

SUSQUEHANNA RIVER BASIN

01531500 SUSQUEHANNA RIVER AT TOWANDA, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 41°45'55", long 76°26'28", Bradford County, Hydrologic Unit 02050106, on right bank at Bridge Street in Towanda, and 1.8 mi upstream from Towanda Creek.

DRAINAGE AREA.--7,797 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1913 to current year. Gage-height records collected at same site since October 1892 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1922, 1929.

GAGE.--Water-stage recorder. Datum of gage is 694.38 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 18, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated by 7 flood-control reservoirs which have a combined capacity of 356,800 acre-ft. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 68,000 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Mar. 21	2245	*97,600	*15.98	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6260	6970	11600	14800	4830	12500	40900	10100	35400	5320	5940	2710
2	4730	6080	11200	35900	4830	11100	37200	14800	49900	4780	14900	e10300
3	3840	5860	10400	31400	4870	10400	40000	14900	32600	4380	13800	e32300
4	3090	5730	9080	23300	5570	9520	33300	15500	23200	3990	14600	e33400
5	2940	5500	8310	19700	9840	9230	46300	13100	20300	3610	14100	e31200
6	2940	5460	7810	17100	11500	9440	61300	11600	17900	3430	14000	e17200
7	2890	5810	8080	15600	12000	9020	46100	10600	16000	3240	12200	e12500
8	2730	7180	7790	14500	10300	9010	36500	9880	15800	3030	11500	e9750
9	2510	7620	7140	14600	9510	9420	30700	9290	14200	3020	12100	e7390
10	2250	6940	6250	16200	8520	10400	28000	8640	12100	3110	23000	e6480
11	2130	6430	5580	15300	7830	9680	27200	8120	10600	3290	23400	e5670
12	2160	6110	5930	13300	e7000	9020	26500	8810	10000	3990	19500	e4940
13	2550	6360	7770	11900	e6400	9380	24300	10900	12100	4330	18400	e4310
14	3210	7520	12900	9680	e5800	9230	21700	14600	14200	3840	12900	e3860
15	3060	8040	22400	9050	e5400	9170	19600	13900	16600	3360	10100	e3670
16	3300	7770	21800	8270	e5000	13600	17600	12000	13300	2940	8370	e3860
17	9250	11800	18000	e7600	e4500	35400	16200	11300	10500	2710	7290	e4940
18	15100	22800	13700	e7000	e3800	64500	15000	11100	8830	2850	6490	e7210
19	14500	21500	11200	e6400	e4400	70000	13800	9840	8340	3070	5840	e6480
20	11200	17100	14300	e6400	e4800	67800	12600	8600	7990	3360	5220	e5400
21	10800	15000	28800	e6000	e5200	89100	11900	7960	31400	3380	4630	e4400
22	9240	15500	28100	e5800	e5900	91100	11400	7670	46100	16000	3990	e5070
23	7410	20700	22400	e5200	e8400	87300	11500	7390	31300	39100	3590	e9000
24	6230	23700	18300	e4600	e13000	82600	12200	7360	21600	31900	3230	e15000
25	6140	22200	15900	e4800	e18000	71400	12200	10900	15000	30800	2940	e17000
26	6400	19200	14200	e5000	e16000	61300	11100	12700	11600	19500	2760	10400
27	9760	17200	12400	e5000	e15000	57600	12300	12200	9670	13100	2590	8440
28	11200	15300	11400	e4700	e14000	49300	13500	11600	8270	11000	2490	9580
29	10700	13500	11400	e4600	---	42200	12900	11300	7030	9550	2420	17700
30	8860	12300	11400	e4400	---	42000	11200	9810	6100	7620	2370	12800
31	7730	---	10900	e4600	---	43300	---	8870	---	6180	2370	---
TOTAL	195110	353180	406440	352700	232200	1115020	715000	335340	537930	259780	287030	322960
MEAN	6294	11770	13110	11380	8293	35970	23830	10820	17930	8380	9259	10770
MAX	15100	23700	28800	35900	18000	91100	61300	15500	49900	39100	23400	33400
MIN	2130	5460	5580	4400	3800	9010	11100	7360	6100	2710	2370	2710
CFSM	0.81	1.51	1.68	1.46	1.06	4.61	3.06	1.39	2.30	1.07	1.19	1.38
IN.	0.93	1.69	1.94	1.68	1.11	5.32	3.41	1.60	2.57	1.24	1.37	1.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2003, BY WATER YEAR (WY)

MEAN	5294	9317	11060	10610	11820	23590	25250	13200	7354	4109	3026	3289
MAX	31270	28940	32550	31200	35700	60780	76640	34770	41150	23840	16210	23200
(WY)	1978	1928	1997	1996	1976	1936	1993	1943	1972	1915	1915	1977
MIN	507	495	1459	1273	1821	8417	4975	3297	1381	783	571	432
(WY)	1965	1965	1931	1931	1920	1981	1946	1985	1999	1962	1964	1964

