



2005 Water Year
BROKENSTRAW CREEK BASIN
03015500 Brokenstraw Creek at Youngsville, PA

Latitude: 41° 51' 09"

Longitude: 079° 19' 03"

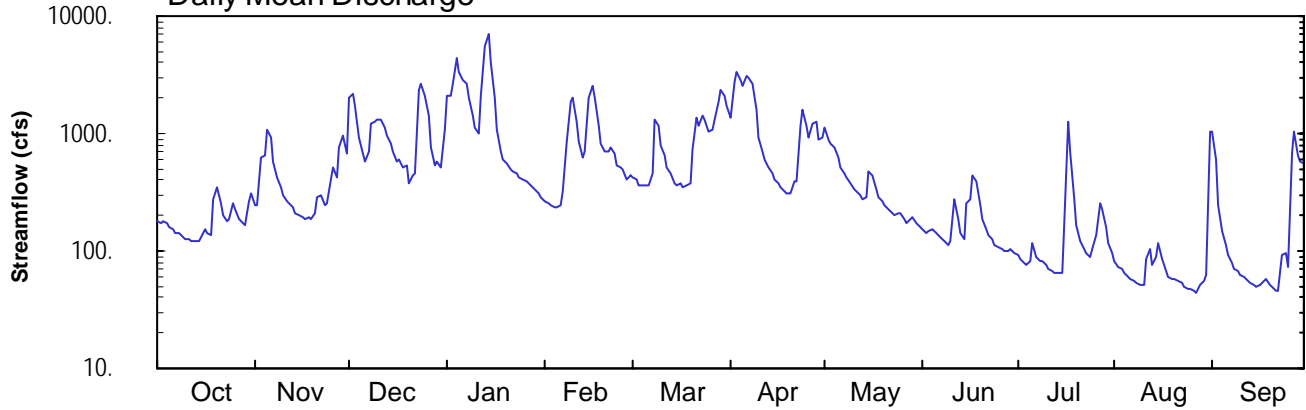
Hydrologic Unit Code: 05010001

Warren County

Datum: 1186.92 feet

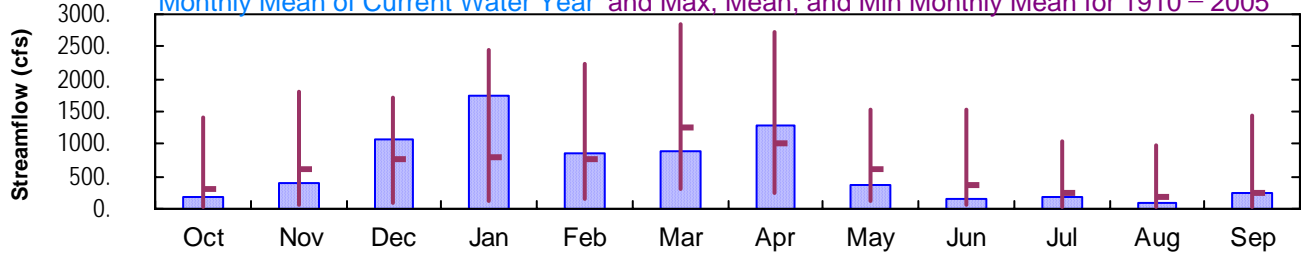
Drainage Area: 321. mi²

Daily Mean Discharge

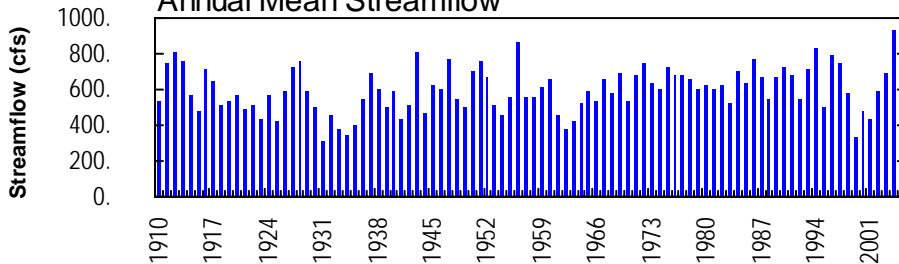


Monthly Statistics

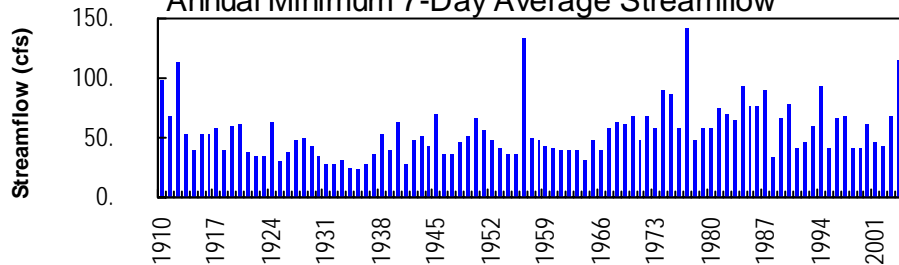
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1910 – 2005



