

CUMBERLAND RIVER BASIN

03421000 COLLINS RIVER NEAR MCMINNVILLE, TN

LOCATION.--Lat 35°42'32", long 85°43'46", Warren County, Hydrologic Unit 05130107, on left bank at downstream side of bridge on U.S. Highway 70S, 1.8 mi downstream from Barren Fork River, 2.5 mi northeast of McMinnville, and at mile 19.5.

DRAINAGE AREA.--640 mi².

PERIOD OF RECORD.--October 1924 to current year. Prior to April 1925 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 873: 1929, 1932(M), 1934-35, 1936(M), 1937. WSP 1276: 1925-26, 1928(M), 1933, 1936, 1940. WSP 2110: Drainage area.

GAGE.--Data collection platform. Datum of gage is 825.78 ft, Sandy Hook datum. Prior to Oct. 16, 1926, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1854 is believed to have been about equal to that of Mar. 23, 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 16	2230	26,100	23.36	May 7	0130	*43,200	*31.17
Feb 22	2130	15,100	16.85				

Minimum discharge, 153 ft³/s, Oct. 26, 27.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	386	772	393	1,190	2,200	3,370	628	1,080	628	305	567	204
2	298	563	372	1,210	1,710	2,720	588	1,000	569	467	726	196
3	245	451	355	1,180	1,430	2,260	560	768	531	1,430	725	250
4	215	404	509	1,170	2,100	1,910	538	635	510	936	783	631
5	216	438	4,460	1,060	2,100	1,680	1,070	1,480	477	736	666	500
6	223	2,860	3,680	978	1,700	1,580	1,210	25,800	452	646	709	398
7	280	3,450	2,360	879	1,890	1,670	4,960	39,500	467	912	2,860	356
8	424	2,090	1,720	811	1,750	1,530	4,700	29,900	519	974	1,090	300
9	379	1,420	1,370	780	1,480	1,400	3,680	9,880	485	850	757	261
10	323	1,080	2,120	740	1,400	1,270	3,520	4,030	471	656	598	237
11	285	7,050	8,960	674	1,510	1,140	4,080	3,830	459	594	495	221
12	260	4,320	5,080	611	1,480	1,040	3,210	3,550	626	721	447	208
13	256	1,970	3,280	562	1,380	961	2,370	2,470	528	642	408	197
14	240	1,460	3,240	536	3,180	892	1,850	1,910	452	1,420	389	196
15	225	1,170	2,490	514	19,500	835	1,530	1,580	416	1,050	468	191
16	235	1,350	2,030	494	25,100	790	1,310	1,420	437	896	386	184
17	254	1,330	1,700	485	19,800	749	1,170	1,300	521	1,890	350	176
18	272	1,110	1,450	460	8,270	720	1,120	3,800	460	1,610	325	171
19	248	940	1,290	432	4,090	1,160	1,030	2,660	560	1,060	302	167
20	222	843	2,100	424	2,990	2,430	894	1,940	818	755	281	164
21	205	795	2,030	459	2,510	1,270	881	2,290	582	598	278	164
22	190	738	1,690	606	9,160	1,000	840	3,030	470	766	314	1,130
23	177	673	1,440	595	10,600	868	725	2,440	394	2,430	282	2,770
24	170	606	5,880	517	5,450	777	652	1,920	338	2,190	257	1,260
25	165	554	7,380	467	3,570	709	634	1,550	306	1,380	242	741
26	158	512	4,020	463	2,990	667	1,080	1,340	283	942	231	549
27	155	490	2,670	457	4,710	631	940	1,180	285	709	221	453
28	171	459	2,060	442	4,590	597	819	1,010	275	606	214	453
29	385	439	1,700	1,480	---	598	704	883	260	573	212	779
30	1,250	416	1,450	4,300	---	681	633	782	265	494	216	574
31	1,110	---	1,280	3,070	---	677	---	700	---	537	210	---
TOTAL	9,622	40,753	80,559	28,046	148,640	38,582	47,926	155,658	13,844	29,775	16,009	14,081
MEAN	310	1,358	2,599	905	5,309	1,245	1,598	5,021	461	960	516	469
MAX	1,250	7,050	8,960	4,300	25,100	3,370	4,960	39,500	818	2,430	2,860	2,770
MIN	155	404	355	424	1,380	597	538	635	260	305	210	164
CFSM	0.48	2.12	4.06	1.41	8.29	1.94	2.50	7.85	0.72	1.50	0.81	0.73
IN.	0.56	2.37	4.68	1.63	8.64	2.24	2.79	9.05	0.80	1.73	0.93	0.82

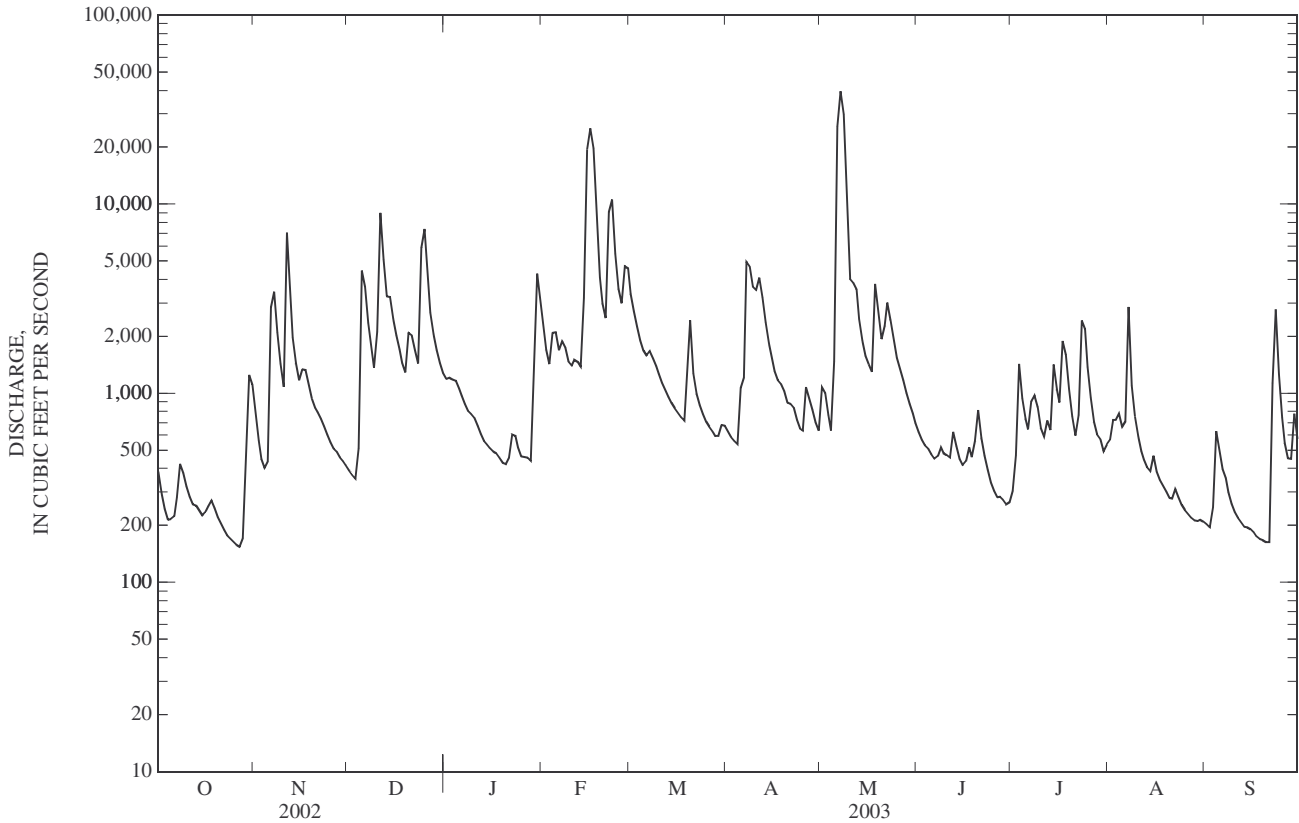
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)

MEAN	318	776	1,605	2,133	2,414	2,519	1,791	1,125	630	438	323	293
MAX	2,345	4,286	6,783	6,262	6,564	6,279	4,412	5,021	4,216	2,091	1,439	1,204
(WY)	(1976)	(1958)	(1991)	(1974)	(1939)	(1929)	(1994)	(2003)	(1928)	(1989)	(1942)	(1992)
MIN	63.5	69.0	107	126	391	619	462	225	85.9	115	76.2	62.9
(WY)	(1932)	(1932)	(1940)	(1940)	(1941)	(1988)	(1986)	(1941)	(1988)	(1944)	(1925)	(1925)

03421000 COLLINS RIVER NEAR MCMINNVILLE, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003	
ANNUAL TOTAL	574,689		623,495		1,191	
ANNUAL MEAN	1,574		1,708		2,193	
HIGHEST ANNUAL MEAN					1973	
LOWEST ANNUAL MEAN					409	
HIGHEST DAILY MEAN	41,500	Jan 24	39,500	May 7	64,100	Dec 23, 1990
LOWEST DAILY MEAN	94	Sep 13	155	Oct 27	37	Oct 28, 1961
ANNUAL SEVEN-DAY MINIMUM	98	Sep 9	169	Oct 22	50	Sep 24, 1925
MAXIMUM PEAK FLOW			43,200	May 7	75,300	Mar 23, 1929
MAXIMUM PEAK STAGE			31.17	May 7	39.10	Mar 23, 1929
INSTANTANEOUS LOW FLOW			a153	Oct 26	35	Sep 21, 1930
ANNUAL RUNOFF (CFSM)	2.46		2.67		1.86	
ANNUAL RUNOFF (INCHES)	33.40		36.24		25.29	
10 PERCENT EXCEEDS	2,870		3,320		2,610	
50 PERCENT EXCEEDS	536		757		534	
90 PERCENT EXCEEDS	136		244		114	

a Also occurred Oct. 27.



CUMBERLAND RIVER BASIN

03424730 SMITH FORK AT TEMPERANCE HALL, TN

LOCATION.--Lat 36°05'14", long 85°54'29", Dekalb County, Hydrologic Unit 05130108, on left bank 150 ft downstream from James Slager Memorial bridge on State Highway 264, 0.3 mi northwest of Temperance Hall, and at mile 8.8.

DRAINAGE AREA.--214 mi².

PERIOD OF RECORD.--August 1991 to current year.

GAGE.--Data collection platform and crest-stage gage. Datum of gage is 499.00 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 11	0300	7,580	14.73	Apr 7	0330	5,000	11.54
Feb 4	0730	5,110	11.68	May 5	1400	10,700	18.54
Feb 15	0030	10,200	17.95	May 6	0630	15,400	22.83
Feb 15	2030	*16,100	*23.39	May 7	1930	15,700	23.05
Feb 22	1000	8,660	16.08	Jun 7	1430	11,100	18.96

Minimum discharge, 24 ft³/s, Sept. 20, 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	144	64	192	255	611	188	93	78	492	89	61
2	57	102	61	186	215	495	171	90	73	235	369	48
3	49	79	59	200	203	392	160	90	81	159	1,540	76
4	48	71	414	231	2,590	331	144	80	87	116	540	98
5	46	158	2,930	217	922	298	208	5,210	84	93	822	79
6	43	1,860	926	196	547	272	438	10,900	73	86	1,020	64
7	43	533	453	171	530	240	3,010	9,070	5,010	440	1,040	50
8	44	293	307	160	454	214	1,140	4,150	1,130	285	393	44
9	45	201	234	154	382	201	802	1,320	491	156	245	39
10	45	153	1,910	141	355	183	810	714	322	113	174	36
11	51	855	4,580	123	383	170	984	1,380	376	489	162	36
12	77	576	1,230	110	378	161	621	831	678	263	549	33
13	66	306	1,400	101	329	154	427	487	362	184	304	29
14	54	209	1,930	98	2,960	144	322	344	262	160	281	40
15	50	183	845	95	11,000	136	264	278	220	124	227	42
16	69	1,680	516	93	8,190	129	228	231	225	97	154	36
17	74	735	368	93	2,620	125	216	203	1,150	84	114	31
18	68	396	292	86	1,210	136	200	225	502	74	93	28
19	55	279	291	83	764	820	165	205	901	67	80	26
20	49	222	1,100	83	607	841	145	168	437	60	72	25
21	46	182	571	102	549	427	388	177	306	62	66	25
22	43	156	394	120	4,280	306	306	224	222	89	64	894
23	39	130	296	112	2,110	250	210	190	173	316	68	621
24	36	111	1,070	94	1,220	217	172	162	143	250	58	240
25	35	98	1,030	92	776	194	163	141	116	142	53	146
26	33	91	575	90	626	185	182	133	99	100	46	105
27	34	85	407	87	774	171	156	119	93	79	43	89
28	34	79	322	86	788	156	130	105	91	69	40	87
29	42	72	266	146	---	191	114	97	82	121	39	76
30	354	68	227	506	---	267	103	93	106	113	38	69
31	237	---	200	314	---	213	---	85	---	97	63	---
TOTAL	2,038	10,107	25,268	4,562	46,017	8,630	12,567	37,595	13,973	5,215	8,846	3,273
MEAN	65.7	337	815	147	1,643	278	419	1,213	466	168	285	109
MAX	354	1,860	4,580	506	11,000	841	3,010	10,900	5,010	492	1,540	894
MIN	33	68	59	83	203	125	103	80	73	60	38	25
CFSM	0.31	1.57	3.81	0.69	7.68	1.30	1.96	5.67	2.18	0.79	1.33	0.51
IN.	0.35	1.76	4.39	0.79	8.00	1.50	2.18	6.54	2.43	0.91	1.54	0.57

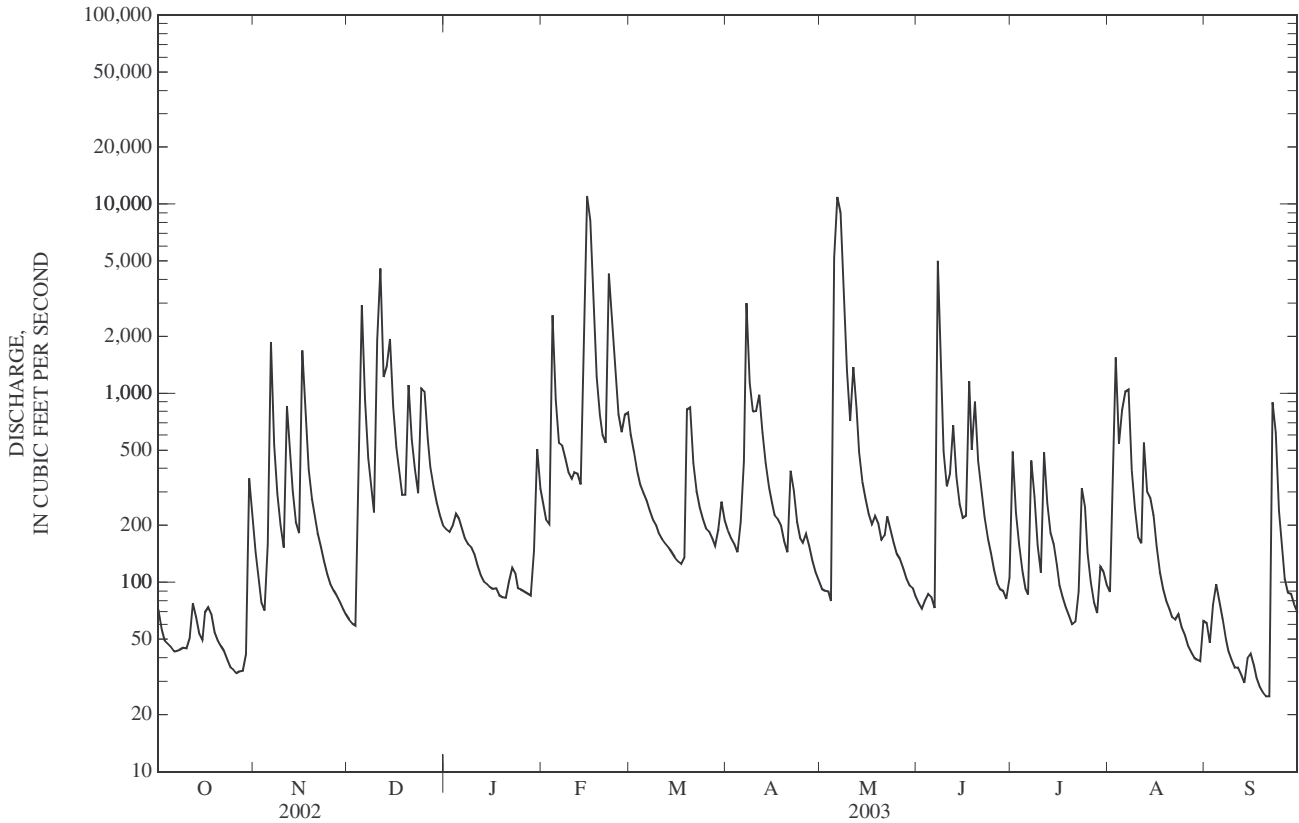
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

MEAN	79.8	187	455	575	595	700	438	348	235	123	85.2	80.0
MAX	270	559	815	1,081	1,643	1,516	1,095	1,213	768	460	285	389
(WY)	(1996)	(1997)	(2003)	(1999)	(2003)	(1994)	(1994)	(2003)	(1998)	(1992)	(2003)	(1992)
MIN	15.1	29.5	72.7	82.9	212	278	158	61.4	44.0	25.6	22.5	12.5
(WY)	(2001)	(2000)	(2000)	(2000)	(1993)	(2003)	(1992)	(1992)	(2002)	(2000)	(1999)	(1999)

03424730 SMITH FORK AT TEMPERANCE HALL, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003	
ANNUAL TOTAL	138,751		178,091		325	
ANNUAL MEAN	380		488		488	
HIGHEST ANNUAL MEAN					1994	
LOWEST ANNUAL MEAN					2000	
HIGHEST DAILY MEAN	10,300	Jan 24	11,000	Feb 15	11,800	Jan 23, 1999
LOWEST DAILY MEAN	12	Sep 10	25	Sep 20	9.7	Sep 10, 1999
ANNUAL SEVEN-DAY MINIMUM	13	Sep 9	30	Sep 15	10	Sep 7, 1999
MAXIMUM PEAK FLOW			16,100	Feb 15	19,900	Jan 23, 1999
MAXIMUM PEAK STAGE			23.39	Feb 15	26.12	Jan 23, 1999
INSTANTANEOUS LOW FLOW			a24	Sep 20	9.0	Sep 8, 1999
ANNUAL RUNOFF (CFSM)	1.78		2.28		1.52	
ANNUAL RUNOFF (INCHES)	24.12		30.96		20.61	
10 PERCENT EXCEEDS	798		924		652	
50 PERCENT EXCEEDS	104		171		114	
90 PERCENT EXCEEDS	25		49		24	

a Also occurred Sept. 21.



