



2005 Water Year
MONONGAHELA RIVER BASIN
03072000 Dunkard Creek at Shannopin, PA

Latitude: 39° 45 ' 33"

Longitude: 079° 58 ' 15"

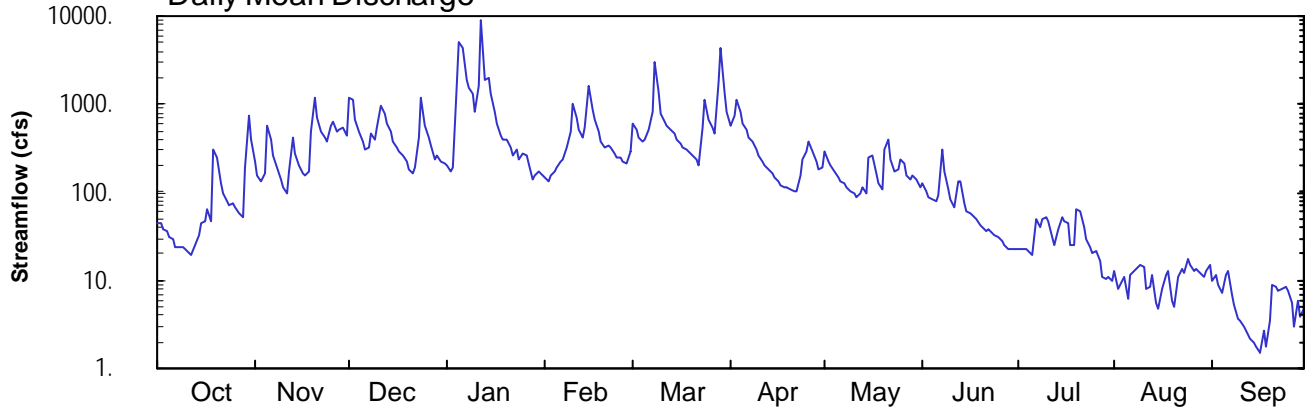
Hydrologic Unit Code: 05020005

Greene County

Datum: 806.25 feet

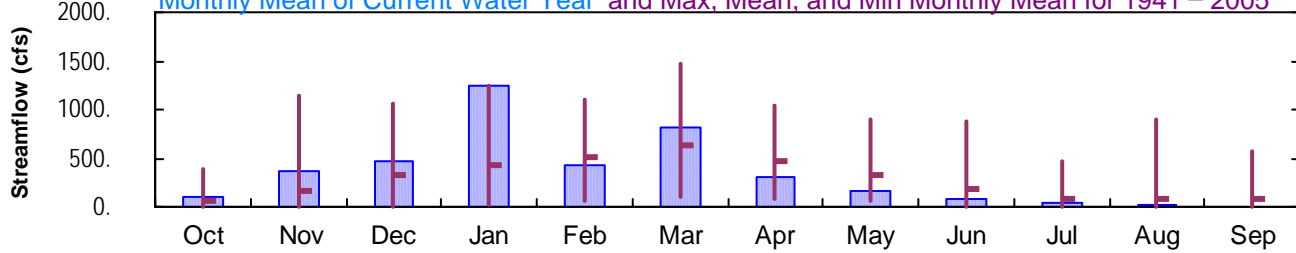
Drainage Area: 229. mi²

Daily Mean Discharge

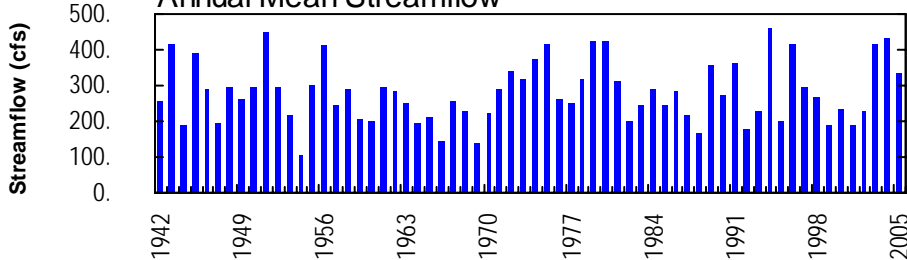


Monthly Statistics

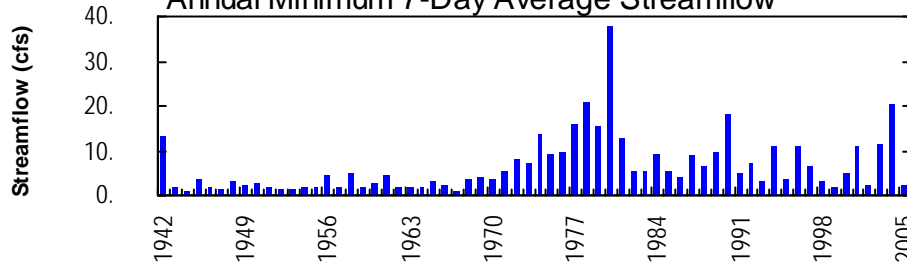
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1941 – 2005



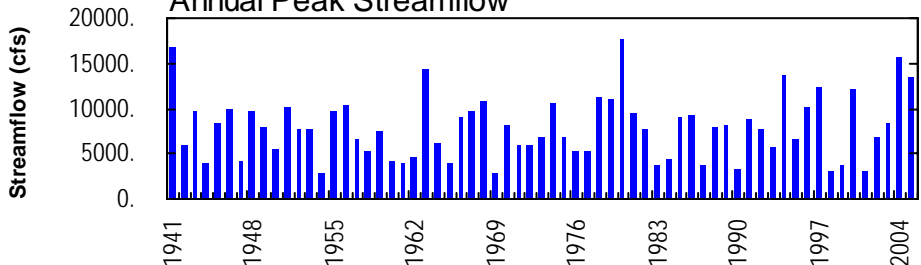
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 39°45'33", long 79°58'15", Greene County, Hydrologic Unit 05020005, on left bank 1,300 ft upstream from highway bridge at mine buildings at Shannopin, 1.2 mi north of Dunkard, 3.5 mi upstream from mouth, and 4 mi southwest of Greensboro.

DRAINAGE AREA.--229 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year. Prior to December 1940 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1505: 1955.

GAGE.--Water-stage recorder. Datum of gage is 806.25 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation at low flow by mine pumpage above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Jan. 5	2300	9,410	11.14	Mar. 8	1100	4,550	8.79
Jan. 12	0900	*13,400	*12.77	Mar. 29	0300	6,410	9.81

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	44	228	1160	198	e145	600	583	283	126	22	13	9.9
2	44	156	1130	176	e132	505	755	227	100	23	8.2	11
3	39	132	659	187	e153	416	1110	199	90	22	9.8	8.9
4	36	163	481	1750	e176	375	839	170	84	23	11	7.1
5	30	575	375	5120	e196	389	617	147	80	21	6.2	11
6	30	395	309	4360	221	503	502	132	95	20	11	13
