



2004 Water Year MAHONING CREEK BASIN

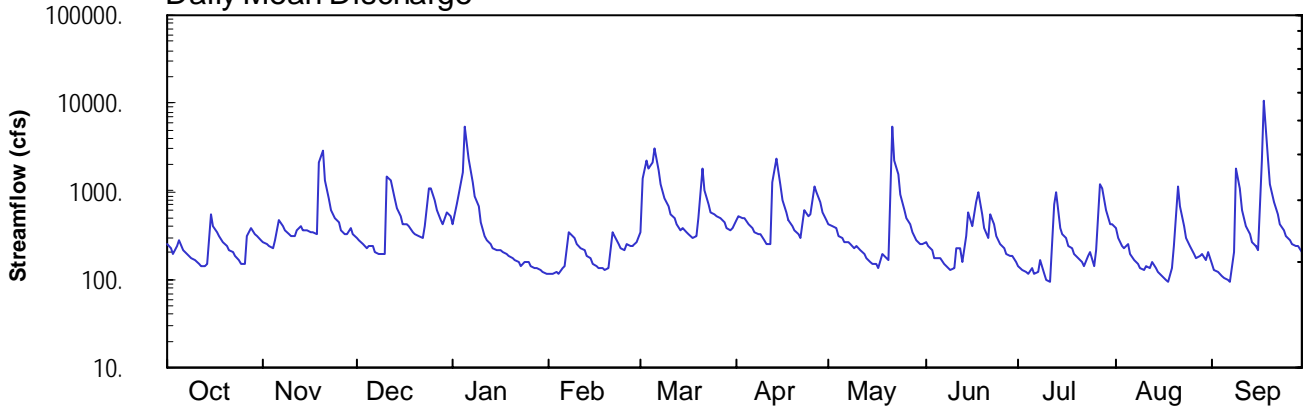
03034000 Mahoning Creek at Punxsutawney, PA

Latitude: 40° 56' 21"
Jefferson County

Longitude: 079° 00' 31"
Datum: 1206.14 feet

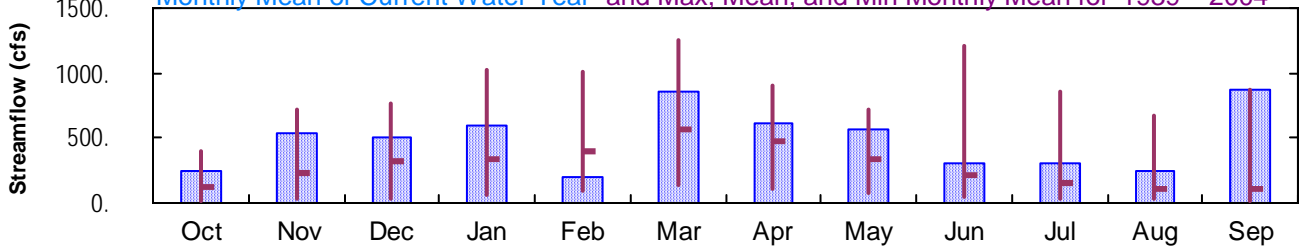
Hydrologic Unit Code: 05010006
Drainage Area: 158. mi²

Daily Mean Discharge

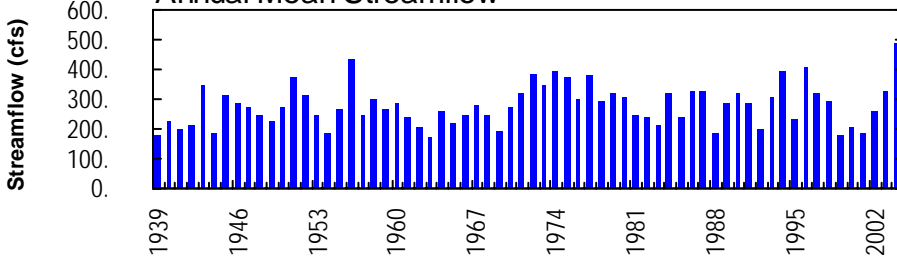


Monthly Statistics

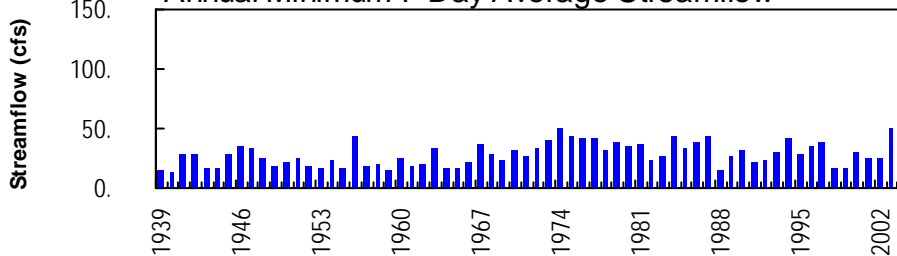
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1939 – 2004



