

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee

[For each site, the discharge values in the first row are Bulletin 17B station estimates (Interagency Advisory Committee on Water Data, 1982); the discharge values in the second row are weighted estimates based on equation 11; CDA, contributing drainage area in square miles; CS, main-channel slope in feet per mile; CF, 2-year recurrence interval climate factor; PF, physiographic-region factor; Z, number of historic peaks and high outliers; H, total historical period in years; N, systematic record length in years; N_e, effective record length in years; See appendix C for description of computing effective record length; See figure 1 for station location]

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years						Parameters for effective record				
							2	5	10	25	50	100	500	Z	H	N	N _e
Peak discharge, in cubic feet per second																	
Hydrologic area 1																	
5	02384900	Coahulla Creek near Cleveland; 1955-85 35.117 84.838	4.35	31.6	2.32	0.67	526 519	996 970	1,420 1,370	2,100 2,000	2,740 2,570	3,490 3,250	5,800 5,430	0	0	31	31
52	03418500	Caney Fork at Clifty; 1931-49 35.891 85.218	111	15.3	2.29	0.82	6,260 6,030	9,120 8,740	11,400 10,800	14,600 13,800	17,400 16,400	20,500 19,200	29,100 27,000	1	108	19	27
121	03455000	French Broad River near Newport; 1901-05, 1921-99 35.980 83.160	1,858	8.6	2.21	0.98	27,700 27,800	45,100 45,100	58,400 58,300	77,200 76,700	92,500 91,700	109,000 108,000	153,000 150,000	1	134	84	87
125	03461000	Pigeon River at Hartford; 1926-48 35.814 83.062	547	28.9	2.21	0.91	12,200 12,400	19,400 19,700	24,700 25,000	31,700 32,200	37,200 37,900	42,900 43,900	57,000 59,300	1	47	23	27
126	03461200	Cosby Creek above Cosby; 1959-87 35.783 83.217	10.2	484.9	2.21	0.71	746 744	1,120 1,120	1,370 1,380	1,700 1,730	1,960 1,990	2,210 2,270	2,830 2,950	0	0	29	29
127	03461500	Pigeon River at Newport; 1901-05, 1908-30, 1932-40, 1943, 1946-82, 1997-99 35.961 83.174	666	31.1	2.21	0.92	15,700 15,700	24,800 24,900	31,400 31,500	40,300 40,400	47,300 47,400	54,500 54,700	72,500 73,000	1	134	78	82
135	03465000	North Indian Creek near Unicoi; 1945-57, 1959-84 36.176 82.293	15.9	189.0	2.16	0.73	470 478	689 708	840 872	1,040 1,090	1,190 1,260	1,340 1,440	1,700 1,860	0	0	39	39
136	03465500	Nolichucky River at Embreeville; 1921-99 36.176 82.457	805	18.1	2.16	0.93	20,400 20,300	34,100 33,700	45,500 44,700	63,000 61,200	78,400 75,700	96,000 92,200	147,000 141,000	1	98	79	81
137	03466228	Sinking Creek at Afton; 1978-99 36.199 82.742	13.7	55.5	2.18	0.72	349 363	681 710	979 1,020	1,460 1,520	1,900 1,970	2,420 2,500	3,980 4,090	0	0	22	22
138	03466500	Nolichucky River below Nolichucky Dam; 1904-08, 1920-25, 1946-73 36.066 82.872	1,184	18.3	2.19	0.96	21,400 21,600	33,100 33,500	42,100 42,500	54,900 55,300	65,300 65,900	76,800 77,300	108,000 107,000	1	73	39	44
139	03466890	Lick Creek near Albany; 1985-99 36.248 82.926	172	6.6	2.19	0.85	3,610 3,790	5,110 5,530	6,180 6,880	7,630 8,730	8,770 10,200	9,960 11,700	13,000 15,800	1	23	15	17

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees		CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
								2	5	10	25	50	100	500	Z	H	N	N _e
								Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																		
140	03467000	Lick Creek at Mohawk; 1947-71 36.201 83.048	220	4.2	2.19	0.86	5,490 5,400	7,890 7,780	9,610 9,530	11,900 12,000	13,800 14,000	15,700 16,000	20,600 21,800	0	0	25	25	
141	03467480	Bent Creek at Taylor Gap; 1986-99 36.236 83.111	28.6	18.4	2.20	0.76	1,790 1,750	2,290 2,290	2,590 2,610	2,950 3,050	3,200 3,390	3,440 3,780	3,970 4,620	0	0	14	14	
142	03467500	Nolichucky River near Morristown; 1921-57, 1959-82 36.180 83.176	1,679	15.2	2.20	0.98	23,300 23,600	36,000 36,600	46,000 46,800	60,500 61,600	72,700 74,000	86,200 87,500	123,000 124,000	1	195	61	65	
143	03467993	Cedar Creek near Valley Home; 1986-99 36.134 83.313	2.01	85.7	2.20	0.64	113 119	151 166	178 204	214 262	243 309	273 358	351 484	0	0	14	14	
144	03467998	Sinking Fork at White Pine; 1986-99 36.122 83.296	6.38	49.3	2.20	0.69	838 792	1,180 1,110	1,420 1,330	1,730 1,630	1,970 1,870	2,220 2,130	2,820 2,810	0	0	14	14	
145	03469000	French Broad River below Douglas Dam; 1919-42 35.952 83.551	4,543	7.9	2.21	0.91	48,800 48,800	66,800 67,200	77,900 79,200	91,200 93,900	101,000 105,000	110,000 115,000	129,000 139,000	1	76	24	31	
146	03469010	Millican Creek near Douglas Dam; 1943-47, 1950-52, 1954-62 35.929 83.541	4.2	23.2	2.22	0.67	745 696	1,070 978	1,290 1,140	1,570 1,360	1,780 1,540	1,990 1,720	2,490 2,190	0	0	17	17	
147	03469110	Ramsey Creek near Pitman Center; 1967-85 35.759 83.347	2.2	649	2.22	0.64	125 131	237 247	331 343	470 487	590 610	722 745	1,090 1,130	0	0	19	19	
148	03469130	Little Pigeon River near Sevierville; 1954-82 35.861 83.504	110	114.3	2.22	0.82	8,780 8,570	11,200 11,000	12,900 12,700	15,200 15,000	17,000 16,900	19,000 18,900	23,900 24,200	0	0	29	29	
149	03469160	East Fork Little Pigeon River near Sevierville; 1954-82 35.865 83.488	64.1	29.8	2.22	0.80	2,830 2,830	4,530 4,520	5,910 5,890	7,960 7,890	9,730 9,600	11,700 11,500	17,300 17,000	0	0	29	29	
150	03469175	Little Pigeon River above Sevierville; 1989-99 35.865 83.534	184	87.2	2.22	0.85	8,740 8,620	12,500 12,300	15,200 15,000	18,900 18,800	21,900 21,800	25,000 25,300	33,100 33,800	0	0	11	11	
151	03469200	Little Pigeon River above W Prong near Sevierville; 1954-67 35.870 83.568	201	81.1	2.22	0.86	11,400 11,000	15,900 15,300	19,200 18,500	23,800 23,000	27,600 26,600	31,600 30,500	42,300 41,200	0	0	14	14	
152	03469500	West Prong Little Pigeon R near Pigeon Forge; 1947-49, 1954-82 35.806 83.574	76.2	166.7	2.22	0.80	5,730 5,660	7,840 7,750	9,170 9,090	10,800 10,800	12,000 12,000	13,100 13,200	15,700 16,100	0	0	32	32	
153	03470000	Little Pigeon River at Sevierville; 1920-82 35.878 83.578	353	76.3	2.22	0.89	14,700 14,700	23,100 22,900	29,200 28,900	37,500 37,100	44,100 43,600	51,000 50,400	68,600 67,800	1	116	63	68	

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years								Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e	
							Peak discharge, in cubic feet per second											
Hydrologic area 1—Continued																		
154	03470215	Dumplin Creek at Mt. Hareb; 1986-99 36.083 83.431	3.65	39.1	2.21	0.67	100 111	154 183	192 242	242 325	281 391	320 458	414 626	0	0	14	14	
162	03477000	South Fork Holston River at Bluff City; 1901-50 36.477 82.263	813	16.2	2.11	0.93	12,200 12,300	16,600 16,900	19,600 20,100	23,300 24,300	26,200 27,600	29,000 30,800	35,900 38,700	1	84	50	54	
166	03479500	Watauga River at N.C.-Tenn. State line; 1943-55 36.290 81.926	152	25.3	2.10	0.84	5,210 5,100	7,890 7,690	10,200 9,910	14,000 13,400	17,500 16,500	21,600 20,200	34,700 31,900	1	106	13	22	
167	03480000	Watauga River at Stump Knob; 1928-31, 1935-45 36.310 81.959	171	43.3	2.10	0.85	5,720 5,630	9,190 9,010	12,200 11,800	16,900 16,200	21,100 20,000	26,100 24,600	41,300 38,300	1	96	15	23	
169	03482000	Roan Creek near Neva; 1943-55, 1959-85 36.377 81.890	102	61.8	2.10	0.82	2,730 2,760	4,280 4,340	5,480 5,570	7,200 7,350	8,620 8,840	10,200 10,500	14,400 14,800	1	46	40	41	
170	03482500	Roan Creek at Butler; 1935-48 36.342 81.993	166	48.4	2.10	0.85	2,550 2,790	3,480 4,000	4,120 4,960	4,950 6,300	5,580 7,360	6,230 8,690	7,820 11,500	0	0	14	14	
171	03483000	Watauga River at Butler; 1921-48 36.333 82.004	427	40.8	2.10	0.90	9,740 9,690	13,600 13,600	16,700 16,800	21,400 21,600	25,600 25,800	30,300 30,500	44,000 44,200	1	99	28	35	
172	03485500	Doe River at Elizabethton; 1912-16, 1921-31, 1933-82 36.344 82.210	137	58.9	2.12	0.83	3,170 3,210	5,260 5,330	7,030 7,130	9,770 9,960	12,200 12,500	15,100 15,400	23,500 23,900	1	116	66	70	
173	03486000	Watauga River at Elizabethton; 1927-48 36.356 82.224	692	29.8	2.12	0.92	13,500 13,500	21,100 21,000	27,300 27,100	36,600 36,100	44,700 43,900	53,900 52,600	80,200 77,900	1	82	22	29	
174	03486225	Powder Branch near Johnson City; 1973-84 36.317 82.278	3.5	124.8	2.16	0.66	121 128	230 243	328 348	488 517	636 668	813 845	1,360 1,370	0	0	12	12	
175	03487500	South Fork Holston River at Kingsport; 1926-48 36.531 82.558	1,935	11.2	2.14	0.99	25,100 25,500	37,600 38,300	46,600 47,800	59,000 60,700	68,800 71,000	79,200 81,700	106,000 109,000	1	158	23	29	
176	03487550	Reedy Creek at Orebank; 1964-87, 1989-99 36.562 82.460	36.3	56.2	2.14	0.77	1,180 1,190	1,960 1,970	2,670 2,680	3,860 3,860	5,000 4,970	6,390 6,320	11,000 10,700	1	73	35	40	
184	03490522	Forgey Creek at Zion Hill; 1986-1999 36.487 82.886	0.86	193.0	2.14	0.61	82 81	151 145	214 203	322 296	424 383	550 487	961 816	0	0	14	14	
185	03491000	Big Creek near Rogersville, 1942-49; 1955-99 36.426 82.952	47.3	14.4	2.14	0.78	2,560 2,510	3,680 3,600	4,420 4,320	5,350 5,240	6,050 5,940	6,740 6,680	8,350 8,360	0	0	53	53	

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

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							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																	
186	03491200	Big Creek trib near Rogersville; 1955-85 36.425 82.955	2.00	102.0	2.14	0.64	152 151	318 310	484 464	780 731	1,080 991	1,460 1,320	2,780 2,420	0	0	31	31
187	03491300	Beech Creek at Kepler; 1966-87 36.402 82.886	47.0	13.8	2.14	0.78	2,040 2,010	2,740 2,720	3,180 3,180	3,700 3,780	4,080 4,230	4,440 4,720	5,240 5,760	0	0	22	22
188	03491500	Holston River near Rogersville; 1902-41 36.370 82.999	3,035	8.2	2.19	1.01	37,400 37,700	53,200 54,000	63,300 64,600	75,400 78,100	84,200 87,800	92,600 97,300	111,000 119,000	0	0	40	40
189	03491540	Robertson Creek near Persia; 1986-99 36.340 83.041	14.6	8.3	2.19	0.73	851 823	1,030 1,010	1,130 1,140	1,250 1,300	1,340 1,420	1,410 1,550	1,580 1,830	0	0	14	14
190	03491544	Crockett Creek below Rogersville; 1989-99 36.380 83.047	4.67	56.0	2.19	0.68	439 426	665 646	838 812	1,080 1,050	1,280 1,250	1,500 1,470	2,090 2,080	0	0	11	11
191	03494714	Dry Land Creek trib nr New Market; 1986-1999 36.059 83.057	0.20	259.0	2.20	0.56	42 39	60 57	72 70	88 89	101 106	114 122	145 166	0	0	14	14
192	03495500	Holston River near Knoxville; 1931-40 36.016 83.832	3,747	5.1	2.24	1.03	39,200 41,300	51,900 57,000	60,300 68,500	71,000 83,700	79,000 95,400	87,100 107,000	106,000 135,000	0	0	10	10
193	03496000	First Creek at Mineral Springs Ave at Knoxville; 1946-63 36.015 83.922	11.9	16.7	2.24	0.72	609 621	905 937	1,110 1,170	1,390 1,490	1,600 1,740	1,820 2,000	2,370 2,660	0	0	18	18
194	03497000	Tennessee River at Knoxville; 1883-1941 35.955 83.862	8,934	7.1	2.24	1.08	97,000 96,800	141,000 141,000	171,000 170,000	209,000 207,000	237,000 234,000	265,000 262,000	332,000 327,000	2	75	50	56
195	03497300	Little River above Townsend; 1964-99 35.664 83.711	106	101.5	2.26	0.82	6,630 6,590	10,500 10,300	13,300 13,100	17,300 16,900	20,500 19,900	23,800 23,100	32,400 31,500	1	50	36	39
196	03498000	Little River near Walland; 1932-51, 1994 35.763 83.850	192	59.7	2.25	0.85	9,220 9,170	14,100 14,000	17,600 17,500	22,300 22,200	25,900 25,800	29,600 29,600	38,900 39,100	2	78	21	33
197	03498500	Little River near Maryville; 1951-99 35.786 83.884	269	53.6	2.25	0.87	12,300 12,200	18,600 18,500	23,200 23,000	29,300 29,100	34,100 33,800	39,100 38,700	51,500 51,100	1	125	49	55
198	03498700	Nails Creek near Knoxville; 1955-85 35.880 83.780	0.36	135.6	2.24	0.58	66 65	107 105	142 139	194 193	240 238	291 289	441 436	0	0	31	31
209	03518400	North Fork Citico Creek near Tellico Plains; 1961-70 35.397 84.074	7.04	468.3	2.30	0.69	668 662	954 969	1,140 1,190	1,380 1,480	1,560 1,710	1,730 1,940	2,140 2,590	0	0	10	10

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							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																	
210	03518500	Tellico River at Tellico Plains; 1926-82 35.362 84.279	118	90.5	2.30	0.83	7,620 7,560	11,300 11,200	13,800 13,600	17,100 16,900	19,700 19,400	22,300 21,900	28,600 28,200	1	143	57	62
211	03519500	Little Tennessee River at McGhee; 1905-44 35.604 84.212	2,443	13.5	2.30	1.00	47,400 46,500	68,200 67,300	82,100 81,000	99,600 98,400	113,000 111,000	126,000 125,000	156,000 153,000	1	78	40	45
212	03519600	Island Creek at Vonore; 1954-76 35.594 84.249	11.2	20.3	2.30	0.71	621 638	1,070 1,090	1,460 1,500	2,110 2,140	2,720 2,720	3,440 3,410	5,740 5,520	0	0	23	23
213	03519610	Baker Creek trib near Binfield; 1967-77, 1979-99 35.699 84.046	2.1	63.4	2.25	0.64	132 136	295 300	453 457	724 716	985 966	1,300 1,250	2,320 2,100	0	0	32	32
214	03519640	Baker Creek near Greenback; 1966-98 35.672 84.108	16.0	17.4	2.25	0.73	642 659	1,270 1,300	1,890 1,910	2,960 2,930	4,030 3,920	5,370 5,120	9,900 9,040	0	0	33	33
215	03519700	Bat Creek near Vonore; 1954-76 35.643 84.253	30.7	9.1	2.25	0.76	1,360 1,380	2,410 2,420	3,250 3,240	4,490 4,380	5,530 5,340	6,680 6,400	9,790 9,370	0	0	23	23
216	03520100	Sweetwater Creek near Loudon; 1954-82 35.738 84.374	62.2	7.7	2.26	0.79	1,330 1,420	2,090 2,300	2,690 3,030	3,570 4,070	4,310 4,920	5,140 5,840	7,430 8,370	0	0	29	29
225	03527800	Big War Creek at Luther; 1986-99 36.455 83.241	22.3	38.7	2.15	0.75	1,440 1,410	2,210 2,140	2,810 2,700	3,690 3,500	4,420 4,150	5,240 4,880	7,490 6,890	0	0	14	14
226	03528000	Clinch River above Tazewell; 1920-99 36.425 83.398	1,474	6.6	2.19	0.97	24,100 24,100	34,600 34,700	42,000 42,100	51,700 52,100	59,100 59,700	66,800 67,500	85,600 86,800	1	138	80	84
227	03528100	Big Sycamore Creek near Sneedville; 1935-44 36.506 83.390	5.49	36.7	2.16	0.68	318 318	524 523	669 671	858 868	1,000 1,020	1,150 1,180	1,490 1,580	0	0	10	10
228	03528300	Big Barren Creek near New Tazewell; 1935-44 36.382 83.711	13.2	54.6	2.21	0.72	280 319	465 549	606 738	801 1,010	959 1,230	1,130 1,460	1,560 2,050	0	0	10	10
229	03528390	Crooked Creek near Maynardville; 1986-99 36.266 83.840	2.23	81.0	2.22	0.65	299 289	521 493	713 660	1,010 926	1,280 1,150	1,600 1,400	2,550 2,130	0	0	14	14
230	03528400	White Creek near Sharps Chapel; 1935-70 36.345 83.894	2.68	154	2.22	0.65	117 121	223 231	311 323	442 460	553 582	676 712	1,010 1,060	0	0	36	36
236	03532000	Powell River near Arthur; 1920-82, 1997-99 36.542 83.630	685	3.8	2.19	0.92	15,200 15,000	21,700 21,400	26,400 25,900	32,700 32,000	37,600 36,800	42,700 42,000	55,800 55,500	1	119	66	70

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

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							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																	
237	03533000	Clinch River below Norris Dam; 1902-36 36.216 84.082	2,913	4.9	2.23	1.01	46,600 46,100	71,200 69,900	87,900 86,200	109,000 106,000	125,000 121,000	141,000 136,000	178,000 171,000	1	109	33	40
238	03534000	Coal Creek at Lake City; 1955-99 36.221 84.157	24.5	59.4	2.23	0.75	3,170 3,100	4,950 4,810	6,240 6,010	7,980 7,630	9,350 8,910	10,800 10,200	14,300 13,700	1	71	45	49
239	03534500	Buffalo Creek at Norris; 1948-50, 1955-82 36.185 84.059	7.82	21.1	2.23	0.70	684 678	970 965	1,160 1,160	1,410 1,420	1,600 1,620	1,790 1,820	2,230 2,340	0	0	31	31
240	03535000	Bullrun Creek near Halls Crossroads; 1958-97 36.114 83.988	68.5	15.2	2.23	0.80	3,050 3,040	5,870 5,740	8,490 8,130	12,800 11,900	16,900 15,200	21,800 19,200	37,500 31,400	0	0	30	30
241	03535140	South Fork Beaver Creek at Harbison; 1967-78 36.114 83.854	1.23	52.8	2.23	0.62	250 232	410 372	521 468	665 609	775 713	884 822	1,140 1,100	0	0	12	12
242	03535180	Willow Fork near Halls Crossroads; 1967-99 36.100 83.907	3.23	58.1	2.23	0.66	216 219	432 435	629 630	947 944	1,240 1,220	1,590 1,550	2,640 2,500	0	0	33	33
243	03536450	First Creek near Oak Ridge; 1987-96 35.922 84.319	0.33	184.0	2.25	0.57	76 70	152 130	222 179	338 255	448 325	580 422	997 668	0	0	10	10
244	03536550	Whiteoak Creek below Melton Valley Dr near Oak Ridge; 1985-96 35.919 84.317	3.28	73.8	2.25	0.66	380 373	554 551	678 683	845 885	977 1,040	1,120 1,200	1,460 1,630	0	0	12	12
245	03537000	Whiteoak Creek below Oak Ridge National Laboratory; 1951-52, 1956-63 35.912 84.316	3.62	72.4	2.25	0.67	415 405	528 536	598 628	682 774	742 880	799 991	928 1,260	0	0	10	10
246	03537100	Melton Branch near Melton Hill near Oak Ridge; 1985-95 35.916 84.298	0.52	126.0	2.25	0.59	69 69	116 117	155 158	213 226	264 281	321 343	485 515	0	0	11	11
247	03538130	Caney Creek near Kingston; 1962-85 35.865 84.385	5.55	32.6	2.25	0.68	1,060 1,010	1,410 1,340	1,640 1,550	1,920 1,820	2,130 2,030	2,340 2,240	2,830 2,770	0	0	24	24
248	03538200	Poplar Creek near Oliver Springs; 1954-85 36.022 84.310	55.9	19.2	2.24	0.79	3,470 3,430	5,370 5,300	6,850 6,730	8,980 8,790	10,800 10,500	12,700 12,400	18,100 17,600	1	86	32	38
249	03538215	Indian Creek at Oliver Springs; 1962-72 36.046 84.347	18.4	116.0	2.24	0.74	1,590 1,560	2,450 2,390	3,160 3,070	4,250 4,090	5,220 4,990	6,340 6,010	9,660 8,970	1	50	10	18
250	03538225	Poplar Creek near Oak Ridge; 1961-89 35.999 84.340	82.5	13.2	2.25	0.81	4,160 4,100	6,140 6,020	7,640 7,460	9,770 9,510	11,500 11,200	13,400 13,100	18,600 18,300	0	0	29	29

