

CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN

LOCATION.--Lat 36°23'08", long 84°33'17", Scott County, Hydrologic Unit 05130104, on left bank at town of New River, 700 ft downstream from Phillips Creek, 1,000 ft downstream from bridge on U.S. Highway 27, 1.7 mi downstream from Brimstone Creek, and at mile 8.6.

DRAINAGE AREA.--382 mi².

PERIOD OF RECORD.--August 1934 to September 1991, October 1991 to September 1998, as stage only. October 1998 to current year. Gage-height records collected in this vicinity 1908-52 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1436: Drainage area. WDR TN-73: 1939(M), 1951(M), 1970(M).

GAGE.--Water-stage recorder. Datum of gage is 1,092.67 ft above NGVD of 1929.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,700 ft³/s, May 27, 1973, gage height, 37.91 ft, from high water mark in gage well, from rating curve extended above 27,000 ft³/s on basis of slope-area and contracted-opening measurements of peak flow; no flow part of each day Aug. 12-14, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 23, 1929, reached a stage of 41.2 ft, discharge, 74,700 ft³/s, estimated, based on field survey at old U.S. Weather Bureau gage, 1,200 ft upstream at datum 3.41 ft higher.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 16	1430	*30,000	*24.69	Apr 11	0000	17,100	17.89
Feb 22	1800	15,400	16.90				

Minimum discharge, 41 ft³/s, Oct. 6.

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	126	351	238	544	906	1,420	554	824	216	233	689	73
2	92	254	210	512	758	1,250	518	631	177	322	577	67
3	73	196	191	485	651	1,050	476	591	155	607	1,010	2,340
4	57	176	390	438	1,350	867	434	471	198	376	1,500	6,470
5	48	222	7,550	402	1,550	765	553	1,750	195	292	1,480	1,810
6	50	1,160	2,950	390	1,160	735	751	5,130	150	231	963	822
7	71	987	1,440	361	1,010	716	6,080	5,460	1,860	211	634	525
8	55	628	986	341	794	622	3,770	4,120	2,200	190	451	388
9	73	437	746	343	654	578	7,160	1,980	957	259	336	320
10	68	356	634	332	641	529	8,430	1,230	566	587	282	251
11	80	5,780	1,600	295	618	473	9,070	1,110	402	1,460	314	200
12	182	2,010	1,640	255	590	436	3,030	1,040	466	991	306	172
13	220	1,020	2,210	225	564	409	1,780	734	509	592	249	148
14	160	686	5,760	226	695	390	1,250	577	656	482	183	130
15	121	532	2,280	220	9,620	359	979	493	1,490	364	150	122
16	121	613	1,450	206	24,800	339	808	799	2,050	298	132	122
17	181	595	1,060	211	7,510	322	915	1,220	5,140	265	177	111
18	152	508	827	182	2,830	331	6,550	3,850	2,960	225	336	91
19	119	434	694	186	1,730	334	2,400	1,730	4,370	178	185	83
20	105	492	2,020	194	1,310	396	1,490	1,200	2,080	153	130	77
21	106	492	1,750	214	1,080	413	1,320	1,400	1,180	133	106	72
22	103	648	1,240	279	7,790	372	1,200	1,730	810	150	94	1,250
23	88	598	940	247	5,500	344	951	1,260	600	457	94	3,430
24	78	499	1,050	214	2,450	319	787	945	457	334	99	1,030
25	73	419	1,940	210	1,700	302	679	702	366	239	91	614
26	70	366	1,620	212	1,400	293	680	578	304	180	70	424
27	72	355	1,220	205	1,410	285	583	452	300	145	58	376
28	77	307	980	201	1,530	267	466	360	351	120	53	740
29	459	269	805	325	---	320	402	323	268	111	50	495
30	744	255	670	1,240	---	555	1,220	302	241	112	53	365
31	539	---	576	1,080	---	585	---	252	---	257	62	---
TOTAL	4,563	21,645	47,667	10,775	82,601	16,376	65,286	43,244	31,674	10,554	10,914	23,118
MEAN	147	722	1,538	348	2,950	528	2,176	1,395	1,056	340	352	771
MAX	744	5,780	7,550	1,240	24,800	1,420	9,070	5,460	5,140	1,460	1,500	6,470
MIN	48	176	191	182	564	267	402	252	150	111	50	67
CFSM	0.39	1.89	4.03	0.91	7.72	1.38	5.70	3.65	2.76	0.89	0.92	2.02
IN.	0.44	2.11	4.64	1.05	8.04	1.59	6.36	4.21	3.08	1.03	1.06	2.25

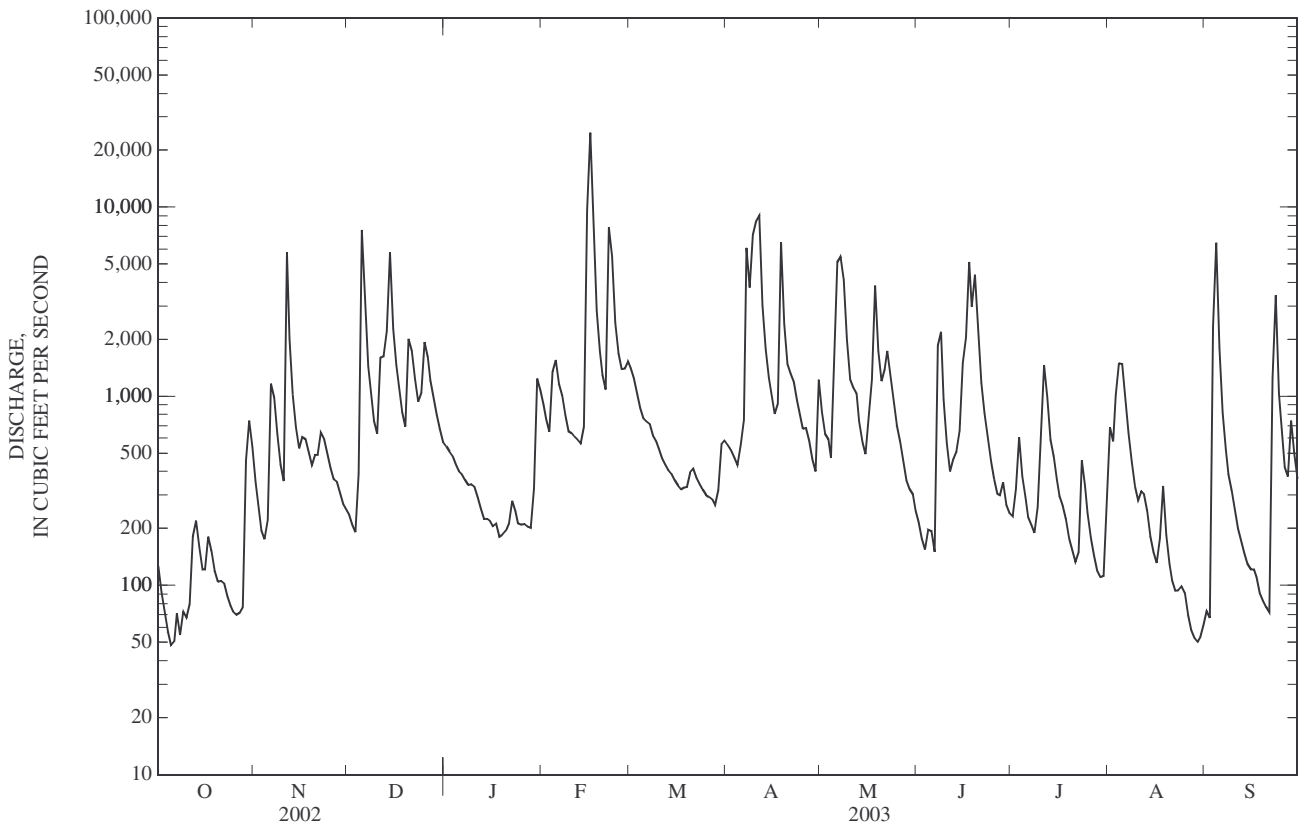
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	138	495	1,073	1,377	1,482	1,523	1,091	683	357	273	163	137
MAX	1,035	2,683	3,359	4,206	3,891	4,371	2,564	3,095	2,850	1,986	1,159	1,235
(WY)	(1990)	(1958)	(1991)	(1937)	(1939)	(1975)	(1977)	(1973)	(1989)	(1967)	(1942)	(1989)
MIN	0.64	2.35	43.9	42.1	112	528	216	60.6	4.54	3.99	5.71	2.68
(WY)	(1953)	(1940)	(1966)	(1981)	(1941)	(2003)	(1942)	(1936)	(1936)	(1944)	(1936)	(1953)

03408500 NEW RIVER AT NEW RIVER, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	259,528.24		368,417		731	
ANNUAL MEAN	711		1,009		341	
HIGHEST ANNUAL MEAN					1,350	1973
LOWEST ANNUAL MEAN					341	1988
HIGHEST DAILY MEAN	21,900	Mar 18	24,800	Feb 16	a38,000	Dec 23, 1990
LOWEST DAILY MEAN	0.62	Sep 13	48	Oct 5	0.10	Aug 9, 1944
ANNUAL SEVEN-DAY MINIMUM	1.7	Sep 8	59	Aug 27	0.10	Aug 9, 1944
MAXIMUM PEAK FLOW			30,000	Feb 16	a63,700	May 27, 1973
MAXIMUM PEAK STAGE			24.69	Feb 16	b37.91	May 27, 1973
INSTANTANEOUS LOW FLOW			41	Oct 6	c0.00	Aug 12, 1944
ANNUAL RUNOFF (CFSM)	1.86		2.64		1.91	
ANNUAL RUNOFF (INCHES)	25.27		35.88		26.00	
10 PERCENT EXCEEDS	1,280		1,990		1,630	
50 PERCENT EXCEEDS	262		471		258	
90 PERCENT EXCEEDS	12		109		17	

- a Highest daily mean and instantaneous peak flows from rating curve extended above 27,000 ft³/s on basis of slope-area and contracted opening measurements of peak flow.
- b Maximum stage from high-water mark in gage well.
- c Minimum discharge also occurred Aug. 13-15, 1944.



CUMBERLAND RIVER BASIN

03409500 CLEAR FORK NEAR ROBBINS, TN

LOCATION.--Lat 36°23'18", long 84°37'49", Scott County, Hydrologic Unit 05130104, on right bank 300 ft downstream from Burnt Mill Bridge, 3.3 mi northwest of Robbins, and at mile 3.7.

DRAINAGE AREA.--272 mi².

PERIOD OF RECORD.--October 1930 to September 1971, July 1975 to September 1991, October 1991 to September 1998, stage only, October 1998 to current year. Published as Clear Fork River near Robbins, October 1951 to September 1954.

REVISED RECORDS.--WSP 1306: 1931(M), 1936-37(M), 1943-44(M). WSP 1436: Drainage area. WSP 1910: 1935(M).

GAGE.--Data collection platform. Datum of gage is 1,081.46 ft, Sandy Hook datum. Prior to Aug. 10, 1940, nonrecording gage at site 300 ft upstream at datum 1.00 ft higher.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929 reached a stage of 22.1 ft, former site and datum, from information by local residents, and flood of May 27, 1973, reached a stage of 18.92 ft, present site and datum, from floodmark; discharge 35,700 ft³/s, from rating curve extended above 14,000 ft³/s, on basis of slope-area measurement at gage height 18.5 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 5	1030	7,720	9.63	May 6	2000	9,360	10.54
Feb 16	0730	*19,100	*14.40	May 7	2200	11,100	11.38
Feb 22	2000	11,400	11.54	Sep 4	1200	16,700	13.59
Apr 9	0530	8,380	10.01	Sep 22	2130	10,300	11.04
Apr 10	2130	14,300	12.70				

Minimum discharge, 14 ft³/s, Aug. 28, 29, 30, 31.

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	97	223	137	486	e760	989	186	245	146	94	50	692
2	74	171	122	451	629	845	179	284	123	103	151	242
3	61	141	115	419	552	700	169	277	110	112	266	4,750
4	52	128	217	390	1,350	573	160	222	112	97	197	12,900
5	48	163	5,850	352	1,480	500	240	2,610	116	77	136	3,680
6	45	1,190	2,730	331	1,020	468	554	7,280	105	66	261	1,200
7	52	801	1,260	303	869	432	4,620	7,590	214	62	144	667
8	46	491	816	283	719	363	3,400	6,020	431	56	131	455
9	42	353	588	279	598	328	7,040	2,230	250	55	105	339
10	43	307	501	268	592	294	e8,260	1,220	162	84	81	252
11	53	3,120	2,950	241	587	263	e8,050	1,030	133	128	78	186
12	59	1,630	2,290	212	628	244	2,670	1,180	422	145	204	146
13	86	777	e2,020	182	605	228	1,450	704	538	117	145	121
14	91	492	e5,500	198	757	216	966	505	697	386	102	103
15	79	383	e2,000	179	7,920	203	719	414	2,950	260	77	92
16	98	766	1,300	183	16,300	189	565	569	1,780	143	62	103
17	157	734	967	183	7,630	182	656	1,110	3,020	99	50	83
18	132	529	763	180	2,620	184	1,870	2,000	1,710	76	43	68
19	110	419	643	189	1,520	190	1,230	1,340	2,030	61	41	58
20	89	372	1,170	174	1,120	179	844	867	1,080	52	37	51
21	82	319	1,220	189	926	178	803	1,050	607	43	31	47
22	84	294	937	252	6,320	158	857	1,510	392	39	30	2,750
23	78	266	744	268	5,810	143	643	1,040	276	39	33	4,450
24	70	221	788	285	2,380	132	505	746	200	46	29	1,340
25	65	193	1,810	194	1,490	125	426	527	152	48	25	722
26	65	177	1,340	240	1,140	122	453	431	121	43	22	466
27	67	179	995	245	1,150	120	390	346	108	35	19	374
28	69	177	809	180	1,140	117	307	265	109	28	16	625
29	85	157	684	e295	---	133	257	219	112	24	15	457
30	353	147	586	e1,150	---	221	248	194	92	24	14	325
31	321	---	518	e980	---	206	---	171	---	38	122	---
TOTAL	2,853	15,320	42,370	9,761	68,612	9,225	48,717	44,196	18,298	2,680	2,717	37,744
MEAN	92.0	511	1,367	315	2,450	298	1,624	1,426	610	86.5	87.6	1,258
MAX	353	3,120	5,850	1,150	16,300	989	8,260	7,590	3,020	386	266	12,900
MIN	42	128	115	174	552	117	160	171	92	24	14	47
CFSM	0.34	1.88	5.02	1.16	9.01	1.09	5.97	5.24	2.24	0.32	0.32	4.63
IN.	0.39	2.10	5.79	1.33	9.38	1.26	6.66	6.04	2.50	0.37	0.37	5.16

