

OHIO RIVER MAIN STEM

03036500 ALLEGHENY RIVER AT KITTANNING, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°49'13", long 79°31'54", Armstrong County, Hydrologic Unit 05010006, on right bank 600 ft upstream from dam at lock 7, 3,000 ft upstream from bridge on SR 1038 at Kittanning, 5.7 mi upstream from Crooked Creek, and 9.7 mi downstream from Mahoning Creek, at mile 45.8.

DRAINAGE AREA.--8,973 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1904 to September 1928, October 1934 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 873: Drainage area. WSP 1305: 1906 (M), 1914, 1925. WSP 1435: 1936-37, 1939.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 773.40 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Sept. 30, 1928, nonrecording gage at site 4,000 ft downstream at different datum. Oct. 1, 1934 to Apr. 19, 1939, nonrecording gage, Apr. 20, 1939 to Sept. 27, 1990, water-stage recorder at present site at different datum.

REMARKS.--Records good except those for estimated daily discharges and those below 2,000 ft³/s, which are poor. Sharp rises and drops in discharge during periods of low flow may be caused by hydroelectric power production. Flow regulated since 1924 by Piney Reservoir, since December 1940 by Tionesta Lake, since June 1941 by Mahoning Creek Lake, since November 1949 by Chautauqua Lake (station 03013946), since June 1952 by East Branch Clarion River Lake (station 03027000), since October 1965 by Allegheny Reservoir (station 03012520), since July 1970 by Union City Reservoir (station 03021518), and since January 1974 by Woodcock Creek Lake (station 03022550). 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4460	4070	10400	28600	e5500	18700	28000	5950	17600	5060	36100	10900
2	3860	4690	11100	53900	e5940	17300	22700	6110	19800	4640	35600	29900
3	3300	5240	10400	44900	e5840	15800	22200	7340	18500	4310	31000	35000
4	3100	5360	9200	37900	e8330	16600	20200	8120	18600	4300	27200	34300
5	3000	6140	8030	35500	e13200	15600	30600	8030	17500	4060	25600	27300
6	2860	6250	7610	32000	e15500	16100	57100	7430	16100	4240	26000	22100
7	2590	7710	7060	28600	18000	15900	46700	10100	14400	6260	23000	17700
8	2800	8260	7200	25800	16600	15700	41300	11600	14300	5750	22000	14100
9	3090	8940	6110	23900	15400	19100	36900	11900	17300	5480	21000	13300
10	3110	8310	6200	22200	13500	23800	41500	14800	18300	5540	23200	11900
11	3240	9710	5520	19300	12100	22200	39900	15300	17600	6690	27200	10900
12	3020	12100	7210	15800	11100	20200	38100	14600	16800	7840	25800	10500
13	3700	12600	10600	13000	9410	19800	37100	15700	41700	6340	26000	8890
14	3180	11600	17300	11500	9310	26100	33600	19100	47600	5970	25700	7840
15	3070	10100	31500	11300	8740	26200	28600	24000	36700	4690	26300	7640
16	3350	9190	30500	9120	8260	27300	23000	24600	32800	4380	22900	9660
17	e4010	11000	28100	e7750	e8300	39700	17900	20800	27700	4620	16500	9230
18	e4480	13700	25000	e6500	e7200	51000	14700	21800	24600	5140	13700	9270
19	e3930	15400	22100	e5150	e7000	55600	12100	20200	e21700	4990	12900	11100
20	3680	16800	25100	e5700	e7100	52100	10800	17900	e18200	6750	9640	11300
21	4510	17000	40300	e6300	e7300	49400	11100	22100	14800	6730	8030	11100
22	5660	16600	36800	e6900	e8300	51900	12200	23100	12300	52000	6880	11200
23	4950	16600	31500	e5800	13600	52500	14000	20600	11900	67200	5370	13600
24	4340	16900	29400	e4820	18600	51000	13000	19900	10700	54700	5660	17800
25	4190	16000	27400	e4690	20800	49000	11200	20100	8770	51700	5170	18500
26	4600	15000	25300	e4700	19300	44700	9810	18200	8120	45700	7780	16400
27	4940	14800	22900	e4900	17900	40900	8890	15200	7040	39500	19200	15300
28	5960	13500	19800	e5500	19500	39200	8610	13500	5990	61900	10500	16200
29	5630	10900	17400	e5400	---	35100	8730	12800	5400	54100	9170	18300
30	4990	10500	16000	e5300	---	33100	6720	9700	5460	43700	12700	17300
31	4670	---	15700	e5300	---	32100	---	10300	---	37500	11800	---
TOTAL	122270	334970	568740	498030	331630	993700	707260	470880	548280	621780	579600	468530
MEAN	3944	11170	18350	16070	11840	32050	23580	15190	18280	20060	18700	15620
MAX	5960	17000	40300	53900	20800	55600	57100	24600	47600	67200	36100	35000
MIN	2590	4070	5520	4690	5500	15600	6720	5950	5400	4060	5170	7640
CFSM	0.44	1.24	2.04	1.79	1.32	3.57	2.63	1.69	2.04	2.24	2.08	1.74
IN.	0.51	1.39	2.36	2.06	1.37	4.12	2.93	1.95	2.27	2.58	2.40	1.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2003, BY WATER YEAR (WY)

