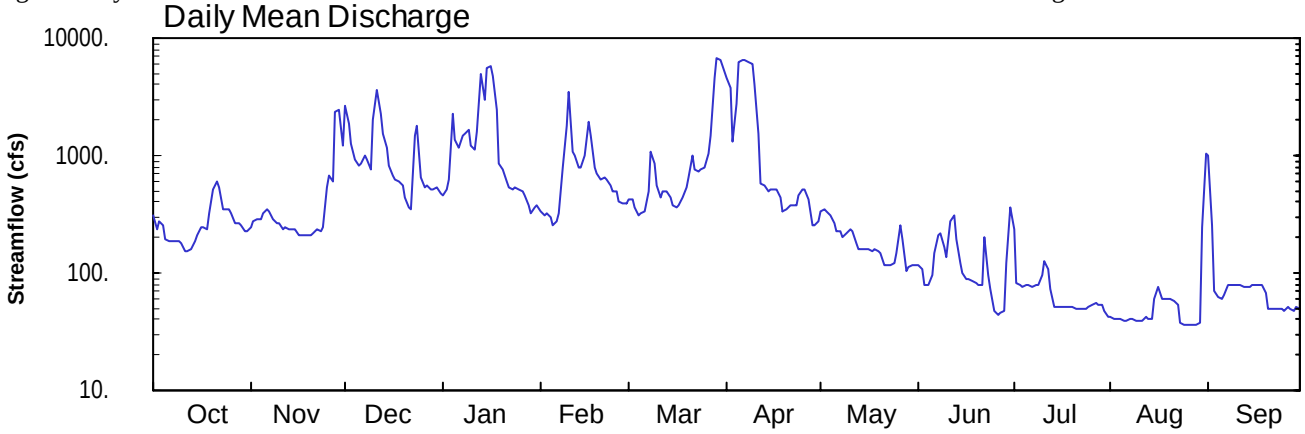
2005 Water Year
CHEMUNG RIVER BASIN
01518700 Tioga River at Tioga Junction, PA

Latitude: 41° 57 ' 09" Longitude: 077° 06 ' 56" Hydrologic Unit Code: 02050104

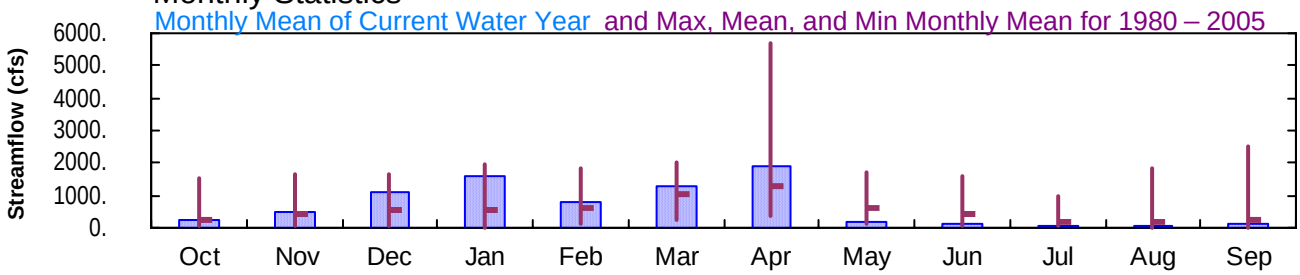
Tioga County Datum: 990.43 feet Drainage Area: 446. mi^2