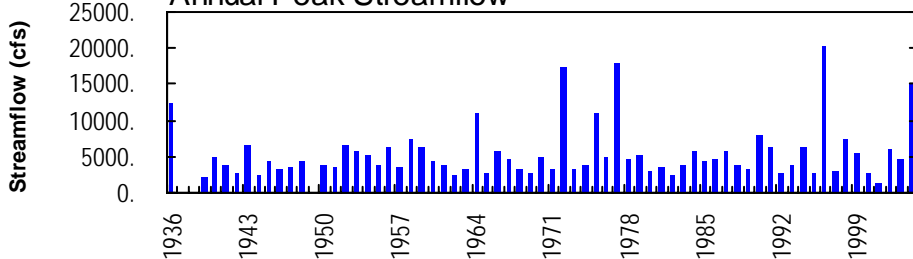
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



MAHONING CREEK BASIN

**03034000 MAHONING CREEK AT PUNXSUTAWNEY, PA
(Pennsylvania Water-Quality Network Station)**

LOCATION.--Lat 40°56'21", long 79°00'31", Jefferson County, Hydrologic Unit 05010006, on right bank 75 ft downstream from Williams Run, 1.8 mi upstream from bridge on Diamond Road at Sportsburg, 1.9 mi downstream from Sawmill Run, and 2 mi west of Punxsutawney.

DRAINAGE AREA.--158 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WDR PA-87-3: 1977-86 (P).

GAGE.--Water-stage recorder. Datum of gage is 1,206.14 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers benchmark). Prior to Oct. 1, 1946, at site 2.9 mi upstream at datum 13.30 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diurnal fluctuations at low flow by mine pumpage into stream upstream of station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 15.6 ft, from floodmark at former site and datum, discharge, 12,500 ft³/s, from rating curve extended above 5,500 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Nov. 19	2045	5,530	8.94	Apr. 13	2345	3,460	6.96
Jan. 5	0845	7,260	10.33	May 21	1100	12,100	13.72
Mar. 2	2315	2,990	6.44	July 12	2215	2,530	5.92
Mar. 6	0845	3,620	7.12	Sept. 18	0530	*15,100	*15.60

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	247	259	300	430	e115	344	460	419	260	139	380	149
2	222	248	277	725	e117	1410	532	408	242	129	290	131
3	197	235	251	933	e120	2240	500	377	212	120	244	120
4	242	222	232	1620	e118	1790	490	317	178	116	223	112
5	281	286	236	5490	e132	2160	426	295	174	137	254	104
6	221	473	244	2340	e141	3050	378	271	173	117	190	97
7	202	404	201	1300	e350	1730	351	260	153	123	167	94
8	186	368	193	880	e330	1210	333	255	138	162	150	208
9	174	331	195	670	e288	853	323	231	127	113	137	1850
10	163	306	194	e449	254	662	281	244	132	99	130	1080
11	153	306	1450	e314	229	543	257	210	224	94	140	598
12	146	360	1310	e275	220	488	253	191	225	728	134	412
13	142	396	835	e250	189	415	1280	174	156	950	158	319
14	153	370	642	e232	e175	369	2330	161	313	386	136	267
15	548	356	527	e218	e146	375	1190	152	584	333	119	242
16	410	349	430	e212	e141	338	786	149	393	295	108	220
17	346	343	432	e209	e138	325	593	137	759	234	101	2190
18	305	328	399	e196	e132	301	479	193	972	232	95	10900
19	266	2070	353	e181	e125	311	405	182	540	197	133	2390
20	233	2910	328	e172	e138	485	355	163	373	173	243	1200
21	213	1320	303	e166	e353	1850	322	5300	300	160	1120	768
22	202	830	289	e157	e310	1050	298	2210	556	139	676	554
23	184	604	412	e146	e255	724	614	1570	424	180	401	432
24	165	483	1070	e155	e230	587	525	945	304	200	297	358
25	152	435	1070	e157	e217	555	539	612	257	138	237	315
26	151	359	784	e142	247	515	1120	503	226	212	196	282
27	310	318	598	e135	235	494	964	424	193	1210	175	252
28	375	324	478	e133	234	439	746	340	181	1100	187	239
29	327	381	418	e128	262	388	577	286	186	605	196	244
30	307	319	578	e124	---	355	470	248	156	415	169	208
31	280	---	509	e118	---	383	---	246	---	431	209	---
TOTAL	7503	16293	15538	18657	5941	26739	18177	17473	9111	9667	7395	26335
MEAN	242	543	501	602	205	863	606	564	304	312	239	878
MAX	548	2910	1450	5490	353	3050	2330	5300	972	1210	1120	10900
MIN	142	222	193	118	115	301	253	137	127	94	95	94
CFSM	1.53	3.44	3.17	3.81	1.30	5.46	3.83	3.57	1.92	1.97	1.51	5.56
IN.	1.77	3.84	3.66	4.39	1.40	6.30	4.28	4.11	2.15	2.28	1.74	6.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	118	223	326	339	403	563	468	333	214	155	111	111
MAX	394	715	769	1025	1013	1249	909	722	1210	855	670	878
(WY)	1987	1986	1973	1952	1975	1964	1994	1953	1972	1977	1956	2004
MIN	18.1	23.0	27.2	61.0	96.6	132	112	79.9	48.9	26.4	23.0	16.9
(WY)	1965	1999	1961	1961	1993	1969	1946	1941	1991	1988	1949	1964

e Estimated.

