

**POTOMAC RIVER BASIN
TONOLOWAY CREEK BASIN**

01613050 TONOLOWAY CREEK NEAR NEEDMORE, PA

LOCATION.--Lat 39°53'54", long 78°07'57", Fulton County, Hydrologic Unit 02070004, on left bank 10 ft downstream from bridge on SR 3008, 0.2 mi upstream from Foster Creek, and 3.5 mi north of Needmore.

DRAINAGE AREA.--10.7 mi².

PERIOD OF RECORD.--Occasional discharge measurements and annual maximums, water years 1963-65. October 1965 to current year.

REVISED RECORDS.--WSP 2103: 1966-68(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 688.94 ft above sea level. Prior to Sept. 2, 1965, crest-stage gage at same site at datum 2.0 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Mar. 3	2145	*259	*5.13	May 7	2400	192	4.84
Mar. 18	1530	154	4.68				

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.19	.22	e.10	5.7	5.1	11	12	2.0	1.2	1.3	.12
2	.08	.19	.21	e.07	6.5	4.4	10	10	3.0	2.7	.93	.10
3	.06	.17	.21	e.26	5.7	31	8.8	9.3	3.7	.89	.19	.08
4	.32	.18	.21	e.25	5.1	89	13	8.6	2.4	.44	.10	.07
5	.47	.20	.21	e.26	4.5	36	19	7.9	1.9	.27	.07	.17
6	.34	.22	.24	e.48	4.3	27	18	7.4	1.6	.15	.05	3.5
7	.31	.23	.24	e.47	4.4	20	17	15	1.5	.10	.04	3.6
8	2.3	.20	.29	e.51	5.3	e16	16	64	1.3	.06	.04	1.5
9	1.4	.28	.47	e.53	4.8	e13	46	32	1.1	.04	.04	.87
10	.67	.26	.35	e.62	4.6	e12	80	24	1.1	.04	.04	.56
11	.34	.34	.22	e.62	4.4	11	78	19	1.3	.07	.03	.33
12	.27	.35	.18	e.59	4.5	11	83	16	1.0	.07	.03	.21
13	.24	.32	.17	e.53	4.3	e11	56	14	.90	.04	.03	.14
14	.24	.29	.18	e.52	3.9	e12	38	11	1.1	.04	.03	.12
15	.19	.29	.17	e.52	4.3	e16	33	9.4	.99	.04	.02	.16
16	.16	.29	.16	e.50	3.7	18	29	8.0	.70	.02	.02	1.8
17	.18	.31	.20	e.50	3.8	45	23	7.1	2.6	.02	.02	1.6
18	.18	.27	.19	e.63	3.6	122	19	6.4	2.1	.02	.02	.56
19	.16	.25	.21	e.71	3.3	89	17	6.1	1.1	.12	.02	.34
20	.13	.27	.24	e.82	3.1	46	20	5.4	.85	.10	1.4	.29
21	.13	.28	.25	e.92	2.9	66	17	4.9	.89	.06	1.6	.47
22	.13	.25	.29	e.86	2.8	95	17	4.7	.84	.09	.35	.40
23	.14	.25	.31	e13	2.7	54	25	5.6	.60	.10	1.0	.22
24	.14	.25	.28	e70	2.5	35	34	4.9	.46	.06	2.2	.16
25	.15	.25	e.26	37	2.7	28	32	4.4	.43	.03	1.1	.14
26	.15	.32	e.23	21	2.6	23	28	3.8	.38	.02	3.6	.12
27	.15	.30	e.23	14	3.1	19	23	3.4	.33	.01	1.3	.10
28	.17	.25	e.23	11	5.0	17	19	3.0	.28	.01	.84	1.7
29	.20	.23	e.18	8.0	---	14	16	2.7	.39	.01	.45	1.8
30	.19	.21	e.15	6.0	---	11	13	2.4	.36	.01	.23	15
31	.20	---	e.12	5.0	---	9.9	---	2.2	---	.02	.15	---
TOTAL	9.90	7.69	7.10	196.27	114.1	1006.4	858.8	334.6	37.20	6.85	17.24	36.23
MEAN	.32	.26	.23	6.33	4.07	32.5	28.6	10.8	1.24	.22	.56	1.21
MAX	2.3	.35	.47	70	6.5	122	83	64	3.7	2.7	3.6	15
MIN	.06	.17	.12	.07	2.5	4.4	8.8	2.2	.28	.01	.02	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1999, BY WATER YEAR (WY)

