



2005 Water Year
BEAVER RIVER BASIN
03101500 Shenango River at Pymatuning Dam, PA

Latitude: 41° 29 ' 53"

Longitude: 080° 27 ' 37"

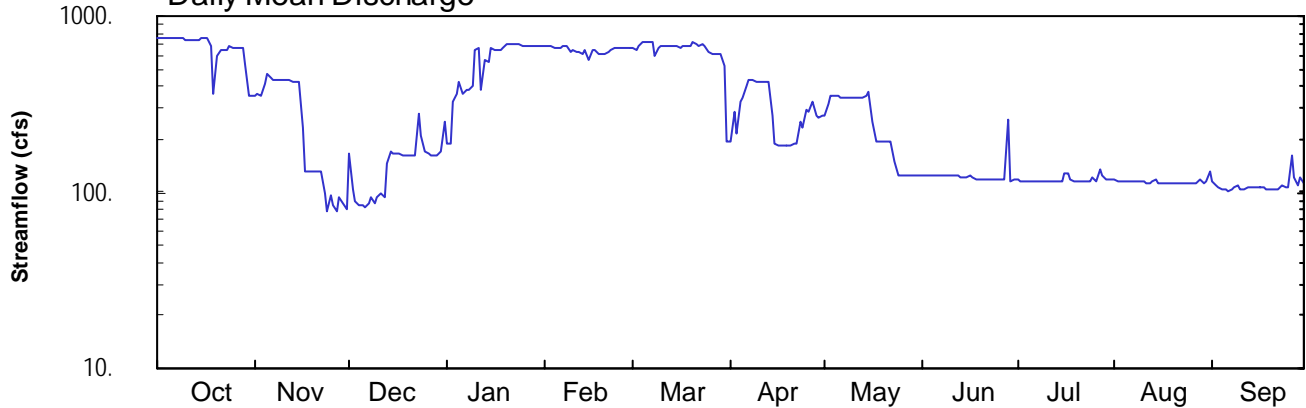
Hydrologic Unit Code: 05030102

Crawford County

Datum: 970.00 feet

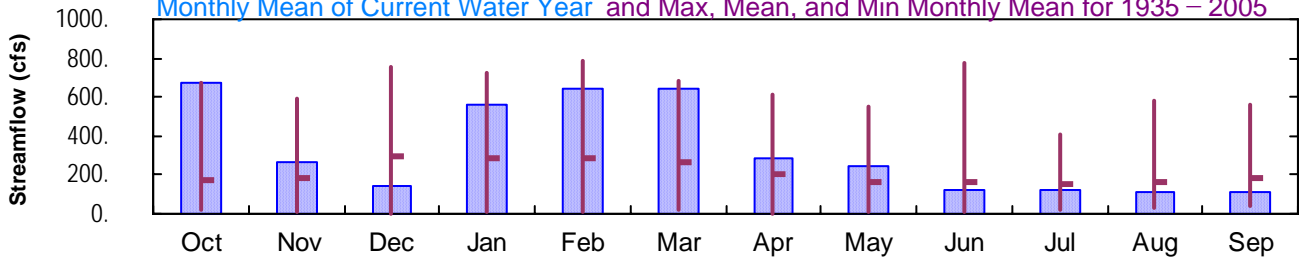
Drainage Area: 167. mi²

Daily Mean Discharge

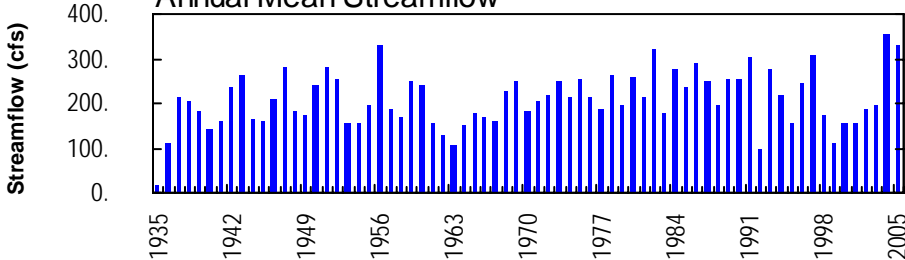


Monthly Statistics

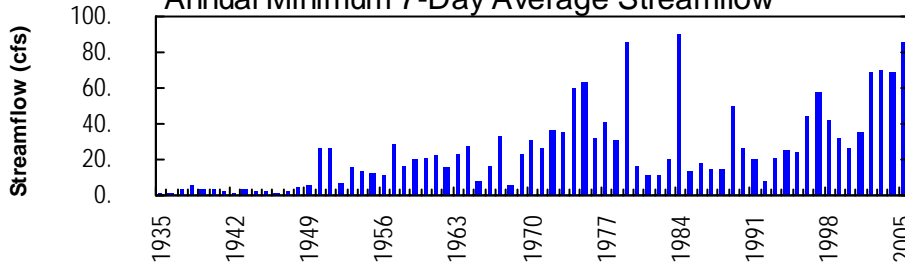
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1935 – 2005



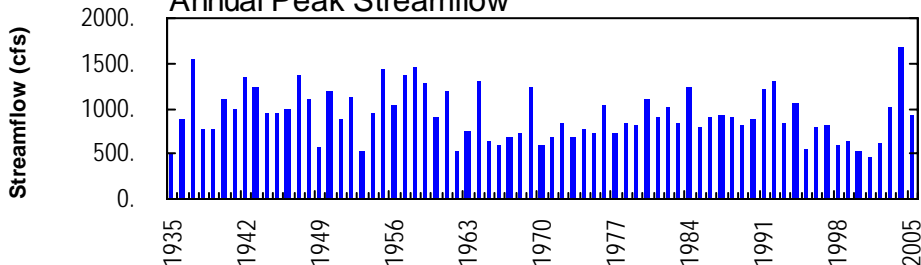
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



BEAVER RIVER BASIN

03101500 SHENANGO RIVER AT PYMATUNING DAM, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 41°29'53", long 80°27'37", Crawford County, Hydrologic Unit 05030102, on left bank 500 ft downstream from Sugar Run, 900 ft downstream from Pymatuning Dam, 1.5 mi northwest of Jamestown, at mile 84.9.

DRAINAGE AREA.--167 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1934 to current year.

REVISED RECORDS.--WSP 823: 1934-36. WSP 1083: 1936 (M), 1937, 1940 (M), 1941-45. WSP 1335: 1940.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 970.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since December 1933 by Pymatuning Reservoir (station 03100500). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

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	748	357	165	187	670	652	196	270	125	119	117	114
2	751	360	105	188	670	649	287	319	125	115	116	108
3	751	350	90	323	670	684	214	352	125	115	115	106
4	750	411	85	364	668	707	323	352	125	115	115	105
5	747	471	84	419	667	706	343	351	125	115	115	104