MAHONING CREEK BASIN

03034000 MAHONING CREEK AT PUNXSUTAWNEY, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	138960		178829			
ANNUAL MEAN	381		489		280	
HIGHEST ANNUAL MEAN					489	
LOWEST ANNUAL MEAN					177	
HIGHEST DAILY MEAN	3200	Sep 4	10900	Sep 18	13200	Jun 23 1972
LOWEST DAILY MEAN	86	Jul 4	94	Jul 11 ^a	12	Oct 19 1939
ANNUAL SEVEN-DAY MINIMUM	93	Jun 30	115	Sep 1	13	Oct 14 1939
MAXIMUM PEAK FLOW			b 15100	Sep 18	b 20400	Jul 19 1996
MAXIMUM PEAK STAGE			15.60	Sep 18	c 18.38	Jul 19 1996
INSTANTANEOUS LOW FLOW			90	Sep 8	2.6	Sep 26 1939
ANNUAL RUNOFF (CFSM)	2.41		3.09		1.77	
ANNUAL RUNOFF (INCHES)	32.72		42.10		24.06	
10 PERCENT EXCEEDS	761		995		624	
50 PERCENT EXCEEDS	278		287		157	
90 PERCENT EXCEEDS	126		137		34	

^a Also Sept. 7.

^b From rating curve extended above 5,500 ft³/s on basis of slope-area measurement at gage height 13.01 ft.

^c From floodmark in gage well.

MAHONING CREEK BASIN

03034000 MAHONING CREEK AT PUNXSUTAWNEY, PA--Continued
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

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 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover -able, mg/L (00916)	Magnesium, water, unfltrd recover -able, mg/L (00927)
OCT 2003													
16...	0845	1028	9813	416	11.1	7.0	7.0	271	275	9.5	110	29.0	8.3
DEC													
23...	1115	1028	9813	349	13.0	6.8	7.3	321	348	4.0	130	34.9	9.8
FEB 2004													
26...	1350	1028	9813	E247	13.8	6.5	7.1	352	344	2.0	120	33.7	9.8
APR													
22...	1045	1028	9813	294	9.7	7.3	7.3	349	350	14.0	130	36.2	10.5
JUN													
24...	1215	1028	9813	303	10.4	7.4	7.2	293	286	17.0	110	30.8	8.3
AUG													
24...	0910	1028	9813	304	8.7	6.8	7.1	270	265	15.5	100	27.3	7.7

Date	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (00417)	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 as N mg/L (00610)	Nitrate water, unfltrd as N mg/L (00620)	Nitrite water, unfltrd as N mg/L (00615)	Ortho-phosphate, water, unfltrd as P mg/L (70507)	Phosphorus, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover -able, µg/L (01105)	Copper, water, unfltrd recover -able, µg/L (01042)
OCT 2003													
16...	37	71.7	228	30	<.020	.55	<.040	.02	.021	.89	3.4	200	<10
DEC													
23...	38	90.9	228	12	.050	.79	<.040	.01	.016	1.2	1.0	200	<10
FEB 2004													
26...	38	80.2	256	4	.070	1.00	<.040	.02	.025	1.2	1.0	<200	<10
APR													
22...	40	99.6	270	6	.040	.61	<.040	<.01	.013	.84	1.2	<200	<10
JUN													
24...	42	69.8	228	<2	.070	.88	<.040	.01	.024	1.0	1.6	200	<10
AUG													
24...	42	61.0	210	10	<.020	.89	<.040	.01	.020	.97	1.6	<200	<10

Date	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, unfltrd recover -able, µg/L (01051)	Manganese, water, unfltrd recover -able, µg/L (01055)	Nickel, water, unfltrd recover -able, µg/L (01067)	Zinc, water, unfltrd recover -able, µg/L (01092)
OCT 2003					
16...	1050	<1.0	180	<50	20
DEC					
23...	900	<1.0	250	<50	20
FEB 2004					
26...	630	<1.0	220	<50	30
APR					
22...	640	<1.0	170	<50	10
JUN					
24...	830	<1.0	130	<50	60
AUG					
24...	660	<1.0	100	<50	<10

MAHONING CREEK BASIN

03034000 MAHONING CREEK AT PUNXSUTAWNEY, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	10/21/03
Benthic Macroinvertebrate	Count
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Acentrella</i>	1
Baetiscidae	
<i>Baetisca</i>	1
Heptageniidae	
<i>Stenacron</i>	1
<i>Stenonema</i>	5
Isonychiidae	
<i>Isonychia</i>	2
Plecoptera (STONEFLIES)	
Taeniopterygidae	
<i>Taeniopteryx</i>	69
Trichoptera (CADDISFLIES)	
Brachycentridae	
<i>Micrasema</i>	1
Hydropsychidae	
<i>Cheumatopsyche</i>	8
<i>Hydropsyche</i>	6
Psychomyiidae	
<i>Psychomyia</i>	2
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	10
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	2
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	1
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	1
Total Organisms	112
Total Taxa	16