

BEAVER RIVER BASIN

**03105500 BEAVER RIVER AT WAMPUM, PA
(Pennsylvania Water-Quality Network Station)**

LOCATION.--Lat 40°53'19", long 80°20'14", Lawrence County, Hydrologic Unit 05030104, on right bank at downstream side of bridge on State Highway 288 at Wampum, 2.9 mi upstream from Connoquenessing Creek, at mile 15.4.

DRAINAGE AREA.--2,235 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1914 to September 1918, August 1932 to current year. Monthly discharge only for some periods, published in WSP 1305. Published as "at Newport" 1914-18.

REVISED RECORDS.--WSP 728: Drainage area. WSP 1385: 1933-40, 1946, 1951-52. WSP 1725: 1960 (adjusted runoff). WDR PA 853: 1984 (M).

GAGE.--Water-stage recorder. Datum of gage is 736.24 ft above National Geodetic Vertical Datum of 1929 (Penn Central Railroad bench mark). Prior to Sept. 20, 1914, nonrecording gage at site 500 ft downstream at datum 0.76 ft lower. Oct. 1, 1914 to Sept. 30, 1918, nonrecording gage at site 1 mi upstream at datum 0.84 ft higher. Aug. 26, 1932 to Nov. 16, 1938, nonrecording gage at present site and datum. Since 1932 an auxiliary gage 10 mi downstream at Beaver Falls (station 03107500) is used during periods of backwater from Connoquenessing Creek.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1916 by Milton Reservoir, since November 1929 by Meander Creek Reservoir, since December 1933 by Pymatuning Reservoir (station 03100500), since December 1942 by Berlin Lake, since October 1943 by Mosquito Creek Lake, since December 1966 by Michael J. Kirwan Reservoir, and since January 1967 by Shenango River Lake 40 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1912, 29.9 ft, Mar. 26, 1913, from floodmark, discharge, about 87,000 ft³/s.

**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	707	718	5300	1200	6530	1500	4320	2640	2770	898	923	822
2	618	680	3800	1190	6910	1550	2860	4320	2220	885	881	820
3	520	812	3110	1010	5490	2270	4870	8640	2050	907	883	833
4	495	794	3000	945	4170	2660	7720	6700	1600	922	849	1190
5	486	676	2800	983	3500	2040	7180	4760	1700	901	845	859
6	685	580	2350	1020	3230	1620	6600	4120	6000	882	942	744
7	743	510	2230	1060	3080	1520	6480	3690	6130	876	874	703
8	597	487	1730	1180	2660	1480	6120	3310	5240	889	832	717
9	557	636	1670	1220	2110	1440	5570	3280	4180	917	817	710
10	537	752	1310	1250	2000	1620	5930	3520	3220	1360	841	707
11	501	728	1060	1200	2800	1430	4660	3030	2530	1140	844	682
12	527	710	898	1180	3220	1320	3670	3390	2240	974	837	651
13	920	700	925	1370	2720	1210	3660	12300	2290	928	843	666
14	719	684	1110	1420	2240	1080	8420	17900	2930	973	835	674
15	837	677	1320	1370	1730	1020	17100	11200	5040	958	886	785
16	725	668	1310	1350	1590	1810	9920	7490	4430	933	861	1600
17	803	667	1570	1310	1610	2220	7010	7380	3130	913	2510	956
18	803	658	7490	1270	1550	1860	6980	10100	3080	938	1420	778
19	723	660	5900	1190	1460	1500	7280	9680	2890	964	1020	741
20	648	1020	4890	1120	1450	1650	6950	7570	2220	1150	960	687
21	548	1060	4140	1130	1840	2960	6210	6620	1550	963	921	677
22	506	937	3720	1140	2040	2610	5250	5990	1290	929	873	689
23	613	845	3220	1150	1940	1990	4400	5390	1240	1050	1010	669
24	2130	875	3740	1370	1700	1760	3080	4940	1190	2210	1750	665
25	1800	1660	3470	1940	1540	1950	2510	4720	1110	1430	1370	649
26	1520	2260	3020	1720	1520	3900	2210	4610	997	1050	1070	647
27	1320	1750	2730	1610	1580	10200	2060	4440	996	949	946	1100
28	1380	1730	2220	1500	1550	7220	2270	4240	1160	902	864	1900
29	1270	1850	2040	1440	---	6240	3230	3900	1080	931	819	1160
30	1050	3330	1380	2580	---	6510	2950	3890	958	1120	796	893
31	846	---	1240	4750	---	6150	---	4110	---	1010	803	---
TOTAL	26134	30114	84693	44168	73760	84290	167470	187870	77461	31852	30925	25374
MEAN	843	1004	2732	1425	2634	2719	5582	6060	2582	1027	998	846
MAX	2130	3330	7490	4750	6910	10200	17100	17900	6130	2210	2510	1900
MIN	486	487	898	945	1450	1020	2060	2640	958	876	796	647
CFSM	0.38	0.45	1.22	0.64	1.18	1.22	2.50	2.71	1.16	0.46	0.45	0.38
IN.	0.43	0.50	1.41	0.74	1.23	1.40	2.79	3.13	1.29	0.53	0.51	0.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2002, BY WATER YEAR (WY)

