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LOW FLOWS AND FLOW DURATION OF TENNESSEE STREAMS THROUGH 1981

U.S. GEOLOGICAL SURVEY

Water-Resources Investigations Report 84-4347



Prepared in cooperation with the

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT,

DIVISION OF WATER MANAGEMENT

03455000 - FRENCH BROAD RIVER NEAR NEWPORT, TN

LOCATION.--Lat 35°58'54", long 83°09'40", Coker County, on left bank 15 feet downstream from bridge on U.S. Highway 411 at Oldtown, 1 mile northeast of Newport city limits, 3.7 miles upstream from Pigeon River, and at mile 77.5.

DRAINAGE AREA.--1,858 mi².

PERIOD OF RECORD.--1904-5, 1921-81.

REMARKS.--Diurnal fluctuation during low flow caused by powerplants above stations.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	485	80	1,320	20	3,960
99.1	545	70	1,600	10	5,500
99	560	60	1,960	5	7,630
98	660	50	2,300	2	11,000
95	810	40	2,720	1	14,000
90	1,000	30	3,200	0.5	17,500

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	809	582	482	410
3	854	616	511	434
7	904	653	541	459
14	966	699	582	497
30	1,070	770	639	544
60	1,230	877	725	616
90	1,400	982	808	684

03461000 - PIGEON RIVER AT HARTFORD, TN

LOCATION.--Lat 35°48'52", long 83°08'42", Cocke County, 600 feet downstream from highway bridge at Hartford, and 4.5 miles downstream from Big Creek and North Carolina-Tennessee State line.

DRAINAGE AREA.--547 mi².

PERIOD OF RECORD.--1931-48.

REMARKS.--Regulated since 1930 by Lake Junaluska, Lake Logan, and Lake Walters.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	26	80	350	20	1,370
99.1	32	70	470	10	1,800
99	34	60	572	5	2,250
98	48	50	710	2	3,180
95	80	40	880	1	4,410
90	170	30	1,100	0.5	5,900

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	31	19	15	12
3	120	73	55	42
7	210	150	130	110
14	250	200	180	160
30	280	220	200	180
60	340	270	230	210
90	380	300	260	240

03461200 - COSBY CREEK ABOVE COSBY, TN

LOCATION.--Lat 35°47'02", long 83°13'08", Cocke County, on downstream left wingwall of bridge on State Highway 32, 1,000 feet downstream from Crying Creek, 3,000 feet upstream from Stillhouse Branch, 2.4 miles southeast of Cosby, and at mile 10.6.

DRAINAGE AREA.--10.2 mi².

PERIOD OF RECORD.--1967-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	2.4	80	11	20	39
99.1	2.7	70	14	10	55
99	2.8	60	18	5	77
98	3.4	50	22	2	109
95	4.7	40	26	1	127
90	6.7	30	32	0.5	170

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	4.4	2.6	2.0	1.6
3	4.6	2.7	2.1	1.6
7	4.9	3.0	2.3	1.8
14	5.3	3.2	2.5	2.0
30	6.9	4.4	3.4	2.8
60	9.9	5.9	4.4	3.5
90	12	7.1	5.4	4.3

03461500 - PIGEON RIVER AT NEWPORT, TN

LOCATION.--Lat 35°57'36", long 83°10'26", Cocke County, on left bank 100 feet upstream from bridge on U.S. Highway 70 at Newport, 0.6 mile downstream from Morell Branch, and at mile 6.8.

DRAINAGE AREA.--666 mi².

PERIOD OF RECORD.--1949-81.

REMARKS.--Considerable regulation (since 1930) by Lake Junaluska, Lake Logan, and Lake Walters during periods of low flow.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	71	80	460	20	1,880
99.1	89	70	620	10	2,500
99	92	60	780	5	3,090
98	135	50	970	2	4,070
95	220	40	1,190	1	5,270
90	310	30	1,470	0.5	6,800

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	87.3	52.1	53.2	47.4
3	144	95.5	76.7	63.7
7	238	144	105	78.3
14	302	181	128	93.0
30	380	248	189	147
60	453	307	245	201
90	523	356	285	235

03465000 - NORTH INDIAN CREEK NEAR UNICOI, TN

LOCATION.--Lat 36°10'35", long 82°17'36", Unicoi County, on right bank 100 feet upstream from unnamed tributary, 200 feet north of State Highway 107, 900 feet upstream from Rocky Branch, and 3.4 miles southeast of Unicoi.

DRAINAGE AREA.--15.9 mi².

PERIOD OF RECORD.--1944-57.

REMARKS.--Some diversion from Davis Spring, 1 mile upstream, for part of water supply of Johnson City.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	2.45	80	6.36	20	30.4
99.1	2.65	70	8.64	10	42.6
99	2.68	60	11.4	5	61.3
98	2.94	50	15.0	2	95.6
95	3.49	40	19.0	1	120
90	4.51	30	24.1	0.5	150

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	4.0	2.8	2.4	2.1
3	4.1	2.9	2.4	2.1
7	4.3	3.0	2.5	2.2
14	4.5	3.2	2.6	2.3
30	5.0	3.4	2.8	2.4
60	5.7	3.7	3.0	2.5
90	6.3	4.1	3.3	2.7

03465500 - NOLICHUCKY RIVER AT EMBREEVILLE, TN

LOCATION.--Lat 36°10'35", long 82°27'27", Washington County, on left bank, at Embreeville, 2,000 feet upstream from bridge on State Highway 81, 3 miles northwest of Erwin, 5.2 miles downstream from North Indian Creek, and at mile 89.0.

DRAINAGE AREA.--805 mi².

PERIOD OF RECORD.--1921-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	214	80	550	20	1,820
99.1	230	70	690	10	2,600
99	233	60	840	5	3,540
98	270	50	1,000	2	5,200
95	330	40	1,220	1	6,920
90	410	30	1,460	0.5	8,900

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	330	234	192	160
3	349	250	206	173
7	367	268	224	192
14	395	290	243	210
30	442	321	267	228
60	511	366	305	262
90	589	420	350	300

03466500 - NOLICHUCKY RIVER BELOW NOLICHUCKY DAM, TN

LOCATION.--Lat 36°03'59", long 82°52'18", Greene County, on right bank 0.30 mile downstream from Nolichucky Dam, 2.2 miles upstream from Cove Creek, 7.0 miles south of Greeneville, and at mile 45.7.

DRAINAGE AREA.--1,184 mi².

PERIOD OF RECORD.--1919-73.

REMARKS.--Low flow regulated by Lake Davy Crockett.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	79.0	80	720	20	2,570
99.1	200	70	883	10	3,240
99	209	60	1,090	5	4,490
98	280	50	1,330	2	6,740
95	410	40	1,650	1	8,940
90	529	30	1,990	0.5	11,400

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	240	32	24	20
3	378	240	170	120
7	463	341	285	220
14	517	393	336	293
30	581	420	350	320
60	680	508	430	372
90	770	560	440	380

03467000 - LICK CREEK AT MOHAWK, TN

LOCATION.--Lat 36°12'09", long 83°02'53", Greene County, on right bank
0.25 mile east of Mohawk, 0.6 mile upstream from Riley Creek, and 17.5
miles upstream from mouth.

DRAINAGE AREA.--220 mi².

PERIOD OF RECORD.--1946-71.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	12.2	80	29.4	20	262
99.1	13.6	70	39.7	10	530
99	13.9	60	56.8	5	948
98	16.3	50	81.2	2	1,780
95	18.9	40	119	1	2,300
90	22.3	30	176	0.5	3,190

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	17.3	13.4	11.5	10.1
3	17.8	13.8	11.9	10.5
7	18.8	14.6	12.6	11.2
14	20.2	15.4	13.3	11.8
30	22.4	17.7	15.9	14.6
60	26.8	20.7	18.3	16.6
90	31.5	22.3	19.2	17.2

03467500 - NOLICHUCKY RIVER NEAR MORRISTOWN, TN

LOCATION.--Lat 36°10'49", long 83°10'32", Hamblen County, on right bank
0.25 mile upstream from Susong Bridge, 1.1 miles upstream from Forgey
Island, 7 miles southeast of Morristown, and at mile 14.5.

