

## BEAVER RIVER BASIN

03107500 BEAVER RIVER AT BEAVER FALLS, PA  
(Pennsylvania Water-Quality Network Station)

**LOCATION.**--Lat 40°45'48", long 80°18'55", Beaver County, Hydrologic Unit 05030104, on left bank at Beaver Falls, 200 ft upstream from pumping plant of Beaver Falls Municipal Authority, 7.0 mi downstream from Connoquenessing Creek, at mile 5.5.

**DRAINAGE AREA.**--3,106 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--October 1935 to current year (fragmentary records only prior to October 1956). Gage-height records collected at same site since 1908 are contained in reports of U.S. Weather Bureau.

**REVISED RECORDS.**--WSP 1725: 1960 (adjusted runoff); Instantaneous low flow for water years 1997, 1998 were published in error.

**GAGE.**--Water-stage recorder and concrete dam control. Datum of gage is 727.48 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Dec. 3, 1941, nonrecording gage at site 200 ft downstream at same datum.

**REMARKS.**--No estimated daily discharges. Records good above 2,000 ft<sup>3</sup>/s, and fair below, except those below 1,200 ft<sup>3</sup>/s, which are poor. Pumpage from gage pool, averaging 3.4 ft<sup>3</sup>/s in 1935 and 6.0 ft<sup>3</sup>/s at present, for local water supply, returns to river 2 mi downstream; information furnished by Beaver Falls Municipal Authority. 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, since January 1967 by Shenango River Lake, all over 50 mi upstream, and since May 1969 by Lake Arthur (station 03106280) 29 mi upstream. U.S. Army Corps of Engineers satellite telemetry at station.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood of Mar. 27, 1913 reached a stage of 17.4 ft, discharge, 103,000 ft<sup>3</sup>/s, from rating curve extended above 60,000 ft<sup>3</sup>/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	816	871	6610	1790	8960	2280	5990	3650	3970	1300	1140	933
2	737	816	4700	1760	9350	2310	4290	5170	3120	1250	1070	923
3	635	992	3680	1540	7070	3420	5840	10900	2660	1250	1050	927
4	584	1110	3440	1450	5420	4220	9490	8140	2290	1250	1020	1300
5	546	918	3220	1440	4520	3180	8580	5600	2260	1190	1000	1030
6	683	798	2760	1500	4080	2680	7710	4820	9700	1160	1080	905
7	813	721	2630	1530	3870	2520	7420	4360	12600	1130	1040	857
8	656	669	2200	1640	3460	2400	6970	4190	8080	1120	999	860
9	611	755	2110	1690	2910	2220	6400	4200	5840	1130	971	857
10	582	901	1820	1750	2720	2380	7030	4520	4420	1570	981	848
11	555	868	1490	1810	3610	2170	5640	3770	3480	1450	975	816
12	580	844	1320	1880	4300	1950	4500	3860	3010	1230	969	790
13	939	827	1350	2070	3650	1830	4540	16300	3170	1140	1110	795
14	807	808	1680	2070	3060	1680	11500	25000	3870	1170	1150	800
15	921	790	2100	2010	2610	1570	25000	16200	6560	1160	1100	890
16	865	780	2050	1950	2400	2370	15600	10300	5750	1130	1060	1650
17	896	771	2920	1810	2410	3170	10200	9450	4190	1090	2600	1150
18	907	761	15100	1730	2300	2680	9110	14700	3770	1110	2360	956
19	835	775	10900	1590	2130	2260	8990	14300	3510	1160	1380	895
20	759	1130	7460	1460	2070	2360	8420	10500	2880	1340	1220	844
21	651	1320	5800	1580	2800	4450	7340	8570	2140	1160	1140	826
22	601	1140	4950	1590	3280	3960	6210	7420	1760	1110	1070	834
23	766	1010	4230	1610	3110	3180	5250	6480	1660	1130	1160	797
24	3380	989	4740	1980	2700	2850	3940	5850	1600	2330	2010	790
25	2840	1960	4430	3430	2460	3010	3270	5610	1530	1730	1850	776
26	2010	3470	3800	2890	2410	6230	2970	5360	1420	1310	1370	777
27	1590	2430	3460	2540	2530	18600	2740	5030	1380	1200	1150	1290
28	1620	2410	2990	2310	2450	12300	2960	4740	1650	1220	1030	2660
29	1470	2500	2780	2180	---	9180	4520	4530	1640	1200	968	1670
30	1230	3810	2030	3670	---	8910	4000	4330	1410	1350	931	1170
31	1000	---	1870	7670	---	8220	---	5600	---	1260	924	---
TOTAL	31885	37944	120620	65920	102640	130540	216420	243450	111320	39330	37878	30616
MEAN	1029	1265	3891	2126	3666	4211	7214	7853	3711	1269	1222	1021
MAX	3380	3810	15100	7670	9350	18600	25000	25000	12600	2330	2600	2660
MIN	546	669	1320	1440	2070	1570	2740	3650	1380	1090	924	776
CFSM	0.33	0.41	1.25	0.68	1.18	1.36	2.32	2.53	1.19	0.41	0.39	0.33
IN.	0.38	0.45	1.44	0.79	1.23	1.56	2.59	2.92	1.33	0.47	0.45	0.37

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2002, BY WATER YEAR (WY)