Daily Mean Discharge

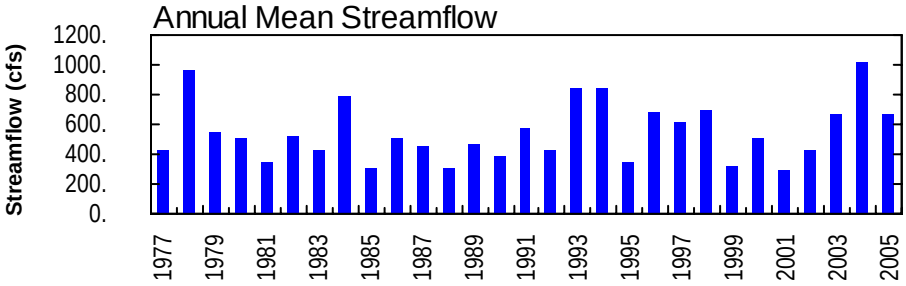


Monthly Statistics

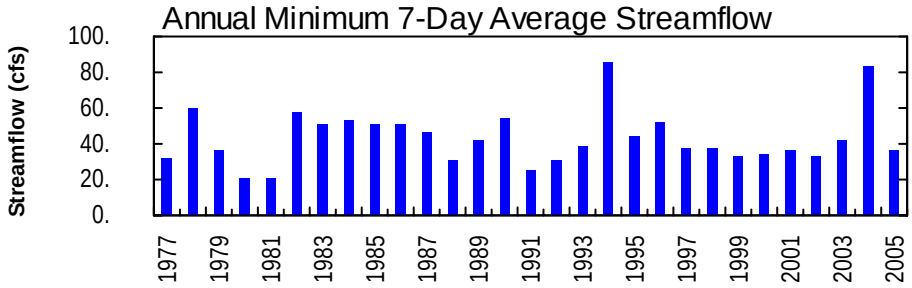
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1980 – 2005



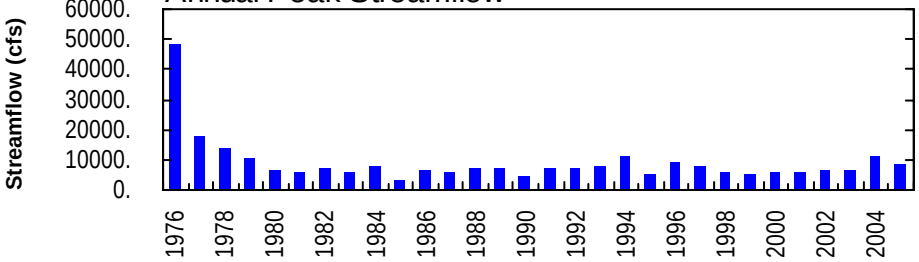
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



CHEMUNG RIVER BASIN

01518700 TIOGA RIVER AT TIOGA JUNCTION, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 41°57'09", long 77°06'56", Tioga County, Hydrologic Unit 02050104, on left bank 0.3 mi upstream from bridge on Township Route 722 at Tioga Junction, 3.3 mi downstream from Crooked Creek, and 5.0 mi downstream from Tioga and Hammond Dams.

DRAINAGE AREA.--446 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 990.43 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since November 1979 by Tioga Dam (station 01517900) and Hammond Dam (station 01518498). Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1975 reached a stage of about 22.1 ft, from floodmarks, discharge, about 48,000 ft^3/s.

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	306	244	2700	464	e340	417	4560	335	117	238	42	992
2	235	279	1890	506	e310	428	3710	350	109	81	41	256
3	277	289	1280	632	321	365	1310	341	80	79	41	70
4	251	285	941	2310	301	314	2760	306	80	78	41	64
5	192	322	826	1350	259	e320	6290	265	96	78	40	61
6	190	346	872	1170	275	e330	6470	230	151	80	40	66
7	190	338	1010	1480	318	488	6430	224	213	77	40	78
8	190	290	929	1550	803	1080	6320	199	217	78	41	78
9	187	270	764	1670	1760	863	6040	218	169	79	40	78
10	180	262	2050	1200	3470	550	4020	235	136	97	39	78
11	155	240	3640	1140	1090	446	1540	227	275	124	39	78
12	155	241	2230	1620	992	486	588	182	306	109	43	77
13	163	240	1520	4950	805	492	554	157	192	74	41	77
14	187	237	1160	2940	799	448	e490	157	120	52	41	77
15	207	232	831	5560	1010	378	e520	160	102	52	61	78
16	245	208	679	5900	1970	358	514	158	90	52	77	78
17	241	207	635	4820	1490	382	509	156	90	52	60	78
18	231	208	596	2460	804	439	437	157	86	51	59	78
19	322	208	563	865	691	537	329	156	82	51	60	66
20	516	209	439	768	614	642	344	148	79	51	60	50
21	605	221	356	e610	656	993	382	119	78	50	59	50
22	538	233	347	e540	637	763	384	119	205	50	54	50
23	351	230	1450	e520	565	728	384	119	96	49	38	50
24	345	242	1790	e530	490	758	460	121	75	49	37	49
25	343	526	662	522	486	799	516	149	47	51	37	48
26	327	673	530	503	403	1040	512	252	45	53	37	51
27	269	601	550	e460	398	1490	425	196	46	55	36	49
28	266	2380	508	e380	399	4560	257	105	47	53	37	48
29	251	2440	510	e320	---	6690	257	111	121	53	37	51
30	227	1220	545	363	---	6500	273	119	367	48	246	49
31	228	---	484	377	---	5720	---	118	---	43	1050	---
TOTAL	8370	13921	33287	48480	22456	39804	57585	5889	3917	2187	2614	3053
MEAN	270	464	1074	1564	802	1284	1920	190	131	70.5	84.3	102
MAX	605	2440	3640	5900	3470	6690	6470	350	367	238	1050	992
MIN	155	207	347	320	259	314	257	105	45	43	36	48

