



2005 Water Year
MAHONING CREEK BASIN
03034000 Mahoning Creek at Punxsutawney, PA

Latitude: 40° 56 ' 21"

Longitude: 079° 00 ' 31"

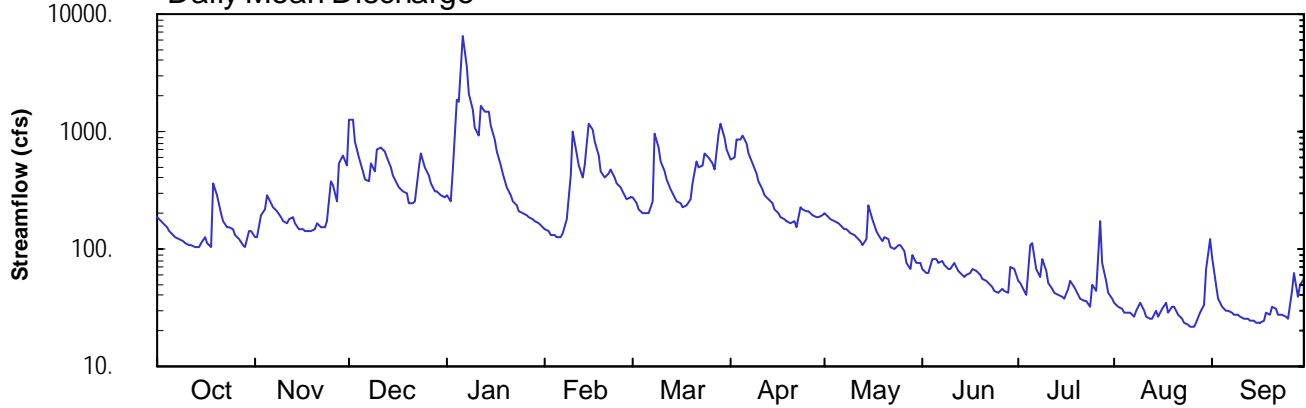
Hydrologic Unit Code: 05010006

Jefferson County

Datum: 1206.14 feet

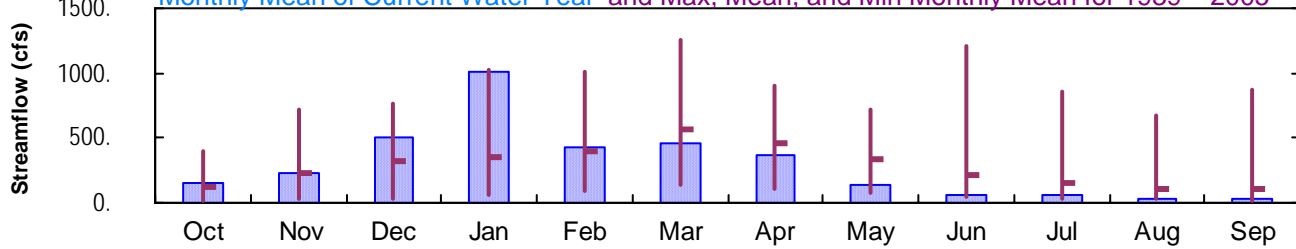
Drainage Area: 158. mi²

Daily Mean Discharge

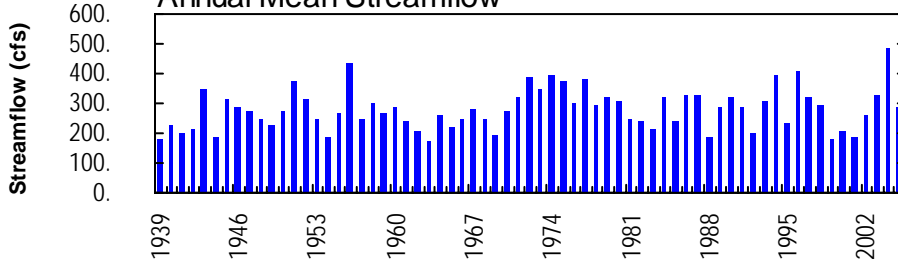


Monthly Statistics

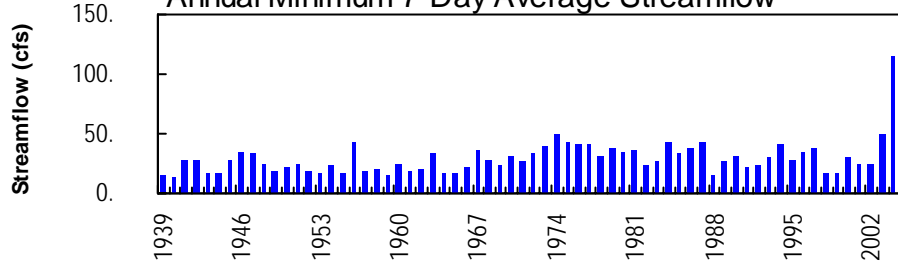
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1939 – 2005