DRAINAGE AREA.--1,679 mi².

PERIOD OF RECORD.--1922-57.

REMARKS.--Low flow partly regulated by Lake Davy Crockett.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	160	80	780	20	3,060
99.1	200	70	1,010	10	4,270
99	207	60	1,240	5	6,120
98	277	50	1,540	2	9,250
95	407	40	1,920	1	12,000
90	546	30	2,410	0.5	15,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	194	125	99.8	70
3	343	210	150	100
7	470	310	243	160
14	528	371	304	257
30	613	430	353	298
60	726	503	409	342
90	824	569	465	393

03469000 - FRENCH BROAD RIVER BELOW DOUGLAS DAM, TN

LOCATION.--Lat 35°57'06", long 83°33'05", Sevier County, on right bank
1.0 mile downstream from Douglas Dam, 1.7 miles upstream from Millican
Creek, 5.8 miles north of Sevierville, and at mile 31.3.

DRAINAGE AREA.--4,543 mi².

PERIOD OF RECORD.--1920-42.

REMARKS.--No regulation during this period of record. See also next page.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	934	80	2,670	20	8,690
99.1	1,040	70	3,390	10	12,300
99	1,060	60	4,110	5	17,000
98	1,230	50	4,940	2	24,700
95	1,600	40	5,910	1	32,100
90	2,000	30	7,030	0.5	40,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	1,460	961	742	586
3	1,590	1,090	863	696
7	1,750	1,230	992	815
14	1,870	1,330	1,090	911
30	2,070	1,480	1,220	1,030
60	2,430	1,760	1,460	1,240
90	2,750	1,950	1,610	1,370

03469000 - FRENCH BROAD RIVER BELOW DOUGLAS DAM, TN

LOCATION.--Lat 35°57'06", long 83°33'05", Sevier County, on right bank
1.0 mile downstream from Douglas Dam, 1.7 miles upstream from Millican
Creek, 5.8 miles north of Sevierville, and at mile 31.3.

DRAINAGE AREA.--4,543 mi².

PERIOD OF RECORD.--1944-74.

REMARKS.--Flow completely regulated by Douglas Lake during this period of
record.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	18.8	80	2,900	20	10,000
99.1	24.8	70	4,200	10	12,900
99	25.8	60	5,380	5	15,500
98	37.0	50	6,520	2	19,200
95	740	40	7,380	1	22,700
90	1,460	30	8,360	0.5	25,700

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	20.3	15.1	14.3	13.0
3	63.8	22.0	16.1	14.0
7	413	89.5	36.8	20.0
14	1,200	312	120	60.1
30	2,570	1,373	750	450
60	3,480	2,380	1,880	1,500
90	4,150	3,050	2,540	1,900

03469010 - MILLICAN CREEK NEAR DOUGLAS DAM, TN

LOCATION.--Lat 35°55'45", long 83°32'26", Sevier County, on right bank
1,150 feet upstream from State Highway 66 bridge, and 1,950 feet
upstream from mouth of Little Millican Creek.

DRAINAGE AREA.--4.2 mi².

PERIOD OF RECORD.--1944-62.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	0	80	0.04	20	3.18
99.1	0	70	.09	10	8.05
99	0	60	.27	5	22.3
98	0	50	.60	2	56.9
95	0	40	1.09	1	86.1
90	.01	30	1.93	0.5	113

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	0	0	0	0
3	0	0	0	0
7	0	0	0	0
14	0	0	0	0
30	0	0	0	0
60	.1	0	0	0
90	.2	.1	.1	0

03470000 - LITTLE PIGEON RIVER AT SEVIERVILLE, TN

LOCATION.--Lat 35°52'34", long 83°34'36", Sevier County, on left bank
0.5 mile downstream from city limits of Sevierville, 0.5 mile
downstream from West Fork Little Pigeon River, and at mile 4.5.

DRAINAGE AREA.--353 mi².

PERIOD OF RECORD.--1921-81.

REMARKS.--Some regulation at low flow caused by small mills above station
prior to 1967. During the period April 1966 to July 1967, Tennessee
Valley Authority constructed a flood-control project for town of
Sevierville, widening and deepening Little Pigeon River through the
town and 1.8 miles down stream, and relocating the lower part of West
Prong Little Pigeon River.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	41	80	150	20	750
99.1	47	70	200	10	1,100
99	48	60	265	5	1,780
98	56	50	340	2	3,000
95	77	40	434	1	4,200
90	100	30	556	0.5	5,400

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	70.0	43.4	32.0	24.1
3	71.8	48.6	38.9	32.1
7	76.8	52.8	43.2	36.5
14	86.3	59.0	48.2	40.7
30	107	70.5	55.9	45.8
60	140	90.5	70.9	57.6
90	170	111	88.0	72.1

03470500 - FRENCH BROAD RIVER NEAR KNOXVILLE, TN

LOCATION.--Lat 35°57'30", long 83°46'26", Knox County, on left bank
0.7 mile downstream from Johnson Hollow, 7.5 miles upstream from
confluence with Holston River, and 8 miles east of Knoxville.

DRAINAGE AREA.--5,101 mi².

PERIOD OF RECORD.--1954-81.

REMARKS.--Flow regulated by Douglas Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	490	80	3,650	20	11,300
99.1	720	70	5,000	10	14,000
99	770	60	6,190	5	17,300
98	1,150	50	7,300	2	20,800
95	1,700	40	8,420	1	25,000
90	2,300	30	9,670	0.5	29,200

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	628	345	247	186
3	1,160	632	430	250
7	1,700	1,180	976	750
14	2,430	1,620	1,290	1,060
30	3,210	2,240	1,840	1,550
60	4,010	2,990	2,570	2,260
90	4,880	3,690	3,140	2,730

03476500 - SOUTH FORK HOLSTON RIVER BELOW SOUTH HOLSTON DAM, TN

LOCATION.--Lat 36°31'25", long 82°05'50", Sullivan County, on right bank 1,900 feet downstream from South Holston Dam powerhouse, 1.0 mile upstream from bridge at Bristol waterworks, 1.0 mile upstream from Thomas Creek, 6.7 miles southeast of Bristol, and at mile 49.4.

DRAINAGE AREA.--703 mi².

PERIOD OF RECORD.--1952-74.

REMARKS.--Flow regulated by South Holston Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	5.20	80	12.0	20	1,690
99.1	5.33	70	194	10	2,080
99	5.36	60	566	5	2,390
98	5.69	50	905	2	2,920
95	6.79	40	1,220	1	3,130
90	7.99	30	1,490	0.5	3,230

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	5.70	3.24	1.90	0.80
3	6.12	5.30	3.63	2.50
7	7.41	5.75	5.54	4.00
14	31.1	12.0	7.38	4.99
30	131	43.6	13.0	8.50
60	355	173	104	40.0
90	453	292	200	115

03477000 - SOUTH FORK HOLSTON RIVER AT BLUFF CITY, TN

LOCATION.--Lat 36°28'38", long 82°15'47", Sullivan County, on right bank at Bluff City, 100 feet upstream from bridge on U.S. Highways 11E and 19, 600 feet downstream from Southern Railway bridge, 0.8 mile downstream from Indian Creek, and 4.8 miles upstream from Beaver Creek.

DRAINAGE AREA.--813 mi².

PERIOD OF RECORD.--1900-50.

REMARKS.--Site now inundated by Boone Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	93	80	352	20	1,600
99.1	143	70	449	10	2,450
99	147	60	594	5	3,490
98	177	50	746	2	5,300
95	219	40	952	1	6,700
90	264	30	1,220	0.5	8,630

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	229	156	120	93.5
3	245	171	131	101
7	262	182	139	106
14	277	193	149	117
30	298	206	161	127
60	326	227	187	158
90	363	253	211	182

03479500 - WATAUGA RIVER AT NORTH CAROLINA - TENNESSEE STATE LINE

LOCATION.--Lat 36°17'25", long 81°55'33", Johnson County, on left bank, 0.6 mile downstream from North Carolina - Tennessee State line, 1.9 miles downstream from Stone Mountain Branch, and 7.5 miles southeast of Butler.

