

CHEMUNG RIVER BASIN

01518000 TIOGA RIVER AT TIOGA, PA

LOCATION.--Lat 41°54'30", long 77°07'47", Tioga County, Hydrologic Unit 02050104, on left bank 130 ft upstream from highway bridge on Township Route 667 at Tioga, 0.8 mi upstream from Crooked Creek, and 0.9 mi downstream from Tioga Dam.

DRAINAGE AREA.--282 mi².

PERIOD OF RECORD.--June 1938 to current year. Prior to October 1938 monthly discharge only, published in WSP 1302.

REVISIONS.--WSP 871: 1938.

GAGE.--Water-stage recorder. Datum of gage is 1,021.07 ft above sea level. Prior to Sept. 9, 1953, at site 20 ft upstream at datum 2.11 ft higher. Sept. 9, 1953, to Aug. 10, 1954, at site 130 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Discharges include flow diverted from Crooked Creek into Tioga River since Oct. 1, 1977. Flow regulated since November 1979 by Tioga Dam (station 01517900). Several measurements of water temperature were made during the year. Satellite telemetry at station.

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	34	33	37	e42	372	305	947	278	58	68	33	31
2	34	33	36	e47	468	290	1260	253	66	68	33	31
3	34	42	37	79	758	494	1070	231	66	48	33	31
4	34	52	37	101	690	4180	1070	215	66	35	33	30
5	34	49	37	91	584	4100	1250	203	58	35	33	30
6	34	45	37	75	440	2130	969	177	51	35	33	30
7	30	42	37	68	414	987	755	177	41	35	33	36
8	21	38	37	57	413	766	553	184	34	35	33	32
9	16	34	37	59	342	654	1010	263	34	35	33	32
10	16	37	37	61	435	662	1810	283	32	35	33	32
11	32	48	37	61	482	594	1260	225	29	35	33	32
12	79	46	37	61	554	542	1210	163	28	34	33	32
13	75	47	37	61	591	487	945	161	32	34	33	31
14	71	49	37	63	523	480	614	151	33	33	33	31
15	58	48	36	64	443	474	543	117	33	33	33	31
16	29	39	36	63	418	444	574	98	33	33	33	171
17	24	36	37	95	535	659	694	98	31	33	33	1650
18	21	37	36	143	647	1730	621	98	32	33	33	483
19	20	44	36	143	515	1160	465	98	44	33	33	194
20	20	44	36	229	397	875	460	89	54	33	32	150
21	21	44	37	293	349	917	457	67	55	33	32	150
22	21	44	37	293	313	1030	384	66	55	33	32	143
23	35	44	36	2710	279	914	632	67	47	33	31	124
24	42	44	36	4320	261	932	1190	84	39	33	31	78
25	37	40	36	3930	244	971	679	115	38	34	31	78
26	34	37	35	3020	218	831	667	86	36	33	32	69
27	33	37	35	1670	202	748	624	86	37	33	31	55
28	33	37	35	1210	252	747	437	63	38	33	31	62
29	33	37	34	794	---	789	357	49	48	33	31	75
30	33	37	e34	495	---	742	314	48	69	34	31	486
31	33	---	e33	437	---	822	---	49	---	33	31	---
TOTAL	1071	1244	1122	20835	12139	31456	23821	4342	1317	1128	1003	4440
MEAN	34.5	41.5	36.2	672	434	1015	794	140	43.9	36.4	32.4	148
MAX	79	52	37	4320	758	4180	1810	283	69	68	33	1650
MIN	16	33	33	42	202	290	314	48	28	33	31	30

e Estimated.

CHEMUNG RIVER BASIN

01518000 TIOGA RIVER AT TIOGA, PA--Continued

REMARKS--Those data in the first set of statistics (1978-99) represent flow past the gage including streamflow diverted into Tioga River from the adjacent Crooked Creek Basin since October 1977, and are not equivalent to natural streamflow conditions prior to this date.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1999, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	269	449	496	532	560	945	1083	531	359	162	166	111
MAX (WY)	1454	1684	1377	1709	1716	2161	4544	1433	1404	682	1747	386
MIN (WY)	1991	1978	1997	1996	1981	1979	1993	1989	1989	1994	1994	1996
MIN (WY)	34.5	31.2	36.2	22.7	111	238	323	140	41.5	32.5	28.4	20.8
(WY)	1999	1981	1999	1981	1989	1981	1988	1985	1991	1991	1980	198

