



2004 Water Year BEAVER RIVER BASIN

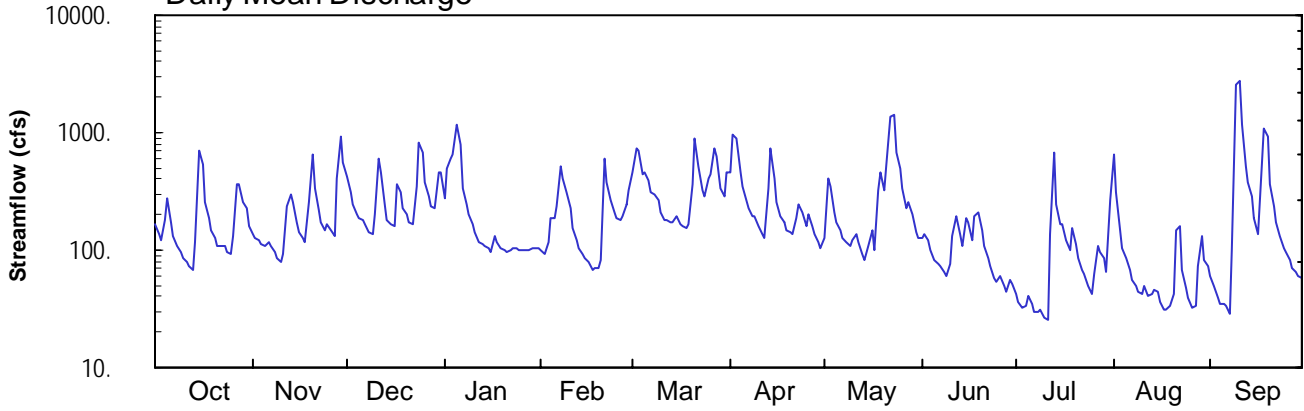
03102500 Little Shenango River at Greenville, PA

Latitude: 41° 25 ' 19"
Mercer County

Longitude: 080° 22 ' 35"
Datum: 953.46 feet

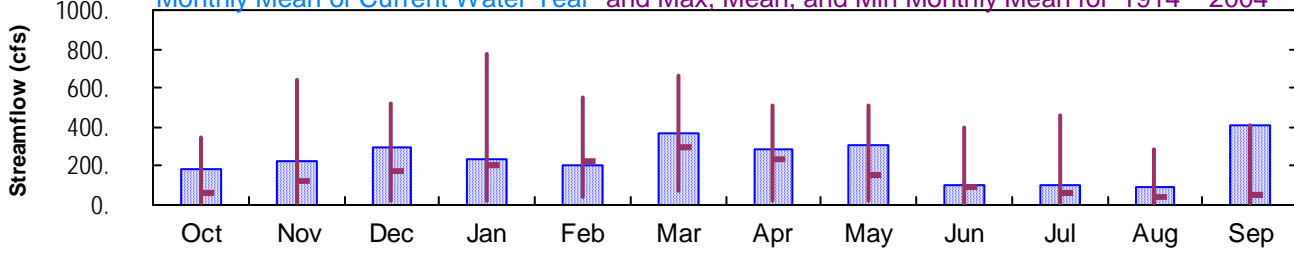
Hydrologic Unit Code: 05030102
Drainage Area: 104. mi²

Daily Mean Discharge

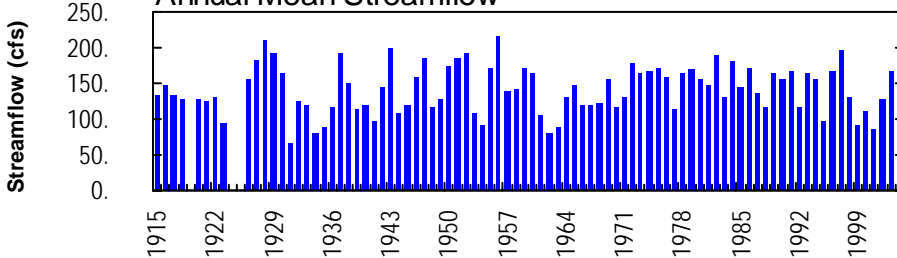


Monthly Statistics

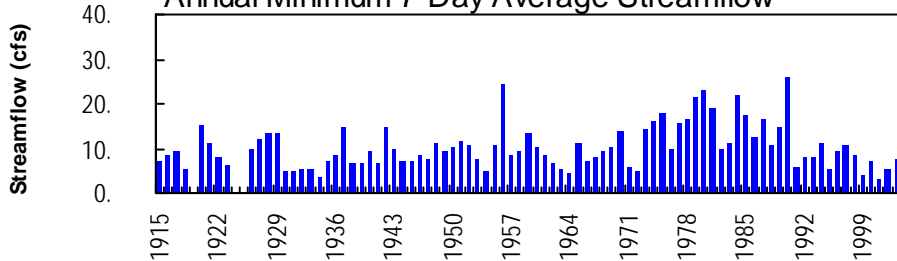
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1914 – 2004