DRAINAGE AREA.--152 mi².

PERIOD OF RECORD.--1943-55.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	18.5	80	81.4	20	349
99.1	21.4	70	111	10	507
99	21.8	60	140	5	725
98	25.9	50	178	2	1,160
95	34.2	40	218	1	1,610
90	49.3	30	269	0.5	1,990

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	33	15	13	10
3	39	19	17	14
7	43	23	19	15
14	50	30	23	19
30	57	33	25	20
60	68	40	30	24
90	81	45	33	27

03480000 - WATAUGA RIVER AT STUMP KNOB, TN

LOCATION.--Lat 36°18'37", long 81°57'31", Johnson County, on left bank,
200 feet downstream from Dugger Bridge, 0.25 mile upstream from former
post office of Stump Knob, 2.75 miles upstream from Elk River and 4.25
miles upstream from former site of Butler.

DRAINAGE AREA.--171 mi².

PERIOD OF RECORD.--1928-45.

REMARKS.--Site now inundated by Watauga Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	36.8	80	102	20	371
99.1	40.7	70	132	10	548
99	41.5	60	164	5	801
98	48.1	50	198	2	1,270
95	58.2	40	237	1	1,750
90	73.0	30	286	0.5	2,360

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	53	38	32	28
3	56	40	34	30
7	59	44	38	33
14	66	48	41	36
30	71	51	44	38
60	85	60	50	44
90	100	70	58	49

03482000 - ROAN CREEK NEAR NEVA, TN

LOCATION.--Lat 36°22'37", long 81°53'14", Johnson County, 1.1 miles downstream from Avery Branch, 1.7 miles southwest of Neva, and 2.2 miles upstream from Hopper Creek.

DRAINAGE AREA.--102 mi².

PERIOD OF RECORD.--1942-55.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	8.80	80	27.6	20	146
99.1	9.34	70	36.7	10	213
99	9.48	60	48.4	5	306
98	11.0	50	64.5	2	496
95	14.3	40	85.1	1	681
90	18.5	30	112	0.5	927

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	14	9.6	7.7	6.4
3	15	9.9	7.9	6.6
7	16	10	8.5	7.1
14	18	11	8.8	8.0
30	20	12	10	9.1
60	23	13	11	10
90	25	15	12	11

03482500 - ROAN CREEK AT BUTLER, TN

LOCATION.--Lat 36°20'22", long 81°59'36", Johnson County, 0.5 mile north-east of former site of Butler, and 0.7 mile upstream from mouth.

DRAINAGE AREA.--166 mi².

PERIOD OF RECORD.--1934-48.

REMARKS.--Site inundated by Watauga Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	27.0	80	54.6	20	217
99.1	28.7	70	64.6	10	337
99	29.2	60	79.7	5	520
98	32.6	50	97.6	2	820
95	38.6	40	125	1	1,100
90	45.0	30	163	0.5	1,400

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	40	32	28	25
3	42	34	30	26
7	44	35	31	27
14	46	37	32	28
30	49	40	34	30
60	56	43	37	32
90	60	45	38	33

03483000 - WATAUGA RIVER AT BUTLER, TN

LOCATION.--Lat 36°19'59", long 82°00'16", Johnson County, at former site of Butler, 1,000 feet downstream from site of highway bridge and 1,100 feet downstream from Roan Creek.

DRAINAGE AREA.--427 mi².

PERIOD OF RECORD.--1900-02; 1921-48.

REMARKS.--Site inundated by Watauga Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	123	80	253	20	902
99.1	129	70	314	10	1,320
99	130	60	380	5	1,880
98	142	50	455	2	3,000
95	162	40	559	1	4,000
90	192	30	700	0.5	5,700

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	158	125	109	97.9
3	164	131	116	105
7	174	140	125	113
14	185	148	131	118
30	200	157	139	125
60	231	177	154	138
90	264	193	165	145

03484000 - WATAUGA RIVER BELOW WILBUR DAM, TN

LOCATION.--Lat 36°20'39", long 82°07'46", Carter County, 1,800 feet downstream from Wilbur Dam, 0.7 mile downstream from Big Laurel Branch, 2.7 miles downstream from Watauga Dam, 5 miles east of Elizabethton, and at mile 33.6.

DRAINAGE AREA.--471 mi².

PERIOD OF RECORD.--1950-81.

REMARKS.--Flow complete regulated by Watauga Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	31.0	80	62.0	20	1,400
99.1	33.0	70	140	10	1,700
99	34.0	60	370	5	2,000
98	38.0	50	610	2	2,420
95	45.0	40	860	1	2,800
90	52.0	30	1,100	0.5	3,100

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	34.5	20.5	13.2	8.40
3	41.1	22.0	14.1	9.20
7	56.0	29.4	18.9	12.3
14	84.7	41.4	25.4	15.9
30	160	66.9	36.3	20.1
60	303	132	68.0	34.4
90	442	212	110	54.3

03485500 - DOE RIVER AT ELIZABETHTON, TN

LOCATION.--Lat 36°20'40", long 82°12'37", Carter County, on left bank 1,500 feet upstream from bridge on State Highway 91 at Elizabethton, and 1 mile upstream from mouth.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--1913-16, 1922-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	38	80	88	20	302
99.1	41	70	110	10	420
99	42	60	135	5	584
98	47	50	170	2	867
95	56	40	200	1	1,140
90	67	30	242	0.5	1,400

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	54.3	40.7	34.5	29.8
3	57.3	43.3	36.8	31.9
7	60.1	45.7	39.1	34.1
14	63.9	49.0	42.4	37.6
30	72.2	55.2	47.5	41.8
60	83.8	62.5	53.0	45.9
90	93.5	68.3	57.7	50.0

03486000 - WATAUGA RIVER AT ELIZABETHTON, TN

LOCATION.--Lat 36°21'21", long 82°13'26", Carter County, on left bank 25 feet upstream from bridge on U.S. Highway 19E at Elizabethton, 0.6 mile downstream from Doe River, and at mile 25.9.

DRAINAGE AREA.--692 mi².

PERIOD OF RECORD.--1927-49.

REMARKS.--Unregulated - see next page for present characteristics.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	172	80	396	20	1,420
99.1	189	70	497	10	2,000
99	193	60	610	5	2,820
98	220	50	746	2	4,190
95	264	40	910	1	5,400
90	306	30	1,110	0.5	6,950

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	227	174	152	137
3	261	208	185	169
7	282	227	204	187
14	303	242	216	197
30	327	259	230	210
60	382	296	260	234
90	438	326	281	249

03486000 - WATAUGA RIVER AT ELIZABETHTON, TN

LOCATION.--Lat 36°21'21", long 82°13'26", Carter County, on left bank 25 feet upstream from bridge on U.S. Highway 19E at Elizabethton, 0.6 mile downstream from Doe River, and at mile 25.9.

DRAINAGE AREA.--692 mi².

PERIOD OF RECORD.--1954-81.

REMARKS.--Flow partly regulated by Watauga Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	117	80	395	20	1,770
99.1	130	70	550	10	2,100
99	132	60	745	5	2,520
98	150	50	970	2	3,130
95	190	40	1,240	1	3,600
90	260	30	1,490	0.5	4,130

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	140	119	109	102
3	171	133	117	106
7	226	164	139	121
14	315	219	178	148
30	444	322	268	228
60	571	427	363	316
90	677	526	459	410

03486200 - BUFFALO CREEK AT MILLIGAN COLLEGE, TN

LOCATION.--Lat 36°18'25", long 82°17'30", Carter County, on right bank
 20 feet upstream from bridge on private road, 600 feet from Tennessee
 Highway 67 and 0.4 mile downstream from main entrance to Milligan
 College.

DRAINAGE AREA.--28.1 mi².

