

Water-Data Report 2006

03105500 BEAVER RIVER AT WAMPUM, PA

Upper Ohio-Beaver Basin
Beaver Subbasin

LOCATION.--Lat 40°53'19", long 80°20'14" referenced to North American Datum of 1927, Lawrence County, PA, 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 river mile 15.4.

DRAINAGE AREA.--2,235 mi².

SURFACE-WATER 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-85-3: 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. Satellite telemetry at station.

COOPERATION.--Station established and maintained by the U.S. Geological Survey in cooperation with the U.S. Army Corps of Engineers, Pittsburgh District and the Pennsylvania Department of Environmental Protection.

REMARKS.--Records good except those for estimated daily discharges, which are poor. 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.

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

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,290	1,940	5,080	2,770	3,270	1,680	847	1,730	3,420	1,990	7,510	3,080
2	1,140	2,070	4,580	3,340	3,010	1,750	901	1,350	3,660	1,610	5,560	3,300
3	1,020	1,930	4,440	7,460	4,550	1,980	939	1,210	5,930	1,500	5,400	4,020
4	966	1,710	4,280	5,930	5,550	1,740	1,060	1,210	5,080	2,560	6,060	3,330
5	942	1,490	3,640	5,160	6,840	1,570	998	1,190	4,470	4,160	5,240	e2,990
6	917	1,420	3,410	5,060	6,610	1,410	959	1,140	3,450	5,000	4,880	2,830
7	937	1,380	3,240	4,860	5,780	1,360	1,120	1,060	2,700	4,390	4,290	3,010
8	995	1,370	2,680	4,540	5,210	1,300	1,820	1,040	2,080	3,450	3,510	2,280
9	1,100	1,440	2,570	4,020	4,840	1,350	1,660	1,010	1,460	3,160	2,780	1,930
10	1,080	1,570	1,940	3,540	4,300	1,770	1,310	968	1,300	3,200	2,160	1,680
11	1,060	1,500	1,810	3,370	3,770	1,780	1,100	1,070	1,180	8,730	2,010	1,570
12	985	1,440	1,790	3,310	3,380	5,410	1,010	1,940	1,130	8,390	1,910	1,580
13	936	1,390	1,700	3,030	3,030	7,490	1,740	1,720	1,110	7,230	1,850	2,790
14	901	1,360	1,660	3,230	2,720	9,670	1,690	1,370	1,080	6,280	1,600	4,160
15	877	2,690	1,670	3,450	2,390	6,680	1,560	3,090	1,020	6,440	1,730	5,420
16	850	3,060	1,590	2,990	2,210	4,830	1,340	8,000	989	5,890	1,640	4,870
17	840	2,510	1,550	2,800	2,610	3,560	1,190	8,520	957	5,040	1,650	4,430
18	840	2,030	1,500	4,700	2,710	3,060	1,030	7,740	919	4,120	1,620	3,830
19	916	1,900	1,490	5,340	2,210	2,600	912	7,720	907	3,480	1,640	7,120
20	937	1,780	1,420	4,940	1,900	2,230	915	6,600	1,040	3,000	1,880	7,230
21	952	1,710	1,440	4,690	1,790	2,090	924	5,340	945	2,980	1,980	5,400
22	1,070	1,650	1,450	4,370	1,730	1,870	1,600	4,600	2,280	5,670	1,940	5,010
23	1,520	1,500	1,300	4,430	1,830	1,420	3,890	3,470	11,100	5,220	1,890	4,730
24	1,530	1,490	1,270	4,480	1,850	1,160	5,400	3,220	6,860	3,930	1,880	4,460
25	2,450	1,450	1,400	4,230	1,800	1,060	4,940	2,690	4,890	3,500	1,630	3,870
26	3,760	1,420	1,840	3,800	1,760	1,050	3,580	4,570	3,240	2,840	1,440	3,150
27	3,240	1,420	2,390	3,220	1,690	1,030	2,770	9,110	2,570	2,440	2,400	2,710
28	2,700	1,570	2,520	2,940	1,680	984	2,370	7,120	2,780	2,680	2,750	3,450
29	2,280	4,610	2,880	2,940	---	934	1,910	5,460	3,010	2,750	3,160	5,860
30	2,070	6,970	2,980	3,590	---	907	1,740	4,650	2,440	3,400	3,640	4,610
31	1,970	---	2,790	3,610	---	845	---	3,950	---	9,000	3,130	---
Total	43,071	59,770	74,300	126,140	91,020	76,570	53,225	113,858	83,997	134,030	90,760	114,700
Mean	1,389	1,992	2,397	4,069	3,251	2,470	1,774	3,673	2,800	4,324	2,928	3,823
Max	3,760	6,970	5,080	7,460	6,840	9,670	5,400	9,110	11,100	9,000	7,510	7,230
Min	840	1,360	1,270	2,770	1,680	845	847	968	907	1,500	1,440	1,570
Cfsm	0.62	0.89	1.07	1.82	1.45	1.11	0.79	1.64	1.25	1.93	1.31	1.71
In.	0.72	0.99	1.24	2.10	1.51	1.27	0.89	1.90	1.40	2.23	1.51	1.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,300	1,817	2,873	3,543	3,893	4,778	3,953	2,763	2,018	1,581	1,337	1,352
Max	5,888	7,936	7,978	13,030	8,779	9,098	9,226	8,362	8,004	7,667	5,272	8,772
(WY)	(1991)	(1986)	(1991)	(1937)	(1915)	(1916)	(1994)	(1996)	(1989)	(2003)	(2003)	(2004)
Min	168	278	447	534	304	1,074	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

	Calendar Year 2005		Water Year 2006		Water Years 1915 - 2006	
Annual total	1,270,341		1,061,441			
Annual mean	3,480		2,908		2,601	
Highest annual mean					4,796	2004
Lowest annual mean					834	1934
Highest daily mean	^a 25,500	Jan 6	11,100	Jun 23	47,500	Jan 22, 1959
Lowest daily mean	^a 535	Sep 15	840	Oct 17 ^c	88	Oct 5, 1914
Annual seven-day minimum	^b 604	Sep 15	880	Oct 13	94	Oct 3, 1914
Maximum peak flow			13,900	Jun 23	^d 50,100	May 28, 1946
Maximum peak stage			^e 9.83	Jun 23	^f 21.53	May 28, 1946
Instantaneous low flow					^g 74	Jul 30, 1933
Annual runoff (cfsm)	1.56		1.30		1.16	
Annual runoff (inches)	21.14		17.67		15.81	
10 percent exceeds	8,120		5,410		5,940	
50 percent exceeds	1,710		2,390		1,470	
90 percent exceeds	840		1,020		588	

^a Estimated

^b Computed using estimated daily discharges.

^c Also Oct 18.

^d From slope rating curve extended above 28,000 ft³/s on basis of contracted-opening measurement at gage height 21.44 ft.

^e From peak-stage indicator.

^f Maximum gage height, 24.86 ft, Jan 22, 1959 (backwater from Conoquenessing Creek).

^g Minimum discharge observed.