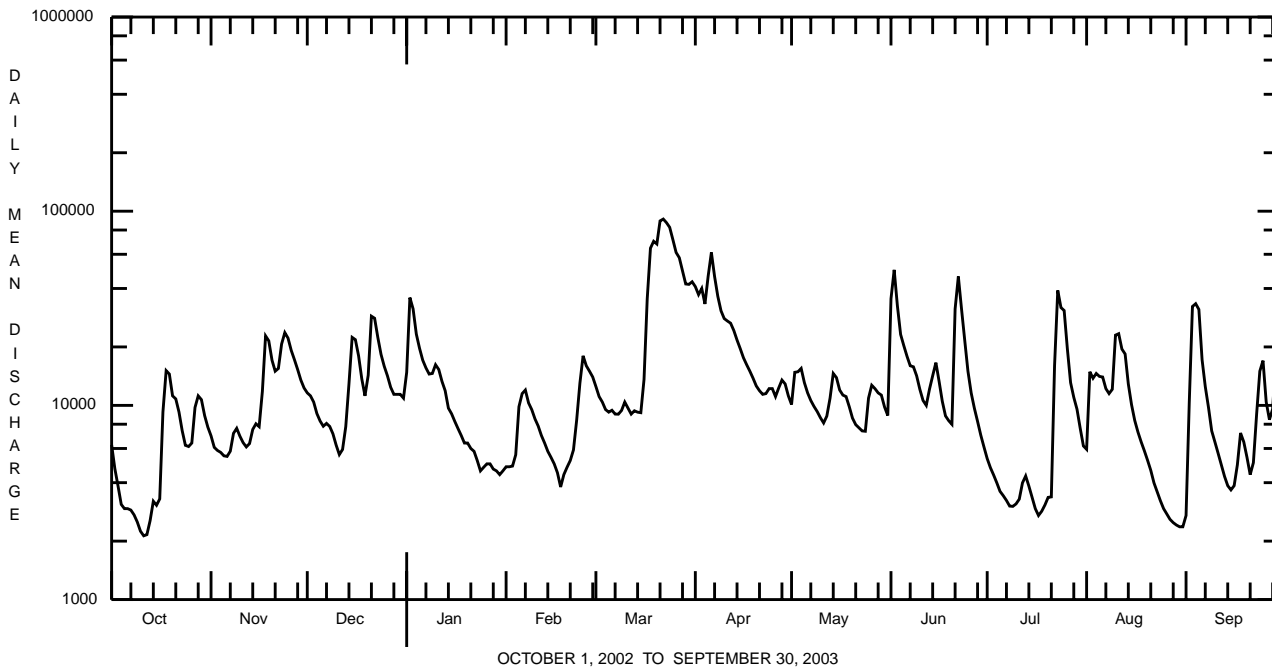
e Estimated.

SUSQUEHANNA RIVER BASIN

01531500 SUSQUEHANNA RIVER AT TOWANDA, PA--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1914 - 2003	
ANNUAL TOTAL	3967980		5112690		10640	
ANNUAL MEAN	10870		14010		16610	
HIGHEST ANNUAL MEAN					1978	
LOWEST ANNUAL MEAN					1965	
HIGHEST DAILY MEAN	62100	Jun 7	91100	Mar 22	283000	Jun 23 1972
LOWEST DAILY MEAN	636	Sep 14	2130	Oct 11	340	Sep 23 1964
ANNUAL SEVEN-DAY MINIMUM	686	Sep 11	2460	Oct 7	348	Sep 18 1964
MAXIMUM PEAK FLOW			97600	Mar 21	a 320000	Jun 24 1972
MAXIMUM PEAK STAGE			15.98	Mar 21	b 33.43	Jun 24 1972
INSTANTANEOUS LOW FLOW					334	Sep 23,24 1964
ANNUAL RUNOFF (CFSM)	1.39		1.80		1.37	
ANNUAL RUNOFF (INCHES)	18.93		24.39		18.55	
10 PERCENT EXCEEDS	22700		31000		25800	
50 PERCENT EXCEEDS	9080		10100		5500	
90 PERCENT EXCEEDS	1060		3600		1250	

a From rating curve extended above 180,000 ft³/s.
b From floodmark.



SUSQUEHANNA RIVER BASIN

01531500 SUSQUEHANNA RIVER AT TOWANDA, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using rapid bioassessment protocols for benthic macroinvertebrates using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 (approximate) subsamples.

Date	9/4/02
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Dugesiidae	
<u>Dugesia</u> sp	7
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Hydrobiidae	
<u>Amnicola</u> sp	3
Pleuroceridae	
<u>Leptoxis carinata</u>	3
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
<u>Musiculum</u> sp	1
<u>Sphaerium</u> sp	2
Oligochaeta (AQUATIC EARTHWORMS)	
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<u>Baetis</u> sp	13
<u>Heterocloeon</u> sp	2
Caenidae	
<u>Caenis</u> sp	4
Heptageniidae	
<u>Leucrocuta</u> sp	1
<u>Nixe</u> sp	1
<u>Rhithrogena</u> sp	1
<u>Stenonema</u> sp	4
Isonychiidae	
<u>Isonychia</u> sp	22
Potamanthidae	
<u>Anthopotamus</u> sp	19
Plecoptera (STONEFLIES)	
Perlidae	
<u>Agnatina</u> sp	5
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<u>Cheumatopsyche</u> sp	10
<u>Hydropsyche</u> sp	6
<u>Macrostemum</u> sp	2
Philopotamidae	
<u>Chimarra</u> sp	25
Lepidoptera (MOTHS AND BUTTERFLIES)	
Pyralidae	
<u>Petrophila</u> sp	1

SUSQUEHANNA RIVER BASIN

01531500 SUSQUEHANNA RIVER AT TOWANDA, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	9/4/02
Benthic Macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<u>Optioservus</u> sp	8
<u>Stenelmis</u> sp	44
Psephenidae (WATER PENNIES)	
<u>Psephenus</u> sp	2
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	7
Simuliidae (BLACK FLIES)	
<u>Simulium</u> sp	38
Total Organisms	236