PERIOD OF RECORD.--1965-70.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
 of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	3.59	80	7.10	20	35.0
99.1	3.92	70	8.26	10	55.0
99	3.94	60	10.3	5	82.9
98	4.17	50	14.7	5	114
95	4.80	40	19.5	1	148
90	5.67	30	25.2	0.5	174

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	4.3	2.7	2.0	1.5
3	4.9	2.8	2.2	1.8
7	5.0	3.1	2.4	1.9
14				
30				
60				
90				

03487500 - SOUTH FORK HOLSTON RIVER AT KINGSPORT, TN

LOCATION.--Lat 36°30'37", long 82°32'10", Sullivan County, 0.5 mile downstream from Carolina, Clinchfield & Ohio Railway bridge, 1.1 miles upstream from bridge on State Highway 81, 3 miles southeast of Kingsport post office, and 5.75 miles upstream from confluence with North Fork Holston River.

DRAINAGE AREA.--1,931 mi².

PERIOD OF RECORD.--1927-49.

REMARKS.--Unregulated; see next page for present characteristics.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	460	80	890	20	3,500
99.1	480	70	1,100	10	5,100
99	485	60	1,410	5	7,300
98	530	50	1,800	2	10,700
95	590	40	2,200	1	13,600
90	700	30	2,700	0.5	16,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	575	478	441	416
3	604	507	469	444
7	632	532	494	468
14	670	555	510	480
30	722	586	532	494
60	841	647	569	515
90	946	703	605	536

03487500 - SOUTH FORK HOLSTON RIVER AT KINGSFORT, TN

LOCATION.--Lat 36°31'51", long 82°33'29", Sullivan County, on left bank on Long Island 1,000 feet downstream from bridge on State Highway 81, at Kingsport, 1.2 miles upstream from Reedy Creek, and 3.8 miles upstream from confluence with North Fork.

DRAINAGE AREA.--1,935 mi².

PERIOD OF RECORD.--1954-77.

REMARKS.--Flow regulated by South Holston Lake (since November 1950), by Watauga Lake (since December 1948), by Boone Lake (since December 1952), and by Fort Patrick Henry Lake (since October 1953). Some diversions upstream for water supplies.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	390	80	860	20	4,170
99.1	420	70	1,300	10	5,200
99	430	60	1,860	5	6,100
98	480	50	2,400	2	7,530
95	580	40	2,960	1	8,740
90	740	30	3,530	0.5	9,420

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	579	456	396	349
3	634	499	433	382
7	720	603	550	510
14	875	705	630	574
30	1,190	958	861	790
60	1,570	1,280	1,140	1,040
90	1,800	1,520	1,400	1,320

03487550 - REEDY CREEK AT OREBANK, TN

LOCATION.--Lat 36°33'42", long 82°27'36", Sullivan County, on upstream right bank at Anderson Bridge, 0.1 mile south of U.S. Highway 11W, 0.3 mile north of Orebank, 1.0 mile upstream from Gaines Branch, and 9.8 miles upstream from mouth.

DRAINAGE AREA.--36.3 mi².

PERIOD OF RECORD.--1964-81.

REMARKS.--The Bloomingdale Utility District diverts an average of about 0.6 ft³/s for supply, 0.8 mile upstream from the gage.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	4.9	80	11	20	61
99.1	5.2	70	15	10	92
99	5.2	60	20	5	140
98	5.6	50	26	2	226
95	6.5	40	35	1	320
90	7.7	30	45	0.5	520

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	6.4	5.1	4.6	4.2
3	6.7	5.2	4.7	4.3
7	7.1	5.5	4.9	4.4
14	7.5	5.8	5.1	4.7
30	8.6	6.4	5.6	5.1
60	10	7.3	6.1	5.3
90	11	8.1	6.9	6.1

03490500 - HOLSTON RIVER AT SURGOINSVILLE, TN

LOCATION.--Lat 36°28'19", long 82°50'50", Hawkins County, on right bank
1,500 feet upstream from Surgoinsville Creek and county bridge at
Surgoinsville, 9.8 miles upstream from Big Creek, and at mile 118.8.

DRAINAGE AREA.--2,874 mi², includes that of Surgoinsville Creek.

PERIOD OF RECORD.--1954-81.

REMARKS.--Flow partly regulated by South Holston Lake, Watauga Lake, Boone
Lake, and by Fort Patrick Henry Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	700	80	1,740	20	5,460
99.1	770	70	2,200	10	7,100
99	780	60	2,750	5	9,300
98	890	50	3,300	2	12,900
95	1,100	40	3,850	1	15,700
90	1,300	30	4,500	0.5	20,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	831	697	635	588
3	966	843	800	772
7	1,150	972	910	870
14	1,380	1,130	1,030	964
30	1,810	1,460	1,320	1,210
60	2,110	1,740	1,580	1,470
90	2,330	1,950	1,800	1,690

03491000 - BIG CREEK NEAR ROGERSVILLE, TN

LOCATION.--Lat 36°25'34", long 82°57'07", Hawkins County, on left bank
300 feet upstream from county bridge, 2.0 miles upstream from the
mouth, and 3.0 miles northeast of Rogersville.

DRAINAGE AREA.--47.3 mi².

PERIOD OF RECORD.--1942-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	2.9	80	8.0	20	75
99.1	3.2	70	11	10	130
99	3.3	60	17	5	210
98	3.8	50	24	2	390
95	4.7	40	36	1	560
90	5.8	30	50	0.5	900

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	4.3	3.1	2.6	2.2
3	4.4	3.2	2.7	2.3
7	4.7	3.4	2.8	2.5
14	5.1	3.7	3.1	2.7
30	5.9	4.3	3.7	3.3
60	7.2	5.1	4.4	3.9
90	8.4	5.9	4.9	4.4

03491300 - BEECH CREEK AT KEPLER, TN

LOCATION.--Lat 36°24'06", long 82°53'09", Hawkins County, on upstream right wingwall of county road bridge, at Kepler, 5.9 miles east of intersection of U.S. Highway 11W and Burem Road, at mile 6.6.

DRAINAGE AREA.--47.0 mi².

PERIOD OF RECORD.--1966-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	1.6	80	5.8	20	61
99.1	1.8	70	8.5	10	110
99	1.9	60	13	5	190
98	2.2	50	19	2	350
95	2.8	40	28	1	530
90	3.7	30	41	0.5	780

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	2.4	1.7	1.4	1.2
3	2.5	1.8	1.5	1.3
7	2.7	1.9	1.6	1.3
14	3.0	2.2	1.8	1.6
30	3.9	2.7	2.3	2.0
60	5.4	3.4	2.8	2.3
90	7.3	4.3	3.4	2.7

03491500 - HOLSTON RIVER NEAR ROGERSVILLE, TN

LOCATION.--Lat 36°22'13", long 82°59'58", Hawkins County, 300 feet downstream from bridge on State Highways 66 and 70, 2.300 feet upstream from Southern Railway bridge, 0.5 mile downstream from Dodson Creek, 3 miles south of Rogersville, and at mile 104.2.

DRAINAGE AREA.--3,035 mi².

PERIOD OF RECORD.--1902-42.

REMARKS.--Site inundated by Cherokee Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	585	80	1,370	20	5,640
99.1	627	70	1,730	10	8,220
99	631	60	2,110	5	11,900
98	710	50	2,740	2	17,700
95	842	40	3,370	1	22,600
90	1,020	30	4,280	0.5	28,600

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	820	631	555	501
3	858	669	591	535
7	893	694	614	556
14	939	728	641	580
30	1,030	791	700	637
60	1,210	903	779	692
90	1,380	1,000	853	749

03494000 - HOLSTON RIVER NEAR JEFFERSON CITY, TN

LOCATION.--Lat 36°10'03", long 83°30'10", Jefferson County, on left bank 250 feet upstream from bridge on State Highway 92, 0.2 mile downstream from Cherokee Dam, 2.5 miles upstream from Mill Spring Creek, and 3 miles north of Jefferson City.

DRAINAGE AREA.--3,429 mi².

PERIOD OF RECORD.--1954-74.

REMARKS.--Flow regulated by South Holston Lake (since November 1950), by Watauga Lake (since December 1948), by Boone Lake (since December 1952), by Fort Patrick Lake (since October 1953), and by Cherokee Lake (since December 1941).

