

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°23'28", long 79°51'30", Allegheny County, Hydrologic Unit 05020005, near right bank on river guide wall 300 ft upstream from dam at lock 2 at Braddock, 1,700 ft downstream from Turtle Creek, and 11.2 mi upstream of confluence with Allegheny River.

DRAINAGE AREA.--7,337 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder and fixed-crest concrete dam control with streamward lock chamber usable as floodway during high flow since 1951. Datum of gage is 709.66 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers benchmark). Prior to Aug. 13, 1951, at site 700 ft upstream, and Aug. 13, 1951 to Nov. 8, 1990 at present site at datum 2.50 ft lower.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by locks and hydroelectric plants, since January 1925 by Deep Creek Reservoir (station 03076000), since 1926 by Lake Lynn, since May 1938 by Tygart Lake (station 03055500), since December 1942 by Youghiogheny River Lake (station 03077000), and since April 1989 by Stonewall Jackson Lake, combined capacity, 779,000 acre-ft. Figures of daily discharge include slight diversion from Beaver Run Reservoir in the Kiskiminetas River Basin to the borough of Jeannette in the Monongahela River Basin. U.S. Army Corps of Engineers satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 38.8 ft from floodmarks, discharge, 210,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4290	13300	10600	18800	6300	26200	8200	5370	22000	4650	9460	9670
2	2940	11100	11100	49000	7860	22900	10400	5530	40300	3570	7400	21800
3	2200	9950	9930	41200	8700	27300	13000	5960	34700	3520	5920	30100
4	2340	8090	10600	42500	14700	30700	12700	6570	65700	4520	7420	33300
5	3660	7740	7380	36100	27900	28200	14000	10200	50700	4870	7180	39200
6	2310	8830	7370	28700	21500	50300	16000	16500	39800	4530	5490	29300
7	2030	13900	7230	26300	20200	60800	17600	19700	35200	4990	5210	17400
8	2520	15900	4880	20500	18200	47400	29600	20700	47000	19500	6330	12500
9	2470	12100	6000	16000	14600	46300	33000	35500	38200	38400	5870	11200
10	2470	11500	6510	16300	9940	52900	31500	66100	30600	36900	9910	9010
11	2620	10900	4800	14100	9200	40700	32500	67500	24100	43500	9860	7950
12	3710	9550	5530	13400	8640	33300	31500	53400	19000	34600	8900	6200
13	3580	14100	11600	11800	7440	29900	28400	41800	14200	22900	10400	4420
14	4960	12800	27600	11700	6590	38900	23400	43500	16600	17900	9990	4820
15	3920	11400	36800	11000	5940	45200	22100	38900	22400	13300	8670	4630
16	6330	11400	24800	8730	6080	39800	17500	34100	23600	10900	7020	6100
17	8700	13000	21400	5560	6480	40500	15300	27600	21000	9280	6480	5900
18	10900	22300	17800	6510	6690	39900	11000	22000	25100	7210	7130	6600
19	9280	19400	16500	3990	8500	33200	8210	18900	25300	8220	10600	14900
20	7360	20500	17200	4870	9960	27600	6430	19200	23500	6450	10400	42900
21	7020	20600	36500	4940	9350	24700	6940	17500	28300	6060	6710	28500
22	7270	17200	27900	5660	14300	26400	7640	15600	27100	5320	4680	24200
23	6750	13300	20400	6160	64100	23800	7720	14500	20600	4930	3500	24800
24	5150	12200	20200	6740	90400	17600	8420	20500	16200	6080	4320	25800
25	6010	10200	17100	5400	46700	15900	7820	20900	10900	5520	3860	20400
26	4630	9890	22300	3710	36800	16100	8050	18100	8490	4900	3370	16800
27	4060	11300	19000	4880	37400	12200	6080	12700	7470	4450	5270	13000
28	6290	9470	15300	4710	31800	9770	7100	11800	5930	3050	16700	12300
29	5710	9410	13400	4950	---	8270	4870	8840	5100	7100	10000	16600
30	8780	9590	12900	5220	---	5580	5720	8230	4670	8220	8970	14800
31	13800	---	13600	5660	---	8570	---	9570	---	6460	10500	---
TOTAL	164060	380920	484230	445090	556270	930890	452700	717270	753760	361800	237520	515100
MEAN	5292	12700	15620	14360	19870	30030	15090	23140	25130	11670	7662	17170
MAX	13800	22300	36800	49000	90400	60800	33000	67500	65700	43500	16700	42900
MIN	2030	7740	4800	3710	5940	5580	4870	5370	4670	3050	3370	4420
CFSM	0.72	1.73	2.13	1.96	2.71	4.09	2.06	3.15	3.42	1.59	1.04	2.34
IN.	0.83	1.93	2.46	2.26	2.82	4.72	2.30	3.64	3.82	1.83	1.20	2.61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

