

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

## 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.**--No estimated daily discharges. Records good. 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 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. 27	2030	*65,600	*11.98	(No peaks above base discharge.)			

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	2690	1360	4930	3660	25900	10700	28600	21500	14200	8010	1560	953
2	2330	1330	7370	3330	37700	9790	24400	20500	12800	6530	1500	890
3	2020	1320	7010	3270	33700	9050	21400	21100	10800	5490	1420	847
4	1750	1360	5980	3260	25500	9740	19300	18200	8810	4810	1340	809
5	1600	1400	5120	3200	19600	10700	17300	15400	8650	4260	1300	788
6	1310	1430	4570	3090	15500	10300	15100	13200	31000	3870	1220	775
7	1340	1470	4140	3020	13500	9130	13400	11800	62100	3410	1180	765
8	1310	1500	3850	2800	12000	8850	12200	11200	49700	3140	1150	772
9	1300	1470	3700	2940	11000	8600	11200	10900	30600	3000	1120	807
10	1220	1450	3650	2930	10500	8570	10900	12500	20100	2880	1100	801
11	1160	1420	3640	3030	23100	9690	11300	13300	15400	2710	1060	770
12	1140	1400	3360	3190	35000	10100	10500	12600	12500	2520	1010	698
13	1130	1380	3270	3320	30200	9960	9330	20700	10800	2420	974	664
14	1140	1340	3640	3290	21200	9240	10300	53900	10400	2270	932	636
15	1180	1290	5040	3220	16600	8700	20100	56400	17500	2150	900	647
16	1200	1270	6730	3170	15100	8520	27400	44200	38200	2070	880	691
17	1210	1250	6940	3090	14800	8570	22700	31400	39500	2140	860	696
18	1290	1220	13500	3030	13700	8390	18500	34200	28300	1930	839	1110
19	1340	1220	21400	2870	12000	8130	16000	49400	20500	1850	812	1460
20	1390	1230	16600	2460	10700	8570	13500	37300	15400	1790	809	1400
21	1420	1210	13100	2470	10500	10800	12100	28100	12200	1810	805	1290
22	1410	1220	11200	2640	11700	13400	11000	22700	10100	1930	812	1190
23	1380	1210	9450	2850	13300	12500	10400	19400	8670	2000	860	1460
24	1390	1210	8490	3010	12800	11600	9560	16800	8450	1870	940	1670
25	1440	1300	8210	5520	11100	11100	8710	14400	8840	1830	968	4140
26	1480	1660	7680	9610	10100	14300	9420	12700	7950	1720	1000	3360
27	1490	2290	6740	10100	9960	55900	9650	11900	8810	1680	1030	2930
28	1480	2730	5630	9570	10500	58700	10600	11500	18000	1530	1030	3840
29	1440	2810	4890	9670	---	46600	24000	12800	13800	1600	1060	8290
30	1400	3070	4330	11600	---	37400	25400	12100	10400	1380	1070	8680
31	1370	---	3740	19400	---	33400	---	13000	---	1540	1020	---
TOTAL	44750	45820	217900	148610	487260	491000	464270	685100	564480	86140	32561	53829
MEAN	1444	1527	7029	4794	17400	15840	15480	22100	18820	2779	1050	1794
MAX	2690	3070	21400	19400	37700	58700	28600	56400	62100	8010	1560	8680
MIN	1130	1210	3270	2460	9960	8130	8710	10900	7950	1380	805	636
CFSM	0.19	0.20	0.90	0.61	2.23	2.03	1.98	2.83	2.41	0.36	0.13	0.23
IN.	0.21	0.22	1.04	0.71	2.32	2.34	2.22	3.27	2.69	0.41	0.16	0.26