6	744	446	83	360	667	708	400	348	125	115	115	102
7	744	439	87	385	670	720	435	348	125	115	115	104
8	742	433	93	377	669	588	430	348	125	115	115	105
9	742	432	87	404	624	659	424	348	125	115	115	110
10	741	432	93	643	649	675	422	348	125	115	115	105
11	739	432	98	664	622	679	420	348	125	115	113	105
12	737	430	95	385	620	674	419	348	124	115	112	106
13	736	428	145	558	617	677	420	343	122	115	115	107
14	738	428	169	549	643	678	271	353	122	115	119	107
15	748	427	166	665	571	674	187	372	123	115	114	107
16	753	235	165	648	646	667	186	252	124	128	112	107
17	755	130	164	640	637	669	186	196	122	127	112	107
18	677	130	162	639	618	672	186	194	120	118	112	105
19	362	130	163	654	612	678	186	193	120	116	112	105
20	600	131	162	691	611	706	186	195	120	115	112	105
21	649	132	162	689	632	689	189	194	120	117	112	105
22	647	131	162	688	636	675	191	194	118	116	112	105
23	651	97	281	688	655	695	252	150	118	115	112	110
24	670	78	209	687	665	683	234	125	120	115	112	107
25	662	95	170	684	658	623	297	125	120	121	112	107
26	656	85	165	682	656	615	284	125	120	116	112	161
27	652	79	162	681	651	610	325	125	120	133	113	123
28	652	93	162	679	652	612	276	125	256	124	117	110
29	530	86	162	677	---	610	268	125	114	118	112	120
30	357	81	173	676	---	527	273	125	119	117	116	112
31	357	---	251	673	---	196	---	125	---	117	133	---
TOTAL	20788	7989	4520	17247	18026	20057	8710	7716	3797	3642	3549	3284
MEAN	671	266	146	556	644	647	290	249	127	117	114	109
MAX	755	471	281	691	670	720	435	372	256	133	133	161
MIN	357	78	83	187	571	196	186	125	114	115	112	102
CFSM	4.02	1.59	0.87	3.33	3.86	3.87	1.74	1.49	0.76	0.70	0.69	0.66
IN.	4.63	1.78	1.01	3.84	4.02	4.47	1.94	1.72	0.85	0.81	0.79	0.73