03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN

LOCATION.--Lat 36°17'47", long 86°39'28", Davidson County, Hydrologic Unit 05130202, at right bank in powerhouse, at Old Hickory Dam, 2.0 mi west of Hendersonville, and at mile 216.2.

DRAINAGE AREA.--11,673 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1931 to September 1942, October 1947 to current year. Prior to July 1953, published as "at dam 3, near Old Hickory". July 1953 to September 1986 published as "below Old Hickory".

GAGE.--Datum of gage is NGVD of 1929.

REMARKS.--Flow regulated by six lakes or reservoirs (see p. 170).

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173,000 ft³/s, Jan. 29, 1937; maximum gage height, 438.80 ft, Mar. 14, 1975; minimum daily discharge, 86 ft³/s, Aug. 15, 1936; minimum gage height since filling of Cheatham Lake on Oct. 1, 1956, 383.49 ft, Sept. 10, 1962, at present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 437.4 ft Dec. 31, 1926, at present datum, from profile by U.S. Army Corps of Engineers, discharge, 200,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 91,600 ft³/s, Feb. 17; minimum daily, 3,900 ft³/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,900	8,120	11,100	16,000	20,100	58,400	16,900	28,400	13,000	17,400	29,500	16,200
2	4,350	8,400	9,160	16,200	17,100	57,100	14,000	30,700	11,300	15,900	27,300	16,100
3	6,480	6,300	9,710	15,000	16,500	57,500	15,700	28,000	7,420	14,200	28,700	14,900
4	7,400	6,490	9,810	16,800	22,100	54,700	16,700	22,700	7,300	12,400	25,300	16,500
5	5,760	5,040	26,500	14,800	29,800	52,400	17,700	32,800	10,200	9,860	15,900	20,600
6	4,280	17,200	37,900	21,800	19,700	52,400	19,800	60,300	13,000	11,400	20,600	20,800
7	6,340	12,600	22,500	21,700	17,800	43,200	24,000	72,300	29,300	13,100	24,600	9,940
8	6,950	15,500	15,600	17,500	20,100	43,100	34,100	85,900	41,300	13,100	27,800	6,850
9	5,350	12,400	15,400	19,500	18,400	43,000	23,000	86,500	23,000	10,200	18,500	8,080
10	9,270	5,090	15,000	17,700	10,800	43,000	23,700	77,300	12,900	10,100	15,800	12,400
11	19,500	10,300	39,100	16,200	14,300	43,000	36,900	58,800	15,800	13,900	17,500	14,900
12	12,400	16,400	42,400	15,700	18,200	42,800	42,300	51,600	30,900	13,900	18,900	16,100
13	12,200	17,600	27,400	18,800	19,600	41,400	43,300	48,400	28,900	12,200	18,300	13,300
14	8,920	15,500	28,300	19,800	28,700	33,100	42,500	41,500	20,300	12,200	18,200	10,100
15	7,060	17,300	29,400	19,900	78,300	28,000	34,300	36,700	12,600	12,200	18,800	11,200
16	5,760	20,400	23,600	19,900	88,900	31,300	41,000	41,900	13,900	12,200	17,900	12,500
17	5,730	15,300	20,000	20,000	91,600	35,100	31,400	48,800	17,800	9,780	16,600	13,300
18	5,800	13,500	15,000	19,900	73,000	30,500	31,300	45,600	23,400	10,500	12,500	13,400
19	5,050	13,300	18,200	19,400	60,400	25,700	35,800	34,300	27,600	12,100	13,800	12,200
20	5,850	13,400	28,900	18,200	65,800	31,000	36,400	32,700	27,900	12,200	19,600	12,200
21	5,020	13,100	26,600	17,200	64,100	28,100	36,700	33,500	28,200	12,100	19,900	11,100
22	5,010	11,000	22,000	20,000	73,700	22,000	33,200	28,300	28,400	17,500	17,800	39,200
23	5,010	11,100	19,900	20,100	77,000	21,900	28,400	26,100	22,900	19,400	17,700	31,900
24	4,980	10,600	22,200	20,000	78,000	19,800	31,900	30,100	26,000	19,400	19,100	19,800
25	6,220	12,000	22,600	20,400	77,100	17,300	38,500	27,400	28,000	16,500	14,900	12,500
26	6,000	8,300	20,500	20,700	73,600	17,900	27,000	22,600	25,400	14,400	18,700	13,600
27	5,790	8,230	19,800	20,000	64,900	17,900	28,100	23,500	26,700	13,200	18,200	13,600
28	5,730	10,100	15,000	18,900	63,100	18,800	23,900	22,200	26,700	12,200	16,000	13,600
29	5,010	10,000	18,300	17,000	---	20,700	25,400	25,000	22,500	12,200	9,110	11,300
30	5,010	7,150	16,800	18,600	---	19,600	29,400	19,900	16,900	14,800	12,900	12,300
31	7,100	---	14,900	23,500	---	17,100	---	18,600	---	20,800	16,600	---
TOTAL	209,230	351,720	663,580	581,200	1,302,700	1,067,800	883,300	1,242,400	639,520	421,340	587,010	450,470
MEAN	6,749	11,720	21,410	18,750	46,520	34,450	29,440	40,080	21,320	13,590	18,940	15,020
MAX	19,500	20,400	42,400	23,500	91,600	58,400	43,300	86,500	41,300	20,800	29,500	39,200
MIN	3,900	5,040	9,160	14,800	10,800	17,100	14,000	18,600	7,300	9,780	9,110	6,850

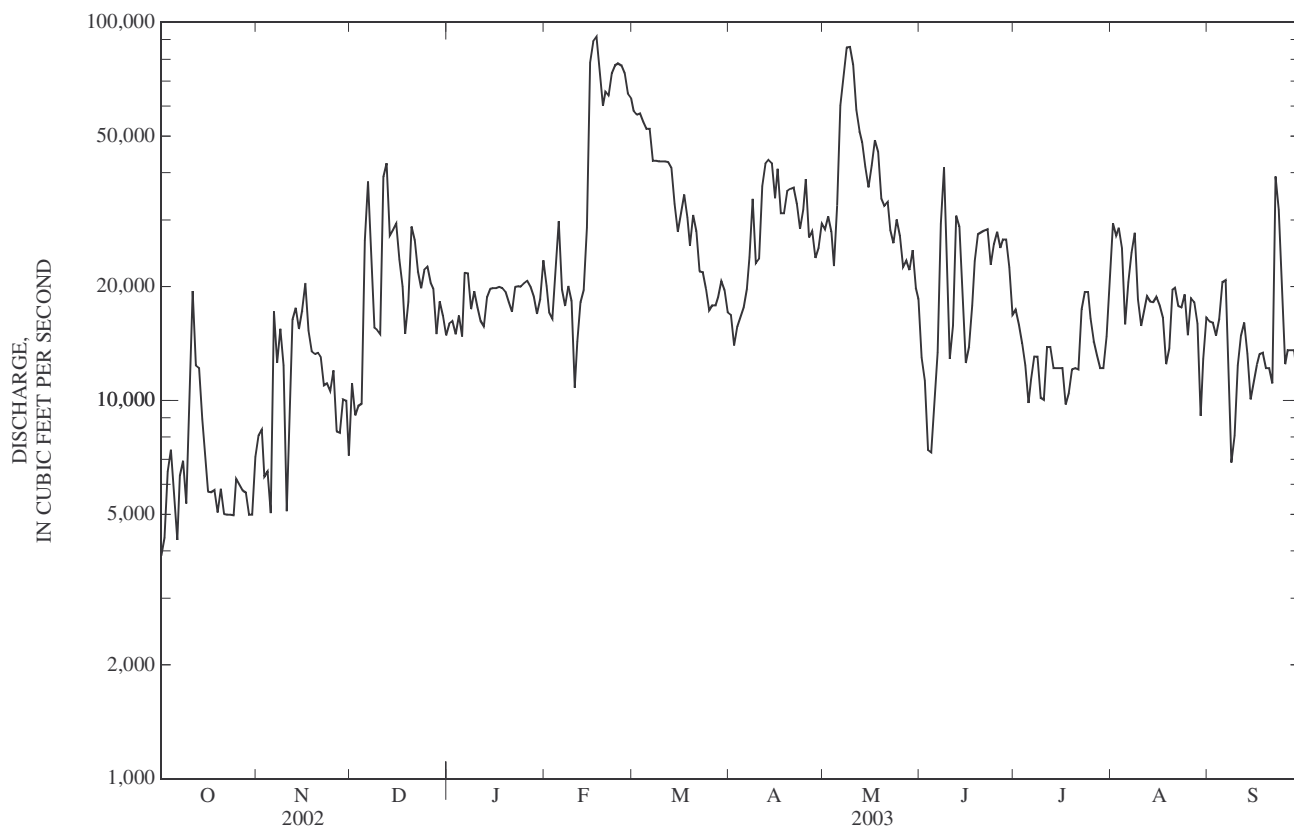
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

MEAN	9,045	12,060	21,420	27,690	27,580	31,220	28,380	20,810	15,700	12,670	12,130	10,070
MAX	29,430	29,530	43,590	79,580	61,700	73,880	74,400	65,100	40,510	28,410	21,400	27,600
(WY)	(1990)	(1980)	(1979)	(1974)	(1957)	(1975)	(1994)	(1984)	(1997)	(1967)	(1982)	(1979)
MIN	2,660	3,449	3,974	4,656	8,524	6,778	6,963	5,465	6,048	4,211	4,991	2,723
(WY)	(1969)	(1981)	(1981)	(1981)	(1981)	(1981)	(1986)	(1988)	(1988)	(1974)	(1975)	(1968)

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		*WATER YEARS 1957 - 2003	
ANNUAL TOTAL	6,435,270		8,400,270		19,030	
ANNUAL MEAN	17,630		23,010		8,780	
HIGHEST ANNUAL MEAN					28,560	1974
LOWEST ANNUAL MEAN					8,780	1988
HIGHEST DAILY MEAN	87,900	Mar 18	91,600	Feb 17	146,000	Mar 14, 1975
LOWEST DAILY MEAN	3,900	Oct 1	3,900	Oct 1	200	Nov 3, 1957
ANNUAL SEVEN-DAY MINIMUM	5,250	Oct 18	5,250	Oct 18	1,070	Oct 28, 1969
10 PERCENT EXCEEDS	36,100		42,900		40,700	
50 PERCENT EXCEEDS	11,100		18,500		13,600	
90 PERCENT EXCEEDS	6,630		8,190		5,320	

* Regulated period only.



03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1979 to current year.

pH: April 1979 to current year.

WATER TEMPERATURE: April 1979 to current year.

DISSOLVED OXYGEN: April 1979 to current year.

TURBIDITY: October 1992 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1979.

REMARKS.--Flow regulated by Old Hickory Dam and other reservoirs above station. Periods of missing record were due to instrument malfunctions.

Supersaturation of dissolved oxygen may occur due to local hydraulic conditions. All parameters affected by release from Old Hickory Dam. Records for water temperature are excellent and specific conductance, pH are fair, for dissolved oxygen are poor and for turbidity are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 269 microsiemens, Jan. 3, 4, 2002; minimum, 137 microsiemens, March 14, 1994.

pH: Maximum, 9.8 units, March 26, 1988; minimum, 6.4 units, July 28, 1991, July 24, 25, 26, 1993.

WATER TEMPERATURE: Maximum, 27.6°C, August 8, 1988; minimum, 2.1°C, Dec. 24, 1989.

DISSOLVED OXYGEN: Maximum, 17.5 mg/L Dec. 6, 11, 2002; minimum, 2.9 mg/L, Sept. 5, 1988, July 8, 1993.

TURBIDITY: Maximum recorded, 170 NTU, March 5, 1997, minimum, 1 NTU, many days during the 1996, Sept. 20, 1997, and many days during the 2000, 2001, and 2002 water years, Oct. 4, 5, 6, 2002, Sept. 8, 2003.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 238 microsiemens, Nov. 27; minimum, 170 microsiemens, May 22.

pH: Maximum, 8.9 units, Sept. 12; minimum, 7.2 units, Aug. 5.

WATER TEMPERATURE: Maximum, 25.6°C, Aug. 24; minimum, 3.8°C, Jan. 24, 27.

DISSOLVED OXYGEN: Maximum, 17.5 mg/L, Dec. 6, 11; minimum, 3.3 mg/L, Sept. 3.

TURBIDITY: Maximum, 150 NTU, Feb. 16, 17; minimum, 1 NTU, Oct. 4, 5, Sept. 8.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	189	183	186	226	223	224	225	219	222	227	227	227
2	192	187	190	226	225	226	221	217	219	227	225	227
3	194	190	192	226	224	225	217	215	216	226	225	225
4	193	190	191	224	223	224	215	211	213	225	223	224
5	194	192	193	224	218	220	211	199	206	223	220	222
6	195	193	194	219	209	214	200	193	197	221	220	220
7	195	194	194	209	206	207	199	191	195	220	219	219
8	195	192	194	206	205	205	204	199	202	221	220	221
9	195	194	195	209	205	207	207	203	205	221	219	220
10	196	194	195	210	209	210	211	207	210	219	219	219
11	200	196	198	212	210	211	219	211	214	220	219	219
12	204	200	201	214	212	213	219	213	217	220	219	219
13	207	204	206	214	213	214	214	211	214	220	218	219
14	208	207	207	219	214	216	211	210	211	218	216	217
15	210	207	209	229	218	224	213	210	212	220	215	217
16	211	210	211	234	229	232	219	213	216	219	219	219
17	211	211	211	232	231	232	222	219	221	220	217	219
18	213	211	212	232	231	231	225	222	224	218	217	217
19	214	213	213	231	230	231	227	224	226	217	216	216
20	215	214	214	234	231	233	228	227	228	216	215	216
21	217	214	215	234	231	233	227	224	225	215	214	215
22	216	214	215	231	228	230	224	221	223	215	213	214
23	215	214	215	229	228	229	224	222	223	214	214	214
24	215	214	214	229	227	228	224	220	222	215	213	214
25	214	213	214	232	227	229	220	219	219	214	213	214
26	214	213	214	235	232	234	221	219	220	215	214	214
27	216	214	215	238	235	237	222	221	221	216	215	215
28	218	215	217	237	236	237	221	220	221	217	216	216
29	219	218	219	237	232	235	222	221	221	217	216	216
30	222	218	220	232	224	227	223	221	222	217	212	214
31	224	221	223	---	---	---	227	223	225	214	212	213
MONTH	224	183	206	238	205	224	228	191	216	227	212	218