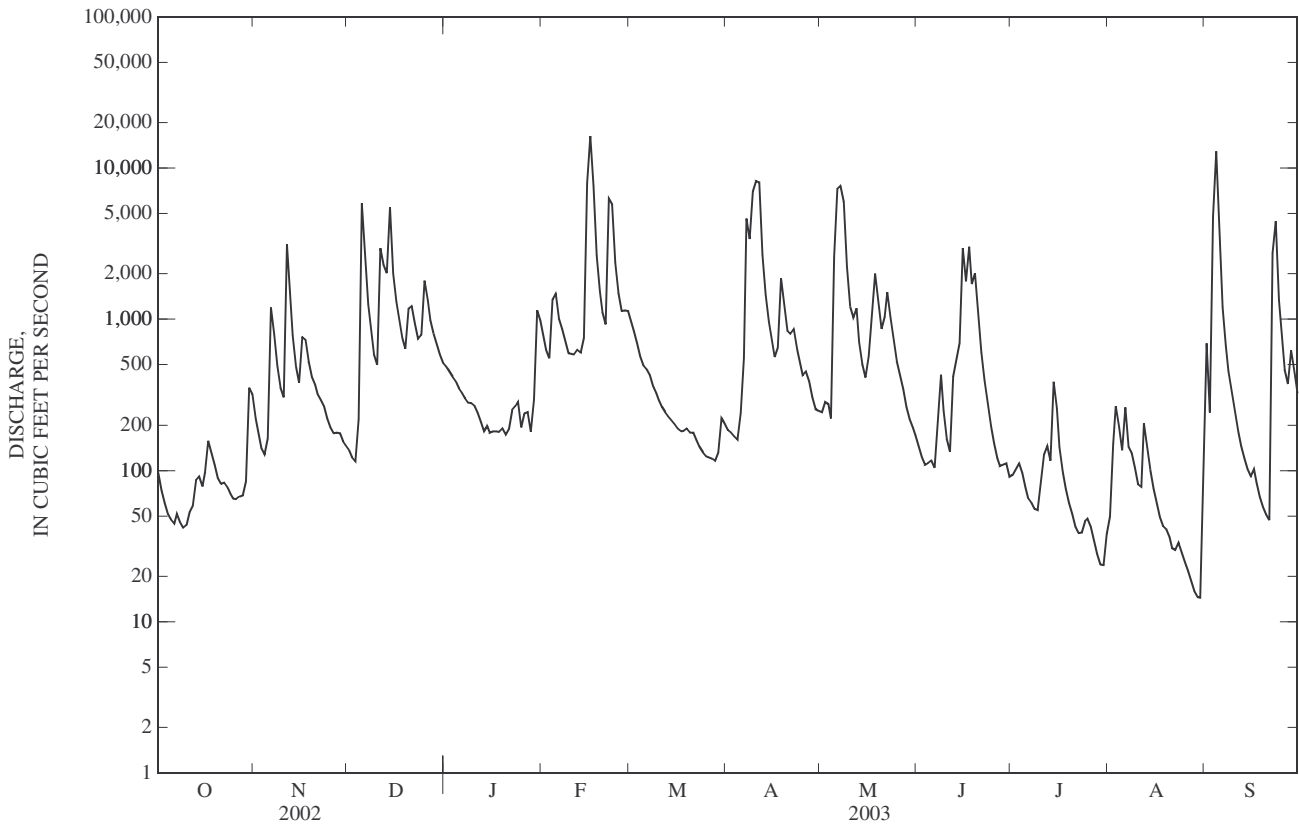
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

MEAN	91.1	291	650	907	1,047	988	735	475	217	159	101	112
MAX	747	1,303	2,470	3,418	2,794	2,757	1,968	2,043	1,742	1,122	940	1,258
(WY)	(1990)	(1958)	(1991)	(1937)	(1939)	(1963)	(1977)	(1984)	(1989)	(1967)	(1971)	(2003)
MIN	1.84	4.97	28.6	32.4	141	298	152	64.1	8.29	6.40	8.07	2.92
(WY)	(1954)	(1954)	(1964)	(1981)	(1941)	(2003)	(1942)	(1948)	(1988)	(1944)	(1987)	(1953)

03409500 CLEAR FORK NEAR ROBBINS, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	214,134.1		302,493			
ANNUAL MEAN	587		829		479	
HIGHEST ANNUAL MEAN					864	1989
LOWEST ANNUAL MEAN					215	1931
HIGHEST DAILY MEAN	15,900	Mar 18	16,300	Feb 16	a24,800	Dec 23, 1990
LOWEST DAILY MEAN	3.9	Sep 14	14	Aug 30	0.20	Sep 20, 1932
ANNUAL SEVEN-DAY MINIMUM	4.4	Sep 12	20	Aug 24	0.51	Sep 15, 1932
MAXIMUM PEAK FLOW			19,100	Feb 16	a34,000	Feb 3, 1939
MAXIMUM PEAK STAGE			14.40	Feb 16	b18.50	Feb 3, 1939
INSTANTANEOUS LOW FLOW			c14	Aug 28	d0.20	Sep 19, 1932
ANNUAL RUNOFF (CFSM)	2.16		3.05		1.76	
ANNUAL RUNOFF (INCHES)	29.29		41.37		23.91	
10 PERCENT EXCEEDS	1,210		1,830		1,110	
50 PERCENT EXCEEDS	163		261		160	
90 PERCENT EXCEEDS	21		53		11	

- a Highest daily mean and instantaneous peak flows from rating curve extended above 14,000 ft³/s on basis of slope-area measurement of peak flow.
- b Maximum stage from floodmarks, site and datum then in use.
- c Also occurred August 29, 30, and 31.
- d Also occurred Sept. 20, 21, 1932.
- e Estimated



03410210 SOUTH FORK CUMBERLAND RIVER AT LEATHERWOOD FORD, TN

LOCATION.--Lat 36°28'38", long 84°40'09", Scott County, Hydrologic Unit 05130104, on left bank at bridge on State Route 297, 1.0 mi above Anderson Branch, 1.3 miles below North White Oak Creek, 10.1 mi southwest of Oneida, and at mile 70.1.

DRAINAGE AREA.--806 mi².

PERIOD OF RECORD.--October 1983 to September 1987. October 1998 to September 1999, May 2001 to current year. Occasional discharge measurements, water years 1961-62, 1979-80, 1991-94.

GAGE.--Data collection platform. Datum of gage is 862.79 ft, Sandy Hook datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observation 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 20,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 16	1230	*49,200	*29.28	Apr 11	0030	33,800	24.35
Feb 22	2000	30,800	23.24	Sep 4	1100	25,600	21.21

Minimum discharge, 129 ft³/s, Aug. 29.

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

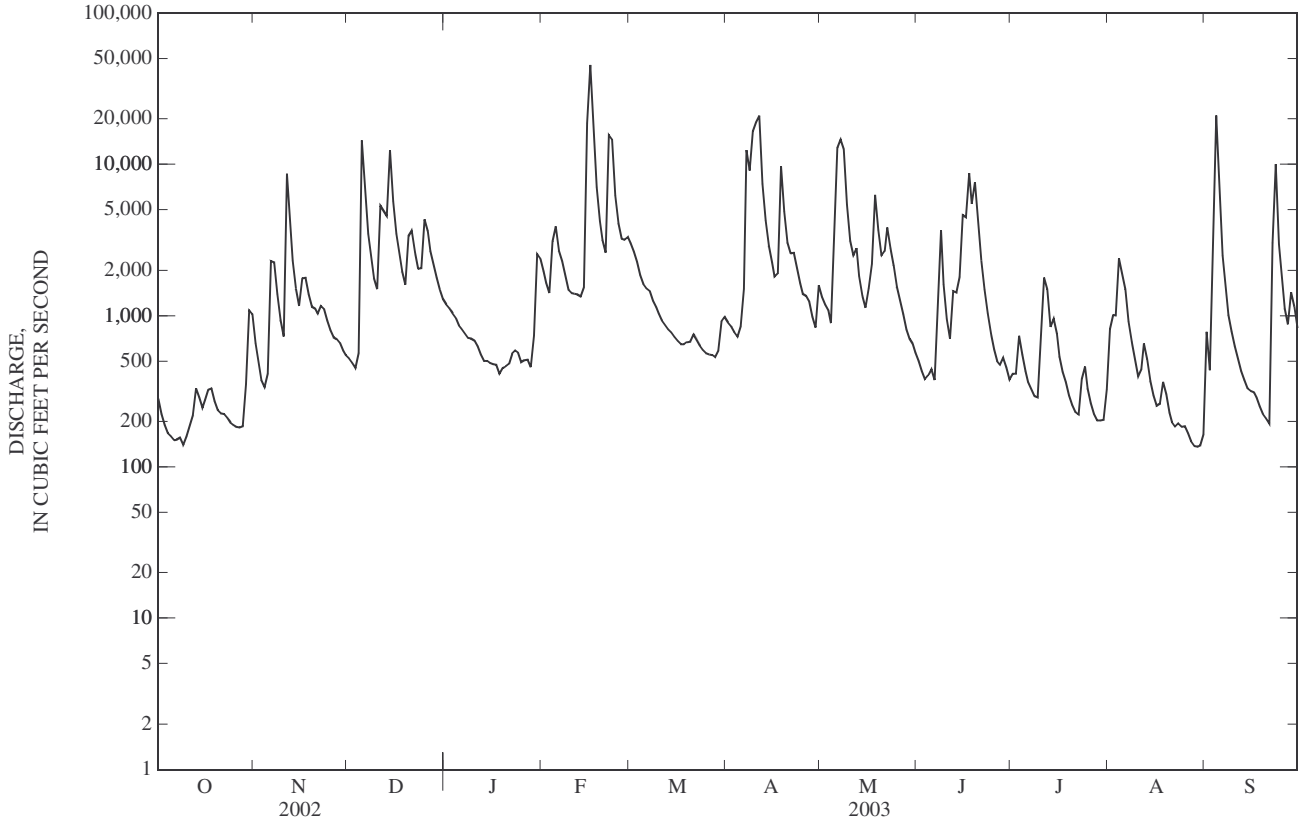
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	654	526	1,190	1,980	3,040	903	1,340	506	413	821	778
2	224	485	488	1,120	1,650	2,670	850	1,190	430	413	1,020	436
3	191	378	454	1,040	1,420	2,280	784	1,090	380	733	1,010	5,380
4	168	338	568	964	3,110	1,870	730	891	403	556	2,400	21,100
5	160	413	14,400	865	3,910	1,620	851	3,910	443	432	1,870	6,980
6	151	2,310	7,380	823	2,690	1,510	1,500	12,900	375	364	1,500	2,480
7	152	2,250	3,480	765	2,310	1,460	12,400	14,600	1,440	329	910	1,460
8	157	1,390	2,360	714	1,850	1,260	9,090	12,600	3,690	294	676	1,020
9	140	943	1,780	707	1,480	1,140	16,700	5,450	1,610	288	525	789
10	160	732	1,500	689	1,420	1,040	19,000	3,150	947	753	400	631
11	188	8,640	5,310	628	1,400	931	21,100	2,520	699	1,780	446	517
12	220	4,630	4,910	558	1,390	866	7,410	2,790	1,460	1,500	656	432
13	333	2,310	4,560	504	1,350	810	4,240	1,820	1,430	841	521	375
14	289	1,520	12,400	503	1,550	771	2,900	1,370	1,810	962	373	331
15	247	1,170	5,700	488	18,700	724	2,250	1,130	4,640	763	297	317
16	278	1,770	3,460	479	45,300	680	1,800	1,520	4,510	539	254	312
17	325	1,790	2,510	477	19,300	650	1,900	2,190	8,720	428	262	291
18	332	1,390	1,970	415	7,090	646	9,710	6,300	5,490	366	367	252
19	273	1,150	1,600	455	4,230	666	4,870	3,690	7,630	298	304	226
20	239	1,120	3,360	460	3,170	677	3,050	2,480	4,120	258	230	209
21	226	1,030	3,630	480	2,620	753	2,580	2,670	2,310	231	197	195
22	226	1,160	2,630	562	15,700	692	2,600	3,820	1,490	222	185	3,030
23	212	1,110	2,050	591	14,600	637	2,040	2,810	1,040	385	193	10,100
24	196	928	2,070	574	6,250	593	1,640	2,140	767	461	185	2,960
25	191	803	4,320	493	4,110	565	1,400	1,560	603	330	187	1,690
26	186	720	3,630	507	3,240	553	1,370	1,260	501	264	168	1,120
27	183	701	2,690	516	3,160	548	1,250	1,020	477	224	148	875
28	186	662	2,190	458	3,310	532	986	810	529	203	137	1,420
29	352	588	1,780	733	---	589	836	699	459	204	137	1,160
30	1,090	552	1,480	2,570	---	911	1,590	648	380	206	139	825
31	1,020	---	1,280	2,400	---	977	---	574	---	325	164	---
TOTAL	8,578	43,637	106,466	23,728	178,290	32,661	138,330	100,942	59,289	15,365	16,682	67,691
MEAN	277	1,455	3,434	765	6,368	1,054	4,611	3,256	1,976	496	538	2,256
MAX	1,090	8,640	14,400	2,570	45,300	3,040	21,100	14,600	8,720	1,780	2,400	21,100
MIN	140	338	454	415	1,350	532	730	574	375	203	137	195
CFSM	0.34	1.80	4.26	0.95	7.90	1.31	5.72	4.04	2.45	0.61	0.67	2.80
IN.	0.40	2.01	4.91	1.10	8.23	1.51	6.38	4.66	2.74	0.71	0.77	3.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

MEAN	309	1,197	1,809	2,056	2,836	2,175	2,141	1,901	731	479	379	351
MAX	870	3,506	3,434	4,553	6,368	4,021	4,611	5,631	1,976	1,758	1,302	2,256
(WY)	(1986)	(1987)	(2003)	(1999)	(2003)	(2002)	(2003)	(1984)	(2003)	(1999)	(1985)	(2003)
MIN	43.4	49.4	196	602	1,245	1,054	539	347	230	124	61.4	25.9
(WY)	(1999)	(1999)	(2000)	(1986)	(2002)	(2003)	(1986)	(2001)	(1984)	(2000)	(1987)	(1999)

03410210 SOUTH FORK CUMBERLAND RIVER AT LEATHERWOOD FORD, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	568,622		791,659		1,381	
ANNUAL MEAN	1,558		2,169		2,169	
HIGHEST ANNUAL MEAN					2,169	2003
LOWEST ANNUAL MEAN					899	2000
HIGHEST DAILY MEAN	43,300	Mar 18	45,300	Feb 16	49,300	May 7, 1984
LOWEST DAILY MEAN	21	Sep 13	137	Aug 28	18	Sep 18, 1999
ANNUAL SEVEN-DAY MINIMUM	25	Sep 10	154	Aug 25	20	Sep 14, 1999
MAXIMUM PEAK FLOW			49,200	Feb 16	56,100	May 7, 1984
MAXIMUM PEAK STAGE			29.28	Feb 16	31.22	May 7, 1984
INSTANTANEOUS LOW FLOW			129	Aug 29	17	Oct 1, 1998
ANNUAL RUNOFF (CF5M)	1.93		2.69		1.71	
ANNUAL RUNOFF (INCHES)	26.24		36.54		23.28	
10 PERCENT EXCEEDS	3,180		4,590		3,050	
50 PERCENT EXCEEDS	491		903		572	
90 PERCENT EXCEEDS	79		226		57	



03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, TN

LOCATION.--Lat 36°24'58", long 85°01'35", Fentress County, Hydrologic Unit 05130105, on right bank at bridge 200 ft upstream from bridge on State Highway 52, 0.5 mi upstream from Poplar Cove Creek, 5.3 mi west of Jamestown, and at mile 12.7.