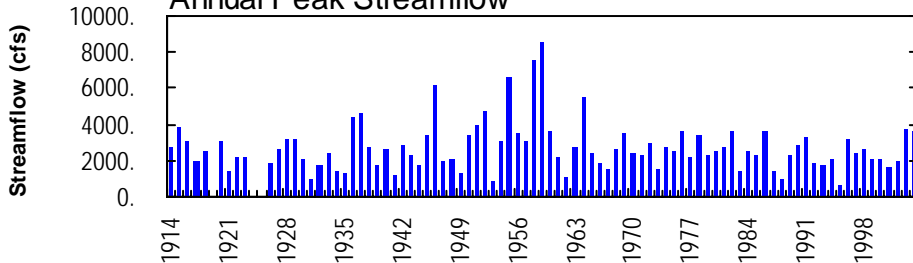
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



BEAVER RIVER BASIN

**03102500 LITTLE SHENANGO RIVER AT GREENVILLE, PA
(Pennsylvania Water-Quality Network Station)**

LOCATION.--Lat 41°25'19", long 80°22'35", Mercer County, Hydrologic Unit 05030102, on left bank 1,700 ft downstream from Williamson Crossing bridge, 1 mi northeast of Greenville, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--104 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1913 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1914, 1922-23, 1926-29. WSP 1335: 1923 (m).

GAGE.--Water-stage recorder. Datum of gage is 953.46 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 4, 1915, nonrecording gage; Nov. 4, 1915, to Sept. 30, 1918, water-stage recorder; Nov. 7, 1919, to Aug. 31, 1923, and Nov. 19, 1925, to June 20, 1934, nonrecording gage at site 1 mi downstream at datum 8.96 ft lower.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
May 22	2400	1,770	6.54	Sept. 9	2400	*3,670	*9.68

**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	165	138	416	274	e98	461	465	127	128	42	643	60
2	135	127	316	501	e91	736	975	400	137	37	313	50
3	122	123	241	600	e118	698	873	344	122	33	147	40
4	178	113	201	653	e187	439	456	208	99	33	103	34
5	281	107	184	1180	e190	452	353	171	83	41	84	35
6	174	118	180	785	e239	396	268	148	76	35	67	33
7	129	106	163	341	e511	316	224	128	72	30	57	29
8	107	96	142	242	e404	300	198	117	65	30	49	100
9	94	86	137	e198	e310	265	192	110	60	31	43	2590
10	85	79	202	e165	e226	212	159	121	75	26	43	2730
11	78	91	591	e143	e152	179	136	137	134	25	50	1180
12	73	232	466	e118	e121	177	125	116	196	137	41	505
13	67	303	244	e114	e105	172	334	94	139	665	43	375
14	116	252	183	e109	e94	170	741	82	107	243	47	282
15	709	173	164	e104	e86	191	407	108	186	167	44	188
16	537	143	157	e96	e78	165	254	147	176	167	36	137
17	258	129	356	e129	e68	157	196	100	122	123	31	534
18	185	118	307	e118	e70	151	173	326	190	98	31	1090
19	150	259	230	e103	e70	167	149	466	209	152	33	926
20	124	659	206	e99	e82	367	144	324	145	113	42	369
21	110	330	175	e96	e607	876	136	513	107	85	147	233
22	107	216	167	e98	e374	513	189	1390	87	69	157	174
23	109	172	346	e104	e268	322	242	1410	72	62	69	132
24	98	147	809	e105	e209	281	206	690	57	50	47	105
25	93	168	665	e102	e185	414	157	498	54	43	39	95
26	132	145	375	e99	e180	437	199	337	60	64	32	82
27	363	129	285	e99	192	743	162	231	50	108	34	70
28	359	409	237	e101	241	622	134	253	45	97	74	64
29	255	923	227	e103	329	333	115	206	56	87	133	60
30	223	551	460	e105	---	290	105	143	52	66	84	57
31	161	---	454	e106	---	453	---	125	---	265	74	---
TOTAL	5777	6642	9286	7190	5885	11455	8467	9570	3161	3224	2837	12359
MEAN	186	221	300	232	203	370	282	309	105	104	91.5	412
MAX	709	923	809	1180	607	876	975	1410	209	665	643	2730
MIN	67	79	137	96	68	151	105	82	45	25	31	29
CFSM	1.79	2.13	2.88	2.23	1.95	3.55	2.71	2.97	1.01	1.00	0.88	3.96
IN.	2.07	2.38	3.32	2.57	2.11	4.10	3.03	3.42	1.13	1.15	1.01	4.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2004, BY WATER YEAR (WY)

MEAN	60.3	123	176	205	222	294	233	157	93.7	64.3	43.8	46.2
MAX	343	639	521	773	553	659	506	511	395	457	284	412
(WY)	1927	1986	1928	1937	1976	1963	1957	1929	1989	1958	1980	2004
MIN	5.19	6.31	16.8	21.3	36.0	66.5	16.7	21.8	11.9	5.91	5.33	5.90
(WY)	1964	1931	1961	1977	1963	1915	1915	1934	1934	1934	1930	1930

e Estimated.