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	215	214	214	205	202	204	204	203	203	189	188	189
2	216	214	215	205	204	205	204	203	203	190	189	190
3	217	216	217	205	202	204	204	203	204	190	188	189
4	220	217	218	202	200	201	205	204	204	190	189	189
5	223	220	221	201	199	200	206	204	205	189	187	188
6	224	223	224	199	198	199	206	205	206	188	185	186
7	226	224	226	198	197	197	208	206	207	189	184	187
8	227	226	226	197	195	196	210	208	209	195	178	188
9	232	227	229	199	195	196	210	209	209	180	177	178
10	231	230	230	200	198	199	211	210	211	184	176	179
11	232	230	231	199	198	198	219	211	216	187	184	186
12	233	232	232	198	196	197	224	219	222	187	180	183
13	233	232	232	198	195	197	223	213	217	181	179	180
14	232	229	231	198	198	198	215	212	213	185	179	181
15	236	229	232	199	198	198	212	208	210	186	183	185
16	236	210	220	198	196	197	208	204	206	184	180	183
17	215	204	208	202	196	199	204	203	203	180	176	178
18	210	204	207	205	202	204	203	200	202	179	176	178
19	207	194	201	205	203	204	202	201	202	178	175	176
20	194	177	187	206	204	204	203	197	201	179	175	176
21	178	175	176	204	202	203	197	193	194	179	173	177
22	196	176	185	205	202	204	194	191	193	174	170	172
23	210	196	205	205	204	205	192	191	192	173	171	172
24	206	200	202	203	201	201	192	190	192	174	173	173
25	206	202	205	202	201	202	190	185	188	176	173	174
26	204	200	202	203	202	202	186	185	186	179	176	177
27	201	198	200	203	202	202	187	185	186	181	179	180
28	202	199	200	204	203	203	188	186	187	181	180	181
29	---	---	---	204	202	203	188	187	188	182	181	181
30	---	---	---	204	203	203	189	186	187	185	182	184
31	---	---	---	204	203	203	---	---	---	186	185	185
MONTH	236	175	213	206	195	201	224	185	202	195	170	181
	JUNE			JULY			AUGUST			SEPTEMBER		
1	186	185	185	190	187	189	205	200	202	195	191	192
2	186	184	185	189	187	188	204	199	201	192	190	191
3	186	185	186	188	187	187	202	196	199	191	190	190
4	188	186	187	187	187	187	199	196	197	192	190	191
5	188	185	186	188	187	187	201	193	197	193	191	191
6	186	185	185	188	187	187	201	195	198	193	191	191
7	186	182	184	188	187	187	198	197	197	194	191	192
8	190	184	187	189	188	189	199	196	198	194	186	190
9	191	190	190	190	189	189	210	198	202	187	184	185
10	190	188	189	190	189	190	210	207	209	187	183	185
11	189	187	188	190	189	190	207	202	205	187	185	186
12	191	187	189	190	189	189	202	201	202	185	184	185
13	201	191	195	190	189	190	201	200	200	185	184	185
14	214	201	207	191	189	190	202	199	201	184	183	184
15	218	214	216	191	190	191	201	199	200	184	182	183
16	216	210	213	191	188	188	203	199	200	183	183	183
17	211	209	210	188	186	187	206	202	204	185	183	184
18	210	209	210	188	187	188	207	203	205	187	185	186
19	211	210	211	190	188	189	204	202	203	189	187	188
20	210	207	208	190	188	189	202	199	201	190	188	189
21	215	209	212	192	189	191	201	199	200	191	189	190
22	214	210	212	193	190	191	200	198	199	192	186	190
23	211	208	209	192	189	190	201	199	200	194	189	192
24	210	208	209	191	187	189	200	198	199	190	187	189
25	209	203	206	189	187	188	200	199	199	188	186	187
26	203	200	201	189	186	188	200	197	198	188	186	187
27	200	198	199	190	187	189	197	196	197	190	188	189
28	198	193	196	193	187	190	195	193	193	190	189	190
29	194	190	192	196	190	193	194	191	192	192	190	191
30	190	188	189	197	193	195	194	191	193	195	191	193
31	---	---	---	205	193	197	194	191	192	---	---	---
MONTH	218	182	198	205	186	189	210	191	199	195	182	188

CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.2	8.0	7.8	7.7	8.0	7.9	8.0	7.9	8.1	8.0	7.7	7.6
2	8.1	7.7	7.9	7.7	8.1	7.8	7.9	7.9	8.1	8.0	7.7	7.7
3	8.0	7.7	7.8	7.7	8.0	8.0	8.0	7.9	8.1	8.0	7.7	7.7
4	8.0	7.8	7.8	7.8	8.0	7.9	8.0	8.0	8.1	8.0	7.7	7.7
5	8.1	7.9	7.8	7.6	8.0	7.9	8.0	7.9	8.2	8.1	7.7	7.7
6	8.1	8.0	7.8	7.7	7.9	7.8	8.0	7.9	8.1	8.1	7.7	7.7
7	8.0	7.9	7.8	7.7	7.8	7.8	8.0	8.0	8.1	8.0	7.7	7.7
8	7.9	7.9	7.8	7.6	7.8	7.8	8.0	8.0	8.2	8.1	7.7	7.7
9	---	---	7.8	7.7	7.8	7.8	8.0	8.0	8.2	8.0	7.7	7.7
10	---	---	7.9	7.6	7.8	7.7	8.1	8.0	8.0	8.0	7.8	7.7
11	---	---	7.8	7.7	7.8	7.7	8.1	8.0	8.1	7.9	7.7	7.7
12	---	---	7.9	7.7	7.8	7.7	8.2	8.0	8.0	7.9	7.7	7.7
13	---	---	8.1	7.8	7.7	7.7	8.2	8.1	8.1	8.0	7.8	7.7
14	---	---	8.1	7.9	7.7	7.7	8.1	8.1	8.0	7.9	7.8	7.7
15	7.9	7.8	8.0	7.9	7.7	7.6	8.2	8.0	8.0	7.7	7.9	7.8
16	7.9	7.7	7.9	7.8	7.7	7.6	8.0	7.9	7.7	7.5	7.9	7.8
17	7.9	7.8	8.0	7.9	7.7	7.6	8.0	7.9	7.5	7.5	7.9	7.8
18	8.1	7.8	8.0	7.9	7.7	7.7	8.0	8.0	7.5	7.5	8.1	7.9
19	8.1	7.9	8.1	7.9	7.9	7.7	8.0	7.9	7.5	7.4	8.2	8.1
20	8.0	7.8	7.9	7.8	7.9	7.8	8.1	8.0	7.4	7.4	8.2	8.1
21	7.8	7.7	8.0	7.8	7.9	7.9	8.0	8.0	7.5	7.4	8.2	8.1
22	7.9	7.7	7.9	7.8	7.9	7.9	8.1	8.0	7.5	7.5	8.2	8.1
23	7.9	7.7	8.0	7.9	7.9	7.9	8.1	8.0	7.6	7.5	8.2	8.1
24	7.9	7.7	8.0	7.9	7.9	7.9	8.2	8.0	7.6	7.5	8.2	8.0
25	7.9	7.8	7.9	7.9	7.9	7.9	8.1	8.0	7.6	7.6	8.3	8.1
26	7.9	7.7	7.9	7.9	7.9	7.9	8.1	8.0	7.6	7.5	8.3	8.0
27	7.8	7.5	8.0	7.9	8.0	7.9	8.1	8.0	7.6	7.5	8.6	8.3
28	7.9	7.7	8.0	7.9	8.0	7.9	8.1	8.0	7.7	7.6	8.6	8.4
29	7.8	7.7	8.0	7.9	8.0	7.9	8.0	8.0	---	---	8.6	8.2
30	7.9	7.6	8.0	7.9	8.0	7.9	8.0	7.9	---	---	8.6	8.5
31	7.8	7.6	---	---	8.0	7.9	8.1	8.0	---	---	8.7	8.4
MONTH	---	---	8.1	7.6	8.1	7.6	8.2	7.9	8.2	7.4	8.7	7.6
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.7	8.5	8.2	8.1	7.9	7.6	8.3	8.0	8.0	7.6	8.3	7.5
2	8.7	8.5	8.2	8.0	8.0	7.7	8.4	8.0	8.0	7.6	7.6	7.3
3	8.8	8.6	8.1	7.9	8.2	7.7	8.6	8.2	7.8	7.5	7.8	7.5
4	8.8	8.7	8.0	7.9	8.0	7.7	8.3	8.2	7.6	7.3	7.7	7.4
5	8.8	8.6	8.0	7.8	8.4	7.8	8.4	7.9	7.5	7.2	8.1	7.6
6	8.7	8.6	7.8	7.7	8.6	8.0	8.4	8.0	8.1	7.3	8.2	7.7
7	8.6	8.5	7.7	7.5	8.6	8.0	8.2	7.8	7.8	7.5	8.1	7.6
8	8.5	8.4	7.5	7.4	8.2	7.9	8.4	7.9	8.0	7.7	8.1	7.6
9	8.4	8.2	7.5	7.4	7.9	7.7	8.2	7.9	7.8	7.3	8.2	7.8
10	8.2	8.1	7.5	7.4	8.4	7.6	8.1	7.8	7.7	7.3	8.6	8.0
11	8.1	8.0	7.5	7.4	8.2	7.9	8.0	7.8	7.9	7.5	8.8	7.9
12	8.0	7.9	7.5	7.5	8.2	7.8	8.2	8.0	8.0	7.6	8.9	7.9
13	8.0	7.9	7.5	7.5	7.9	7.7	8.2	7.9	8.0	7.7	8.8	7.9
14	8.0	7.9	7.5	7.5	8.0	7.8	8.0	7.9	8.0	7.6	8.3	7.8
15	8.0	7.9	7.5	7.4	8.1	7.9	8.2	7.9	7.8	7.5	8.0	7.7
16	8.0	7.9	7.7	7.5	8.1	7.9	8.0	7.7	7.7	7.4	8.6	8.0
17	8.0	7.9	7.7	7.6	8.3	7.9	7.9	7.6	7.6	7.4	8.4	8.0
18	8.1	7.9	7.7	7.6	8.4	8.1	7.8	7.7	7.6	7.3	8.3	7.9
19	8.1	8.0	7.8	7.6	8.5	8.3	7.8	7.7	7.6	7.4	8.4	7.8
20	8.0	7.9	7.8	7.7	8.3	8.2	7.9	7.7	7.8	7.6	8.6	7.8
21	8.0	7.9	7.8	7.7	8.3	8.2	7.9	7.6	8.0	7.5	8.7	8.0
22	8.1	8.0	7.8	7.6	8.3	8.2	7.9	7.7	7.9	7.6	8.5	8.0
23	8.2	8.0	7.8	7.6	8.4	8.1	7.9	7.7	8.0	7.6	8.0	7.8
24	8.1	8.0	7.7	7.6	8.5	8.2	8.3	7.9	8.3	7.8	8.0	7.8
25	8.0	7.9	7.6	7.6	8.7	8.3	8.3	7.7	8.0	7.6	7.9	7.6
26	7.9	7.9	7.8	7.5	8.6	8.3	8.5	7.7	8.1	7.6	8.4	7.7
27	8.0	7.9	7.7	7.6	8.6	8.2	7.8	7.5	8.1	7.7	8.0	7.6
28	8.2	7.9	7.7	7.6	8.5	8.3	7.6	7.4	7.6	7.6	8.0	7.6
29	8.2	8.0	7.7	7.6	8.4	8.2	7.6	7.4	7.6	7.4	7.9	7.8
30	8.3	8.0	7.9	7.7	8.4	8.0	7.9	7.4	7.7	7.3	8.3	7.9
31	---	---	7.9	7.6	---	---	8.0	7.6	8.0	7.4	---	---
MONTH	8.8	7.9	8.2	7.4	8.7	7.6	8.6	7.4	8.3	7.2	8.9	7.3

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	22.6	22.0	22.2	16.9	16.5	16.7	10.0	9.4	9.7	9.2	8.9	9.0
2	22.3	21.8	22.1	16.5	16.0	16.2	9.4	9.0	9.1	9.1	9.1	9.1
3	22.6	22.0	22.3	16.0	15.6	15.8	9.2	9.0	9.1	9.1	8.4	8.7
4	23.2	22.3	22.8	15.7	15.4	15.5	9.1	8.5	8.9	8.4	8.1	8.2
5	22.6	21.7	21.9	15.4	15.1	15.2	8.6	8.3	8.5	8.3	8.1	8.2
6	22.3	21.6	22.0	15.1	14.5	14.8	8.8	8.3	8.5	8.2	7.8	8.0
7	22.1	21.9	22.0	14.6	14.3	14.5	8.8	8.3	8.6	8.0	7.8	7.9
8	21.9	21.7	21.8	14.6	14.2	14.4	8.3	8.0	8.1	8.1	7.7	7.9
9	---	---	---	14.7	14.4	14.5	8.1	7.9	8.0	8.2	7.9	8.0
10	---	---	---	15.5	14.7	15.1	7.9	7.8	7.9	8.0	7.7	7.9
11	---	---	---	15.4	15.1	15.3	7.8	7.7	7.7	7.7	7.4	7.5
12	---	---	---	15.1	14.9	15.0	7.8	7.7	7.8	7.4	7.0	7.2
13	---	---	---	14.9	14.7	14.8	7.9	7.8	7.8	7.1	6.9	7.0
14	---	---	---	14.7	14.4	14.6	8.0	7.8	7.9	7.0	6.8	6.9
15	20.4	20.2	20.2	14.5	14.2	14.3	8.2	7.8	8.0	6.9	6.6	6.7
16	20.2	19.4	19.8	14.2	13.3	13.8	8.3	7.8	8.0	6.8	6.4	6.6
17	19.4	19.0	19.3	13.3	12.7	12.9	8.6	8.3	8.5	6.4	5.8	6.1
18	19.0	18.8	18.9	12.7	12.1	12.5	8.9	8.6	8.7	5.8	5.4	5.5
19	18.9	18.5	18.7	12.8	12.4	12.6	9.2	8.9	9.0	5.4	5.3	5.4
20	18.5	18.2	18.4	12.9	12.6	12.8	9.3	9.1	9.2	5.7	5.2	5.4
21	18.2	18.0	18.1	12.9	12.6	12.8	9.3	9.0	9.2	5.7	5.6	5.6
22	18.1	17.8	17.9	12.6	11.9	12.3	9.3	9.1	9.2	5.7	5.4	5.5
23	18.1	17.8	17.9	11.9	11.7	11.8	9.4	9.2	9.2	5.5	4.4	4.9
24	17.8	17.7	17.8	11.9	11.5	11.7	9.4	9.3	9.4	4.4	3.8	4.1
25	17.9	17.8	17.8	11.8	11.5	11.6	9.3	8.8	9.0	4.4	4.0	4.2
26	17.8	17.7	17.8	11.5	11.1	11.3	8.8	8.4	8.6	4.3	4.2	4.2
27	17.8	17.7	17.8	11.1	10.4	10.8	8.4	8.2	8.3	4.3	3.8	4.1
28	17.8	17.7	17.7	10.4	10.1	10.3	8.3	8.1	8.2	4.4	4.1	4.2
29	17.9	17.7	17.8	10.1	9.9	10	8.5	8.0	8.2	4.5	4.3	4.4
30	17.8	17.4	17.6	10.1	10.0	10.0	8.8	8.3	8.5	4.5	4.4	4.5
31	17.4	16.9	17.2	---	---	---	8.9	8.7	8.8	4.9	4.5	4.7
MONTH	---	---	---	16.9	9.9	13.5	10.0	7.7	8.6	9.2	3.8	6.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.3	4.9	5.1	6.5	6.4	6.4	12.3	11.6	12.0	15.0	14.6	14.8
2	5.7	5.2	5.4	6.5	6.3	6.4	12.8	12.1	12.4	15.3	14.7	15.0
3	6.1	5.6	5.8	6.5	6.2	6.4	13.4	12.5	12.9	15.3	14.8	15.0
4	6.2	5.9	6.0	6.9	6.4	6.7	13.9	13.1	13.5	15.4	14.9	15.1
5	6.6	6.1	6.4	7.2	6.9	7.1	13.9	13.5	13.7	15.4	14.9	15.2
6	6.5	6.4	6.5	7.2	6.9	7.1	13.8	13.5	13.7	15.3	15.1	15.2
7	6.4	5.9	6.2	7.3	6.8	7.0	14.2	13.5	13.7	15.4	15.0	15.2
8	5.9	5.6	5.8	7.8	7.2	7.5	13.8	13.4	13.6	15.9	15.2	15.6
9	6.0	5.7	5.9	7.8	7.6	7.7	13.4	12.5	12.9	15.7	15.4	15.5
10	6.0	5.8	5.9	7.6	7.2	7.4	12.5	11.8	12.1	16.2	15.5	15.8
11	6.3	5.8	6.0	7.7	7.2	7.4	11.9	11.3	11.7	16.9	16.1	16.6
12	6.3	6.1	6.2	8.1	7.5	7.8	12.6	11.9	12.4	17.2	16.6	16.9
13	6.5	6.1	6.3	8.4	7.8	8.1	12.5	11.9	12.1	17.5	16.8	17.1
14	6.8	6.5	6.6	8.6	8.2	8.4	12.5	11.7	12.1	17.4	17.2	17.3
15	7.0	6.7	6.9	8.9	8.6	8.7	12.8	12.2	12.5	17.2	16.9	17.0
16	7.5	6.8	7.1	9.3	8.7	9.0	12.9	12.4	12.6	17.3	17.0	17.1
17	7.7	7.4	7.6	9.4	9.2	9.3	13.2	12.7	13.0	17.0	16.7	16.8
18	7.5	7.2	7.3	9.4	9.0	9.2	13.9	12.9	13.3	17.0	16.5	16.7
19	7.6	7.3	7.5	9.8	9.1	9.4	14.0	13.4	13.6	16.7	16.4	16.5
20	7.6	7.4	7.5	10.2	9.4	9.8	13.9	13.5	13.7	16.6	16.3	16.4
21	7.4	7.2	7.3	10.1	9.9	9.9	13.8	13.5	13.7	16.3	16.2	16.3
22	7.3	7.0	7.2	10.4	9.8	10.1	13.9	13.6	13.7	16.4	16.1	16.2
23	7.1	6.9	7.0	10.4	10.2	10.3	14.5	13.6	13.9	16.5	16.1	16.3
24	7.4	7.1	7.3	11.6	10.7	11.1	14.0	13.6	13.8	16.4	16.1	16.2
25	7.2	6.7	6.8	12.1	11.3	11.7	13.8	13.4	13.6	16.5	16.0	16.3
26	6.8	6.7	6.7	12.2	11.6	11.9	13.4	13.1	13.2	16.3	15.7	15.9
27	6.7	6.6	6.7	12.9	12.2	12.5	13.7	13.1	13.4	16.0	15.8	15.9
28	6.6	6.4	6.5	12.9	12.5	12.7	14.5	13.4	13.8	16.6	16.0	16.3
29	---	---	---	12.8	12.3	12.5	14.7	14.1	14.4	16.7	16.1	16.4
30	---	---	---	12.6	11.9	12.3	14.9	14.2	14.5	17.4	16.6	16.9
31	---	---	---	12.1	11.7	11.9	---	---	---	17.3	16.7	17.0
MONTH	7.7	4.9	6.6	12.9	6.2	9.2	14.9	11.3	13.2	17.5	14.6	16.1

CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.7	16.9	17.3	20.6	20.1	20.3	25.4	25.0	25.2	25.5	24.5	24.9
2	17.8	17.5	17.7	20.5	20.2	20.3	25.2	24.5	25.0	25.0	24.0	24.5
3	17.7	16.7	17.5	21.1	20.2	20.6	24.6	23.8	24.1	25.0	24.2	24.5
4	17.3	16.6	16.9	20.9	20.3	20.6	23.8	23.2	23.5	24.5	24.0	24.2
5	18.2	17.0	17.6	21.6	20.3	21.1	23.5	23.2	23.3	24.7	24.2	24.5
6	19.0	17.7	18.2	21.5	20.7	21.2	24.0	23.2	23.5	24.5	23.9	24.2
7	18.9	18.0	18.4	21.8	21.5	21.7	23.6	23.1	23.3	23.9	23.4	23.7
8	18.6	18.2	18.4	22.2	20.7	21.6	24.0	23.3	23.8	23.4	22.8	23.1
9	18.8	18.3	18.5	22.6	21.2	21.8	23.8	23.0	23.5	23.2	22.5	22.8
10	19.6	18.2	18.8	22.8	21.4	21.9	23.5	23.0	23.2	23.7	22.5	23.1
11	19.5	18.8	19.0	22.6	21.4	22.1	23.8	23.1	23.5	24.0	22.6	23.3
12	19.5	19.0	19.1	23.2	22.6	22.9	23.8	23.3	23.5	24.3	22.8	23.5
13	20.2	19.1	19.6	23.9	22.7	23.4	23.9	23.4	23.7	24.1	22.8	23.4
14	20.4	19.9	20.1	23.9	23.3	23.6	24.1	23.5	23.8	23.7	23.0	23.4
15	20.5	19.9	20.2	24.2	23.5	23.7	24.0	23.6	23.8	23.2	22.8	23.0
16	20.4	20.0	20.1	23.6	23.0	23.3	24.6	23.7	24.2	23.7	23.1	23.4
17	21.0	20.0	20.6	23.7	22.8	23.3	24.8	24.2	24.6	23.7	23.4	23.5
18	21.2	20.8	20.9	23.7	22.9	23.4	24.8	24.2	24.5	23.7	23.2	23.4
19	21.9	21.2	21.6	24.0	23.5	23.7	25.1	24.3	24.7	23.8	23.2	23.4
20	21.9	21.4	21.7	24.4	23.6	24.1	25.5	24.9	25.1	23.9	23.2	23.6
21	21.9	21.6	21.8	25.0	24.2	24.6	25.5	24.7	25.1	23.7	23.4	23.6
22	22.0	21.5	21.7	25.1	24.4	24.8	25.2	24.4	24.9	23.6	22.8	23.1
23	21.7	21.2	21.5	25.0	24.4	24.7	25.4	24.5	24.9	22.8	22.6	22.7
24	21.8	21.3	21.6	25.1	24.7	25.0	25.6	24.8	25.2	22.9	22.4	22.6
25	21.6	21.2	21.5	25.1	24.3	24.7	25.3	24.8	25.0	22.7	22.0	22.3
26	21.3	20.6	21.0	25.2	24.3	24.6	25.4	24.6	25.0	22.9	22.0	22.4
27	21.1	20.3	20.7	24.7	24.2	24.4	25.1	24.9	25.0	22.6	21.8	22.2
28	21.1	20.6	20.9	24.8	24.3	24.5	25.0	24.4	24.7	21.8	21.6	21.7
29	21.0	20.5	20.7	24.8	24.3	24.6	24.4	23.9	24.2	21.6	21.0	21.3
30	20.9	20.4	20.6	25.3	24.6	24.9	24.5	23.6	24.1	21.2	20.9	21.0
31	---	---	---	25.3	24.9	25.1	25.3	24.3	24.8	---	---	---
MONTH	22.0	16.6	19.8	25.3	20.1	23.1	25.6	23.0	24.3	25.5	20.9	23.2

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.2	6.2	7.0	8.4	7.4	8.1	14.6	13.9	14.2	11.9	11.6	11.7
2	7.0	5.3	6.4	8.7	7.4	8.2	14.8	13.0	14.4	11.8	11.5	11.7
3	7.5	5.5	6.7	8.3	7.3	7.9	14.6	14.1	14.4	12.0	11.5	11.8
4	9.2	6.8	8.0	8.4	7.6	7.9	14.6	14.0	14.3	12.3	12.0	12.1
5	7.6	6.0	6.4	8.3	6.2	7.8	14.5	14.1	14.3	12.2	12.0	12.1
6	7.5	5.6	6.8	8.6	7.7	8.3	17.5	13.4	15.2	12.5	11.9	12.2
7	7.2	6.0	6.7	9.1	8.4	8.7	13.7	13.3	13.5	12.8	12.3	12.5
8	8.4	6.3	7.3	9.1	7.9	8.7	13.6	13.3	13.5	12.8	12.5	12.7
9	---	---	---	9.2	8.6	8.9	13.7	13.2	13.5	12.8	12.4	12.6
10	---	---	---	9.7	8.1	9.0	13.4	13.1	13.2	13.2	12.6	12.9
11	---	---	---	9.6	8.9	9.2	17.5	12.9	15.1	13.4	12.9	13.1
12	---	---	---	9.8	8.8	9.4	17.0	13.0	15.1	13.9	13.1	13.4
13	---	---	---	11.2	9.5	10.2	13.0	12.6	12.8	13.8	13.4	13.6
14	---	---	---	11.3	10.8	11.0	12.7	12.3	12.5	13.6	13.1	13.4
15	8.0	7.4	7.7	11.3	10.6	10.8	12.3	11.8	12.1	14.6	12.8	13.5
16	8.2	7.3	7.8	11.1	10.7	10.9	12.3	11.9	12.1	14.5	14.0	14.3
17	8.5	8.0	8.2	11.6	11.0	11.3	11.9	11.6	11.8	14.1	13.8	14.0
18	9.0	7.5	8.5	12.3	11.4	11.9	12.0	11.7	11.8	---	---	---
19	8.9	8.2	8.6	12.5	11.8	12.0	12.0	11.3	11.5	---	---	---
20	8.5	7.6	8.0	12.0	11.4	11.7	11.6	11.2	11.4	---	---	---
21	8.0	7.1	7.6	12.5	11.5	12.0	11.7	11.4	11.5	---	---	---
22	8.0	6.9	7.6	12.5	11.5	12.1	11.6	11.3	11.5	---	---	---
23	8.1	7.2	7.7	13.3	12.0	12.8	11.8	11.3	11.4	---	---	---
24	7.9	6.9	7.5	13.5	12.8	13.1	11.4	10.9	11.2	---	---	---
25	8.4	7.4	8.0	13.0	12.6	12.8	11.4	11.0	11.2	---	---	---
26	8.5	7.3	8.0	13.2	12.6	12.9	11.5	11.2	11.3	---	---	---
27	8.4	6.5	7.8	13.6	12.8	13.2	11.8	11.1	11.5	---	---	---
28	8.8	7.8	8.3	14.3	13.4	13.8	12.0	11.5	11.7	---	---	---
29	8.6	7.8	8.2	14.7	13.7	14.2	11.9	11.6	11.8	---	---	---
30	8.6	6.8	8.3	14.3	13.9	14.1	12.2	11.8	11.9	13.5	13.3	13.4
31	8.5	6.8	8.1	---	---	---	12.0	11.7	11.8	13.6	13.4	13.5
MONTH	---	---	---	14.7	6.2	10.8	17.5	10.9	12.7	---	---	---

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	13.6	13.4	13.5	14.3	13.3	13.8	10.9	10.4	10.8	12.2	11.9	12.0
2	13.7	13.4	13.5	13.3	12.9	13.1	11.1	10.5	10.7	12.2	11.6	11.9
3	13.7	13.5	13.6	13.2	13.0	13.1	10.9	10.4	10.7	12.2	11.6	11.8
4	13.8	13.5	13.6	13.4	12.8	13.2	10.6	10.3	10.5	12.2	11.5	11.8
5	13.9	13.6	13.7	13.3	12.7	13.1	10.3	9.6	9.9	12.9	11.2	12.5
6	13.8	13.6	13.7	13.2	12.9	13.1	9.9	9.2	9.7	13.0	12.1	12.8
7	13.9	13.5	13.7	13.2	12.4	12.7	9.9	9.1	9.5	12.3	11.6	12.0
8	14.2	13.8	14.0	---	---	---	10.0	9.4	9.8	11.6	11.1	11.4
9	14.0	13.6	13.9	---	---	---	9.8	9.5	9.6	11.9	11.2	11.6
10	13.6	13.3	13.5	---	---	---	9.6	9.4	9.5	11.7	11.0	11.4
11	13.7	13.0	13.3	---	---	---	9.6	9.4	9.5	11.1	10.5	10.8
12	13.6	13.0	13.2	---	---	---	11.0	9.4	10.2	11.7	9.8	10.5
13	14.0	13.5	13.8	---	---	---	11.2	10.7	10.9	11.8	10.2	10.6
14	16.5	13.7	14.3	---	---	---	11.3	10.8	11.0	11.1	9.5	10.6
15	16.1	15.1	15.5	---	---	---	11.1	10.3	10.7	11.1	9.5	10.1
16	15.4	14.7	15.0	---	---	---	12.2	10.4	11.3	12.9	9.9	11.5
17	14.9	14.6	14.8	---	---	---	11.8	10.6	10.9	13.0	12.6	12.8
18	15.0	14.6	14.8	13.4	13.1	13.2	11.1	10.5	10.8	13.0	11.6	12.6
19	15.2	14.0	14.5	13.4	12.9	13.2	11.2	10.8	11.0	12.1	10.8	11.3
20	14.6	13.9	14.3	13.2	12.9	13.0	11.2	10.9	11.0	11.2	10.8	11.0
21	14.6	14.2	14.4	12.9	12.5	12.7	11.2	10.8	11.0	10.9	10.6	10.8
22	15.0	14.5	14.6	12.8	12.4	12.6	11.6	11.0	11.2	10.9	10.4	10.6
23	15.4	14.8	15.0	12.7	12.4	12.6	11.7	10.9	11.2	11.5	10.2	10.9
24	15.1	14.8	15.0	12.4	11.9	12.1	11.4	11.2	11.3	11.3	10.6	11.0
25	15.5	15.0	15.3	12.2	11.8	12.0	11.8	11.1	11.6	11.1	10.8	11.0
26	15.3	14.7	15.1	11.9	11.3	11.7	11.8	10.9	11.3	11.7	10.6	11.0
27	15.0	14.2	14.6	12.4	11.8	12.0	11.5	11.0	11.2	11.6	10.8	11.2
28	14.4	14.1	14.2	12.1	11.5	11.7	12.6	11.2	11.7	12.1	10.4	11.6
29	---	---	---	11.6	10.9	11.2	12.1	11.7	12.0	11.9	11.2	11.4
30	---	---	---	11.3	10.8	11.0	12.9	11.6	12.1	12.4	11.1	11.7
31	---	---	---	11.2	10.6	10.9	---	---	---	12.2	11.1	11.5
MONTH	16.5	13.0	14.2	---	---	---	12.9	9.1	10.8	13.0	9.5	11.4
	JUNE			JULY			AUGUST			SEPTEMBER		
1	11.8	10.6	11.3	11.0	9.6	10.3	8.2	6.7	7.5	9.3	5.9	7.7
2	11.7	10.9	11.4	10.4	8.8	9.5	8.6	7.1	7.8	7.0	4.7	6.0
3	11.5	8.9	10.7	10.4	9.2	9.7	9.0	7.2	7.9	8.0	3.3	6.4
4	10.1	8.6	9.6	9.7	9.1	9.5	8.6	7.1	7.8	7.7	4.1	6.3
5	11.2	8.8	10.1	9.7	8.8	9.4	9.3	6.8	8.0	8.5	6.2	7.7
6	11.6	9.7	10.6	9.3	8.7	9.1	10.0	7.3	8.4	9.0	5.9	7.8
7	12.2	10.1	11.2	9.0	8.3	8.8	9.4	8.0	8.6	9.1	5.5	7.7
8	12.1	11.0	11.7	8.9	7.7	8.4	9.9	8.8	9.4	8.0	4.6	7.0
9	11.0	9.7	10.3	8.6	7.3	7.9	9.2	7.6	8.6	---	---	---
10	12.5	8.5	10.7	8.1	7.3	7.7	8.9	6.8	8.0	9.1	7.3	8.6
11	11.1	9.9	10.4	7.8	7.0	7.6	9.6	8.0	8.8	9.8	7.4	8.5
12	11.1	8.5	9.3	8.2	7.7	8.0	9.8	8.2	8.8	10.4	7.4	8.9
13	9.8	8.4	8.9	8.2	7.6	7.9	9.8	8.6	9.1	9.9	7.3	8.4
14	10.6	9.4	9.9	7.7	7.2	7.5	10.3	8.6	9.4	8.5	7.1	8.0
15	10.8	9.0	10	9.2	7.1	7.8	9.7	8.3	8.8	7.6	6.5	7.0
16	10.6	9.1	9.6	7.7	7.1	7.3	9.3	8.2	8.7	9.1	7.4	8.2
17	11.3	9.2	10.4	7.9	6.8	7.3	9.0	8.0	8.6	8.7	7.6	8.2
18	11.5	10.3	10.7	7.5	6.9	7.3	8.8	7.4	8.1	8.6	7.2	7.9
19	12.0	10.8	11.5	7.1	6.5	6.8	8.7	6.5	8.2	8.6	6.9	7.6
20	10.9	9.5	10.1	7.4	6.4	6.9	9.2	8.4	8.8	9.2	6.9	8.2
21	10.9	9.7	10.3	7.2	6.3	6.8	9.6	8.0	8.9	9.4	7.1	8.4
22	11.8	10.1	10.9	7.0	6.4	6.7	9.2	7.8	8.7	10.3	8.0	9.5
23	12.3	10.2	11.0	7.2	6.3	6.7	9.0	8.0	8.4	10.4	7.3	8.3
24	12.6	10.0	11.8	9.0	6.9	7.9	9.7	8.1	8.8	8.0	7.2	7.5
25	13.1	11.3	12.3	9.2	7.5	8.5	9.1	7.8	8.4	7.9	6.3	7.0
26	12.6	11.6	12.2	9.3	7.3	8.3	9.3	7.7	8.6	9.6	5.9	7.6
27	12.4	11.1	11.7	7.8	5.9	7.0	9.1	7.7	8.6	8.4	6.4	7.1
28	12.5	11.5	12.0	7.3	6.0	6.5	9.3	7.5	8.4	8.2	6.4	7.2
29	12.3	11.1	11.8	6.5	4.9	6.1	7.9	6.7	7.2	8.0	7.0	7.4
30	12.0	10.6	11.2	7.5	5.8	6.6	7.9	6.3	7.2	9.0	7.3	8.2
31	---	---	---	7.4	6.2	6.6	8.7	6.4	7.7	---	---	---
MONTH	13.1	8.4	10.8	11.0	4.9	7.8	10.3	6.3	8.4	---	---	---

CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	8	6	9	6	6	4	29	18
2	10	5	---	---	8	3	9	6	5	4	20	15
3	5	2	---	---	7	4	8	6	6	4	17	15
4	5	1	---	---	8	5	8	5	6	4	17	12
5	6	1	---	---	8	5	9	5	6	5	17	13
6	---	---	---	---	8	6	8	5	10	5	20	12
7	---	---	---	---	11	5	9	5	8	5	13	9
8	---	---	---	---	8	5	10	6	7	5	12	9
9	---	---	---	---	9	6	---	---	11	5	13	10
10	---	---	---	---	11	8	---	---	13	10	14	9
11	---	---	---	---	19	8	---	---	17	11	11	9
12	---	---	---	---	11	7	---	---	15	11	12	9
13	---	---	11	7	13	7	---	---	12	8	22	8
14	---	---	8	6	17	8	---	---	15	7	10	7
15	---	---	8	6	21	16	9	5	54	15	10	6
16	---	---	12	7	19	13	6	5	150	54	8	5
17	---	---	9	7	15	10	7	5	150	120	8	6
18	---	---	10	6	12	9	7	5	140	85	11	6
19	---	---	10	5	12	9	8	5	120	85	11	8
20	---	---	9	6	11	9	8	4	120	100	10	8
21	---	---	19	5	10	8	8	5	100	72	10	9
22	---	---	12	5	10	8	6	5	83	56	11	9
23	---	---	8	5	11	8	8	6	66	47	12	10
24	---	---	8	5	11	8	7	5	110	60	16	13
25	---	---	8	5	17	11	7	5	60	40	17	12
26	---	---	8	5	17	10	7	5	82	45	15	11
27	---	---	9	5	11	8	10	5	62	38	13	10
28	---	---	9	5	10	7	7	5	43	26	15	10
29	---	---	10	5	12	6	7	5	---	---	21	9
30	---	---	13	5	11	5	7	4	---	---	13	10
31	---	---	---	---	7	5	6	4	---	---	14	10
MONTH	---	---	---	---	21	3	---	---	150	4	29	5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13	10	12	9	19	8	15	8	14	6	14	7
2	14	10	14	8	12	7	13	8	21	5	12	8
3	15	10	12	9	14	8	11	7	13	8	11	8
4	14	10	15	9	13	7	10	7	43	8	16	6
5	16	11	18	9	11	6	---	---	22	7	---	---
6	17	11	34	12	10	6	---	---	11	7	---	---
7	17	10	58	17	12	7	6	4	11	8	---	---
8	22	11	120	58	17	10	7	4	14	8	8	1
9	17	11	120	53	15	10	6	4	17	9	---	---
10	14	10	77	31	13	9	6	4	17	9	10	7
11	23	12	34	28	15	11	8	4	12	9	14	6
12	28	17	42	25	18	12	6	4	11	8	9	5
13	33	21	36	23	17	13	7	4	11	8	10	5
14	41	26	28	20	15	10	7	4	15	8	10	6
15	44	17	28	17	16	10	10	4	12	7	12	6
16	40	17	22	17	13	10	8	5	16	9	11	6
17	22	17	24	18	12	10	8	5	16	7	15	7
18	30	14	28	14	13	10	9	4	17	6	9	6
19	19	12	21	12	13	9	6	5	10	6	12	6
20	19	14	16	12	16	10	7	4	11	7	14	5
21	22	15	16	12	16	12	9	4	10	6	9	6
22	26	12	16	12	16	12	9	4	11	7	24	6
23	13	10	17	11	18	12	9	5	12	7	20	11
24	13	10	14	11	16	11	9	5	12	7	14	10
25	16	11	15	11	21	11	10	5	13	7	14	10
26	14	11	22	11	15	11	12	5	14	6	18	7
27	13	10	15	10	14	11	11	5	---	---	13	8
28	16	9	16	9	15	11	8	5	---	---	13	8
29	12	9	15	10	16	10	8	4	14	7	12	7
30	46	10	13	10	14	10	11	5	12	6	14	7
31	---	---	14	8	---	---	11	5	12	6	---	---
MONTH	46	9	120	8	21	6	---	---	---	---	---	---

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03426385 MANSKER CREEK ABOVE GOODLETTSVILLE, TN

LOCATION.--Lat 36°20'20", long 86°43'04", Davidson County, Hydrologic Unit 05130202, on left bank at downstream end of bridge on U.S. Highway 31W, at mouth of Slater Creek, 400 ft below Lumsley Fork, and 1.2 mi north of Goodlettsville.