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																	
251	03538250	East Fork Poplar Creek near Oak Ridge; 1961-88 35.966 84.358	19.5	12.9	2.25	0.74	1,370 1,360	2,070 2,050	2,630 2,590	3,430 3,360	4,120 4,020	4,880 4,780	6,990 6,780	0	0	28	28
252	03538270	Bear Creek at State Hwy 95 near Oak Ridge; 1985-99 35.937 84.339	4.34	34.7	2.25	0.67	389 389	611 612	769 775	979 998	1,140 1,180	1,310 1,360	1,710 1,870	0	0	15	15
253	03538275	Bear Creek near Oak Ridge; 1961-78 35.947 84.363	7.15	32.4	2.25	0.69	469 475	648 669	771 813	932 1,010	1,060 1,170	1,180 1,330	1,500 1,730	0	0	18	18
254	03538300	Rock Creek near Sunbright; 1955-71 36.198 84.661	5.54	121.5	2.24	0.68	744 717	1,040 1,010	1,250 1,210	1,520 1,480	1,720 1,690	1,940 1,920	2,450 2,520	0	0	17	17
255	03538500	Emory River near Wartburg; 1935-82 36.113 84.615	83.2	30.6	2.25	0.81	6,890 6,750	10,800 10,500	13,800 13,400	18,200 17,400	21,800 20,700	25,700 24,300	36,400 34,200	1	136	48	54
256	03538600	Obed River at Crossville; 1955-85, 1992-95 35.957 85.050	12.0	12.8	2.28	0.72	650 659	927 957	1,120 1,170	1,380 1,460	1,580 1,690	1,780 1,920	2,300 2,510	0	0	35	35
257	03538800	Obed River tributary near Crossville; 1955-70 35.983 85.059	0.72	52.5	2.28	0.60	129 125	201 195	259 253	346 339	422 413	506 498	748 759	0	0	16	16
258	03538900	Self Creek near Big Lick; 1968-85 35.798 85.042	3.8	45.4	2.29	0.67	271 284	549 566	808 821	1,240 1,230	1,640 1,590	2,130 2,050	3,670 3,470	0	0	18	18
259	03539500	Daddys Creek near Crab Orchard; 1931-58 35.926 84.913	93.5	9.3	2.28	0.82	4,830 4,760	7,630 7,450	9,590 9,330	12,100 11,800	14,100 13,700	16,000 15,700	20,700 20,600	1	57	28	33
260	03539600	Daddys Creek near Hebbertsburg; 1958-68 35.998 84.823	139	8.7	2.28	0.84	7,840 7,150	9,310 8,950	10,200 10,300	11,400 12,200	12,300 13,700	13,100 15,300	15,100 19,000	0	0	11	11
261	03539800	Obed River near Lancing; 1958-68, 1973-87 36.081 84.671	518	17.2	2.25	0.91	30,600 28,400	45,600 41,300	55,300 49,400	67,500 59,500	76,300 67,200	84,900 75,100	105,000 94,100	1	59	27	32
262	03540500	Emory River at Oakdale; 1929-99 35.983 84.558	764	18.0	2.25	0.93	47,800 45,400	76,500 70,800	97,800 88,500	127,000 112,000	150,000 132,000	174,000 152,000	237,000 205,000	1	143	71	75
263	03541100	Bitter Creek near Camp Austin; 1967-85 36.015 84.526	5.53	190.1	2.25	0.68	1,320 1,220	2,620 2,280	3,680 3,050	5,220 4,120	6,490 5,000	7,850 5,960	11,400 8,670	0	0	19	19
264	03541500	Whites Creek near Glen Alice; 1935-78 35.797 84.760	108	54.0	2.27	0.82	11,200 10,900	19,600 18,700	26,700 24,900	37,700 34,200	47,400 42,200	58,500 51,300	91,000 77,300	1	127	44	50

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																	
265	03542500	Piney River at Spring City; 1928-31, 1955-82 35.700 84.855	95.9	55.7	2.29	0.82	8,380 8,140	14,000 13,400	18,400 17,400	24,900 23,100	30,300 27,800	36,400 32,900	52,900 47,400	1	55	32	35
266	03543200	Ten Mile Creek near Decatur; 1954-70 35.618 84.692	26.4	8.3	2.30	0.75	2,520 2,290	4,010 3,530	5,100 4,390	6,570 5,700	7,740 6,690	8,950 7,750	12,000 10,500	0	0	17	17
267	03543500	Sewee Creek near Decatur; 1935-94 35.581 84.748	117	11.5	2.30	0.83	5,360 5,330	8,670 8,560	11,200 11,000	14,600 14,400	17,500 17,100	20,500 20,000	28,300 27,600	0	0	60	60
268	03544500	Richland Creek near Dayton; 1928-31, 1935-82 35.505 85.022	50.2	103.0	2.32	0.78	4,540 4,490	7,500 7,370	9,640 9,410	12,500 12,100	14,700 14,200	16,900 16,300	22,400 21,500	1	83	52	56
276	03556000	Turtletown Creek at Turtletown; 1935-71 35.132 84.344	26.9	25.3	2.31	0.75	629 682	876 981	1,030 1,200	1,230 1,470	1,370 1,670	1,510 1,870	1,820 2,310	0	0	37	37
277	03557000	Hiwassee River near Reliance; 1901-13, 1920-39 35.222 84.526	1,223	13.4	2.31	0.96	26,800 26,500	37,900 37,800	45,500 45,700	55,500 55,900	63,100 63,900	70,900 72,000	90,000 91,900	0	0	33	33
280	03559500	Ocoee River at Copperhill; 1904-10, 1912-13, 1916-17, 1920 34.991 84.377	352	13.2	2.32	0.89	8,030 8,580	12,800 13,700	16,000 17,300	20,100 21,900	23,100 25,300	26,000 28,800	32,600 36,700	0	0	13	13
282	03560500	Davis Mill Creek at Copperhill; 1950-67, 1969-77, 1987-94 34.995 84.382	5.16	63.0	2.32	0.68	856 821	1,310 1,240	1,660 1,570	2,150 2,060	2,560 2,460	2,990 2,900	4,150 4,150	0	0	35	35
283	03561000	North Potato Creek near Ducktown; 1935-70 35.015 84.383	13.0	48.0	2.32	0.72	1,580 1,540	2,750 2,640	3,760 3,560	5,360 4,970	6,820 6,220	8,510 7,680	13,600 12,000	0	0	36	36
284	03561500	Ocoee River at McHarg; 1918-30 35.007 84.363	447	12.1	2.32	0.90	10,600 10,900	14,800 15,500	17,800 19,000	22,000 23,700	25,300 27,400	28,900 31,300	38,100 41,300	1	91	13	21
285	03563000	Ocoee River at Emf; 1913-30 35.097 84.535	524	14.0	2.32	0.91	14,100 14,100	21,100 21,300	26,300 26,500	33,500 33,500	39,200 39,100	45,300 45,000	61,100 60,100	1	91	18	26
286	03565040	Chestuee Creek above Englewood; 1945-57 35.440 84.447	14.8	13.5	2.30	0.73	1,190 1,150	1,890 1,800	2,460 2,310	3,300 3,070	4,020 3,710	4,830 4,440	7,110 6,490	0	0	13	13
287	03565080	Little Chestuee Creek below Wilson Station; 1948-57 35.427 84.446	8.24	28.8	2.30	0.70	742 729	935 969	1,050 1,140	1,200 1,390	1,300 1,570	1,400 1,790	1,620 2,260	0	0	10	10
288	03565120	Chestuee Creek at Zion Hill; 1945-61 35.401 84.523	37.8	9.2	2.31	0.77	2,120 2,090	3,080 3,060	3,720 3,750	4,530 4,660	5,130 5,370	5,730 6,090	7,130 7,840	0	0	17	17

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																	
289	03565160	Middle Creek below Hwy 39 near Englewood; 1945-60 35.421 84.521	32.7	12.0	2.31	0.76	1,430 1,470	2,300 2,380	2,960 3,080	3,880 4,080	4,630 4,890	5,430 5,760	7,510 8,030	0	0	16	16
290	03565250	Chestuee Creek at Dentville; 1945-61 35.283 84.609	114	4.9	2.31	0.83	3,280 3,390	4,720 5,070	5,650 6,270	6,780 7,830	7,600 8,980	8,400 10,100	10,200 12,700	0	0	17	17
291	03565300	South Chestuee Creek near Benton; 1958-87 35.167 84.716	31.8	14.3	2.32	0.76	2,090 2,060	3,590 3,470	4,810 4,580	6,610 6,190	8,140 7,560	9,860 9,070	14,600 13,300	0	0	30	30
292	03565500	Oostanaula Creek near Sanford; 1955-89 35.327 84.705	57.0	7.5	2.31	0.79	1,400 1,490	2,680 2,860	3,820 4,060	5,610 5,880	7,230 7,470	9,110 9,270	14,700 14,500	0	0	35	35
293	03566000	Hiwassee River at Charleston; 1899-1903, 1920-39 35.288 84.752	2,298	11.5	2.31	1.00	35,400 35,800	45,200 46,600	50,800 53,500	57,100 62,000	61,400 68,100	65,300 74,000	73,500 86,600	1	73	25	31
294	03566200	Brymer Creek near McDonald; 1955-85 35.122 84.950	9.68	22.6	2.35	0.71	818 813	1,250 1,250	1,610 1,620	2,150 2,170	2,630 2,660	3,180 3,220	4,790 4,980	0	0	31	31
295	03566420	Wolftever Creek near Ooltewah; 1965-99 35.062 85.066	18.8	16.6	2.35	0.74	1,440 1,410	2,360 2,320	3,160 3,080	4,390 4,260	5,510 5,310	6,810 6,540	10,700 10,200	0	0	35	35
301	03567500	South Chickamauga Creek near Chickamauga; 1929-78, 1981-94 35.014 85.207	428	5.6	2.35	0.90	12,300 12,200	17,700 17,600	21,300 21,300	25,800 26,000	29,100 29,500	32,400 33,000	40,000 41,300	0	0	64	64
302	03568000	Tennessee River at Chattanooga; 1874-1936 35.087 85.279	21,400	4.5	2.35	1.14	206,000 203,000	264,000 260,000	299,000 294,000	340,000 333,000	368,000 360,000	395,000 387,000	452,000 444,000	1	133	63	68
305	03570800	Little Brush Creek near Dunlap; 1958-85 35.404 85.388	15.4	152.2	2.34	0.73	1,870 1,830	2,520 2,470	2,930 2,910	3,450 3,470	3,830 3,910	4,210 4,360	5,090 5,680	0	0	28	28
306	03571000	Sequatchie River near Whitwell; 1921-94 35.206 85.497	384	3.3	2.35	0.89	11,900 11,700	17,600 17,400	21,500 21,200	26,400 26,200	30,000 29,900	33,700 33,700	42,300 42,600	1	128	74	78
307	03571500	Little Sequatchie River at Sequatchie; 1980-87, 1989-99 35.130 85.586	116	56.8	2.35	0.83	7,760 7,510	9,300 9,200	10,100 10,200	11,100 11,500	11,700 12,400	12,300 13,300	13,400 15,300	0	0	19	19
308	03571600	Brown Spring Branch near Sequatchie; 1955-78 35.149 85.558	0.67	954.3	2.35	0.60	100 99	143 144	171 180	205 224	230 258	254 311	309 398	0	0	24	24
309	03571800	Battle Creek near Monteagle; 1955-99 35.130 85.771	50.4	136.0	2.36	0.78	3,840 3,810	5,160 5,150	6,150 6,150	7,510 7,550	8,620 8,760	9,810 9,990	13,000 13,200	1	97	45	50

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 2																	
18	03313600	West Fork Drakes Creek trib near Fountain Head; 1967-85 36.559 86.457	0.95	73.9	2.31	1.04	203	394	559	815	1,040	1,300	2,060	0	0	19	19
							203	379	523	733	916	1,120	1,700				
35	03407908	New River at Cordell; 1978-87 36.336 84.452	198	7.6	2.24	1.25	12,800	16,800	19,200	22,100	24,100	26,000	30,100	0	0	10	10
							11,800	15,700	18,200	21,700	25,200	28,100	35,200				
36	03408000	New River near New River; 1923-34 36.384 84.529	314	7.0	2.23	1.28	17,800	25,100	30,800	39,100	46,000	53,800	75,200	1	32	12	16
							16,900	23,600	28,500	35,200	40,800	46,800	64,100				
37	03408500	New River at New River; 1935-93, 1995-99 36.386 84.555	382	7.1	2.23	1.28	24,600	34,600	41,700	51,200	58,700	66,400	86,000	1	96	64	67
							24,000	33,600	40,300	49,100	56,000	63,200	81,400				
38	03409000	White Oak Creek at Sunbright; 1933, 1955-73, 1975 36.244 84.671	13.5	54.5	2.24	1.14	1,950	2,910	3,560	4,410	5,060	5,710	7,290	1	44	21	25
							1,920	2,840	3,470	4,290	4,920	5,560	7,130				
39	03409500	Clear Fork near Robbins; 1931-71, 1973, 1975-99 36.388 84.630	272	12.0	2.23	1.27	14,500	21,700	26,800	33,300	38,300	43,400	55,500	0	0	67	67
							14,400	21,600	26,600	33,100	38,100	43,200	55,600				
44	03414500	East Fork Obey River near Jamestown; 1944-99 36.416 85.026	196	37.0	2.26	1.25	16,400	25,100	31,200	39,300	45,500	51,800	67,200	1	71	56	58
							16,200	24,500	30,200	37,600	42,500	48,100	61,900				
45	03415000	West Fork Obey River near Alpine; 1943-71, 1980-81 36.397 85.174	81	33.6	2.27	1.22	7,040	10,300	12,500	15,200	17,200	19,100	23,700	0	0	31	31
							6,980	10,200	12,300	15,000	17,000	19,000	23,200				
46	03415500	Obey River near Byrdstown; 1920-43 36.536 85.170	445	21.2	2.26	1.29	16,500	25,900	32,200	40,200	46,000	51,800	64,800	0	0	24	24
							16,700	26,600	33,200	41,800	48,200	54,500	69,100				
47	03415700	Big Eagle Creek near Livingston; 1955-78 36.449 85.274	4.77	68.5	2.27	1.10	727	1,120	1,370	1,660	1,860	2,050	2,440	0	0	24	24
							722	1,110	1,360	1,650	1,870	2,080	2,580				
48	03416000	Wolf River near Byrdstown; 1945-99 36.560 85.073	106	12.3	2.26	1.23	6,950	9,900	11,800	14,000	15,600	17,200	20,600	1	71	55	57
							6,950	9,960	11,900	14,400	16,100	17,900	21,900				
49	03417700	Mathews Branch trib near Livingston; 1955-85 36.334 85.340	0.49	161.4	2.27	1.02	134	231	311	432	538	657	997	0	0	31	31
							131	223	295	403	496	596	891				
50	03418000	Roaring River near Hilham; 1933-75 36.341 85.426	51.6	14.6	2.28	1.20	3,370	5,420	6,850	8,700	10,100	11,500	14,800	0	0	43	43
							3,410	5,490	6,960	8,870	10,300	11,800	15,300				
51	03418070	Roaring River above Gainesboro; 1975-97 36.351 85.546	176	16.2	2.28	1.25	9,640	14,700	18,200	22,700	26,000	29,400	37,200	0	0	23	23
							9,740	14,900	18,500	23,200	26,800	30,400	39,000				

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 2—Continued																	
53	03420000	Calfkiller River below Sparta; 1941-71 35.909 85.479	111	5.2	2.29	1.23	7,610 7,370	10,900 10,600	13,200 12,800	16,400 16,000	18,900 18,500	21,600 21,100	28,300 27,800	1	43	31	33
54	03420360	Mud Creek trib no. 2 near Summitville; 1967-92 35.603 86.026	2.28	35.4	2.35	1.07	487 478	1,010 956	1,530 1,390	2,410 2,090	3,280 2,740	4,350 3,550	7,930 5,980	0	0	26	26
55	03420500	Barren Fork near Trousdale; 1933-83 35.665 85.883	126	11.8	2.34	1.23	9,760 9,590	16,100 15,600	20,700 19,800	6,900 25,400	31,700 29,800	36,700 34,400	48,800 45,600	1	82	51	55
56	03420600	Owen Branch near Centertown; 1955-89 35.708 85.885	4.6	20.8	2.33	1.10	330 345	888 907	1,460 1,470	2,470 2,420	3,440 3,310	4,600 4,370	8,220 7,600	1	88	35	41
57	03421000	Collins River near McMinnville; 1926-99 35.709 85.729	640	25.9	2.34	1.31	23,600 23,600	36,800 36,700	45,800 45,700	57,500 57,300	66,200 66,000	75,000 74,700	95,500 95,200	1	139	74	78
58	03421100	Sink trib at McMinnville; 1955-76 35.696 85.780	0.47	68.0	2.34	1.02	186 175	278 258	346 318	441 403	517 474	599 551	813 764	0	0	22	22
59	03421200	Charles Creek near McMinnville; 1955-99 35.717 85.768	31.1	20.3	2.34	1.18	3,250 3,220	5,410 5,300	7,290 7,070	10,300 9,800	13,000 12,200	16,300 15,000	26,300 23,600	1	100	45	50
60	03423000	Falling Water River near Cookeville; 1933-56 36.077 85.521	45.9	18.2	2.29	1.19	3,380 3,430	4,470 4,690	5,110 5,520	5,850 6,570	6,350 7,340	6,810 8,080	7,780 9,690	0	0	24	24
96	03431800	Sycamore Creek near Ashland City; 1962-87, 1989-99 36.320 87.051	97.2	11.7	2.33	1.22	7,640 7,500	12,300 11,900	15,700 15,000	20,300 19,200	23,800 22,500	27,500 26,000	36,700 34,600	0	0	37	37
101	03434500	Harpeth River near Kingston Springs; 1926-99 36.122 87.099	667	2.8	2.34	1.31	20,800 20,500	31,400 30,800	38,400 37,600	47,100 46,100	53,400 52,500	59,600 58,800	73,600 73,400	1	97	74	77
102	03434590	Jones Creek near Burns; 1984-99 36.528 86.545	9.32	46.5	2.31	1.13	1,590 1,580	2,520 2,510	3,180 3,170	4,040 4,040	4,710 4,720	5,390 5,420	7,040 7,140	0	0	16	16
103	03435030	Red River near Portland; 1967-86 36.557 86.571	15.1	28.0	2.31	1.15	2,340 2,260	4,190 3,900	5,770 5,210	8,220 7,150	10,400 8,830	12,900 10,800	20,200 16,300	0	0	20	20
105	03435500	Red River near Adams; 1921-69 36.589 87.089	309	4.4	2.32	1.27	14,100 13,900	21,000 20,700	26,000 25,500	32,800 32,100	38,100 37,300	43,800 42,800	58,000 56,900	1	87	49	53
106	03435770	Sulphur Fork Red River above Springfield; 1976-99 36.513 86.862	56.6	14.7	2.31	1.20	6,130 5,860	9,380 8,830	11,500 10,800	14,200 13,100	16,200 14,900	18,100 16,700	22,400 21,100	0	0	24	24
107	03435930	Spring Creek trib near Cedar Hill; 1986-99 36.536 86.998	1.28	5.7	2.32	1.05	96 99	128 138	146 164	167 197	181 219	194 241	220 368	0	0	14	14

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years						Parameters for effective record				
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 2—Continued																	
108	03436000	Sulphur Fork Red River near Adams; 1939-91 36.515 87.059	165	6.6	2.32	1.25	7,080 7,160	10,700 10,900	13,400 13,800	17,200 17,700	20,200 20,700	23,400 24,000	31,800 32,600	1	89	53	57
109	03436100	Red River at Port Royal; 1962-99 36.555 87.142	498	4.2	2.32	1.30	21,200 20,600	30,800 29,900	37,400 36,400	46,100 45,000	52,700 51,600	59,500 58,900	76,000 76,000	1	97	38	44
110	03436690	Yellow Creek at Ellis Mills; 1981-97 36.311 87.554	103	14.0	2.34	1.23	4,920 5,260	8,530 9,110	11,300 12,000	15,200 15,900	18,300 19,000	21,700 22,200	30,300 30,400	0	0	17	17
111	03436700	Yellow Creek near Shiloh; 1958-80, 1982-97 36.349 87.539	124	12.3	2.34	1.23	5,600 5,790	9,050 9,500	11,700 12,300	15,800 16,200	18,200 19,200	21,300 22,400	29,300 30,500	0	0	39	39
314	03574700	Big Huckleberry Creek near Belvidere; 1955-74 35.067 86.358	2.18	15.0	2.38	1.07	386 375	691 656	938 877	1,300 1,200	1,610 1,460	1,950 1,770	2,870 2,550	0	0	20	20
323	03578000	Elk River near Pelham; 1952-87 35.297 85.870	65.6	78.3	2.35	0.80	3,940 4,000	6,400 6,500	8,360 8,470	11,200 11,300	13,700 13,700	16,400 16,300	23,900 23,200	0	0	36	36
324	03578500	Bradley Creek near Prairie Plains; 1952-83 35.356 85.979	41.3	14.2	2.35	0.77	2,530 2,620	3,960 4,160	4,890 5,210	6,030 6,530	6,840 7,490	7,620 8,430	9,340 10,500	0	0	32	32
325	03579100	Elk River near Estill Springs; 1921-51 35.286 86.106	275	4.2	2.37	1.27	7,050 7,550	12,500 13,200	16,600 17,500	22,300 23,300	26,900 27,800	31,700 32,600	43,800 44,500	0	0	31	31
326	03579800	Miller Cr near Cowan; 1955-78 35.171 85.983	4.3	236	2.36	1.10	1,580 1,460	2,330 2,090	2,820 2,490	3,440 2,940	3,900 3,300	4,350 3,610	5,400 4,520	0	0	24	24
327	03579900	Boiling Fork Creek at Cowan; 1955-78 35.162 86.006	17	28.6	2.36	1.15	2,030 2,010	2,940 2,930	3,620 3,630	4,570 4,620	5,350 5,420	6,200 6,290	8,450 8,590	0	0	24	24
339	03587200	Bluewater Creek trib near Leoma; 1955-83 35.141 87.368	0.49	78.1	2.40	1.02	148 145	212 209	256 256	314 319	359 369	405 421	517 551	0	0	29	29
340	03587500	Shoal Creek above Little Shoal Creek at Lawrenceburg; 1955-82 35.234 87.333	27.0	19.7	2.40	1.17	2,910 2,870	5,130 4,970	7,010 6,680	9,880 9,270	12,400 11,500	15,300 14,100	23,800 21,600	1	140	28	35
341	03588000	Shoal Creek at Lawrenceburg; 1968-91 35.244 87.351	55.4	17.9	2.40	1.20	5,220 5,160	8,720 8,500	11,600 11,100	15,800 15,000	19,400 18,300	23,500 22,000	34,900 32,200	2	97	24	37
342	03588400	Chisholm Creek at Westpoint; 1963-87 35.134 87.529	43.0	15.1	2.40	1.19	3,270 3,320	6,350 6,260	9,070 8,700	13,400 12,400	17,200 15,600	21,700 19,300	34,800 30,000	0	0	25	25

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 2—Continued																	
343	03588500	Shoal Creek at Iron City; 1926-94 35.024 87.579	348	8.2	2.40	1.28	17,300 17,100	30,200 29,500	40,300 39,000	54,900 52,600	67,100 63,800	80,300 76,100	116,000 109,000	1	93	69	72
353	03593300	Snake Creek near Adamsville; 1940-59 35.220 88.427	49.4	12.3	2.41	1.20	4,460 4,410	6,010 6,120	7,110 7,400	8,590 9,120	9,750 10,500	11,000 11,900	14,100 15,300	0	0	20	20
354	03593800	Horse Creek near Savannah; 1940-75 35.177 88.209	104	13.5	2.42	1.23	4,960 5,140	10,500 10,700	15,700 15,500	24,400 22,600	32,600 29,000	42,400 36,500	73,000 59,000	0	0	36	36
355	03594040	Turkey Creek near Savannah; 1940-59 35.229 88.194	53.7	16.9	2.41	1.20	3,070 3,240	5,870 6,110	8,170 8,350	11,600 11,500	14,500 14,100	17,700 17,000	26,300 24,600	0	0	20	20
356	03594058	White Oak Creek near Milledgeville; 1941-59 35.374 88.382	46.1	10.6	2.41	1.19	5,100 4,860	7,290 6,920	8,820 8,390	10,800 10,400	12,400 12,000	14,000 13,600	18,000 17,600	0	0	19	19
357	03594120	Middleton Creek near Milledgeville; 1940-59 35.416 88.361	45.5	9.7	2.40	1.19	3,850 3,810	5,340 5,400	6,350 6,540	7,660 8,030	8,660 9,160	9,680 10,300	12,200 13,100	0	0	20	20
358	03594160	Indian Creek near Cerro Gordo; 1940-59 35.307 88.125	201	10.0	2.41	1.26	10,500 10,400	18,900 18,400	25,000 24,100	33,000 31,700	39,000 37,500	45,000 43,500	59,000 57,800	0	0	20	20
359	03594200	Eagle Creek near Clifton Junction; 1955-83 35.339 87.973	19.0	32.1	2.40	1.16	1,520 1,550	3,290 3,270	4,820 4,710	7,120 6,830	9,090 8,600	11,200 10,500	17,000 15,700	0	0	29	29
360	03594300	Cypress Creek trib near Pope; 1955-83 35.619 87.956	0.75	23.0	2.39	1.03	110 114	165 176	208 227	269 301	321 362	377 429	534 607	0	0	29	29
361	03594400	Cypress Creek at Pope; 1955-71 35.615 87.990	16.8	28.6	2.39	1.15	1,030 1,100	1,970 2,080	2,800 2,920	4,140 4,210	5,350 5,350	6,780 6,640	11,100 10,400	0	0	17	17
366	03594460	Cane Creek near Chesterfield; 1941-54 35.614 88.273	22.2	14.5	2.40	1.16	1,140 1,310	2,060 2,380	2,880 3,250	4,160 4,560	5,330 5,680	6,700 6,950	10,800 10,600	0	0	14	14
367	03594480	Turkey Creek near Decaturville; 1954-63 35.575 88.139	8.4	13.2	2.39	1.12	1,010 995	1,630 1,600	2,050 2,020	2,560 2,580	2,940 3,000	3,300 3,430	4,090 4,450	0	0	10	10
368	03596000	Duck River below Manchester; 1935-87 35.471 86.122	107	13.9	2.36	1.23	7,220 7,200	14,000 13,500	19,800 18,700	28,900 26,500	36,900 33,400	46,100 41,200	72,700 63,900	1	86	53	57
385	03602170	West Piney River at Hwy 70 near Dickson; 1984-99 36.089 87.470	2.16	58.1	2.34	1.07	443 433	741 712	959 912	1,250 1,190	1,480 1,410	1,720 1,640	2,300 2,230	0	0	16	16