e Estimated.

CHEMUNG RIVER BASIN

01518700 TIOGA RIVER AT TIOGA JUNCTION, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2005, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	254	427	570	539	635	1013	1311	601	443	209	210	234
MAX	1515	1626	1632	1975	1837	2009	5667	1723	1619	976	1836	2534
(WY)	1991	1997	1997	1996	1981	1994	1993	1989	1989	2004	1994	2004
MIN	41.4	49.0	41.5	29.5	127	259	352	151	51.4	38.4	29.6	26.3
(WY)	1992	1981	1999	1981	1989	1981	1988	2001	1980	1991	1980	1980

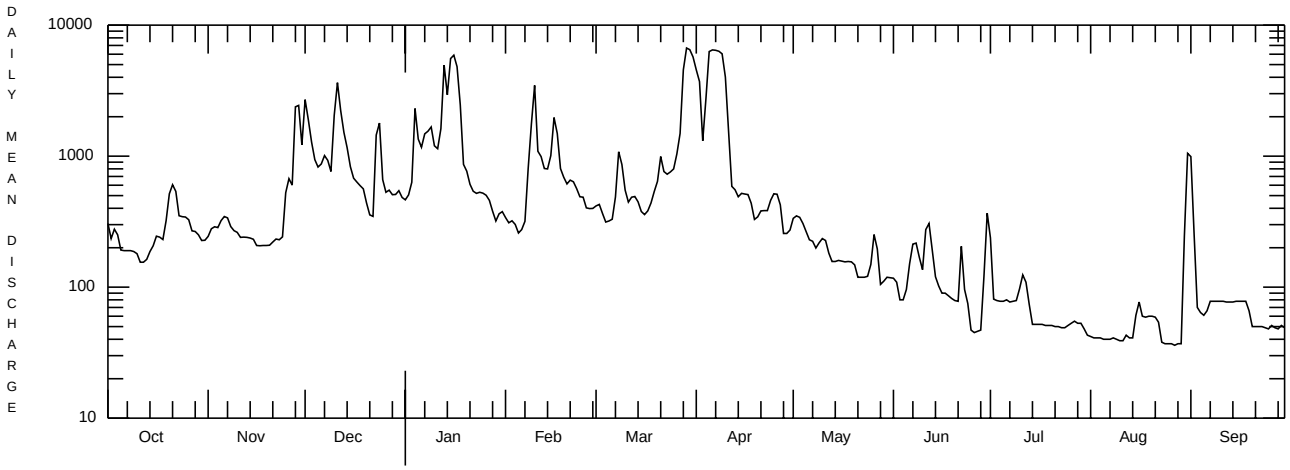
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1980 - 2005	
ANNUAL TOTAL	333876		241563			
ANNUAL MEAN	912		662		536	
HIGHEST ANNUAL MEAN					1014	2004
LOWEST ANNUAL MEAN					297	2001
HIGHEST DAILY MEAN	7490	Sep 22	6690	Mar 29	7490	Sep 22 2004
LOWEST DAILY MEAN	59	Jul 3	36	Aug 27	16	Aug 26-28 1980
ANNUAL SEVEN-DAY MINIMUM	83	Jul 1	37	Aug 23	21	Jan 23 1981
MAXIMUM PEAK FLOW			**a**8340	Jan 15	**a**11200	Aug 18 1994
MAXIMUM PEAK STAGE			14.35	Jan 15	15.42	Aug 18 1994
10 PERCENT EXCEEDS	2350		1500		1230	
50 PERCENT EXCEEDS	451		266		217	
90 PERCENT EXCEEDS	188		50		50	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1979, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	581	746	635	963	453	1993	1010	663	210	123	177	160
MAX	838	1764	1324	1484	597	2355	1404	1365	318	181	288	278
(WY)	1978	1978	1978	1979	1977	1979	1978	1978	1978	1976	1976	1977
MIN	198	181	229	97.2	380	1478	807	311	153	78.3	65.2	80.3
(WY)	1979	1979	1977	1977	1978	1977	1979	1979	1977	1979	1979	1976