MEAN	1811	3014	4738	4805	5507	6690	5889	4027	2921	2256	1685	1743
MAX	6760	11520	11880	11620	12360	13040	13620	10880	11090	7925	6505	5804
(WY)	1991	1986	1991	1993	1990	1993	1957	1996	1989	1958	1980	1975
MIN	531	439	540	714	887	1606	1861	1271	966	916	777	739
(WY)	1992	1992	1961	1961	1963	1969	1971	1962	1992	1965	1991	1999

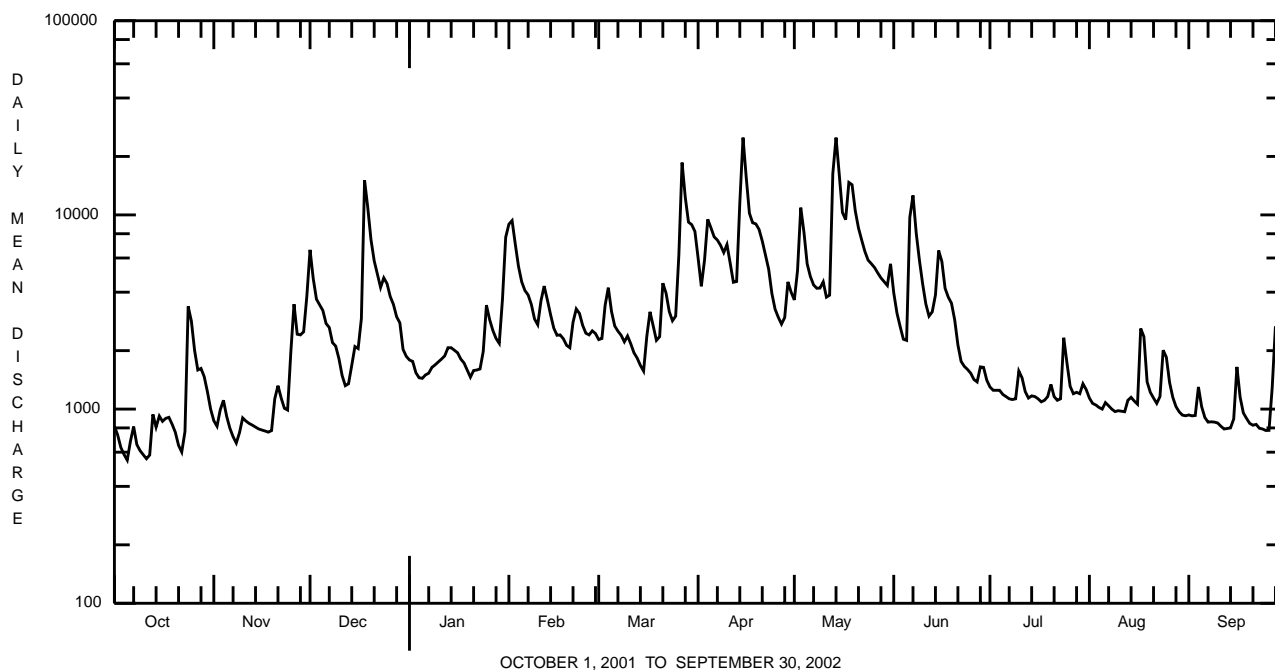
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## 03107500 BEAVER RIVER AT BEAVER FALLS, PA--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1957 - 2002	
ANNUAL TOTAL	855755		1168563			
ANNUAL MEAN	2345		3202		3748	
HIGHEST ANNUAL MEAN					5146	1997
LOWEST ANNUAL MEAN					1938	1963
HIGHEST DAILY MEAN	15100	Dec 18	25000	Apr 15 <sup>a</sup>	65400	Jan 22 1959
LOWEST DAILY MEAN	546	Oct 5	546	Oct 5	320	Nov 5 1991
ANNUAL SEVEN-DAY MINIMUM	635	Oct 5	635	Oct 5	333	Nov 1 1991
MAXIMUM PEAK FLOW			27100	Apr 15	<sup>b</sup> 69900	Jan 22 1959
MAXIMUM PEAK STAGE			9.53	Apr 15	14.42	Jan 22 1959
ANNUAL RUNOFF (CFSM)	0.75		1.03		1.21	
ANNUAL RUNOFF (INCHES)	10.25		14.00		16.39	
10 PERCENT EXCEEDS	5390		7420		8260	
50 PERCENT EXCEEDS	1620		2010		2320	
90 PERCENT EXCEEDS	791		822		900	

<sup>a</sup> Also May 14.

<sup>b</sup> From rating curve extended above 57,000 ft<sup>3</sup>/s.



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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)	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 UNFLTRD FET LAB (MG/L AS CACO3) (00417)	FLUO-RIDE, TOTAL (MG/L AS F) (00951)
APR 2002	17...	9813	10260	40	5.3	7.6	347	16.3	120	35.5	7.6	54	<.2
JUN	04...	9813	2200	40	7.8	7.6	435	20.2	140	41.1	9.2	72	<.2
AUG	06...	9813	1100	40	5.1	7.6	544	28.0	170	48.7	12.5	86	.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-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)
APR 2002	48.8	290	84	.070	.91	<.040	1.7	.07	.210	6.2	10	4970
JUN	57.8	318	<2	.070	1.04	.050	1.5	.05	.070	5.8	<10	610
AUG	71.4	364	22	.090	1.56	<.040	2.1	.14	.170	5.6	<10	750

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	350	<50	50	<5
JUN	120	<50	20	<5
AUG	170	<50	<10	<5