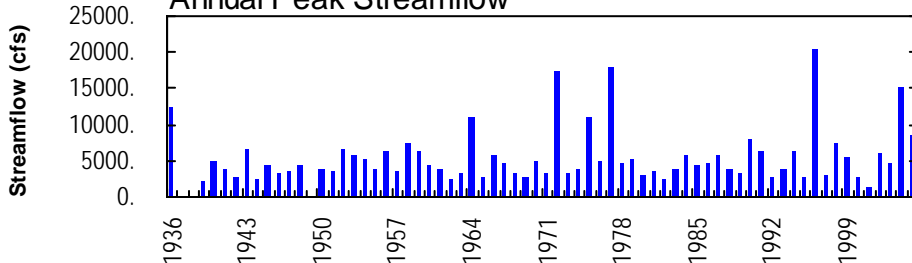
Annual Mean Streamflow



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)
Jan. 6	1530	*8,390	*11.14	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	126	1270	285	e150	272	569	201	68	53	35	84
2	172	125	1240	259	e142	249	611	186	63	51	32	50
3	168	196	836	468	e132	221	858	178	63	44	31	38
4	152	222	609	1860	e129	205	847	172	83	40	29	32
5	141	292	465	1800	e128	205	920	163	83	107	29	30
6	133	246	391	6410	e126	200	779	157	76	111	28	29
7	128	228	381	3700	e134	259	663	149	79	67	27	28
8	124	207	541	2080	e183	979	545	145	73	59	30	28
9	118	186	467	1530	416	723	439	137	68	83	35	27
10	113	174	708	1090	981	556	372	131	67	64	29	27
11	110	165	733	927	659	464	325	126	75	52	27	26
12	106	182	668	1670	514	386	291	118	65	45	26	25
13	105	190	596	1470	402	326	267	109	62	42	25	25
14	105	163	495	1460	518	280	242	123	59	40	30	24
15	111	150	419	1120	1150	254	220	232	59	39	27	24
16	128	147	367	845	1040	244	200	178	63	38	32	24
17	110	144	340	680	838	231	188	141	68	46	35	24
18	103	143	309	511	635	238	180	129	65	54	29	29
19	360	140	300	444	466	262	171	119	61	47	32	27
20	282	150	244	e337	409	367	167	124	56	44	32	32
21	202	166	245	e283	440	563	172	121	53	38	28	32
22	175	155	257	e254	472	495	154	103	51	37	25	27
23	156	152	490	e232	401	517	229	99	48	36	24	28
24	155	173	663	e213	359	660	222	108	45	32	23	27
25	149	383	487	e202	333	599	214	109	42	49	22	26
26	131	345	426	e192	308	535	209	96	45	45	22	44
27	120	259	366	e186	270	473	194	75	44	171	23	63
28	108	539	311	e183	281	948	190	69	42	76	29	39
29	104	618	307	e172	---	1150	190	89	72	54	33	49
30	142	519	287	e164	---	883	195	77	67	43	67	57
31	143	---	278	e158	---	701	---	75	---	37	120	---
TOTAL	4539	6885	15496	31185	12016	14445	10823	4039	1865	1744	1016	1025
MEAN	146	230	500	1006	429	466	361	130	62.2	56.3	32.8	34.2
MAX	360	618	1270	6410	1150	1150	920	232	83	171	120	84
MIN	103	125	244	158	126	200	154	69	42	32	22	24
CFSM	0.93	1.45	3.16	6.37	2.72	2.95	2.28	0.82	0.39	0.36	0.21	0.22
IN.	1.07	1.62	3.65	7.34	2.83	3.40	2.55	0.95	0.44	0.41	0.24	0.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)

MEAN	119	223	328	349	404	561	467	330	212	154	110	110
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