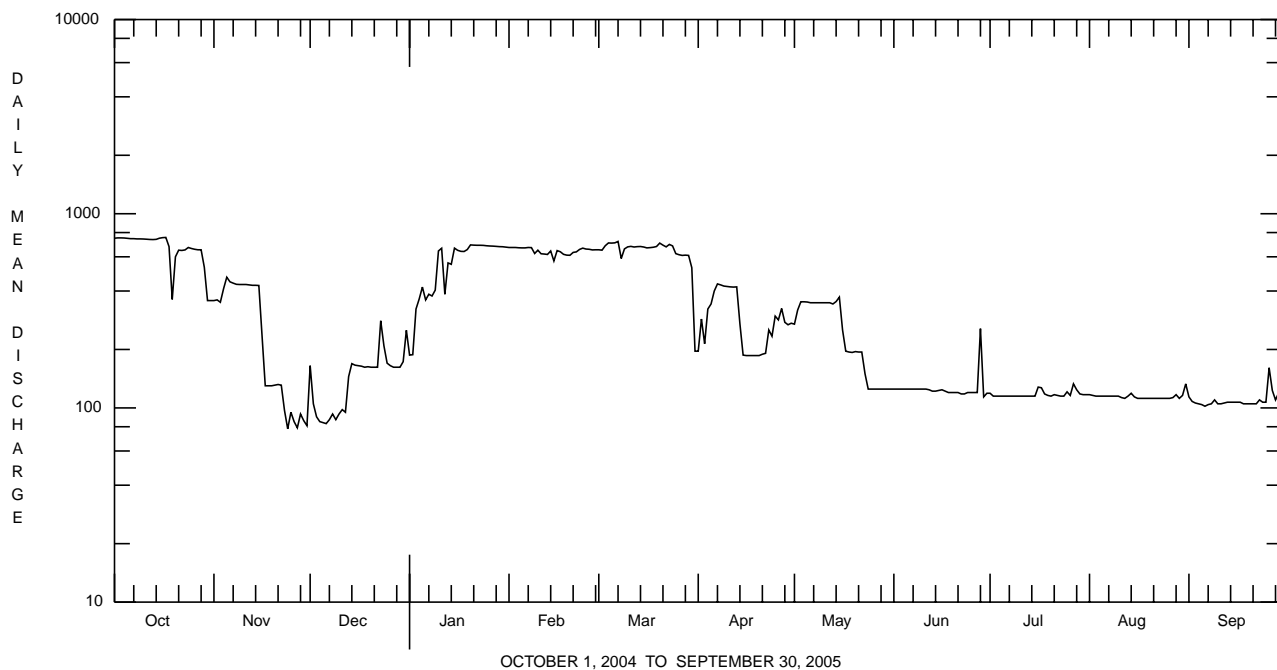
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2005, BY WATER YEAR (WY)

MEAN	176	185	293	282	283	260	203	167	164	149	163	185
MAX	671	588	753	728	783	682	608	548	773	408	587	558
(WY)	2005	1997	1987	1943	1952	1956	1950	1956	1947	1987	1956	1956
MIN	17.3	6.27	3.79	10.4	13.2	17.0	2.78	5.78	5.37	20.0	31.6	40.2
(WY)	1935	1935	1945	1936	1935	1992	1935	1935	1935	1968	1935	1935