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years								Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e	
							Peak discharge, in cubic feet per second											
Hydrologic area 2—Continued																		
386	03602500	Piney River at Vernon; 1926-99 35.871 87.501	202	11.5	2.38	1.26	9,890 9,930	18,000 18,000	24,000 23,700	31,700 31,300	37,500 37,000	43,300 42,800	56,600 56,100	1	103	74	77	
387	03603000	Duck River above Hurricane Mills; 1926-75 35.930 87.74	2,557	1.9	2.35	1.37	38,400 39,000	56,200 57,900	68,500 70,800	84,600 87,500	97,000 100,000	110,000 113,000	140,000 144,000	1	139	51	56	
388	03603800	Chalk Creek near Waynesboro; 1960-74 35.247 87.767	4.88	45.1	2.40	1.10	576 583	1,060 1,060	1,480 1,460	2,160 2,170	2,780 2,740	3,510 3,390	5,740 5,270	0	0	15	15	
389	03604000	Buffalo River near Flat Woods; 1921-99 35.496 87.833	447	5.1	2.39	1.29	15,200 15,200	27,300 26,900	37,100 36,100	51,500 49,100	63,700 59,800	77,000 71,500	113,000 103,000	1	103	79	81	
390	03604070	Coon Creek trib near Hohenwald; 1967-94 35.569 87.667	0.51	200.5	2.39	1.02	85 87	153 157	202 209	268 279	317 333	366 388	482 520	0	0	28	28	
391	03604080	Hugh Hollow Branch near Hohenwald; 1967-69, 1971-94 35.583 87.677	1.52	105.6	2.39	1.06	187 194	536 526	899 840	1,520 1,330	2,120 1,770	2,820 2,270	4,940 3,740	0	0	27	27	
392	03604090	Coon Creek above Chop Hollow near Hohenwald; 1967-99 35.589 87.686	6.02	73.9	2.39	1.11	548 563	1,300 1,310	2,000 1,980	3,120 2,990	4,100 3,870	5,230 4,860	8,380 7,550	0	0	33	33	
393	03604500	Buffalo River near Lobelville; 1928-94 35.813 87.797	707	4.1	2.38	1.31	16,500 16,800	28,800 29,100	38,500 38,400	52,100 51,300	63,200 61,700	75,200 72,600	106,000 101,000	1	98	67	70	
394	03604800	Birdsong Creek near Holladay; 1941-68 35.899 88.127	44.9	11.7	2.37	1.19	4,810 4,560	7,460 6,900	9,160 8,490	11,200 10,500	12,600 12,000	14,000 13,500	17,000 16,900	0	0	28	28	
395	03605555	Trace Creek above Denver; 1964-99 36.052 87.907	31.9	19.8	2.35	1.18	3,530 3,460	5,410 5,290	6,810 6,640	8,760 8,520	10,300 10,100	12,000 11,700	16,500 16,000	0	0	36	36	
Hydrologic area 3																		
61	03425500	Spring Creek near Lebanon; 1955-89 36.180 86.241	35.3	12.5	2.31	1.56	5,510 5,410	7,720 7,540	9,130 8,910	10,900 10,600	12,100 11,800	13,400 13,100	16,100 15,900	0	0	35	35	
62	03425700	Spencer Creek near Lebanon; 1955-92 36.239 86.401	3.32	64.8	2.31	1.66	777 778	1,380 1,370	1,820 1,780	2,420 2,330	2,870 2,690	3,340 3,130	4,460 4,200	0	0	38	38	
63	03425800	Cedar Creek trib at Green Hill; 1955-57, 1959-83 36.231 86.528	0.86	82.2	2.32	1.71	181 185	294 303	373 388	475 499	552 584	629 668	810 842	0	0	28	28	
64	03426000	Drakes Creek above Hendersonville; 1955-85 36.371 86.617	19.2	32.1	2.31	1.59	2,610 2,630	3,840 3,900	4,650 4,740	5,640 5,800	6,360 6,570	7,060 7,330	8,660 9,060	0	0	31	31	

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 3—Continued																	
65	03426800	East Fork Stones River at Woodbury; 1963-87, 1989-99 35.828 86.077	39.1	31.9	2.32	1.56	3,950 3,990	6,070 6,140	7,610 7,700	9,690 9,800	11,300 11,400	13,000 13,200	17,300 17,400	1	97	36	42
66	03426874	Brawleys Fork below Bradyville; 1983-99 35.746 86.171	15.4	37.9	2.35	1.59	2,390 2,390	2,680 2,810	2,830 3,090	2,990 3,440	3,080 3,690	3,170 3,920	3,340 4,390	0	0	17	17
67	03427000	Bradley Creek at Lascassas; 1955-74 35.927 86.290	37.0	16.5	2.32	1.56	7,330 6,840	11,000 10,100	13,300 12,100	16,300 14,800	18,500 16,700	20,700 18,700	25,600 23,300	0	0	20	20
68	03427500	East Fork Stones River near Lascassas; 1952-58, 1963-99 35.918 86.334	262	6.4	2.32	1.49	16,800 16,500	22,600 22,400	26,100 26,200	30,300 30,800	33,200 34,100	35,900 37,400	41,800 44,600	1	97	44	49
69	03427690	Bushman Creek at Pitts Lane Ford near Compton; 1989-99 35.896 86.348	9.67	13.2	2.32	1.61	1,190 1,260	1,570 1,760	1,800 2,110	2,080 2,560	2,280 2,890	2,470 3,210	2,900 3,910	0	0	11	11
70	03427830	Short Creek trib near Christiana; 1966-75 35.677 86.363	0.17	100.3	2.36	1.78	60 63	99 105	129 135	169 175	201 205	235 236	320 305	0	0	10	10
71	03428000	West Fork Stones River near Murfreesboro; 1933-46, 1948-69 35.822 86.417	122	10.3	2.36	1.52	12,200 11,900	19,100 18,500	24,700 23,700	32,800 31,200	39,700 37,500	47,400 44,700	68,900 64,400	1	97	36	42
72	03428500	West Fork Stones River near Smyrna; 1966-99 35.940 86.465	194	9.0	2.32	1.50	14,200 13,900	22,900 22,200	29,600 28,500	39,200 37,400	47,300 44,700	56,000 52,700	79,500 73,700	1	97	34	40
73	03429000	Stones River near Smyrna; 1926-99 36.000 86.460	571	5.1	2.32	1.46	27,800 27,100	37,900 37,200	44,300 43,700	51,800 51,700	57,200 57,500	62,400 63,200	73,800 76,300	1	74	42	46
74	03429500	Stewart Creek near Smyrna; 1953-63, 1965-81 35.998 86.505	62.1	6.6	2.32	1.54	3,160 3,330	5,390 5,720	7,090 7,530	9,460 10,000	11,400 12,000	13,400 14,000	18,600 19,200	1	34	28	30
75	03430100	Stones River below J. Percy Priest Dam; 1939-67 36.158 86.620	892	4.1	2.32	1.45	31,000 30,400	42,300 41,900	50,000 49,800	59,900 60,100	67,500 68,200	75,200 76,400	93,800 96,300	1	74	29	35
76	03430118	McCrary Creek at Ironwood Drive at Donelson; 1977-99 36.152 86.651	7.31	39.1	2.32	1.62	1,320 1,330	2,050 2,080	2,530 2,570	3,100 3,180	3,510 3,610	3,890 3,990	4,720 4,790	0	0	23	23
77	03430400	Mill Creek at Nolensville; 1965-99 35.959 86.675	12.0	30.6	2.33	1.60	4,690 4,500	7,070 6,700	8,510 8,020	10,200 9,550	11,300 10,600	12,300 11,600	14,300 13,700	1	64	35	39
78	03430600	Mill Creek at Hobson Pike near Antioch; 1965-75 36.021 86.681	43.0	16.1	2.33	1.56	4,200 4,400	6,150 6,570	7,490 8,110	9,230 10,100	10,600 11,600	11,900 13,100	15,100 16,800	0	0	11	11

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 3—Continued																	
79	03431000	Mill Creek near Antioch; 1954-99 36.082 86.681	64.0	11.4	2.32	1.54	6,100	9,200	11,600	15,000	17,800	20,900	29,300	1	100	46	51
							6,100	9,220	11,600	14,900	17,600	20,500	28,300				
80	03431040	Sevenmile Creek at Blackman Rd near Nashville; 1965-99 36.072 86.733	12.2	41.1	2.33	1.60	1,630	2,630	3,480	4,840	6,070	7,530	12,000	1	79	35	40
							1,650	2,670	3,540	4,890	6,090	7,480	11,500				
81	03431060	Mill Creek at Thompson Lane near Woodbine; 1965-99 36.118 86.719	93.4	9.5	2.32	1.53	8,530	12,400	15,100	18,500	21,000	23,800	30,000	0	0	35	35
							8,470	12,400	15,100	18,500	21,100	23,800	30,200				
82	03431062	Mill Creek trib at Glenrose Ave at Woodbine; 1977-99 36.117 86.727	1.17	84.5	2.32	1.70	352	534	658	817	936	1,060	1,340	0	0	23	23
							351	534	660	824	948	1,070	1,330				
83	03431080	Sims Branch at Elm Hill Pike near Donelson; 1965, 1967-75 36.152 86.684	3.92	57.8	2.32	1.65	650	1,190	1,630	2,270	2,800	3,380	4,920	1	20	10	13
							687	1,250	1,660	2,230	2,680	3,040	4,360				
84	03431120	W F Browns Creek at General Bates Dr at Nashville; 1965-99 36.108 86.785	3.3	77.1	2.33	1.66	961	1,540	1,920	2,370	2,690	2,990	3,610	0	0	35	35
							955	1,530	1,890	2,320	2,630	2,930	3,530				
85	03431240	E F Browns Cr at Baird-Ward Paint Co at Nashville; 1965-98 36.109 86.767	1.58	65.6	2.32	1.69	310	456	555	683	778	875	1,100	0	0	34	34
							318	485	605	758	870	981	1,210				
86	03431340	Browns Creek at Factory Street at Nashville; 1965-84, 1986-99 36.141 86.759	13.2	42.6	2.32	1.60	2,170	3,360	4,170	5,210	5,980	6,760	8,590	0	0	34	34
							2,170	3,370	4,190	5,250	6,040	6,840	8,620				
87	03431490	Pages Branch at Avondale; 1977-99 36.206 86.773	2.01	101.2	2.32	1.68	833	1,490	2,000	2,710	3,270	3,870	5,380	0	0	23	23
							800	1,370	1,780	2,320	2,760	3,220	4,190				
88	03431517	Cummings Branch at Lickton; 1976-90 36.307 86.800	2.4	86.0	2.32	1.67	331	558	721	933	1,100	1,260	1,640	0	0	15	15
							358	624	824	1,090	1,260	1,450	1,850				
89	03431520	Claylick Creek at Lickton; 1965-85 36.301 86.810	4.13	69.3	2.32	1.65	1,000	1,760	2,340	3,160	3,830	4,530	6,350	0	0	21	21
							994	1,710	2,240	2,920	3,490	3,950	5,520				
90	03431550	Earthman Fork at Whites Creek; 1965-99 36.265 86.831	6.29	48.4	2.32	1.63	1,080	1,640	2,040	2,570	2,980	3,400	4,450	0	0	35	35
							1,090	1,670	2,090	2,640	3,070	3,510	4,460				
91	03431580	Ewing Creek at Knight Road near Bordeaux; 1965-82 36.232 86.804	13.3	46.7	2.32	1.60	3,000	4,230	5,140	6,380	7,380	8,450	11,200	0	0	18	18
							2,910	4,100	4,960	6,140	7,090	8,090	10,100				
92	03431600	Whites Creek at Tucker Road near Bordeaux; 1965-75 36.212 86.825	51.6	21.5	2.32	1.55	4,660	7,070	8,790	11,100	12,900	14,700	19,300	0	0	11	11
							4,940	7,600	9,520	11,900	13,700	15,600	20,100				

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees		CDA	CS	CF	PF	Recurrence interval, in years						Parameters for effective record				
								2	5	10	25	50	100	500	Z	H	N	N _e
								Peak discharge, in cubic feet per second										
Hydrologic area 3—Continued																		
93	03431650	Vaughns Gap Branch at Percy Warner Blvd at Belle Meade; 1965-75 36.095 86.877	2.66	83.3	2.33	1.66	529 559	797 869	993 1,080	1,260 1,380	1,470 1,610	1,690 1,850	2,260 2,350	0	0	11	11	
94	03431670	Richland Creek at Fransworth Dr at Belle Meade; 1965-75 36.120 86.857	12.4	40.6	2.33	1.60	1,800 1,850	2,300 2,500	2,630 2,980	3,040 3,620	3,360 4,090	3,680 4,560	4,440 5,550	0	0	11	11	
95	03431700	Richland Creek at Charlotte Ave at Nashville; 1965-90, 1994-99 36.151 86.854	24.3	33.0	2.32	1.58	3,150 3,180	5,100 5,120	6,480 6,490	8,290 8,270	9,670 9,630	11,100 11,000	14,400 14,300	0	0	32	32	
97	03432350	Harpeth River at Franklin; 1975-99 35.921 86.866	176	3.9	2.34	1.50	8,640 8,570	12,600 12,600	15,100 15,400	18,200 18,900	20,400 21,500	22,600 24,100	27,500 30,000	0	0	25	25	
98	03432500	West Harpeth River near Leipers Fork; 1955-78 35.899 86.967	66.9	10.4	2.35	1.54	5,510 5,620	11,900 11,300	17,700 15,700	27,200 22,000	35,900 27,500	46,100 33,800	76,500 52,500	0	0	24	24	
99	03432925	L Harpeth River at Granny White Pike at Brentwood; 1978-99 36.025 86.819	22.0	18.4	2.33	1.58	2,610 2,660	4,200 4,270	5,330 5,420	6,830 6,940	7,990 8,110	9,160 9,310	12,000 12,200	0	0	22	22	
100	03433500	Harpeth River at Bellevue; 1921-29, 1932-99 36.054 86.928	393	3.2	2.33	1.47	12,400 12,500	18,100 18,400	22,000 22,500	27,100 27,900	31,000 32,000	35,000 36,200	44,500 46,400	1	97	77	79	
328	03581500	West Fork Mulberry Creek at Mulberry; 1954-85 35.209 86.463	41.2	16.4	2.38	1.56	7,160 6,860	10,100 9,660	12,000 11,500	14,400 14,000	16,100 15,800	17,800 17,600	21,700 21,700	0	0	32	32	
329	03582000	Elk River above Fayetteville; 1935-52 35.134 86.540	827	3.4	2.38	1.45	16,300 17,400	24,400 26,400	29,800 32,800	36,500 41,100	41,500 47,300	46,500 53,500	58,000 68,200	0	0	18	18	
330	03582300	Norris Creek near Fayetteville; 1954-83 35.165 86.545	42.6	16.6	2.38	1.56	6,060 5,920	9,200 8,910	11,500 11,100	14,700 14,200	17,200 16,600	19,900 19,200	26,900 25,900	0	0	30	30	
331	03583000	Bradshaw Creek at Frankewing; 1955-68 35.193 86.845	36.5	20.3	2.39	1.56	4,670 4,580	7,080 6,950	8,910 8,710	11,500 11,200	13,600 13,100	15,900 15,300	22,000 20,000	0	0	14	14	
332	03583200	Chicken Creek at McBurg; 1955-89 35.184 86.813	7.66	50.6	2.39	1.62	2,670 2,570	4,100 3,890	4,990 4,700	6,050 5,670	6,780 6,300	7,470 6,970	8,930 8,480	0	0	35	35	
333	03583300	Richland Creek near Cornersville; 1962-99 35.319 86.872	47.5	16.0	2.38	1.55	5,870 5,820	8,850 8,750	10,700 10,700	12,800 12,900	14,200 14,500	15,500 16,000	18,200 19,100	0	0	38	38	
334	03583500	Weakley Creek near Bodenham; 1956-68 35.252 87.169	24.4	67.9	2.40	1.58	1,400 1,580	2,150 2,520	2,710 3,200	3,480 4,180	4,110 4,950	4,770 5,750	6,480 7,470	0	0	13	13	

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees		CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
								2	5	10	25	50	100	500	Z	H	N	N _e
								Peak discharge, in cubic feet per second										
Hydrologic area 3—Continued																		
335	03584000	Richland Creek near Pulaski; 1935-75 35.214 87.101	366	5.3	2.39	1.48	16,400 16,200	29,500 28,500	40,500 38,200	57,300 52,400	72,000 64,400	88,900 77,700	137,000 116,000	1	134	41	47	
336	03584500	Elk River near Prospect; 1905-07, 1919-52 35.027 86.948	1,784	2.9	2.40	1.42	32,100 32,400	49,800 50,300	63,400 63,600	82,600 82,100	98,500 97,100	116,000 113,000	162,000 155,000	1	72	37	42	
369	03597000	Garrison Fork at Fairfield, 1954-68; 1970-85 35.566 86.283	66.3	17.7	2.36	1.54	7,150 7,100	11,600 11,500	15,200 14,900	20,400 19,800	24,800 23,900	29,800 28,400	43,400 40,900	0	0	31	31	
370	03597300	Wartrace Creek above Bell Buckle; 1966-99 35.629 86.356	4.99	49.6	2.36	1.64	987 986	1,740 1,730	2,340 2,290	3,180 3,090	3,880 3,690	4,630 4,380	6,620 6,210	0	0	34	34	
371	03597450	Kelly Creek trib near Bell Buckle; 1967-77, 1979-82 35.609 86.320	0.73	132.0	2.36	1.72	390 366	504 475	568 542	640 626	687 687	731 746	820 842	0	0	15	15	
372	03597500	Wartrace Creek at Bell Buckle; 1954-83 35.588 86.339	16.3	25.7	2.36	1.59	3,890 3,780	5,450 5,290	6,400 6,210	7,500 7,310	8,260 8,090	8,970 8,830	10,500 10,500	0	0	30	30	
373	03597550	Muse Branch near Bell Buckle; 1966-75 35.567 86.324	1.86	58.1	2.36	1.68	458 463	698 713	866 890	1,090 1,120	1,260 1,300	1,430 1,480	1,850 1,870	0	0	10	10	
374	03597590	Wartrace Creek below County Road at Wartrace; 1990-99 35.527 86.340	35.7	14.7	2.37	1.56	4,860 4,700	7,390 7,130	9,200 8,860	11,600 11,200	13,500 13,000	15,400 15,000	20,300 19,800	0	0	10	10	
375	03598000	Duck River near Shelbyville; 1935-75 35.480 86.499	481	6.1	2.37	1.29	17,600 17,700	28,000 28,000	35,900 35,800	47,000 46,700	56,200 55,500	66,000 64,900	92,100 89,400	1	185	41	46	
376	03598200	Weakly Creek near Rover; 1955-83 35.635 86.551	9.46	11.8	2.37	1.61	979 1,010	1,660 1,720	2,200 2,280	2,990 3,140	3,660 3,820	4,390 4,560	6,400 6,540	0	0	29	29	
377	03599000	Big Rock Creek at Lewisburg; 1954-68, 1996-99 35.449 86.786	24.9	19.2	2.37	1.58	4,170 4,110	6,600 6,450	8,480 8,220	11,200 10,700	13,400 12,700	15,800 14,900	22,300 20,800	1	144	19	26	
378	03599200	East Rock Creek at Farmington; 1954-89 35.501 86.714	43.1	10.2	2.37	1.56	4,780 4,720	8,220 7,930	10,700 10,100	13,800 13,000	16,200 15,200	18,500 17,400	24,000 22,700	0	0	36	36	
379	03599400	Little Flat Creek trib near Rally Hill; 1955-75 35.687 86.829	0.63	72.8	2.37	1.72	171 174	281 288	363 374	479 490	572 581	671 676	927 898	0	0	21	21	
380	03599500	Duck River at Columbia; 1905-08, 1921-75 35.618 87.032	1,208	2.7	2.37	1.44	25,000 25,200	34,200 34,800	40,400 41,500	48,600 50,500	54,900 57,400	61,300 64,500	77,000 82,200	1	75	59	61	

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years						Parameters for effective record				
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 3—Continued																	
381	03600000	Rutherford Creek near Carters Creek; 1954-69 35.673 86.978	68.8	9.7	2.37	1.54	4,530 4,780	7,160 7,780	9,030 9,990	11,500 12,800	13,400 15,000	15,400 17,100	20,300 22,400	0	0	16	16
382	03600088	Carters Creek at Butler Rd at Carters Creek; 1987-99 35.717 86.996	20.1	24.5	2.36	1.58	2,450 2,500	2,800 3,050	3,010 3,430	3,240 3,910	3,400 4,250	3,550 4,560	3,860 5,220	0	0	13	13
383	03600500	Big Bigby Creek at Sandy Hook; 1954-79, 1981-87, 1989 35.489 87.233	17.5	40.4	2.39	1.59	2,230 2,250	3,860 3,880	5,050 5,060	6,640 6,620	7,870 7,820	9,130 9,050	12,200 11,900	0	0	34	34
384	03602000	Duck River at Centerville; 1920-55 35.788 87.466	2,048	2.1	2.38	1.42	33,000 33,500	44,800 46,100	52,200 54,500	61,100 64,900	67,500 72,600	73,700 80,200	87,600 99,200	1	75	36	41
Hydrologic area 4																	
362	03594415	Beech River near Lexington; 1953-63 35.659 88.417	15.9	6.9	2.39	1.32	999 1,050	1,380 1,520	1,620 1,830	1,890 2,200	2,090 2,460	2,270 2,710	2,660 3,180	0	0	11	11
363	03594430	Harmon Creek near Lexington; 1953-70 35.638 88.354	6.87	19.0	2.39	1.50	685 721	875 965	983 1,130	1,100 1,310	1,180 1,430	1,250 1,540	1,400 1,740	0	0	18	18
364	03594435	Piney Creek at Hwy 104 near Lexington; 1953-55, 1957-70 35.596 88.368	19.2	16.2	2.40	1.28	1,140 1,240	1,820 2,020	2,300 2,580	2,940 3,320	3,440 3,890	3,940 4,470	5,180 5,850	0	0	17	17
365	03594445	Beech River near Chesterfield; 1941-54, 1961-65 35.624 88.273	115	3.8	2.39	0.97	5,300 5,060	8,840 8,090	11,300 10,100	14,600 12,700	17,100 14,800	19,500 16,900	25,300 22,100	0	0	19	19
396	03606500	Big Sandy River at Bruceton; 1930-87 36.039 88.228	205	3.7	2.36	0.89	4,820 4,930	8,220 8,400	10,800 11,100	14,600 14,700	17,600 17,700	20,800 20,900	29,300 29,100	1	91	58	62
405	07024300	Beaver Creek at Huntingdon; 1954-94 35.999 88.434	55.5	6.0	2.36	1.09	3,270 3,270	4,860 4,860	5,920 5,940	7,270 7,330	8,280 8,370	9,280 9,410	11,600 11,900	0	0	41	41
406	07024500	South Fork Obion River near Greenfield; 1930-87, 1989-93, 1997-99 36.118 88.811	383	3.8	2.36	0.81	7,900 8,040	12,800 13,100	16,300 16,700	20,900 21,400	24,400 25,100	28,000 28,800	36,500 37,700	0	0	66	66
407	07025000	Rutherford Fork Obion River near Bradford; 1930-57 36.053 88.878	201	4.8	2.36	0.89	4,860 5,110	6,530 7,320	7,540 8,900	8,700 10,900	9,510 12,400	10,300 13,700	11,900 16,700	0	0	28	28
408	07025220	Cane Creek near Martin; 1955-83 36.327 88.851	6.79	17.0	2.35	1.50	1,530 1,510	2,990 2,920	4,240 4,080	6,130 5,800	7,760 7,280	9,580 8,920	14,600 13,500	0	0	29	29

