

## 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 mi<sup>2</sup>.

## 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 good 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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)	Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)
Mar. 20	2300	5,070	9.10	May 18	1700	4,160	8.54
Mar. 27	0400	*6,720	*9.96				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	9.0	102	e27	469	112	556	856	100	61	38	6.0
2	15	7.4	112	e25	351	108	441	957	97	51	28	5.3
3	13	15	71	24	255	349	379	1120	78	48	23	4.8
4	12	13	53	22	208	560	327	833	137	43	20	4.6
5	9.7	8.9	42	e19	161	363	270	638	248	51	18	4.0
6	8.7	7.2	35	e14	119	281	237	496	321	34	18	3.4
7	7.9	6.8	30	e16	118	222	202	442	1450	31	16	3.3
8	7.2	7.5	32	e23	107	182	180	727	602	28	15	3.7
9	7.3	8.4	62	28	93	153	166	755	291	25	13	3.6
10	9.5	6.9	97	30	85	139	176	847	184	39	11	3.0
11	9.8	5.8	76	170	178	121	148	627	136	85	10	2.5
12	9.8	5.3	60	550	340	106	129	459	111	61	9.6	2.1
13	7.6	5.1	52	360	267	105	124	572	102	40	8.5	1.8
14	8.1	5.2	51	220	194	101	131	1140	326	33	7.9	1.8
15	10	5.7	59	150	155	94	325	976	249	34	7.6	2.2
16	14	6.8	70	130	139	642	662	646	341	33	11	2.6
17	6.2	9.6	70	100	126	988	461	463	284	24	10	3.0
18	2.7	13	494	88	113	1860	343	2440	161	21	9.2	9.4
19	1.6	12	516	79	94	1310	273	1940	116	28	12	19
20	1.7	18	240	72	89	2500	230	1030	91	35	41	13
21	2.3	18	134	69	144	2830	233	670	77	55	38	9.6
22	2.5	19	90	68	277	1130	1030	491	66	35	24	8.0
23	6.2	18	72	66	213	688	988	363	59	31	18	13
24	10	20	78	194	170	513	600	287	53	554	22	10
25	5.2	33	e51	863	143	396	438	280	48	232	24	7.8
26	5.4	34	e44	446	134	968	340	224	43	109	16	7.8
27	8.8	51	e38	281	148	4170	266	177	42	107	14	41
28	9.1	85	e30	199	131	1840	971	146	141	102	13	184
29	9.4	47	e28	157	---	1180	2050	126	148	76	11	96
30	9.3	49	e27	145	---	857	1170	112	85	55	8.5	52
31	9.4	---	e29	441	---	628	---	100	---	41	6.9	---
TOTAL	256.4	550.6	2945	5076	5021	25496	13846	20940	6187	2202	522.2	528.3
MEAN	8.27	18.4	95.0	164	179	822	462	675	206	71.0	16.8	17.6
MAX	17	85	516	863	469	4170	2050	2440	1450	554	41	184
MIN	1.6	5.1	27	14	85	94	124	100	42	21	6.9	1.8
CFSM	0.04	0.08	0.41	0.72	0.78	3.59	2.02	2.95	0.90	0.31	0.07	0.08
IN.	0.04	0.09	0.48	0.82	0.82	4.14	2.25	3.40	1.01	0.36	0.08	0.09

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

MEAN	68.1	156	323	419	505	625	467	327	178	89.2	76.5	70.8
MAX	381	1149	1071	1050	1100	1475	1033	903	877	461	890	573
(WY)	1955	1986	1991	1994	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