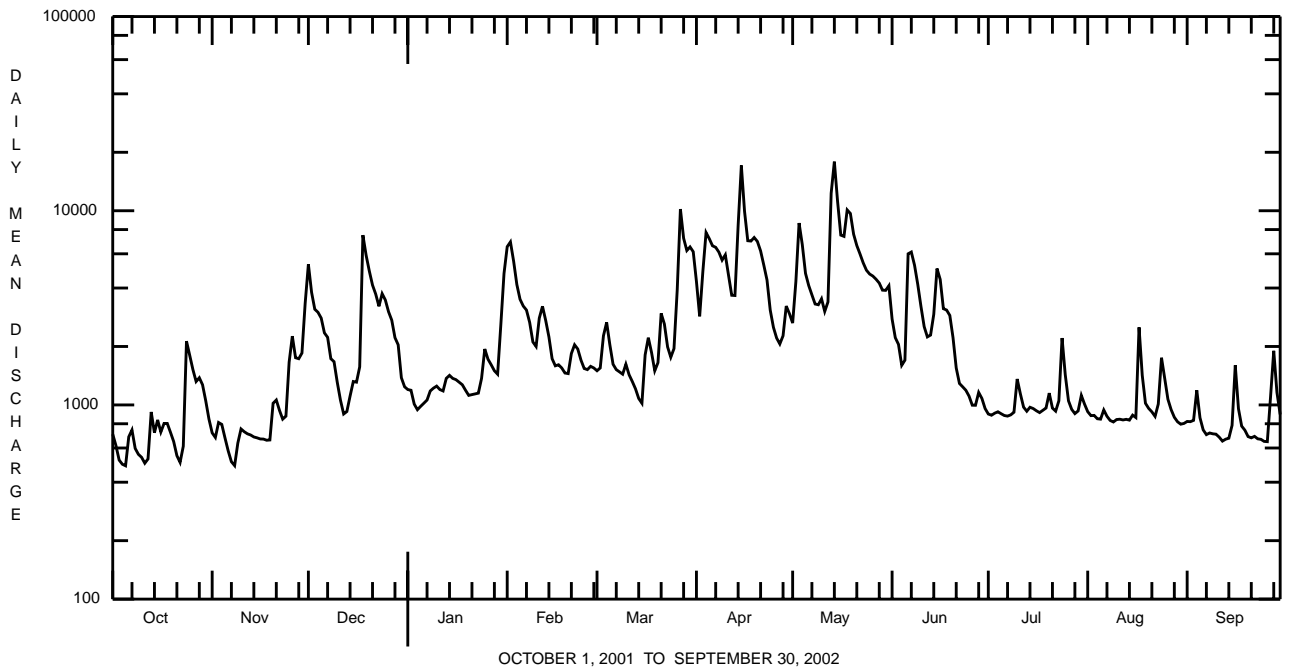
MEAN	1251	1786	2826	3405	3881	4822	3931	2677	1973	1470	1246	1179
MAX	5888	7936	7978	13030	8779	9098	9226	8362	8004	5893	4923	4759
(WY)	1991	1986	1991	1937	1915	1916	1994	1996	1989	1958	1956	1990
MIN	168	278	447	534	304	1074	657	288	222	198	156	153
(WY)	1934	1915	1961	1918	1934	1969	1915	1934	1934	1918	1933	1916

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SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1915 - 2002	
ANNUAL TOTAL	615550		864111			
ANNUAL MEAN	1686		2367		2537	
HIGHEST ANNUAL MEAN					3995	1956
LOWEST ANNUAL MEAN					834	1934
HIGHEST DAILY MEAN	8300	Apr 7	17900	May 14	47500	Jan 22 1959
LOWEST DAILY MEAN	486	Oct 5	486	Oct 5	88	Oct 5 1914
ANNUAL SEVEN-DAY MINIMUM	583	Oct 3	583	Oct 3	94	Oct 3 1914
MAXIMUM PEAK FLOW			18700	Apr 15	a50100	May 28 1946
MAXIMUM PEAK STAGE			b11.68	Apr 15	c21.53	May 28 1946
INSTANTANEOUS LOW FLOW					d74	Jul 30 1933
ANNUAL RUNOFF (CFSM)	0.75		1.06		1.14	
ANNUAL RUNOFF (INCHES)	10.25		14.38		15.42	
10 PERCENT EXCEEDS	3820		5910		5800	
50 PERCENT EXCEEDS	1130		1420		1420	
90 PERCENT EXCEEDS	697		688		575	

- a From slope-rating curve extended above 28,000 ft³/s on basis of contracted-opening measurement at gage height 21.44 ft.
- b Maximum gage height 11.70 ft, discharge 18,700 ft³/s, May 14.
- c Maximum gage height, 24.86 ft, Jan. 22, 1959 (backwater from Connoquenessing Creek).
- d Minimum discharge observed.



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03105500 BEAVER RIVER AT WAMPUM, PA--Continued
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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 FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	ANC WATER UNFLTRD FET LAB (MG/L AS CAC03) (00417)	FLUO-RIDE, TOTAL (MG/L AS F) (00951)
APR 2002													
18...	1400	9813	7070	40	7.1	7.7	363	16.7	120	34.6	8.0	64	<.2
JUN													
20...	1100	9813	2190	40	7.6	7.5	452	21.8	120	35.6	8.2	76	<.2
AUG													
06...	1100	9813	969	40	5.5	7.4	539	29.0	150	42.9	11.4	88	.3

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-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)	CYANIDE AMEN-ABLE TO CHLOR-INATION UNFLTRD (MG/L) (00722)	IRON, TOTAL RECOV-ERABLE (µG/L AS FE) (01045)
APR 2002													
18...	43.8	194	52	.070	.97	<.040	1.8	.04	.130	6.8	<10	<1.00	2000
JUN													
20...	44.1	306	30	.060	1.07	.060	1.6	.06	.140	6.6	<10	<1.00	1380
AUG													
06...	60.1	344	10	.050	1.57	<.040	2.1	.13	.190	5.7	<10	1.23	960

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)	PHENOLS TOTAL (µG/L) (32730)
APR 2002				
18...	140	<50	<10	<5
JUN				
20...	130	<50	30	<5
AUG				
06...	120	<50	<10	<5