DRAINAGE AREA.--27.7 mi², includes Slater Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1993 to current year.

GAGE.--Data collection platform. Datum of gage is 434.99 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 14	1915	1,920	7.85	May 7	0945	3,090	10.18
Feb 22	0300	1,390	6.75	Sep 22	0600	*3,090	*10.19
May 7	0315	1,620	7.25				

Minimum daily discharge, 1.9 ft³/s, July 27, Aug. 25, 26.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	7.6	10	90	42	48	44	42	5.9	5.3	11	2.8
2	14	6.8	9.7	76	38	42	38	45	5.5	4.8	6.7	33
3	10	6.6	8.8	62	62	37	33	32	9.3	3.9	31	37
4	23	7.1	36	51	124	34	30	26	7.2	3.3	14	21
5	33	122	378	45	77	32	35	309	6.1	3.0	9.9	11
6	22	165	129	38	61	29	80	204	23	3.3	7.2	7.4
7	14	60	70	34	55	26	241	1,190	27	4.7	6.3	5.7
8	11	38	50	32	46	24	123	258	15	3.3	5.1	4.7
9	9.1	30	39	30	42	22	81	128	11	2.8	4.4	3.8
10	352	26	35	26	42	21	76	72	14	7.0	3.8	3.3
11	188	59	70	23	41	20	65	116	107	6.6	18	2.9
12	70	45	66	21	47	19	54	60	64	4.4	17	2.7
13	39	34	88	20	43	18	44	41	33	11	31	2.4
14	27	28	114	19	822	17	38	33	28	10	21	14
15	21	58	77	18	715	16	34	28	33	6.2	11	6.5
16	17	146	58	19	606	15	31	24	23	4.1	7.5	4.5
17	13	73	46	16	194	15	37	27	18	3.1	5.5	3.6
18	11	46	38	18	108	15	33	23	15	2.8	4.4	3.1
19	10	36	139	16	107	48	28	20	13	2.6	3.7	2.8
20	11	29	188	18	130	44	25	17	10	2.3	3.0	2.7
21	9.4	25	95	27	131	36	31	16	8.4	2.3	2.7	3.9
22	8.6	22	67	27	550	31	25	15	7.2	2.8	2.3	680
23	7.9	18	50	24	269	28	22	13	6.2	2.8	2.3	81
24	6.9	16	57	28	175	25	21	11	5.5	2.4	2.1	38
25	6.5	14	59	20	120	23	24	11	4.8	2.2	1.9	25
26	6.2	14	49	19	91	60	28	11	5.1	2.1	1.9	19
27	5.8	12	43	19	72	49	24	10	6.4	1.9	2.2	15
28	6.2	11	38	19	57	41	21	8.2	4.7	2.8	2.1	12
29	8.6	11	35	55	---	90	19	7.9	4.0	5.0	2.0	9.7
30	10	10	32	58	---	70	16	7.1	4.2	3.3	2.3	8.3
31	8.5	---	37	48	---	53	---	6.4	---	35	3.8	---
TOTAL	994.7	1,176.1	2,211.5	1,016	4,867	1,048	1,401	2,811.6	524.5	157.1	247.1	1,066.8
MEAN	32.1	39.2	71.3	32.8	174	33.8	46.7	90.7	17.5	5.07	7.97	35.6
MAX	352	165	378	90	822	90	241	1,190	107	35	31	680
MIN	5.8	6.6	8.8	16	38	15	16	6.4	4.0	1.9	1.9	2.4
CFSM	1.16	1.42	2.58	1.18	6.28	1.22	1.69	3.27	0.63	0.18	0.29	1.28
IN.	1.34	1.58	2.97	1.36	6.54	1.41	1.88	3.78	0.70	0.21	0.33	1.43

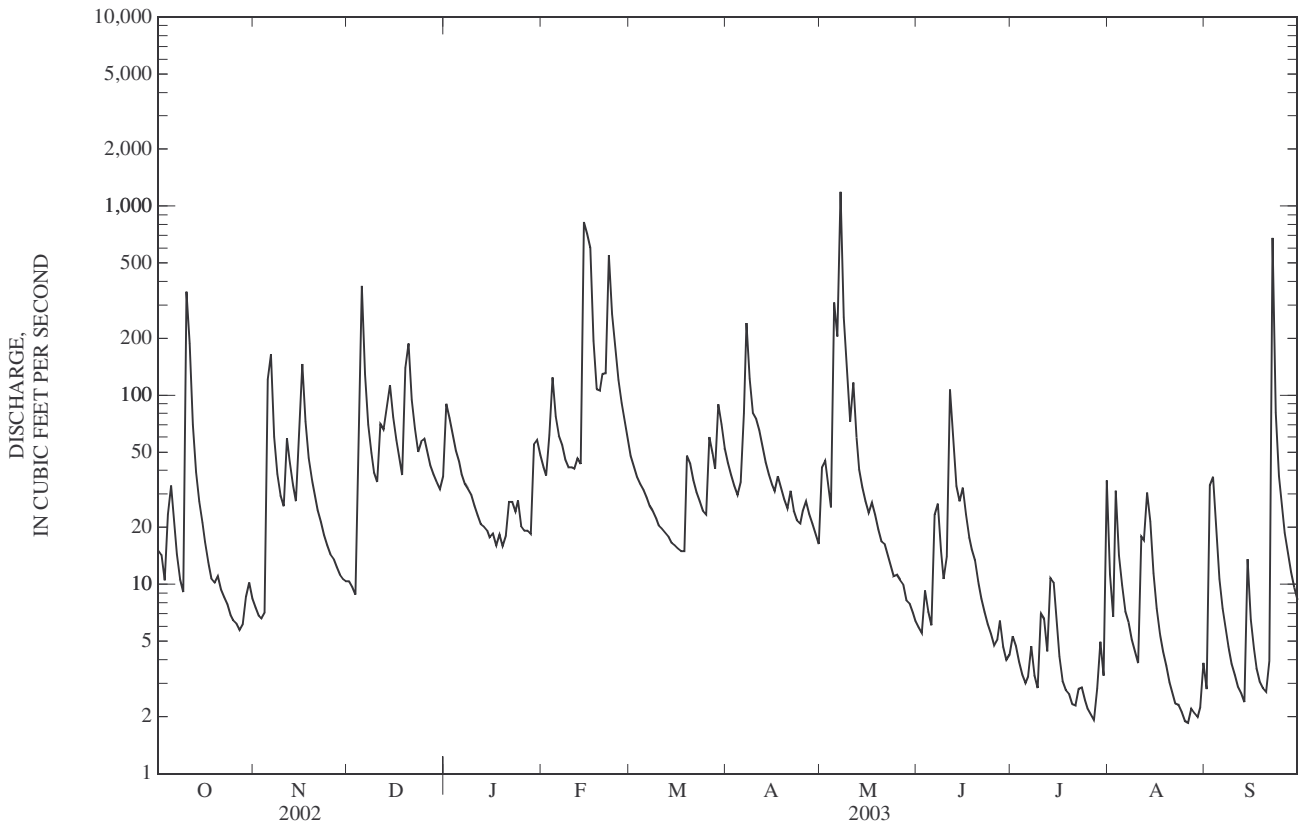
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

MEAN	11.8	33.2	52.1	68.1	85.3	94.1	65.8	51.8	34.2	7.57	5.16	11.8
MAX	32.1	81.9	123	157	174	251	116	97.3	127	12.7	14.0	52.2
(WY)	(2003)	(1997)	(1997)	(1999)	(2003)	(1997)	(1998)	(1998)	(1998)	(1998)	(1994)	(1996)
MIN	1.40	2.94	10.1	15.4	35.7	33.8	23.2	12.7	5.31	2.58	1.17	0.38
(WY)	(2001)	(1999)	(2000)	(2000)	(2002)	(2003)	(1995)	(2001)	(2000)	(1995)	(1993)	(1999)

03426385 MANSKER CREEK ABOVE GOODLETTSVILLE, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1993 - 2003	
ANNUAL TOTAL	17,793.55		17,521.4		43.3	
ANNUAL MEAN	48.7		48.0		63.9	
HIGHEST ANNUAL MEAN					20.9	
LOWEST ANNUAL MEAN					1997	
HIGHEST DAILY MEAN	1,160	Jan 24	1,190	May 7	1,890	Mar 2, 1997
LOWEST DAILY MEAN	0.25	Sep 4	a1.9	Jul 27	0.02	Sep 9, 1999
ANNUAL SEVEN-DAY MINIMUM	0.30	Sep 4	2.1	Aug 23	0.04	Sep 3, 1999
MAXIMUM PEAK FLOW			b3,090	May 7	12,500	Mar 2, 1997
MAXIMUM PEAK STAGE			10.19	Sep 22	13.31	Mar 2, 1997
ANNUAL RUNOFF (CFSM)	1.76		1.73		1.56	
ANNUAL RUNOFF (INCHES)	23.90		23.53		21.23	
10 PERCENT EXCEEDS	108		90		87	
50 PERCENT EXCEEDS	18		22		14	
90 PERCENT EXCEEDS	2.4		3.3		1.8	

a Also occurred Aug. 25, 26.
 b Also occurred Sept. 22.



CUMBERLAND RIVER BASIN

03426385 MANSKER CREEK ABOVE GOODLETTSVILLE, TN

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)
OCT 16...	1010	17	498	13.5	4
DEC 03...	0855	8.1	170	3.5	--
FEB 04...	1415	112	385	8.5	--
MAR 31...	1350	50	337	14.0	--
JUN 02...	0845	5.4	409	16.0	2
JUL 29...	1830	3.4	398	25.0	11
SEP 29...	1340	9.6	535	17.0	--

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CUMBERLAND RIVER BASIN

03426470 DRY CREEK NEAR EDENWOLD, TN

LOCATION.--Lat 36°17'05", long 86°42'24", Davidson County, Hydrologic Unit 05130202, on right wingwall on downstream side of bridge on Gallatin Pike, 0.6 mi southwest of Edenwold, 0.6 mi northeast of Amqui, and at mile 1.2.

DRAINAGE AREA.--7.64 mi².

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--Data collection platform. Elevation of gage is 430 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good except discharges above 1,000 ft³/s, which are poor. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 5	2200	*2,860	*8.82	Sep 22	0545	2,040	8.32

Minimum discharge, 0.45 ft³/s, July 28.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

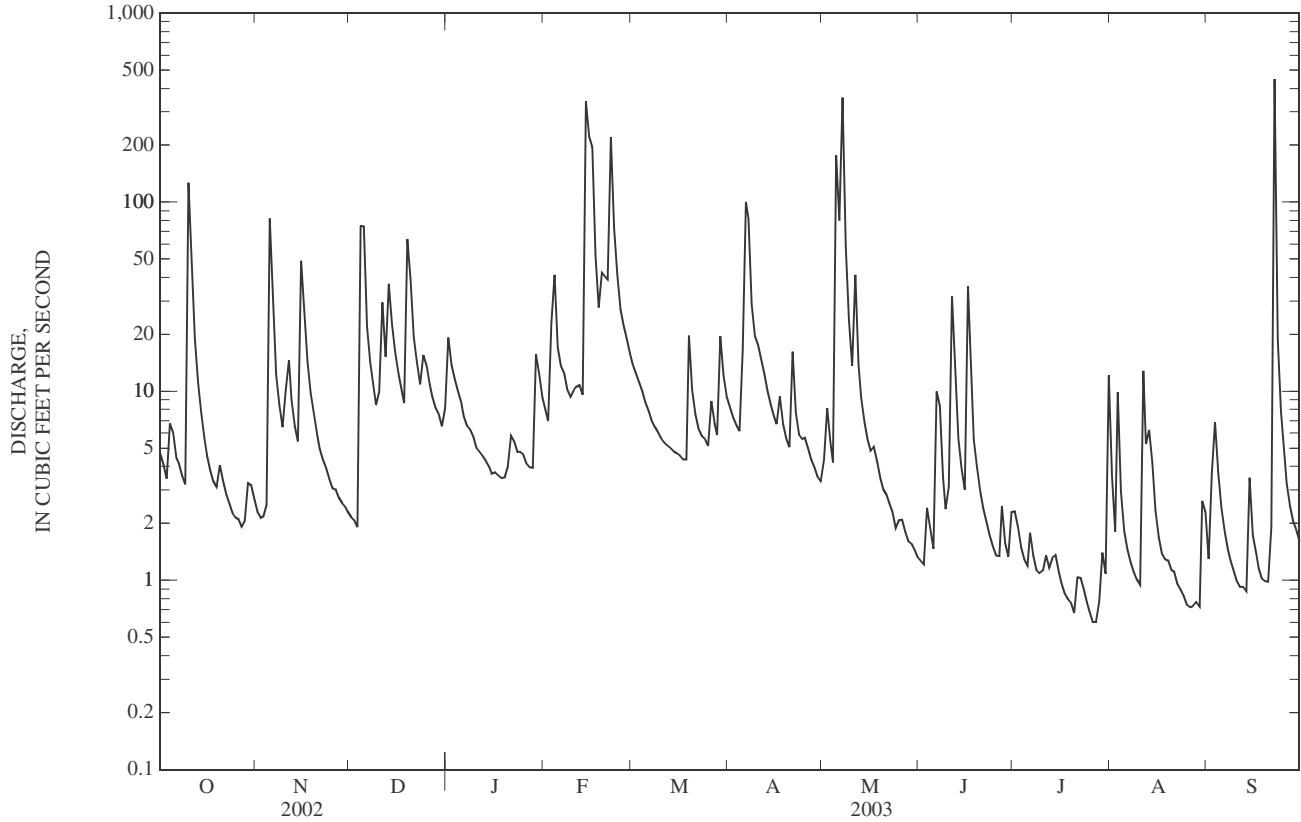
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	2.3	2.2	19	7.9	14	8.3	4.3	1.3	2.3	3.6	1.3
2	4.1	2.1	2.1	14	7.0	12	7.3	8.2	1.2	1.9	1.8	3.7
3	3.5	2.2	1.9	12	23	11	6.6	5.4	2.4	1.5	9.9	6.9
4	6.8	2.5	75	10	41	10	6.2	4.2	1.9	1.3	2.9	3.7
5	6.1	82	74	8.8	17	8.8	16	177	1.5	1.2	1.8	2.4
6	4.5	26	22	7.4	14	7.9	100	80	10	1.8	1.5	1.8
7	4.2	12	14	6.6	13	7.0	82	356	8.4	1.4	1.3	1.5
8	3.6	8.5	11	6.3	10	6.5	29	59	3.5	1.1	1.1	1.3
9	3.2	6.5	8.5	5.8	9.4	6.1	20	24	2.4	1.1	1.0	1.1
10	126	10	10	5.0	10	5.7	18	14	3.1	1.1	0.95	1.00
11	57	15	30	4.8	11	5.4	15	41	32	1.4	13	0.93
12	19	9.0	15	4.5	11	5.2	12	14	12	1.2	5.3	0.93
13	11	6.6	37	4.3	9.6	5.0	10	9.3	5.6	1.3	6.3	0.88
14	7.7	5.4	23	4.0	340	4.8	8.5	7.0	3.9	1.4	4.2	3.5
15	5.6	49	16	3.7	224	4.7	7.4	5.6	3.0	1.1	2.3	1.7
16	4.6	28	12	3.7	196	4.6	6.7	4.8	36	0.97	1.7	1.4
17	3.8	14	10	3.6	52	4.4	9.4	5.1	11	0.86	1.4	1.2
18	3.3	9.8	8.7	3.5	28	4.4	6.8	4.3	5.6	0.80	1.3	1.0
19	3.1	7.6	64	3.5	43	20	5.6	3.5	4.0	0.76	1.3	0.99
20	4.1	5.9	39	4.0	41	10	5.1	3.0	3.0	0.67	1.1	0.99
21	3.4	5.0	19	5.8	39	7.6	16	2.8	2.4	1.0	1.1	1.9
22	2.9	4.4	14	5.4	220	6.4	7.7	2.6	2.0	1.0	0.96	447
23	2.6	3.9	11	4.8	73	5.9	5.9	2.3	1.7	0.90	0.90	19
24	2.3	3.5	16	4.8	42	5.6	5.6	1.9	1.5	0.76	0.83	7.8
25	2.2	3.1	14	4.7	27	5.1	5.7	2.1	1.4	0.68	0.75	4.9
26	2.1	3.0	11	4.2	22	8.9	5.0	2.1	1.3	0.60	0.72	3.3
27	1.9	2.7	9.3	4.0	19	6.8	4.4	1.8	2.5	0.60	0.73	2.5
28	2.1	2.6	8.2	4.0	16	5.9	4.0	1.6	1.6	0.77	0.77	2.1
29	3.3	2.4	7.6	16	---	19	3.6	1.6	1.3	1.4	0.73	1.8
30	3.2	2.3	6.6	12	---	12	3.3	1.4	2.3	1.1	2.6	1.6
31	2.7	---	8.1	9.3	---	9.4	---	1.3	---	12	2.3	---
TOTAL	314.6	337.3	600.2	209.5	1,565.9	250.1	441.1	851.2	169.8	45.97	76.14	530.12
MEAN	10.1	11.2	19.4	6.76	55.9	8.07	14.7	27.5	5.66	1.48	2.46	17.7
MAX	126	82	75	19	340	20	100	356	36	12	13	447
MIN	1.9	2.1	1.9	3.5	7.0	4.4	3.3	1.3	1.2	0.60	0.72	0.88
CFSM	1.33	1.47	2.53	0.88	7.32	1.06	1.92	3.59	0.74	0.19	0.32	2.31
IN.	1.53	1.64	2.92	1.02	7.62	1.22	2.15	4.14	0.83	0.22	0.37	2.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