SUMMARY STATISTICS	WATER YEARS 1976 - 1979	
ANNUAL MEAN	643	
HIGHEST ANNUAL MEAN	955	1978
LOWEST ANNUAL MEAN	429	1977
HIGHEST DAILY MEAN	8510	Jan 9 1978
LOWEST DAILY MEAN	28	Sep 11 1977
ANNUAL SEVEN-DAY MINIMUM	32	Sep 7 1977
MAXIMUM PEAK FLOW	**bc**17900	Feb 25 1977
MAXIMUM PEAK STAGE	**d**17.20	Jan 26 1978
INSTANTANEOUS LOW FLOW	26	Feb 13, Sep 12, 1977; Feb 3, 1979.
ANNUAL RUNOFF (CFSM)	1.44	
ANNUAL RUNOFF (INCHES)	19.59	
10 PERCENT EXCEEDS	1520	
50 PERCENT EXCEEDS	232	
90 PERCENT EXCEEDS	69	

a From rating curve extended above 6,000 ft^3/s.
b From rating curve extended above 4,000 ft^3/s.
c Gage height 16.70 ft.
d Backwater from ice.



OCTOBER 1, 2004 TO SEPTEMBER 30, 2005

01518700 TIOGA RIVER AT TIOGA JUNCTION, 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 col-lecting sample, code (00027)	Agency ana-lyzing sample, code (00028)	Instan-taneous dis-charge, cfs (00061)	Sam-pling method, code (82398)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conduc-tance, wat unf lab, µS/cm 25 degC (90095)	Specif. conduc-tance, wat unf µS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recover-able, mg/L (00916)
OCT 2004													
27...	0900	1028	9813	270	30	10.8	7.2	7.2	178	176	9.6	68	18.7
NOV													
30...	1130	1028	9813	266	30	13.2	7.2	7.6	151	147	6.1	59	17.0
DEC													
28...	1015	1028	9813	538	30	14.7	7.1	7.4	139	143	.5	52	14.0
JAN 2005													
26...	0945	1028	9813	525	30	14.8	7.1	7.1	139	142	.9	51	13.9
FEB													
08...	0830	1028	9813	381	30	13.8	7.1	7.3	147	143	1.6	56	15.1
MAR													
09...	1150	1028	9813	787	30	15.3	7.3	7.4	153	147	1.4	54	15.5
APR													
07...	1230	1028	9813	6360	30	15.0	6.9	6.6	82	83	5.7	31	8.0
MAY													
17...	1140	1028	9813	156	30	11.8	7.7	7.6	174	168	12.9	65	17.6
JUN													
23...	1130	1028	9813	97	30	9.2	7.3	7.6	205	206	17.6	77	21.1
JUL													
07...	1800	1028	9813	76	30	8.7	7.7	7.7	211	214	22.2	86	24.0
AUG													
11...	1000	1028	9813	40	30	7.6	7.5	7.0	237	243	24.6	97	27.8
SEP													
13...	1120	1028	9813	78	30	9.3	7.7	7.9	238	244	20.9	95	26.8