DRAINAGE AREA.--202 mi², includes 6.0 mi² without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1942 to September 1991. October 1991 to September 1992, miscellaneous water-quality measurements. October 1992 to September 2000, crest-stage partial record station. October 2000 to current year. Prior to February 1943 monthly discharges only, published in WSP 1306.

REVISED RECORDS.--WSP 1276: 1944, 1946(M). WSP 1506: Drainage area.

GAGE.--Water-stage encoder and satellite telemeter at station. Datum of gage is 680.30 ft, Sandy Hook datum. Feb. 24 to April 7, 1943, nonrecording gage 200 ft upstream at same datum.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,800 ft³/s, May 27, 1973, gage height, 30.46 ft, from rating curve extended above 32,000 ft³/s, on basis of slope-area measurement of peak flow; minimum, 3.6 ft³/s, Sept. 26-28, 1948; minimum gage height, 0.55 ft, Sept. 12-17, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of about 30.7 ft, from flood profile by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 15	0300	9,750	14.36	May 6	0000	18,600	20.11
Feb 15	2030	*23,300	*22.54	May 6	1600	12,600	16.54
Feb 16	1530	22,500	22.16	May 7	1730	15,700	18.48
Apr 10	1500	8,180	13.02	Sep 4	0930	14,900	18.04

Minimum discharge, 20 ft³/s, Aug. 30.

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

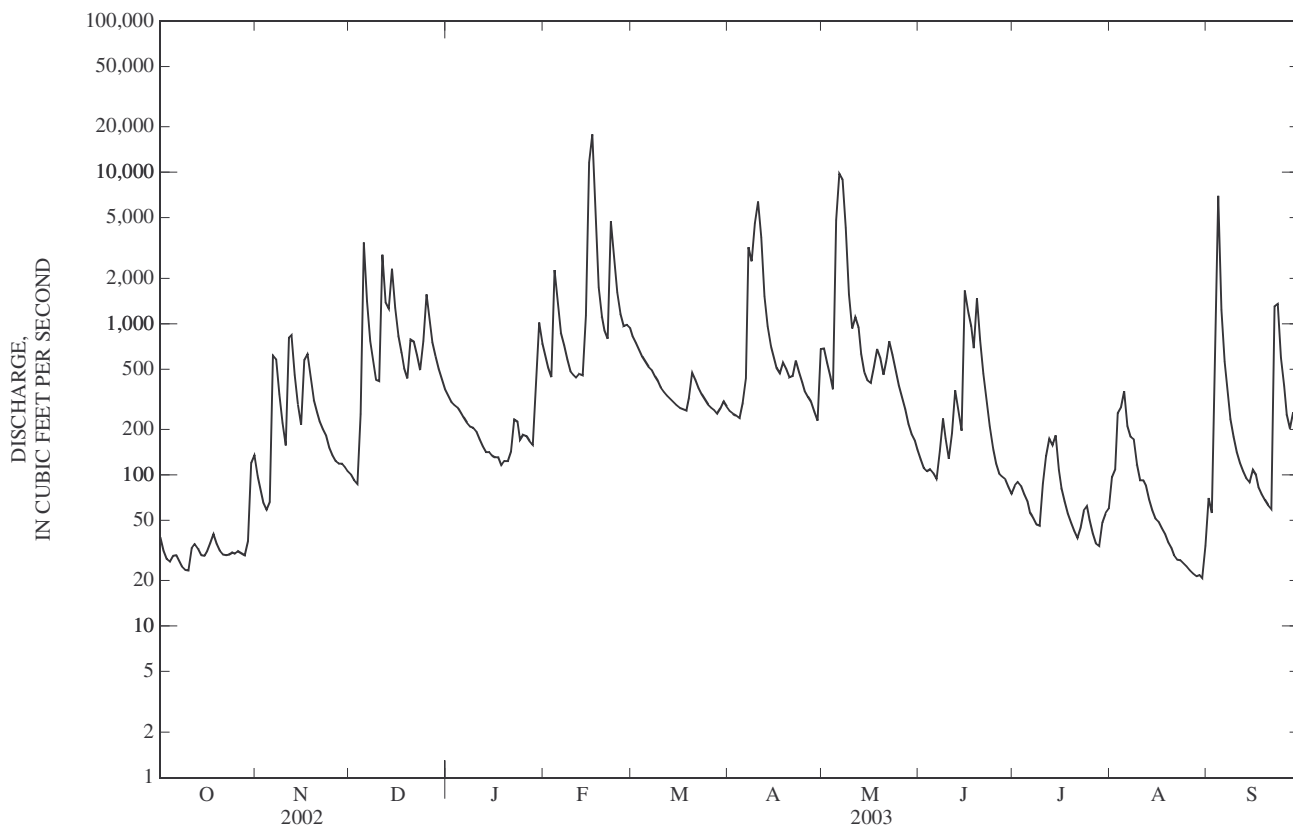
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	99	101	334	607	832	266	687	127	85	97	71
2	32	79	93	304	512	750	256	549	111	90	109	56
3	28	66	87	289	443	672	247	449	106	85	257	927
4	27	59	252	279	2,270	605	238	368	109	75	280	7,000
5	29	67	3,430	258	1,370	559	301	4,850	103	67	358	1,230
6	30	619	1,400	241	868	521	434	9,790	94	56	211	559
7	27	585	762	221	723	496	3,210	9,050	143	52	180	349
8	25	342	554	211	582	449	2,600	4,300	235	47	172	236
9	24	220	425	205	486	414	4,620	1,560	174	46	118	180
10	24	156	420	194	456	382	6,430	931	128	88	93	142
11	33	805	2,850	173	439	355	3,720	1,110	188	134	93	121
12	35	836	1,390	154	467	336	1,520	948	363	174	86	106
13	33	458	1,260	143	458	320	957	639	271	158	69	95
14	30	293	2,310	141	1,130	304	714	478	197	184	58	90
15	29	214	1,270	136	11,600	290	588	422	1,650	108	51	108
16	32	575	840	131	17,700	280	507	407	1,220	82	49	100
17	35	630	642	131	4,700	272	471	521	966	67	44	83
18	41	434	511	115	1,740	268	556	680	685	56	41	75
19	35	314	436	123	1,130	324	506	594	1,470	48	36	69
20	32	259	785	125	908	476	443	461	775	43	33	63
21	30	226	764	143	796	429	453	587	465	39	30	60
22	29	203	622	234	4,760	377	572	766	308	45	28	1,300
23	30	183	495	227	2,900	341	478	623	210	58	27	1,340
24	31	153	765	170	1,600	315	410	500	152	62	26	596
25	30	136	1,560	184	1,160	293	359	391	120	50	25	386
26	31	124	1,060	182	971	277	328	326	102	41	23	254
27	30	119	759	167	987	268	304	272	98	35	22	204
28	30	120	612	158	944	254	262	219	94	34	22	259
29	37	112	505	380	---	277	229	186	84	49	22	204
30	120	106	429	1,020	---	308	685	170	75	56	21	153
31	135	---	370	744	---	285	---	148	---	59	34	---
TOTAL	1,153	8,592	27,759	7,517	62,707	12,329	32,664	42,982	10,823	2,273	2,715	16,416
MEAN	37.2	286	895	242	2,240	398	1,089	1,387	361	73.3	87.6	547
MAX	135	836	3,430	1,020	17,700	832	6,430	9,790	1,650	184	358	7,000
MIN	24	59	87	115	439	254	229	148	75	34	21	56
CFSM	0.19	1.46	4.57	1.24	11.4	2.03	5.56	7.07	1.84	0.37	0.45	2.79
IN.	0.22	1.63	5.27	1.43	11.90	2.34	6.20	8.16	2.05	0.43	0.52	3.12

03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, TN—Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)												
MEAN	95.9	291	632	781	868	867	617	438	179	115	74.2	87.8
MAX (WY)	589 (1990)	973 (1958)	2,066 (1991)	2,253 (1950)	2,240 (2003)	2,897 (1975)	1,369 (1977)	1,909 (1984)	682 (1989)	961 (1967)	722 (1982)	547 (2003)
MIN (WY)	4.76 (1948)	8.05 (1954)	22.1 (1964)	43.6 (1981)	161 (1968)	206 (1983)	139 (1986)	66.7 (1962)	10.9 (1988)	9.73 (1944)	10.0 (1962)	7.18 (1953)
SUMMARY STATISTICS				FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1943 - 2003		
ANNUAL TOTAL				179,402.6			227,930					
ANNUAL MEAN				492			624			419		
HIGHEST ANNUAL MEAN										743		
LOWEST ANNUAL MEAN										218		
HIGHEST DAILY MEAN				13,600			Mar 18			23,200		
LOWEST DAILY MEAN				6.8			Sep 14			3.6		
ANNUAL SEVEN-DAY MINIMUM				7.3			Sep 12			3.9		
MAXIMUM PEAK FLOW							23,300			a44,800		
MAXIMUM PEAK STAGE							22.54			a30.46		
INSTANTANEOUS LOW FLOW							20			3.6		
ANNUAL RUNOFF (CFSM)				2.51			3.19			2.14		
ANNUAL RUNOFF (INCHES)				34.05			43.26			29.02		
10 PERCENT EXCEEDS				937			1,140			947		
50 PERCENT EXCEEDS				158			254			158		
90 PERCENT EXCEEDS				18			35			15		

a From rating curve extended above 32,000 ft³/s, on basis of slope-area measurement.



CUMBERLAND RIVER BASIN

03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, 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 03...	1130	27	282	20.5	4
DEC 10...	1245	355	125	7.5	5
APR 24...	1000	409	128	12.5	7
MAY 29...	0845	194	180	16.0	--
JUL 29...	0810	52	285	21.0	2

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CUMBERLAND RIVER BASIN

03415000 WEST FORK OBEY RIVER NEAR ALPINE, TN

LOCATION.--Lat 36°23'49", long 85°10'28", Overton County, Hydrologic Unit 05130105, on left bank 20 ft upstream from bridge on State Highway 52, 0.3 mile upstream from Nettlecarrier Creek, 2.4 miles east of Alpine, and at mile 8.0.

DRAINAGE AREA.--115 mi², includes 34 mi² without surface drainage.

PERIOD OF RECORD.--October 1942 to September 1971, October 1979 to November 1981. October 2001 to current year. Prior to December 1942 monthly discharges only, published in WSP 1306.

REVISIONS.--WSP 1386: 1943-45(P), 1946, 1948, 1952(P). WSP 1506: Drainage area.

GAGE.--Data collection platform and crest-stage gage. Datum of gage is 683.28 ft above NGVD of 1929. Oct. 1942 to Sept. 1971 gage at same site at datum 1.0 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft³/s, Mar. 21, 1955, gage height 17.30 ft present datum; minimum 2.6 ft³/s Sept. 13-19, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of about 15.3 ft (present datum), from flood profile by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 15	2000	*10,200	*14.06	May 7	1600	7,440	11.90
Feb 16	1400	9,890	13.84				

Minimum discharge, 11 ft³/s, Oct. 10.