BEAVER RIVER BASIN

03102500 LITTLE SHENANGO RIVER AT GREENVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1914 - 2004	
ANNUAL TOTAL	78285		85853			
ANNUAL MEAN	214		235		143	
HIGHEST ANNUAL MEAN					235	
LOWEST ANNUAL MEAN					65.6	
HIGHEST DAILY MEAN	3450	Jul 22	2730	Sep 10	5980	Jan 22 1959
LOWEST DAILY MEAN	29	Jul 2	25	Jul 11	2.8	Aug 16 2001
ANNUAL SEVEN-DAY MINIMUM	36	Jun 27	31	Jul 5	3.3	Sep 7 2001
MAXIMUM PEAK FLOW			a3670	Sep 9	a8540	Jan 22 1959
MAXIMUM PEAK STAGE			9.68	Sep 9	14.30	Jan 22 1959
INSTANTANEOUS LOW FLOW			24	Jul 11	2.4	Aug 16 2001b
ANNUAL RUNOFF (CFSM)	2.06		2.26		1.37	
ANNUAL RUNOFF (INCHES)	28.00		30.71		18.66	
10 PERCENT EXCEEDS	436		502		330	
50 PERCENT EXCEEDS	137		147		67	
90 PERCENT EXCEEDS	53		50		13	

a From rating curve extended above 3,200 ft³/s on basis of slope-area measurement at gage height 12.26 ft.

b Also Sept. 13.

BEAVER RIVER BASIN

03102500 LITTLE SHENANGO RIVER AT GREENVILLE, 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 field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfl lab, µS/cm 25 degC (90095)	Specif. conductance, wat unfl 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	21...	1028	9813	109	9.9	7.1	7.2	214	215	11.2	92	27.0	5.9
DEC	15...	1028	9813	165	14.1	6.8	7.6	208	212	1.0	79	22.8	5.3
FEB 2004	23...	1028	9813	E268	13.5	7.0	7.5	210	221	.8	72	21.2	4.6
APR	13...	1028	9813	308	11.4	7.5	7.6	211	214	7.0	85	24.6	5.8
JUN	15...	1028	9813	186	7.4	7.4	7.6	216	208	21.0	86	24.7	5.9
AUG	17...	1028	9813	31	9.3	7.8	7.8	306	300	18.5	130	38.7	8.1

Date	ANC, wat unfl 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 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)	
OCT 2003	21...	70	15.0	142	8	<.020	.42	<.040	.03	.041	.95	6.5	300	<10
DEC	15...	63	18.7	118	26	.020	.86	<.040	.02	.025	1.2	3.6	<200	<10
FEB 2004	23...	47	16.2	130	20	.140	1.04	<.040	.04	.049	1.5	3.7	600	<10
APR	13...	60	18.8	152	<2	<.020	.51	<.040	.03	.045	1.2	3.8	600	<10
JUN	15...	70	13.3	168	12	.060	.52	<.040	.03	.123	1.4	7.1	3200	10
AUG	17...	107	19.1	222	4	<.020	.13	<.040	.02	.038	.47	4.3	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	21...	1020	<1.0	100	<50	80
DEC	15...	560	<1.0	70	<50	<10
FEB 2004	23...	1240	<1.0	90	<50	100
APR	13...	1700	1.1	150	<50	<10
JUN	15...	5140	3.5	270	<50	80
AUG	17...	660	<1.0	110	<50	70

BEAVER RIVER BASIN

03102500 LITTLE SHENANGO RIVER AT GREENVILLE, 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	09/04/03
Benthic Macroinvertebrate	Count
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Pleuroceridae	
<i>Elimia</i>	1
Bivalvia (CLAMS)	
Veneroidea	
Sphaeriidae	
<i>Sphaerium</i>	5
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Tubificidae	4
Arthropoda	
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Baetis</i>	7
Caenidae	
<i>Caenis</i>	6
Heptageniidae	
<i>Stenacron</i>	1
<i>Stenonema</i>	2
Isonychiidae	
<i>Isonychia</i>	1
Plecoptera (STONEFLIES)	
Leuctridae	
<i>Leuctra</i>	1
Megaloptera	
Sialidae (ALDERFLIES)	
<i>Sialis</i>	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	32
<i>Hydropsyche</i>	6
Philopotamidae	
<i>Chimarra</i>	6
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	3
<i>Promoresia</i>	1
<i>Stenelmis</i>	15
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	2
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	33
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	4
Tipulidae (CRANE FLIES)	
<i>Hexatoma</i>	1
Total Organisms	132
Total Taxa	20