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 4—Continued																	
409	07025225	Cane Creek trib near Martin; 1955-76 36.312 88.847	0.76	37.5	2.35	2.10	233 235	354 360	436 446	540 555	616 636	692 715	867 898	0	0	22	22
410	07025400	North Fork Obion River near Martin; 1939-67, 1997-99 36.406 88.856	372	4.2	2.35	0.81	8,880 8,970	14,700 14,600	19,100 18,900	25,500 24,900	30,700 29,700	36,400 34,800	51,400 48,200	0	0	32	32
411	07025500	North Fork Obion River near Union City; 1930-70, 1989-99 36.400 88.995	480	3.7	2.35	0.78	10,100 10,200	16,700 16,700	21,500 21,400	27,800 27,700	32,600 32,400	37,600 37,300	49,400 49,100	1	70	52	55
412	07026000	Obion River at Obion; 1930-58, 1967-95 36.251 89.192	1,852	2.2	2.36	0.63	24,800 24,400	37,200 36,500	45,500 44,600	56,000 55,000	63,700 62,600	71,400 70,200	89,100 87,800	1	95	58	62
413	07026300	Obion River near Bogota; 1937-77 36.137 89.429	2,033	1.9	2.36	0.62	21,500 21,500	32,400 32,600	39,900 40,400	49,300 50,300	56,400 57,800	63,500 65,300	80,000 82,700	1	77	39	44
414	07026500	Reelfoot Creek near Samburg; 1951-72 36.442 89.296	110	3.7	2.35	0.98	5,580 5,160	9,130 8,030	11,900 10,200	15,800 13,300	19,000 15,900	22,500 18,700	31,900 26,300	0	0	22	22
415	07027500	South Fork Forked Deer River at Jackson; 1930-73, 1989-91 35.594 88.814	495	4.3	2.40	0.77	8,830 9,080	15,000 15,500	20,100 20,600	27,800 28,100	34,400 34,400	41,900 41,200	63,200 60,000	0	0	47	47
416	07027800	South Fork Forked Deer River near Gates; 1954-77 35.817 89.356	932	2.7	2.39	0.70	10,600 11,500	18,400 19,800	24,200 25,900	32,000 34,000	38,200 40,200	44,500 46,600	59,900 61,900	0	0	24	24
417	07028000	S Fork Forked Deer River at Chestnut Bluff; 1930-57 35.862 89.348	1,003	2.6	2.38	0.69	14,100 14,400	23,300 23,500	29,800 30,000	38,400 38,500	44,900 45,000	51,500 51,500	67,100 67,000	0	0	28	28
418	07028500	North Fork Forked Deer River at Trenton; 1951-71, 1980-84 35.980 88.926	73.5	6.4	2.39	1.04	3,950 3,940	6,080 6,040	7,600 7,530	9,640 9,520	11,200 11,100	12,900 12,700	17,000 16,700	0	0	21	21
419	07028600	Cain Creek trib near Trenton; 1955-57, 1959-85 35.938 88.941	0.95	57.5	2.39	2.03	510 502	686 675	803 789	952 934	1,060 1,040	1,180 1,140	1,440 1,410	0	0	30	30
420	07028700	Cain Creek near Trenton; 1954-85 35.966 88.954	14.4	11.1	2.39	1.34	1,450 1,460	3,070 3,020	4,600 4,410	7,120 6,640	9,480 8,680	12,300 11,100	21,000 18,200	0	0	32	32
421	07028900	Middle Fork Forked Deer River near Spring Creek; 1954-57, 1959-78 35.810 88.617	88.2	5.9	2.39	1.01	3,070 3,260	5,940 6,130	8,510 8,500	12,600 12,000	16,500 15,000	20,900 18,400	34,600 28,400	0	0	24	24
422	07028930	Turkey Creek at Medina; 1967-75, 1997-99 35.807 88.802	4.75	34.3	2.39	1.59	1,630 1,510	2,240 2,070	2,630 2,420	3,100 2,870	3,450 3,170	3,780 3,590	4,550 4,440	0	0	12	12

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 4—Continued																	
423	07028940	Turkey Creek near Medina; 1962-82 35.794 88.810	7.87	26.9	2.39	1.47	2,820 2,620	4,010 3,680	4,800 4,390	5,820 5,340	6,570 6,060	7,330 6,710	9,130 8,530	0	0	16	16
424	07029000	Middle Fork Forked Deer River near Alamo; 1930-73 35.851 89.067	369	3.9	2.39	0.81	7,970 8,140	11,900 12,400	14,800 15,700	18,900 20,300	22,200 24,000	25,800 27,800	35,100 37,700	0	0	44	44
425	07029050	Nash Creek near Tigrett; 1955-78 35.961 89.285	7.23	12.4	2.37	1.49	1,050 1,050	1,380 1,410	1,590 1,660	1,860 1,970	2,050 2,230	2,240 2,460	2,690 2,980	0	0	24	24
426	07029090	Lewis Creek near Dyersburg; 1955-78, 1980-83, 1985-99 36.054 89.362	25.5	12.1	2.37	1.22	2,220 2,230	3,520 3,540	4,390 4,420	5,480 5,520	6,260 6,330	7,020 7,130	8,720 8,920	0	0	43	43
427	07029100	North Fork Forked Deer River at Dyersburg; 1944-77 36.030 89.387	939	2.9	2.37	0.70	10,900 11,600	16,000 17,500	19,400 21,800	23,600 27,500	26,700 31,800	29,800 36,000	36,700 45,700	0	0	34	34
430	07029275	Hatchie River near Pocahontas; 1941-58 35.041 88.787	310	2.4	2.44	0.83	7,250 7,290	11,800 11,700	15,300 15,000	20,200 19,400	24,300 22,900	28,700 26,500	40,300 36,000	0	0	12	12
432	07029370	Cypress Creek at Selmer; 1954-73, 1975 35.168 88.589	44.1	8.0	2.41	1.12	2,060 2,140	3,100 3,330	3,880 4,230	4,980 5,440	5,870 6,390	6,820 7,390	9,340 9,950	0	0	21	21
433	07029400	Hatchie River at Pocahontas; 1942-73, 1975-77 35.057 88.801	837	2.5	2.44	0.71	14,900 14,800	24,300 23,800	31,400 30,500	41,300 39,500	49,400 46,700	58,000 54,200	80,500 75,600	0	0	35	35
435	07029500	Hatchie River at Bolivar; 1930-79, 1981-87, 1989-99 35.275 88.977	1,480	1.3	2.41	0.65	18,400 18,200	30,800 30,000	40,000 38,400	52,600 49,600	62,700 58,400	73,200 67,500	99,800 90,400	0	0	68	68
436	07030000	Hatchie River near Stanton; 1930-58 35.523 89.349	1,975	0.9	2.40	0.63	23,300 22,000	35,700 33,400	44,400 41,200	55,800 51,500	64,500 59,300	73,400 67,200	94,800 86,400	0	0	29	29
437	07030050	Hatchie River at Rialto; 1939-74, 1976-77 35.637 89.604	2,308	0.9	2.39	0.61	21,800 21,400	33,300 32,500	41,000 40,100	50,700 49,600	57,900 56,800	65,100 63,900	81,700 80,600	0	0	38	38
438	07030100	Cane Creek at Ripley; 1958-70, 1986-99 35.756 89.551	33.9	13.1	2.39	1.17	3,100 3,090	4,550 4,570	5,500 5,570	6,700 6,840	7,570 7,790	8,430 8,730	10,400 10,900	0	0	27	27
439	07030240	Loosahatchie River near Arlington; 1970-99 35.310 89.640	262	6.8	2.41	0.85	9,970 9,930	15,400 15,400	19,200 19,300	24,200 24,300	28,000 28,200	31,800 32,200	41,000 41,700	0	0	30	30
440	07030270	Clear Creek near Arlington; 1954-56, 1959-84 35.272 89.705	60.5	8.6	2.41	1.07	3,770 3,780	4,260 4,510	4,530 5,060	4,820 5,710	5,010 6,130	5,180 6,480	5,540 7,140	0	0	29	29

Table 4. Selected basin characteristics and flood-frequency estimates for 297 gaging stations located in Tennessee—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
Hydrologic area 4—Continued																	
441	07030280	Loosahatchie River at Brunswick; 1939-64, 1966-76 35.281 89.766	505	5.9	2.40	0.77	15,100 14,700	22,800 22,200	28,000 27,400	34,700 34,100	39,700 39,300	44,800 44,400	56,700 56,900	0	0	37	37
443	07030500	Wolf River at Rossville; 1930-71 35.054 89.541	503	3.0	2.43	0.77	9,740 9,840	16,200 16,300	20,600 20,800	26,000 26,400	29,900 30,600	33,700 34,700	42,100 45,100	0	0	42	42
444	07031650	Wolf River at Germantown; 1970-86, 1991-95, 1997-99 35.116 89.801	699	2.8	2.44	0.73	10,400 10,900	16,400 17,600	20,800 22,800	26,900 29,700	31,700 35,000	36,800 42,100	49,900 56,200	0	0	24	24
445	07031700	Wolf River at Raleigh; 1937-73 35.202 89.923	771	2.6	2.40	0.72	12,200 12,400	20,300 20,500	26,000 26,400	33,700 34,100	39,700 40,000	45,800 46,000	60,500 62,600	1	39	37	38
446	07032200	Nonconnah Creek near Germantown; 1970-79, 1981-84, 1986-99 35.050 89.819	68.2	8.3	2.44	1.05	6,780 6,520	9,300 8,790	10,800 10,200	12,500 11,900	13,700 13,100	14,800 14,300	17,100 17,000	0	0	28	28
447	07032224	Johns Creek at Raines Rd at Memphis; 1975-82, 1984-85 35.035 89.886	19.4	15.1	2.44	1.28	4,210 3,800	5,850 5,160	6,980 6,110	8,460 7,400	9,600 8,430	10,700 9,510	13,600 12,100	0	0	10	10

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states

[Discharge values are Bulletin 17B station estimates (Interagency Advisory Committee on Water Data, 1982); See individual state's most recent flood-frequency report for weighted discharge estimates; CDA, contributing drainage area in square miles; CS, main-channel slope in feet per mile; CF, 2-year recurrence interval climate factor; PF, physiographic-region factor; Z, number of historic peaks and high outliers; H, total historical period in years; N, systematic record length in years; N_e, effective record length in years; See appendix C for description of computing effective record length; See figure 1 for station location]

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years						Parameters for effective record				
							2	5	10	25	50	100	500	Z	H	N	N _e
Hydrologic area 1																	
1	02384000	Conasauga River near Tennga, Ga.; 1930-31, 1938, 1940-47, 1951-76, 1990 35.010 84.730	108	73.0	2.33	0.82	9,620	13,400	15,600	18,000	19,600	21,000	23,900	0	0	39	39
2	02384500	Conasauga River near Eton, Ga.; 1954-58, 1963-98 34.830 84.850	252	25.7	2.35	0.87	9,290	15,300	20,000	26,700	32,100	38,100	53,900	1	48	41	42
3	02384540	Mill Creek near Crandall, Ga.; 1985-97 34.872 84.721	8.27	404	2.34	0.70	645	1,240	1,750	2,520	3,180	3,940	6,040	0	0	13	13
4	02384600	Pinhook Creek near Eton, Ga.; 1964-97 34.830 84.820	4.28	27.5	2.34	0.67	373	562	695	870	1,000	1,140	1,480	0	0	34	34
6	02385000	Coahulla Creek near Varnell, Ga.; 1940-43, 1951-61 34.900 84.920	86.7	3.51	2.35	0.81	3,290	5,370	6,950	9,160	11,000	12,900	17,800	1	72	15	22
7	02385500	Mill Creek at Dalton, Ga.; 1945-59 34.780 84.980	40.1	15.3	2.36	0.77	2,490	3,380	3,980	4,760	5,340	5,940	7,380	0	0	15	15
8	02385800	Holly Creek near Chatsworth, Ga.; 1961-98 34.720 84.770	64.0	52.0	2.37	0.79	3,530	5,830	7,670	10,400	12,700	15,300	22,400	1	48	38	40
9	02387000	Conasauga River at Tilton, Ga.; 1938-97 34.670 84.930	687	11.0	2.37	0.92	14,000	20,200	24,300	29,200	32,800	36,300	44,100	1	157	60	65
10	03160610	Old Field Creek near West Jefferson, N.C.; 1955-71 36.370 81.530	2.38	188	2.10	0.65	103	147	180	226	263	303	408	0	0	17	17
11	03161000	South Fork New River near Jefferson, N.C.; 1925-26, 1929-41, 1943-98 36.400 81.420	205	7.48	2.09	0.85	4,840	8,610	12,300	18,800	25,400	33,800	63,400	1	83	71	73
12	03162110	Buffalo Creek at Warrensville, N.C.; 1955-70 36.450 81.510	22.9	57.0	2.09	0.75	1,160	1,930	2,630	3,770	4,850	6,150	10,300	1	31	16	19

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years						Parameters for effective record				
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																	
13	03162500	North Fork New River at Crumpler, N.C.; 1909-16, 1929-58, 1966 36.520 81.390	277	22.0	2.09	0.87	5,750	10,300	14,800	22,700	31,300	42,200	82,000	1	89	39	45
115	03452000	Sandymush Creek near Alexander, N.C.; 1943-55 35.730 82.670	79.5	42.2	2.21	0.81	2,020	3,060	3,880	5,070	6,080	7,200	10,300	0	0	13	13
116	03453000	Ivy Creek near Marshall, N.C.; 1935-74, 1994-98 35.770 82.620	158	44.7	2.21	0.84	4,040	6,590	8,660	11,800	14,400	17,400	26,000	0	0	44	44
117	03453500	French Broad River at Marshall, N.C.; 1943-98 35.790 82.660	1,332	4.71	2.21	0.96	20,100	30,500	37,600	46,700	53,600	60,600	77,100	1	208	56	59
118	03453880	Brush Creek at Walnut, N.C.; 1954-59, 1961-71 35.840 82.740	7.76	146	2.20	0.70	636	946	1,160	1,440	1,660	1,880	2,420	0	0	17	17
119	03454000	Big Laurel Creek near Stackhouse, N.C.; 1935-73 35.920 82.760	126	68.9	2.20	0.83	3,360	5,410	7,010	9,310	11,200	13,300	19,000	0	0	39	39
120	03454500	French Broad River at Hot Springs, N.C.; 1935-49 35.890 82.820	1,563	6.30	2.20	0.97	23,000	36,700	47,800	64,500	79,100	95,600	143,000	1	159	15	22
122	03459000	Jonathan Creek near Cove Creek, N.C.; 1931-73 35.620 83.010	65.3	64.6	2.21	0.80	1,950	2,720	3,230	3,890	4,390	4,900	6,110	0	0	43	43
123	03459500	Pigeon River near Hepco, N.C.; 1928-98 35.640 82.990	350	26.7	2.21	0.88	11,300	17,200	21,500	27,500	32,300	37,500	50,800	2	97	71	76
124	03460000	Cataloochee Creek near Cataloochee, N.C.; 1935-52, 1963-98 35.670 83.070	49.2	162	2.21	0.78	1,950	2,960	3,640	4,490	5,120	5,750	7,190	0	0	54	54
128	03461910	North Toe River at Newland, N.C.; 1955-73 36.080 81.930	9.21	138	2.16	0.70	367	429	468	516	551	585	664	0	0	19	19
129	03462000	North Toe River at Altapass, N.C.; 1935-58 35.900 82.030	104	34.7	2.17	0.82	2,760	4,490	6,000	8,390	10,600	13,200	21,200	1	42	24	28
130	03463300	South Toe River near Celo, N.C.; 1958-98 35.830 82.180	43.4	133	2.18	0.78	5,350	9,310	12,800	18,200	23,100	28,800	46,200	1	59	41	44
131	03463500	South Toe River at Newdale, N.C.; 1935-52 35.910 82.190	59.9	36.2	2.17	0.79	5,480	9,480	13,000	18,700	23,900	30,000	49,000	1	35	18	22

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																	
132	03463910	Phipps Creek near Burnsville, N.C.; 1957-66, 1970-73 35.910 82.370	1.61	483	2.17	0.63	144	223	284	373	447	529	752	0	0	14	14
133	03464000	Cane River near Sioux, N.C.; 1934-73 36.010 82.330	157	30.6	2.17	0.84	4,730	8,420	11,800	17,400	22,600	29,000	49,600	1	81	40	45
134	03464500	Nolichucky River at Poplar, N.C.; 1926-55 36.070 82.340	608	29.0	2.17	0.91	15,400	24,800	32,600	44,500	55,000	67,000	102,000	1	40	30	32
155	03471500	S F Holston River at Riverside near Chilhowie, Va.; 1908-09, 1921-31, 1942-99 36.760 81.630	76.1	32.0	2.08	0.80	1,960	3,080	3,930	5,150	6,150	7,250	10,200	1	92	71	73
156	03472500	Beaverdam Creek at Damascus, Va.; 1948-95 36.630 81.790	56.0	56.9	2.09	0.79	2,100	3,130	3,880	4,890	5,680	6,520	8,630	0	0	48	48
157	03473000	S F Holston River near Damascus, Va.; 1932-99 36.650 81.840	301	23.2	2.09	0.88	6,580	9,710	12,100	15,600	18,600	21,800	30,800	1	133	68	72
158	03473500	M F Holston River at Groseclose, Va.; 1948-58, 1960-94 36.890 81.350	7.39	46.2	2.06	0.69	171	299	401	550	675	812	1,180	0	0	46	46
159	03474000	M F Holston River at Sevenmile Ford, Va.; 1942-99 36.810 81.620	132	24.3	2.07	0.83	3,330	5,320	6,890	9,170	11,100	13,200	19,100	0	0	58	58
160	03474500	M F Holston River at Chilhowie, Va.; 1907-09, 1921-31 36.800 81.680	155	21.5	2.08	0.84	3,840	6,250	8,230	11,200	13,800	16,800	25,400	0	0	14	14
161	03475000	M F Holston River near Meadowview, Va.; 1932-53, 1957, 1972, 1975, 1977-99 36.710 81.820	211	14.6	2.08	0.86	4,120	6,190	7,680	9,690	11,300	12,900	17,100	0	0	48	48
163	03478400	Beaver Creek at Bristol, Va.; 1958-99 36.630 82.130	27.7	40.0	2.10	0.75	372	630	844	1,170	1,450	1,780	2,710	0	0	42	42
164	03478910	Cove Creek at Sherwood, N.C.; 1955-72 36.260 81.780	23.1	116	2.15	0.75	1,040	2,030	2,960	4,520	6,010	7,830	13,700	1	57	18	24
165	03479000	Watauga River near Sugar Grove, N.C.; 1941-98 36.240 81.820	90.8	51.3	2.15	0.81	5,900	10,500	14,500	20,800	26,600	33,500	54,400	1	83	59	62
168	03481000	Elk River near Elk Park, N.C.; 1935-55 36.180 81.960	42.1	103	2.16	0.77	2,190	3,880	5,500	8,310	11,100	14,600	26,800	1	40	21	25
177	03487800	Lick Creek near Chatham Hill, Va.; 1966-99 36.960 81.470	25.5	39.1	2.06	0.75	1,260	1,760	2,090	2,490	2,780	3,070	3,720	0	0	34	34

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years						Parameters for effective record				
							2	5	10	25	50	100	500	Z	H	N	N _e
Peak discharge, in cubic feet per second																	
Hydrologic area 1—Continued																	
178	03488000	N F Holston River near Saltville, Va.; 1907-08, 1921-99 36.900 81.750	222	21.7	2.07	0.86	6,060	9,000	11,200	14,200	16,600	19,100	25,700	1	138	81	85
179	03488450	Brumley Creek at Brumley Gap, Va.; 1980-98 36.792 82.019	21.1	202	2.09	0.74	675	895	1,040	1,230	1,360	1,500	1,830	0	0	19	19
180	03488500	N F Holston River at Holston, Va.; 1952-77 36.770 82.070	402	17.7	2.09	0.89	10,100	15,400	19,600	25,500	30,500	36,000	50,900	0	0	26	26
181	03489800	Cove Creek near Shelleys, Va.; 1951-99 36.650 82.350	17.3	68.3	2.10	0.73	844	1,180	1,400	1,670	1,880	2,090	2,570	0	0	49	49
182	03489900	Big Moccasin Creek near Gate City, Va.; 1953-77 36.650 82.550	79.6	16.7	2.13	0.81	2,400	3,390	4,090	5,020	5,740	6,490	8,370	0	0	25	25
183	03490000	N F Holston River near Gate City, Va.; 1932-99 36.610 82.570	672	9.69	2.13	0.92	14,300	20,800	25,500	32,000	37,100	42,600	56,800	1	138	68	73
199	03503000	Little Tennessee River at Needmore, N.C.; 1945-82, 1984-98 35.340 83.530	436	10.0	2.27	0.90	9,800	13,700	16,100	19,100	21,100	23,100	27,500	0	0	53	53
200	03504000	Nantahala River near Rainbow Springs, N.C.; 1940-98 35.130 83.620	51.9	30.7	2.28	0.78	2,530	3,460	4,080	4,870	5,460	6,050	7,460	0	0	59	59
201	03506500	Nantahala River at Almond, N.C.; 1922-26, 1928-32, 1934-42 35.380 83.570	174	45.0	2.27	0.85	5,140	7,340	8,890	11,000	12,600	14,200	18,400	0	0	17	17
202	03507000	Little Tennessee River at Judson, N.C.; 1897-44 35.408 83.557	664	8.43	2.27	0.92	13,600	21,400	27,400	35,800	42,800	50,300	70,400	0	0	48	48
203	03511000	Oconaluftee River at Cherokee, N.C.; 1922-49 35.480 83.320	131	145	2.27	0.83	5,450	7,320	8,480	9,870	10,800	11,800	13,900	1	36	28	30
204	03512000	Oconaluftee River at Birdtown, N.C.; 1949-98 35.460 83.350	184	95.0	2.27	0.85	8,890	11,600	13,300	15,300	16,800	18,200	21,400	0	0	50	50
205	03513000	Tuckasegee River at Bryson City, N.C.; 1898-40 35.430 83.450	655	26.0	2.27	0.92	17,400	27,700	35,300	45,800	54,200	63,000	85,400	0	0	43	43
206	03513500	Noland Creek near Bryson City, N.C.; 1936-71 35.480 83.650	13.8	368	2.26	0.72	947	1,290	1,530	1,830	2,070	2,300	2,880	0	0	36	36