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	21	e37	41	122	198	292	100	248	65	38	96	e62
2	18	e30	38	110	170	259	98	166	58	40	393	e50
3	15	e24	36	113	155	218	93	138	57	37	1,210	95
4	14	e35	227	111	1,650	193	91	115	57	33	276	1,700
5	14	e40	1,390	107	605	175	128	1,510	51	30	292	270
6	17	e110	415	100	339	160	189	3,390	48	27	148	123
7	15	e100	227	91	276	143	1,790	4,660	90	26	191	84
8	13	e83	169	91	216	131	1,270	2,190	105	26	131	63
9	12	e70	137	91	187	124	2,260	793	68	33	98	51
10	13	53	297	84	177	113	3,260	381	57	54	77	50
11	16	400	1,710	73	163	108	1,810	513	63	160	64	48
12	17	158	504	66	185	103	e900	335	89	92	58	40
13	16	101	460	63	165	99	e500	224	68	55	52	35
14	15	76	928	63	839	92	287	178	56	43	46	33
15	14	109	448	60	5,590	88	229	149	567	36	42	31
16	18	395	279	58	7,810	85	194	132	407	31	42	30
17	21	203	206	57	2,290	83	185	170	316	28	39	26
18	19	138	165	53	853	82	189	359	223	25	36	24
19	17	114	148	52	440	89	157	244	374	23	33	23
20	16	100	358	51	327	199	141	184	203	21	e29	21
21	15	90	261	66	278	147	142	250	141	21	e26	20
22	15	81	208	110	2,430	126	138	280	111	51	e25	1,030
23	13	69	167	85	1,550	116	122	232	89	46	e24	496
24	13	61	274	73	747	109	112	190	73	41	e23	175
25	13	56	492	71	467	103	108	156	61	31	e22	115
26	13	52	326	71	367	100	103	136	54	24	e20	87
27	13	50	241	68	352	95	93	117	53	21	e19	95
28	13	47	197	66	338	90	82	101	49	22	e19	97
29	19	46	166	245	---	103	75	92	42	26	e19	71
30	55	45	144	362	---	113	947	82	38	39	e18	58
31	44	---	129	244	---	103	---	74	---	58	e30	---
TOTAL	547	2,973	10,788	3,077	29,164	4,041	15,793	17,789	3,733	1,238	3,598	5,103
MEAN	17.6	99.1	348	99.3	1,042	130	526	574	124	39.9	116	170
MAX	55	400	1,710	362	7,810	292	3,260	4,660	567	160	1,210	1,700
MIN	12	24	36	51	155	82	75	74	38	21	18	20
CFSM	0.22	1.22	4.30	1.23	12.9	1.61	6.50	7.08	1.54	0.49	1.43	2.10
IN.	0.25	1.37	4.95	1.41	13.39	1.86	7.25	8.17	1.71	0.57	1.65	2.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

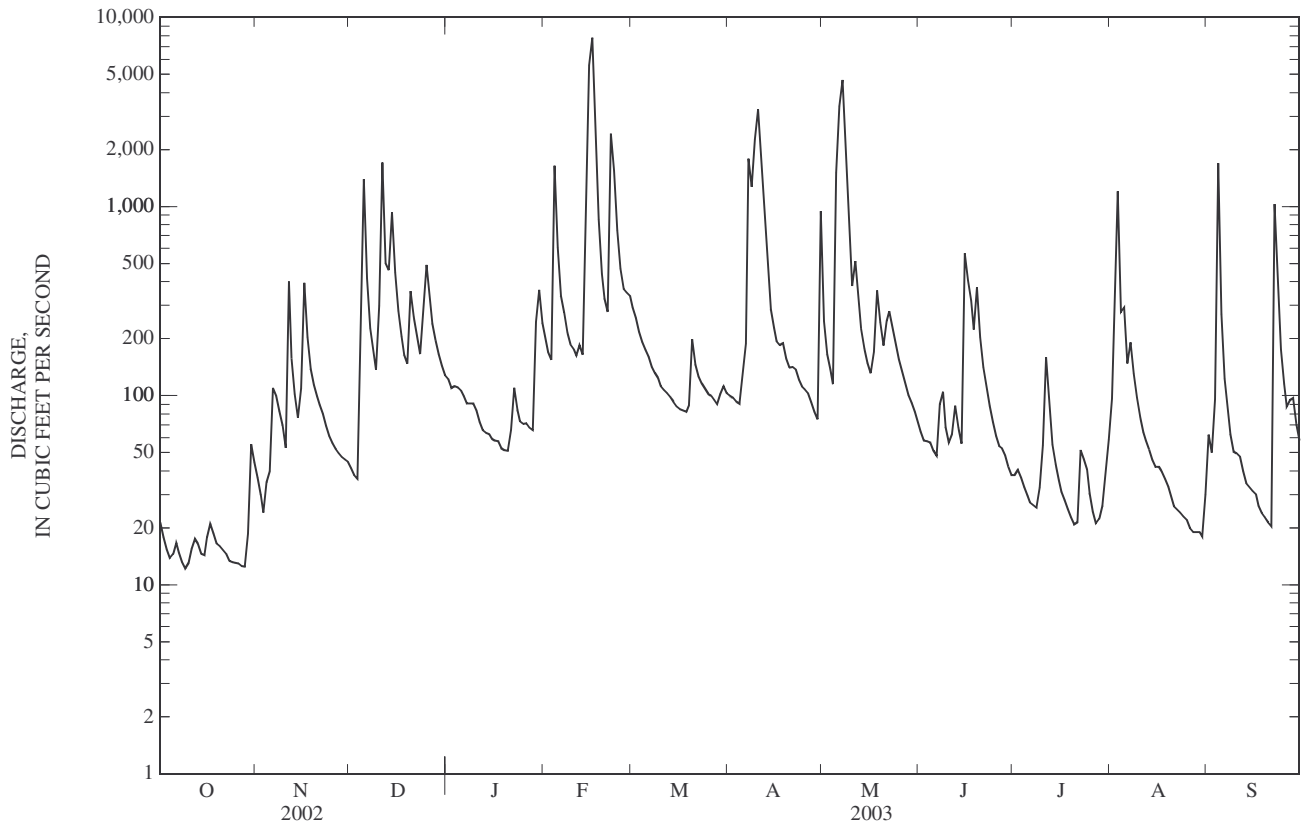
	23.4	85.4	207	302	377	377	264	140	74.7	46.7	30.4	28.2
MEAN												
MAX	122	384	691	1,024	1,042	859	528	574	266	327	142	183
(WY)	(1980)	(1958)	(1952)	(1950)	(2003)	(1955)	(1962)	(2003)	(1969)	(1967)	(1971)	(1944)
MIN	3.84	4.61	6.28	11.2	79.4	130	68.8	23.5	12.3	7.33	6.09	4.23
(WY)	(1953)	(1954)	(1966)	(1981)	(1968)	(2003)	(1963)	(1948)	(1948)	(1954)	(1962)	(1980)

03415000 WEST FORK OBEY RIVER NEAR ALPINE, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1943 - 2003	
ANNUAL TOTAL	78,836.8		97,844		162	
ANNUAL MEAN	216		268		268	
HIGHEST ANNUAL MEAN					81.7	2003
LOWEST ANNUAL MEAN					2.6	1966
HIGHEST DAILY MEAN	6,360	Mar 18	7,810	Feb 16	7,810	Feb 16, 2003
LOWEST DAILY MEAN	3.7	Sep 12	12	Oct 9	2.6	Sep 13, 1954
ANNUAL SEVEN-DAY MINIMUM	4.0	Sep 9	13	Oct 22	2.6	Sep 12, 1954
MAXIMUM PEAK FLOW			10,200	Feb 15	15,100	Mar 21, 1955
MAXIMUM PEAK STAGE			14.06	Feb 15	17.30	Mar 21, 1955
INSTANTANEOUS LOW FLOW			11	Oct 10	a2.6	Sep 13, 1954
ANNUAL RUNOFF (CFSM)	2.67		3.31		2.00	
ANNUAL RUNOFF (INCHES)	36.21		44.94		27.12	
10 PERCENT EXCEEDS	354		453		362	
50 PERCENT EXCEEDS	71		95		48	
90 PERCENT EXCEEDS	7.8		21		6.2	

a Also occurred Sept. 14-19, 1954.

e Estimated



CUMBERLAND RIVER BASIN
03417500 CUMBERLAND RIVER AT CELINA, TN

WATER-QUALITY RECORDS

LOCATION.--Lat 36°33'15", long 85°30'52", Clay County, Hydrologic Unit 05130106, on right bank at State Highway 52 bridge, 0.5 mi northwest of courthouse in Celina, 600 ft downstream from Obey River, and at mile 380.8.

DRAINAGE AREA.--7,307 mi².

PERIOD OF RECORD.--November 1991 to September 1997, October 1999 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1991 to September 1997, October 1999 to current year.

pH: November 1991 to September 1997, October 1999 to current year.

WATER TEMPERATURE: November 1991 to September 1997, October 1999 to current year.

DISSOLVED OXYGEN: October 1992 to September 1997, October 1999 to current year.

INSTRUMENTATION.--Data collection platform and water-quality monitor.

REMARKS.--Flow regulated by Lake Cumberland (station 03413500) and Dale Hollow Lake (station 03416500). Interruptions in the record were due to instrument malfunctions. Records for water temperature are excellent, for specific conductance are good, for pH are good, for dissolved oxygen are poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 280 microsiemens, Aug. 29, 1992; minimum, 113 microsiemens, Mar. 27, 1994.

pH: Maximum, 8.5 units, Mar. 3, 4, 6, 1992; minimum, 6.2 units, Sept. 14, 1993.

WATER TEMPERATURE: Maximum, 20.3°C, Sept. 2, 2003; minimum, 2.5°C, Feb. 9, 1995.

DISSOLVED OXYGEN: Maximum, 15.3 mg/L, Jan. 29, 2000; minimum, 6.6 mg/L, Sept. 23, 2000.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 234 microsiemens, Feb. 11; minimum, 146 microsiemens, Feb. 17.

pH: Maximum, 8.0 units, Feb. 20, 21, 22; minimum, 7.0 units, Oct. 9, Aug. 20, 21, Sept. 2.

WATER TEMPERATURE: Maximum, 20.3°C, Sept. 2; minimum, 4.4°C, Feb. 9.

DISSOLVED OXYGEN: Maximum, 13.5 mg/L, Jan. 25; minimum, 6.7 mg/L, Oct. 9, Sept. 2.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 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	203	199	201	216	212	213	194	191	192	223	219	221
2	201	198	199	212	204	207	192	191	191	225	221	223
3	198	193	196	204	200	202	191	189	190	225	220	223
4	195	190	192	203	198	201	200	188	191	223	220	221
5	209	192	199	209	198	201	196	182	189	222	220	221
6	205	196	199	213	207	210	196	190	192	222	218	220
7	203	196	199	211	200	203	204	196	200	220	217	219
8	211	197	200	214	204	210	202	199	201	220	218	219
9	206	198	200	215	211	212	202	198	200	220	217	219
10	233	197	211	213	208	210	201	199	200	219	217	218
11	225	208	216	220	209	214	200	187	192	219	215	217
12	222	215	218	210	204	206	194	184	187	217	214	215
13	221	216	219	213	202	207	199	190	196	215	212	213
14	224	219	222	216	213	215	198	193	195	213	211	212
15	223	217	220	216	213	215	195	191	192	213	211	212
16	219	212	216	221	215	218	200	195	198	213	210	212
17	214	209	211	217	210	213	203	197	198	213	211	212
18	215	210	212	216	211	214	204	202	203	212	209	210
19	211	206	208	218	209	213	208	197	205	211	208	210
20	208	205	206	212	208	209	204	194	201	212	209	211
21	207	204	205	212	209	211	207	202	204	211	209	210
22	208	202	204	211	207	209	212	206	210	212	204	210
23	203	197	200	207	201	205	213	210	211	218	210	214
24	199	196	198	201	198	200	217	209	212	223	213	218
25	198	196	197	202	199	200	219	215	217	221	213	217
26	197	194	196	204	201	202	218	213	215	228	214	218
27	198	195	197	201	199	201	218	214	216	228	215	220
28	197	196	197	200	197	199	217	215	216	221	214	218
29	225	197	199	199	196	197	216	214	215	225	213	219
30	225	203	214	196	192	194	219	215	217	229	214	221
31	219	203	213	---	---	---	220	217	218	224	214	218
MONTH	233	190	205	221	192	207	220	182	202	229	204	216

03417500 CUMBERLAND RIVER AT CELINA, 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	222	214	219	203	195	198	182	178	180	176	175	175
2	224	214	220	203	196	202	189	181	184	175	174	175
3	224	216	220	203	202	203	197	188	192	174	172	173
4	228	218	222	203	201	202	197	193	195	172	171	172
5	225	212	218	204	203	203	194	192	193	173	169	171
6	227	214	222	204	203	204	197	191	193	175	173	174
7	229	220	225	205	203	204	200	190	196	177	163	169
8	230	221	225	205	202	203	197	192	194	180	170	176
9	231	222	226	204	201	202	204	196	201	180	175	177
10	233	224	229	204	198	201	202	191	197	177	173	175
11	234	225	229	199	195	197	204	192	200	176	172	174
12	233	222	227	197	195	196	206	203	204	175	171	173
13	228	222	225	196	189	193	205	199	202	175	170	172
14	229	192	221	190	185	187	201	196	199	172	169	171
15	203	166	188	190	185	188	199	194	195	172	169	171
16	171	156	164	186	179	182	196	194	195	172	168	170
17	193	146	159	182	177	179	195	191	193	172	167	169
18	219	193	210	183	182	183	193	187	190	176	171	173
19	220	211	217	185	182	184	190	188	189	178	176	177
20	218	210	213	192	180	185	192	190	191	180	175	177
21	210	208	209	197	192	195	192	184	188	178	174	175
22	211	189	198	197	194	195	186	179	182	177	174	175
23	196	186	189	195	194	195	181	177	178	177	174	176
24	205	196	202	194	190	194	179	177	179	177	174	176
25	206	202	204	186	183	186	179	177	178	177	174	175
26	206	203	204	185	183	184	178	176	177	178	175	177
27	204	200	200	187	184	185	179	177	178	179	175	177
28	204	200	203	186	181	183	179	175	177	178	175	176
29	---	---	---	186	182	184	177	175	176	182	177	179
30	---	---	---	191	185	188	176	174	175	181	175	177
31	---	---	---	189	180	187	---	---	---	176	173	174
MONTH	234	146	210	205	177	193	206	174	189	182	163	174
	JUNE			JULY			AUGUST			SEPTEMBER		
1	177	173	175	179	177	178	196	191	194	190	184	187
2	178	171	174	181	178	179	197	191	193	192	186	189
3	177	170	173	182	180	181	201	192	195	202	189	198
4	177	170	173	182	180	181	205	198	202	208	198	201
5	176	170	172	182	180	181	203	191	198	207	197	201
6	176	168	172	181	178	179	191	186	189	199	197	198
7	185	160	168	183	180	181	192	189	191	198	194	196
8	183	158	165	184	177	181	---	---	---	196	191	194
9	200	183	192	182	176	178	---	---	---	195	188	190
10	203	196	200	184	177	179	---	---	---	189	186	187
11	202	186	193	184	177	180	---	---	---	188	186	187
12	193	185	189	184	178	181	183	181	182	188	185	187
13	194	190	191	183	178	180	183	181	182	188	186	187
14	195	188	191	182	177	179	183	181	182	188	186	187
15	195	192	194	182	177	179	182	180	181	189	187	188
16	194	188	190	183	179	181	182	180	181	189	187	188
17	190	181	186	182	179	181	181	179	180	190	187	188
18	183	179	181	182	179	180	182	179	180	189	187	188
19	181	177	179	181	178	179	181	178	180	190	187	188
20	178	174	176	182	179	180	181	178	179	188	186	187
21	174	173	173	186	178	180	180	180	180	189	187	188
22	173	172	173	191	179	183	180	179	180	197	185	189
23	172	171	172	188	182	184	180	179	180	192	179	186
24	173	171	172	189	184	186	180	179	179	195	188	193
25	173	172	172	189	186	187	179	179	179	195	193	194
26	174	172	172	191	187	189	180	179	179	194	191	193
27	173	172	172	190	186	187	181	179	180	194	190	192
28	175	172	173	193	185	187	181	181	181	194	189	191
29	177	174	175	197	185	190	181	180	181	193	190	191
30	177	174	175	193	188	190	181	179	180	191	188	190
31	---	---	---	195	187	190	184	178	181	---	---	---
MONTH	203	158	179	197	176	182	---	---	---	208	179	191

