

## 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 mi<sup>2</sup>.

## 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 good except those for estimated daily discharges, which are poor. Some regulation by mills above 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 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)
Dec. 18	0600	5,550	8.28	June 6	2315	5,070	7.86
Mar. 27	0230	*5,630	*8.37				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	69	753	e169	1280	326	717	468	388	94	33	23
2	35	68	455	e167	978	328	620	722	271	82	29	21
3	33	143	330	e167	739	613	597	767	202	73	25	21
4	31	157	263	e161	635	620	556	548	176	66	24	24
5	29	100	221	e161	505	477	459	463	212	61	26	23
6	31	83	195	e153	439	482	413	402	1790	54	28	23
7	29	72	194	e150	390	440	367	379	3180	50	37	21
8	36	68	177	e136	360	384	347	404	1260	47	30	20
9	31	69	210	e158	307	342	373	434	781	45	26	20
10	30	75	196	e147	274	332	488	407	563	47	23	18
11	30	66	162	e167	496	282	370	325	429	57	23	17
12	33	60	148	e209	486	256	327	319	349	49	25	17
13	48	56	159	e217	404	248	440	2300	300	40	229	18
14	69	54	252	e197	324	234	1260	3600	365	38	93	17
15	79	52	281	188	314	218	3510	2000	542	37	48	20
16	92	52	227	185	309	343	1950	1200	421	38	37	26
17	68	51	1310	168	300	384	1230	941	330	37	38	38
18	75	49	4620	162	263	320	914	2530	260	35	46	26
19	63	49	2020	138	236	300	742	1830	222	36	53	22
20	50	101	1130	142	245	385	658	1250	181	43	52	20
21	45	142	766	180	554	804	549	947	159	43	37	21
22	43	90	568	170	609	646	491	743	136	40	29	21
23	54	74	476	159	540	575	424	603	121	37	36	20
24	1040	66	442	300	475	523	350	511	110	37	52	18
25	472	280	363	731	446	540	315	462	108	37	97	18
26	216	477	293	497	433	1870	297	399	110	63	69	18
27	137	267	271	416	447	4340	253	323	97	54	44	84
28	128	390	257	376	382	2050	323	311	152	64	35	449
29	107	360	230	332	---	1300	721	406	148	47	28	112
30	86	520	173	786	---	1150	478	292	126	41	25	53
31	74	---	e175	1550	---	866	---	291	---	38	23	---
TOTAL	3333	4160	17317	8839	13170	21978	20539	26577	13489	1530	1400	1249
MEAN	108	139	559	285	470	709	685	857	450	49.4	45.2	41.6
MAX	1040	520	4620	1550	1280	4340	3510	3600	3180	94	229	449
MIN	29	49	148	136	236	218	253	291	97	35	23	17
CFSM	0.30	0.39	1.57	0.80	1.32	1.99	1.92	2.41	1.26	0.14	0.13	0.12
IN.	0.35	0.43	1.81	0.92	1.38	2.30	2.15	2.78	1.41	0.16	0.15	0.13

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2002, BY WATER YEAR (WY)

MEAN	160	332	556	650	750	971	774	515	325	199	147	130
MAX	1290	1648	1778	2607	2048	2324	2054	1283	1518	1373	775	1743
(WY)	1955	1986	1928	1937	1956	1945	1940	1983	1989	1928	1980	1926
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

