

Table 10. Results of Kendall's tau trend test and flood-frequency analysis of Stranger Creek near Tonganoxie (station 06892000, map index number 32) peak-flow record with increasing trend added

Year	Peak flow (cubic feet per second)						
	No change	2-percent increase ¹	2.5-percent increase ¹	3-percent increase ¹			
1958	19,100	1.00	19,100	1.000	19,100	1.00	19,100
1959	4,120	1.02	4,202	1.025	4,223	1.03	4,244
1960	9,540	1.04	9,922	1.050	10,017	1.06	10,112
1961	7,820	1.06	8,289	1.075	8,407	1.09	8,524
1962	20,600	1.08	22,248	1.100	22,660	1.12	23,072
1963	2,410	1.10	2,651	1.125	2,711	1.15	2,772
1964	2,790	1.12	3,125	1.150	3,209	1.18	3,292
1965	10,100	1.14	11,514	1.175	11,868	1.21	12,221
1966	5,290	1.16	6,136	1.200	6,348	1.24	6,560
1967	17,800	1.18	21,004	1.225	21,805	1.27	22,606
1968	5,530	1.20	6,636	1.250	6,913	1.30	7,189
1969	12,200	1.22	14,884	1.275	15,555	1.33	16,226
1970	9,730	1.24	12,065	1.300	12,649	1.36	13,233
1971	3,220	1.26	4,057	1.325	4,267	1.39	4,476
1972	7,910	1.28	10,125	1.350	10,679	1.42	11,232
1973	7,560	1.30	9,828	1.375	10,395	1.45	10,962
1974	11,300	1.32	14,916	1.400	15,820	1.48	16,724
1975	4,710	1.34	6,311	1.425	6,712	1.51	7,112
1976	3,580	1.36	4,869	1.450	5,191	1.54	5,513
1977	14,900	1.38	20,562	1.475	21,978	1.57	23,393
1978	6,130	1.40	8,582	1.500	9,195	1.60	9,808
1979	4,080	1.42	5,794	1.525	6,222	1.63	6,650
1980	6,620	1.44	9,533	1.550	10,261	1.66	10,989
1981	8,210	1.46	11,987	1.575	12,931	1.69	13,875
1982	18,400	1.48	27,232	1.600	29,440	1.72	31,648
1983	6,950	1.50	10,425	1.625	11,294	1.75	12,163
1984	4,070	1.52	6,186	1.650	6,716	1.78	7,245
1985	11,400	1.54	17,556	1.675	19,095	1.81	20,634
1986	15,100	1.56	23,556	1.700	25,670	1.84	27,784
1987	5,400	1.58	8,532	1.725	9,315	1.87	10,098
1988	1,490	1.60	2,384	1.750	2,608	1.90	2,831
1989	9,080	1.62	14,710	1.775	16,117	1.93	17,524
1990	13,400	1.64	21,976	1.800	24,120	1.96	26,264
1991	2,250	1.66	3,735	1.825	4,106	1.99	4,478
1992	5,580	1.68	9,374	1.850	10,323	2.02	11,272
1993	11,100	1.70	18,870	1.875	20,813	2.05	22,755
1994	5,700	1.72	9,804	1.900	10,830	2.08	11,856
1995	7,860	1.74	13,676	1.925	15,131	2.11	16,585

Table 10. Results of Kendall's tau trend test and flood-frequency analysis of Stranger Creek near Tonganoxie (station 06892000, map index number 32) peak-flow record with increasing trend added—Continued

Year	Peak flow (cubic feet per second)						
	No change	2-percent increase ¹	2.5-percent increase ¹	3-percent increase ¹			
1996	14,100	1.76	24,816	1.950	27,495	2.14	30,174
1997	12,900	1.78	22,962	1.975	25,478	2.17	27,993
Mean	8,751		12,103		12,942		13,780
Median	7,840		10,023		10,754		11,564
Kendall's tau	.0231		.173		.208		.247
Probability level	.843		.118		.061		.025
Slope	16.8		165		200		243
100-year flood	29,600 ² (22,600, 42,700)		42,300		46,800		49,600
50-year flood	25,400 ² (19,800, 35,700)		36,200		39,900		42,200
25-year flood	21,400 ² (17,100, 29,100)		30,400		33,300		35,200
10-year flood	16,300 ² (13,400, 21,200)		23,000		25,000		26,400
5-year flood	12,600 ² (10,500, 15,700)		17,500		18,900		20,000

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

²Values in parentheses indicate confidence limits.