BEAVER RIVER BASIN

03101500 SHENANGO RIVER AT PYMATUNING DAM, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1935 - 2005	
ANNUAL TOTAL	119712		119325			
ANNUAL MEAN	327		327		209	
HIGHEST ANNUAL MEAN					356	2004
LOWEST ANNUAL MEAN					16.6	1935
HIGHEST DAILY MEAN	791	Sep 15	755	Oct 17	1240	Jan 28 1937
LOWEST DAILY MEAN	69	Sep 3-7	78	Nov 24	0.40	Aug 25 1935
ANNUAL SEVEN-DAY MINIMUM	69	Sep 1	85	Nov 24	0.73	Jun 6 1935
MAXIMUM PEAK FLOW			933	Jun 28	1660	Sep 9 2004
MAXIMUM PEAK STAGE			6.98	Jun 28	9.81	Sep 9 2004
ANNUAL RUNOFF (CFSM)	1.96		1.96		1.25	
ANNUAL RUNOFF (INCHES)	26.67		26.58		16.98	
10 PERCENT EXCEEDS	658		678		554	
50 PERCENT EXCEEDS	344		193		137	
90 PERCENT EXCEEDS	95		107		27	



BEAVER RIVER BASIN

03101500 SHENANGO RIVER AT PYMATUNING DAM, 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, μ S/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, μ S/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, unfltrd recoverable, mg/L (00916)	Magnesium, water, unfltrd recoverable, mg/L (00927)
NOV 2004 15...	1305	1028	9813	424	11.2	7.0	7.2	154	159	8.0	59	17.5	3.8
JAN 2005 10...	1335	1028	9813	683	13.2	7.2	7.9	144	152	2.0	56	16.3	3.8
MAR 15...	1350	1028	9813	669	12.0	7.2	7.2	162	165	3.0	62	18.1	4.1
MAY 16...	1315	1028	9813	196	9.5	7.6	7.9	146	150	15.5	57	16.6	3.7
JUL 18...	1400	1028	9813	117	6.9	7.2	7.6	162	171	25.0	63	18.6	4.0
SEP 19...	1315	1028	9813	105	8.1	7.4	7.9	154	159	23.0	39	8.6	4.2

Date	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (00417)	Fluoride, water, unfltrd mg/L (00951)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 105degC, wat flt 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 recoverable, μ g/L (01105)
NOV 2004 15...	48	<.2	10.8	116	<2	.060	<.04	<.040	.03	.043	.74	5.3	<200
JAN 2005 10...	46	<.2	11.4	118	12	.060	.24	<.040	.02	.032	.74	4.7	210
MAR 15...	49	<.2	11.9	188	<2	.120	.36	<.040	.01	.023	.98	5.4	<200
MAY 16...	46	<.2	11.3	106	12	.020	.12	<.040	.03	.041	.77	--	250
JUL 18...	56	<.2	9.3	138	<2	.600	.07	<.040	.03	.053	1.2	--	<200
SEP 19...	52	<.2	10.1	120	10	<.020	<.04	<.040	.03	.050	.62	--	<200

Date	Copper, water, unfltrd recoverable, μ g/L (01042)	Cyanide amenable to chlorination, wat unfltrd mg/L (00722)	Iron, water, unfltrd recoverable, μ g/L (01045)	Lead, water, unfltrd recoverable, μ g/L (01051)	Manganese, water, unfltrd recoverable, μ g/L (01055)	Nickel, water, unfltrd recoverable, μ g/L (01067)	Zinc, water, unfltrd recoverable, μ g/L (01092)	Phenolic compounds, water, unfltrd pounds (32730)
NOV 2004 15...	<10	<1.00	190	2.2	70	<50	<10	<5
JAN 2005 10...	<10	<1.00	320	<1.0	50	<50	<10	<5
MAR 15...	<10	<1.00	120	<1.0	60	<50	<10	<5
MAY 16...	<10	<1.00	390	<1.0	80	<50	<10	<5
JUL 18...	<10	<1.00	470	<1.0	880	<50	<10	<5
SEP 19...	<10	<1.00	320	<1.0	160	<50	<10	<5

BEAVER RIVER BASIN

03101500 SHENANGO RIVER AT PYMATUNING DAM, 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	10/27/04
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	2
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Physidae	
<i>Physa</i>	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Naididae	197
Arthropoda	
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
<i>Gammarus</i>	8
Insecta	
Ephemeroptera (MAYFLIES)	
Caenidae	
<i>Caenis</i>	8
Heptageniidae	
<i>Stenonema</i>	14
Leptophlebiidae	
<i>Paraleptophlebia</i>	1
Plecoptera (STONEFLIES)	
Capniidae	
<i>Paracapnia</i>	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	8
<i>Hydropsyche</i>	1
Philopotamidae	
<i>Chimarra</i>	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	1
<i>Stenelmis</i>	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	45
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	2
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	41
Total Organisms	332
Total Taxa	16