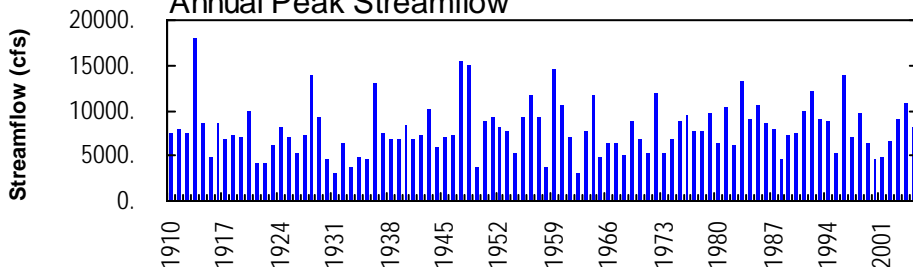
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



BROKENSTRAW CREEK BASIN

03015500 BROKENSTRAW CREEK AT YOUNGSVILLE, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 41°51'09", long 79°19'03", Warren County, Hydrologic Unit 05010001, on right bank 150 ft downstream from bridge on Main Street at Youngsville, 500 ft upstream from Matthews Run, and 3.7 mi upstream from mouth. Records include flow of Matthews Run.

DRAINAGE AREA.--321 mi², including that of Matthews Run.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1909 to current year. Monthly discharge only for some periods, published in WSP 1305. Flow of Matthews Run included in records since October 1938.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1083: 1913 (M). WSP 1275: 1920, 1932, 1936. WSP 1305: 1910-15, 1928-29.

GAGE.--Water-stage recorder. Datum of gage is 1,186.92 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1933, nonrecording gage at site 150 ft upstream at datum 2.00 ft higher. Oct. 1, 1933 to June 15, 1939, nonrecording gage at site 150 ft upstream, and June 16, 1939 to Sept. 30, 1961, water-stage recorder at present site, both at datum 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 4,500 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Jan. 4	0300	5,090	7.77	Jan. 14	0400	*8,190	*9.85

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	245	2000	2060	e269	428	1360	1120	153	92	83	1050
2	176	247	2220	2140	e251	401	2770	892	143	85	73	603
3	179	628	1730	2640	e242	364	3330	832	150	80	70	241
4	170	652	933	4360	e233	359	2840	749	151	77	65	147
5	158	1100	673	3320	e233	363	2540	621	142	83	61	111
6	151	933	587	2840	e246	359	3050	512	137	119	58	91
7	145	568	703	2620	324	453	3020	459	128	89	55	78
8	139	423	1240	1990	848	1290	2670	422	119	82	53	71
9	134	342	1280	1410	1900	1150	1620	379	113	81	52	67
10	129	298	1330	1110	2000	787	935	340	119	75	51	63
11	125	270	1300	1020	1280	644	717	317	281	71	84	60
12	123	252	1110	2130	871	506	593	293	187	69	102	56
13	120	232	968	5490	615	459	517	278	142	66	76	54
14	120	209	835	7160	692	377	455	290	126	66	89	52
15	131	198	701	4130	2050	369	407	478	250	64	116	49
16	153	192	584	2000	2520	374	373	433	274	168	86	51
17	144	188	604	1070	2010	349	346	338	434	1250	68	56
18	138	191	523	e694	1150	363	326	292	399	699	60	57
19	272	190	532	e611	813	370	309	263	241	288	57	52
20	351	209	379	e551	703	726	306	249	184	167	57	50
21	252	284	442	e505	701	1350	386	231	153	122	56	47
22	202	296	458	e473	748	1180	390	215	138	104	53	46
23	177	244	2400	e450	669	1440	1170	204	126	98	50	93
24	187	251	2650	e431	529	1290	1590	210	114	88	48	96
25	260	404	2090	e403	511	1040	1190	208	107	104	47	72
26	225	515	1400	e385	491	1100	921	189	103	135	46	672
27	190	420	767	e371	405	1300	1200	175	99	258	45	1050
28	171	763	539	e353	440	1900	1280	184	100	231	52	655
29	168	974	576	e334	---	2340	900	191	103	160	56	581
30	270	665	518	e316	---	2110	913	172	98	116	63	563
31	308	---	1080	e288	---	1710	---	158	---	95	1060	---
TOTAL	5649	12383	33152	53655	23744	27251	38424	11694	5014	5282	2992	6934
MEAN	182	413	1069	1731	848	879	1281	377	167	170	96.5	231
MAX	351	1100	2650	7160	2520	2340	3330	1120	434	1250	1060	1050
MIN	120	188	379	288	233	349	306	158	98	64	45	46
CFSM	0.57	1.29	3.33	5.39	2.64	2.74	3.99	1.18	0.52	0.53	0.30	0.72
IN.	0.65	1.44	3.84	6.22	2.75	3.16	4.45	1.36	0.58	0.61	0.35	0.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2005, BY WATER YEAR (WY)