CUMBERLAND RIVER BASIN

03417500 CUMBERLAND RIVER AT CELINA, 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	7.4	7.3	7.4	7.3	7.4	7.3	7.7	7.7	7.8	7.7	7.8	7.7
2	7.3	7.2	7.4	7.3	7.3	7.2	7.7	7.7	7.8	7.7	7.8	7.8
3	7.3	7.2	7.4	7.3	7.3	7.2	7.8	7.7	7.8	7.7	7.8	7.6
4	7.2	7.1	7.4	7.3	7.4	7.3	7.7	7.7	7.7	7.7	7.7	7.6
5	7.2	7.1	7.3	7.3	7.4	7.3	7.8	7.7	7.7	7.7	7.7	7.6
6	7.3	7.2	7.3	7.3	7.4	7.3	7.8	7.7	7.8	7.7	7.7	7.6
7	7.3	7.2	7.4	7.3	7.4	7.4	7.8	7.7	7.8	7.8	7.7	7.6
8	7.3	7.1	7.4	7.4	7.4	7.4	7.7	7.7	7.8	7.8	7.7	7.5
9	7.3	7.0	7.4	7.4	7.5	7.4	7.8	7.7	7.9	7.8	7.6	7.6
10	7.4	7.3	7.4	7.4	7.5	7.4	7.8	7.7	7.9	7.8	7.6	7.6
11	7.4	7.3	7.4	7.3	7.5	7.4	7.8	7.7	7.9	7.8	7.7	7.6
12	7.4	7.4	7.4	7.3	7.4	7.4	7.8	7.7	7.9	7.8	7.7	7.6
13	7.4	7.3	7.3	7.3	7.4	7.4	7.8	7.8	7.9	7.8	7.7	7.6
14	7.4	7.4	7.4	7.3	7.5	7.4	7.8	7.7	7.8	7.6	7.6	7.6
15	7.4	7.4	7.4	7.3	7.5	7.4	7.8	7.8	7.6	7.5	7.6	7.6
16	7.4	7.4	7.4	7.3	7.5	7.4	7.8	7.8	7.5	7.4	7.6	7.5
17	7.4	7.4	7.4	7.3	7.5	7.4	7.8	7.8	7.5	7.4	7.6	7.5
18	7.5	7.4	7.4	7.4	---	---	7.8	7.8	7.6	7.5	7.6	7.5
19	7.5	7.4	7.4	7.4	7.7	7.6	7.8	7.8	7.6	7.6	7.6	7.5
20	7.5	7.4	7.4	7.3	7.6	7.6	7.9	7.8	8.0	7.6	7.7	7.6
21	7.4	7.4	7.5	7.4	7.7	7.6	7.8	7.8	8.0	8.0	7.7	7.6
22	7.4	7.4	7.5	7.4	7.7	7.7	7.8	7.8	8.0	7.8	7.7	7.6
23	7.4	7.3	7.5	7.4	7.7	7.7	7.8	7.8	7.9	7.8	7.7	7.6
24	7.4	7.3	7.5	7.3	7.7	7.7	7.8	7.8	7.9	7.8	7.7	7.6
25	7.4	7.3	7.4	7.3	7.7	7.7	7.8	7.8	7.9	7.8	7.6	7.6
26	7.3	7.3	7.4	7.4	7.7	7.7	7.8	7.8	7.9	7.9	7.6	7.6
27	7.3	7.2	7.4	7.3	7.7	7.7	7.9	7.8	7.9	7.7	7.6	7.6
28	7.3	7.3	7.5	7.3	7.7	7.7	7.9	7.8	7.8	7.7	7.6	7.6
29	7.4	7.3	7.5	7.4	7.7	7.7	7.9	7.7	---	---	7.7	7.6
30	7.4	7.3	7.5	7.4	7.7	7.7	7.7	7.7	---	---	7.7	7.7
31	7.4	7.3	---	---	7.7	7.7	7.8	7.7	---	---	7.7	7.6
MONTH	7.5	7.0	7.5	7.3	---	---	7.9	7.7	8.0	7.4	7.8	7.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.7	7.6	7.6	7.5	7.7	7.7	7.4	7.3	7.5	7.4	7.2	7.2
2	7.7	7.7	7.6	7.5	7.8	7.7	7.4	7.3	7.5	7.4	7.3	7.0
3	7.8	7.7	7.6	7.5	7.8	7.6	7.4	7.4	7.5	7.4	7.4	7.1
4	7.8	7.7	7.6	7.5	7.7	7.6	7.4	7.3	7.5	7.4	7.4	7.3
5	7.7	7.6	7.6	7.5	7.7	7.7	7.4	7.4	7.6	7.5	7.4	7.3
6	7.6	7.5	7.6	7.5	7.8	7.6	7.4	7.4	7.5	7.4	7.3	7.2
7	7.6	7.5	7.7	7.6	7.7	7.6	7.4	7.3	7.4	7.4	7.2	7.2
8	7.6	7.6	7.7	7.6	7.6	7.5	7.5	7.4	---	---	7.2	7.2
9	7.7	7.6	7.6	7.6	7.6	7.5	7.5	7.4	---	---	7.2	7.2
10	7.8	7.7	7.6	7.6	7.6	7.6	7.5	7.4	---	---	7.2	7.1
11	7.8	7.8	7.6	7.6	7.7	7.6	7.5	7.4	---	---	7.2	7.1
12	7.8	7.7	7.6	7.6	7.6	7.5	7.5	7.4	7.1	7.1	7.2	7.1
13	7.8	7.7	7.7	7.6	7.6	7.5	7.5	7.4	7.2	7.1	7.2	7.1
14	7.8	7.8	7.7	7.6	7.5	7.5	7.5	7.4	7.1	7.1	7.1	7.1
15	7.8	7.8	7.7	7.6	7.5	7.5	7.5	7.4	7.1	7.1	7.1	7.1
16	7.8	7.8	7.7	7.6	7.5	7.5	7.5	7.4	7.1	7.1	7.2	7.1
17	7.8	7.8	7.7	7.6	7.5	7.4	7.6	7.5	7.1	7.1	7.2	7.1
18	7.8	7.6	7.7	7.6	7.4	7.4	7.5	7.5	7.2	7.1	7.2	7.1
19	7.7	7.6	7.8	7.6	7.4	7.4	7.5	7.4	7.1	7.1	7.2	7.2
20	7.7	7.7	7.8	7.7	7.4	7.3	7.5	7.4	7.1	7.0	7.2	7.2
21	7.7	7.6	7.7	7.6	7.4	7.3	7.6	7.4	7.1	7.0	7.2	7.2
22	7.7	7.6	7.7	7.6	7.4	7.3	7.5	7.4	7.1	7.1	7.3	7.2
23	7.6	7.6	7.7	7.6	7.3	7.3	7.4	7.4	7.1	7.1	7.3	7.3
24	7.6	7.6	7.7	7.6	7.3	7.3	7.5	7.4	7.2	7.1	7.3	7.2
25	7.6	7.6	7.7	7.6	7.3	7.3	7.5	7.4	7.1	7.1	7.3	7.2
26	7.6	7.6	7.7	7.6	7.3	7.3	7.5	7.4	7.1	7.1	7.3	7.2
27	7.6	7.5	7.7	7.6	7.3	7.3	7.5	7.4	7.2	7.1	7.3	7.2
28	7.6	7.5	7.8	7.7	7.3	7.3	7.5	7.4	7.1	7.1	7.3	7.2
29	7.6	7.5	7.8	7.4	7.4	7.3	7.6	7.4	7.1	7.1	7.3	7.2
30	7.6	7.5	7.9	7.8	7.3	7.3	7.5	7.4	7.2	7.1	7.3	7.3
31	---	---	7.8	7.7	---	---	7.5	7.4	7.2	7.1	---	---
MONTH	7.8	7.5	7.9	7.4	7.8	7.3	7.6	7.3	---	---	7.4	7.0

03417500 CUMBERLAND RIVER AT CELINA, 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	17.8	17.6	17.7	14.3	13.5	13.9	10.5	9.9	10.2	9.8	9.3	9.6
2	18.4	17.4	17.9	13.5	12.2	12.7	9.9	9.7	9.7	9.6	9.1	9.3
3	18.2	17.1	17.9	12.6	12.3	12.4	10.6	9.7	10.3	9.1	8.2	8.6
4	17.1	16.7	16.9	12.5	12.2	12.4	10.4	8.8	9.8	8.2	7.9	8.1
5	17.3	16.5	16.9	13.2	12.2	12.4	9.1	8.6	8.9	8.3	7.9	8.1
6	17.5	17.1	17.3	13.2	13.0	13.1	8.7	8.3	8.5	8.3	8.1	8.2
7	17.4	16.8	17.2	13.0	12.6	12.8	9.3	8.6	9.0	8.1	7.6	7.8
8	17.0	14.5	16.4	13.0	12.4	12.7	9.2	8.9	9.0	8.1	7.6	7.8
9	16.9	14.2	16.3	13.3	12.3	12.7	9.3	9.1	9.2	8.5	8.0	8.3
10	17.2	16.7	17.0	14.7	13.3	13.8	9.5	9.1	9.4	8.4	7.8	8.2
11	17.4	16.6	16.9	15.1	14.7	14.9	9.3	9.0	9.2	7.8	6.9	7.4
12	18.1	17.3	17.7	15.0	14.6	14.9	9.1	8.5	8.8	6.9	6.5	6.7
13	18.1	17.3	17.8	14.6	13.3	13.7	9.6	8.9	9.4	7.2	6.6	6.9
14	17.3	16.5	16.9	13.3	12.3	12.7	9.5	9.0	9.3	7.2	6.9	7.1
15	16.6	16.0	16.4	12.5	12.3	12.4	9.2	8.8	9.0	7.1	6.7	6.9
16	16.0	15.2	15.7	12.4	11.8	12.2	9.5	9.1	9.3	6.9	6.6	6.8
17	15.2	14.7	14.8	11.8	10.9	11.4	10.2	9.5	9.9	6.8	6.3	6.6
18	14.9	14.6	14.7	10.9	10.1	10.5	10.4	10.1	10.3	6.3	5.9	6.2
19	14.7	14.3	14.5	11.5	11.4	11.4	10.7	10.3	10.5	6.4	6.1	6.3
20	14.6	14.4	14.5	12.0	11.4	11.7	10.7	10.0	10.4	7.2	6.3	6.6
21	14.8	14.3	14.5	12.7	11.9	12.3	10.0	9.2	9.6	7.3	7.0	7.2
22	14.9	14.4	14.6	12.4	11.1	11.8	9.6	9.1	9.3	7.0	6.4	6.7
23	15.0	14.1	14.5	11.1	10.6	10.9	9.2	9.0	9.1	6.5	5.8	6.1
24	15.4	14.9	15.1	10.8	10.4	10.6	9.1	9.0	9.0	5.9	5.2	5.6
25	15.3	15.1	15.2	10.8	10.6	10.7	9.0	8.2	8.6	6.4	5.7	6.0
26	15.6	15.2	15.4	10.6	10.3	10.5	8.2	7.6	8.0	6.3	5.8	6.0
27	15.8	15.4	15.6	10.3	9.6	9.9	7.8	7.5	7.6	5.8	5.2	5.5
28	15.6	15.4	15.5	9.8	9.3	9.6	8.2	7.6	7.9	6.2	5.6	5.8
29	15.6	15.2	15.3	9.7	8.9	9.3	8.6	8.0	8.3	6.4	6.2	6.3
30	15.6	14.8	15.2	10.4	9.4	10	8.9	8.3	8.7	6.3	5.7	5.9
31	14.8	14.3	14.4	---	---	---	9.3	8.8	9.1	6.2	5.6	5.9
MONTH	18.4	14.1	16.0	15.1	8.9	12.0	10.7	7.5	9.2	9.8	5.2	7.0
	FEBRUARY			MARCH			APRIL			MAY		
1	6.4	6.1	6.3	5.8	5.6	5.6	8.2	6.6	7.4	10.3	9.7	10
2	6.6	6.0	6.3	5.6	5.4	5.6	8.6	8.2	8.4	10.1	9.6	9.9
3	7.2	6.4	6.7	5.6	5.3	5.4	8.7	8.4	8.5	9.9	9.5	9.7
4	7.7	7.0	7.4	5.7	5.3	5.5	8.9	8.4	8.6	10.2	9.5	9.9
5	7.0	6.1	6.5	6.0	5.5	5.7	8.8	8.2	8.6	10.8	9.9	10.3
6	6.1	5.6	5.8	5.7	5.2	5.5	8.6	7.8	8.0	11.4	10.7	11.0
7	5.7	5.2	5.6	5.5	5.2	5.3	9.5	8.3	8.8	12.5	10.9	12.0
8	5.2	4.6	4.9	6.0	5.4	5.7	10.9	9.5	10.4	12.1	11.2	11.7
9	4.8	4.4	4.6	6.3	5.9	6.0	10.8	8.5	9.4	11.5	11.1	11.2
10	5.0	4.7	4.9	5.9	5.5	5.7	8.5	7.7	8.0	11.8	11.4	11.6
11	5.5	4.6	5.0	5.9	5.3	5.7	8.7	7.8	8.2	12.3	11.7	12.0
12	5.8	5.2	5.5	6.8	5.9	6.3	8.9	8.3	8.6	12.2	11.4	11.7
13	5.8	5.3	5.5	7.0	6.5	6.7	8.9	8.1	8.5	11.5	10.8	11.0
14	7.0	5.4	5.8	6.7	6.2	6.5	9.0	8.1	8.6	10.9	10.1	10.5
15	7.4	6.9	7.1	7.0	6.0	6.4	9.0	8.3	8.7	10.6	10.1	10.3
16	7.3	6.5	7.0	7.5	7.0	7.2	9.1	8.2	8.6	10.6	10.0	10.3
17	6.5	5.8	6.1	7.1	6.7	6.9	8.9	8.4	8.7	10.8	10.3	10.6
18	5.8	5.4	5.5	6.9	6.6	6.8	9.2	8.3	8.9	11.1	10.6	10.8
19	5.8	5.5	5.6	7.9	6.8	7.2	9.3	8.7	9.0	11.7	11.0	11.4
20	6.1	5.8	5.9	8.7	7.4	8.2	9.6	9.0	9.2	11.7	11.4	11.6
21	6.2	6.0	6.1	8.6	7.8	8.2	9.5	8.9	9.2	11.7	10.5	11.0
22	7.3	6.2	6.8	7.9	7.3	7.6	9.4	8.9	9.1	10.5	10.3	10.4
23	7.1	6.3	6.9	7.3	7.1	7.2	9.0	8.4	8.7	10.9	10.4	10.7
24	6.3	5.7	5.9	7.8	7.2	7.5	9.2	8.7	9.0	11.4	10.7	11.0
25	5.7	5.3	5.5	8.3	7.6	8.0	9.0	8.4	8.7	11.3	10.8	11.1
26	5.4	5.3	5.3	8.2	7.8	8.0	9.3	8.8	9.0	11.1	10.5	10.8
27	5.3	5.2	5.3	8.0	7.5	7.7	9.6	8.8	9.2	11.9	10.7	11.3
28	5.6	5.3	5.5	8.3	7.6	7.9	10.1	9.3	9.6	12.1	11.2	11.7
29	---	---	---	8.4	7.8	8.1	10.1	9.3	9.7	12.1	11.4	11.8
30	---	---	---	7.8	6.7	7.3	10.3	9.5	9.9	12.1	11.3	11.7
31	---	---	---	6.8	6.2	6.5	---	---	---	12.5	11.4	12.0
MONTH	7.7	4.4	5.9	8.7	5.2	6.7	10.9	6.6	8.8	12.5	9.5	11.0