7	24	267	321	1890	238	824	418	126	304	50	13	6.9
8	24	194	465	1570	315	3090	368	114	174	40	13	5.3
9	24	141	397	1340	478	1360	311	105	110	49	15	3.6
10	23	112	543	835	1020	791	265	97	82	52	14	3.4
11	20	98	951	1620	705	624	230	87	67	47	8.2	3.0
12	19	171	787	9140	508	580	201	98	133	31	8.5	2.4
13	25	424	606	1880	426	527	181	116	132	25	12	2.2
14	32	274	479	2010	535	455	164	97	75	38	5.5	2.0
15	45	201	384	1290	1640	399	146	249	62	e52	4.8	1.8
16	47	165	319	811	877	354	132	265	57	e46	8.0	1.5
17	64	156	290	618	659	326	120	161	55	46	12	2.7
18	47	169	259	442	493	300	115	125	49	26	13	1.8
19	312	489	229	390	369	274	113	107	43	25	6.0	3.6
20	242	1180	179	395	330	259	109	313	39	64	5.1	9.1
21	128	709	165	325	340	233	104	405	37	62	11	8.5
22	97	482	191	261	326	201	105	233	38	41	14	7.7
23	78	415	429	e306	270	533	154	174	35	30	12	7.8
24	72	370	1160	e232	250	1130	239	183	33	24	18	8.7
25	74	586	579	e271	252	670	289	241	30	21	15	7.4
26	68	643	411	e266	229	546	367	208	27	21	13	5.6
27	57	481	331	e215	217	469	286	157	25	17	13	2.9
28	52	522	242	e143	293	1820	228	137	23	11	12	5.9
29	190	551	260	e158	---	4320	185	158	23	10	11	3.9
30	739	442	226	e176	---	1380	194	141	22	11	13	4.9
31	390	---	214	e161	---	804	---	115	---	9.7	15	---
TOTAL	3116	10891	14531	38536	11793	25057	9430	5370	2250	979.7	344.3	173.5
MEAN	101	363	469	1243	421	808	314	173	75.0	31.6	11.1	5.78
MAX	739	1180	1160	9140	1640	4320	1110	405	304	64	18	13
MIN	19	98	165	143	132	201	104	87	22	9.7	4.8	1.5
CFSM	0.44	1.59	2.05	5.43	1.84	3.53	1.37	0.76	0.33	0.14	0.05	0.03
IN.	0.51	1.77	2.36	6.26	1.92	4.07	1.53	0.87	0.37	0.16	0.06	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