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	42.8	80	108	20	7,750
99.1	44.3	70	1,500	10	9,300
99	44.7	60	2,850	5	11,100
98	48.7	50	4,000	2	13,500
95	57.0	40	5,280	1	16,300
90	67.0	30	6,500	0.5	18,700

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	50.2	42.5	38.4	35.1
3	53.6	46.3	42.8	40.1
7	57.4	49.2	48.2	45.0
14	87.0	68.0	62.0	53.0
30	629	200	110	78.0
60	1,550	995	768	612
90	2,220	1,650	1,430	1,270

03495500 - HOLSTON RIVER NEAR KNOXVILLE, TN

LOCATION.--Lat 36°00'56", long 83°49'54", Knox County, on right bank at Knoxville city limits, 300 feet upstream from bridge on U.S. Highways 11E, 25W, and 70, and 5.5 miles upstream from confluence with French Broad River.

DRAINAGE AREA.--3,747 mi².

PERIOD OF RECORD.--1954-81.

REMARKS.--Regulated.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	220	80	1,310	20	8,000
99.1	260	70	2,400	10	9,800
99	266	60	3,530	5	11,500
98	319	50	4,600	2	14,600
95	450	40	5,740	1	17,900
90	640	30	6,780	0.5	20,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	260	191	164	145
3	300	217	185	163
7	421	288	244	217
14	714	471	388	335
30	1,380	907	721	593
60	2,100	1,590	1,380	1,240
90	2,790	2,200	1,960	1,790

03496000 - FIRST CREEK AT MINERAL SPRINGS AVE. AT KNOXVILLE, TN

LOCATION.--Lat 36°00'53", long 83°55'18", Knox County, on right bank at Mineral Springs Avenue Bridge in Knoxville, 0.3 mile downstream from Whites Creek, and 5.9 miles upstream from mouth.

DRAINAGE AREA.--15.7 mi² (includes 3.8 mi² without surface drainage).

PERIOD OF RECORD.--1945-63.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	2.54	80	4.72	20	30.9
99.1	2.68	70	6.19	10	46.8
99	2.72	60	8.20	5	70.8
98	2.87	50	11.7	2	120
95	3.14	40	16.1	1	174
90	3.60	30	22.0	0.5	230

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	2.9	2.5	2.3	2.2
3	3.0	2.6	2.4	2.2
7	3.1	2.7	2.5	2.3
14	3.3	2.8	2.6	2.4
30	3.6	3.0	2.8	2.6
60	4.1	3.3	3.0	2.8
90	4.8	3.8	3.3	3.0

03496200 - FIRST CREEK ABOVE POWERS AVE. AT KNOXVILLE, TN

LOCATION.--Lat 36°00'35", long 83°55'17", Knox County, on left bank, in Knoxville, 200 feet downstream from unnamed tributary, 0.25 mile upstream from Powers Avenue, 5.6 miles upstream from mouth.

DRAINAGE AREA.--17.2 mi² (includes 3.8 mi² without surface drainage).

PERIOD OF RECORD.--1964-70.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	2.41	80	5.65	20	25.1
99.1	2.49	70	7.27	10	37.5
99	2.52	60	9.57	5	57.0
98	2.75	50	12.8	2	109
95	3.66	40	15.6	1	153
90	4.42	30	19.6	0.5	220

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	3.2	2.5	2.4	2.2
3	3.4	2.6	2.5	2.3
7	3.6	2.7	2.6	2.5
14				
30				
60				
90				

03496500 - FIRST CREEK AT FIFTH AVE. AT KNOXVILLE, TN

LOCATION.--Lat 35°58'40", long 83°54'51", Knox County, on left bank, at Fifth Avenue bridge in Knoxville, 1.8 miles upstream from mouth and 4.1 miles downstream from gage at Mineral Springs Avenue in Knoxville.

DRAINAGE AREA.--21.1 mi² (includes 4.5 mi² without surface drainage).

PERIOD OF RECORD.--1946-58.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	2.94	80	6.00	20	38.4
99.1	3.01	70	7.96	10	59.6
99	3.03	60	11.0	5	93.5
98	3.22	50	15.1	2	154
95	3.61	40	20.2	1	223
90	4.25	30	27.2	0.5	329

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	3.3	2.7	2.5	2.3
3	3.4	2.8	2.6	2.4
7	3.6	3.1	2.8	2.6
14	3.9	3.2	3.0	2.8
30	4.4	3.5	3.2	2.9
60	5.7	4.2	3.8	3.5
90	6.3	4.8	4.1	3.7

03497000 - TENNESSEE RIVER AT KNOXVILLE, TN

LOCATION.--Lat 35°57'17", long 83°51'42", Knox County, on left bank, 0.7 mile downstream from confluence of French Broad and Holston Rivers, 3.5 miles upstream from First Creek, 3.6 miles upstream from Gay Street Bridge at Knoxville, and at mile 651.4.

DRAINAGE AREA.--8,934 mi², includes that of First Creek.

PERIOD OF RECORD.--1919-42.

REMARKS.--See next page for present characteristics.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	1,840	80	4,770	20	16,800
99.1	2,020	70	5,900	10	24,000
99	2,060	60	7,250	5	34,000
98	2,370	50	8,800	2	50,000
95	2,900	40	10,900	1	62,000
90	3,400	30	13,300	0.5	74,700

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	2,730	2,100	1,860	1,690
3	2,820	2,190	1,940	1,770
7	2,980	2,320	2,060	1,880
14	3,180	2,450	2,150	1,950
30	3,530	2,640	2,280	2,020
60	4,160	3,030	2,550	2,200
90	4,770	3,400	2,830	2,410

03497000 - TENNESSEE RIVER AT KNOXVILLE, TN

LOCATION.--Lat 35°57'17", long 83°51'42", Knox County, on left bank, 0.7 mile downstream from confluence of French Broad and Holston Rivers, 3.5 miles upstream from First Creek, 3.6 miles upstream from Gay Street Bridge at Knoxville, and at mile 651.4.

DRAINAGE AREA.--8,934 mi², includes that of First Creek.

PERIOD OF RECORD.--1954-81.

REMARKS.--Flow regulated by Douglas, South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	1,800	80	6,500	20	19,300
99.1	2,000	70	8,700	10	23,000
99	2,020	60	10,800	5	27,600
98	2,330	50	13,000	2	35,000
95	3,100	40	14,800	1	41,200
90	4,000	30	16,900	0.5	48,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	1,700	1,420	1,310	1,220
3	2,330	1,960	1,810	1,710
7	3,050	2,530	2,360	2,250
14	4,100	3,250	2,920	2,680
30	5,850	4,440	3,810	3,340
60	7,490	5,710	4,880	4,250
90	8,650	7,110	6,410	5,890

03497300 - LITTLE RIVER ABOVE TOWNSEND, TN

LOCATION.--Lat 35°39'52", long 83°42'41", Blount County, on left bank along State Highway 73, in Great Smoky Mountains National Park, 0.3 mile above Rush Branch, 0.4 mile southeast of Park entrance, 2.2 miles southeast of Townsend, and at mile 35.3.

DRAINAGE AREA.--106 mi².

PERIOD OF RECORD.--1964-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	36	80	98	20	393
99.1	38	70	130	10	560
99	38	60	164	5	780
98	42	50	210	2	1,210
95	53	40	250	1	1,600
90	69	30	305	0.5	2,100

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	46	36	32	29
3	48	38	33	30
7	53	41	36	32
14	59	46	40	36
30	72	54	46	40
60	87	63	53	46
90	110	74	61	52

03498000 - LITTLE RIVER NEAR WALLAND, TN

LOCATION.--Lat 35°45'48", long 83°51'00", Blount County, on right bank
0.4 mile upstream from former bridge on State Highway 73, 1.0 mile
upstream from Ellejoy Creek, and 3 miles downstream from Walland.

DRAINAGE AREA.--192 mi².

