

OHIO RIVER MAIN STEM

03049500 ALLEGHENY RIVER AT NATRONA, PA

LOCATION.--Lat 40°36'55", long 79°43'07", Allegheny County, Hydrologic Unit 05010009, on right bank 520 ft upstream from dam at lock 4 at Natrona, 5.8 mi downstream from Kiskiminetas River, at mile 24.3.

DRAINAGE AREA.--11,410 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1435: 1939.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 736.36 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Apr. 14, 1940, nonrecording gage and Apr. 15, 1940 to Oct. 22, 1990, water-stage recorder at same site at datum 0.75 ft higher.

REMARKS.--No estimated daily discharges. Records good except those below 2,000 ft³/s, which are poor. Flow regulated since 1924 by Piney Reservoir, since 1940 by Crooked Creek Lake, since 1941 by Mahoning Creek Lake and Tionesta Lake, since 1942 by Loyalhanna Lake, since 1949 by Chautauqua Lake (station 03013946), since 1952 by East Branch Clarion River Lake (station 03027000), and Conemaugh River Lake, since 1965 by Allegheny Reservoir (station 03012520), since 1971 by Union City Reservoir (station 03021518), and since 1974 by Woodcock Creek Lake (station 03022550). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 32.06 ft, discharge, 365,000 ft³/s, determined by U.S. Army Corps of Engineers.