MEAN	5295	9240	15310	17040	20690	23980	18800	14370	9442	6403	5836	4812
MAX	23130	42130	37600	36150	43120	54500	39180	40310	30240	15620	23720	18290
(WY)	1980	1986	1973	1952	1956	1963	1940	1996	1981	1958	1956	1971
MIN	1200	971	2748	3389	6387	8042	6473	3352	2107	1765	1531	1005
(WY)	1954	1954	1954	1977	1954	1969	1971	1982	1965	1966	1957	1946

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

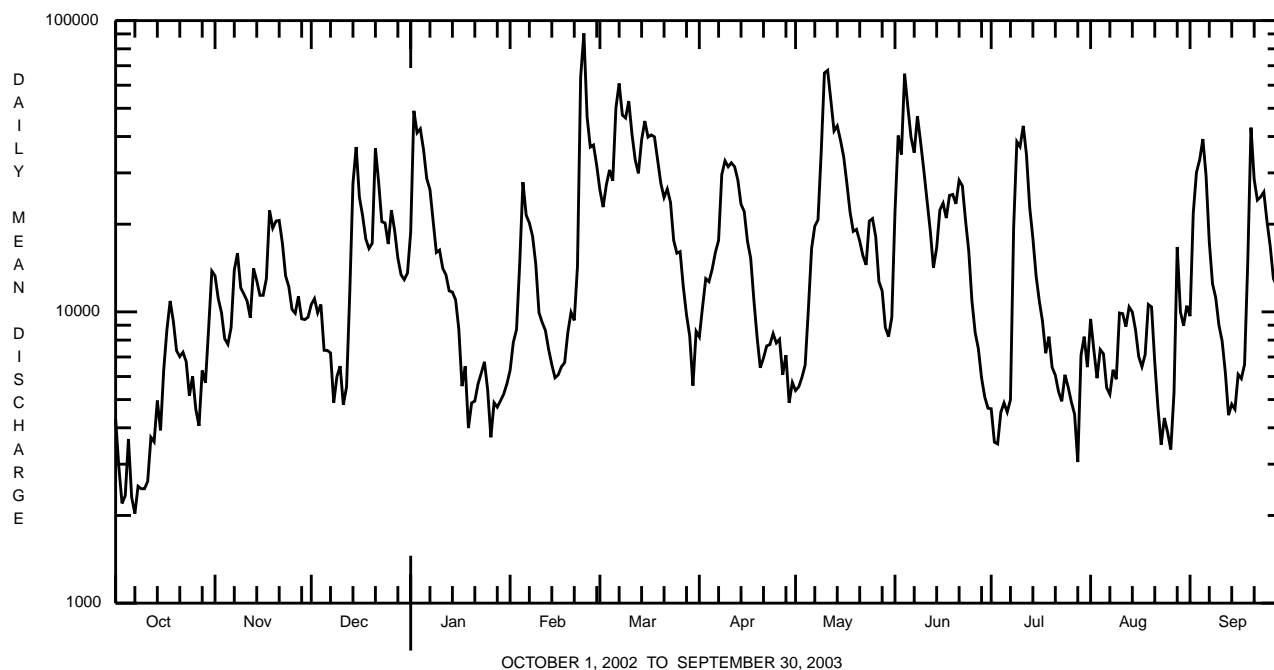
SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	4284470		5999610			
ANNUAL MEAN	11740		16440		12550	
HIGHEST ANNUAL MEAN					18440	
LOWEST ANNUAL MEAN					6946	
HIGHEST DAILY MEAN	a94600	Mar 21	90400	Feb 24	188000	Jan 20 1996
LOWEST DAILY MEAN	1640	Sep 10	2030	Oct 7	703	Sep 3 1946 ^b
ANNUAL SEVEN-DAY MINIMUM	1840	Sep 7	2500	Oct 3	839	Nov 17 1953
MAXIMUM PEAK FLOW			108000	Feb 24	c210000	Jan 20 1996
MAXIMUM PEAK STAGE			20.39	Feb 24	d29.07	Jan 20 1996
ANNUAL RUNOFF (CFMS)	1.60		2.24		1.71	
ANNUAL RUNOFF (INCHES)	21.72		30.42		23.25	
10 PERCENT EXCEEDS	27900		36800		29300	
50 PERCENT EXCEEDS	7900		11200		7700	
90 PERCENT EXCEEDS	2280		4850		2270	

