

Table 11. Results of Kendall's tau trend test and flood-frequency analysis of Pottawatomie Creek at Garnett (station 06914000, map index number 34) peak-flow record with decreasing trend added

| Year | Peak flow (cubic feet per second) | | | | | | |
|------|-----------------------------------|-----------------------------------|--------|-----------------------------------|--------|-----------------------------------|--------|
| | No change | 0.5-percent decrease ¹ | | 1.0-percent decrease ¹ | | 1.5-percent decrease ¹ | |
| 1958 | 12,900 | 1.000 | 12,900 | 1.00 | 12,900 | 1.000 | 12,900 |
| 1959 | 4,110 | .995 | 4,089 | .99 | 4,069 | .985 | 4,048 |
| 1960 | 9,760 | .990 | 9,662 | .98 | 9,565 | .970 | 9,467 |
| 1961 | 57,000 | .985 | 56,145 | .97 | 55,290 | .955 | 54,435 |
| 1962 | 18,500 | .980 | 18,130 | .96 | 17,760 | .940 | 17,390 |
| 1963 | 5,700 | .975 | 5,558 | .95 | 5,415 | .925 | 5,273 |
| 1964 | 5,650 | .970 | 5,481 | .94 | 5,311 | .910 | 5,142 |
| 1965 | 10,700 | .965 | 10,326 | .93 | 9,951 | .895 | 9,577 |
| 1966 | 3,770 | .960 | 3,619 | .92 | 3,468 | .880 | 3,318 |
| 1967 | 42,000 | .955 | 40,110 | .91 | 38,220 | .865 | 36,330 |
| 1968 | 5,080 | .950 | 4,826 | .90 | 4,572 | .850 | 4,318 |
| 1969 | 14,600 | .945 | 13,797 | .89 | 12,994 | .835 | 12,191 |
| 1970 | 29,000 | .940 | 27,260 | .88 | 25,520 | .820 | 23,780 |
| 1971 | 9,800 | .935 | 9,163 | .87 | 8,526 | .805 | 7,889 |
| 1972 | 10,700 | .930 | 9,951 | .86 | 9,202 | .790 | 8,453 |
| 1973 | 10,800 | .925 | 9,990 | .85 | 9,180 | .775 | 8,370 |
| 1974 | 36,200 | .920 | 33,304 | .84 | 30,408 | .760 | 27,512 |
| 1975 | 19,900 | .915 | 18,209 | .83 | 16,517 | .745 | 14,826 |
| 1976 | 3,670 | .910 | 3,340 | .82 | 3,009 | .730 | 2,679 |
| 1977 | 13,000 | .905 | 11,765 | .81 | 10,530 | .715 | 9,295 |
| 1978 | 11,600 | .900 | 10,440 | .80 | 9,280 | .700 | 8,120 |
| 1979 | 24,000 | .895 | 21,480 | .79 | 18,960 | .685 | 16,440 |
| 1980 | 14,900 | .890 | 13,261 | .78 | 11,622 | .670 | 9,983 |
| 1981 | 12,600 | .885 | 11,151 | .77 | 9,702 | .655 | 8,253 |
| 1982 | 11,000 | .880 | 9,680 | .76 | 8,360 | .640 | 7,040 |
| 1983 | 11,400 | .875 | 9,975 | .75 | 8,550 | .625 | 7,125 |
| 1984 | 11,800 | .870 | 10,266 | .74 | 8,732 | .610 | 7,198 |
| 1985 | 8,890 | .865 | 7,690 | .73 | 6,490 | .595 | 5,290 |
| 1986 | 15,300 | .860 | 13,158 | .72 | 11,016 | .580 | 8,874 |
| 1987 | 18,600 | .855 | 15,903 | .71 | 13,206 | .565 | 10,509 |
| 1988 | 13,800 | .850 | 11,730 | .70 | 9,660 | .550 | 7,590 |
| 1989 | 12,300 | .845 | 10,394 | .69 | 8,487 | .535 | 6,581 |
| 1990 | 10,700 | .840 | 8,988 | .68 | 7,276 | .520 | 5,564 |
| 1991 | 2,950 | .835 | 2,463 | .67 | 1,977 | .505 | 1,490 |
| 1992 | 16,200 | .830 | 13,446 | .66 | 10,692 | .490 | 7,938 |
| 1993 | 17,200 | .825 | 14,190 | .65 | 11,180 | .475 | 8,170 |
| 1994 | 12,100 | .820 | 9,922 | .64 | 7,744 | .460 | 5,566 |
| 1995 | 10,100 | .815 | 8,232 | .63 | 6,363 | .445 | 4,495 |

Table 11. Results of Kendall's tau trend test and flood-frequency analysis of Pottawatomie Creek at Garnett (station 06914000, map index number 34) peak-flow record with decreasing trend added—Continued

| Year | Peak flow (cubic feet per second) | | | | | | |
|--------------------------|--------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|--------|-------|--------|
| | No change | 0.5-percent decrease ¹ | 1.0-percent decrease ¹ | 1.5-percent decrease ¹ | | | |
| 1996 | 4,510 | 0.810 | 3,653 | 0.62 | 2,796 | 0.430 | 1,939 |
| 1997 | 10,200 | .805 | 8,211 | .61 | 6,222 | .415 | 4,233 |
| Mean | 14,325 | | 13,046 | | 11,768 | | 10,490 |
| Median | 11,700 | | 10,296 | | 9,241 | | 8,029 |
| Kendall's tau | -.009 | | -.095 | | -.192 | | -.297 |
| Probability level | .944 | | .395 | | .083 | | .007 |
| Slope | -11.5 | | -53.5 | | -106 | | -162 |
| 100-year flood | 52,100 ² (39,300, 77,000) | | 49,000 | | 46,400 | | 44,800 |
| 50-year flood | 43,800 ² (33,700, 62,500) | | 40,800 | | 38,200 | | 36,100 |
| 25-year flood | 36,100 ² (28,400, 49,600) | | 33,300 | | 30,800 | | 28,700 |
| 10-year flood | 26,700 ² (21,700, 34,800) | | 24,300 | | 22,100 | | 20,100 |
| 5-year flood | 20,100 ² (16,700, 25,100) | | 18,200 | | 16,300 | | 14,500 |

¹First column is factor by which original peak flow is multiplied to impart trend.

²Values in parentheses indicate confidence limits.