

MONONGAHELA RIVER BASIN

03075070 MONONGAHELA RIVER AT ELIZABETH, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°15'44", long 79°54'05", Allegheny County, Hydrologic Unit 05020005, on right bank 30 ft landward from upstream end of guide wall, 1,050 ft upstream from dam at lock 3 at Elizabeth, 0.4 mi downstream from Lobbs Creek, at mile 24.0.

DRAINAGE AREA.--5,340 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year. Published as "*at Charleroi*" (station 03075000) October 1933 to September 1976. Monthly discharge prior to 1940, adjusted for reservoir contents, published in WSP 1305. Records for March 1886 to March 1905 (high-water periods, only), published in WSP 169, are unreliable and should not be used (peak discharge of July 11, 1888, as published in WSP 183, is still considered reliable).

REVISED RECORDS.--WSP 758: Drainage area. WSP 783: 1888 (M). WSP 1435: 1934, 1936. See also "*PERIOD OF RECORD.*"

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 717.90 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). From Oct. 1, 1967 to Sept. 30, 1976, at site 17.5 mi upstream at datum 15.70 ft higher. Prior to Oct. 1, 1967, water-stage recorder at site 17.9 mi upstream at datum 17.43 ft higher. Oct. 1, 1965 to Sept. 30, 1967, auxiliary staff gage, Apr. 14, 1966 to Sept. 30, 1967, auxiliary water-stage recorder and Oct. 1, 1967 to Nov. 4, 1990, water-stage recorder at present site at datum 7.60 ft higher.

REMARKS.--No estimated daily discharges. Records good, except those below 2,500 ft³/s, which are poor. Flow regulated by locks above station, since 1938 by Tygart Lake (station 03055500), since May 1926 by Lake Lynn, and since April 1989 by Stonewall Jackson Lake, combined capacity, 432,000 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

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	1510	1880	2530	2630	9130	5420	21000	30400	3280	1730	3640	766
2	1740	988	2170	1790	7370	2290	17200	22200	4620	1660	3420	1110
3	2100	2090	2880	2150	6940	3010	15800	24500	4170	1970	2740	1190
4	1860	1750	2810	2990	6700	8000	17800	23500	3660	1940	1460	674
5	1700	1200	5950	1650	8210	5500	15400	19300	5580	1140	1590	818
6	1660	3350	1770	1310	5170	6350	11800	13900	9620	1840	3040	1250
7	1670	883	1690	1320	3480	4150	8110	13100	17000	1050	1330	676
8	1060	1700	1630	1710	4600	5060	7140	15600	11900	1350	1190	1470
9	1670	1660	2710	1690	2700	3150	6270	25000	7950	2380	1910	1030
10	2130	1050	4440	1780	2760	2620	5280	19600	6660	1900	1030	629
11	1060	503	4150	8980	4960	4420	7240	24100	5510	9620	683	954
12	1500	838	4100	19100	8270	4800	5300	21300	3500	6820	1110	991
13	1720	1200	4070	9920	6180	3850	3160	17800	3270	4870	2020	774
14	1460	969	3540	9740	7230	2980	5950	19300	12500	4840	1460	943
15	1240	760	2480	10200	7540	2090	9620	17800	10100	6830	779	921
16	2040	1220	2420	8830	5990	4510	27900	19300	6850	7500	1390	1010
17	1920	762	4710	7450	3640	9540	19300	16900	7510	4750	1320	1250
18	1760	1440	10100	8260	5680	14500	20400	30600	6230	4470	614	1350
19	1940	1030	12300	7660	3830	15600	19400	33900	5700	3920	1260	1660
20	1700	365	9660	4440	3820	29900	15100	24700	2780	4620	1770	773
21	1510	716	6810	3890	3750	71400	12400	18300	3420	4430	1040	814
22	1220	511	5300	4710	6590	36000	30900	14000	3290	4630	1430	1370
23	2030	1030	5780	4610	5500	28000	44400	12800	1450	3070	932	728
24	925	972	4810	11200	2840	24300	31100	8010	1550	4000	1980	903
25	2580	1640	5920	35400	2760	21300	27100	6030	1270	3170	1610	855
26	847	1780	5100	29800	6310	24300	22800	6710	1930	3680	2000	1250
27	1130	2390	5610	22200	7940	47200	18600	5240	2280	6410	1470	4200
28	1760	2810	3670	19100	6540	22200	21500	5930	2900	12500	2560	5010
29	1300	3410	3090	17100	---	15500	54300	4180	1500	9000	822	6130
30	913	2840	3520	13400	---	11500	35400	4500	2250	7160	787	3330
31	1430	---	3310	13600	---	9550	---	3950	---	4570	1430	---
TOTAL	49085	43737	139030	288610	156430	448990	557670	522450	160230	137820	49817	44829
MEAN	1583	1458	4485	9310	5587	14480	18590	16850	5341	4446	1607	1494
MAX	2580	3410	12300	35400	9130	71400	54300	33900	17000	12500	3640	6130
MIN	847	365	1630	1310	2700	2090	3160	3950	1270	1050	614	629
(†)	-700	-384	-210	+41	+55	+1420	+1280	-1020	-40	+49	-434	-462

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2002, BY WATER YEAR (WY)

	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	3559	6604	11470	13490	15440	18030	13510	10240	6337	4381	4118	2933																																																									
MAX	16770	33750	29760	37480	33170	41930	26500	33610	24840	13570	17890	13300																																																									
(WY)	1980	1986	1973	1937	1994	1963	1940	1996	1981	1958	1956	1945																																																									
MIN	475	400	1991	2249	3210	6636	4478	2128	1009	915	812	581																																																									
(WY)	1954	1954	1966	1977	1934	1987	1971	1982	1936	1966	1957	1936																																																									

† Change in contents, equivalent in cubic feet per second, in Tygart Lake, Stonewall Jackson Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Energy Supply. Records of contents in Tygart Lake and Stonewall Jackson Lake furnished by U.S. Army Corps of Engineers.

