



2005 Water Year
BEAVER RIVER BASIN
03106000 Connoquenessing Creek near Zelenople, PA

Latitude: 40° 49 ' 01"

Longitude: 080° 14 ' 33"

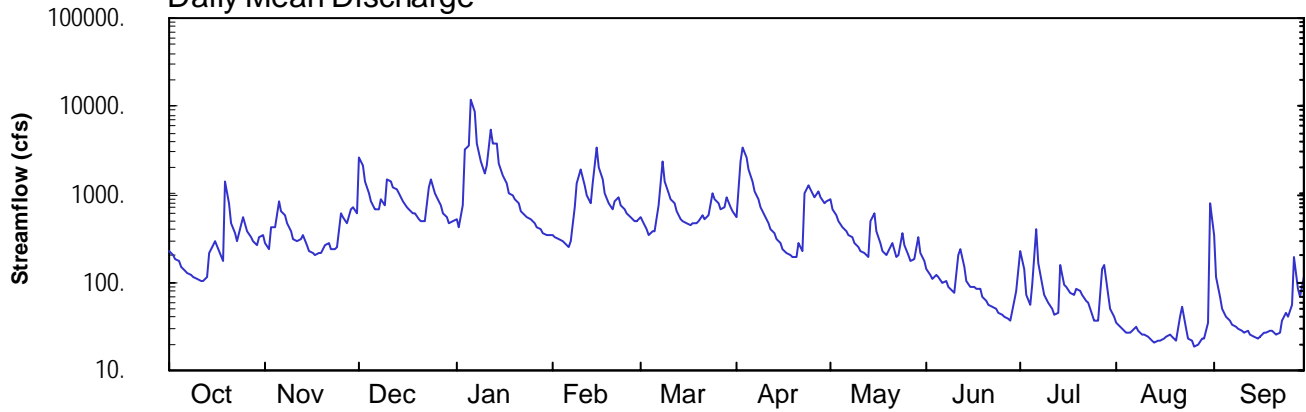
Hydrologic Unit Code: 05030105

Beaver County

Datum: 852.31 feet

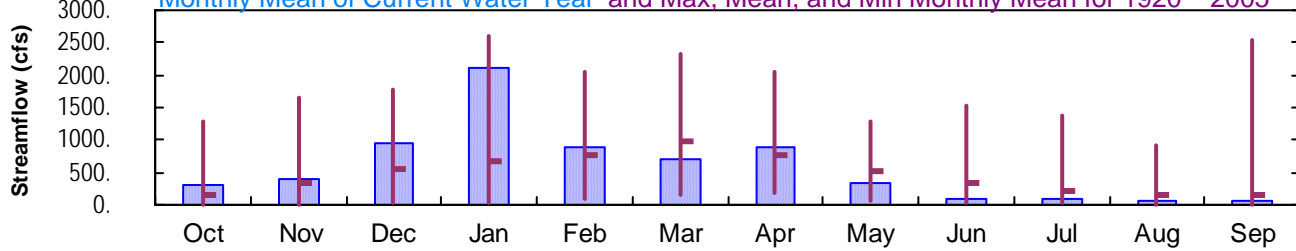
Drainage Area: 356. mi²

Daily Mean Discharge

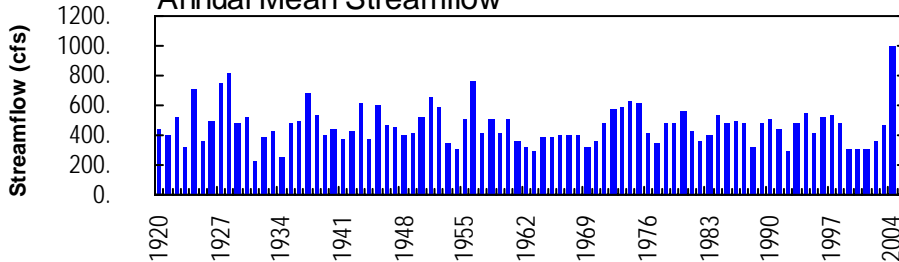


Monthly Statistics

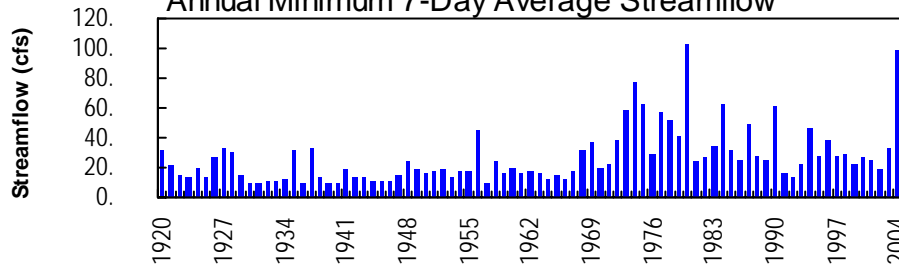
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1920 – 2005