CUMBERLAND RIVER BASIN

03417500 CUMBERLAND RIVER AT CELINA, 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	12.6	11.9	12.3	13.4	13.0	13.2	16.7	16.0	16.4	18.9	17.7	18.2
2	13.2	12.3	12.7	14.0	13.2	13.6	16.4	15.9	16.2	20.3	16.6	19.3
3	12.9	12.1	12.4	14.7	13.7	14.3	17.1	16.3	16.7	19.8	15.7	19.1
4	12.4	12.1	12.2	15.4	14.1	14.7	18.9	17.0	17.8	19.4	18.6	19.0
5	12.8	12.1	12.5	15.3	14.3	14.8	19.0	16.6	18.4	19.9	19.2	19.6
6	13.1	12.4	12.8	15.5	14.7	15.1	16.6	15.7	16.1	19.7	18.9	19.3
7	15.0	13.1	14.4	15.6	14.6	15.1	16.1	15.6	15.8	19.5	18.5	18.8
8	15.9	14.8	15.3	16.1	15.6	15.8	---	---	---	18.7	18.0	18.3
9	15.0	14.7	14.8	16.3	16.1	16.2	---	---	---	18.6	17.6	17.9
10	15.8	14.7	15.2	16.7	15.9	16.2	---	---	---	18.1	17.4	17.8
11	15.7	13.2	14.5	16.2	15.8	15.9	---	---	---	18.1	17.8	18.0
12	13.8	12.6	13.3	16.2	15.7	16.0	16.3	16.0	16.2	18.2	17.8	18.0
13	13.9	13.1	13.6	15.9	15.2	15.6	16.4	15.9	16.1	18.3	17.9	18.1
14	13.3	12.8	13.1	15.9	15.2	15.5	16.6	15.8	16.2	18.1	17.7	17.9
15	13.4	12.5	13.0	16.3	15.9	16.1	16.6	16.0	16.3	17.8	17.5	17.7
16	13.3	12.8	13.1	16.4	16.2	16.4	16.8	16.1	16.4	17.9	17.3	17.6
17	12.9	12.4	12.7	16.7	16.3	16.4	16.6	16.1	16.4	17.9	17.4	17.6
18	12.4	11.7	11.9	16.7	15.8	16.3	16.9	16.2	16.5	18.1	17.7	17.9
19	12.4	11.6	12.1	16.0	14.8	15.3	16.9	16.2	16.6	18.1	17.8	18.0
20	12.8	12.2	12.5	16.0	14.7	15.3	17.1	16.4	16.7	18.1	17.6	17.8
21	13.0	12.4	12.6	16.2	15.6	15.9	17.0	16.5	16.8	17.8	17.5	17.6
22	13.2	12.2	12.7	15.8	14.6	15.1	17.1	16.7	16.9	18.1	17.7	17.9
23	13.1	12.4	12.7	15.0	14.1	14.6	17.1	16.6	16.9	18.4	17.7	18.0
24	13.3	12.5	12.8	15.6	14.6	15.1	17.2	16.5	16.8	18.0	17.5	17.8
25	13.4	12.6	13.0	16.0	14.8	15.4	17.2	16.6	16.9	18.0	17.7	17.8
26	13.4	12.7	13.0	16.3	15.3	15.8	17.4	16.8	17.1	18.2	17.7	18.0
27	13.4	12.8	13.0	16.4	15.4	15.9	17.5	17.0	17.2	18.4	18.0	18.2
28	13.7	12.8	13.3	16.7	16.1	16.4	17.4	16.9	17.1	18.4	17.4	17.8
29	14.0	13.6	13.7	17.1	16.1	16.6	17.4	16.7	17.0	17.4	16.8	17.1
30	13.9	13.4	13.6	16.8	15.0	15.7	17.4	16.8	17.1	17.1	16.5	16.8
31	---	---	---	16.8	16.0	16.5	17.8	17.0	17.4	---	---	---
MONTH	15.9	11.6	13.2	17.1	13.0	15.5	---	---	---	20.3	15.7	18.1

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	8.3	7.5	7.6	9.6	9.3	9.5	10.6	10.0	10.3	10.2	10.1	10.2
2	8.4	7.8	8.3	10.2	9.6	10.0	10.0	9.4	9.8	10.2	10.2	10.2
3	8.6	8.3	8.4	10.3	9.8	10.2	9.9	9.5	9.7	10.6	10.2	10.4
4	8.4	7.7	8.1	10.4	9.9	10.2	10.9	9.9	10.3	10.7	10.5	10.6
5	8.2	7.6	7.8	10.5	9.7	10.1	11.2	10.8	11.0	10.8	10.6	10.7
6	8.6	8.2	8.4	10.1	9.6	9.9	11.0	10.8	10.9	10.9	10.7	10.8
7	8.8	8.3	8.6	9.8	9.6	9.7	10.8	10.6	10.7	10.9	10.8	10.9
8	8.9	7.2	8.4	10.2	9.8	10	10.9	10.7	10.8	10.9	10.8	10.9
9	9.0	6.7	8.5	10.3	10.0	10.2	11.0	10.6	10.8	10.9	10.7	10.8
10	9.0	8.4	8.8	10.3	10.1	10.2	10.9	10.6	10.7	10.9	10.7	10.8
11	9.0	8.4	8.8	10.1	9.2	9.5	11.1	10.7	10.9	11.2	10.9	11.1
12	8.5	8.2	8.3	9.3	8.7	9.0	11.2	10.7	10.9	11.5	11.1	11.4
13	8.3	8.1	8.2	9.2	8.4	8.9	10.8	10.5	10.6	11.4	11.3	11.4
14	8.7	8.3	8.5	10.1	8.8	9.6	10.7	10.4	10.6	11.4	11.2	11.3
15	9.2	8.7	9.0	10.2	8.8	9.8	10.8	10.6	10.7	11.4	11.1	11.3
16	9.5	8.8	9.1	10.4	9.6	10.1	10.7	10.6	10.7	11.4	11.2	11.3
17	9.6	9.2	9.4	10.6	10.2	10.3	10.7	9.8	10.4	11.5	11.2	11.4
18	9.6	9.2	9.5	10.9	10.6	10.7	---	---	---	11.7	11.4	11.6
19	10.0	9.6	9.8	11.0	10.7	10.9	9.8	9.7	9.8	11.8	11.5	11.7
20	10.0	9.5	9.7	10.7	10.2	10.5	9.7	9.5	9.6	11.9	11.5	11.7
21	9.7	9.3	9.5	10.8	10.4	10.6	9.9	9.6	9.8	11.5	11.4	11.4
22	10.0	9.5	9.8	11.0	10.3	10.6	10.0	9.9	9.9	13.4	11.4	12.2
23	10.1	9.5	9.8	11.2	10.6	10.9	10.2	9.9	10.1	13.4	11.0	12.4
24	10.1	9.6	9.8	11.0	10.3	10.6	10.1	10.0	10.1	13.3	9.9	11.7
25	10.1	9.5	9.8	10.8	10.0	10.3	10.2	10.0	10.1	13.5	10.6	12.1
26	9.6	9.2	9.4	11.0	10.5	10.7	10.5	10.2	10.4	12.2	11.5	11.7
27	9.7	9.1	9.4	11.0	10.7	10.8	10.8	10.5	10.6	12.2	11.7	12.0
28	10.0	9.5	9.8	11.4	10.6	10.9	10.7	10.6	10.6	12.1	11.9	12.0
29	9.9	9.4	9.7	11.6	11.1	11.3	10.6	10.5	10.6	12.1	11.8	11.9
30	9.8	9.3	9.5	11.5	10.6	11.0	10.6	10.4	10.5	12.0	11.8	11.9
31	9.4	9.2	9.3	---	---	---	10.4	10.2	10.3	12.1	11.8	12.0
MONTH	10.1	6.7	9.0	11.6	8.4	10.2	---	---	---	13.5	9.9	11.3