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 | 3650 | 3470 | 3460 | 3170 | 49600 | 17600 | 20600 | 18300 | 8640 | 4080 | 4290 | 2880 |
| 2 | 3150 | 3690 | 3470 | 1760 | 47500 | 20600 | 21000 | 16100 | 7650 | 6080 | 2810 | 2900 |
| 3 | 3480 | 4310 | 3780 | 1830 | 49200 | 20500 | 24600 | 14600 | 7180 | 7090 | 3400 | 3170 |
| 4 | 3770 | 4240 | 3510 | 2070 | 49200 | 26900 | 26500 | 12100 | 7040 | 5690 | 3020 | 2940 |
| 5 | 3260 | 3730 | 3580 | 2690 | 46400 | 33600 | 30200 | 10300 | 6330 | 3730 | 3410 | 2630 |
| 6 | 3560 | 3760 | 3460 | 2790 | 44600 | 30500 | 30900 | 10400 | 5770 | 3390 | 3150 | 2580 |
| 7 | 3250 | 3590 | 3210 | 3210 | 41100 | 29100 | 32100 | 8850 | 5210 | 3080 | 3540 | 2790 |
| 8 | 5210 | 3710 | 3380 | 3200 | 41500 | 25200 | 31200 | 8940 | 5560 | 3400 | 2890 | 3530 |
| 9 | 7710 | 3950 | 3420 | 4010 | 38800 | 21700 | 31800 | 11900 | 4480 | 4250 | 2220 | 3350 |
| 10 | 7330 | 4440 | 3520 | 3250 | 35800 | 20000 | 47900 | 10800 | 3940 | 4680 | 2670 | 2770 |
| 11 | 6570 | 5030 | 3690 | 4700 | 34000 | 19200 | 48100 | 13100 | 3370 | 4090 | 2710 | 2600 |
| 12 | 6020 | 5070 | 3260 | 5180 | 30200 | 17400 | 53700 | 13300 | 3570 | 3600 | 3270 | 2470 |
| 13 | 5900 | 4760 | 3120 | 7030 | 30300 | 16100 | 55900 | 12800 | 2980 | 3570 | 2850 | 2470 |
| 14 | 4960 | 4580 | 2960 | 7550 | 30000 | 15400 | 55300 | 12000 | 3100 | 3700 | 3380 | 2960 |
| 15 | 4250 | 4090 | 2770 | 9890 | 27500 | 15100 | 49600 | 11300 | 4310 | 2820 | 3400 | 2860 |
| 16 | 3710 | 3110 | 2800 | 9740 | 26200 | 15000 | 42600 | 11300 | 3560 | 3200 | 3630 | 3180 |
| 17 | 4100 | 2830 | 2990 | 10300 | 25600 | 14500 | 36400 | 11000 | 3670 | 2930 | 3450 | 2950 |
| 18 | 3530 | 2650 | 2310 | 13300 | 22800 | 21100 | 35100 | 10700 | 3040 | 2840 | 2930 | 3610 |
| 19 | 4680 | 3250 | 3370 | 21400 | 24100 | 30500 | 34400 | 16000 | 2960 | 2920 | 2360 | 2850 |
| 20 | 4560 | 3860 | 3410 | 25400 | 22300 | 33900 | 34600 | 12200 | 2460 | 3380 | 2510 | 2810 |
| 21 | 4010 | 3890 | 3660 | 26400 | 20100 | 31200 | 35100 | 9750 | 2600 | 3060 | 2520 | 3370 |
| 22 | 3790 | 3870 | 7000 | 26700 | 17700 | 28700 | 35900 | 9150 | 2860 | 3920 | 3340 | 2790 |
| 23 | 3630 | 3740 | 17100 | 37000 | 14700 | 30100 | 39300 | 9060 | 2790 | 3360 | 4320 | 3130 |
| 24 | 3740 | 3850 | 16300 | 82900 | 14000 | 28400 | 41700 | 9390 | 3040 | 4100 | 3900 | 3170 |
| 25 | 2690 | 3620 | 12000 | 88900 | 13300 | 25600 | 43200 | 17300 | 2840 | 3730 | 3900 | 3160 |
| 26 | 2500 | 3910 | 8710 | 61100 | 12800 | 25600 | 38700 | 20000 | 3700 | 3170 | 5450 | 3060 |
| 27 | 2700 | 3680 | 6980 | 53000 | 10900 | 24100 | 34700 | 19400 | 2880 | 3380 | 6230 | 3020 |
| 28 | 2940 | 3470 | 7070 | 54200 | 12400 | 23100 | 28400 | 16600 | 3210 | 3500 | 5390 | 3350 |
| 29 | 3620 | 3240 | 7660 | 60300 | --- | 21900 | 25300 | 13100 | 3490 | 4290 | 3340 | 3750 |
| 30 | 3790 | 3010 | 5570 | 59300 | --- | 20600 | 21800 | 11200 | 4230 | 3510 | 2740 | 5570 |
| 31 | 3750 | --- | 3990 | 54700 | --- | 20300 | --- | 9800 | --- | 3380 | 2880 | --- |
| TOTAL | 129810 | 114400 | 161510 | 746970 | 832600 | 723500 | 1086600 | 390740 | 126460 | 117920 | 105900 | 92670 |
| MEAN | 4187 | 3813 | 5210 | 24100 | 29740 | 23340 | 36220 | 12600 | 4215 | 3804 | 3416 | 3089 |
| MAX | 7710 | 5070 | 17100 | 88900 | 49600 | 33900 | 55900 | 20000 | 8640 | 7090 | 6230 | 5570 |
| MIN | 2500 | 2650 | 2310 | 1760 | 10900 | 14500 | 20600 | 8850 | 2460 | 2820 | 2220 | 2470 |
| CFSM | .37 | .33 | .46 | 2.11 | 2.61 | 2.05 | 3.17 | 1.10 | .37 | .33 | .30 | .27 |
| IN. | .42 | .37 | .53 | 2.44 | 2.71 | 2.36 | 3.54 | 1.27 | .41 | .38 | .35 | .30 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1999, BY WATER YEAR (WY)