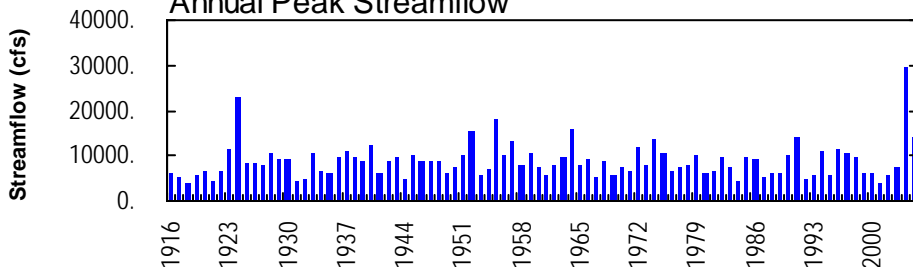
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



BEAVER RIVER BASIN

03106000 CONNOQUENESSING CREEK NEAR ZELIENOPLE, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°49'01", long 80°14'33", Beaver County, Hydrologic Unit 05030105, on right bank at downstream side of highway bridge at Hazen, 0.3 mi upstream from Brush Creek, 4 mi southeast of Ellwood City, and 6.0 mi west of Zelenople.

DRAINAGE AREA.--356 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1919 to current year. Monthly discharge only for some periods, published in WSP 1305. June 1915 to September 1919 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania. Published as "at Hazen" 1915-16, 1929-63, and as "near Hazen" 1917-28.

REVISED RECORDS.--WSP 743: Drainage area. WSP 893: 1937-38, 1939 (M). WSP 1305: 1922-26, 1928. WSP 1335: 1920-21, 1924 (M). WSP 1385: 1952.

GAGE.--Water-stage recorder. Datum of gage is 852.31 ft above National Geodetic Vertical Datum of 1929. Prior to June 23, 1941, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by mills upstream of station. 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 5,000 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Jan. 6	1845	*13,900	*13.85	Jan. 12	1530	6,290	8.96

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	230	273	2550	528	e340	555	556	862	144	225	35	351
2	206	242	2160	425	e329	499	2350	663	124	141	32	114
3	186	417	1400	764	e308	411	3460	575	112	73	30	67
4	171	421	1030	3160	e292	349	2570	498	121	56	26	50
5	151	835	823	3560	e282	379	1900	427	113	94	27	41
6	138	656	673	11600	e255	390	1430	384	101	398	28	36
7	129	564	661	8750	e287	734	1100	351	103	164	31	34
8	119	476	898	3700	e722	2410	896	322	89	94	28	31
9	113	381	769	2360	1340	1430	695	280	79	72	26	29
10	109	316	1460	1690	1930	1050	571	252	76	59	25	28
11	106	287	1390	2080	1260	884	483	231	204	50	25	27
12	102	316	1230	5440	971	776	406	214	243	44	22	28
13	113	338	1150	3830	808	649	359	195	152	46	20	26
14	216	261	1010	3730	1330	525	316	485	103	159	22	24
15	271	225	827	2280	3410	485	273	597	89	92	22	23
16	298	212	728	1610	2000	469	240	386	89	89	23	25
17	226	206	676	1300	1450	446	216	279	86	78	24	26
18	174	211	607	1040	1050	466	206	231	83	74	26	27
19	1410	220	602	1000	787	474	195	201	69	84	25	28
20	784	270	518	884	673	497	192	223	61	81	22	29
21	480	280	501	e807	830	592	279	280	57	73	42	26
22	358	238	484	e637	941	533	229	198	54	61	53	27
23	294	233	1190	e589	752	574	1020	206	49	59	30	37
24	440	246	1500	e542	661	1030	1280	367	44	44	24	44
25	552	621	1010	e510	618	865	1140	267	43	37	21	40
26	384	558	914	e473	564	789	928	210	40	37	19	57
27	322	463	748	e414	497	691	1110	173	39	144	19	189
28	288	686	596	e393	504	697	927	184	37	157	23	86
29	265	708	539	e361	---	947	789	335	60	71	23	70
30	333	595	471	e345	---	722	847	213	80	50	34	117
31	352	---	485	e340	---	629	---	170	---	41	788	---
TOTAL	9320	11755	29600	65142	25191	21947	26963	10259	2744	2947	1595	1737
MEAN	301	392	955	2101	900	708	899	331	91.5	95.1	51.5	57.9
MAX	1410	835	2550	11600	3410	2410	3460	862	243	398	788	351
MIN	102	206	471	340	255	349	192	170	37	37	19	23
CFSM	0.84	1.10	2.68	5.90	2.53	1.99	2.52	0.93	0.26	0.27	0.14	0.16
IN.	0.97	1.23	3.09	6.81	2.63	2.29	2.82	1.07	0.29	0.31	0.17	0.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2005, BY WATER YEAR (WY)