MEAN	314	619	761	795	769	1240	1024	611	377	236	180	236
MAX	1413	1817	1724	2459	2248	2851	2715	1528	1535	1039	994	1428
(WY)	1991	1986	1978	1913	1976	1936	1947	1943	1928	1986	1956	1977
MIN	31.7	57.3	85.9	124	161	297	251	135	62.0	37.8	32.3	31.6
(WY)	1932	1931	1961	1918	1987	1915	1946	1934	1934	1934	1934	1936

e Estimated.

BROKENSTRAW CREEK BASIN

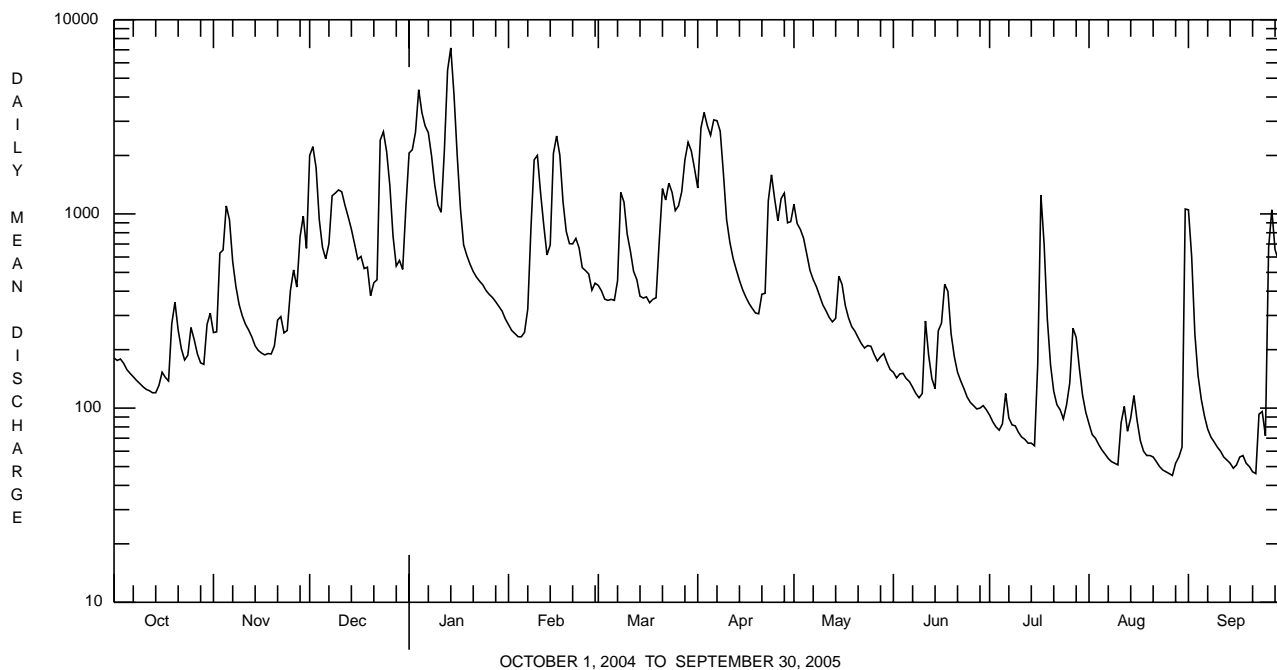
03015500 BROKENSTRAW CREEK AT YOUNGSRVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1910 - 2005	
ANNUAL TOTAL	305706		226174			
ANNUAL MEAN	835		620		596	
HIGHEST ANNUAL MEAN					929	2004
LOWEST ANNUAL MEAN					307	1931
HIGHEST DAILY MEAN	8360	Sep 9	7160	Jan 14	14000	Mar 25 1913
LOWEST DAILY MEAN	91	Jul 11	45	Aug 27	19	Oct 14 1934
ANNUAL SEVEN-DAY MINIMUM	115	Jul 5	49	Aug 22	24	Oct 11 1934
MAXIMUM PEAK FLOW			8190	Jan 14	ab 18000	Mar 25 1913
MAXIMUM PEAK STAGE			9.85	Jan 14	14.20	Mar 25 1913
INSTANTANEOUS LOW FLOW			43	Aug 27	c 19	Oct 14 1934
ANNUAL RUNOFF (CFSM)	2.60		1.93		1.86	
ANNUAL RUNOFF (INCHES)	35.43		26.21		25.23	
10 PERCENT EXCEEDS	2100		1600		1440	
50 PERCENT EXCEEDS	493		309		308	
90 PERCENT EXCEEDS	152		67		67	