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

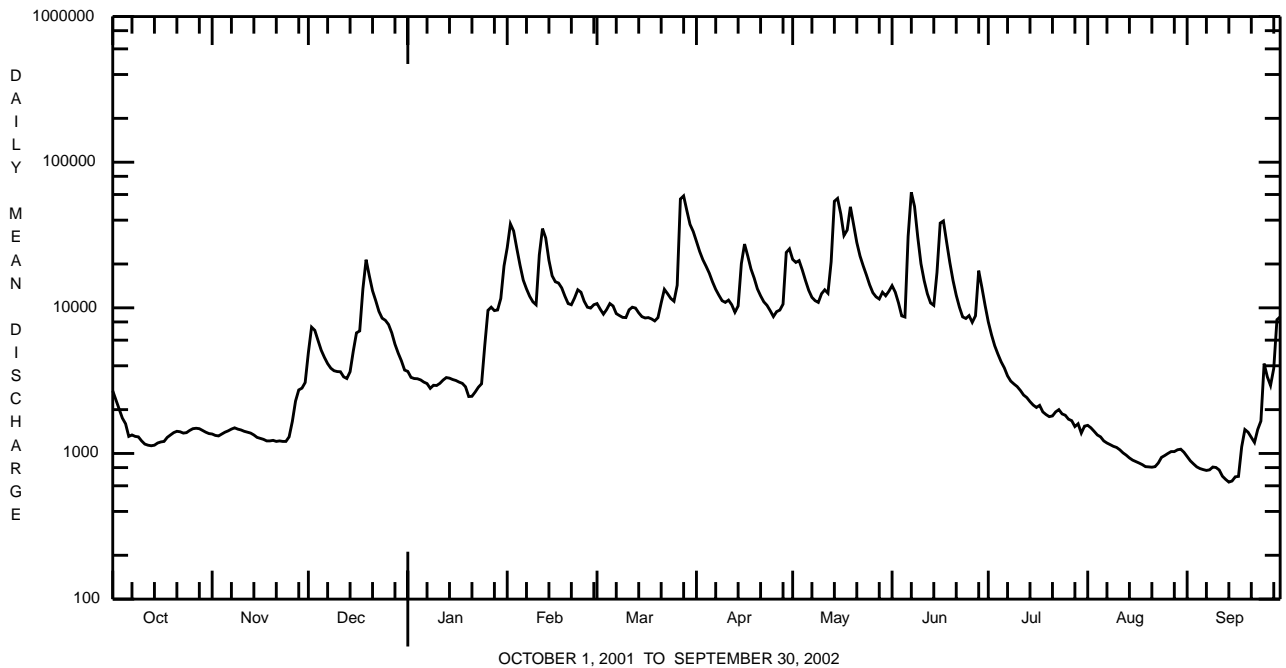
MEAN	5283	9289	11040	10600	11860	23450	25260	13230	7235	4061	2956	3205
MAX	31270	28940	32550	31200	35700	60780	76640	34770	41150	23840	16210	23200
(WY)	1978	1928	1997	1996	1976	1936	1993	1943	1972	1915	1915	1977
MIN	507	495	1459	1273	1821	8417	4975	3297	1381	783	571	432
(WY)	1965	1965	1931	1931	1920	1981	1946	1985	1999	1962	1964	1964

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SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1914 - 2002	
ANNUAL TOTAL	2820120		3321720			
ANNUAL MEAN	7726		9101		10610	
HIGHEST ANNUAL MEAN					16610	1978
LOWEST ANNUAL MEAN					5104	1965
HIGHEST DAILY MEAN	84400	Apr 10	62100	Jun 7	283000	Jun 23 1972
LOWEST DAILY MEAN	<b>e</b> 760	Sep 20	636	Sep 14	340	Sep 23 1964
ANNUAL SEVEN-DAY MINIMUM	<b>a</b> 807	Sep 18	686	Sep 11	348	Sep 18 1964
MAXIMUM PEAK FLOW			65600	Mar 27	<b>b</b> 320000	Jun 24 1972
MAXIMUM PEAK STAGE			11.98	Mar 27	<b>c</b> 33.43	Jun 24 1972
INSTANTANEOUS LOW FLOW					334	Sep 23,24 1964
ANNUAL RUNOFF (CFSM)	0.99		1.17		1.36	
ANNUAL RUNOFF (INCHES)	13.45		15.85		18.48	
10 PERCENT EXCEEDS	17800		21400		25800	
50 PERCENT EXCEEDS	3740		4810		5450	
90 PERCENT EXCEEDS	1100		1060		1240	

- a** Computed using estimated daily discharges.
- b** From rating curve extended above 180,000 ft<sup>3</sup>/s.
- c** From floodmark.
- e** Estimated.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

REMARKS.--Other data for the Water-Quality Network can be found on pages 306-334.

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)	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)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	
APR 2002	22...	0730	9813	11200	40	8.7	8.8	206	12.5	82	25.3	4.5	62	12.7
JUN	18...	0845	9813	30000	40	9.5	7.8	149	16.4	61	18.9	3.4	46	9.5
AUG	05...	0815	9813	1320	40	6.6	8.7	372	26.9	130	38.3	8.2	98	27.9

Date	RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L) (00515)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (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 TOTAL (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)	MANGA-NESE, TOTAL RECOV-ERABLE (µG/L AS MN) (01055)	
APR 2002	22...	154	20	<.020	.56	<.040	.89	.02	.040	3.1	<10	420	<1.0	40
JUN	18...	126	30	<.020	.48	<.040	.88	.04	.070	4.4	<10	1860	1.5	40
AUG	05...	156	6	.080	.15	<.040	.65	.03	.050	3.4	<10	140	<1.0	50

Date	NICKEL, TOTAL RECOV-ERABLE (µG/L AS NI) (01067)	ZINC, TOTAL RECOV-ERABLE (µG/L AS ZN) (01092)	
APR 2002	22...	<50	<10
JUN	18...	<50	<10
AUG	05...	<50	<10