MEAN	163	336	563	672	750	967	775	518	331	204	158	165
MAX	1290	1648	1778	2607	2048	2324	2054	1283	1518	1373	923	2543
(WY)	1955	1986	1928	1937	1956	1945	1940	1983	1989	1928	2004	2004
MIN	11.3	12.3	22.3	16.4	97.7	154	182	62.3	24.4	20.5	11.2	11.4
(WY)	1931	1931	1961	1931	1934	1969	1946	1934	1934	1936	1930	1930

e Estimated.

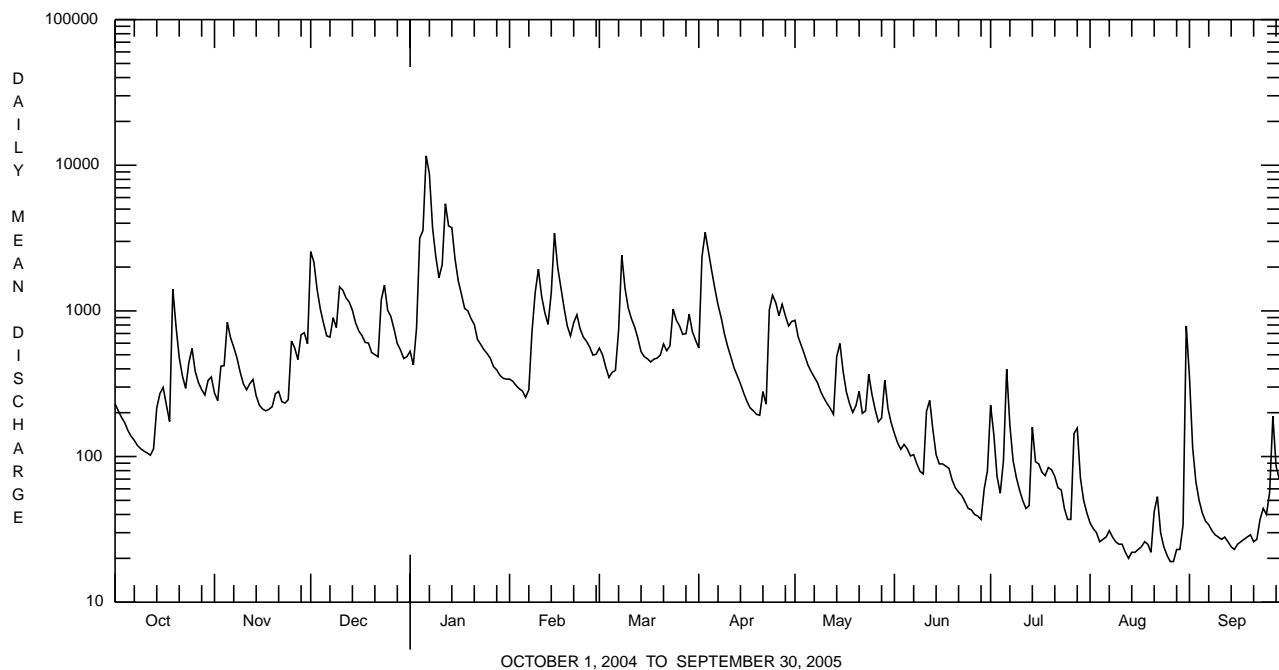
BEAVER RIVER BASIN

03106000 CONNOQUENESSING CREEK NEAR ZELIENOPE, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1920 - 2005	
ANNUAL TOTAL	347982		209200			
ANNUAL MEAN	951		573		465	
HIGHEST ANNUAL MEAN					1001	2004
LOWEST ANNUAL MEAN					221	1931
HIGHEST DAILY MEAN	24500	Sep 18	11600	Jan 6	24500	Sep 18 2004
LOWEST DAILY MEAN	63	Jul 25	19	Aug 26,27	6.5	Jul 21 1936
ANNUAL SEVEN-DAY MINIMUM	98	Jul 11	23	Aug 11	8.7	Oct 13 1939
MAXIMUM PEAK FLOW			13900	Jan 6	a 29400	Sep 18 2004
MAXIMUM PEAK STAGE			13.85	Jan 6	b 18.17	Sep 18 2004
INSTANTANEOUS LOW FLOW			17	Aug 26,27	6.0	Jul 21 1936
ANNUAL RUNOFF (CFSM)	2.67		1.61		1.31	
ANNUAL RUNOFF (INCHES)	36.36		21.86		17.76	
10 PERCENT EXCEEDS	1690		1240		1100	
50 PERCENT EXCEEDS	543		294		215	
90 PERCENT EXCEEDS	164		30		32	

a From rating curve extended above 17,100 ft³/s.

b From floodmarks.



BEAVER RIVER BASIN

03106000 CONNOQUENESSING CREEK NEAR ZELIENOPLE, 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, unfltrd recover -able, mg/L (00916)	Magnesium, water, unfltrd recover -able, mg/L (00927)
NOV 2004 01...	1015	1028	9813	274	10.4	7.6	7.6	474	466	11.5	160	49.9	9.5
JAN 2005 05...	1110	1028	9813	2810	10.9	7.1	7.6	265	273	7.0	83	23.8	5.8
MAR 01...	1030	1028	9813	E555	14.0	7.4	7.8	513	524	1.7	140	42.0	8.4
MAY 02...	1140	1028	9813	658	11.5	8.1	8.0	370	377	10.5	120	32.5	8.2
JUL 05...	1105	1028	9813	50	10.6	8.4	8.6	596	611	25.0	200	59.7	11.2