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years						Parameters for effective record				
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																	
207	03514000	Hazel Creek at Proctor, N.C.; 1943-52 35.480 83.720	44.4	166	2.26	0.78	2,320	3,640	4,650	6,050	7,200	8,420	11,700	0	0	10	10
208	03516000	Snowbird Creek near Robbinsville, N.C.; 1943-52 35.310 83.860	42.0	138	2.35	0.77	2,890	4,120	5,040	6,330	7,390	8,520	11,500	0	0	10	10
217	03521500	Clinch River at Richlands, Va.; 1946-92, 1994-99 37.090 81.780	139	23.0	2.07	0.83	3,540	5,140	6,270	7,770	8,920	10,100	13,100	1	99	53	58
218	03523000	Big Cedar Creek near Lebanon, Va.; 1953-77, 1991-94 36.910 82.040	51.5	39.6	2.08	0.78	2,340	2,870	3,160	3,490	3,700	3,900	4,300	0	0	29	29
219	03524000	Clinch River at Cleveland, Va.; 1921-99 36.940 82.150	528	14.9	2.08	0.91	10,300	15,200	18,800	23,800	27,800	32,100	43,300	1	138	79	83
220	03524500	Guest River at Coeburn, Va.; 1950-99 36.930 82.460	87.3	13.1	2.11	0.81	2,690	4,240	5,440	7,160	8,600	10,200	14,400	1	138	50	56
221	03524900	Stony Creek at Ka, Va.; 1981-99 36.816 82.617	30.9	205	2.12	0.76	3,240	5,360	7,070	9,610	11,800	14,200	21,000	0	0	19	19
222	03525000	Stony Creek at Fort Blackmore, Va.; 1950-77 36.770 82.580	41.4	178	2.13	0.77	2,950	5,330	7,310	10,300	12,800	15,700	23,600	1	60	28	33
223	03526000	Copper Creek near Gate City, Va.; 1948-91, 1993-99 36.670 82.570	106	16.1	2.13	0.82	2,780	4,220	5,310	6,850	8,110	9,470	13,100	0	0	51	51
224	03527000	Clinch River at Speers Ferry, Va.; 1921-95 36.650 82.750	1,126	9.36	2.13	0.95	20,500	30,400	37,400	46,900	54,200	62,000	81,300	1	134	75	79
231	03529500	Powell River at Big Stone Gap, Va.; 1945-77, 1979-94 36.870 82.780	112	41.2	2.13	0.82	4,960	7,680	9,800	12,900	15,400	18,300	26,000	1	77	49	53
232	03530000	S F Powell River at Big Stone Gap, Va.; 1945-47, 1951-75, 1977 36.860 82.770	40.0	156	2.13	0.77	2,310	3,350	4,100	5,090	5,870	6,690	8,740	1	60	29	34
233	03530500	N F Powell River at Pennington Gap, Va.; 1945-77, 1979-95 36.770 83.030	70.0	59.4	2.14	0.80	3,890	5,980	7,650	10,100	12,200	14,500	21,100	1	78	50	54
234	03531000	Powell River near Pennington Gap, Va.; 1921-31 36.734 82.999	290	21.5	2.14	0.87	13,200	18,800	22,900	28,600	33,100	37,900	50,200	0	0	11	11
235	03531500	Powell River near Jonesville, Va.; 1932-98 36.660 83.090	319	16.8	2.14	0.88	11,200	16,900	21,300	27,500	32,700	38,300	53,600	1	132	67	71

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																	
269	03544947	Brier Creek near Hiawassee, Ga.; 1985-98 34.847 83.709	1.74	600	2.30	0.63	201	475	746	1,210	1,660	2,190	3,890	0	0	14	14
270	03545000	Hiwassee River at Presley, Ga.; 1942-98 34.900 83.720	45.5	60.9	2.30	0.78	1,970	3,110	3,940	5,050	5,930	6,830	9,090	0	0	57	57
271	03546000	Shooting Creek near Hayesville, N.C.; 1923, 1943-45, 1947-55 35.020 83.710	37.6	234	2.29	0.77	1,410	2,390	3,230	4,570	5,780	7,210	11,500	0	0	13	13
272	03548500	Hiwassee River above Murphy, N.C.; 1897-1917, 1919-41 35.080 84.000	406	92.0	2.31	0.89	11,500	15,800	18,600	21,900	24,300	26,600	31,700	0	0	44	44
273	03550000	Valley River at Tomotla, N.C.; 1905-09, 1915-17, 1919-98 35.140 83.980	104	60.3	2.31	0.82	4,160	6,490	8,310	11,000	13,200	15,700	22,500	1	101	88	90
274	03550500	Nottely River near Blairsville, Ga.; 1943-98 34.840 83.940	74.8	58.7	2.32	0.80	3,450	5,080	6,170	7,550	8,580	9,600	12,000	1	91	56	60
275	03554000	Nottely River near Ranger, N.C.; 1901-06, 1915-17, 1919-41 35.030 84.120	272	14.3	2.31	0.87	5,980	8,970	11,100	14,100	16,400	18,900	25,100	0	0	32	32
278	03558000	Toccoa River near Dial, Ga.; 1913-96 34.790 84.240	177	30.4	2.32	0.85	4,530	6,990	8,780	11,200	13,100	15,100	20,000	1	156	84	88
279	03559000	Toccoa River near Blue Ridge, Ga.; 1901-02, 1914-30 34.890 84.290	233	15.7	2.32	0.86	5,860	10,300	13,800	18,800	23,000	27,500	39,600	1	151	19	23
281	03560000	Fightingtown Creek at McCaysville, Ga.; 1943-71, 1973 34.980 84.390	70.9	29.3	2.32	0.80	2,460	3,780	4,850	6,470	7,880	9,490	14,100	1	48	30	33
296	03566660	Sugar Creek near Ringgold, Ga.; 1965-74 34.970 85.020	4.44	19.6	2.35	0.67	575	949	1,260	1,750	2,170	2,670	4,120	0	0	10	10
297	03566685	Little Chickamauga Creek near Ringgold, Ga.; 1964-75 34.840 85.140	35.5	12.3	2.36	0.77	1,910	3,490	4,820	6,860	8,640	10,700	16,500	0	0	12	12
298	03566687	Little Chickamauga Creek trib near Ringgold, Ga.; 1965-74 34.860 85.140	3.36	41.7	2.36	0.66	365	663	931	1,370	1,780	2,270	3,810	0	0	10	10
299	03566700	South Chickamauga Creek at Ringgold, Ga.; 1949-65 34.920 85.130	169	6.38	2.35	0.84	9,090	13,600	17,000	21,700	25,500	29,500	40,100	1	40	17	22

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees		CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
								2	5	10	25	50	100	500	Z	H	N	N _e
								Peak discharge, in cubic feet per second										
Hydrologic area 1—Continued																		
300	03567200	West Chickamauga Creek near Kensington, Ga.; 1950-76 34.800 85.350	73.0	14.7	2.39	0.80	4,210	6,850	8,960	12,100	14,700	17,000	25,700	1	43	27	30	
303	03568500	Chattanooga Creek near Flintstone, Ga.; 1951-74 34.970 85.330	50.6	14.9	2.35	0.78	2,890	4,330	5,380	6,810	7,950	9,150	12,200	0	0	24	24	
304	03568933	Lookout Creek near New England, Ga.; 1980-98 34.898 85.463	149	7.62	2.36	0.84	6,760	11,300	14,900	20,200	24,600	29,600	43,100	0	0	19	19	
310	03572110	Crow Creek at Bass, Ala.; 1975-96 34.934 85.918	131	31.8	2.38	0.83	9,070	12,500	14,900	18,000	20,300	22,700	28,600	0	0	22	22	
311	03572900	Town Creek near Geraldine, Ala.; 1957-80 34.378 85.990	141	10.9	2.42	0.83	8,700	12,500	15,000	18,000	20,300	22,400	27,400	1	62	24	32	
Hydrologic area 2																		
14	03312500	Barren River near Pageville, Ky.; 1940-63 36.852 86.077	514	4.30	2.26	1.30	19,100	33,200	44,700	61,800	76,500	92,800	138,000	0	0	24	24	
15	03312795	Little Beaver Creek near Glasgow, Ky.; 1976-79, 1981-86 37.010 86.017	0.89	186	2.26	1.04	163	247	307	388	452	519	687	0	0	10	10	
16	03313000	Barren River near Finney, Ky.; 1942-50, 1961-62 36.895 86.134	865	3.70	2.26	1.32	31,600	50,500	64,300	82,300	97,400	113,000	150,000	0	0	11	11	
17	03313500	West Bays Fork at Scottsville, Ky.; 1951-83 36.748 86.196	7.47	47.2	2.27	1.12	1,430	2,010	2,451	3,070	3,590	4,150	5,680	1	47	33	36	
19	03313700	West Fork Drakes Creek near Franklin, Ky.; 1969-98 36.719 86.546	91.0	9.06	2.30	1.22	6,100	9,180	11,400	14,300	16,600	19,000	25,000	1	62	30	35	
20	03313800	Lick Creek near Franklin, Ky.; 1959-83 36.790 86.490	7.80	19.5	2.27	1.12	2,050	3,550	4,720	6,380	7,750	9,220	13,100	1	47	25	29	
21	03314000	Drakes Creek near Alvaton, Ky.; 1940-82 36.895 86.381	358	6.60	2.27	1.28	16,300	27,500	37,000	51,900	65,300	80,900	127,000	1	46	43	44	
22	03314500	Barren River at Bowling Green, Ky.; 1938-62 37.001 86.431	1,359	2.60	2.27	1.34	29,900	45,700	57,600	74,400	88,200	103,000	142,000	1	52	25	30	
23	03316000	Mud River near Lewisburg, Ky.; 1940-83 37.004 86.907	80.8	7.10	2.28	1.21	5,230	7,300	8,700	10,500	11,900	13,300	16,600	0	0	44	44	

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 2—Continued																	
24	03400500	Poor Fork at Cumberland, Ky.; 1940-91 36.974 82.933	82.3	28.1	2.13	1.21	3,470	5,620	7,200	9,340	11,000	12,800	17,200	0	0	52	52
25	03400700	Clover Fork at Evarts, Ky.; 1960-78, 1981-86 36.866 83.194	82.4	42.4	2.14	1.21	5,690	9,640	12,700	17,200	21,000	25,000	36,000	0	0	25	25
26	03401000	Cumberland River near Harlan, Ky.; 1940-98 36.847 83.356	374	13.0	2.14	1.28	16,700	26,100	33,000	42,300	49,700	57,500	77,100	0	0	59	59
27	03401500	Yellow Creek bypass at Middlesboro, Ky.; 1941-83 36.631 83.729	35.3	123	2.18	1.18	3,130	4,670	5,860	7,340	8,590	9,900	13,300	0	0	42	42
28	03402000	Yellow Creek near Middlesboro, Ky.; 1941-98 36.668 83.689	60.6	74.4	2.18	1.20	4,170	6,320	7,910	10,100	11,700	13,800	18,700	0	0	58	58
29	03402020	Shillalah Creek near Page, Ky.; 1976-86 36.665 83.590	2.96	342	2.18	1.08	516	723	852	1,010	1,110	1,220	1,450	0	0	11	11
30	03403000	Cumberland River near Pineville, Ky.; 1939-75, 1977, 1979-91 36.813 83.766	809	8.20	2.17	1.32	27,600	39,800	48,200	59,300	67,900	76,700	98,200	1	63	51	52
31	03403910	Clear Fork at Saxton, Ky.; 1969-90, 1996-98 36.634 84.112	331	15.4	2.18	1.28	11,300	16,600	20,200	24,800	28,100	31,500	39,300	0	0	25	25
32	03404900	Lynn Camp Creek at Corbin, Ky.; 1957-98 36.951 84.094	53.8	10.3	2.18	1.20	2,270	3,530	4,540	6,020	7,280	8,690	12,600	0	0	42	42
33	03405000	Laurel River at Corbin, Ky.; 1923-24, 1943-73 36.969 84.127	201	5.80	2.18	1.25	6,620	10,300	13,000	16,600	19,500	22,400	29,700	0	0	33	33
34	03406000	Wood Creek near London, Ky.; 1954-86 37.161 84.112	3.89	49.2	2.17	1.09	305	468	570	688	769	843	999	0	0	33	33
40	03410500	South Fork Cumberland River near Stearns, Ky.; 1943-98 36.627 84.533	954	9.00	2.20	1.32	44,600	62,000	73,100	86,600	96,400	106,000	127,000	0	0	56	56
41	03411000	South Fork Cumberland River at Nevelsville, Ky.; 1916-31, 1933-50 36.840 84.583	1,271	8.00	2.19	1.34	49,800	70,600	84,300	101,000	114,000	126,000	155,000	1	59	34	38
42	03413200	Beaver Creek near Monticello, Ky.; 1969-83, 1991-98 36.797 84.896	43.4	20.2	2.22	1.19	3,150	5,520	7,400	10,100	12,300	14,800	21,300	0	0	23	23

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees		CDA	CS	CF	PF	Recurrence interval, in years						Parameters for effective record				
								2	5	10	25	50	100	500	Z	H	N	N _e
														Peak discharge, in cubic feet per second				
Hydrologic area 2—Continued																		
43	03414102	Bear Creek near Burksville, Ky.; 1976-86 36.771 85.275		3.52	49.4	2.23	1.09	540	988	1,350	1,890	2,340	2,830	4,170	0	0	11	11
104	03435140	Whippoorwill Creek near Claymour, Ky.; 1973-91 36.875 87.089		20.8	13.8	2.29	1.16	3,230	4,910	6,150	7,860	9,230	10,700	14,400	0	0	19	19
112	03437490	South Fork Little River trib near Hopkinsville, Ky.; 1977-86 36.858 87.428		1.41	27.1	2.29	1.05	260	431	554	718	844	972	1,280	0	0	10	10
113	03437500	South Fork Little River at Hopkinsville, Ky.; 1950-83 36.839 87.481		35.3	7.10	2.29	1.18	2,770	4,390	5,620	7,360	8,780	10,300	14,400	0	0	34	34
114	03438000	Little River near Cadiz, Ky.; 1940-98 36.778 87.722		150	3.60	2.33	1.24	6,550	10,500	13,800	18,800	23,100	28,000	42,200	1	60	59	60
312	03573000	Short Creek near Albertville, Ala.; 1946-58, 1961-64, 1966-69 34.301 86.181		91.6	8.10	2.44	1.22	6,370	10,100	13,100	17,500	21,300	25,500	37,300	1	28	21	23
313	03574500	Paint Rock River near Woodville, Ala.; 1936-99 34.624 86.306		320	14.8	2.43	1.27	16,700	26,400	33,400	42,800	50,200	57,800	76,700	1	133	64	69
315	03575000	Flint River near Chase, Ala.; 1929-81, 1983-94 34.819 86.481		342	8.00	2.42	1.28	16,100	30,400	41,700	58,000	71,400	85,800	123,000	1	133	65	70
316	03575700	Aldridge Creek near Farley, Ala.; 1961-64, 1985-99 34.624 86.541		14.1	19.7	2.43	1.14	1,920	2,990	3,780	4,840	5,680	6,560	8,790	1	39	19	22
317	03575830	Indian Creek near Madison, Ala.; 1959-99 34.697 86.700		49.0	15.2	2.43	1.19	2,790	4,820	6,460	8,890	11,000	13,300	19,600	1	133	40	46
318	03576148	Cotaco Creek at Florette, Ala.; 1966-80 34.414 86.688		136	3.10	2.44	1.24	5,730	9,340	12,100	16,000	19,200	22,700	31,800	1	18	15	16
319	03576250	Limestone Creek near Athens, Ala.; 1940-85, 1991, 1995-99 34.752 86.823		119	10.6	2.43	1.23	7,150	12,300	16,400	22,400	27,400	33,000	48,400	1	133	51	56
320	03576400	Piney Creek near Athens, Ala.; 1958-70 34.803 86.883		55.8	11.4	2.43	1.20	3,430	5,160	6,530	8,520	10,200	12,100	17,400	1	19	13	15
321	03576500	Flint Creek near Falkville, Ala.; 1953-73, 1991, 1993-99 34.373 86.934		86.3	19.2	2.45	1.22	5,960	8,690	10,500	12,600	14,200	15,700	19,100	0	0	28	28
322	03577000	West Flint Creek near Oakville, Ala.; 1941-58, 1960-69, 1991, 1993-98 34.476 87.142		87.6	2.80	2.44	1.22	3,280	5,060	6,310	7,960	9,230	10,500	13,700	0	0	35	35

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 2—Continued																	
338	03586500	Big Nance Creek at Courtland, Ala.; 1936-40, 1946-81, 1988-99 34.670 87.317	166	5.40	2.44	1.25	6,330	9,470	11,600	14,300	16,400	18,400	23,200	1	133	53	58
344	03590000	Cypress Creek near Florence, Ala.; 1935-53 34.808 87.700	209	19.8	2.44	1.26	9,990	16,800	21,500	27,500	32,000	36,400	46,300	1	89	19	27
345	03591800	Bear Creek near Hackleburg, Ala.; 1957-79, 1981 34.284 87.774	143	6.10	2.46	1.24	7,570	11,800	14,700	18,400	21,100	23,800	30,100	1	114	24	31
346	03592000	Bear Creek near Red Bay, Ala.; 1914-20, 1959-81 34.444 88.115	263	4.00	2.46	1.27	4,990	8,460	11,500	16,200	20,500	25,500	40,800	1	114	30	37
347	03592200	Cedar Creek near Pleasant Site, Ala.; 1958-77 34.549 88.019	189	4.80	2.45	1.25	7,230	9,980	11,800	14,000	15,600	17,200	20,800	1	111	20	28
348	03592300	Little Bear Creek near Halltown, Ala.; 1951-77 34.489 88.035	78.2	10.6	2.46	1.21	3,620	5,500	6,830	8,590	9,960	11,400	14,800	1	111	27	34
349	03592500	Bear Creek at Bishop, Ala.; 1927-32, 1934-79 34.656 88.122	667	3.80	2.45	1.31	16,000	23,700	29,100	36,100	41,500	47,000	60,500	1	113	52	57
350	03592718	Little Yellow Creek East near Burnsville, Miss.; 1974-98 34.834 88.285	24.7	13.9	2.44	1.16	1,740	3,080	4,080	5,450	6,530	7,640	10,400	0	0	25	25
351	03592800	Yellow Creek near Doskie, Miss.; 1938-61, 1973-77 34.900 88.290	143	5.50	2.44	1.24	4,790	8,820	12,200	17,100	21,400	26,100	39,100	1	47	29	32
352	03593010	Chambers Creek opposite Kendrick, Miss.; 1940-61 34.980 88.380	21.1	11.8	2.44	1.16	2,320	4,610	6,470	9,160	11,400	13,700	19,900	0	0	22	22
Hydrologic area 3																	
337	03585300	Sugar Creek near Good Springs, Ala.; 1958-69 34.944 87.156	152	11.5	2.42	1.51	9,760	16,000	20,800	27,700	33,400	39,600	56,000	1	15	12	13
Hydrologic area 4																	
397	03610000	Clarks River at Murray, Ky.; 1952-82 36.593 88.300	89.7	8.59	2.34	1.01	5,810	10,500	14,600	21,000	26,800	33,400	53,000	0	0	31	31
398	03610200	Clarks River at Almo, Ky.; 1983-99 36.692 88.274	134	7.45	2.34	0.95	9,240	14,100	17,700	22,500	26,300	30,300	40,400	0	0	16	16

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees		CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
								2	5	10	25	50	100	500	Z	H	N	N _e
								Peak discharge, in cubic feet per second										
Hydrologic area 4—Continued																		
399	03610500	Clarks River near Benton, Ky.; 1939-82 36.873 88.347	227	6.20	2.31	0.87	9,760	16,600	21,800	29,100	34,900	41,000	56,700	0	0	44	44	
400	03610545	West Fork Clarks River near Brewers, Ky.; 1969-83, 1989-94 36.780 88.467	68.7	11.6	2.34	1.05	5,160	7,740	9,370	11,300	12,700	14,000	16,900	0	0	21	21	
401	07022500	Perry Creek near Mayfield, Ky.; 1953-65, 1968-87 36.679 88.632	1.72	28.1	2.34	1.85	683	1,080	1,360	1,760	2,080	2,420	3,280	0	0	33	33	
402	07023000	Mayfield Creek at Lovelaceville, Ky.; 1939-77 36.952 88.825	212	5.30	2.31	0.88	6,860	9,860	12,000	15,000	17,400	19,900	26,300	1	41	39	40	
403	07023500	Obion Creek at Pryorsburg, Ky.; 1952-83 36.686 88.726	36.8	10.9	2.34	1.16	3,810	4,960	5,640	6,440	7,000	7,520	8,650	0	0	32	32	
404	07024000	Bayou de Chien near Clinton, Ky.; 1940-82, 1985-98 36.629 88.964	68.7	8.00	2.34	1.05	3,160	4,680	5,680	6,910	7,810	8,680	10,700	0	0	57	57	
428	07029252	Pool Branch near Ripley, Miss.; 1965-75 34.712 88.788	1.24	36.0	2.45	1.95	338	458	532	621	684	744	877	0	0	11	11	
429	07029270	Hatchie River near Walnut, Miss.; 1947-80 34.944 88.786	272	4.40	2.44	0.85	7,150	12,000	15,600	20,600	24,500	28,700	39,200	0	0	34	34	
431	07029300	Tuscumbia River Canal near Corinth, Miss.; 1950-79 34.931 88.598	278	3.90	2.44	0.85	8,340	14,300	18,700	24,600	29,300	34,100	46,100	0	0	30	30	
434	07029412	Hurricane Creek near Walnut, Miss.; 1953, 1955-69 34.925 88.904	20.2	17.1	2.45	1.27	1,460	1,600	1,670	1,740	1,780	1,820	1,890	0	0	16	16	
442	07030365	Wesley Branch near Walnut, Miss.; 1966-75, 1977 34.950 89.090	2.17	63.5	2.44	1.79	205	343	455	623	768	930	1,390	0	0	11	11	
448	07269000	N Tippah Cr nr Ripley, Miss.; 1939-42, 1948, 1952-66, 1968-80, 1983-85, 1988-91 34.733 89.025	19.3	16.1	2.45	1.28	2,920	4,730	6,050	7,820	9,220	10,700	14,300	0	0	40	40	
449	07269990	Tippah Creek near Potts Camp, Miss.; 1943-62 34.597 89.350	355	3.40	2.45	0.82	11,100	15,900	19,000	22,800	25,600	28,400	34,500	0	0	20	20	
450	07276000	Coldwater River near Lewisburg, Miss.; 1940-58 34.841 89.827	213	4.20	2.45	0.88	10,600	17,700	22,100	27,400	31,000	34,400	41,300	0	0	19	19	

Table 5. Selected basin characteristics and flood-frequency estimates for 156 gaging stations located in adjacent states—Continued

Site no.	Station no.	Station name; period of record latitude and longitude, in decimal degrees	CDA	CS	CF	PF	Recurrence interval, in years							Parameters for effective record			
							2	5	10	25	50	100	500	Z	H	N	N _e
							Peak discharge, in cubic feet per second										
Hydrologic area 4—Continued																	
451	07277500	Coldwater River near Coldwater, Miss.; 1929-42 34.721 89.989	634	3.20	2.45	0.75	17,000	31,000	41,600	56,100	67,600	79,400	108,000	1	33	14	18
452	07277730	Senatobia Creek near Senatobia, Miss.; 1942-58 34.617 89.942	82.0	10.3	2.45	1.02	14,500	17,200	18,800	20,400	21,500	22,500	24,600	0	0	16	16
453	07279600	Arkabutla Creek near Arkabutla, Miss.; 1947-58 34.652 90.163	98.1	7.50	2.45	0.99	11,300	13,900	15,400	16,900	18,000	18,900	20,900	0	0	12	12

Appendixes

Appendix A. Calculation of the prediction error and prediction interval for flood-frequency predictions at unregulated sites in Tennessee

The value of the prediction error variance (MSE_s) at a site of interest can be estimated as follows: Denote the column vector of n logarithms, where log is the log (base 10) of observed peak-discharge characteristics at n sites in a region by Y . For example,

$$Y = \begin{bmatrix} \log Q_{50,1} \\ \log Q_{50,2} \\ \dots \\ \log Q_{50,n} \end{bmatrix},$$

in which, $Q_{50,i}$ represents the observed 50-year peak at the i th gaging station in the region. Further, let X represent the (n by p) matrix of $p-1$ basin characteristics augmented by a column of ones at n gaging stations, and let B represent a column vector of p regression coefficients.

