

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.

REVISED RECORDS.--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.--No estimated daily discharges. Records good. 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|-------|-------|------|------|------|------|------|
| 1 | 35 | 45 | 44 | 105 | 110 | 114 | 857 | 267 | 94 | 159 | 39 | 54 |
| 2 | 35 | 45 | 44 | 105 | 138 | 126 | 896 | 235 | 93 | 240 | 40 | 54 |
| 3 | 35 | 45 | 43 | 95 | 107 | 142 | 726 | 193 | 94 | 144 | 40 | 54 |
| 4 | 35 | 45 | 43 | 89 | 92 | 142 | 838 | 190 | 103 | 111 | 40 | 54 |
| 5 | 36 | 45 | 43 | 89 | 108 | 142 | 1430 | 195 | 122 | 158 | 40 | 54 |
| 6 | 170 | 45 | 43 | 89 | 110 | 138 | 1690 | 186 | 102 | 185 | 40 | 54 |
| 7 | 134 | 45 | 43 | 89 | 110 | 127 | 3040 | 151 | 93 | 149 | 40 | 54 |
| 8 | 88 | 45 | 43 | 89 | 109 | 126 | 3520 | 128 | 75 | 129 | 40 | 54 |
| 9 | 76 | 45 | 43 | 89 | 109 | 138 | 3230 | 115 | 48 | 119 | 40 | 54 |
| 10 | 57 | 45 | 43 | 97 | 151 | 141 | 3010 | 115 | 53 | 99 | 35 | 54 |
| 11 | 46 | 44 | 43 | 101 | 176 | 135 | 2730 | 106 | 63 | 88 | 30 | 54 |
| 12 | 46 | 44 | 42 | 101 | 134 | 128 | 2500 | 83 | 60 | 69 | 30 | 54 |
| 13 | 46 | 44 | 42 | 101 | 150 | 189 | 977 | 103 | 51 | 69 | 30 | 55 |
| 14 | 46 | 44 | 42 | 101 | 161 | 275 | 876 | 122 | 51 | 69 | 30 | 55 |
| 15 | 46 | 44 | 59 | 101 | 318 | 442 | 839 | 117 | 59 | 69 | 31 | 55 |
| 16 | 46 | 44 | 71 | 98 | 322 | 475 | 977 | 74 | 66 | 60 | 31 | 55 |
| 17 | 46 | 44 | 913 | 91 | 219 | 348 | 839 | 44 | 119 | 50 | 31 | 55 |
| 18 | 45 | 44 | 750 | 92 | 173 | 341 | 761 | 87 | 157 | 49 | 31 | 55 |
| 19 | 45 | 44 | 269 | 93 | 168 | 353 | 681 | 115 | 134 | 48 | 47 | 55 |
| 20 | 45 | 44 | 234 | 93 | 198 | 398 | 559 | 113 | 160 | 56 | 59 | 55 |
| 21 | 45 | 44 | 224 | 93 | 190 | 779 | 888 | 113 | 179 | 53 | 59 | 54 |
| 22 | 45 | 44 | 188 | 93 | 130 | 1220 | 1460 | 113 | 133 | 53 | 48 | 54 |
| 23 | 45 | 44 | 119 | 93 | 108 | 908 | 898 | 105 | 714 | 53 | 36 | 54 |
| 24 | 45 | 44 | 101 | 93 | 127 | 1010 | 799 | 97 | 1250 | 53 | 36 | 406 |
| 25 | 45 | 44 | 101 | 93 | 162 | 751 | 660 | 97 | 445 | 53 | 36 | 3100 |
| 26 | 45 | 43 | 101 | 93 | 179 | 577 | 466 | 141 | 194 | 53 | 50 | 1170 |
| 27 | 45 | 43 | 108 | 83 | 161 | 457 | 416 | 190 | 132 | 53 | 57 | 499 |
| 28 | 45 | 43 | 108 | 76 | 140 | 410 | 381 | 232 | 98 | 53 | 55 | 342 |
| 29 | 45 | 43 | 94 | 80 | --- | 425 | 333 | 176 | 98 | 52 | 55 | 288 |
| 30 | 46 | 44 | 99 | 137 | --- | 3020 | 300 | 113 | 99 | 45 | 54 | 218 |
| 31 | 45 | --- | 105 | 131 | --- | 1350 | --- | 94 | --- | 40 | 54 | --- |
| TOTAL | 1654 | 1326 | 4245 | 2973 | 4360 | 15327 | 37577 | 4210 | 5139 | 2681 | 1284 | 7273 |
| MEAN | 53.4 | 44.2 | 137 | 95.9 | 156 | 494 | 1253 | 136 | 171 | 86.5 | 41.4 | 242 |
| MAX | 170 | 45 | 913 | 137 | 322 | 3020 | 3520 | 267 | 1250 | 240 | 59 | 3100 |
| MIN | 35 | 43 | 42 | 76 | 92 | 114 | 300 | 44 | 48 | 40 | 30 | 54 |