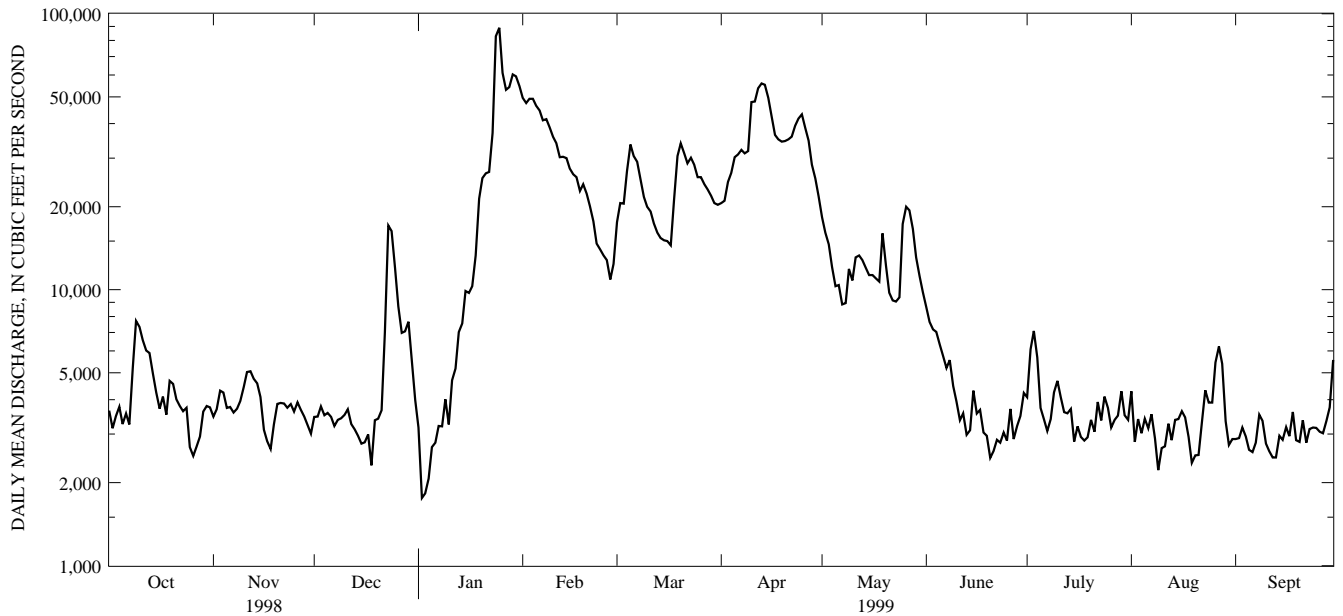
| | | | | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| MEAN | 9778 | 16650 | 23930 | 24920 | 27400 | 38730 | 35600 | 22860 | 14610 | 9084 | 6606 | 6884 |
| MAX | 34470 | 45220 | 48690 | 68600 | 53390 | 87030 | 83780 | 48400 | 45820 | 34630 | 23020 | 22690 |
| (WY) | 1991 | 1986 | 1978 | 1952 | 1976 | 1945 | 1940 | 1943 | 1989 | 1972 | 1956 | 1990 |
| MIN | 1227 | 2686 | 2316 | 4520 | 7167 | 10410 | 9000 | 6129 | 3759 | 1944 | 1786 | 1444 |
| (WY) | 1964 | 1954 | 1961 | 1961 | 1963 | 1969 | 1946 | 1941 | 1991 | 1966 | 1962 | 1939 |

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03049500 ALLEGHENY RIVER AT NATRONA, PA--Continued

| SUMMARY STATISTICS | FOR 1998 CALENDAR YEAR | | FOR 1999 WATER YEAR | | WATER YEARS 1939 - 1999 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 5771450 | | 4629080 | | 19710 | |
| ANNUAL MEAN | 15810 | | 12680 | | 27810 | |
| HIGHEST ANNUAL MEAN | | | | | 1956 | |
| LOWEST ANNUAL MEAN | | | | | 12680 | |
| HIGHEST DAILY MEAN | 119000 | Jan 9 | 88900 | Jan 25 | 206000 | Dec 31 1942 |
| LOWEST DAILY MEAN | 2310 | Dec 18 | 1760 | Jan 2 | 949 | Oct 26 1963 |
| ANNUAL SEVEN-DAY MINIMUM | 2890 | Dec 12 | 2500 | Jan 1 | 1030 | Oct 25 1963 |
| INSTANTANEOUS PEAK FLOW | | | 106000 | Jan 25 | ^a 238000 | Dec 30 1942 |
| INSTANTANEOUS PEAK STAGE | | | 18.71 | Jan 25 | ^b 27.46 | Dec 30 1942 |
| INSTANTANEOUS LOW FLOW | | | | | 985 | Oct 22 1963 |
| ANNUAL RUNOFF (CFSM) | 1.39 | | 1.11 | | 1.73 | |
| ANNUAL RUNOFF (INCHES) | 18.82 | | 15.09 | | 23.47 | |
| 10 PERCENT EXCEEDS | 37600 | | 34500 | | 45000 | |
| 50 PERCENT EXCEEDS | 6910 | | 4310 | | 13200 | |
| 90 PERCENT EXCEEDS | 3400 | | 2850 | | 3130 | |

a From rating curve extended above 172,000 ft³/s.
b Datum then in use.



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