PERIOD OF RECORD.--1932-52.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	34.7	80	102	20	507
99.1	37.6	70	133	10	773
99	38.2	60	171	5	1,130
98	44.1	50	222	2	1,730
95	56.4	40	290	1	2,450
90	72.7	30	380	0.5	3,290

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	50.5	36.4	30.4	26.2
3	54.7	40.6	34.5	30.2
7	56.9	42.4	36.3	32.0
14	61.9	45.6	38.7	33.8
30	69.2	50.0	42.4	37.2
60	85.9	60.5	50.9	44.3
90	101	72.6	61.3	53.4

03498500 - LITTLE RIVER NEAR MARYVILLE, TN

LOCATION.--Lat 35°47'10", long 83°53'04", Blount County, on right bank on downstream side of bridge on U.S. Highway 411, 0.8 mile downstream from Crooked Creek, 5.0 miles east of Maryville, and at mile 17.3.

DRAINAGE AREA.--269 mi².

PERIOD OF RECORD.--1952-81.

REMARKS.--Diurnal fluctuations at low flow caused by small mills above station. Some flow diverted for municipal water supply of Maryville.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	51.0	80	152	20	690
99.1	53.8	70	200	10	1,100
99	54.5	60	250	5	1,620
98	62.2	50	320	2	2,740
95	82.0	40	410	1	3,720
90	110	30	520	0.5	4,700

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	76.6	58.0	50.0	44.4
3	80.0	60.9	52.7	46.8
7	84.7	63.8	54.8	48.4
14	92.9	68.6	58.4	51.0
30	109	77.8	64.8	55.5
60	134	92.0	74.4	61.9
90	151	102	81.9	68.1

03518000 - LITTLE TENNESSEE RIVER AT CALDERWOOD, TN

LOCATION.--Lat 35°30'24", long 84°00'14", Blount County, on right bank
250 feet downstream from Scona Lodge Ferry, 0.7 mile west of
Calderwood, 2.5 miles downstream from Calderwood Dam, and at mile 41.1.

DRAINAGE AREA.--1,862 mi².

PERIOD OF RECORD.--1913-18.

REMARKS.--Based on 6 years of record; data given below may not be
representative of flow.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	1,060	80	2,180	20	5,830
99.1	1,170	70	2,500	10	8,000
99	1,200	60	2,860	5	10,600
98	1,390	50	3,400	2	15,200
95	1,700	40	4,020	1	20,000
90	1,900	30	4,660	0.5	26,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	1,500	1,200	990	860
3	1,500	1,200	1,000	890
7	1,700	1,400	1,200	1,100
14	1,800	1,500	1,300	1,100
30	2,000	1,700	1,400	1,200
60	2,100	1,800	1,600	1,400
90	2,300	1,900	1,700	1,500

03518000 - LITTLE TENNESSEE RIVER AT CALDERWOOD, TN

LOCATION.--Lat 35°30'24", long 84°00'14", Blount County, on right bank
250 feet downstream from Scona Lodge Ferry, 0.7 mile west of
Calderwood, 2.5 miles downstream from Calderwood Dam, and at mile 41.1.

DRAINAGE AREA.--1,862 mi².

PERIOD OF RECORD.--1946-57.

REMARKS.--Flow regulated by several reservoirs above station. Site
inundated by Chilhowee Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	1,000	80	2,900	20	5,610
99.1	1,050	70	3,500	10	6,400
99	1,060	60	3,980	5	7,060
98	1,190	50	4,400	2	11,800
95	1,500	40	4,710	1	13,300
90	2,100	30	5,080	0.5	14,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	720	330	200	120
3	1,400	1,000	860	750
7	1,800	1,400	1,200	1,100
14	2,000	1,600	1,400	1,300
30	2,300	1,900	1,700	1,500
60	2,900	2,400	2,100	1,900
90	3,200	2,700	2,500	2,300

03518300 - LITTLE TENNESSEE RIVER BELOW CHILHOWEE DAM, TN

LOCATION.--Lat 35°32'48", long 84°03'50", Blount County, on right bank on U.S. Highway 129, at Tallahassee, 100 feet upstream from Cochran Creek, 0.8 mile downstream from Chilhowee Dam, 20 miles south of Maryville, and at mile 32.8. Records include flow of Cochran Creek.

DRAINAGE AREA.--1,987 mi².

PERIOD OF RECORD.--1959-79.

REMARKS.--Flow regulated by seven reservoirs above station.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	1,230	80	3,100	20	6,800
99.1	1,250	70	3,800	10	7,800
99	1,250	60	4,400	5	9,000
98	1,320	50	4,900	2	10,700
95	1,500	40	5,400	1	11,800
90	2,100	30	6,000	0.5	13,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	1,290	1,240	1,200	1,100
3	1,420	1,300	1,250	1,200
7	1,940	1,530	1,350	1,250
14	2,250	1,750	1,520	1,340
30	2,600	2,010	1,740	1,550
60	3,090	2,430	2,110	1,860
90	3,510	2,890	2,560	2,290

03518500 - TELLICO RIVER AT TELLICO PLAINS, TN

LOCATION.--Lat 35°21'42", long 84°16'44", Monroe County, on right bank
200 feet upstream from bridge on Tellico Plains - Rafter Road, 0.4 mile
downstream from Laurel Creek, 0.8 mile east of Tellico Plains, and at
mile 28.2.

DRAINAGE AREA.--118 mi².

PERIOD OF RECORD.--1926-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	30	80	86	20	390
99.1	32	70	110	10	570
99	33	60	150	5	810
98	37	50	190	2	1,300
95	47	40	240	1	1,740
90	61	30	300	0.5	2,370

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	46.4	34.2	29.2	25.6
3	47.5	35.1	30.1	26.6
7	50.0	36.7	31.4	27.7
14	54.0	39.4	33.7	29.6
30	61.8	44.2	37.2	32.4
60	75.5	52.6	43.6	37.3
90	84.7	58.9	49.3	42.8

03519500 - LITTLE TENNESSEE RIVER AT MCGHEE, TN

LOCATION.--Lat 35°36'16", long 84°12'43", Monroe County, on right bank at mouth of Tellico River, 100 feet upstream from bridge on U.S. Highway 411, 0.3 mile upstream from Louisville & Nashville Railroad bridge, and 0.5 mile south of McGhee. Records include flow of Tellico River.

DRAINAGE AREA.--2,443 mi², includes that of Tellico River.

PERIOD OF RECORD.--1906-19.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	1,400	80	2,830	20	8,570
99.1	1,490	70	3,500	10	12,000
99	1,510	60	4,210	5	15,700
98	1,710	50	5,100	2	22,700
95	2,000	40	5,970	1	30,000
90	2,300	30	7,010	0.5	37,500

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	1,800	1,300	1,100	910
3	1,900	1,400	1,200	970
7	1,900	1,600	1,500	1,400
14	2,000	1,700	1,600	1,500
30	2,200	1,900	1,800	1,700
60	2,400	2,100	2,000	2,000
90	2,700	2,300	2,200	2,200

03519500 - LITTLE TENNESSEE RIVER AT MCGHEE, TN

LOCATION.--Lat 35°36'16", long 84°12'43", Monroe County, on right bank at mouth of Tellico River, 100 feet upstream from bridge on U.S. Highway 411, 0.3 mile upstream from Louisville & Nashville Railroad bridge, and 0.5 mile south of McGhee. Records include flow of Tellico River.

DRAINAGE AREA.--2,443 mi², includes that of Tellico River.

PERIOD OF RECORD.--1958-69.

REMARKS.--Flow regulated by seven reservoirs above station.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	1,640	80	3,530	20	7,520
99.1	1,690	70	4,200	10	8,800
99	1,700	60	4,770	5	9,890
98	1,830	50	5,300	2	13,300
95	2,200	40	5,870	1	15,400
90	2,700	30	6,600	0.5	19,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	1,600	1,500	1,400	1,300
3	1,900	1,700	1,600	1,600
7	2,300	1,900	1,700	1,600
14	2,800	2,200	1,900	1,700
30	3,100	2,500	2,200	1,900
60	3,600	2,900	2,500	2,200
90	3,900	3,300	3,000	2,800

03519640 - BAKER CREEK NEAR GREENBACK, TN

LOCATION.--Lat 35°40'21", long 84°06'28", Blount County, on right bank at downstream side of county road bridge, 1.0 mile upstream from Little Baker Creek, 3.4 miles east of Greenback, and at mile 15.0.