MEAN	69.6	171	328	431	511	630	466	334	186	90.7	77.5	78.4
MAX	381	1149	1071	1243	1100	1475	1033	903	877	461	890	573
(WY)	1955	1986	1991	2005	1956	1994	1948	1968	1981	1996	1980	1975
MIN	1.73	2.44	7.46	26.5	63.5	112	80.9	57.4	10.2	4.62	2.45	2.38
(WY)	1952	1954	1954	1967	1954	1987	1971	1986	1966	1962	1962	1999

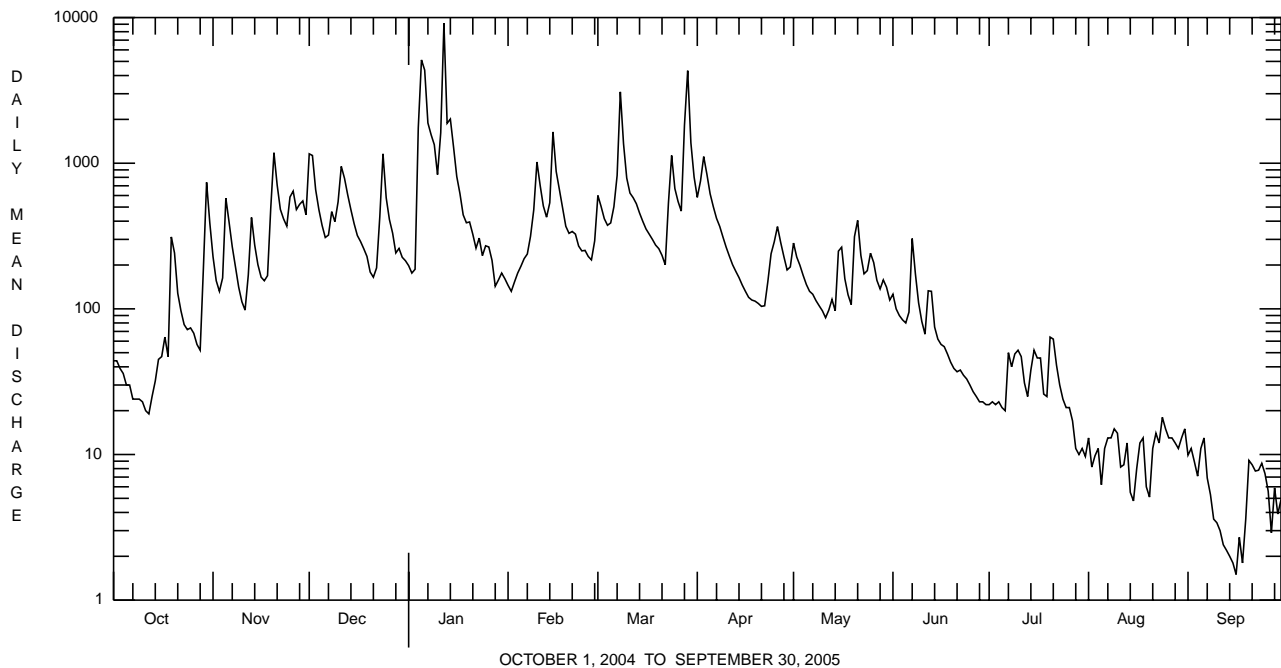
e Estimated.