MEAN	3.38	11.6	16.7	19.3	23.4	23.6	17.6	12.4	15.7	3.59	1.59	5.44
MAX	10.1	30.8	34.2	49.9	55.9	57.0	48.5	27.5	47.3	12.9	3.28	17.7
(WY)	(2003)	(1997)	(1997)	(1999)	(2003)	(1997)	(1998)	(2003)	(1998)	(2002)	(2002)	(2003)
MIN	0.17	0.68	4.46	6.56	10.1	7.85	5.78	2.51	1.16	0.33	0.20	0.12
(WY)	(2001)	(1999)	(2000)	(2000)	(2002)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(1999)

03426470 DRY CREEK NEAR EDENWOLD, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003	
ANNUAL TOTAL	6,125.07		5,391.93		12.8	
ANNUAL MEAN	16.8		14.8		5.12	
HIGHEST ANNUAL MEAN					17.6	1997
LOWEST ANNUAL MEAN					5.12	2000
HIGHEST DAILY MEAN	578	Mar 17	447	Sep 22	679	Jun 5, 1998
LOWEST DAILY MEAN	0.23	Sep 12	0.60	Jul 26	0.02	Sep 8, 1999
ANNUAL SEVEN-DAY MINIMUM	0.30	Sep 8	0.76	Jul 22	0.04	Aug 20, 2000
MAXIMUM PEAK FLOW			2,860	May 5	6,360	Jun 5, 1998
MAXIMUM PEAK STAGE			8.82	May 5	10.21	Jun 5, 1998
INSTANTANEOUS LOW FLOW			0.45	Jul 28	0.02	Aug 23, 2000
ANNUAL RUNOFF (CF5M)	2.20		1.93		1.67	
ANNUAL RUNOFF (INCHES)	29.82		26.25		22.73	
10 PERCENT EXCEEDS	30		25		21	
50 PERCENT EXCEEDS	4.9		4.8		3.2	
90 PERCENT EXCEEDS	0.94		1.1		0.31	



CUMBERLAND RIVER BASIN

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN

LOCATION.--Lat 35°55'06", long 86°20'02", Rutherford County, Hydrologic Unit 05130203, on left bank 50 (revised) ft upstream from highway bridge, 2.5 mi southwest of Lascassas, 3.7 mi downstream from Bradley Creek, 6.0 mi northeast of the courthouse in Murfreesboro, and at mile 15.4.

DRAINAGE AREA.--262 mi².

PERIOD OF RECORD.--October 1950 to November 1958, May 1963 to September 1991, October 1991 to September 2000, crest-stage partial record station. October 2000 to current year. Prior to February 1951 monthly discharge only, published in WSP 1726.

REVISED RECORDS.--WSP 1910: Drainage Area. WDR-TN-75-1: 1955(M), 1963(M), 1970(M), 1973 (M)(P).

GAGE.--Data collection platform. Datum of gage is 507.88 ft, Sandy Hook datum (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1973, water-stage recorder 100 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Frequent diurnal fluctuation at low flow caused by small mills above station. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902, 39.48 ft, Mar. 13, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 11	0130	8,310	18.76	May 5	1030	13,400	24.62
Feb 15	0100	11,400	22.39	May 6	0430	17,500	28.74
Feb 15	2000	16,600	27.99	May 7	1700	*17,600	*28.85
Feb 22	1130	10,100	20.92	Jun 7	1100	9,530	20.26

Minimum discharge, 20 ft³/s, Sept. 20, 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	224	63	229	274	941	184	118	81	529	113	54
2	113	156	58	221	226	730	165	114	74	168	72	40
3	86	120	55	293	201	561	151	110	77	118	248	43
4	73	120	730	334	2,580	446	140	98	82	90	167	131
5	75	513	3,990	289	1,100	376	1,630	7,800	73	73	560	140
6	68	3,030	1,380	247	730	340	1,390	15,900	66	136	2,140	84
7	74	930	672	209	924	301	4,350	13,900	3,800	162	2,140	57
8	105	486	428	187	758	265	1,960	6,560	949	146	594	46
9	84	309	306	175	615	241	1,450	1,750	e439	99	305	39
10	73	219	2,560	158	558	216	1,040	920	e268	79	203	35
11	128	1,780	5,640	135	596	196	1,070	2,330	251	202	156	32
12	125	1,020	1,730	117	527	183	744	1,230	309	137	131	30
13	97	499	2,270	107	440	171	528	693	224	95	159	28
14	76	314	2,530	102	3,740	160	380	484	167	162	141	27
15	65	256	1,170	96	12,300	149	302	369	140	111	132	26
16	134	2,400	733	91	10,200	141	254	308	164	80	106	27
17	166	1,060	513	91	3,340	136	234	264	480	65	89	25
18	113	585	376	83	1,560	142	215	285	261	57	73	23
19	86	383	352	78	957	823	179	301	242	51	62	22
20	73	287	1,470	77	786	971	156	234	307	46	53	21
21	66	224	719	80	721	495	525	256	180	44	48	22
22	59	181	489	96	6,130	346	410	340	137	47	44	779
23	53	147	356	92	3,320	274	250	266	111	107	42	741
24	48	122	2,770	77	1,750	233	197	212	94	139	40	239
25	45	105	1,810	73	1,050	205	178	177	81	91	40	139
26	44	93	900	73	988	192	262	161	72	66	36	100
27	42	86	604	71	1,600	175	227	140	71	54	46	81
28	41	79	443	68	1,400	159	175	120	75	47	52	91
29	106	71	344	162	---	218	149	106	68	49	43	89
30	613	66	280	572	---	276	132	97	74	62	42	68
31	367	---	239	358	---	215	---	88	---	128	114	---
MEAN	111	529	1,161	163	2,120	332	634	1,798	314	111	264	109
MAX	613	3,030	5,640	572	12,300	971	4,350	15,900	3,800	529	2,140	779
MIN	41	66	55	68	201	136	132	88	66	44	36	21

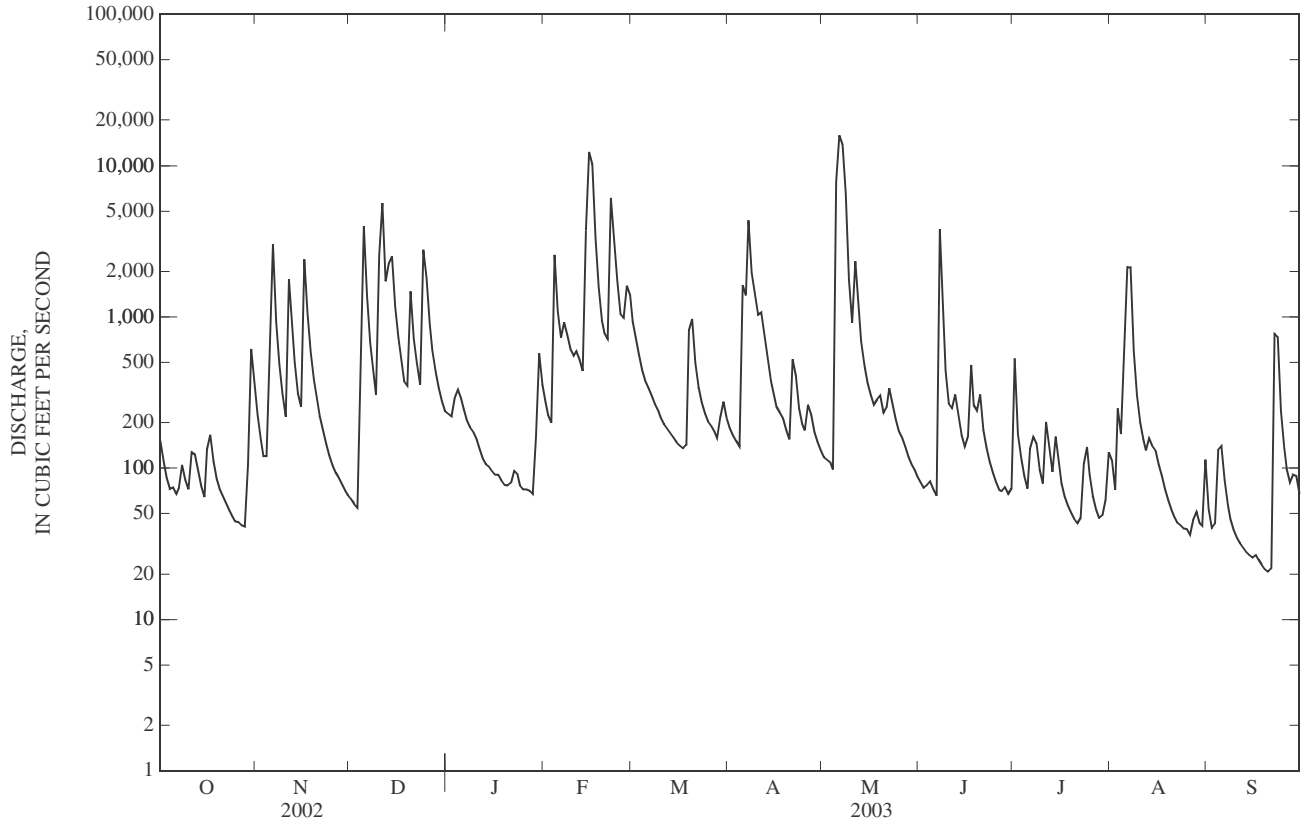
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	149	389	757	811	894	926	622	486	178	122	88.2	153
MAX	1,211	1,466	2,027	2,184	2,136	3,201	1,605	2,214	1,261	898	448	1,078
(WY)	(1976)	(1987)	(1991)	(1974)	(1956)	(1975)	(1973)	(1984)	(1989)	(1989)	(1966)	(1986)
MIN	7.13	9.56	19.6	55.4	205	205	69.5	34.6	9.62	16.8	13.3	10.9
(WY)	(1954)	(1954)	(1966)	(1981)	(1968)	(1966)	(1986)	(1988)	(1988)	(1988)	(1957)	(1968)

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL MEAN	548		628		461	
HIGHEST ANNUAL MEAN					921	1973
LOWEST ANNUAL MEAN					141	1981
HIGHEST DAILY MEAN	16,700	Jan 24	15,900	May 6	34,900	Mar 13, 1975
LOWEST DAILY MEAN	7.1	Sep 14	21	Sep 20	0.40	Aug 31, 1953
ANNUAL SEVEN-DAY MINIMUM	8.7	Sep 10	24	Sep 15	2.9	Sep 22, 1954
MAXIMUM PEAK FLOW			17,600	May 7	41,200	Mar 13, 1975
MAXIMUM PEAK STAGE			28.85	May 7	39.48	Mar 13, 1975
INSTANTANEOUS LOW FLOW			a20	Sep 20	0.20	Oct 23, 1953
10 PERCENT EXCEEDS	1,130		1,390		974	
50 PERCENT EXCEEDS	120		168		120	
90 PERCENT EXCEEDS	20		52		16	

a Also occurred Sept. 21.
e Estimated



CUMBERLAND RIVER BASIN

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN

LOCATION.--Lat 35°54'10", long 86°25'48", Rutherford County, Hydrologic Unit 05130203, on left bank at Murfreesboro sewage treatment plant outfall, 3,000 ft downstream from Sinking Creek, 4.5 mi northwest of the courthouse in Murfreesboro, and at mile 10.7.

DRAINAGE AREA.--177 mi², includes 17 mi² without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1972 to January 1982, January 1986 to current year.

GAGE.--Data collection platform and crest-stage gage. Datum of gage is 514.95 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow is affected by Murfreesboro sewage treatment plant outflow. An annual average of 11.6 ft³/s, with a maximum of 15.5 ft³/s is discharged to the West Fork Stones River 25 ft above the station. Prior to July 1987 an annual average of 7.7 ft³/s was discharged. Natural flow of stream affected by transbasin diversion of water from East Fork Stones River basin into the West Fork Stones River basin.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 11	0330	5,060	12.09	Feb 22	1400	7,020	14.44
Dec 24	1400	3,990	10.40	May 6	0530	7,280	14.67
Feb 15	0630	8,100	15.38	May 7	0000	*15,900	*19.76
Feb 15	2330	9,500	16.49	May 8	0030	12,600	18.32

Minimum discharge, 11 ft³/s, Sept. 20.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	186	86	257	229	625	172	103	91	60	43	21
2	144	144	79	252	203	511	154	109	85	61	38	21
3	118	114	75	272	198	435	139	99	107	65	45	36
4	128	121	219	285	875	378	127	86	82	64	40	56
5	106	206	2,030	257	524	335	1,140	1,390	73	51	55	41
6	90	1,930	775	235	399	317	672	8,270	67	80	96	32
7	139	595	463	215	512	288	1,930	8,640	788	58	140	30
8	121	369	356	197	434	259	990	4,760	363	49	73	28
9	116	281	294	184	359	237	835	1,180	255	42	57	26
10	114	235	1,200	167	336	218	562	708	217	68	49	24
11	136	1,230	3,300	150	340	202	539	1,360	246	148	44	22
12	125	654	1,040	137	304	186	412	828	309	64	43	21
13	114	372	1,400	129	269	171	333	526	237	53	97	20
14	96	280	1,590	121	1,530	156	281	411	189	55	61	19
15	88	272	736	112	7,230	145	243	349	167	55	47	19
16	81	1,300	527	108	6,000	135	219	300	189	49	42	17
17	77	671	430	106	1,930	127	210	272	216	45	38	17
18	74	422	363	99	1,020	151	187	272	164	40	37	17
19	64	324	361	93	705	577	163	278	150	36	34	16
20	60	276	825	91	633	647	145	249	203	41	29	16
21	54	240	485	93	594	373	251	266	149	37	28	17
22	52	211	382	126	3,800	287	223	276	120	50	26	404
23	47	182	320	126	1,960	241	166	241	98	43	26	305
24	43	158	1,930	106	1,030	217	147	227	84	42	25	208
25	41	151	1,040	103	692	191	139	208	72	38	24	151
26	40	129	581	99	705	186	259	194	64	35	23	117
27	37	121	445	95	1,280	161	187	169	93	33	51	95
28	36	107	372	89	919	146	142	150	74	58	44	82
29	67	95	316	128	---	216	121	132	62	125	30	73
30	242	92	278	374	---	249	108	116	56	54	24	69
31	248	---	252	273	---	205	---	103	---	53	22	---
TOTAL	3,082	11,468	22,550	5,079	35,010	8,572	11,196	32,272	5,070	1,752	1,431	2,020
MEAN	99.4	382	727	164	1,250	277	373	1,041	169	56.5	46.2	67.3
MAX	248	1,930	3,300	374	7,230	647	1,930	8,640	788	148	140	404
MIN	36	92	75	89	198	127	108	86	56	33	22	16