MEAN	6.24	12.0	15.2	14.9	22.2	28.4	23.6	17.4	10.5	4.45	2.05	3.85
MAX	37.7	58.2	43.8	62.1	59.5	78.2	72.4	51.5	85.6	39.7	9.93	50.0
(WY)	1991	1998	1997	1996	1986	1994	1993	1988	1972	1989	1989	1996
MIN	.13	.26	.23	.54	3.89	5.44	5.19	3.53	.38	.065	.000	.002
(WY)	1992	1999	1999	1981	1980	1990	1968	1976	1991	1966	1966	1991

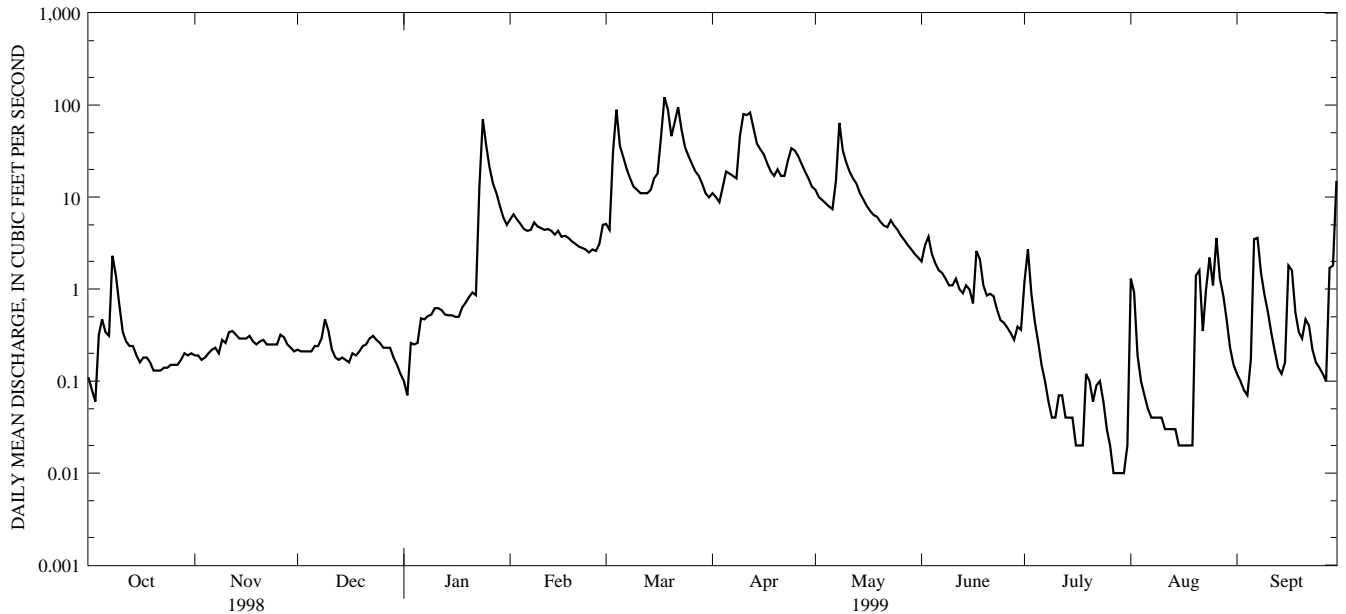
e Estimated.

TONOLOWAY CREEK BASIN

01613050 TONOLOWAY CREEK NEAR NEEDMORE, PA--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1966 - 1999	
ANNUAL TOTAL	5708.21		2632.38		13.3	
ANNUAL MEAN	15.6		7.21		28.3	
HIGHEST ANNUAL MEAN					5.21 1966	
LOWEST ANNUAL MEAN					868 Jun 22 1972	
HIGHEST DAILY MEAN	227	Jan 8	122	Mar 18		
LOWEST DAILY MEAN	e .04	Sep 13-20	.01	Jul 27-30	.00	Jun 25 1966a
ANNUAL SEVEN-DAY MINIMUM	b .04	Sep 13	.02	Jul 25	.00	Jul 1 1966
INSTANTANEOUS PEAK FLOW			259	Mar 3	cd1300	Jun 22 1972
INSTANTANEOUS PEAK STAGE			5.13	Mar 3	9.48	Jan 19 1996
INSTANTANEOUS LOW FLOW			.01	Jul 27-31	.00	Jul 18 1991a
10 PERCENT EXCEEDS	44		19		33	
50 PERCENT EXCEEDS	1.8		.62		5.0	
90 PERCENT EXCEEDS	.14		.07		.30	

- a No flow many days throughout period of record.
- b Computed using estimated daily discharges.
- c Gage height 9.17 ft.
- d From rating curve extended above 540 ft³/s on basis of contracted-opening and slope-area measurement of peak flow.
- e Estimated.



1-YEAR HYDROGRAPH
OCTOBER 1, 1998 TO SEPTEMBER 30, 1999