For example,

$$X = \begin{bmatrix} 1 & \log(CDA_1) & \log(CS_1) & \log(CF_1) \\ 1 & \log(CDA_2) & \log(CS_2) & \log(CF_2) \\ \dots & \dots & \dots & \dots \\ 1 & \log(CDA_n) & \log(CS_n) & \log(CF_n) \end{bmatrix},$$

$$B = \begin{bmatrix} a \\ b_{CDA} \\ b_{CS} \\ b_{CF} \end{bmatrix}.$$

The linear equation can be written as

$$Y = XB.$$

Sampling error variance, for a site 0 with basin characteristics x_0 , is given by the equation

$$MSE_{s,0} = x_0 \{X^T \Lambda^{-1} X\}^{-1} x_0^T,$$

in which Λ is the (n by n) covariance matrix associated with Y . The diagonal elements of Λ are model error variance, γ^2 , plus the time-sampling error for each site i ($i=1,2,3,\dots,n$), which is estimated as a function of a regional estimate of the standard deviation of annual peaks at site i , the recurrence interval of the dependent variable and the number of years of record at site i . Methodology for estimating Λ is given in Tasker and Stedinger (1989). The value of the model error vari-

ance, γ^2 , for both the single-variable and multivariable regional-regression equations are given in appendix table A-1. The off-diagonal elements of Λ are the sample covariance of the estimated t -year peaks at sites i and j . These off-diagonal elements are estimated as a function of a regional estimate of the standard deviation of annual peaks at sites i and j , the recurrence interval of the dependent variable and the number of concurrent years of record at sites i and j (Tasker and Stedinger, 1989). The (p by p) matrices $\{X^T \Lambda^{-1} X\}^{-1}$ for both the single-variable and multivariable regional-regression equations are given in appendix tables A-2 and A-3, respectively. The prediction error variance, in log (base 10) units, at a site of interest can be estimated as

$$MSE_{p,0} = (\gamma^2 + MSE_{s,0}).$$

Furthermore, the standard error of prediction, in log (base 10) units, at a site of interest can be expressed as

$$RMSE_{p,0} = (\gamma^2 + MSE_{s,0})^{1/2}.$$

The prediction error and the negative and positive prediction-error departures, in percent of the predicted value in cubic feet per second, at a given site of interest can be calculated as

$$\%SE_P = 100[e^{5.302(MSE_{p,0})} - 1]^{1/2},$$

$$\%SE_{P(+ \text{ departure})} = 100[10^{RMSE_{p,0}} - 1], \text{ and}$$

$$\%SE_{P(- \text{ departure})} = 100[10^{-RMSE_{p,0}} - 1].$$

Another useful measure of the quality of a flood-frequency prediction is the prediction interval. Let x_0 represent the row vector, augmented by a 1 as the first element, of log (base 10)-transformed basin characteristics at a site of interest. Let b represent the column vector of coefficients for the log (base 10) regression equation used to make a prediction. The predicted value, in log (base 10) units, is

$$y_0 = x_0 b.$$

A $100(1 - \alpha)$ prediction interval for the log (base 10)-transformed value, $y_0 = \log_{10}(q_0)$, would be

$$10^{y_0 - T} \leq q_0 \leq 10^{y_0 + T},$$

where

$$T = t_{\alpha/2, n-p'} (RMSE_{p,0}),$$

where n is the number of gages used to develop the regression equation, p is the number of explanatory variables, p' equals $p + 1$, and $t_{\alpha/2, n-p'}$ is the critical value from a Student's t distribution for the α level of significance and $n - p'$ degrees of freedom. The Student's t distribution is available in most statistics books.

Table A-1. Model error variance (γ^2) for the single-variable and multivariable regional-regression equations in tables 6 and 7

[These values can be used in computations of the prediction error and prediction interval as explained in this appendix. Numbers are given in scientific notation, for example, 0.31377E-01 = 0.31377 x 10⁻¹ = 0.031377. RI, recurrence interval in years; HA, hydrologic area; see figure 1 for HA location; --, not applicable; CDA, contributing drainage area in square miles]

RI	Single-variable regional-regression equations					Multivariable regional-regression equations				
	HA1 (CDA=0.20 to 9,000 mi ²)	HA2 (CDA=0.47 to 2,557 mi ²)	HA3 (CDA=0.17 to 30.2 mi ²)	HA3 (CDA=30.21 to 2,048 mi ²)	HA4 (CDA=0.76 to 2,308 mi ²)	HA1 (CDA=0.20 to 9,000 mi ²)	HA2 (CDA=0.47 to 2,557 mi ²)	HA3 (CDA=0.17 to 30.2 mi ²)	HA3 (CDA=30.21 to 2,048 mi ²)	HA4 (----)
2	0.31377E-01	0.17720E-01	0.19593E-01	0.12658E-01	0.25116E-01	0.26069E-01	0.15891E-01	0.20005E-01	0.12806E-01	--
5	0.30349E-01	0.15767E-01	0.19321E-01	0.13152E-01	0.23343E-01	0.25700E-01	0.13787E-01	0.19713E-01	0.13449E-01	--
10	0.31267E-01	0.16611E-01	0.19686E-01	0.14636E-01	0.24079E-01	0.27146E-01	0.14618E-01	0.20079E-01	0.15002E-01	--
25	0.33949E-01	0.18933E-01	0.20591E-01	0.17420E-01	0.26570E-01	0.30393E-01	0.16996E-01	0.21001E-01	0.17878E-01	--
50	0.36830E-01	0.21270E-01	0.21559E-01	0.20033E-01	0.29244E-01	0.33622E-01	0.19405E-01	0.21991E-01	0.20564E-01	--
100	0.40320E-01	0.23988E-01	0.22758E-01	0.23034E-01	0.32424E-01	0.37415E-01	0.22208E-01	0.23221E-01	0.23643E-01	--
500	0.50443E-01	0.31507E-01	0.26396E-01	0.31387E-01	0.41309E-01	0.48149E-01	0.29955E-01	0.26967E-01	0.32193E-01	--

Table A-2. Matrix $\{X^T \Lambda^{-1} X\}^{-1}$ for the single-variable regional-regression equations in table 6

[These matrices can be used in computations of the prediction error and prediction interval as explained in this appendix. Numbers are given in scientific notation, for example, 0.12582E-01 = 0.12582 x 10⁻¹ = 0.012582. RI, recurrence interval in years; HA, hydrologic area; see figure 1 for HA location; CDA, contributing drainage area in square miles]

RI	Hydrologic area									
	HA1 (CDA=0.20 to 9,000 mi ²)		HA2 (CDA=0.47 to 2,557 mi ²)		HA3 (CDA=0.17 to 30.2 mi ²)		HA3 (CDA=30.21 to 2,048 mi ²)		HA4 (CDA=0.76 to 2,308 mi ²)	
2	0.12582E-02	-0.46690E-03	0.15347E-02	-0.52817E-03	0.25104E-02	-0.15590E-02	0.39578E-02	-0.17034E-02	0.30529E-02	-0.11750E-02
	-0.46690E-03	0.23477E-03	-0.52817E-03	0.27021E-03	-0.15590E-02	0.15052E-02	-0.17034E-02	0.86375E-03	-0.11750E-02	0.60037E-03
5	0.13882E-02	-0.49753E-03	0.15708E-02	-0.51955E-03	0.25852E-02	-0.16006E-02	0.42430E-02	-0.18198E-02	0.29696E-02	-0.11310E-02
	-0.49753E-03	0.24364E-03	-0.51955E-03	0.25962E-03	-0.16006E-02	0.15412E-02	-0.18198E-02	0.92296E-03	-0.11310E-02	0.57658E-03
10	0.15629E-02	-0.54914E-03	0.17846E-02	-0.58243E-03	0.28200E-02	-0.17292E-02	0.48656E-02	-0.20793E-02	0.31910E-02	-0.12055E-02
	-0.54914E-03	0.26466E-03	-0.58243E-03	0.28809E-03	-0.17292E-02	0.16492E-02	-0.20793E-02	0.10529E-02	-0.12055E-02	0.61393E-03
25	0.18443E-02	-0.63743E-03	0.21585E-02	-0.69984E-03	0.32065E-02	-0.19431E-02	0.59361E-02	-0.25317E-02	0.36651E-02	-0.13753E-02
	-0.63743E-03	0.29300E-03	-0.69984E-03	0.34395E-03	-0.19431E-02	0.18320E-02	-0.25317E-02	0.12808E-02	-0.13753E-02	0.69968E-03
50	0.20857E-02	-0.71579E-03	0.24827E-02	-0.80465E-03	0.35326E-02	-0.21264E-02	0.68823E-02	-0.29357E-02	0.41136E-02	-0.15397E-02
	-0.71579E-03	0.33814E-03	-0.80465E-03	0.39478E-03	-0.21264E-02	0.19915E-02	-0.29357E-02	0.14856E-02	-0.15397E-02	0.78275E-03
100	0.23480E-02	-0.80261E-03	0.28324E-02	-0.91962E-03	0.38808E-02	-0.23250E-02	0.79270E-02	-0.33853E-02	0.46181E-02	-0.17267E-02
	-0.80261E-03	0.37770E-03	-0.91962E-03	0.45115E-03	-0.23250E-02	0.21699E-02	-0.33853E-02	0.17144E-02	-0.17267E-02	0.87726E-03
500	0.30281E-02	-0.10330E-02	0.37198E-02	-0.12179E-02	0.47630E-02	-0.28401E-02	0.10687E-01	-0.45859E-02	0.59513E-02	-0.22273E-02
	-0.10330E-02	0.48458E-03	-0.12179E-02	0.59926E-03	-0.28401E-02	0.26316E-02	-0.45859E-02	0.23290E-02	-0.22273E-02	0.11300E-02

Table A-3. Matrix $\{X^T \Lambda^{-1} X\}^{-1}$ for the multivariable regional-regression equations in table 7

[These matrices can be used in the computation of the prediction error and prediction interval as explained in this appendix. Numbers are given in scientific notation, for example, 0.93197E-01 = 0.93197 x 10⁻¹ = 0.093197. RI, recurrence interval in years; HA, hydrologic area; see figure 1 for HA location; CDA, contributing drainage area in square miles; There are no multivariable regional-regression equations for hydrologic area 4.]

RI	Hydrologic area												
	HA1 (CDA=0.20 to 9,000 mi ²)				HA2 (CDA=0.47 to 2,557 mi ²)			HA3 (CDA=0.17 to 30.2 mi ²)			HA3 (CDA=30.21 to 2,048 mi ²)		
2	0.93197E-01	-0.15441E-02	-0.29363E-02	-0.24614	0.76949E-02	-0.17969E-02	-0.33375E-02	0.71914E-01	-0.16257E-01	-0.35509E-01	0.99052E-01	-0.26308E-01	-0.44057E-01
	-0.15441E-02	0.31751E-03	0.32177E-03	0.12442E-02	-0.17969E-02	0.52148E-03	0.69904E-03	-0.16257E-01	0.46364E-02	0.75099E-02	-0.26308E-01	0.73214E-02	0.11398E-01
	-0.29363E-02	0.32177E-03	0.89690E-03	0.28041E-02	-0.33375E-02	0.69904E-03	0.17829E-02	-0.35509E-01	0.75099E-02	0.18177E-01	-0.44057E-01	0.11398E-01	0.20414E-01
	-0.24614	0.12442E-02	0.28041E-02	0.68971									
5	0.10328	-0.15417E-02	-0.29005E-02	-0.27460	0.72572E-02	-0.16767E-02	-0.30935E-02	0.74185E-01	-0.16825E-01	-0.36619E-01	0.10611	-0.28179E-01	-0.47290E-01
	-0.15417E-02	0.33931E-03	0.34147E-03	0.98932E-03	-0.16767E-02	0.48396E-03	0.64266E-03	-0.16825E-01	0.47963E-02	0.77765E-02	-0.28179E-01	0.77470E-02	0.12232E-01
	-0.29005E-02	0.34147E-03	0.93001E-03	0.24319E-02	-0.30935E-02	0.64266E-03	0.16531E-02	-0.36619E-01	0.77765E-02	0.18738E-01	-0.47290E-01	0.12232E-01	0.21963E-01
	-0.27460	0.98932E-03	0.24319E-02	0.77322									
10	0.11915	-0.16555E-02	-0.31044E-02	-0.31815	0.80998E-02	-0.18632E-02	-0.34368E-02	0.79558E-01	-0.18099E-01	-0.39232E-01	0.12127	-0.32190E-01	-0.54068E-01
	-0.16555E-02	0.38000E-03	0.38225E-03	0.88139E-03	-0.18632E-02	0.53648E-03	0.71057E-03	-0.18099E-01	0.51595E-02	0.83586E-02	-0.32190E-01	0.88466E-02	0.13981E-01
	-0.31044E-02	0.38225E-03	0.10263E-02	0.23663E-02	-0.34368E-02	0.71057E-03	0.18389E-02	-0.39232E-01	0.83586E-02	0.20066E-01	-0.54068E-01	0.13981E-01	0.25128E-01
	-0.31815	0.88139E-03	0.23663E-02	0.89838									
25	0.14548	-0.18852E-02	-0.35352E-02	-0.38993	0.98122E-02	-0.22513E-02	-0.41592E-02	0.88674E-01	-0.20240E-01	-0.43668E-01	0.14789	-0.39242E-01	-0.65973E-01
	-0.18852E-02	0.45003E-03	0.45336E-03	0.80319E-03	-0.22513E-02	0.64721E-03	0.85646E-03	-0.20240E-01	0.57686E-02	0.93373E-02	-0.39242E-01	0.10780E-01	0.17055E-01
	-0.35352E-02	0.45336E-03	0.12022E-02	0.24392E-02	-0.41592E-02	0.85646E-03	0.22284E-02	-0.43668E-01	0.93373E-02	0.22321E-01	-0.65973E-01	0.17055E-01	0.30678E-01
	-0.38993	0.80319E-03	0.24392E-02	1.10360									
50	0.16832	-0.21028E-02	-0.39500E-02	-0.45198	0.11389E-01	-0.26114E-02	-0.48323E-02	0.96701E-01	-0.22115E-01	-0.47579E-01	0.17185	-0.45592E-01	-0.76698E-01
	-0.21028E-02	0.51230E-03	0.51692E-03	0.77694E-03	-0.26114E-02	0.75046E-03	0.99322E-03	-0.22115E-01	0.63009E-02	0.10196E-01	-0.45592E-01	0.12522E-01	0.19826E-01
	-0.39500E-02	0.51692E-03	0.13629E-02	0.25782E-02	-0.48323E-02	0.99322E-03	0.25905E-02	-0.47579E-01	0.10196E-01	0.24309E-01	-0.76698E-01	0.19826E-01	0.35680E-01
	-0.45198	0.77694E-03	0.25782E-02	1.28060									
100	0.19323	-0.23516E-02	-0.44278E-02	-0.51954	0.13146E-01	-0.30143E-02	-0.55864E-02	0.10559	-0.24185E-01	-0.51915E-01	0.19865	-0.52699E-01	-0.88712E-01
	-0.23516E-02	0.58141E-03	0.58765E-03	0.77182E-03	-0.30143E-02	0.86615E-03	0.11469E-02	-0.24185E-01	0.68880E-02	0.11145E-01	-0.52699E-01	0.14472E-01	0.22929E-01
	-0.44278E-02	0.58765E-03	0.15436E-02	0.27724E-02	-0.55864E-02	0.11469E-02	0.29957E-02	-0.51915E-01	0.11145E-01	0.26512E-01	-0.88712E-01	0.22929E-01	0.41285E-01
	-0.51954	0.77182E-03	0.27724E-02	1.47310									
500	0.25810	-0.30348E-02	-0.57482E-02	-0.69499	0.17778E-01	-0.40807E-02	-0.75882E-02	0.12932	-0.29694E-01	-0.63520E-01	0.27077	-0.71828E-01	-0.12109
	-0.30348E-02	0.76553E-03	0.77671E-03	0.82519E-03	-0.40807E-02	0.11732E-02	0.15561E-02	-0.29694E-01	0.84499E-02	0.13679E-01	-0.71828E-01	0.19723E-01	0.31297E-01
	-0.57482E-02	0.77671E-03	0.20320E-02	0.33973E-02	-0.75882E-02	0.15561E-02	0.40695E-02	-0.63520E-01	0.13679E-01	0.32410E-01	-0.12109	0.31297E-01	0.56410E-01
	-0.69499	0.82519E-03	0.33973E-02	1.97210									

Appendix B. Description of detailed output file produced by the region-of-influence method for Tennessee

An example of the region-of-influence method diagnostic output file for a hypothetical unregulated site is presented and discussed in this appendix. First, the region-of-influence method output file shows the 60 gaging stations in the region-of-influence for the site of interest (table B-1). The region-of-influence remains constant for each recurrence-interval discharge estimate (fig. 5) produced by the region-of-influence method. Next, for the 2-, 5-, 10-, 25-, 50-, 100-, and 500-year floods, the region-of-influence method output file provides significant regression coefficients, residuals and influence statistics for each station in the region-of-influence, and overall quality measures for the regression (table B-1).

Information provided in the region-of-influence method output file for each gaging station in the region-of-influence includes the station number, hydrologic area, latitude, longitude, and log (base 10)-transformed values of the explanatory basin characteristics for each station. The transformed explanatory basin characteristics in the region-of-influence method output file include *CDA*, *CS*, *PF*, and *CF*. Following this information, for each recurrence-interval regression, log (base 10)-transformed values of the significant regression coefficients, coefficient standard errors, and coefficient significance statistics are given; and for each station in the region-of-influence, log-Pearson Type III station estimates and regression-predicted discharge estimates, the standardized residual, and the leverage and *Cook's D* of the station values are tabulated. Standardized residual, leverage, and *Cook's D* are explained in the following paragraphs.

Dividing each residual by its standard deviation gives the scale-free standardized residual, which can be compared directly with all the other residuals. Standardized residuals approximately follow a Student's *t* distribution and should be randomly scattered above and below a line representing the standardized residual equal to zero. About 95 percent of the observations should fall between standardized residuals of -2 and +2. Observations having a standardized residual less than -2 or greater than +2 should be considered outliers and should only occur about 5 times in 100 observations, if normally distributed.

Leverage is used to identify outlying stations in a dataset. Leverage is an indicator of the potential influence that a station can exert on a regression equa-

tion. Stations that are far from the center of the explanatory-variable space are considered high leverage stations because of their great potential to influence the regression results. A suggested value to identify a station with high leverage is $2p'/n$ where p' is the number of coefficients in the regression equation, and n is the number of stations in the region-of-influence. In this study, the number of stations (n) in the region-of-influence is equal to 60. Stations with high leverage that exert a strong influence on the regression should be assessed for possible data errors or special conditions.

Cook's D for a station is a measure of the shift in the predicted values of discharge when the station is not used to estimate the regression coefficients. *Cook's D* shows the influence of the station on the regression estimates. A suggested cutoff value to flag influential stations is a value of *Cook's D* greater than $4/n$, where n is equal to 60 in this study. A large value of *Cook's D* does not mean that a station should not be present in the regression, but simply indicates that this station has a greater effect on the resulting regression than stations with smaller values of *Cook's D*. Stations having high values of *Cook's D* should be examined for possible data errors or special conditions.

The final information provided in the region-of-influence method output file for each recurrence-interval analysis are error statistics that describe the overall quality of the regression. The average sampling error variance is the overall average sampling error variance given by,

$$(1/n) \sum_{i=1}^n MSE_{s,i}.$$

This term is the same as the second term in eq. 4 of this report. The average sampling error variance is due to estimating regression-equation parameters from the basin characteristics and observed annual-peak flow records at the stations in the region-of-influence.

The model error variance, γ^2 , is a characteristic inherent in the regression equation because at best, the regression equation is only a crude representation of the complex and interrelated hydrologic processes generating floods. Model error variance is an average value that is constant for all the sites in the region-of-influence.

The *PRESS* statistic was discussed in detail in the Region-of-Influence Method section of this report. This statistic is a validation-type estimator of error. For each station in the region-of-influence, leaving

that station out of the regression, the prediction residuals are squared and summed. A smaller *PRESS* statistic indicates a better regression equation.

The maximum sampling error variance is the largest sampling error, $MSE_{s,i}$, for one of the stations in the region-of-influence. If the sampling error variance for the site of interest is larger than the maximum sampling error variance in the region-of-influence, then the regression equation likely is making an extrapolated estimate. When two hydrologic areas are specified for a site, two site sampling error variances exist, which may be different. If either of these values is larger than the maximum sampling error variance, then the regression equation likely is making an extrapolated estimate.

Hardison (1971) describes a method of expressing the errors associated with predicting streamflow characteristics as equivalent years of record (appendix D). Equivalent years of record is defined as the number of years of actual streamflow records needed to provide an estimate of equivalent accuracy to the regression-method estimate. The equivalent years of record for the region-of-influence method (table B-1; and appendix D) can be used in eq. 11 to estimate the weighted discharges given in table 4. When two hydrologic areas are specified for a site of interest, two equivalent year estimates exist, which may be substantially different. To produce a single value of equivalent years of record for use in eq. 11, weight the two values by their respective hydrologic-area percentages and add together.