DRAINAGE AREA.--16.0 mi².

PERIOD OF RECORD.--1965-75.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	5.97	80	12.2	20	46.3
99.1	6.27	70	14.9	10	69.0
99	6.35	60	18.6	5	99.7
98	7.05	50	23.0	2	150
95	7.90	40	28.8	1	202
90	9.22	30	35.8	0.5	290

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	3.6	2.2	1.7	1.3
3	3.7	2.3	1.8	1.4
7	4.2	2.5	1.9	1.6
14				
30				
60				
90				

03520000 - TENNESSEE RIVER AT LOUDON, TN

LOCATION.--Lat 35°44'33", long 84°19'56", Loudon County, on second pier from left bank at bridge on U.S. Highway 11, at Loudon, 9.75 miles downstream from Little Tennessee River, 10.75 miles downstream from Fort Loudoun Dam, 61 miles upstream from Watts Bar Dam, and at River Mile 591.6.

DRAINAGE AREA.--12,220 mi² (approximately).

PERIOD OF RECORD.--1923-30.

REMARKS.--Unregulated flow. Based on eight years of record; data given below may not be representative of flow.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	2,630	80	8,000	20	27,600
99.1	2,900	70	11,000	10	38,000
99	2,940	60	13,100	5	49,300
98	3,430	50	16,000	2	69,200
95	5,100	40	18,900	1	82,200
90	5,900	30	22,100	0.5	95,500

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	5,200	3,500	2,800	2,300
3	5,400	3,600	2,900	2,300
7	5,600	3,700	3,000	2,400
14	5,900	3,900	3,100	2,500
30	6,500	4,300	3,400	2,800
60	7,200	4,700	3,700	2,900
90	8,700	5,600	4,200	3,300

03528000 - CLINCH RIVER ABOVE TAZEWell, TN

LOCATION.--Lat 36°25'30", long 83°23'54", Claiborne County, on right bank
0.4 mile upstream from Grissom Island, 4.6 miles downstream from Big
War Creek, 10 miles east of Tazewell, and at mile 159.8.

DRAINAGE AREA.--1,474 mi².

PERIOD OF RECORD.--1920-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	136	80	420	20	2,900
99.1	145	70	560	10	4,800
99	147	60	800	5	7,300
98	166	50	1,100	2	12,000
95	210	40	1,500	1	16,000
90	270	30	2,100	0.5	19,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	200	150	130	120
3	208	157	136	121
7	216	161	140	124
14	229	169	146	130
30	269	194	165	146
60	331	226	188	163
90	395	262	214	182

03528300 - BIG BARREN CREEK NEAR TAZEWELL, TN

LOCATION.--Lat 36°22'56", long 83°42'40", Claiborne County, on right bank
8.6 miles southwest of New Tazewell.

DRAINAGE AREA.--19.0 mi².

PERIOD OF RECORD.--1935-45.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	2.11	80	3.52	20	17.4
99.1	2.20	70	4.23	10	30.1
99	2.22	60	5.35	5	46.1
98	2.35	50	6.84	2	74.1
95	2.60	40	8.65	1	101
90	2.95	30	12.0	0.5	130

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	2.5	2.1	1.9	1.8
3	2.6	2.1	1.9	1.8
7	2.7	2.2	2.1	2.0
14	2.9	2.3	2.1	2.0
30	3.2	2.6	2.4	2.4
60	3.6	2.8	2.6	2.4
90	3.9	3.1	2.7	2.5

03528400 - WHITE CREEK NEAR SHARPS CHAPEL, TN

LOCATION.--Lat 36°20'42", long 83°53'40", Union County, on right bank
in the White Hollow Experimental Watershed Area.

DRAINAGE AREA.--2.68 mi².

PERIOD OF RECORD.--1935-70.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	0.62	80	0.96	20	4.35
99.1	0.64	70	1.13	10	7.22
99	0.65	60	1.36	5	12.2
98	0.70	50	1.70	2	21.7
95	0.77	40	2.24	1	31.9
90	0.84	30	2.95	0.5	43.0

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	0.7	0.6	0.6	0.5
3	.8	.6	.6	.5
7	.8	.6	.6	.6
14	.8	.7	.6	.6
30	.8	.7	.7	.6
60	.9	.8	.7	.7
90	.9	.8	.7	.7

03532000 - POWELL RIVER NEAR ARTHUR, TN

LOCATION.--Lat 36°32'30", long 83°37'49", Claiborne County, on left bank
500 feet upstream from bridge on U.S. Highway 25E, 2.3 miles east of
Arthur, 2.4 miles downstream from Indian Creek, and at mile 65.4.

DRAINAGE AREA.--685 mi².

PERIOD OF RECORD.--1920-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	78	80	205	20	1,570
99.1	84	70	290	10	2,600
99	86	60	410	5	4,100
98	94	50	580	2	6,600
95	110	40	805	1	8,800
90	140	30	1,100	0.5	11,300

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	111	86.3	77.2	71.2
3	112	87.9	78.9	72.9
7	115	90.2	81.1	75.1
14	122	93.9	84.0	77.5
30	139	103	90.6	82.2
60	170	119	100	87.9
90	203	136	112	96.3

03533000 - CLINCH RIVER BELOW NORRIS DAM, TN

LOCATION.--Lat 36°12'56", long 84°04'56", Anderson County, 0.5 mile upstream from Clear Creek, 1.5 miles north of Norris, and at mile 78.8.

DRAINAGE AREA.--2,913 mi².

PERIOD OF RECORD.--1904-35.

REMARKS.--Unregulated. See next page for present characteristics.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	299	80	1,020	20	6,390
99.1	339	70	1,460	10	10,500
99	350	60	2,000	5	15,600
98	407	50	2,610	2	25,100
95	508	40	3,430	1	32,200
90	712	30	4,590	0.5	38,400

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	464	319	263	224
3	485	330	268	226
7	514	353	290	246
14	555	384	318	273
30	657	454	377	325
60	821	550	451	386
90	1,010	688	570	492

03533000 - CLINCH RIVER BELOW NORRIS DAM, TN

LOCATION.--Lat 36°12'56", long 84°04'56", Anderson County, 0.5 mile upstream from Clear Creek, 1.0 mile downstream from Norris Dam, 1.5 miles north of Norris, and at mile 78.8.

DRAINAGE AREA.--2,913 mi².

PERIOD OF RECORD.--1936-74.

REMARKS.--Flow completely regulated by Norris Lake.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	16.0	80	468	20	6,520
99.1	22.4	70	1,890	10	8,000
99	23.8	60	2,860	5	9,470
98	33.2	50	3,730	2	15,700
95	49.6	40	4,590	1	19,600
90	73.7	30	5,460	0.5	22,000

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	48.6	31.0	19.0	14.2
3	56.7	34.0	19.9	15.4
7	87.6	40.0	24.0	15.5
14	168	49.9	30	22.5
30	461	111	47.9	31.8
60	1,260	357	149	64.5
90	1,800	670	250	80.0

03535000 - BULLRUN CREEK NEAR HALLS CROSSROADS, TN

LOCATION.--Lat 36°06'52", long 83°59'16", Knox County, on left bank on downstream side of bridge on U.S. Highway 441, 2.1 miles downstream from Smith Branch and 4.0 miles northwest of Halls Crossroads.

DRAINAGE AREA.--68.5 mi².

PERIOD OF RECORD.--1958-81.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	5.3	80	14	20	120
99.1	6.2	70	20	10	210
99	6.4	60	29	5	340
98	6.9	50	42	2	670
95	8.2	40	60	1	1,000
90	9.7	30	85	0.5	1,400

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	7.10	5.28	4.62	4.19
3	7.27	5.43	4.77	4.34
7	7.63	5.80	5.16	4.75
14	8.61	6.84	6.25	5.89
30	10.0	7.73	7.00	6.51
60	12.4	9.42	8.38	7.71
90	15.3	11.2	9.72	8.72

03537000 - WHITEOAK CREEK BELOW OAK RIDGE NATIONAL LABORATORY,
NEAR OAK RIDGE, TN

LOCATION.--Lat 35°54'44", long 84°18'59", Roane County, on right bank
0.1 mile upstream from Melton Branch, 1 mile south of Oak Ridge
National Laboratory, and 7 miles south of Oak Ridge.