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1978 - 1999

ANNUAL TOTAL	189776	103918	
ANNUAL MEAN	520	285	471
HIGHEST ANNUAL MEAN			862
LOWEST ANNUAL MEAN			256
HIGHEST DAILY MEAN	4780	Feb 19	4320
LOWEST DAILY MEAN	16	Oct 9,10	16
ANNUAL SEVEN-DAY MINIMUM	22	Oct 16	22
INSTANTANEOUS PEAK FLOW			4590
INSTANTANEOUS PEAK STAGE			6.07
INSTANTANEOUS LOW FLOW			a.00
10 PERCENT EXCEEDS	1300	761	1080
50 PERCENT EXCEEDS	184	48	186
90 PERCENT EXCEEDS	29	32	39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1977, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	145	291	350	271	346	790	753	516	254	93.4	77.0	89.9
MAX (WY)	1084	1061	978	787	814	1694	2124	1534	2397	471	380	1083
MIN (WY)	1956	1971	1974	1952	1976	1964	1958	1946	1972	1972	1947	1975
MIN (WY)	9.26	12.8	22.0	37.9	59.2	169	132	87.6	44.3	16.5	12.2	6.68
(WY)	1964	1965	1965	1961	1963	1969	1946	1941	1962	1955	1966	1964

SUMMARY STATISTICS WATER YEARS 1939 - 1977

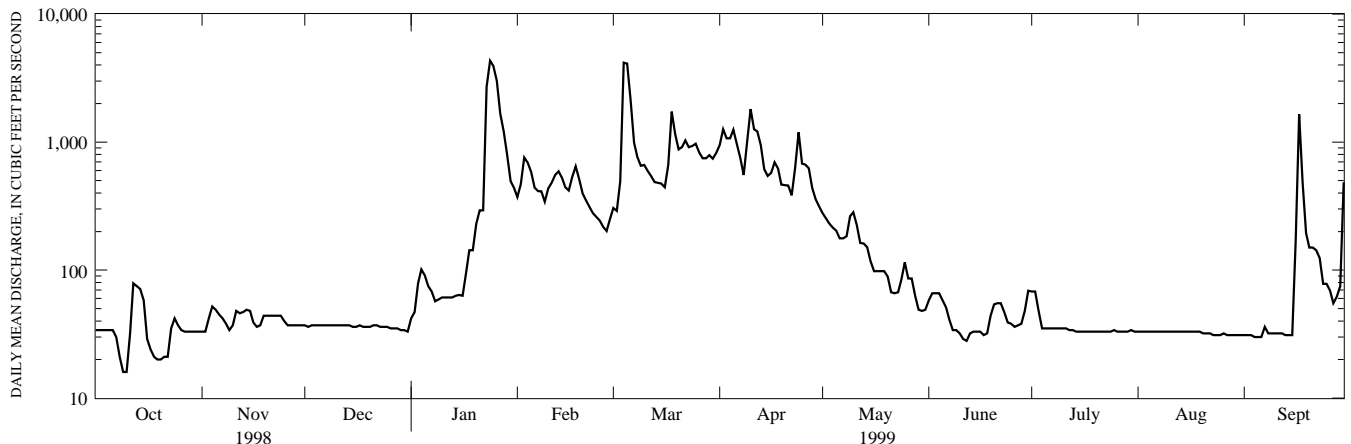
ANNUAL MEAN	331
HIGHEST ANNUAL MEAN	583
LOWEST ANNUAL MEAN	138
HIGHEST DAILY MEAN	26900
LOWEST DAILY MEAN	5.0
ANNUAL SEVEN-DAY MINIMUM	5.3
INSTANTANEOUS PEAK FLOW	c59000
INSTANTANEOUS PEAK STAGE	d19.70
INSTANTANEOUS LOW FLOW	4.5
ANNUAL RUNOFF (CFSM)	1.17
ANNUAL RUNOFF (INCHES)	15.95
10 PERCENT EXCEEDS	780
50 PERCENT EXCEEDS	130
90 PERCENT EXCEEDS	23

a Result of shutoff at Tioga Dam.

b Also Aug. 29, 1980.

c From rating curve extended above 8,000 ft³/s on basis of slope-area and contracted-opening measurement at gage height 15.47 ft, and slope-area measurement of peak flow.

d From floodmark.



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