MEAN	8274	13980	18900	20800	20940	31840	27690	18410	11410	7062	5226	5607
MAX	31750	37830	55850	62840	45020	74110	66140	43650	40230	28200	19250	23500
(WY)	1991	1986	1928	1937	1990	1936	1940	1919	1989	1972	1977	1926
MIN	848	1155	1636	2752	4688	8342	6585	4860	2893	1511	1274	930
(WY)	1924	1909	1961	1961	1963	1969	1946	1941	1936	1966	1910	1909

e Estimated.

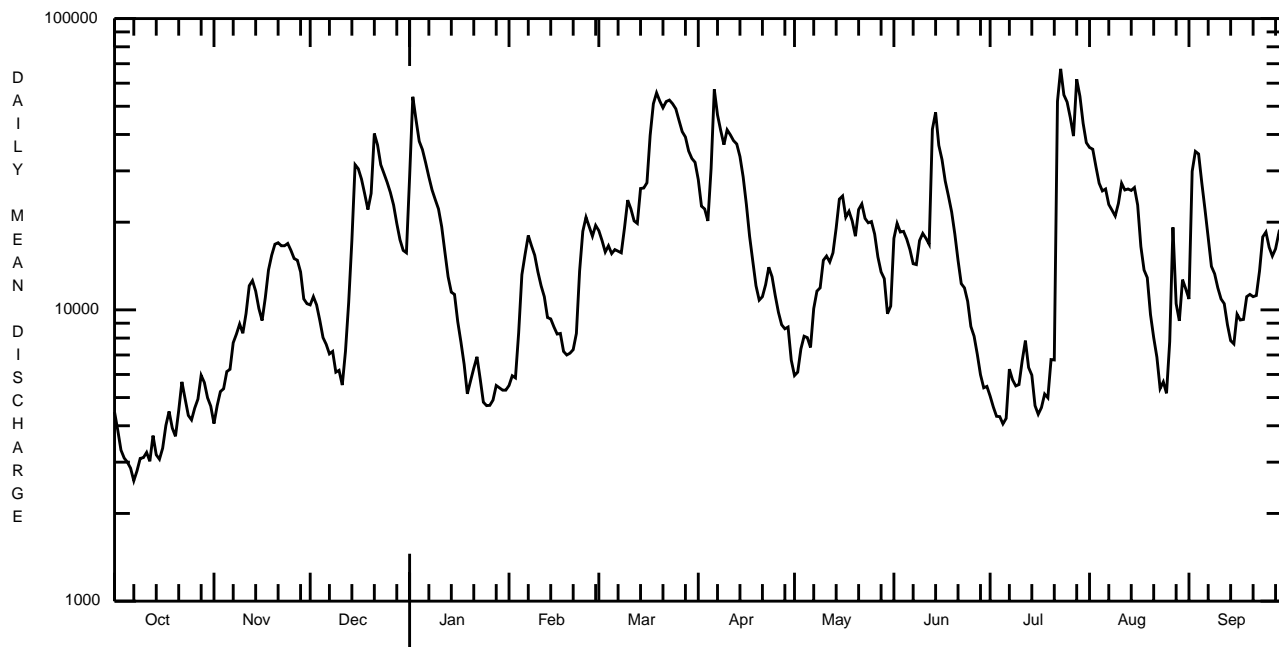
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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1904 - 2003	
ANNUAL TOTAL	5595330		6245670			
ANNUAL MEAN	15330		17110		15820	
HIGHEST ANNUAL MEAN					22400	
LOWEST ANNUAL MEAN					10080	
HIGHEST DAILY MEAN	83400	May 14	67200	Jul 23	253000	Mar 26 1913
LOWEST DAILY MEAN	2470	Aug 9	2590	Oct 7	570	Sep 15 1913 ^a
ANNUAL SEVEN-DAY MINIMUM	2940	Oct 4	2940	Oct 4	610	Sep 11 1913
MAXIMUM PEAK FLOW			88000	Jul 22	269000	Mar 26 1913
MAXIMUM PEAK STAGE			17.30	Jul 22	b 30.70	Mar 26 1913
ANNUAL RUNOFF (CFSM)	1.71		1.91		1.76	
ANNUAL RUNOFF (INCHES)	23.20		25.89		23.96	
10 PERCENT EXCEEDS	34200		36800		36900	
50 PERCENT EXCEEDS	11500		13600		10000	
90 PERCENT EXCEEDS	3160		4700		2270	

