOUS LOW FLOW			177	Jul 11,12	7.0	Sep 27 1932
ANNUAL RUNOFF (CFSM)	2.61		2.55		1.48	
ANNUAL RUNOFF (INCHES)	35.41		34.70		20.18	
10 PERCENT EXCEEDS	1440		1320		986	
50 PERCENT EXCEEDS	562		584		267	
90 PERCENT EXCEEDS	300		246		68	

a From rating curve extended above 6,800 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow.

b From floodmark in gage.

PENNS CREEK BASIN

01555000 PENNS CREEK AT PENNS CREEK, PA--Continued  
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

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

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, 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 recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
OCT 2003	09...	1028	9813	492	10.8	8.2	8.2	220	212	11.3	100	32.7	4.5
DEC 18...	0930	1028	9813	1020	12.0	7.0	7.8	195	195	2.5	92	29.7	4.4
FEB 2004	19...	1028	9813	E220	13.8	7.9	8.0	236	236	.1	110	34.7	6.1
APR 14...	1245	1028	9813	2160	11.3	7.3	7.7	155	141	7.6	77	25.2	3.3
JUN 08...	1245	1028	9813	292	12.4	8.8	8.7	201	211	21.1	100	31.2	5.3
AUG 16...	1230	1028	9813	346	10.7	8.2	8.2	229	227	17.9	110	34.1	5.5

Date	ANC, wat unfltrd, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC, wat fltrd, mg/L (00515)	Residue total at 105 deg. C, suspended, 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)	Ortho-phosphate, water, unfltrd, mg/L as P (70507)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, water, unfltrd, mg/L (00600)	Organic carbon, water, unfltrd, mg/L (00680)	Aluminum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003	86	10.9	134	2	<.020	1.66	<.040	<.01	.018	2.0	1.7	<200	<10
DEC 18...	73	10.7	134	6	<.020	1.77	<.040	.02	.029	1.6	1.4	200	<10
FEB 2004	93	12.2	150	<2	<.020	1.76	<.040	.01	.018	2.0	1.3	<200	<10
APR 14...	57	8.9	102	72	.030	1.20	<.040	.03	.124	2.0	3.6	2600	<10
JUN 08...	83	10.5	138	6	.030	1.12	<.040	.02	.022	1.4	2.2	<200	<10
AUG 16...	90	10.5	164	6	<.020	1.29	<.040	.01	.023	1.4	2.5	<200	<10

Date	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2003	120	<1.0	<10	<50	40
DEC 18...	260	<1.0	20	<50	120
FEB 2004	90	<1.0	<10	<50	<10
APR 14...	2430	2.2	100	<50	20
JUN 08...	260	<1.0	20	<50	<10
AUG 16...	190	<1.0	10	<50	10

PENNS CREEK BASIN

01555000 PENNS CREEK AT PENNS CREEK, 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	10/09/03
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	3
Nematoda (NEMATODES)	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancyliidae	
<i>Ferrissia</i>	1
Pleuroceridae	
<i>Leptoxis carinata</i>	1
Bivalvia (CLAMS)	
Veneroidea	
Sphaeriidae	
<i>Sphaerium</i>	3
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Crustacea	
Amphipoda (SCUDS)	
Crangonyctidae	
<i>Crangonyx</i>	1
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
<i>Caecidotea</i>	2
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Acentrella</i>	1
<i>Baetis</i>	1
Caenidae	
<i>Caenis</i>	12
Ephemerellidae	
<i>Ephemerella</i>	2
<i>Eurylophella</i>	1
<i>Serratella</i>	2
Heptageniidae	
<i>Stenonema</i>	16
Isonychiidae	
<i>Isonychia</i>	2
Plecoptera (STONEFLIES)	
Perlidae	
<i>Acroneuria</i>	1
Taeniopterygidae	
<i>Taeniopteryx</i>	6
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
<i>Corydalus</i>	1

PENNS CREEK BASIN

01555000 PENNS CREEK AT PENNS CREEK, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	10/09/03
Benthic Macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Helicopsychidae	
<i>Helicopsyche</i>	2
Hydropsychidae	
<i>Cheumatopsyche</i>	5
<i>Hydropsyche</i>	4
Hydroptilidae	
<i>Leucotrichia</i>	1
Lepidostomatidae	
<i>Lepidostoma</i>	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	11
<i>Stenelmis</i>	3
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	9
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	24
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	3
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	3
Total Organisms	127
Total Taxa	32