a Based on river summation.

b Also Sept. 4, 22, 1946.

c From rating curve extended above 183,000 ft³/s.

d Maximum gage height, 31.39 ft, June 24, 1972 (backwater from Allegheny River). Datum then in use.



MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued
(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 242-289.

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 2002 TO SEPTEMBER 2003

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, μ S/cm 25 degC (00095)	Temperature, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water unfltrd recover mg/L (00916)	Magnesium, water, unfltrd recover mg/L (00927)	ANC, wat unfl fixed end pt, lab, mg/L as CaCO3 (00417)
NOV 2002 04...	0930	1028	9813	7860	40	10.7	7.8	290	9.8	95	27.5	6.3	32
MAY 2003 28...	1410	1028	9813	11800	40	9.6	7.8	306	17.0	100	30.4	7.0	43
JUL 08...	1425	1028	9813	20000	40	8.4	7.5	365	--	130	36.1	9.8	47
SEP 09...	1320	1028	9813	11500	40	8.4	7.2	208	23.0	70	20.4	4.6	34

Date	Fluoride, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd mg/L as N (00610)	Nitrate water, unfltrd mg/L as N (00620)	Nitrite water, unfltrd mg/L as N (00615)	Ortho-phosphate, water, unfltrd mg/L as P (70507)	Phosphorus, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover mg/L (01105)	Copper, water, unfltrd recover mg/L (01042)
NOV 2002 04...	<.2	72.1	214	14	.080	.90	<.040	.02	.027	1.3	2.8	400	<10
MAY 2003 28...	<.2	75.8	196	<2	.050	.60	<.040	.05	.029	.83	2.1	1000	<10
JUL 08...	.3	91.6	272	38	.040	.68	<.040	.05	.069	1.2	2.2	1500	<10
SEP 09...	<.2	46.7	154	26	.040	.62	<.040	.05	.032	.72	2.5	800	<10

Date	Cyanide amenable to chlorination, wat unfltrd recover mg/L (00722)	Iron, water, unfltrd recover mg/L (01045)	Lead, water, unfltrd recover mg/L (01051)	Manganese, water, unfltrd recover mg/L (01055)	Nickel, water, unfltrd recover mg/L (01067)	Zinc, water, unfltrd recover mg/L (01092)	Phenolic compounds, water, unfltrd recover mg/L (32730)
NOV 2002 04...	<1.00	820	1.2	110	<50	<10	<5
MAY 2003 28...	<1.00	1140	1.2	120	<50	10	<5
JUL 08...	<1.00	2370	3.1	160	<50	50	<5
SEP 09...	<1.00	1250	1.3	120	<50	90	<5

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using rapid bioassessment protocols for benthic macroinvertebrates using a D-Frame net with a mesh size of 500 μ m. Samples represent counts per 100 (approximate) subsamples.

Date	10/1/02
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	14
Mollusca	
Bivalvia (CLAMS)	
Veneroidea	
Sphaeriidae	2
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Naididae	33
Arthropoda	
Crustacea	
Cladocera	229
Amphipoda (SCUDS)	
Gammaridae	
<u>Gammarus</u> sp	1
Insecta	
Ephemeroptera (MAYFLIES)	
Heptageniidae	1
Tricorythidae	
<u>Tricorythodes</u> sp	1
Trichoptera (CADDISFLIES)	
Hydroptilidae	1
Polycentropodidae	
<u>Neureclipsis</u> sp	26
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	189
Empididae (DANCE FLIES)	
<u>Hemerodromia</u> sp	1
Total Organisms	498