^a Also Sept. 16, 17, 1913.

^b From Floodmark, site and datum then in use.



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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 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 col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd µS/cm 25 degC (00095)	Temper- ature, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, unfltrd recover- able, mg/L (00916)	Magnes- ium, water, unfltrd recover- able, mg/L (00927)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (00417)
Date	Fluor- ide, 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, sus- pended, 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- phos- phate, water, unfltrd mg/L as P (70507)	Phos- phorus, water, unfltrd mg/L (00665)	Total nitro- gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Alum- inum, water, unfltrd recover- able, µg/L (01105)	Copper, water, unfltrd recover- able, µg/L (01042)
Date					Cyanide amen- able to chlor- ination recover wat unfltrd mg/L (00722)	Iron, water, unfltrd recover- able, µg/L (01045)	Lead, water, unfltrd recover- able, µg/L (01051)	Mangan- ese, water, unfltrd recover µg/L (01055)	Nickel, water, unfltrd recover µg/L (01067)	Zinc, water, unfltrd recover µg/L (01092)	Phen- olic com- pounds, water, unfltrd µg/L (32730)		
NOV 2002 25...	1400	1028	9813	14800	40	12.8	7.7	195	5.7	75	20.6	5.6	34
MAR 2003 26...	1315	1028	9813	45300	40	13.4	7.5	150	8.5	47	13.2	3.5	22
MAY 29...	1230	1028	9813	12500	40	9.8	7.9	183	18.5	63	17.6	4.6	30
JUL 17...	1345	1028	9813	4670	40	8.0	7.6	277	--	100	27.3	7.6	43
SEP 25...	1210	1028	9813	19100	40	9.5	7.6	221	18.0	79	21.7	6.1	43
NOV 2002 25...	<.2	35.4	170	<2	.030	.56	<.040	.01	.022	.76	3.0	200	<10
MAR 2003 26...	<.2	19.5	126	10	<.020	.60	<.040	.03	.038	.86	2.6	900	<10
MAY 29...	<.2	30.7	132	12	<.020	.34	<.040	.02	.023	.50	2.7	400	<10
JUL 17...	<.2	57.2	204	10	<.020	.42	<.040	.02	.018	.65	2.6	200	<10
SEP 25...	<.2	36.9	154	<2	<.020	.38	<.040	.02	.023	.50	3.3	400	<10
NOV 2002 25...					<1.00	450	<1.0	160	<50	<10	<5		
MAR 2003 26...					<1.00	1710	1.5	240	<50	50	<5		
MAY 29...					<1.00	640	<1.0	200	<50	<10	<5		
JUL 17...					1.33	370	<1.0	210	<50	20	<5		
SEP 25...					<1.00	720	<1.0	160	<50	90	<5		

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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 µm. Samples represent counts per 100 (approximate) subsamples.

Date	9/27/02
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	2
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancyliidae	
<u>Ferrissia</u> sp	1
Physidae	
<u>Physa</u> sp	4
Planorbidae	
<u>Planorbella</u> sp	12
Pleuroceridae	
<u>Leptoxis carinata</u>	3
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
<u>Sphaerium</u> sp	3
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Naididae	11
Arthropoda	
Crustacea	
Cladocera	20
Insecta	
Ephemeroptera (MAYFLIES)	
Caenidae	
<u>Caenis</u> sp	5
Heptageniidae	
<u>Stenacron</u> sp	32
Tricorythidae	
<u>Tricorythodes</u> sp	1
Trichoptera (CADDISFLIES)	
Hydroptilidae	
<u>Hydroptila</u> sp	2
Polycentropodidae	
<u>Neureclipsis</u> sp	2
<u>Polycentropus</u> sp	5
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	193
Total Organisms	296