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1941 - 2005	
ANNUAL TOTAL	141152		122471.5			
ANNUAL MEAN	386		336		281	
HIGHEST ANNUAL MEAN					462	1994
LOWEST ANNUAL MEAN					104	1954
HIGHEST DAILY MEAN	7830	Sep 18	9140	Jan 12	11200	Mar 5 1963
LOWEST DAILY MEAN	13	Sep 7	1.5	Sep 16	0.50	Aug 27 1944
ANNUAL SEVEN-DAY MINIMUM	21	Sep 1	2.1	Sep 12	0.73	Aug 25 1944
MAXIMUM PEAK FLOW			13400	Jan 12	a17600	Aug 18 1980
MAXIMUM PEAK STAGE			12.77	Jan 12	14.27	Aug 18 1980
INSTANTANEOUS LOW FLOW			1.1	Sep 19	0.40	Aug 28 1944
ANNUAL RUNOFF (CFSM)	1.68		1.47		1.23	
ANNUAL RUNOFF (INCHES)	22.93		19.89		16.65	
10 PERCENT EXCEEDS	802		707		686	
50 PERCENT EXCEEDS	182		158		100	
90 PERCENT EXCEEDS	33		9.8		8.1	

a From rating curve extended above 16,000 ft³/s.



MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, 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 08...	0915	1028	9813	197	10.3	7.5	7.7	489	499	9.0	170	48.9	10.9
JAN 2005 24...	1000	1028	9813	E232	14.1	7.1	7.5	491	469	.0	160	43.1	13.0
MAR 07...	0945	1028	9813	887	12.4	7.7	7.9	364	368	4.8	120	35.5	8.2
MAY 09...	0950	1028	9813	106	9.7	7.8	7.7	537	544	14.4	160	43.2	11.7
JUL 11...	1000	1028	9813	47	9.1	7.7	7.8	1570	1650	23.0	380	103	30.0
SEP 26...	0940	1028	9813	6.5	7.6	6.8	6.9	5490	5610	22.0	1700	451	134
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 fltrd, 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, water, 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 08...	83	130	366	2	<.020	.46	<.040	<.01	<.010	.70	2.1	283	<10
JAN 2005 24...	77	139	332	20	.130	.59	<.040	.02	.017	.73	1.4	1100	<10
MAR 07...	70	88.0	216	6	.030	.46	<.040	<.01	.014	.63	1.7	730	<10
MAY 09...	92	156	398	4	.020	.11	<.040	<.01	.013	.52	--	560	<10
JUL 11...	133	635	1220	2	.030	.12	<.040	.01	.012	.32	--	510	<10
SEP 26...	54	3400	5330	22	.160	.95	<.040	<.01	<.010	1.4	--	1000	<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 08...	390	<1.0	100	<50	<10								
JAN 2005 24...	1450	<1.0	250	<50	20								
MAR 07...	960	<1.0	110	<50	<10								
MAY 09...	450	<1.0	140	<50	30								
JUL 11...	310	<1.0	200	<50	10								
SEP 26...	410	<1.0	480	<50	40								

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, 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	09/14/04
Benthic macroinvertebrate	Count
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Enchytraeidae	1
Tubificidae	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	7
Insecta	
Ephemeroptera (MAYFLIES)	
Caenidae	
<i>Caenis</i>	2
Tricorythidae	
<i>Tricorythodes</i>	5
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
<i>Argia</i>	1
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
<i>Corydalus</i>	1
<i>Nigronia</i>	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	2
<i>Hydropsyche</i>	31
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	1
<i>Oulimnius</i>	1
<i>Stenelmis</i>	12
Hydrophilidae	
<i>Berosus</i>	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	88
Total Organisms	
	155
Total Taxa	
	15