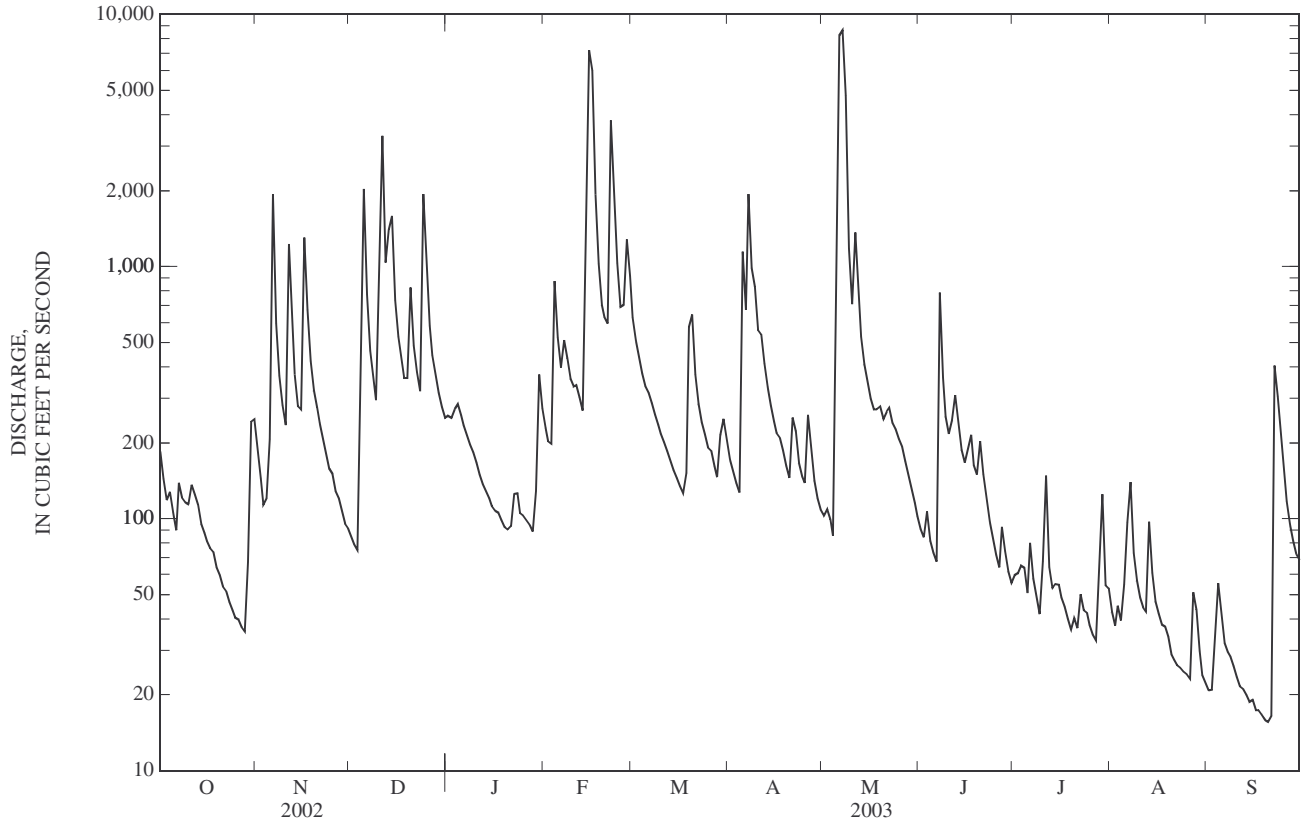
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

MEAN	137	268	485	576	541	668	338	240	156	94.6	70.3	133
MAX	894	1,035	1,259	1,453	1,250	1,773	954	1,041	765	658	348	880
(WY)	(1976)	(1987)	(1991)	(1974)	(2003)	(1975)	(1994)	(2003)	(1989)	(1989)	(1996)	(1979)
MIN	7.60	10.4	31.6	25.4	133	216	58.4	23.8	11.0	13.9	12.2	11.3
(WY)	(1981)	(1981)	(1981)	(1981)	(1978)	(1981)	(1986)	(1981)	(1988)	(1988)	(1976)	(1980)

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		aWATER YEARS 1972 - 2003	
ANNUAL TOTAL	132,700		139,502		312	
ANNUAL MEAN	364		382		517	
HIGHEST ANNUAL MEAN					1973	
LOWEST ANNUAL MEAN					1981	
HIGHEST DAILY MEAN	12,800	Jan 24	8,640	May 7	21,200	Mar 13, 1975
LOWEST DAILY MEAN	14	Sep 14	16	Sep 19	4.7	Oct 13, 1980
ANNUAL SEVEN-DAY MINIMUM	15	Sep 9	17	Sep 15	5.3	Nov 8, 1980
MAXIMUM PEAK FLOW			15,900	May 7	31,000	Mar 13, 1975
MAXIMUM PEAK STAGE			19.76	May 7	23.80	Mar 13, 1975
INSTANTANEOUS LOW FLOW			11	Sep 20	2.9	Jul 7, 1988
10 PERCENT EXCEEDS	635		752		642	
50 PERCENT EXCEEDS	112		150		111	
90 PERCENT EXCEEDS	21		37		16	

a See REMARKS.



03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN—Continued

WATER-QUALITY RECORDS

LOCATION.--At bridge on Blanton Drive, 900 ft upstream from Sinking Creek, 0.7 mi upstream from discharge station.

PERIOD OF RECORD.--February 1986 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1986 to current year.

pH: February 1986 to current year.

WATER TEMPERATURE: February 1986 to current year.

DISSOLVED OXYGEN: February 1986 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Periods of missing record were due to instrument malfunctions. Records for water temperature and pH are fair, specific conductance records are good, dissolved oxygen are poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 529 microsiemens, Jan. 24, 2000; minimum, 63 microsiemens, Dec. 25, 1987.

pH: Maximum, 9.0 units, Mar. 24, 1986; minimum, 5.8 units, June 18, 1992.

WATER TEMPERATURE: Maximum, 33.3°C, July 31, 1999; minimum, 0.2°C, Feb. 3, 4, 5, 6, 1996.

DISSOLVED OXYGEN: Maximum, 21.6 mg/L, Jan. 15, Mar. 11, 12, 2003; minimum, 1.6 mg/L, Sept. 12, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 503 microsiemens, Jan. 30; minimum, 118 microsiemens, May 6.

pH: Maximum, 8.7 units, Jan. 8, 9, 10; minimum, 7.3 units, Aug. 19, 23.

WATER TEMPERATURE: Maximum, 30.6°C, Aug. 22; minimum, 0.4°C, Jan. 18.

DISSOLVED OXYGEN: Maximum, 21.6 mg/L, Jan. 15, Mar. 11, 12; minimum, 3.9 mg/L, Aug. 28.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	436	413	426	473	461	467	445	427	438	420	405	413
2	446	434	437	480	473	478	441	426	435	422	416	420
3	455	446	452	482	476	479	443	423	437	423	416	420
4	465	440	454	481	472	478	430	388	421	426	414	422
5	443	431	435	477	404	464	391	242	326	427	413	422
6	457	436	446	430	248	303	336	258	292	431	425	427
7	459	419	440	399	308	360	392	336	368	434	414	426
8	448	415	426	432	399	418	413	392	406	434	409	424
9	477	448	467	448	432	441	424	413	421	432	403	421
10	476	454	468	455	448	453	429	370	416	430	393	416
11	471	456	464	458	243	365	377	175	227	429	386	412
12	481	458	470	362	250	308	---	---	---	427	388	409
13	490	479	482	414	362	392	---	---	---	424	387	408
14	484	475	481	434	414	426	---	---	---	424	400	410
15	484	481	482	441	410	434	---	---	---	422	390	407
16	484	473	480	410	296	357	385	373	379	419	399	411
17	483	470	478	378	298	339	397	385	390	450	413	423
18	480	466	474	---	---	---	405	397	401	461	432	448
19	477	471	474	---	---	---	406	372	399	441	400	421
20	477	475	476	---	---	---	392	317	363	417	389	406
21	480	470	476	---	---	---	352	314	328	417	400	408
22	477	461	471	---	---	---	390	352	373	442	417	428
23	475	458	467	---	---	---	407	390	399	438	404	421
24	474	461	468	452	438	447	405	184	292	435	412	423
25	475	464	471	454	439	449	332	207	278	426	409	418
26	475	463	470	454	438	448	373	332	355	426	406	418
27	473	457	466	456	442	448	392	373	383	419	403	413
28	470	457	465	456	435	448	402	392	397	417	407	413
29	467	363	447	453	433	444	409	402	405	478	413	426
30	454	424	441	449	431	441	415	406	410	503	423	440
31	461	448	452	---	---	---	420	415	416	431	400	411
MONTH	490	363	461	---	---	---	---	---	---	503	386	419

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	407	396	400	353	316	338	386	361	377	358	350	355
2	419	400	409	371	353	362	392	358	378	369	358	362
3	426	389	418	374	370	372	390	358	376	379	369	373
4	405	312	374	378	373	375	393	369	380	382	378	380
5	349	307	320	383	377	380	387	193	299	384	148	224
6	403	349	378	386	380	382	279	200	243	180	118	142
7	419	403	412	386	371	382	319	239	271	228	128	178
8	419	406	410	387	370	381	363	276	323	301	143	234
9	415	406	408	389	370	383	363	311	324	349	301	327
10	443	415	433	390	358	378	384	333	362	376	349	364
11	437	426	433	389	348	373	392	384	390	377	266	329
12	434	419	428	387	338	368	397	390	392	337	270	308
13	432	414	425	386	339	367	406	397	400	376	337	359
14	433	172	369	386	346	368	410	396	403	388	376	384
15	194	143	163	386	346	369	410	384	400	394	388	391
16	213	151	186	386	346	368	410	374	396	397	391	394
17	301	213	264	383	357	370	404	387	396	395	388	393
18	333	301	319	378	364	371	402	370	390	394	391	393
19	351	333	343	383	311	352	398	356	383	396	390	394
20	361	347	353	323	264	280	400	362	384	400	395	397
21	365	361	363	341	279	310	383	351	363	400	382	390
22	363	146	228	376	341	360	372	365	369	404	388	398
23	289	198	257	380	376	378	373	356	368	406	393	401
24	332	289	310	391	380	387	386	371	378	410	393	404
25	349	332	341	398	378	390	392	384	388	416	409	412
26	355	349	351	396	380	389	394	380	384	417	402	412
27	349	290	316	395	376	388	393	385	390	420	399	411
28	316	282	293	399	371	387	391	343	366	420	395	410
29	---	---	---	397	365	379	343	329	335	419	395	408
30	---	---	---	381	372	376	350	332	342	412	391	403
31	---	---	---	382	363	375	---	---	---	406	390	400
MONTH	443	143	347	399	264	369	410	193	365	420	118	359
	JUNE			JULY			AUGUST			SEPTEMBER		
1	403	383	395	406	392	401	379	357	368	401	395	399
2	398	387	393	411	402	407	393	379	388	403	391	397
3	398	375	386	403	392	399	398	388	395	395	366	387
4	384	375	379	396	388	393	400	306	394	374	361	368
5	381	358	372	395	386	392	386	368	380	371	356	366
6	387	363	380	411	218	358	384	350	378	372	362	368
7	379	176	247	390	284	352	359	325	340	371	366	368
8	357	250	315	420	366	389	373	359	369	375	364	368
9	380	355	365	422	389	392	389	373	384	365	348	359
10	397	380	388	394	370	391	400	387	395	348	336	340
11	399	358	387	370	275	307	405	397	402	337	329	333
12	388	341	366	342	335	339	405	383	399	348	337	343
13	391	369	380	353	342	349	394	367	383	359	344	352
14	385	372	377	383	349	369	376	367	372	372	355	366
15	403	385	399	402	383	396	371	364	368	386	372	380
16	403	359	391	401	396	399	372	365	370	388	379	383
17	362	345	357	397	391	395	380	371	377	402	382	391
18	412	344	381	392	386	390	382	361	375	394	389	392
19	419	386	415	388	384	386	370	352	363	395	388	392
20	410	391	403	385	377	382	377	365	371	403	389	392
21	407	399	403	379	336	374	369	361	366	397	387	393
22	413	397	406	378	369	374	363	354	360	387	233	288
23	409	378	397	382	369	377	358	353	355	396	256	351
24	405	385	398	378	372	376	362	354	359	402	388	395
25	401	394	398	373	366	370	363	357	360	431	395	417
26	404	395	400	370	365	367	363	356	359	426	419	423
27	398	385	393	368	361	365	363	300	348	424	414	420
28	394	385	389	361	262	348	338	309	324	425	418	422
29	393	381	389	329	308	316	339	302	315	433	421	427
30	394	383	391	355	236	346	377	339	361	434	422	428
31	---	---	---	357	236	338	396	375	385	---	---	---
MONTH	419	176	381	422	218	372	405	300	370	434	233	380

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.0	8.0	8.2	8.1	8.5	8.2	8.3	8.0	8.5	8.1	8.0	7.9
2	8.1	7.9	8.3	8.1	8.5	8.2	8.3	8.0	8.6	8.1	8.0	7.9
3	8.1	8.0	8.3	8.1	8.5	8.2	8.3	8.1	8.4	8.1	8.2	8.0
4	8.1	8.0	8.2	8.1	8.5	8.1	8.5	8.1	8.1	7.8	8.2	8.0
5	8.1	7.9	8.2	8.0	8.1	7.9	8.5	8.1	7.8	7.8	8.2	8.0
6	8.2	7.9	8.0	7.8	8.0	7.9	8.4	8.1	8.0	7.8	8.1	8.0
7	8.0	7.9	8.0	7.8	8.2	8.0	8.6	8.2	8.1	7.9	8.4	8.0
8	8.1	7.9	8.2	8.0	---	---	8.7	8.1	8.2	8.0	8.4	8.0
9	8.0	7.9	8.2	8.1	---	---	8.7	8.1	8.2	8.0	8.5	8.0
10	8.0	7.9	8.3	8.1	8.3	8.0	8.7	8.1	8.2	8.0	8.6	8.0
11	7.9	7.8	8.2	7.8	---	---	8.6	8.1	8.3	8.0	8.6	8.0
12	8.0	7.8	8.0	7.8	---	---	8.6	8.1	8.3	8.0	8.5	7.9
13	8.1	7.9	8.2	8.0	---	---	8.6	8.1	8.4	8.1	8.4	7.9
14	8.2	8.0	8.2	8.1	---	---	8.4	8.1	8.1	7.7	8.3	7.9
15	8.1	8.0	8.2	8.0	---	---	8.5	8.1	7.7	7.6	8.3	7.9
16	8.3	8.0	8.0	7.9	---	7.9	8.4	8.1	7.6	7.6	8.3	7.9
17	8.3	8.0	8.0	7.9	8.0	7.9	8.5	8.2	7.7	7.6	8.2	7.9
18	8.3	8.1	---	---	8.1	8.0	8.5	8.2	7.8	7.7	8.2	7.8
19	8.2	8.1	---	---	8.1	7.9	8.5	8.2	7.9	7.8	7.9	7.8
20	8.1	8.0	---	---	8.0	7.9	8.4	8.1	7.9	7.8	7.9	7.7
21	8.2	8.0	---	---	7.9	7.9	8.4	8.1	7.9	7.8	7.9	7.7
22	8.2	8.0	---	---	8.1	7.9	8.5	8.1	7.9	7.6	8.2	7.8
23	8.2	8.0	---	---	8.2	8.0	8.5	8.1	7.8	7.6	8.0	7.9
24	8.2	8.0	8.5	8.2	8.1	7.7	8.4	8.2	7.8	7.8	8.3	8.0
25	8.1	8.0	8.5	8.2	7.9	7.7	8.4	8.2	8.0	7.8	8.4	8.0
26	8.1	8.0	8.3	8.2	8.0	7.9	8.4	8.2	8.0	7.9	8.3	7.9
27	8.2	8.0	8.5	8.2	8.2	8.0	8.4	8.2	8.0	7.9	8.4	7.9
28	8.1	8.0	8.6	8.2	8.2	8.0	8.4	8.2	7.9	7.8	8.4	7.9
29	8.1	7.9	8.5	8.2	8.3	8.1	8.2	8.0	---	---	8.3	7.9
30	8.1	7.9	8.5	8.2	8.3	8.1	8.3	8.0	---	---	8.3	7.9
31	8.2	8.1	---	---	8.2	8.1	8.4	8.1	---	---	8.5	8.0
MONTH	8.3	7.8	---	---	---	---	8.7	8.0	8.6	7.6	8.6	7.7
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.0	8.1	7.8	8.2	7.9	7.8	7.6	7.8	7.5	7.9	7.6
2	8.5	8.0	8.0	7.8	8.1	7.8	7.9	7.7	7.8	7.6	7.8	7.5
3	8.4	7.9	8.0	7.8	8.1	7.8	7.9	7.6	7.9	7.6	7.7	7.5
4	8.3	7.9	8.1	7.9	8.0	7.8	7.9	7.7	8.0	7.6	8.0	7.5
5	8.0	7.7	8.1	7.8	8.2	7.7	7.9	7.7	7.8	7.6	8.0	7.5
6	7.8	7.7	8.1	7.7	8.1	7.8	7.8	7.5	7.8	7.6	7.8	7.5
7	7.9	7.7	7.8	7.7	7.9	7.5	7.8	7.4	7.7	7.4	7.9	7.5
8	8.0	7.8	7.8	7.7	7.7	7.5	7.8	7.6	7.7	7.4	7.8	7.5
9	8.0	7.9	7.9	7.8	8.0	7.6	7.8	7.6	7.9	7.5	7.9	7.6
10	8.1	7.9	7.9	7.8	8.2	7.8	7.7	7.6	7.9	7.6	7.8	7.5
11	8.2	8.1	7.8	7.5	8.1	7.8	7.7	7.5	8.0	7.6	7.8	7.4
12	8.2	8.1	7.7	7.5	8.1	7.8	7.7	7.5	8.0	7.7	8.0	7.5
13	8.3	8.0	7.8	7.7	8.1	7.8	7.7	7.6	7.9	7.6	7.8	7.5
14	8.3	8.0	7.8	7.7	8.1	7.8	7.9	7.6	7.9	7.6	7.8	7.5
15	8.4	8.0	7.9	7.8	8.0	7.8	7.9	7.7	7.9	7.5	7.8	7.5
16	8.4	8.0	8.0	7.8	8.0	7.8	7.9	7.7	7.9	7.6	7.7	7.4
17	8.3	7.9	7.9	7.8	7.8	7.6	8.0	7.7	8.0	7.6	7.8	7.5
18	8.5	7.9	8.0	7.7	7.9	7.6	7.9	7.7	7.8	7.6	7.8	7.6
19	8.5	7.9	8.1	7.8	7.9	7.8	7.9	7.7	7.7	7.3	7.8	7.6
20	8.4	7.9	8.1	7.8	7.9	7.7	7.9	7.7	7.8	7.4	7.8	7.7
21	8.2	7.8	8.0	7.8	7.9	7.7	7.8	7.7	7.8	7.4	7.8	7.7
22	8.4	7.9	8.1	7.8	8.0	7.8	7.7	7.6	7.7	7.4	7.7	7.4
23	8.4	7.9	8.3	7.8	8.0	7.7	7.8	7.6	7.7	7.3	7.6	7.4
24	8.2	7.9	8.3	7.9	8.0	7.7	7.8	7.6	7.8	7.4	7.7	7.6
25	8.2	7.9	8.0	7.8	7.9	7.6	7.8	7.7	7.8	7.5	7.8	7.6
26	8.2	7.9	8.2	7.8	7.9	7.6	7.9	7.7	7.8	7.4	7.9	7.7
27	8.3	8.0	8.3	7.9	7.8	7.6	7.9	7.7	7.7	7.4	7.9	7.7
28	8.2	7.9	8.2	7.9	7.9	7.6	7.9	7.6	7.7	7.4	8.0	7.7
29	8.1	7.8	8.2	7.9	8.0	7.6	7.6	7.5	7.7	7.4	8.0	7.8
30	8.1	7.8	8.2	7.9	7.8	7.6	7.8	7.5	7.9	7.6	8.1	7.8
31	---	---	8.2	7.8	---	---	7.6	7.5	7.8	7.7	---	---
MONTH	8.5	7.7	8.3	7.5	8.2	7.5	8.0	7.4	8.0	7.3	8.1	7.4