03417500 CUMBERLAND RIVER AT CELINA, 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	12.1	11.8	12.0	13.1	13.0	13.0	12.6	11.8	12.3	11.1	10.8	11.0
2	12.2	11.9	12.0	13.0	13.0	13.0	12.8	11.8	12.3	11.1	10.9	11.0
3	12.1	11.8	12.0	13.1	12.9	13.0	12.6	12.4	12.5	11.2	11.0	11.1
4	11.8	11.4	11.6	13.1	13.0	13.0	12.5	12.1	12.3	11.3	11.2	11.2
5	11.9	11.4	11.6	13.1	13.0	13.0	12.2	11.9	12.1	11.4	11.2	11.3
6	12.5	11.8	12.3	13.1	12.9	13.0	12.2	11.8	12.0	---	---	---
7	12.6	12.2	12.4	13.2	13.0	13.1	11.9	11.5	11.6	---	---	---
8	13.1	12.2	12.7	13.2	12.9	13.1	11.5	10.9	11.2	---	---	---
9	13.3	12.5	12.8	13.1	12.9	13.0	11.8	11.1	11.5	---	---	---
10	13.0	12.6	12.8	13.2	13.0	13.1	12.0	11.6	11.8	---	---	---
11	13.2	12.6	12.9	13.3	13.1	13.2	11.9	11.3	11.6	---	---	---
12	13.2	12.5	12.8	13.3	12.9	13.2	11.8	11.3	11.5	---	---	---
13	13.3	12.6	12.9	13.1	12.9	13.0	11.6	11.3	11.4	11.8	11.3	11.8
14	12.8	11.9	12.6	13.1	12.9	13.0	11.7	11.2	11.4	12.2	11.8	12.1
15	12.0	11.4	11.7	13.0	12.9	13.0	11.6	11.1	11.3	12.6	12.2	12.4
16	11.7	11.4	11.6	12.9	12.8	12.9	11.5	11.0	11.1	12.9	12.6	12.7
17	12.0	11.6	11.8	12.9	12.7	12.8	11.3	10.8	11.1	12.9	12.7	12.8
18	12.1	11.8	12.0	12.8	12.6	12.7	11.0	10.7	10.8	13.0	12.7	12.9
19	12.3	11.9	12.1	12.6	12.2	12.5	11.3	10.6	10.8	13.1	12.8	12.9
20	12.3	11.8	12.0	12.4	11.8	12.1	11.1	10.4	10.8	13.1	13.0	13.0
21	12.0	11.9	11.9	12.4	12.0	12.2	11.0	10.4	10.6	13.3	13.1	13.2
22	12.0	11.6	11.8	12.5	12.2	12.4	11.4	10.4	10.8	13.1	12.9	13.1
23	11.9	11.6	11.7	12.5	12.3	12.4	11.4	10.5	10.8	12.9	12.5	12.7
24	12.3	11.9	12.1	12.5	12.3	12.4	11.5	10.5	10.8	12.5	11.6	12.2
25	12.9	12.2	12.5	12.4	12.2	12.3	11.3	10.6	11.0	11.6	10.8	11.3
26	13.0	12.9	12.9	12.5	12.1	12.3	11.9	10.6	11.0	10.8	9.9	10.3
27	13.0	12.9	13.0	12.4	12.0	12.3	11.7	10.6	11.0	---	---	---
28	13.0	12.9	13.0	12.4	10.1	11.2	11.5	10.7	11.0	---	---	---
29	---	---	---	12.4	10.6	11.5	11.9	10.8	11.0	10.2	9.8	9.9
30	---	---	---	12.5	11.9	12.2	11.9	10.8	11.0	10.1	9.8	10.0
31	---	---	---	12.7	12.2	12.4	---	---	---	10.2	9.9	10.0
MONTH	13.3	11.4	12.3	13.3	10.1	12.7	12.8	10.4	11.3	---	---	---
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.2	9.8	10	9.7	9.3	9.5	9.4	8.9	9.1	7.8	7.6	7.7
2	10.6	10.1	10.3	9.8	9.4	9.6	9.4	8.9	9.1	8.0	6.7	7.6
3	10.6	10.2	10.4	9.8	9.4	9.6	9.3	8.9	9.1	8.6	7.0	8.0
4	10.6	10.3	10.4	9.9	9.3	9.6	9.2	8.2	8.8	8.7	8.2	8.4
5	10.7	10.2	10.4	9.9	9.0	9.5	9.4	8.5	9.1	8.4	7.9	8.1
6	10.9	10.4	10.7	10.2	9.4	9.7	9.1	8.1	8.3	8.6	8.0	8.3
7	10.6	9.4	9.9	---	---	---	8.5	8.3	8.4	9.0	8.5	8.7
8	9.4	9.0	9.2	10.1	9.7	9.9	---	---	---	9.3	8.7	8.9
9	9.7	8.5	9.2	10.1	9.7	9.9	---	---	---	9.3	8.4	8.9
10	---	---	---	10.2	9.4	9.8	---	---	---	8.4	8.1	8.2
11	10.0	9.7	9.9	10.0	9.4	9.7	---	---	---	8.3	8.1	8.2
12	9.8	9.1	9.4	10.0	9.4	9.7	7.4	7.2	7.3	8.3	8.1	8.2
13	9.7	9.2	9.4	10.2	9.6	9.9	7.8	7.2	7.5	8.5	8.3	8.4
14	9.7	9.4	9.6	10.2	9.6	9.9	7.9	7.5	7.7	8.4	8.0	8.2
15	9.6	7.1	9.0	9.8	8.7	9.4	7.8	7.6	7.7	8.0	7.9	8.0
16	9.7	7.2	8.8	9.9	8.4	9.2	8.2	7.4	7.6	8.1	7.9	8.0
17	9.9	7.0	9.2	10.2	8.6	9.6	7.8	7.5	7.7	8.2	8.0	8.1
18	9.6	9.2	9.4	10.2	9.8	10	8.0	7.5	7.7	8.1	7.9	8.0
19	9.4	9.3	9.4	10.2	9.5	9.8	7.9	7.3	7.6	8.1	7.8	8.0
20	9.5	9.3	9.4	9.9	9.5	9.7	7.9	7.6	7.7	8.1	7.6	7.8
21	9.4	9.2	9.3	10.4	9.4	9.9	7.9	7.5	7.7	8.0	7.6	7.8
22	9.4	9.3	9.3	9.9	9.3	9.6	7.8	7.5	7.7	8.3	7.7	8.1
23	9.4	9.2	9.3	9.6	9.2	9.4	7.9	7.5	7.6	8.2	7.6	7.8
24	9.3	9.2	9.2	9.7	9.2	9.4	7.8	7.6	7.7	7.9	7.4	7.7
25	9.2	9.1	9.2	9.9	9.3	9.5	7.8	7.5	7.6	8.0	7.6	7.8
26	9.1	9.0	9.1	9.9	9.4	9.6	7.9	7.6	7.7	8.0	7.6	7.8
27	9.1	9.0	9.1	10.0	9.2	9.5	7.9	7.5	7.7	7.9	7.5	7.7
28	9.2	9.0	9.0	9.8	9.2	9.5	7.8	7.6	7.7	8.0	7.5	7.7
29	9.5	9.1	9.3	9.9	9.1	9.4	7.8	7.4	7.6	8.1	7.7	7.9
30	9.6	9.3	9.4	9.5	8.6	9.1	7.8	7.3	7.5	8.2	7.9	8.1
31	---	---	---	9.0	8.6	8.9	7.7	7.4	7.6	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	9.3	6.7	8.1

CUMBERLAND RIVER BASIN

03418070 ROARING RIVER ABOVE GAINESBORO, TN

LOCATION.--Lat 36°21'04", long 85°32'45", Jackson County, Hydrologic Unit 05130106, near left bank of downstream end of county road bridge. 1.1 mi upstream from Blackburn Fork, 6.3 mi east of Gainesboro, and at mile 9.9.

DRAINAGE AREA.--210 mi², includes 34 mi² without surface drainage.

PERIOD OF RECORD.--October 1974 to September 1991. October 1992 to September 1997, crest-stage partial record station. October 2001 to current year. Prior to December 1942 monthly discharges only, published in WSP 1306.

GAGE.--Data collection platform and crest-stage gage. Datum of gage is 520.56 ft above NGVD of 1929.

REMARKS.--Records good, except for estimated daily discharges, which are fair, and those below 5.0 ft³/s, which are poor. Minimum discharge for current year and period of record, no flow many days each year. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s, Mar. 12, 1975, gage height 21.83 ft, from high-water marks; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 16	1630	*14,600	*18.60	May 7	1730	11,000	16.69
May 6	1430	5,320	11.91				

Minimum discharge, no flow, many days.

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	0.38	13	5.7	e209	253	565	114	69	27	1.5	510	0.70
2	0.02	6.3	5.1	e192	222	482	102	58	21	1.6	183	0.18
3	0.00	2.6	5.6	e180	203	397	91	56	23	0.90	2,460	69
4	0.00	3.6	27	e170	1,830	340	83	42	24	0.05	872	891
5	1.7	40	e1,200	e165	1,050	296	140	731	16	0.00	476	305
6	0.39	388	e400	e153	604	272	263	3,250	9.3	0.00	280	91
7	0.00	183	e200	e140	511	233	1,940	7,640	57	0.00	208	42
8	0.00	77	e150	118	383	198	977	3,960	85	0.00	162	22
9	0.00	37	e120	114	320	170	1,530	1,350	36	3.8	97	13
10	0.00	21	e250	101	305	148	3,310	719	19	106	71	8.4
11	7.4	622	e1,500	84	279	133	2,410	853	66	358	150	5.8
12	8.2	341	e450	74	276	120	1,170	675	105	98	137	3.3
13	6.8	146	e400	71	248	107	717	394	46	63	57	0.88
14	0.92	83	e850	70	1,020	95	486	271	24	56	34	0.60
15	0.00	94	e295	65	7,560	86	374	196	214	16	24	0.63
16	1.6	724	e200	64	12,500	80	299	149	693	4.3	17	0.00
17	0.04	425	e164	66	4,720	75	367	221	387	1.9	14	0.00
18	0.00	231	e120	67	1,800	74	353	553	211	1.1	23	0.00
19	0.00	158	e95.0	63	1,150	490	258	385	295	0.73	8.8	0.00
20	0.00	120	958	58	909	870	209	227	149	0.21	3.6	0.00
21	0.00	91	586	80	745	433	218	244	79	25	1.6	0.00
22	0.00	74	414	118	3,180	300	186	276	50	106	2.0	879
23	0.00	54	313	92	2,410	234	148	210	31	63	3.3	870
24	0.00	40	432	80	1,350	191	125	151	20	33	1.7	260
25	0.00	29	650	79	898	160	121	113	12	5.1	1.2	138
26	0.00	23	481	79	710	152	127	95	6.0	1.6	0.91	84
27	0.00	17	376	84	670	134	101	74	6.9	0.82	0.58	65
28	0.00	11	e340	62	678	115	80	59	4.3	5.3	0.27	87
29	15	6.7	e284	201	---	154	66	51	1.2	27	0.00	56
30	37	6.3	e236	433	---	163	80	44	0.72	12	0.00	37
31	16	---	e214	300	---	132	---	35	---	1,270	0.00	---
TOTAL	95.45	4,067.5	11,721.4	3,832	46,784	7,399	16,445	23,151	2,718.42	2,261.91	5,798.96	3,929.49
MEAN	3.08	136	378	124	1,671	239	548	747	90.6	73.0	187	131
MAX	37	724	1,500	433	12,500	870	3,310	7,640	693	1,270	2,460	891
MIN	0.00	2.6	5.1	58	203	74	66	35	0.72	0.00	0.00	0.00
CFSM	0.02	0.77	2.15	0.70	9.49	1.36	3.11	4.24	0.51	0.41	1.06	0.74
IN.	0.02	0.86	2.48	0.81	9.89	1.56	3.48	4.89	0.57	0.48	1.23	0.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

MEAN	71.6	173	403	514	580	584	376	298	88.4	36.0	45.7	70.1
MAX	476	539	1,440	1,271	1,671	2,507	1,015	1,361	483	147	331	261
(WY)	(1990)	(1980)	(1991)	(1979)	(2003)	(1975)	(1979)	(1984)	(1981)	(1989)	(1982)	(1982)
MIN	0.000	0.39	0.43	0.22	74.3	36.6	8.05	0.46	0.000	0.058	0.000	0.000
(WY)	(1979)	(1981)	(1981)	(1981)	(1981)	(1983)	(1986)	(1985)	(1984)	(1984)	(1975)	(1976)

03418070 ROARING RIVER ABOVE GAINESBORO, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1975 - 2003	
ANNUAL TOTAL	104,281.83		128,204.13			
ANNUAL MEAN	286		351		269	
HIGHEST ANNUAL MEAN					455 1975	
LOWEST ANNUAL MEAN					83.0 1986	
HIGHEST DAILY MEAN	9,650	Mar 18	12,500	Feb 16	15,800	Mar 13, 1975
LOWEST DAILY MEAN	0.00	Jun 10	a0.00	Oct 3	a0.00	Oct 28, 1974
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 18	0.00	Oct 18	0.00	Oct 28, 1974
MAXIMUM PEAK FLOW			14,600	Feb 16	22,400	Mar 12, 1975
MAXIMUM PEAK STAGE			18.60	Feb 16	21.83	Mar 12, 1975
INSTANTANEOUS LOW FLOW			a0.00	Oct 1		
ANNUAL RUNOFF (CFSM)	1.62		2.00		1.53	
ANNUAL RUNOFF (INCHES)	22.04		27.10		20.74	
10 PERCENT EXCEEDS	608		737		644	
50 PERCENT EXCEEDS	41		94		41	
90 PERCENT EXCEEDS	0.00		0.25		0.00	

a See REMARKS.

e Estimated

CUMBERLAND RIVER BASIN

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN

WATER-QUALITY RECORDS

LOCATION.--Lat 36°17'12", long 85°56'27", Smith County, Hydrologic Unit 05130108, on right bank in powerhouse at Cordell Hull Dam, 2.7 mi north of Carthage, and at mile 313.5.

DRAINAGE AREA.--8,095 mi².

PERIOD OF RECORD.--October 1980 to September 1997, October 1999 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1997, October 1999 to current year.

pH: October 1990 to September 1997, October 1999 to current year.

WATER TEMPERATURE: October 1980 to September 1997, October 1999 to current year.

DISSOLVED OXYGEN: October 1980 to September 1997, October 1999 to current year.

INSTRUMENTATION.--Data collection platform and water-quality monitor.

REMARKS.--Flow regulated by Cordell Hull Dam and other reservoirs above station. Interruptions in the record were due to instrument malfunctions. All parameters affected by release from Cordell Hull Dam. Records for water temperature, specific conductance and pH are good. Records for dissolved oxygen are poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 290 microsiemens, Mar. 27, 1990; minimum, 140 microsiemens, Sept. 3, 1984.

pH: Maximum, 8.9 units, Aug. 14, 29, 2002; minimum, 6.6 units, May 31, 1994, Jan. 1, 2002.

WATER TEMPERATURE: Maximum, 23.7°C, July 13, 1995 July 31, 1997; minimum, 2.0°C, Jan. 12, 15-21, 1981.

DISSOLVED OXYGEN: Maximum, 15.5 mg/L, Mar. 4, 1983; minimum, 3.7 mg/L, Aug. 5, 1988.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 235 microsiemens, Dec. 1, 3; minimum, 158 microsiemens, Feb. 18, 19.

pH: Maximum, 8.4 units, Apr. 6; minimum, 6.8 units, July 28.

WATER TEMPERATURE: Maximum, 23.2°C, July 21; minimum, 4.4°C, Jan. 24.

DISSOLVED OXYGEN: Maximum, 14.7 mg/L, Feb. 15.