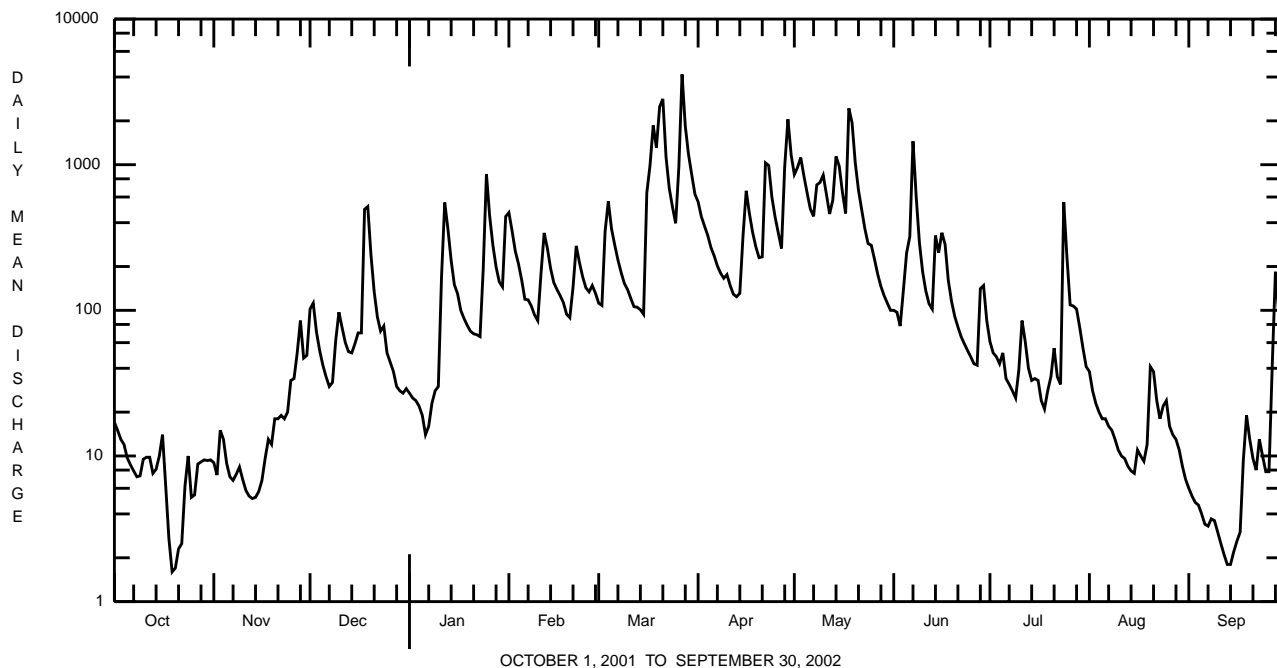
e Estimated.

## MONONGAHELA RIVER BASIN

## 03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL TOTAL	67906.9		83570.5			
ANNUAL MEAN	186		229		275	
HIGHEST ANNUAL MEAN					462	1994
LOWEST ANNUAL MEAN					104	1954
HIGHEST DAILY MEAN	2500	Jan 31	4170	Mar 27	11200	Mar 5 1963
LOWEST DAILY MEAN	1.6	Oct 19	1.6	Oct 19	0.50	Aug 27 1944
ANNUAL SEVEN-DAY MINIMUM	3.3	Oct 17	2.3	Sep 10	0.73	Aug 25 1944
MAXIMUM PEAK FLOW			6720	Mar 27	<sup>a</sup> 17600	Aug 18 1980
MAXIMUM PEAK STAGE			9.96	Mar 27	14.27	Aug 18 1980
INSTANTANEOUS LOW FLOW			1.6	Sep 14	0.40	Aug 28 1944
ANNUAL RUNOFF (CFSM)	0.81		1.000		1.20	
ANNUAL RUNOFF (INCHES)	11.03		13.58		16.31	
10 PERCENT EXCEEDS	498		632		678	
50 PERCENT EXCEEDS	76		72		96	
90 PERCENT EXCEEDS	9.7		7.2		7.9	

a From rating curve extended above 16,000 ft<sup>3</sup>/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.

REMARKS.--Other data for the Water-Quality Network can be found on pages 210-233.

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 2001 TO SEPTEMBER 2002

Date	Time	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (µS/CM) (90095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	ANC WATER UNFLTRD FET LAB (MG/L AS CACO3) (00417)	
APR 2002	15...	0900	9813	181	40	6.7	7.4	560	551	15.7	200	54.5	14.3	88
JUN	17...	0915	9813	302	40	9.2	7.4	610	548	18.0	160	43.9	11.8	88
AUG	08...	0900	9813	15	40	7.5	7.0	884	898	20.2	280	78.2	20.5	70

Date	SULFATE (MG/L AS SO4) (00945)	RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L) (00515)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA (MG/L AS N) (00610)	NITRO-GEN, NITRATE (MG/L AS N) (00620)	NITRO-GEN, NITRITE (MG/L AS N) (00615)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC (MG/L AS C) (00680)	COPPER, TOTAL RECOV-ERABLE (µG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (µG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (µG/L AS PB) (01051)	
APR 2002	15...	149	434	14	<.020	<.04	<.040	.20	.01	.020	2.4	<10	1550	<1.0
JUN	17...	144	398	20	<.020	.39	<.040	.65	.07	.040	3.0	<10	1370	<1.0
AUG	08...	352	662	10	<.020	.06	<.040	.34	<.01	<.010	2.5	<10	610	<1.0

Date	MANGA-NESE, TOTAL RECOV-ERABLE (µG/L AS MN) (01055)	NICKEL, TOTAL RECOV-ERABLE (µG/L AS NI) (01067)	ZINC, TOTAL RECOV-ERABLE (µG/L AS ZN) (01092)	
APR 2002	15...	180	<50	<10
JUN	17...	110	<50	20
AUG	08...	360	<50	20