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.2	20.9	21.4	15.2	14.0	14.3	8.8	6.0	7.1	11.8	10.8	11.3
2	23.5	20.9	22.1	14.0	11.7	12.6	7.1	5.8	6.3	11.2	10.5	11.0
3	23.3	21.8	22.6	13.0	11.7	12.2	6.5	5.4	6.0	10.5	8.5	9.4
4	23.0	22.2	22.6	12.4	12.0	12.2	6.5	5.8	6.2	8.5	7.4	7.9
5	23.4	21.5	22.4	13.2	12.1	12.4	7.8	6.5	7.2	8.8	7.4	8.0
6	22.4	20.1	21.3	14.0	13.2	13.8	7.8	7.1	7.5	8.0	6.8	7.6
7	21.9	19.6	20.9	13.8	12.7	13.3	8.0	6.9	7.4	7.4	6.1	6.7
8	20.7	18.3	19.4	13.8	12.4	13.0	8.3	7.1	7.6	7.9	5.9	6.8
9	20.2	19.2	19.5	14.7	13.1	13.5	8.7	7.4	7.9	8.9	6.8	7.8
10	19.6	19.4	19.6	17.2	14.3	15.3	8.4	7.7	8.1	8.4	6.9	7.6
11	20.4	19.5	19.9	16.9	16.4	16.7	8.5	7.4	7.7	6.9	5.3	6.0
12	21.2	19.9	20.5	16.4	14.9	15.6	9.5	8.2	9.2	5.4	3.9	4.5
13	20.6	18.2	19.6	14.9	13.4	14.1	9.7	9.6	9.6	5.2	3.6	4.3
14	18.5	16.6	17.6	13.9	12.3	13.0	---	---	---	4.5	3.5	4.0
15	18.3	17.2	17.8	13.3	12.5	12.7	---	---	---	4.0	2.7	3.5
16	17.6	15.9	16.8	12.8	11.9	12.4	10.8	9.5	10.5	3.6	2.6	3.0
17	16.6	14.9	15.8	11.9	11.0	11.4	12.0	10.8	11.4	3.1	1.8	2.4
18	16.5	14.3	15.4	---	---	---	12.4	11.5	11.9	2.0	0.4	1.3
19	16.1	15.5	15.9	---	---	---	12.2	11.7	12.0	3.3	1.6	2.4
20	16.0	15.6	15.9	---	---	---	12.2	10.8	11.6	5.3	2.6	3.8
21	16.0	15.3	15.6	---	---	---	10.8	9.8	10.1	5.5	4.5	5.3
22	16.9	15.0	15.9	---	---	---	10.8	9.8	10.1	5.3	3.4	4.3
23	17.1	14.8	15.9	---	---	---	9.9	9.1	9.6	4.0	1.2	2.4
24	17.3	16.4	16.8	11.3	8.9	9.8	9.3	7.6	8.6	1.5	0.6	1.3
25	17.2	16.8	17.0	11.2	9.0	9.8	8.6	8.1	8.4	2.6	1.2	1.7
26	17.6	16.9	17.2	10.4	9.5	9.8	8.2	7.5	7.9	3.3	1.3	2.2
27	17.8	16.7	17.3	9.7	8.5	9.0	8.0	6.9	7.4	2.7	0.8	1.8
28	17.8	17.2	17.5	8.6	7.3	8.0	8.2	7.0	7.6	4.0	2.2	3.0
29	18.5	17.3	17.6	8.4	6.5	7.4	9.0	7.5	8.1	5.3	4.0	4.9
30	18.5	16.5	17.4	8.9	7.7	8.2	10.0	8.2	9.2	5.7	5.2	5.5
31	16.5	15.2	15.7	---	---	---	10.8	9.7	10.3	6.7	5.2	5.9
MONTH	23.5	14.3	18.4	---	---	---	---	---	---	11.8	0.4	5.1
	FEBRUARY			MARCH			APRIL			MAY		
1	7.8	6.2	7.0	10.6	9.3	9.9	16.3	11.2	13.5	23.5	20.7	21.9
2	9.5	6.7	8.0	10.7	9.9	10.5	18.0	13.0	15.4	23.2	20.6	21.8
3	10.4	8.2	9.3	10.9	9.0	9.9	18.8	14.8	16.8	22.5	20.7	21.5
4	10.8	9.8	10.4	11.1	9.1	10.2	19.3	16.6	17.9	21.8	19.3	20.6
5	9.8	8.4	8.8	12.4	11.1	11.7	18.7	15.4	16.9	21.4	16.0	18.4
6	8.4	7.7	8.1	12.1	10.6	11.5	15.4	13.5	14.3	18.6	17.5	17.9
7	7.8	6.4	7.2	12.6	10.0	11.0	15.6	12.8	13.9	18.8	17.6	18.1
8	6.4	5.3	5.8	13.2	10.6	11.8	16.0	14.8	15.7	19.1	18.6	18.8
9	6.2	5.4	5.7	12.8	11.2	12.2	14.8	11.8	13.2	20.2	18.6	19.3
10	6.6	5.8	6.2	12.3	9.7	10.8	11.8	10.8	11.0	21.4	19.7	20.5
11	8.1	6.0	6.8	12.8	9.6	11.0	13.1	10.4	11.7	20.8	20.1	20.5
12	8.8	7.0	7.6	14.8	10.2	12.3	15.6	12.4	13.9	20.1	18.6	19.3
13	9.2	6.8	7.8	15.5	12.0	13.7	17.4	14.3	15.6	19.6	17.6	18.6
14	8.7	7.8	8.3	14.6	13.1	13.9	18.8	15.8	17.0	18.8	18.1	18.4
15	11.8	8.1	10	15.3	13.3	14.3	20.3	16.8	18.3	19.9	18.0	18.8
16	11.8	8.4	10.0	16.0	13.2	14.5	20.5	17.9	19.0	20.5	18.6	19.5
17	8.4	7.8	8.1	15.2	13.7	14.6	20.1	18.5	19.2	20.0	19.5	19.8
18	8.1	7.7	7.9	15.7	14.8	15.2	21.1	18.0	19.3	20.4	19.2	19.7
19	9.2	8.0	8.6	16.4	14.8	15.5	21.9	17.9	19.8	20.4	19.2	19.8
20	10.1	9.2	9.7	17.1	15.3	16.2	22.5	19.1	20.7	19.9	19.2	19.6
21	11.1	10.1	10.6	16.6	15.3	15.9	22.4	19.6	20.8	19.2	18.4	18.8
22	12.1	10.8	11.3	16.9	14.8	15.6	21.2	18.8	19.7	18.5	17.9	18.1
23	12.0	9.2	10.2	---	---	---	20.8	16.8	18.6	20.3	17.3	18.6
24	9.7	9.2	9.4	18.1	14.2	15.8	18.6	16.2	17.2	21.3	17.9	19.4
25	9.3	8.1	8.6	18.7	14.8	16.6	18.1	16.2	17.1	19.7	18.3	19.0
26	8.1	7.7	7.8	17.3	15.5	16.4	17.6	16.4	16.9	20.1	17.6	18.7
27	7.8	7.3	7.5	18.2	14.0	16.1	19.6	15.4	17.2	21.4	17.6	19.4
28	9.3	7.8	8.5	18.5	15.4	17.0	21.0	16.1	18.4	22.0	18.2	20.1
29	---	---	---	17.6	14.6	16.0	22.2	18.2	20.2	22.3	19.6	21.0
30	---	---	---	14.6	11.8	13.2	23.0	19.9	21.4	22.7	19.4	21.0
31	---	---	---	14.3	10.7	12.3	---	---	---	23.6	21.3	22.3
MONTH	12.1	5.3	8.4	---	---	---	23.0	10.4	17.0	23.6	16.0	19.7

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	15.5	12.1	13.2	12.2	11.1	11.6	15.9	10.3	12.4	9.4	6.3	7.3
2	16.7	11.8	13.4	11.7	11.0	11.3	15.1	9.3	11.6	9.1	6.2	7.2
3	13.8	10.5	11.9	13.4	11.3	12.1	13.5	8.4	10.4	8.8	5.3	6.9
4	11.3	10.1	10.7	13.4	10.9	12.0	11.5	7.5	9.2	9.7	6.5	7.9
5	11.5	10.8	11.1	13.3	10.7	11.5	---	---	---	9.6	7.0	8.7
6	11.6	11.0	11.2	12.1	10.5	11.2	---	---	---	8.8	8.0	8.5
7	12.2	11.1	11.6	16.3	11.3	13.3	---	---	---	9.2	7.9	8.6
8	13.7	11.8	12.5	17.1	11.5	13.6	---	---	---	8.4	7.8	8.1
9	13.5	11.9	12.4	18.3	10.9	13.7	---	---	---	---	---	---
10	13.7	11.6	12.3	20.2	11.6	15.1	---	---	---	---	---	---
11	14.7	11.6	12.7	21.6	11.9	15.8	---	---	---	---	---	---
12	15.4	11.4	12.8	21.6	11.6	15.6	---	---	---	8.8	8.3	8.6
13	16.1	11.5	13.1	20.2	10.9	14.6	---	---	---	9.8	8.3	8.9
14	11.7	11.0	11.2	19.1	10.2	13.9	12.4	8.9	11.0	9.4	8.4	8.7
15	11.1	9.8	10.5	18.4	10.3	13.7	12.7	8.2	9.9	10.3	8.3	9.1
16	11.2	9.7	10.5	18.2	10.3	13.5	13.4	7.8	10	10.8	8.1	9.0
17	11.8	11.2	11.6	16.3	10.1	12.7	12.0	7.3	9.2	9.6	7.9	8.7
18	12.0	11.7	11.9	14.0	9.5	11.3	14.8	7.0	10.0	10.8	7.7	8.8
19	12.2	11.4	11.8	10.9	9.1	10.1	15.1	7.4	10.4	11.4	8.1	9.4
20	11.5	11.1	11.3	10.9	10.0	10.5	13.9	6.8	9.7	10.9	8.2	9.2
21	11.2	10.7	10.9	---	---	---	11.4	6.7	8.3	10.6	8.3	9.1
22	10.7	10.0	10.3	13.1	10.3	11.3	12.2	7.1	8.9	11.3	8.5	9.7
23	11.5	10.2	11.1	---	---	---	12.9	7.5	9.4	13.8	9.0	10.7
24	11.8	11.4	11.6	15.1	10.6	12.3	10.3	7.6	8.7	14.8	8.6	10.9
25	12.6	11.6	12.0	15.3	10.5	11.9	10.7	7.8	8.9	10.0	8.2	9.1
26	12.4	11.9	12.1	14.5	9.2	11.2	9.9	7.8	8.9	13.9	8.5	10.4
27	12.4	12.2	12.3	15.3	9.1	11.5	12.2	8.8	10	14.4	8.7	10.9
28	12.2	11.6	12.1	14.7	8.9	11.3	11.6	7.7	9.3	14.6	8.0	10.7
29	---	---	---	13.5	8.8	10.5	10.4	6.8	8.2	13.8	7.9	10.3
30	---	---	---	---	---	---	10.1	6.6	7.8	14.1	7.9	10.4
31	---	---	---	15.9	10.6	12.6	---	---	---	13.3	7.6	9.9
MONTH	16.7	9.7	11.8	---	---	---	---	---	---	---	---	---
	JUNE			JULY			AUGUST			SEPTEMBER		
1	13.8	7.6	10.1	8.4	5.3	6.8	10.3	5.9	8.0	10.0	5.2	7.5
2	11.8	6.6	9.4	9.6	5.8	7.4	9.6	6.4	8.1	10.6	5.4	7.6
3	11.8	7.4	9.1	9.4	5.5	7.2	10.4	6.5	8.3	8.2	5.6	7.1
4	11.2	7.1	8.9	---	---	---	11.0	6.4	8.7	12.5	5.6	8.1
5	14.3	7.3	10.2	---	---	---	10.4	5.7	8.1	12.2	5.8	8.5
6	11.6	7.6	9.4	---	---	---	9.5	5.8	7.6	11.2	6.1	8.6
7	9.1	7.8	8.8	---	---	---	10.5	6.0	8.2	11.6	7.0	9.3
8	10.4	8.6	9.3	8.8	4.6	6.7	10.5	5.1	7.5	11.0	6.1	9.0
9	11.6	8.2	9.2	7.9	4.7	6.2	10.2	5.7	7.2	11.6	7.5	9.6
10	12.2	8.1	9.6	6.7	4.8	5.9	11.3	6.3	8.6	10.6	7.3	9.3
11	11.3	7.6	8.9	7.9	5.4	6.6	11.2	6.6	8.9	10.8	6.7	9.1
12	10.4	7.3	8.6	8.1	5.3	6.5	11.0	7.0	8.9	11.7	7.0	9.2
13	11.4	7.5	8.9	8.0	5.6	6.7	10.1	6.8	8.4	10.9	7.2	9.1
14	10.4	7.0	8.2	9.1	5.8	7.3	10.1	5.7	7.7	10.2	4.9	8.3
15	10.4	6.6	7.9	9.5	5.9	7.5	9.5	6.0	7.7	9.8	6.3	7.9
16	9.6	6.1	7.4	8.7	4.6	7.0	9.8	5.7	7.7	9.5	4.5	7.6
17	8.8	5.7	6.9	9.4	5.6	7.4	9.3	5.7	7.5	8.2	5.9	6.8
18	8.4	5.4	6.6	9.3	5.9	7.5	8.6	5.4	7.0	7.8	5.1	6.3
19	8.2	5.5	6.6	9.0	5.9	7.4	8.5	4.1	6.3	7.7	5.3	6.4
20	8.9	5.5	6.8	9.0	5.9	7.4	8.5	4.6	6.6	7.8	5.3	6.3
21	8.9	5.7	6.9	7.6	5.7	6.6	9.0	4.6	6.7	6.9	5.3	6.2
22	9.7	5.6	7.1	7.6	5.5	6.5	8.9	4.7	6.8	7.1	6.0	6.7
23	---	---	---	8.7	6.0	7.3	8.3	4.4	6.5	8.2	6.7	7.2
24	---	---	---	9.8	6.5	8.1	9.7	5.2	7.2	8.9	6.9	7.6
25	---	---	---	9.7	6.8	8.4	9.1	5.7	7.3	9.3	6.6	7.7
26	8.8	5.3	6.9	10.2	7.3	8.7	9.6	5.3	7.4	9.3	6.7	7.6
27	8.3	5.2	6.6	10.9	7.3	9.0	8.2	4.6	6.5	8.8	6.3	7.4
28	9.8	5.8	7.5	9.9	7.2	8.3	8.1	3.9	5.8	10.0	6.6	8.1
29	10.5	5.5	7.6	8.0	5.5	7.0	7.8	4.4	6.1	10.7	7.2	8.8
30	7.9	5.5	6.8	11.0	6.3	8.4	9.4	4.3	6.9	11.2	7.8	9.4
31	---	---	---	9.0	6.2	7.6	9.6	4.8	7.4	---	---	---
MONTH	---	---	---	---	---	---	11.3	3.9	7.5	12.5	4.5	7.9