Table B-1. Detailed output file produced by the region-of-influence method for Tennessee

[SITE ID, name of the site of interest; ID, gaging station number; HA, hydrologic area; MAP NO., gaging station number on figure 1; LOG, log (base 10)-transformed value; CDA, contributing drainage area, in square miles; CS, main-channel slope, in feet per mile; PF, dimensionless physiographic-region factor; CF, dimensionless climate factor; OBS, flood discharge, in cubic feet per second, computed using Bulletin 17B of the Interagency Advisory Committee on Water Data (1982); PRED, regression-predicted discharge, in cubic feet per second; STD RES, standardized residual]

DATA FOR TDOT VERSION 2.0.3 REGION-OF-INFLUENCE (ROI) METHOD FOR TENNESSEE:
 SITE ID: Big River at Centerville, TN

ID	HA	LATITUDE	LONGITUDE	MAP NO.	LOG(CDA)	LOG(CS)	LOG(PF)	LOG(CF)
3602000.	3.	35.78800	87.46600	384.	3.31130	0.32634	0.15187	0.37672
3584500.	3.	35.02700	86.94800	336.	3.25140	0.45484	0.15332	0.37970
7026000.	4.	36.25100	89.19200	412.	3.26760	0.34635	-0.19877	0.37246
3599500.	3.	35.61800	87.03200	380.	3.08210	0.43616	0.15741	0.37447
7026300.	4.	36.13700	89.42900	413.	3.30810	0.26951	-0.20500	0.37281
7028000.	4.	35.86200	89.34800	417.	3.00130	0.41497	-0.15776	0.37741
7027800.	4.	35.81700	89.35600	416.	2.96940	0.43297	-0.15285	0.37780
7029100.	4.	36.03000	89.38700	427.	2.97270	0.45484	-0.15335	0.37548
3603000.	2.	35.93000	87.74300	387.	3.40770	0.27875	0.13713	0.37085
3582000.	3.	35.13400	86.54000	329.	2.91750	0.53403	0.16139	0.37678
7031700.	4.	35.20200	89.92300	445.	2.88710	0.41497	-0.14016	0.38106
3604500.	2.	35.81300	87.79700	393.	2.84940	0.61172	0.11741	0.37730
7029500.	4.	35.27500	88.97700	435.	3.17030	0.10037	-0.18377	0.38174
3434500.	2.	36.12200	87.09900	101.	2.82410	0.45332	0.11652	0.36950
7029400.	4.	35.05700	88.80100	433.	2.92270	0.39270	-0.14566	0.38794
7031650.	4.	35.11600	89.80100	444.	2.84450	0.44716	-0.13361	0.38683
7025500.	4.	36.40000	88.99500	411.	2.68120	0.56229	-0.10847	0.37101
3430100.	3.	36.15800	86.62000	75.	2.95040	0.61278	0.16060	0.36543
7027500.	4.	35.59400	88.81400	415.	2.69460	0.63043	-0.11053	0.37995
7030000.	4.	35.52300	89.34900	436.	3.29560	-0.04096	-0.20307	0.38011
7030050.	4.	35.63700	89.60400	437.	3.36320	-0.05061	-0.21349	0.37925
7277500.	4.	34.72100	89.98900	451.	2.80210	0.50515	-0.12708	0.38828
7030500.	4.	35.05400	89.54100	443.	2.70160	0.48144	-0.11160	0.38643
3571000.	1.	35.20600	85.49700	306.	2.58430	0.51720	-0.05113	0.37086
7029000.	4.	35.85100	89.06700	424.	2.56700	0.58659	-0.09089	0.37825
7024500.	4.	36.11800	88.81100	406.	2.58320	0.58092	-0.09338	0.37216
3433500.	3.	36.05400	86.92800	100.	2.59440	0.50786	0.16920	0.36780
3592500.	2.	34.65600	88.12200	349.	2.82410	0.57978	0.11652	0.38919
3604000.	2.	35.49600	87.83300	389.	2.65030	0.70586	0.11038	0.37904
7025400.	4.	36.40600	88.85600	410.	2.57050	0.62325	-0.09143	0.37085
3436100.	2.	36.55500	87.14200	109.	2.69720	0.62634	0.11203	0.36604
7030280.	4.	35.28100	89.76600	441.	2.70330	0.77305	-0.11187	0.38106
3598000.	3.	35.48000	86.49900	375.	2.68210	0.78604	0.16708	0.37469
3429000.	3.	36.00000	86.46000	73.	2.75660	0.70757	0.16528	0.36566
3567500.	1.	35.01400	85.20700	301.	2.63140	0.74663	-0.04818	0.37128
3584000.	3.	35.21400	87.10100	335.	2.56350	0.72591	0.16995	0.37866
3579100.	2.	35.28600	86.10600	325.	2.43930	0.62325	0.10292	0.37523
7029275.	4.	35.04100	88.78700	430.	2.49140	0.38202	-0.07924	0.38798
7269990.	4.	34.59700	89.35000	449.	2.55020	0.53148	-0.08830	0.38991
3314500.	2.	37.00100	86.43100	22.	3.13420	0.41497	0.12743	0.35540
3606500.	4.	36.03900	88.22800	396.	2.31180	0.57171	-0.05158	0.37369
3435500.	2.	36.58900	87.08900	105.	2.49000	0.64738	0.10471	0.36545
7029300.	4.	34.93100	88.59800	431.	2.44400	0.59106	-0.07195	0.38807
7029270.	4.	34.94400	88.78600	429.	2.43460	0.64345	-0.07049	0.38826
7025000.	4.	36.05300	88.87800	407.	2.30320	0.67761	-0.05026	0.37249
3313000.	2.	36.89500	86.13400	16.	2.93700	0.56820	0.12050	0.35491
3568000.	1.	35.08700	85.27900	302.	4.33040	0.64836	0.05826	0.37094
3432350.	3.	35.92100	86.86600	97.	2.24550	0.59106	0.17763	0.36863
3592000.	2.	34.44400	88.11500	346.	2.42000	0.60206	0.10224	0.39071
7030240.	4.	35.31000	89.64000	439.	2.41830	0.83251	-0.06799	0.38129
3588500.	2.	35.02400	87.57900	343.	2.54160	0.91169	0.10654	0.38087
2387000.	1.	34.67000	84.93000	9.	2.83700	1.04140	-0.03530	0.37404
7276000.	4.	34.84100	88.82700	450.	2.32840	0.62325	-0.05414	0.38868
3575000.	2.	34.81900	86.48100	315.	2.53400	0.90309	0.10627	0.38439
3427500.	3.	35.91800	86.33400	68.	2.41830	0.80346	0.17346	0.36568
3438000.	2.	36.77800	87.72200	114.	2.17610	0.55630	0.09362	0.36685
3312500.	2.	36.85200	86.07700	14.	2.71100	0.63347	0.11252	0.35496
3566000.	1.	35.28800	84.75200	293.	3.36140	1.06070	-0.00245	0.36423
3594445.	4.	35.62400	88.27300	365.	2.06070	0.57519	-0.01292	0.37929
3576148.	2.	34.41400	86.68800	318.	2.13350	0.49136	0.09212	0.38727

Table B-1. Detailed output file produced by the region-of-influence method for Tennessee—Continued

SUMMARY OF REGION-OF-INFLUENCE (ROI) REGRESSION FOR:

Big River at Centerville, TN
2 YR-PEAK

REGRESSION COEFFICIENTS

VARIABLE	COEFFICIENT	STANDARD ERROR	T FOR H0:BETA=0	PROB> T
CONSTANT	2.16270	0.12350	17.51106	
LOG(CDA)	0.68230	0.03563	19.15105	0.0001
LOG(CS)	0.18660	0.07046	2.64832	0.0105
LOG(PF)	0.67151	0.12460	5.38933	0.0001

Residuals and influence statistics

ID	LOG(OBS)	LOG(PRED)	STD RES	LEVERAGE	COOKS D
3602000.	4.51780	4.58487	-0.74541	0.10242	0.02160
3584500.	4.50700	4.56895	-0.67876	0.07980	0.01372
7026000.	4.39430	4.32332	0.80758	0.09759	0.02485
3599500.	4.39820	4.45270	-0.60976	0.06795	0.01080
7026300.	4.33170	4.33244	-0.00824	0.09161	0.00000
7028000.	4.14870	4.18197	-0.34806	0.03499	0.00277
7027800.	4.02690	4.16686	-1.43620	0.03302	0.04359
7029100.	4.03630	4.17286	-1.45340	0.03276	0.04788
3603000.	4.58390	4.63186	-0.54947	0.12483	0.01364
3582000.	4.21270	4.36133	-1.46445	0.03477	0.03961
7031700.	4.08760	4.11587	-0.30314	0.03625	0.00201
3604500.	4.21969	4.29983	-0.88118	0.03100	0.01244
7029500.	4.26580	4.22111	0.52245	0.12883	0.01404
3434500.	4.31760	4.25241	0.72698	0.04360	0.01129
7029400.	4.17390	4.13231	0.44367	0.03778	0.00446
7031650.	4.01750	4.09721	-0.81445	0.05073	0.01248
7025500.	4.00360	4.02416	-0.22476	0.03850	0.00098
3430100.	4.49110	4.39794	0.98942	0.04246	0.01979
7027500.	3.94570	4.04463	-1.07327	0.03384	0.02326
7030000.	4.36640	4.26727	1.12089	0.15871	0.08373
7030050.	4.33940	4.30459	0.40762	0.17426	0.01235
7277500.	4.22980	4.08349	1.43634	0.04813	0.03403
7030500.	3.98830	4.02089	-0.35031	0.02774	0.00237
3571000.	4.07620	3.98813	0.97444	0.04727	0.01605
7029000.	3.90160	3.96258	-0.65683	0.02384	0.00805
7024500.	3.89780	3.97090	-0.80700	0.03503	0.01274
3433500.	4.09380	4.14124	-0.53727	0.06605	0.00848
3592500.	4.20430	4.27601	-0.78042	0.03705	0.00968
3604000.	4.18310	4.17683	0.06939	0.03270	0.00008
7025400.	3.94860	3.97145	-0.23980	0.03108	0.00103
3436100.	4.32710	4.19510	1.41116	0.03576	0.02914
7030280.	4.17810	4.07628	1.09919	0.06086	0.03231
3598000.	4.24580	4.25156	-0.06257	0.04660	0.00008
3429000.	4.44450	4.28654	1.71113	0.04046	0.05898
3567500.	4.08950	4.06506	0.26891	0.05012	0.00135
3584000.	4.21560	4.16135	0.59003	0.04596	0.00750
3579100.	3.84840	4.01244	-1.71392	0.04231	0.05008
7029275.	3.86010	3.88065	-0.19005	0.03076	0.00069
7269990.	4.04520	3.94257	1.02129	0.02690	0.01701
3314500.	4.47500	4.46416	0.11431	0.06238	0.00031
3606500.	3.68300	3.81208	-1.43262	0.05500	0.04952
3435500.	4.14990	4.05273	1.05537	0.03669	0.01888
7029300.	3.92110	3.89221	0.30178	0.03178	0.00169
7029270.	3.85430	3.89655	-0.44677	0.03196	0.00382
7025000.	3.68690	3.82686	-1.45835	0.04187	0.04409
3313000.	4.49970	4.35355	1.31131	0.02008	0.01991
3568000.	5.31270	5.27742	0.48584	0.39145	0.03975
3432350.	3.93650	3.92437	0.12750	0.09107	0.00052
3592000.	3.69820	3.99486	-3.15554	0.05399	0.18588
7030240.	3.99850	3.92239	0.80540	0.07579	0.01658
3588500.	4.23840	4.13849	1.11793	0.06617	0.03097
2387000.	4.14700	4.26900	-1.43168	0.17020	0.11284
7276000.	4.02750	3.83130	1.94677	0.03512	0.06939
3575000.	4.20720	4.13152	0.84470	0.06377	0.01717
3427500.	4.22400	4.07910	1.59000	0.06495	0.06325
3438000.	3.81600	3.81412	0.02117	0.08578	0.00001
3312500.	4.28130	4.20617	0.75928	0.02200	0.00750
3566000.	4.54950	4.65246	-1.20192	0.23826	0.12045
3594445.	3.72400	3.66736	0.57274	0.06627	0.00941
3576148.	3.75820	3.77193	-0.13593	0.09108	0.00056

AVERAGE SAMPLING ERROR VARIANCE	0.0009
MODEL ERROR VARIANCE	0.0080
PRESS/N	0.0103
MAXIMUM SAMPLING ERROR VARIANCE	0.0036
HA 3 SITE	
SAMPLING ERROR VARIANCE	0.0011
EQUIVALENT YEARS	6.00
HA 2 SITE	
SAMPLING ERROR VARIANCE	0.0010
EQUIVALENT YEARS	6.06

Table B-1. Detailed output file produced by the region-of-influence method for Tennessee—Continued

SUMMARY OF REGION-OF-INFLUENCE (ROI) REGRESSION FOR:
 Big River at Centerville, TN
 5 YR-PEAK

REGRESSION COEFFICIENTS

VARIABLE	COEFFICIENT	STANDARD ERROR	T FOR H0: BETA=0	PROB> T
CONSTANT	2.49506	0.12947	19.27199	
LOG (CDA)	0.63607	0.03727	17.06451	0.0001
LOG (CS)	0.16605	0.07363	2.25513	0.0281
LOG (PF)	0.60373	0.13318	4.53316	0.0001

Residuals and influence statistics

ID	LOG(OBS)	LOG(PRED)	STD RES	LEVERAGE	COOKS D
3602000.	4.65090	4.74715	-1.02587	0.10174	0.04183
3584500.	4.69740	4.73126	-0.35588	0.08038	0.00387
7026000.	4.57040	4.51098	0.65398	0.10091	0.01728
3599500.	4.53370	4.62294	-0.96402	0.06799	0.02817
7026300.	4.51090	4.52022	-0.10042	0.09229	0.00043
7028000.	4.36730	4.37775	-0.10403	0.03298	0.00026
7027800.	4.26590	4.36341	-0.94850	0.03071	0.01945
7029100.	4.20480	4.36884	-1.66878	0.03059	0.06566
3603000.	4.74950	4.79166	-0.46588	0.12623	0.01011
3582000.	4.38710	4.53690	-1.38740	0.03287	0.03533
7031700.	4.30650	4.31574	-0.09488	0.03673	0.00021
3604500.	4.46222	4.47993	-0.18818	0.03093	0.00059
7029500.	4.48830	4.41730	0.80430	0.13247	0.03511
3434500.	4.49662	4.43700	0.64348	0.04305	0.00930
7029400.	4.38560	4.33136	0.55341	0.03767	0.00723
7031650.	4.21490	4.29794	-0.80421	0.05103	0.01246
7025500.	4.22330	4.22836	-0.05337	0.03924	0.00006
3430100.	4.62650	4.57042	0.56917	0.04159	0.00672
7027500.	4.17660	4.24696	-0.73377	0.03363	0.01137
7030000.	4.55280	4.46188	0.97917	0.15651	0.06475
7030050.	4.52220	4.49699	0.28325	0.17418	0.00613
7277500.	4.49120	4.28454	1.90777	0.04850	0.06044
7030500.	4.20970	4.22603	-0.16839	0.02749	0.00057
3571000.	4.24660	4.19386	0.56477	0.05001	0.00570
7029000.	4.07560	4.17037	-0.98012	0.02232	0.01871
7024500.	4.10800	4.17823	-0.74914	0.03524	0.01160
3433500.	4.25810	4.33175	-0.80842	0.06629	0.02028
3592500.	4.37500	4.45800	-0.87048	0.03840	0.01256
3604000.	4.43680	4.36468	0.77199	0.03320	0.00990
7025400.	4.16610	4.17836	-0.12279	0.03048	0.00028
3436100.	4.48850	4.38230	1.08941	0.03608	0.01797
7030280.	4.35690	4.27537	0.84229	0.06028	0.01943
3598000.	4.44680	4.43245	0.14976	0.04620	0.00050
3429000.	4.57920	4.46572	1.18097	0.04003	0.02914
3567500.	4.24790	4.26370	-0.16778	0.05121	0.00055
3584000.	4.46920	4.34876	1.25897	0.04594	0.03546
3579100.	4.09640	4.21225	-1.15353	0.04250	0.02308
7029275.	4.07140	4.09535	-0.20563	0.02825	0.00078
7269990.	4.20140	4.15210	0.46263	0.02694	0.00351
3314500.	4.65960	4.63446	0.25237	0.06265	0.00152
3606500.	3.91470	4.02931	-1.22802	0.05674	0.03802
3435500.	4.32290	4.24958	0.76656	0.03722	0.01034
7029300.	4.15470	4.10431	0.50134	0.03139	0.00476
7029270.	4.07870	4.10792	-0.29506	0.03116	0.00171
7025000.	3.81520	4.04222	-2.24921	0.04001	0.10602
3313000.	4.70340	4.53029	1.43806	0.01830	0.02302
3568000.	5.42180	5.39232	0.39391	0.39754	0.02689
3432350.	4.09860	4.12874	-0.30040	0.08983	0.00291
3592000.	3.92730	4.19604	-2.73454	0.05509	0.14307
7030240.	4.18860	4.13045	0.58587	0.07531	0.00884
3588500.	4.47940	4.32740	1.64385	0.06691	0.06892
2387000.	4.30640	4.45119	-1.64125	0.17277	0.15147
7276000.	4.24660	4.04688	1.86540	0.03403	0.06330
3575000.	4.48220	4.32097	1.73858	0.06463	0.07488
3427500.	4.35360	4.27140	0.86763	0.06563	0.01951
3438000.	4.02260	4.02810	-0.05970	0.08823	0.00012
3312500.	4.52130	4.39256	1.23248	0.02150	0.01991
3566000.	4.65510	4.80779	-1.69515	0.23482	0.23663
3594445.	3.94660	3.89351	0.50504	0.06431	0.00720
3576148.	3.97010	3.98932	-0.17806	0.08881	0.00094

AVERAGE SAMPLING ERROR VARIANCE	0.0010
MODEL ERROR VARIANCE	0.0084
PRESS/N	0.0114
MAXIMUM SAMPLING ERROR VARIANCE	0.0039
HA 3 SITE	
SAMPLING ERROR VARIANCE	0.0012
EQUIVALENT YEARS	7.70
HA 2 SITE	
SAMPLING ERROR VARIANCE	0.0011
EQUIVALENT YEARS	7.79

Table B-1. Detailed output file produced by the region-of-influence method for Tennessee—Continued

SUMMARY OF REGION-OF-INFLUENCE (ROI) REGRESSION FOR:
 Big River at Centerville, TN
 10 YR-PEAK

REGRESSION COEFFICIENTS				
VARIABLE	COEFFICIENT	STANDARD ERROR	T FOR H0: BETA=0	PROB> T
CONSTANT	2.66925	0.13762	19.39567	
LOG(CDA)	0.61153	0.03955	15.46029	0.0001
LOG(CS)	0.15329	0.07807	1.96349	0.0546
LOG(PF)	0.58028	0.14424	4.02315	0.0002

Residuals and influence statistics					
ID	LOG(OBS)	LOG(PRED)	STD RES	LEVERAGE	COOKS D
3602000.	4.71740	4.83234	-1.15744	0.10096	0.05431
3584500.	4.80190	4.81625	-0.14255	0.08095	0.00064
7026000.	4.65790	4.60522	0.55266	0.10424	0.01303
3599500.	4.60690	4.71223	-1.08242	0.06803	0.03695
7026300.	4.60050	4.61459	-0.14380	0.09303	0.00091
7028000.	4.47470	4.47668	-0.01851	0.03107	0.00001
7027800.	4.38430	4.46278	-0.71294	0.02851	0.01118
7029100.	4.28820	4.46786	-1.72092	0.02845	0.07220
3603000.	4.83570	4.87545	-0.41731	0.12764	0.00834
3582000.	4.47370	4.62889	-1.33157	0.03110	0.03225
7031700.	4.41560	4.41706	-0.01416	0.03728	0.00000
3604500.	4.58682	4.57363	0.13347	0.03083	0.00031
7029500.	4.60190	4.51671	0.92150	0.13611	0.04843
3434500.	4.58401	4.53336	0.52141	0.04245	0.00639
7029400.	4.49700	4.43223	0.62266	0.03761	0.00946
7031650.	4.31860	4.39974	-0.73383	0.05117	0.01055
7025500.	4.33210	4.33212	-0.00019	0.03994	0.00000
3430100.	4.69900	4.66062	0.36680	0.04071	0.00285
7027500.	4.30350	4.34956	-0.45497	0.03349	0.00455
7030000.	4.64760	4.56047	0.88023	0.15418	0.05281
7030050.	4.61260	4.59429	0.19437	0.17408	0.00296
7277500.	4.61910	4.38649	1.99006	0.04868	0.06585
7030500.	4.31330	4.33038	-0.16657	0.02725	0.00058
3571000.	4.33250	4.29922	0.33986	0.05265	0.00217
7029000.	4.17120	4.27621	-1.02716	0.02083	0.02130
7024500.	4.21250	4.28380	-0.72408	0.03545	0.01139
3433500.	4.34330	4.43182	-0.92793	0.06651	0.02816
3592500.	4.46360	4.55274	-0.88773	0.03976	0.01357
3604000.	4.56980	4.46222	1.09826	0.03373	0.02092
7025400.	4.28160	4.28366	-0.01934	0.02986	0.00001
3436100.	4.57300	4.47967	0.90507	0.03633	0.01276
7030280.	4.44690	4.37597	0.69076	0.05978	0.01334
3598000.	4.55490	4.52686	0.27691	0.04583	0.00177
3429000.	4.64590	4.55935	0.85252	0.03963	0.01569
3567500.	4.32780	4.36491	-0.37482	0.05223	0.00282
3584000.	4.60700	4.44678	1.58590	0.04591	0.05821
3579100.	4.22060	4.31620	-0.89372	0.04261	0.01403
7029275.	4.18410	4.20538	-0.16728	0.02603	0.00050
7269990.	4.27900	4.25899	0.17448	0.02701	0.00050
3314500.	4.76060	4.72345	0.34995	0.06294	0.00294
3606500.	4.03510	4.14068	-1.07601	0.05849	0.03036
3435500.	4.41540	4.35194	0.62923	0.03771	0.00720
7029300.	4.27120	4.21267	0.54652	0.03105	0.00575
7029270.	4.19320	4.21580	-0.21472	0.03042	0.00092
7025000.	3.87720	4.15242	-2.55403	0.03812	0.13753
3313000.	4.80800	4.62232	1.40944	0.01674	0.02123
3568000.	5.47590	5.45059	0.32331	0.40352	0.01862
3432350.	4.17830	4.23611	-0.53841	0.08845	0.00938
3592000.	4.05920	4.30076	-2.31630	0.05606	0.10472
7030240.	4.28450	4.23626	0.45591	0.07476	0.00537
3588500.	4.60540	4.42507	1.85734	0.06767	0.09037
2387000.	4.38510	4.54329	-1.70679	0.17538	0.16722
7276000.	4.34470	4.15724	1.62421	0.03298	0.04746
3575000.	4.62040	4.41895	2.06812	0.06556	0.10880
3427500.	4.41690	4.37192	0.44995	0.06628	0.00541
3438000.	4.14020	4.13959	0.00631	0.09067	0.00000
3312500.	4.65050	4.48949	1.43860	0.02110	0.02720
3566000.	4.70600	4.88600	-1.87227	0.23124	0.28477
3594445.	4.05500	4.01009	0.39609	0.06241	0.00434
3576148.	4.08280	4.10271	-0.17023	0.08654	0.00084

AVERAGE SAMPLING ERROR VARIANCE	0.0012
MODEL ERROR VARIANCE	0.0090
PRESS/N	0.0129
MAXIMUM SAMPLING ERROR VARIANCE	0.0044
HA 3 SITE	
SAMPLING ERROR VARIANCE	0.0014
EQUIVALENT YEARS	9.55
HA 2 SITE	
SAMPLING ERROR VARIANCE	0.0013
EQUIVALENT YEARS	9.67

Table B-1. Detailed output file produced by the region-of-influence method for Tennessee—Continued

SUMMARY OF REGION-OF-INFLUENCE (ROI) REGRESSION FOR:
 Big River at Centerville, TN
 25 YR-PEAK

REGRESSION COEFFICIENTS

VARIABLE	COEFFICIENT	STANDARD ERROR	T FOR H0: BETA=0	PROB> T
CONSTANT	3.01451	0.11606	25.97309	
LOG (CDA)	0.55710	0.04023	13.84938	0.0001
LOG (PF)	0.64210	0.15523	4.13650	0.0001