a From rating curve extended above 9,400 ft³/s.

b About.

c Minimum observed.



BROKENSTRAW CREEK BASIN

03015500 BROKENSTRAW CREEK AT YOUNGSVILLE, 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 2004 TO SEPTEMBER 2005

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 recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
NOV 2004	16...	1028	9813	192	14.9	8.7	8.4	223	203	4.9	98	29.8	5.7
JAN 2005	19...	1028	9813	694	14.7	7.3	7.9	155	158	.0	66	19.4	4.2
MAR	23...	1028	9813	1400	12.8	8.0	7.6	127	131	2.6	48	14.1	3.0
MAY	25...	1028	9813	213	9.9	7.4	8.1	229	233	11.3	99	30.5	5.5
JUL	25...	1028	9813	112	10.2	8.4	8.6	249	255	23.5	110	31.6	6.6
SEP	07...	1028	9813	79	8.4	7.3	8.1	254	262	17.0	110	34.5	6.6

Date	ANC, wat unfltrd fixed end pt, 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, 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)	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)
NOV 2004	82	10.8	138	<2	<.020	.85	<.040	<.01	.013	.94	2.1	<200	<10
JAN 2005	52	11.2	106	<2	.040	.94	<.040	.01	.012	1.1	1.7	<200	<10
MAR	36	8.5	108	12	.040	.64	<.040	.03	.036	.79	2.4	600	<10
MAY	87	11.4	122	2	.020	.76	<.040	<.01	.018	1.1	--	<200	<10
JUL	97	12.6	174	18	.040	.52	<.040	.01	.018	.64	--	<200	<10
SEP	94	15.7	170	10	.040	.65	<.040	.02	.028	1.1	--	<200	<10

Date	Iron, water, unfltrd recover-able, µg/L (01051)	Lead, water, unfltrd recover-able, µg/L (01055)	Manganese, water, unfltrd recover-able, µg/L (01067)	Nickel, water, unfltrd recover-able, µg/L (01092)	Zinc, water, unfltrd recover-able, µg/L
NOV 2004	200	<1.0	<10	<50	10
JAN 2005	240	<1.0	10	<50	<10
MAR	840	<1.0	40	<50	<10
MAY	250	<1.0	20	<50	<10
JUL	190	<1.0	20	<50	<10
SEP	250	<1.0	20	<50	<10

BROKENSTRAW CREEK BASIN

03015500 BROKENSTRAW CREEK AT YOUNGSVILLE, 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	08/11/04
Benthic macroinvertebrate	Count
Nematoda (NEMATODES)	1
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
<i>Sphaerium</i>	2
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	7
Tubificida	
Naididae	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	2
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Acentrella</i>	1
<i>Baetis</i>	13
Caenidae	
<i>Caenis</i>	2
Ephemerellidae	
<i>Dannella</i>	7
Heptageniidae	
<i>Leucrocuta</i>	4
<i>Stenacron</i>	3
<i>Stenonema</i>	29
Isonychiidae	
<i>Isonychia</i>	1
Leptophlebiidae	
<i>Paraleptophlebia</i>	1
Polymitarcyidae	
<i>Ephoron</i>	4
Tricorythidae	
<i>Tricorythodes</i>	1
Plecoptera (STONEFLIES)	
Nemouridae	1
Perlidae	
<i>Acroneuria</i>	4
<i>Agneta</i>	5
Trichoptera (CADDISFLIES)	
Glossosomatidae	
<i>Protoptila</i>	1
Hydropsychidae	
<i>Cheumatopsyche</i>	7
<i>Hydropsyche</i>	9
Psychomyiidae	
<i>Psychomyia</i>	1

BROKENSTRAW CREEK BASIN

03015500 BROKENSTRAW CREEK AT YOUNGSVILLE, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	08/11/04
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	32
<i>Stenelmis</i>	10
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	3
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	17
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	1
Total Organisms	170
Total Taxa	28