CHEMUNG RIVER BASIN

01518000 TIOGA RIVER AT TIOGA, PA--Continued

REMARKS--Those data in the first set of statistics (1978-2001) 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 - 2001, BY WATER YEAR (WY) (SINCE REGULATION)

| | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 254 | 424 | 478 | 503 | 555 | 923 | 1107 | 517 | 352 | 155 | 155 | 113 |
| 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 | 136 | 41.5 | 32.5 | 28.4 | 20.8 |
| (WY) | 1999 | 1981 | 1999 | 1981 | 1989 | 1981 | 1988 | 2001 | 1991 | 1991 | 1980 | 1980 |

| SUMMARY STATISTICS | FOR 2000 CALENDAR YEAR | FOR 2001 WATER YEAR | WATER YEARS 1978 - 2001 |
|--------------------------|------------------------|---------------------|------------------------------|
| ANNUAL TOTAL | 144228 | 88049 | |
| ANNUAL MEAN | 394 | 241 | 460 |
| HIGHEST ANNUAL MEAN | | | 862 1978 |
| LOWEST ANNUAL MEAN | | | 241 2001 |
| HIGHEST DAILY MEAN | 4320 Apr 5 | 3520 Apr 8 | 8360 Jan 9 1978 |
| LOWEST DAILY MEAN | 28 Sep 8 | 30 Aug 11-14 | 16 Aug 26-28 1980 |
| ANNUAL SEVEN-DAY MINIMUM | 29 Sep 2 | 30 Aug 11 | 16 Jan 15 1981 |
| MAXIMUM PEAK FLOW | | 4960 Mar 30 | 14300 Nov 4 1977 |
| MAXIMUM PEAK STAGE | | 6.47 Mar 30 | 8.84 Nov 4 1977 |
| INSTANTANEOUS LOW FLOW | | | a.00 Mar 6 1979 ^b |
| 10 PERCENT EXCEEDS | 1050 | 668 | 1060 |
| 50 PERCENT EXCEEDS | 145 | 93 | 178 |
| 90 PERCENT EXCEEDS | 35 | 43 | 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

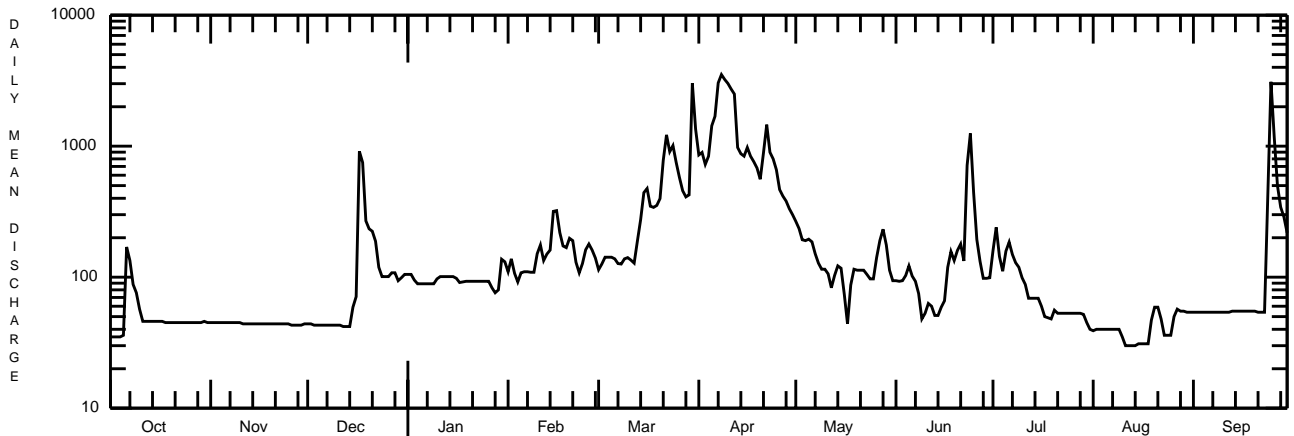
| | | |
|--------------------------|--------|----------------|
| ANNUAL MEAN | 331 | |
| HIGHEST ANNUAL MEAN | 583 | 1972 |
| LOWEST ANNUAL MEAN | 138 | 1965 |
| HIGHEST DAILY MEAN | 26900 | Jun 23 1972 |
| LOWEST DAILY MEAN | 5.0 | Sep 11 1964 |
| ANNUAL SEVEN-DAY MINIMUM | 5.3 | Sep 8 1964 |
| INSTANTANEOUS PEAK FLOW | c59000 | Jun 22 1972 |
| INSTANTANEOUS PEAK STAGE | d19.70 | Jun 22 1972 |
| INSTANTANEOUS LOW FLOW | 4.5 | Aug 10,11 1955 |
| 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.



OCTOBER 1, 2000 TO SEPTEMBER 30, 2001