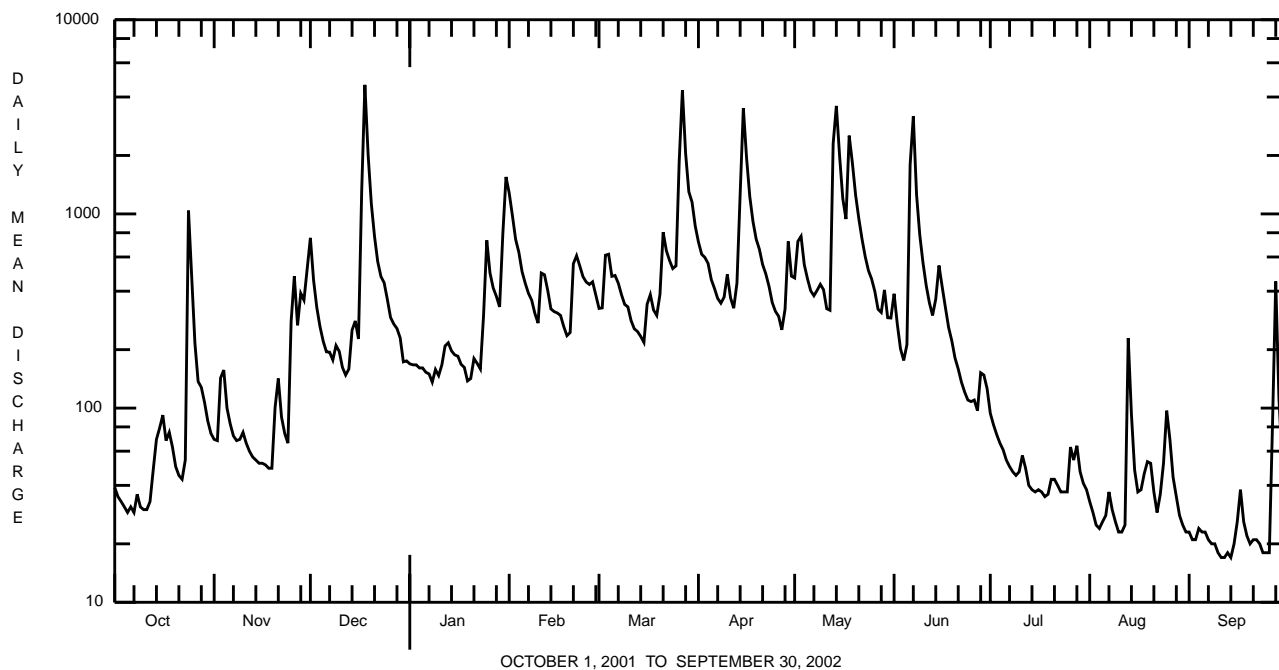
e Estimated.

## BEAVER RIVER BASIN

## 03106000 CONNOQUENESSING CREEK NEAR ZELIENOPE, PA--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1920 - 2002	
ANNUAL TOTAL	117493		133729			
ANNUAL MEAN	322		366		458	
HIGHEST ANNUAL MEAN					816	1928
LOWEST ANNUAL MEAN					221	1931
HIGHEST DAILY MEAN	4620	Dec 18	4620	Dec 18	16000	Jun 29 1924
LOWEST DAILY MEAN	22	Sep 13	17	Sep 11,12,14	6.5	Jul 21 1936
ANNUAL SEVEN-DAY MINIMUM	25	Sep 7	18	Sep 8	8.7	Oct 13 1939
MAXIMUM PEAK FLOW			5630	Mar 27	<sup>a</sup> 23000	Jun 29 1924
MAXIMUM PEAK STAGE			8.37	Mar 27	16.66	Jun 29 1924
INSTANTANEOUS LOW FLOW			16	Sep 10,11,18,24	6.0	Jul 21 1936
ANNUAL RUNOFF (CFSM)	0.90		1.03		1.29	
ANNUAL RUNOFF (INCHES)	12.28		13.97		17.47	
10 PERCENT EXCEEDS	866		758		1090	
50 PERCENT EXCEEDS	172		196		210	
90 PERCENT EXCEEDS	32		30		32	

<sup>a</sup> About.



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WATER-QUALITY RECORDS

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

REMARKS.--Other data for the Water-Quality Network can be found on pages 210-233.

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 2001 TO SEPTEMBER 2002

Date	Time	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (µS/CM) (90095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	ANC-WATER FET LAB (MG/L AS CACO3) (00417)
APR 2002													
17...	1245	9813	1210	40	6.3	7.7	311	299	16.0	97	27.7	6.7	36
JUN													
18...	1100	9813	262	40	9.7	7.6	505	437	18.2	140	39.9	9.7	56
AUG													
05...	1215	9813	25.5	40	7.2	7.6	845	974	27.0	300	92.2	15.6	92

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L) (00515)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	COPPER, TOTAL RECOV-ERABLE (µG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (µG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (µG/L AS PB) (01051)
APR 2002													
17...	47.1	234	18	<.020	1.50	<.040	1.9	.03	.040	2.4	<10	910	1.3
JUN													
18...	65.3	322	4	<.020	1.40	<.040	1.6	.03	.040	2.7	<10	540	<1.0
AUG													
05...	151	696	20	<.020	.68	<.200	1.2	.03	.050	4.8	<10	410	<1.0

Date	MANGA-NESE, TOTAL RECOV-ERABLE (µG/L AS MN) (01055)	NICKEL, TOTAL RECOV-ERABLE (µG/L AS NI) (01067)	ZINC, TOTAL RECOV-ERABLE (µG/L AS ZN) (01092)
APR 2002			
17...	90	<50	<10
JUN			
18...	80	<50	<10
AUG			
05...	200	<50	<10