Date	Magnes-ium, water, unfltrd recover-able, mg/L (00927)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite + nitrate water unfltrd mg/L as N (00630)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)
OCT 2004											
27...	5.1	31	36.9	130	10	<.020	<.020	.470	.520	<.010	.03
NOV											
30...	4.1	36	22.2	108	38	.050	.030	.390	.380	<.010	.13
DEC											
28...	4.0	26	25.4	96	18	.060	.060	.480	.480	<.010	.01
JAN 2005											
26...	3.9	19	33.8	74	22	.060	.140	.650	.660	<.010	<.01
FEB											
08...	4.3	24	33.1	138	<2	.090	.090	.660	.650	<.010	<.01
MAR											
09...	3.7	27	28.8	106	8	.070	.060	.600	.610	<.010	.02
APR											
07...	2.7	12	16.1	74	94	.050	.070	.430	.430	<.010	.02
MAY											
17...	5.0	28	42.4	138	<2	<.020	<.020	.440	.440	<.010	.02
JUN											
23...	5.9	35	44.3	162	6	.050	.060	.420	.400	.013	.02
JUL											
07...	6.3	37	45.6	148	<2	.030	.030	.480	.460	.014	.03
AUG											
11...	6.8	43	51.0	168	<2	<.020	.020	.410	.400	<.010	.03
SEP											
13...	6.7	43	52.3	200	<2	.020	.020	.330	.310	.011	.01

CHEMUNG RIVER BASIN

01518700 TIOGA RIVER AT TIOGA JUNCTION, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, water, fltrd, mg/L (00602)	Total nitro-gen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Alum-inum, water, unfltrd recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Mangan-ese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT 2004												
27...	<.010	.021	.72	.70	2.3	350	<10	440	<1.0	640	<50	20
NOV												
30...	<.010	.064	.53	.66	3.0	2400	<10	2520	1.7	420	<50	10
DEC												
28...	<.010	.031	.78	1.0	2.3	1900	<10	1690	<1.0	390	<50	30
JAN 2005												
26...	<.010	.026	.74	.88	1.8	1200	<10	1120	<1.0	490	<50	60
FEB												
08...	<.010	.016	.95	1.2	2.2	1000	<10	900	<1.0	510	<50	40
MAR												
09...	<.010	.016	.70	1.2	1.8	280	<10	390	<1.0	430	<50	30
APR												
07...	<.010	.114	1.9	.61	3.0	2400	<10	4300	3.8	420	<50	60
MAY												
17...	<.010	.013	.64	.52	1.9	<200	<10	190	<1.0	520	<50	10
JUN												
23...	.012	.034	.62	.57	2.0	270	<10	340	<1.0	390	<50	<10
JUL												
07...	<.010	.023	.64	.58	2.5	<200	<10	260	<1.0	270	<50	<10
AUG												
11...	.020	.040	.92	.47	2.3	<200	<10	270	<1.0	250	<50	<10
SEP												
13...	<.010	.015	.62	.43	2.5	<200	<10	130	<1.0	80	<50	<10

01518700 TIOGA RIVER AT TIOGA JUNCTION, 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	08/04/04
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Nematoda (NEMATODES)	6
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
Ferrissia	4
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
Sphaerium	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Naididae	3
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	10
Crustacea	
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
Caecidotea	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Baetis	2
Caenidae	
Caenis	1
Heptageniidae	
Leucrocuta	1
Stenonema	6
Isonychiidae	
Isonychia	4
Trichoptera (CADDISFLIES)	
Hydropsychidae	
Cheumatopsyche	8
Hydropsyche	17
Macrostemum	2
Hydroptilidae	
Hydroptila	2
Philopotamidae	
Chimarra	7
Psychomyiidae	
Psychomyia	4

01518700 TIOGA RIVER AT TIOGA JUNCTION, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	08/04/04
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Stenelmis	2
Psephenidae (WATER PENNIES)	
Psephenus	10
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	8
Empididae (DANCE FLIES)	
Hemerodromia	4
Tipulidae (CRANE FLIES)	
Antocha	4
Total Organisms	108
Total Taxa	23