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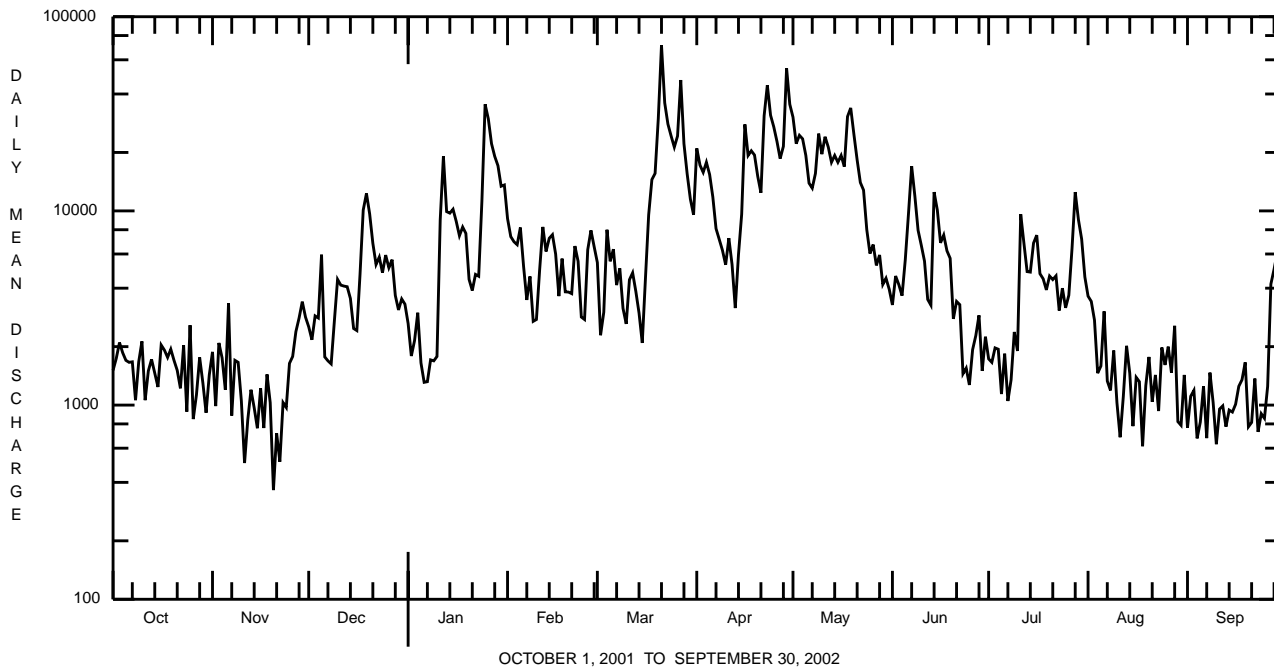
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SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1934 - 2002	
ANNUAL TOTAL	2580053		2598698			
ANNUAL MEAN	7069 † -9		7120 † -414		9149	
HIGHEST ANNUAL MEAN					14400 1996	
LOWEST ANNUAL MEAN					5282 1954	
HIGHEST DAILY MEAN	51500	Jan 31	71400	Mar 21	158000	Jan 20 1996
LOWEST DAILY MEAN	365	Nov 20	365	Nov 20	206	Jun 29 1936
ANNUAL SEVEN-DAY MINIMUM	836	Nov 17	836	Nov 17	301	Oct 1 1936
MAXIMUM PEAK FLOW			81800	Mar 21	a 178000	Nov 6 1985
MAXIMUM PEAK STAGE			20.18	Mar 21	b 30.39	Jan 20 1996
10 PERCENT EXCEEDS	17900		19300		22200	
50 PERCENT EXCEEDS	3890		3660		5120	
90 PERCENT EXCEEDS	1360		1020		1140	

† Change in contents, equivalent in cubic feet per second, in Tygart Lake, Stonewall Jackson Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Energy Supply. Records of contents in Tygart Lake and Stonewall Jackson Lake furnished by U.S. Army Corps of Engineers.

a From rating curve extended above 110,000 ft³/s.

b Gage height 23.60 ft, datum then in use.



MONONGAHELA RIVER BASIN

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(Pennsylvania Water-Quality Network Station)

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) (00028)	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	11...	1400	9813	4350	40	8.5	7.4	255	12.9	88	25.0	6.1	32	<.2
JUN	06...	1315	9813	7220	40	9.4	7.2	330	20.4	110	29.9	8.7	34	<.2
AUG	07...	0930	9813	1450	40	6.7	7.6	239	25.0	72	20.5	5.2	26	<.2

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)	CYANIDE AMEN-ABLE TO CHLOR-INATION UNFLTRD (MG/L) (00722)	IRON, TOTAL RECOV-ERABLE (µG/L AS FE) (01045)	
APR 2002	11...	66.0	174	24	.050	.69	<.040	.90	.03	.020	1.8	<10	<1.00	640
JUN	06...	96.1	218	18	.050	.48	<.040	.71	.02	.020	1.7	<10	<1.00	680
AUG	07...	63.0	140	8	.080	.55	<.040	.70	.01	.010	2.9	<10	<1.00	200

Date	LEAD, TOTAL RECOV-ERABLE (µG/L AS PB) (01051)	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	11...	1.7	130	<50	20	<5
JUN	06...	<1.0	200	<50	20	<5
AUG	07...	<1.0	80	<50	<10	<5