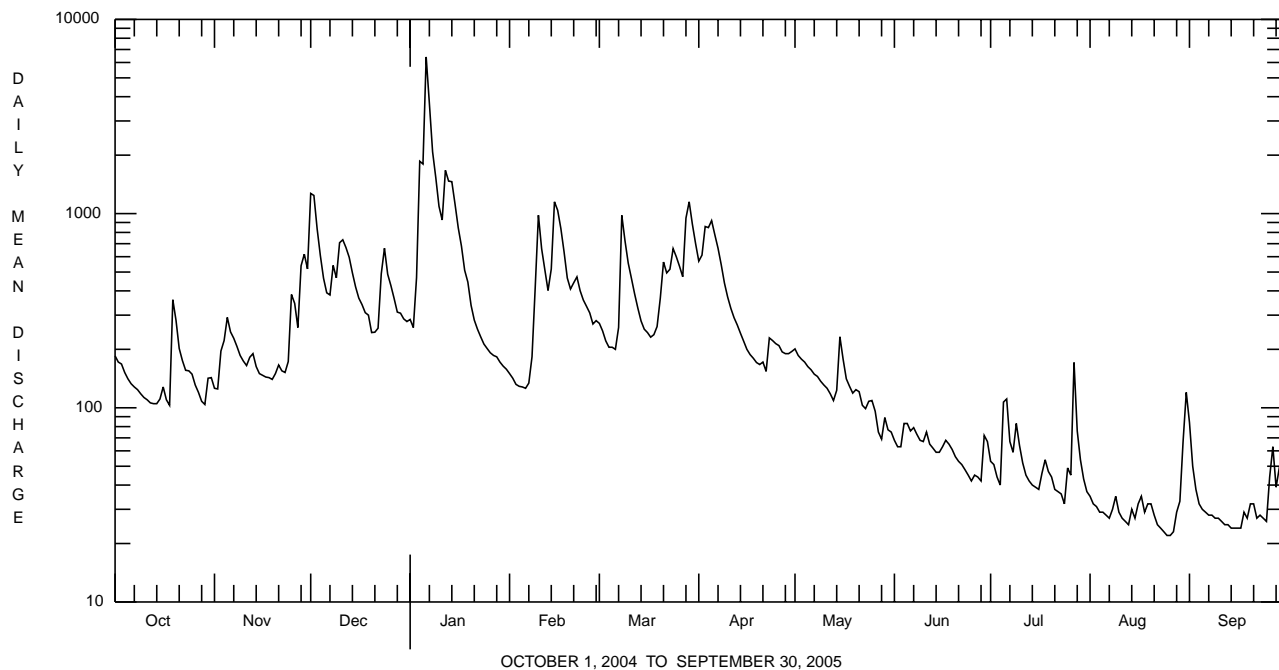
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005	
ANNUAL TOTAL	166415		105078			
ANNUAL MEAN	455		288		280	
HIGHEST ANNUAL MEAN					489	2004
LOWEST ANNUAL MEAN					177	1963
HIGHEST DAILY MEAN	10900	Sep 18	6410	Jan 6	13200	Jun 23 1972
LOWEST DAILY MEAN	94	Jul 11 ^a	22	Aug 25,26	12	Oct 19 1939
ANNUAL SEVEN-DAY MINIMUM	110	Oct 9	24	Aug 21	13	Oct 14 1939
MAXIMUM PEAK FLOW			b 8390	Jan 6	b 20400	Jul 19 1996
MAXIMUM PEAK STAGE			11.14	Jan 6	c 18.38	Jul 19 1996
INSTANTANEOUS LOW FLOW			22	Aug 24 ^d	2.6	Sep 26 1939
ANNUAL RUNOFF (CFSM)	2.88		1.82		1.77	
ANNUAL RUNOFF (INCHES)	39.18		24.74		24.07	
10 PERCENT EXCEEDS	896		661		624	
50 PERCENT EXCEEDS	251		154		157	
90 PERCENT EXCEEDS	125		30		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.

^d Also Aug. 25-27, Sept. 16.



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 2004 TO SEPTEMBER 2005

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)
NOV 2004 17...	1415	1028	9813	143	14.7	8.6	8.0	403	392	6.7	160	42.7	13.0
JAN 2005 04...	1130	1028	9813	2100	11.1	6.7	7.3	162	160	6.6	60	15.7	5.0
MAR 22...	1145	1028	9813	490	11.7	7.2	7.0	267	266	3.1	96	26.1	7.5
MAY 19...	0945	1028	9813	120	9.1	7.7	7.8	403	407	12.3	160	41.2	12.7
JUL 05...	1300	1028	9813	110	6.3	7.3	7.6	317	315	21.6	110	28.5	10.1
SEP 13...	0915	1028	9813	24.7	6.0	7.7	8.0	583	608	19.0	220	59.8	16.2

Date	ANC, wat unfltrd fixed 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, 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-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
NOV 2004 17...	55	100	244	2	<.020	.87	<.040	.01	.025	.97	1.3	<200	<10
JAN 2005 04...	20	36.2	114	128	.030	.79	<.040	.01	.107	1.3	3.7	3000	<10
MAR 22...	29	64.7	192	6	.040	.85	<.040	.01	.022	.85	1.1	210	<10
MAY 19...	56	114	300	<2	.020	.32	<.040	.02	.024	.43	--	<200	<10
JUL 05...	50	70.3	346	70	.120	.89	<.040	.07	.194	1.5	--	7200	30
SEP 13...	93	143	436	8	.040	.88	<.040	.13	.156	1.0	--	<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)
NOV 2004 17...	380	<1.0	160	<50	<10
JAN 2005 04...	8890	5.5	470	<50	50
MAR 22...	810	<1.0	180	<50	10
MAY 19...	480	<1.0	100	<50	<10
JUL 05...	7860	9.1	300	<50	70
SEP 13...	560	<1.0	130	<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	08/12/04
Benthic macroinvertebrate	Count
Nematoda (NEMATODES)	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancyliidae	
<i>Ferrissia</i>	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Naididae	2
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	5
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Plauditus</i>	25
Caenidae	
<i>Caenis</i>	3
Heptageniidae	
<i>Stenacron</i>	1
<i>Stenonema</i>	3
Isonychiidae	
<i>Isonychia</i>	3
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
<i>Nigronia</i>	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	5
<i>Hydropsyche</i>	15
Hydroptilidae	
<i>Hydroptila</i>	5
Psychomyiidae	
<i>Psychomyia</i>	1
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	87
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	2
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	4
Total Organisms	165
Total Taxa	18