DRAINAGE AREA.--3.62 mi².

PERIOD OF RECORD.--1955-64.

REMARKS.--Natural flow of stream affected by operation of Oak Ridge National
Laboratory.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	2.78	80	4.44	20	10.8
99.1	2.89	70	4.91	10	17.2
99	2.92	60	5.38	5	26.7
98	3.14	50	5.94	2	46.0
95	3.55	40	6.68	1	69.0
90	3.87	30	7.93	0.5	100

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	3.3	2.9	2.7	2.6
3	3.4	3.0	2.8	2.6
7	3.7	3.3	3.1	2.9
14	3.9	3.4	3.2	3.0
30	4.3	3.6	3.3	3.1
60	4.6	3.9	3.6	3.3
90	4.9	4.1	3.7	3.4

03537500 - MELTON BRANCH NEAR OAK RIDGE, TN

LOCATION.--Lat 35°54'38", long 84°18'54", Roane County, on right bank
0.1 mile above mouth, 1 mile south of Oak Ridge National Laboratory,
and 7 miles south of Oak Ridge.

DRAINAGE AREA.--1.48 mi².

PERIOD OF RECORD.--1956-64.

REMARKS.--Natural flow of stream affected by operations of Oak Ridge National
Laboratory.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	0	80	0.35	20	2.75
99.1	0	70	.52	10	5.10
99	0	60	.70	5	9.48
98	0	50	.88	2	20.0
95	.14	40	1.29	1	30.0
90	.20	30	1.81	0.5	45.0

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	0.1	0	*	*
3	.2	.1	*	*
7	.2	.1	*	*
14				
30				
60				
90				

*figures cannot be determined from available data.

03538225 - POPLAR CREEK NEAR OAK RIDGE, TN

LOCATION.--Lat 35°59'55", long 84°20'23", Anderson County, on right bank 1,000 feet upstream from county road bridge, 0.4 mile downstream from Indian Creek, 8.2 miles southwest of intersection of State Highways 95 and 62 in Oak Ridge.

DRAINAGE AREA.--82.5 mi².

PERIOD OF RECORD.--1961-81.

REMARKS.--Natural flow of stream affected by operations of Oak Ridge National Laboratory.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	5.82	80	18.6	20	216
99.1	6.26	70	29.0	10	360
99	6.30	60	45.1	5	616
98	7.20	50	71.1	2	1,200
95	8.90	40	104	1	1,900
90	12.0	30	147	0.5	2,600

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	8.05	5.82	5.12	4.70
3	8.17	5.94	5.25	4.84
7	8.53	6.25	5.54	5.11
14	9.44	6.80	5.96	5.44
30	11.5	7.91	6.78	6.08
60	15.0	9.95	8.34	7.35
90	19.9	12.1	9.61	8.07

03538250 - EAST FORK POPLAR CREEK NEAR OAK RIDGE, TN

LOCATION.--Lat 35°57'58", long 84°21'30", Anderson County, near left bank on upstream side of county road bridge, 0.3 mile north of State Highway 95, 1.7 miles upstream from Bear Creek, and 5.8 miles southwest of intersection of State Highways 95 and 62 in Oak Ridge.

DRAINAGE AREA.--19.5 mi².

PERIOD OF RECORD.--1961-81.

REMARKS.--Natural flow of stream affected by operations of Atomic Energy Commission's Y-12 Plant and the Sewage Treatment Plant of the City of Oak Ridge.

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	16	80	23	20	59
99.1	17	70	25	10	87
99	17	60	28	5	138
98	17	50	32	2	240
95	19	40	38	1	400
90	21	30	46	0.5	510

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	18.0	16.0	15.0	14.1
3	18.5	16.9	16.1	15.4
7	19.3	17.6	16.7	16.0
14	20.1	18.3	17.4	16.7
30	21.3	19.5	18.6	17.8
60	23.2	20.8	19.6	18.7
90	25.1	21.9	20.4	19.2

03538500 - EMORY RIVER NEAR WARTBURG, TN

LOCATION.--Lat 36°06'46", long 84°36'54", Morgan County, on right bank
50 feet downstream from highway bridge on Wartburg-Lancing Road, 1.1
miles downstream from Rock Creek, 1.25 miles northwest of Wartbrug, 6.1
miles upstream from Obed River, and at mile 34.5.

DRAINAGE AREA.--83.2 mi².

PERIOD OF RECORD.--1935-68.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	0	80	3.21	20	180
99.1	0	70	9.09	10	343
99	0	60	20.8	5	588
98	0	50	41.0	2	1,090
95	.16	40	72.0	1	1,750
90	.69	30	113	0.5	2,590

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	0.2	0	0	0
3	.2	0	0	0
7	.3	0	0	0
14	.4	0	0	0
30	.7	0	0	0
60	1.6	.2	0	0
90	3.6	.6	.2	.1

03539000 - DADDYS CREEK NEAR GRASSY COVE, TN

LOCATION.--Lat 35°53'26", long 84°56'16", Cumberland County, at bridge on State Highway 68, 3.6 miles northwest of Grassy Cove, 5.6 miles above Bird Creek, and at mile 27.0.

DRAINAGE AREA.--51.2 mi².

PERIOD OF RECORD.--1926-30.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	0	80	7.70	20	182
99.1	0	70	21.0	10	302
99	0	60	40.4	5	494
98	0	50	61.2	2	886
95	.24	40	86.1	1	1,390
90	1.80	30	125	0.5	1,930

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	0.5	0.1	0	0
3	.5	.1	0	0
7	.6	.1	0	0
14				
30				
60				
90				

03539500 - DADDYS CREEK NEAR CRAB ORCHARD, TN

LOCATION.--Lat 35°55'53", long 84°54'47", Cumberland County, on left bank
0.6 mile upstream from North Creek, 1.5 miles downstream from bridge on
U.S. Highway 70, 1.5 miles downstream from Bird Creek, and 2 miles
northwest of Crab Orchard.

DRAINAGE AREA.--93.5 mi².

PERIOD OF RECORD.--1931-58.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage
of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	0.04	80	3.19	20	250
99.1	.06	70	9.40	10	436
99	.07	60	25.8	5	706
98	.17	50	54.1	2	1,200
95	.44	40	96.6	1	1,760
90	.95	30	154	0.5	2,400

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	0.3	0.1	0	0
3	.3	.1	0	0
7	.4	.1	0	0
14	.5	.1	0	0
30	.9	.2	.1	.1
60	2.08	.7	.4	.2
90				

03539600 - DADDYS CREEK NEAR HEBBERTSBURG, TN

LOCATION.--Lat 35°59'53", long 84°49'24", Cumberland County, on upstream end of left abutment of Antioch Bridge, 2.1 miles southwest of Hebbertsburg, 6.9 miles northeast of Crab Orchard, and at mile 9.1.

DRAINAGE AREA.--139 mi².

PERIOD OF RECORD.--1958-68.

REMARKS.--

FLOW DURATION

Flow in cubic feet per second, which was equaled or exceeded for percentage of time indicated.

Percentage	Discharge	Percentage	Discharge	Percentage	Discharge
99.5	0.35	80	12.8	20	351
99.1	.46	70	28.7	10	620
99	.48	60	60.4	5	993
98	.84	50	105	2	1,820
95	2.03	40	159	1	2,630
90	4.65	30	236	0.5	3,510

LOW FLOW

Lowest average flow in cubic feet per second.

Period (consecutive days)	Recurrence interval (in years)			
	2	5	10	20
1	1.5	0.6	0.4	0.3
3	1.6	.7	.4	.3
7	1.8	.8	.5	.3
14	2.4	1.0	.6	.4
30	4.8	1.9	1.1	.6
60	12	4.6	2.3	1.2
90	19	7.3	4.1	2.4