SEP 01...	1045	1028	9813	330	6.8	7.4	7.9	470	488	21.0	150	47.9	7.6
Date	ANC, wat unfltrd 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, 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)
NOV 2004 01...	63	60.0	304	<2	<.020	1.02	<.200	.02	.035	1.2	2.7	<200	<10
JAN 2005 05...	35	35.7	164	76	.040	1.55	<.040	.02	.104	2.0	2.4	1600	<10
MAR 01...	43	54.7	326	2	.040	1.60	<.040	.02	.012	2.0	2.2	<200	<10
MAY 02...	45	50.7	254	2	.040	.99	<.040	.01	.022	1.2	--	<200	<10
JUL 05...	84	61.6	466	28	<.020	.27	<.040	<.01	.109	1.3	--	310	<10
SEP 01...	70	50.3	332	88	.140	1.20	<.040	.03	.149	1.9	--	1700	<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)								
NOV 2004 01...	320	<1.0	60	<50	20								
JAN 2005 05...	3510	4.7	220	<50	20								
MAR 01...	340	<1.0	130	<50	<10								
MAY 02...	390	<1.0	100	<50	<10								
JUL 05...	660	<1.0	220	<50	40								
SEP 01...	3590	5.2	450	<50	20								

BEAVER RIVER BASIN

03106000 CONNOQUENESSING CREEK NEAR ZELIENOPLE, 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	09/16/04
Benthic macroinvertebrate	Count
Nematoda (NEMATODES)	1
Mollusca	
Bivalvia (CLAMS)	
Veneroida	
Corbiculidae	
<i>Corbicula fluminea</i>	7
Arthropoda	
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Acentrella</i>	1
<i>Baetis</i>	6
Ephemerellidae	
<i>Ephemerella</i>	1
Heptageniidae	
<i>Stenonema</i>	7
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
<i>Argia</i>	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	16
<i>Hydropsyche</i>	20
Psychomyiidae	
<i>Psychomyia</i>	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Stenelmis</i>	31
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	28
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	19
Tipulidae (CRANE FLIES)	1
Total Organisms	141
Total Taxa	14