Residuals and influence statistics

ID	LOG(OBS)	LOG(PRED)	STD RES	LEVERAGE	COOKS D
3602000.	4.78620	4.95676	-1.52851	0.07540	0.09665
3584500.	4.91710	4.92432	-0.06466	0.07411	0.00016
7026000.	4.74780	4.70727	0.38769	0.10656	0.00880
3599500.	4.68680	4.83263	-1.35127	0.05296	0.06483
7026300.	4.69300	4.72583	-0.30304	0.08958	0.00529
7028000.	4.58420	4.58524	-0.00877	0.03073	0.00000
7027800.	4.50570	4.57063	-0.52879	0.02695	0.00815
7029100.	4.37370	4.57214	-1.71617	0.02708	0.09711
3603000.	4.92760	5.00100	-0.68583	0.09589	0.02240
3582000.	4.56280	4.74348	-1.37791	0.02531	0.04139
7031700.	4.52810	4.53292	-0.04223	0.03563	0.00006
3604500.	4.71807	4.67731	0.37591	0.03129	0.00335
7029500.	4.72110	4.66269	0.55773	0.08477	0.01594
3434500.	4.67264	4.66264	0.09288	0.02579	0.00020
7029400.	4.61640	4.54923	0.58198	0.03633	0.01063
7031650.	4.42960	4.51340	-0.67909	0.04856	0.01177
7025500.	4.44380	4.43857	0.04763	0.04018	0.00007
3430100.	4.77760	4.76131	0.14056	0.04023	0.00056
7027500.	4.44360	4.44471	-0.00991	0.02598	0.00000
7030000.	4.74670	4.72011	0.22972	0.07211	0.00262
7030050.	4.70520	4.75108	-0.41743	0.08738	0.01051
7277500.	4.74910	4.49397	1.94583	0.04853	0.08283
7030500.	4.41490	4.44792	-0.29129	0.02666	0.00235
3571000.	4.42160	4.42140	0.00186	0.04840	0.00000
7029000.	4.27670	4.38623	-0.97107	0.01955	0.02576
7024500.	4.31990	4.39366	-0.68269	0.03556	0.01387
3433500.	4.43350	4.56850	-1.27442	0.04568	0.05537
3592500.	4.55770	4.66264	-0.94924	0.03961	0.02027
3604000.	4.71190	4.56187	1.39796	0.03282	0.04573
7025400.	4.40600	4.38784	0.15404	0.02753	0.00059
3436100.	4.66330	4.58906	0.65204	0.03626	0.00877
7030280.	4.54020	4.44869	0.79359	0.01977	0.01684
3598000.	4.67230	4.61600	0.50318	0.03970	0.00747
3429000.	4.71450	4.65635	0.51944	0.03861	0.00785
3567500.	4.41110	4.44953	-0.35095	0.04190	0.00269
3584000.	4.75790	4.55177	1.85132	0.04589	0.10756
3579100.	4.34910	4.43954	-0.75998	0.03832	0.01261
7029275.	4.30580	4.35160	-0.31517	0.01384	0.00166
7269990.	4.35880	4.37854	-0.15363	0.02684	0.00050
3314500.	4.87180	4.84240	0.24733	0.05014	0.00160
3606500.	4.16280	4.26930	-0.98623	0.05791	0.03306
3435500.	4.51570	4.46893	0.42093	0.03774	0.00423
7029300.	4.39140	4.32987	0.51717	0.03092	0.00682
7029270.	4.31320	4.32557	-0.10606	0.02895	0.00030
7025000.	3.93970	4.26536	-2.71673	0.03558	0.20516
3313000.	4.91820	4.72809	1.27210	0.01572	0.02151
3568000.	5.53130	5.46439	0.74055	0.34623	0.10057
3432350.	4.25960	4.37954	-0.99205	0.06947	0.03467
3592000.	4.20930	4.42835	-1.89114	0.05004	0.08407
7030240.	4.38420	4.31810	0.55593	0.04920	0.00800
3588500.	4.73990	4.49885	2.22956	0.03500	0.12061
2387000.	4.46550	4.57234	-0.97240	0.03951	0.01761
7276000.	4.43760	4.27691	1.24192	0.03255	0.03599
3575000.	4.76370	4.49444	2.48508	0.03780	0.14997
3427500.	4.48090	4.47313	0.07050	0.06472	0.00018
3438000.	4.27290	4.28693	-0.13011	0.07205	0.00063
3312500.	4.79110	4.59706	1.55399	0.02115	0.04143
3566000.	4.75700	4.88558	-1.08665	0.05944	0.03054
3594445.	4.16450	4.15424	0.08030	0.05544	0.00021
3576148.	4.20440	4.26224	-0.43216	0.05214	0.00477

AVERAGE SAMPLING ERROR VARIANCE	0.0012
MODEL ERROR VARIANCE	0.0106
PRESS/N	0.0150
MAXIMUM SAMPLING ERROR VARIANCE	0.0045
HA 3 SITE	
SAMPLING ERROR VARIANCE	0.0015
EQUIVALENT YEARS	11.43
HA 2 SITE	
SAMPLING ERROR VARIANCE	0.0014
EQUIVALENT YEARS	11.55

Table B-1. Detailed output file produced by the region-of-influence method for Tennessee—Continued

SUMMARY OF REGION-OF-INFLUENCE (ROI) REGRESSION FOR:
 Big River at Centerville, TN
 50 YR-PEAK

REGRESSION COEFFICIENTS				
VARIABLE	COEFFICIENT	STANDARD ERROR	T FOR H0:BETA=0	PROB> T
CONSTANT	3.12463	0.12333	25.33606	
LOG(CDA)	0.54137	0.04272	12.67242	0.0001
LOG(PF)	0.63463	0.16686	3.80344	0.0004

Residuals and influence statistics					
ID	LOG(OBS)	LOG(PRED)	STD RES	LEVERAGE	COOKS D
3602000.	4.82940	5.01366	-1.55510	0.07490	0.10091
3584500.	4.99360	4.98215	0.09660	0.07428	0.00037
7026000.	4.80410	4.76747	0.33180	0.10855	0.00664
3599500.	4.73940	4.89309	-1.34694	0.05276	0.06571
7026300.	4.75120	4.78545	-0.29822	0.09005	0.00523
7028000.	4.65220	4.64933	0.02256	0.02978	0.00002
7027800.	4.58160	4.63518	-0.40824	0.02578	0.00488
7029100.	4.42710	4.63665	-1.70346	0.02584	0.09713
3603000.	4.98680	5.05649	-0.61537	0.09642	0.01829
3582000.	4.61850	4.80651	-1.33546	0.02429	0.03854
7031700.	4.59860	4.59868	-0.00064	0.03590	0.00000
3604500.	4.80197	4.74173	0.52585	0.03128	0.00669
7029500.	4.79700	4.72432	0.65774	0.08641	0.02287
3434500.	4.72744	4.72747	-0.00025	0.02532	0.00000
7029400.	4.69390	4.61446	0.64717	0.03641	0.01335
7031650.	4.50150	4.57977	-0.59339	0.04844	0.00904
7025500.	4.51360	4.50732	0.05399	0.04057	0.00009
3430100.	4.82910	4.82382	0.04283	0.03971	0.00005
7027500.	4.53670	4.51327	0.19771	0.02584	0.00113
7030000.	4.80970	4.77990	0.24147	0.07145	0.00292
7030050.	4.76290	4.80989	-0.40265	0.08721	0.00995
7277500.	4.82970	4.56096	1.90942	0.04849	0.07949
7030500.	4.47590	4.51638	-0.33644	0.02653	0.00319
3571000.	4.47790	4.49125	-0.11767	0.04957	0.00034
7029000.	4.34690	4.45665	-0.91716	0.01871	0.02337
7024500.	4.38720	4.46384	-0.67142	0.03570	0.01376
3433500.	4.49150	4.63655	-1.29804	0.04558	0.05901
3592500.	4.61820	4.72747	-0.93387	0.04035	0.01997
3604000.	4.80390	4.62948	1.54021	0.03320	0.05681
7025400.	4.48710	4.45820	0.23009	0.02718	0.00134
3436100.	4.72160	4.65592	0.54361	0.03637	0.00617
7030280.	4.59910	4.51713	0.66881	0.01913	0.01214
3598000.	4.74940	4.68268	0.56232	0.03962	0.00949
3429000.	4.75730	4.72187	0.29844	0.03844	0.00264
3567500.	4.46370	4.51862	-0.47436	0.04275	0.00503
3584000.	4.85760	4.62030	2.01046	0.04589	0.12901
3579100.	4.42990	4.51052	-0.63573	0.03820	0.00884
7029275.	4.38540	4.42312	-0.24037	0.01315	0.00095
7269990.	4.40870	4.44920	-0.29412	0.02685	0.00182
3314500.	4.94550	4.90227	0.34115	0.05020	0.00305
3606500.	4.24500	4.34344	-0.86221	0.05892	0.02574
3435500.	4.58140	4.53910	0.35944	0.03802	0.00313
7029300.	4.46680	4.40208	0.51029	0.03074	0.00667
7029270.	4.38960	4.39792	-0.06704	0.02857	0.00012
7025000.	3.97810	4.33962	-2.82640	0.03449	0.22205
3313000.	4.98860	4.79112	1.22217	0.01497	0.01936
3568000.	5.56590	5.50596	0.62900	0.34945	0.07360
3432350.	4.31000	4.45301	-1.10687	0.06857	0.04308
3592000.	4.31150	4.49964	-1.52753	0.05032	0.05518
7030240.	4.44710	4.39068	0.44508	0.04899	0.00515
3588500.	4.82680	4.56820	2.26467	0.03541	0.12704
2387000.	4.51560	4.63810	-1.05458	0.04051	0.02114
7276000.	4.49150	4.35080	1.01350	0.03194	0.02372
3575000.	4.85400	4.56391	2.53433	0.03839	0.15915
3427500.	4.52050	4.54392	-0.20053	0.06516	0.00146
3438000.	4.36280	4.36213	0.00590	0.07305	0.00000
3312500.	4.88350	4.66370	1.64635	0.02099	0.04636
3566000.	4.78820	4.94285	-1.22616	0.05896	0.03875
3594445.	4.23210	4.23204	0.00045	0.05437	0.00000
3576148.	4.28380	4.33811	-0.37721	0.05109	0.00356

AVERAGE SAMPLING ERROR VARIANCE	0.0014
MODEL ERROR VARIANCE	0.0116
PRESS/N	0.0168
MAXIMUM SAMPLING ERROR VARIANCE	0.0051
HA 3 SITE	
SAMPLING ERROR VARIANCE	0.0017
EQUIVALENT YEARS	12.73
HA 2 SITE	
SAMPLING ERROR VARIANCE	0.0016
EQUIVALENT YEARS	12.87

Table B-1. Detailed output file produced by the region-of-influence method for Tennessee—Continued

SUMMARY OF REGION-OF-INFLUENCE (ROI) REGRESSION FOR:
 Big River at Centerville, TN
 100 YR-PEAK

REGRESSION COEFFICIENTS				
VARIABLE	COEFFICIENT	STANDARD ERROR	T FOR H0: BETA=0	PROB> T
CONSTANT	3.22370	0.13101	24.60718	
LOG(CDA)	0.52702	0.04537	11.61526	0.0001
LOG(PF)	0.63238	0.17864	3.54000	0.0008

Residuals and influence statistics					
ID	LOG(OBS)	LOG(PRED)	STD RES	LEVERAGE	COOKS D
3602000.	4.86750	5.06487	-1.56826	0.07455	0.10308
3584500.	5.06380	5.03422	0.23503	0.07441	0.00217
7026000.	4.85350	4.82010	0.28596	0.10991	0.00502
3599500.	4.78730	4.94758	-1.32641	0.05265	0.06448
7026300.	4.80240	4.83751	-0.28818	0.09039	0.00495
7028000.	4.71150	4.70569	0.04291	0.02915	0.00006
7027800.	4.64800	4.69198	-0.31406	0.02501	0.00289
7029100.	4.47380	4.69341	-1.67850	0.02500	0.09503
3603000.	5.04000	5.10635	-0.55292	0.09679	0.01488
3582000.	4.66740	4.86335	-1.30061	0.02365	0.03625
7031700.	4.66060	4.65663	0.03076	0.03612	0.00003
3604500.	4.87683	4.79965	0.63661	0.03129	0.00992
7029500.	4.86450	4.77831	0.73756	0.08755	0.02932
3434500.	4.77509	4.78575	-0.08867	0.02501	0.00019
7029400.	4.76380	4.67192	0.70395	0.03650	0.01592
7031650.	4.56630	4.63832	-0.51170	0.04831	0.00672
7025500.	4.57480	4.56816	0.05388	0.04081	0.00009
3430100.	4.87600	4.88019	-0.03193	0.03937	0.00003
7027500.	4.62230	4.57392	0.38477	0.02577	0.00433
7030000.	4.86560	4.83214	0.25462	0.07101	0.00326
7030050.	4.81350	4.86118	-0.38463	0.08713	0.00917
7277500.	4.89980	4.62011	1.85714	0.04838	0.07479
7030500.	4.52760	4.57693	-0.38614	0.02646	0.00424
3571000.	4.52770	4.55335	-0.21375	0.05031	0.00114
7029000.	4.41140	4.51909	-0.84776	0.01815	0.02013
7024500.	4.44630	4.52605	-0.66006	0.03579	0.01349
3433500.	4.54350	4.69801	-1.30776	0.04551	0.06086
3592500.	4.67250	4.78575	-0.91333	0.04086	0.01927
3604000.	4.88670	4.69027	1.64024	0.03348	0.06526
7025400.	4.56060	4.52059	0.29930	0.02695	0.00227
3436100.	4.77420	4.71603	0.45344	0.03640	0.00432
7030280.	4.65110	4.57766	0.56373	0.01871	0.00869
3598000.	4.81960	4.74289	0.60930	0.03960	0.01124
3429000.	4.79490	4.78101	0.11026	0.03834	0.00036
3567500.	4.51030	4.58004	-0.56880	0.04327	0.00731
3584000.	4.94870	4.68220	2.12809	0.04589	0.14587
3579100.	4.50110	4.57435	-0.54248	0.03807	0.00642
7029275.	4.45760	4.48661	-0.17211	0.01272	0.00048
7269990.	4.45260	4.51187	-0.40264	0.02688	0.00339
3314500.	5.01310	4.95608	0.42251	0.05025	0.00468
3606500.	4.31870	4.40945	-0.75056	0.05962	0.01969
3435500.	4.64110	4.60220	0.31173	0.03820	0.00237
7029300.	4.53320	4.46624	0.49570	0.03064	0.00629
7029270.	4.45760	4.46221	-0.03493	0.02833	0.00003
7025000.	4.01130	4.40576	-2.89349	0.03370	0.23197
3313000.	5.05140	4.84777	1.17209	0.01449	0.01745
3568000.	5.59620	5.54276	0.53051	0.35167	0.05286
3432350.	4.35410	4.51946	-1.19959	0.06789	0.05043
3592000.	4.40710	4.56375	-1.19625	0.05043	0.03387
7030240.	4.50290	4.45520	0.35330	0.04876	0.00324
3588500.	4.90490	4.63055	2.27037	0.03572	0.12908
2387000.	4.55950	4.69654	-1.11408	0.04114	0.02383
7276000.	4.53610	4.41658	0.80484	0.03153	0.01480
3575000.	4.93370	4.62638	2.53677	0.03882	0.16115
3427500.	4.55490	4.60789	-0.42789	0.06544	0.00670
3438000.	4.44640	4.42976	0.13769	0.07374	0.00072
3312500.	4.96770	4.72361	1.71309	0.02091	0.04993
3566000.	4.81510	4.99368	-1.32964	0.05858	0.04536
3594445.	4.29080	4.30157	-0.07335	0.05364	0.00017
3576148.	4.35580	4.40636	-0.32765	0.05038	0.00264

AVERAGE SAMPLING ERROR VARIANCE	0.0016
MODEL ERROR VARIANCE	0.0129
PRESS/N	0.0189
MAXIMUM SAMPLING ERROR VARIANCE	0.0057
HA 3 SITE	
SAMPLING ERROR VARIANCE	0.0020
EQUIVALENT YEARS	13.67
HA 2 SITE	
SAMPLING ERROR VARIANCE	0.0018
EQUIVALENT YEARS	13.83

Table B-1. Detailed output file produced by the region-of-influence method for Tennessee—Continued

SUMMARY OF REGION-OF-INFLUENCE (ROI) REGRESSION FOR:

Big River at Centerville, TN
500 YR-PEAK

REGRESSION COEFFICIENTS

VARIABLE	COEFFICIENT	STANDARD ERROR	T FOR H0:BETA=0	PROB> T
CONSTANT	3.42382	0.14995	22.83372	
LOG(CDA)	0.49760	0.05196	9.57586	0.0001
LOG(PF)	0.64048	0.20618	3.10643	0.0030

Residuals and influence statistics

ID	LOG(OBS)	LOG(PRED)	STD RES	LEVERAGE	COOKS D
3602000.	4.94240	5.16880	-1.57014	0.07420	0.10328
3584500.	5.21010	5.13992	0.48674	0.07458	0.00932
7026000.	4.95010	4.92248	0.20727	0.11127	0.00267
3599500.	4.88640	5.05830	-1.24557	0.05263	0.05718
7026300.	4.90300	4.93864	-0.25566	0.09078	0.00393
7028000.	4.82660	4.81623	0.06660	0.02854	0.00014
7027800.	4.77770	4.80350	-0.16003	0.02427	0.00075
7029100.	4.56490	4.80482	-1.59813	0.02417	0.08613
3603000.	5.14740	5.20733	-0.43701	0.09723	0.00933
3582000.	4.76300	4.97894	-1.24119	0.02314	0.03246
7031700.	4.78210	4.77068	0.07725	0.03650	0.00019
3604500.	5.02666	4.91689	0.79325	0.03134	0.01543
7029500.	4.99920	4.88367	0.86682	0.08878	0.04106
3434500.	4.86696	4.90373	-0.26814	0.02474	0.00177
7029400.	4.90600	4.78487	0.80895	0.03669	0.02102
7031650.	4.69790	4.75368	-0.34415	0.04800	0.00301
7025500.	4.69410	4.68852	0.03962	0.04097	0.00005
3430100.	4.97220	4.99481	-0.15025	0.03906	0.00064
7027500.	4.80070	4.69387	0.74238	0.02578	0.01613
7030000.	4.97680	4.93366	0.28571	0.07057	0.00411
7030050.	4.91210	4.96062	-0.34161	0.08716	0.00728
7277500.	5.03530	4.73676	1.71663	0.04800	0.06292
7030500.	4.62390	4.69666	-0.49721	0.02646	0.00702
3571000.	4.62590	4.67703	-0.37348	0.05089	0.00349
7029000.	4.54590	4.64295	-0.66715	0.01759	0.01243
7024500.	4.56190	4.64942	-0.63444	0.03586	0.01250
3433500.	4.64820	4.82317	-1.29887	0.04547	0.06053
3592500.	4.78190	4.90373	-0.85961	0.04144	0.01704
3604000.	5.05470	4.81331	1.76744	0.03379	0.07588
7025400.	4.71070	4.64435	0.43225	0.02675	0.00469
3436100.	4.88070	4.83771	0.29263	0.03630	0.00179
7030280.	4.75380	4.69734	0.37791	0.01836	0.00389
3598000.	4.96410	4.86545	0.68450	0.03967	0.01420
3429000.	4.86820	4.90137	-0.23003	0.03834	0.00158
3567500.	4.60250	4.70235	-0.71305	0.04369	0.01146
3584000.	5.13750	4.80827	2.29711	0.04595	0.17007
3579100.	4.64120	4.70354	-0.40185	0.03784	0.00348
7029275.	4.60540	4.61279	-0.03783	0.01233	0.00002
7269990.	4.53840	4.63625	-0.57617	0.02697	0.00681
3314500.	5.15370	5.06502	0.57182	0.05030	0.00849
3606500.	4.46740	4.54114	-0.53388	0.06031	0.00996
3435500.	4.76380	4.72992	0.23745	0.03836	0.00137
7029300.	4.66320	4.59388	0.44661	0.03059	0.00505
7029270.	4.59300	4.59014	0.01890	0.02812	0.00001
7025000.	4.07480	4.53771	-2.95261	0.03277	0.23816
3313000.	5.17710	4.96246	1.06476	0.01407	0.01397
3568000.	5.65540	5.61595	0.34359	0.35404	0.02238
3432350.	4.43940	4.65496	-1.35832	0.06699	0.06393
3592000.	4.61100	4.69350	-0.54925	0.05028	0.00706
7030240.	4.61300	4.58363	0.18934	0.04828	0.00092
3588500.	5.06320	4.75676	2.22204	0.03610	0.12358
2387000.	4.64470	4.81291	-1.19736	0.04160	0.02742
7276000.	4.61550	4.54776	0.39515	0.03111	0.00349
3575000.	5.09070	4.75281	2.44343	0.03930	0.14938
3427500.	4.62110	4.73827	-0.82698	0.06565	0.02508
3438000.	4.62400	4.56661	0.41552	0.07447	0.00650
3312500.	5.14130	4.84489	1.80658	0.02090	0.05457
3566000.	4.86640	5.09489	-1.48081	0.05804	0.05560
3594445.	4.40360	4.44095	-0.22039	0.05291	0.00148
3576148.	4.50300	4.54446	-0.23230	0.04965	0.00129

AVERAGE SAMPLING ERROR VARIANCE	0.0021
MODEL ERROR VARIANCE	0.0165
PRESS/N	0.0247
MAXIMUM SAMPLING ERROR VARIANCE	0.0075
HA 3 SITE	
SAMPLING ERROR VARIANCE	0.0026
EQUIVALENT YEARS	14.73
HA 2 SITE	
SAMPLING ERROR VARIANCE	0.0024
EQUIVALENT YEARS	14.91

Appendix C. Computing effective record length when historical information is available

Often, the systematically recorded data at a gaging station are adjusted for historical information about unusually large floods that might have occurred outside the period of record. Historical information can be used to improve flood-frequency estimates at sites of interest. To incorporate historical information into flood-frequency estimates, an effective record length is computed at the gaged site to account for the additional accuracy introduced by the historical record. This appendix describes the method used in this study to compute effective record length (N_e) given systematic record length (N), total historical period (H), and probability threshold (P_H). The P_H is estimated by the term $1-Z/H$, where Z is the number of observed historical peaks and/or high outliers. Values for Z , H , N , and N_e for 297 gaging stations in Tennessee are provided in table 4 and for 156 gaging stations in adjacent states in table 5.

Notation

H is the total historical period, in years.

N is the systematic record length, in years.

W equals ($H - N$) is the number of historic years that are not part of the systematic record.

Z is the number of historic peaks and/or high outliers.

Calculations

Let $H^* = \text{minimum}(W, 200)$,

$$P_H = 1 - Z/H,$$

$P^* = \ln(P_H/(1-P_H))$, where \ln is the natural logarithm,

$$A = \text{maximum}[(0.55 - 0.1(P^*)), 0],$$

$$N_e = A(H^*) + N.$$

The adjustment method described above is empirically derived from simulations reported in Ste-dinger and Cohn (1985) and Tasker and Thomas (1978). This method can be used to estimate the effective record lengths given in tables 4 and 5 to within plus or minus 1 year.

Appendix D. Calculation of equivalent years of record for regression-predicted peak discharges

The uncertainty in a flood-frequency prediction can be expressed as the number of years of record at a site needed to achieve an estimate of equal accuracy. The equivalent years of record (Hardison, 1971) can be calculated at a site of interest by equating the variance of prediction, Vp , to the variance of the Pearson III quantile estimated from a sample of annual peaks, $Var(y)$. The variance of a predicted response at site k with p basin characteristics $x_k = (1, x_{k,1}, x_{k,2}, \dots, x_{k,p})$ is given by:

$$Vp = \hat{\gamma}^2 + x_k X' \hat{\Lambda}^{-1} X^{-1} x'_k.$$

The sample variance of the Pearson quantile, $Var(y)$, estimated from N years of annual peaks is approximated by:

$$Var(y) = \frac{\sigma^2}{N} \left[1 + \frac{k^2}{2} (1 + 0.75g^2) + kg \right],$$

Bobee (1973), where σ is the standard deviation of logs of annual peaks, k is the Pearson III standard deviate for a given recurrence interval, and g is the skew coefficient for logs of annual peaks. Substituting regional skew for g and a regional estimate of σ into the above equation, equating it to Vp , and solving for N provides for an equivalent number of years of record as a measure of accuracy. Calculation of equivalent years of record for sites of interest in Tennessee can be accomplished by using the flood-frequency computer application for Tennessee. Equivalent years of record for a discharge estimate computed by the region-of-influence method is provided in the detailed output file for this method (example in table B-1). These values can be used in eq. 11 to obtain weighted discharge estimates at gaging stations in Tennessee.