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	182	185	221	214	217	235	230	232	221	217	219
2	191	186	188	225	214	220	233	231	232	220	217	218
3	192	186	188	226	216	220	235	230	232	219	217	218
4	193	185	188	225	217	220	234	226	230	220	218	219
5	195	187	189	229	217	221	227	217	222	219	218	219
6	193	187	189	223	215	217	221	212	215	220	218	219
7	194	188	190	219	214	216	217	210	213	220	217	218
8	193	189	191	221	212	215	214	209	212	221	219	220
9	195	191	192	218	212	215	214	210	213	223	220	221
10	195	190	192	219	213	215	212	209	210	222	220	221
11	195	191	192	222	216	219	213	210	211	223	220	221
12	194	192	193	224	217	219	218	212	215	223	221	222
13	200	193	196	226	219	222	219	217	218	223	220	221
14	202	196	198	226	219	221	---	---	---	223	221	222
15	202	196	198	225	219	221	---	---	---	223	221	222
16	206	197	201	224	219	221	---	---	---	224	221	222
17	202	197	199	227	218	221	227	209	218	222	219	221
18	202	197	199	225	218	222	231	227	229	222	218	220
19	207	198	201	228	221	225	232	228	229	221	218	219
20	206	198	202	231	226	228	228	223	225	220	217	218
21	210	200	203	231	227	229	225	219	221	221	217	218
22	206	200	202	234	227	230	221	220	220	220	216	217
23	206	201	202	230	226	228	220	218	219	218	216	217
24	212	202	205	230	226	228	219	211	215	220	216	217
25	214	202	206	229	227	228	212	210	211	219	216	217
26	214	203	208	232	228	230	218	210	211	218	216	217
27	216	206	210	233	231	232	213	210	211	219	215	217
28	217	206	211	234	232	233	215	212	213	220	214	216
29	219	208	214	234	232	233	217	214	215	217	213	214
30	221	210	215	234	232	233	218	215	217	215	213	214
31	222	212	216	---	---	---	220	217	219	216	213	215
MONTH	222	182	199	234	212	223	---	---	---	224	213	219

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, 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	218	214	215	207	204	205	195	193	194	189	188	188
2	219	215	217	207	204	205	195	192	193	188	187	188
3	221	217	219	205	204	205	195	192	193	189	187	188
4	221	218	219	205	204	204	197	194	195	188	186	187
5	219	217	218	206	204	205	197	195	197	188	185	186
6	219	218	219	209	205	207	196	192	194	187	185	186
7	221	218	219	208	207	208	194	192	193	189	185	186
8	228	219	223	209	207	208	198	193	196	189	186	188
9	224	219	221	210	208	209	198	197	197	186	174	179
10	226	218	221	210	208	209	199	195	197	182	175	178
11	224	220	222	209	208	208	201	196	199	191	182	187
12	224	219	221	209	207	208	199	194	197	196	191	194
13	225	220	222	208	205	206	197	194	195	199	195	197
14	227	222	224	208	205	206	198	196	197	198	196	197
15	225	221	223	208	204	206	199	196	198	197	195	196
16	225	191	213	205	201	203	196	193	194	196	193	194
17	191	161	173	202	200	201	193	191	192	194	189	192
18	162	158	160	202	196	199	193	191	192	189	187	188
19	174	158	163	196	191	194	194	191	192	188	186	187
20	205	174	194	191	189	190	193	191	192	189	186	187
21	211	205	208	194	190	192	192	189	190	189	186	187
22	212	210	211	198	194	196	191	190	190	189	187	188
23	213	200	209	198	197	197	192	190	191	191	189	190
24	201	197	199	200	198	198	192	191	192	193	191	192
25	200	195	197	202	199	199	192	191	191	193	190	192
26	208	199	204	204	201	202	191	189	190	190	189	190
27	209	207	208	204	203	204	191	189	190	192	186	188
28	208	207	207	205	203	204	190	189	189	188	186	186
29	---	---	---	203	200	202	189	187	188	189	185	186
30	---	---	---	200	196	199	189	188	188	189	186	187
31	---	---	---	196	193	195	---	---	---	191	186	188
MONTH	228	158	209	210	189	202	201	187	193	199	174	189
	JUNE			JULY			AUGUST			SEPTEMBER		
1	191	187	189	185	179	181	194	188	189	198	193	196
2	194	187	189	183	180	181	194	188	190	198	193	195
3	192	187	189	183	180	181	---	---	---	200	190	193
4	192	187	189	184	180	182	191	189	190	196	189	191
5	193	187	189	184	181	182	193	189	190	192	188	190
6	194	189	191	187	181	183	197	192	194	195	190	192
7	198	187	190	188	181	183	203	197	200	196	190	192
8	190	187	188	190	183	185	205	201	203	202	189	195
9	190	188	189	192	183	186	207	204	205	200	193	197
10	198	188	192	191	184	185	209	204	206	203	194	199
11	192	190	191	188	184	185	206	202	203	206	198	200
12	192	187	191	195	183	188	205	201	202	208	202	204
13	191	186	189	191	182	185	211	201	203	209	206	207
14	197	186	191	191	183	185	214	201	203	209	207	208
15	206	196	201	187	183	184	215	200	204	211	206	207
16	212	199	203	194	183	186	214	200	203	206	204	205
17	213	196	202	197	184	187	215	199	204	206	203	204
18	206	199	202	192	185	187	213	200	203	207	195	199
19	203	199	201	195	188	190	214	205	208	198	193	194
20	203	198	200	193	188	190	217	205	209	198	192	194
21	201	192	197	193	188	191	214	201	206	197	192	194
22	198	190	194	191	187	189	207	196	201	197	191	193
23	196	184	192	190	187	189	201	195	198	193	191	192
24	189	180	185	192	186	189	201	195	197	194	191	193
25	189	180	184	190	185	187	200	195	197	197	193	194
26	185	180	181	192	185	187	198	192	194	201	195	198
27	180	179	180	197	186	189	196	193	194	202	198	200
28	180	180	180	204	186	191	202	193	196	207	198	201
29	184	180	182	199	187	191	201	196	198	203	198	200
30	183	180	182	196	188	191	204	196	198	203	199	201
31	---	---	---	196	189	191	202	194	197	---	---	---
MONTH	213	179	191	204	179	186	---	---	---	211	188	198

CUMBERLAND RIVER BASIN

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, 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	7.7	7.3	7.7	7.6	7.8	7.8	7.8	7.7	8.0	7.8	7.6	7.6
2	7.9	7.2	7.7	7.6	7.9	7.8	7.8	7.8	8.0	7.8	7.6	7.6
3	7.9	7.6	7.8	7.6	7.9	7.8	7.8	7.8	8.0	7.8	7.6	7.6
4	8.0	7.5	7.8	7.6	7.9	7.8	7.8	7.7	7.9	7.9	7.6	7.6
5	7.8	7.4	7.8	7.6	7.8	7.8	7.8	7.8	7.9	7.9	7.6	7.6
6	7.6	7.3	7.8	7.7	7.8	7.7	7.8	7.7	8.0	7.9	7.6	7.6
7	7.9	7.4	7.8	7.7	7.8	7.7	7.8	7.7	8.0	7.9	7.6	7.6
8	7.9	7.6	7.8	7.6	7.7	7.7	7.8	7.8	7.9	7.8	7.6	7.6
9	7.9	7.6	7.7	7.6	7.7	7.7	7.8	7.8	7.9	7.7	7.6	7.6
10	7.8	7.6	7.8	7.6	7.7	7.7	7.9	7.8	7.9	7.7	7.6	7.6
11	7.9	7.6	7.8	7.5	7.7	7.7	7.9	7.8	7.9	7.7	7.6	7.6
12	7.8	7.7	7.8	7.5	7.7	7.7	7.9	7.8	7.9	7.7	7.6	7.6
13	7.8	7.7	7.9	7.5	7.7	7.7	7.9	7.8	8.0	7.8	7.6	7.6
14	7.9	7.6	7.9	7.6	7.7	7.6	7.9	7.8	8.0	7.8	7.6	7.6
15	7.8	7.7	7.9	7.6	7.6	7.6	7.9	7.8	8.0	8.0	7.7	7.6
16	7.8	7.6	7.7	7.6	7.7	7.6	7.9	7.8	8.0	7.8	7.7	7.6
17	7.8	7.6	7.7	7.5	7.6	7.4	7.9	7.8	7.8	7.7	7.7	7.6
18	7.9	7.6	7.7	7.5	7.6	7.6	7.9	7.9	7.6	7.6	7.8	7.6
19	7.9	7.6	7.7	7.4	7.7	7.6	7.9	7.9	7.6	7.6	7.8	7.8
20	7.8	7.6	7.8	7.7	7.7	7.6	8.0	7.9	7.7	7.6	7.8	7.7
21	7.8	7.6	7.8	7.7	7.7	7.7	8.0	7.8	7.7	7.7	7.8	7.8
22	7.9	7.6	7.8	7.7	7.7	7.7	8.0	7.9	7.7	7.6	7.9	7.8
23	7.9	7.7	7.7	7.6	7.8	7.7	8.0	7.9	7.6	7.6	7.8	7.8
24	7.9	7.7	7.7	7.6	7.8	7.7	8.0	7.9	7.6	7.6	7.8	7.8
25	7.9	7.6	7.8	7.7	7.8	7.7	8.0	7.9	7.6	7.6	7.9	7.8
26	8.0	7.6	7.7	7.7	7.8	7.7	8.0	7.8	7.6	7.6	8.0	7.8
27	8.0	7.6	7.8	7.7	7.8	7.7	8.0	7.9	7.6	7.6	8.2	7.9
28	7.9	7.7	7.8	7.7	7.8	7.7	8.0	7.9	7.6	7.6	8.1	8.0
29	7.9	7.7	7.8	7.7	7.8	7.8	7.9	7.9	---	---	8.0	8.0
30	7.8	7.6	7.8	7.8	7.8	7.8	7.9	7.9	---	---	8.0	8.0
31	7.8	7.6	---	---	7.8	7.7	7.9	7.8	---	---	8.2	7.9
MONTH	8.0	7.2	7.9	7.4	7.9	7.4	8.0	7.7	8.0	7.6	8.2	7.6
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	8.1	7.9	7.8	8.1	7.8	7.4	7.3	7.4	7.0	7.6	7.2
2	8.2	8.1	7.8	7.8	8.2	7.8	7.5	7.3	7.6	7.0	7.3	7.1
3	8.3	8.1	7.8	7.8	8.1	7.8	7.6	7.4	---	---	7.4	7.0
4	8.3	8.1	7.8	7.7	7.9	7.7	7.6	7.3	7.3	7.1	7.5	7.2
5	8.2	8.1	7.8	7.7	8.1	7.5	7.7	7.5	7.6	7.2	7.6	7.2
6	8.4	8.2	7.8	7.7	8.1	7.6	7.7	7.3	8.0	7.1	7.3	7.2
7	8.2	8.1	7.8	7.7	7.9	7.7	7.8	7.3	7.7	7.4	7.2	7.0
8	8.1	8.1	7.7	7.7	7.8	7.8	7.7	7.3	7.6	7.3	7.6	7.0
9	8.1	8.0	7.7	7.7	7.8	7.6	7.7	7.1	7.7	7.2	7.6	7.1
10	8.0	8.0	7.7	7.7	7.8	7.4	7.9	7.1	7.7	7.3	7.8	7.1
11	8.0	8.0	7.7	7.7	8.1	7.6	7.6	7.2	7.7	7.2	7.9	7.3
12	8.0	8.0	7.8	7.7	8.3	7.7	7.8	7.0	7.7	7.2	7.8	7.4
13	8.0	8.0	7.9	7.8	7.7	7.6	7.8	7.1	7.6	7.2	7.8	7.4
14	8.0	8.0	8.0	7.9	7.7	7.5	7.7	7.1	7.5	7.1	7.7	7.4
15	8.0	8.0	8.0	7.9	7.8	7.5	7.8	7.2	7.6	7.0	7.6	7.4
16	8.0	8.0	8.1	8.0	8.2	7.4	7.5	7.0	7.6	7.0	7.8	7.4
17	8.0	7.9	8.1	8.0	8.1	7.4	7.6	6.9	7.6	7.0	7.8	7.4
18	8.0	7.9	8.0	7.9	7.9	7.6	7.8	7.1	7.6	7.0	7.7	7.4
19	8.0	7.9	8.1	8.0	7.8	7.7	7.7	7.1	7.7	7.1	7.7	7.3
20	7.9	7.9	8.1	8.0	7.7	7.6	7.9	7.1	7.8	7.2	7.6	7.2
21	7.9	7.9	8.1	8.0	7.7	7.6	8.0	7.3	7.7	7.3	7.6	7.2
22	7.9	7.9	8.1	8.0	7.6	7.6	7.9	7.3	7.9	7.3	7.5	7.3
23	7.9	7.9	8.0	8.0	7.6	7.5	7.8	7.2	7.6	7.3	7.4	7.4
24	7.9	7.9	8.0	8.0	7.6	7.5	7.9	7.1	7.8	7.3	7.4	7.3
25	7.9	7.9	8.0	8.0	7.6	7.5	8.1	7.2	7.8	7.4	7.5	7.3
26	7.9	7.9	8.0	8.0	7.5	7.4	8.1	7.0	7.6	7.3	7.6	7.2
27	7.9	7.8	8.1	8.0	7.4	7.4	7.8	6.9	7.6	7.4	7.5	7.3
28	7.9	7.9	8.1	7.9	7.4	7.4	7.9	6.8	7.6	7.3	7.5	7.2
29	7.9	7.8	8.0	7.8	7.4	7.3	7.7	6.9	7.6	7.3	7.5	7.2
30	7.9	7.8	8.1	7.8	7.4	7.3	7.9	7.1	7.5	7.2	7.5	7.4
31	---	---	7.9	7.8	---	---	7.6	7.0	7.5	7.2	---	---
MONTH	8.4	7.8	8.1	7.7	8.3	7.3	8.1	6.8	8.0	7.0	7.9	7.0

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, 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	19.2	18.4	18.9	16.4	15.9	16.2	8.6	8.1	8.4	8.0	7.9	8.0
2	19.3	18.5	18.9	15.9	15.4	15.7	8.2	7.7	7.9	8.1	7.9	8.0
3	19.8	18.3	18.9	15.5	15.2	15.3	7.9	7.6	7.8	7.9	7.6	7.8
4	20.6	18.2	19.4	15.2	14.9	15.1	7.8	7.5	7.7	7.8	7.5	7.6
5	20.1	18.7	19.4	14.9	14.5	14.8	7.5	7.1	7.3	8.0	7.7	7.8
6	20.2	18.5	19.0	14.5	13.9	14.3	7.3	7.0	7.1	8.0	7.8	8.0
7	19.5	18.7	18.9	13.9	13.6	13.7	7.3	7.1	7.2	8.1	7.7	7.9
8	19.4	18.4	18.8	13.8	13.4	13.6	7.3	7.2	7.3	8.0	7.7	7.9
9	19.4	18.8	19.0	13.9	13.4	13.6	7.4	7.2	7.3	8.0	7.7	7.9
10	19.5	19.0	19.2	15.1	13.7	14.1	7.3	7.2	7.2	7.7	7.4	7.6
11	19.6	19.1	19.3	14.3	13.8	14.1	7.2	7.0	7.1	7.4	7.1	7.3
12	19.8	19.3	19.5	13.8	13.5	13.7	7.4	7.1	7.3	7.1	6.8	7.0
13	19.6	19.0	19.4	13.6	13.2	13.4	7.6	7.4	7.5	6.8	6.6	6.7
14	19.7	18.8	19.2	13.4	13.1	13.3	---	---	---	6.6	6.3	6.5
15	19.2	18.9	19.1	13.2	12.9	13.1	---	---	---	6.4	6.1	6.3
16	19.1	18.5	18.8	12.9	12.4	12.7	---	---	---	6.3	5.8	6.1
17	18.8	18.2	18.5	12.4	11.8	12.1	8.8	8.6	8.7	5.8	5.2	5.6
18	18.8	18.0	18.3	11.8	11.5	11.7	9.1	8.7	8.9	5.2	5.0	5.1
19	18.2	17.9	18.1	11.9	11.5	11.6	9.3	9.0	9.2	5.2	4.9	5.0
20	18.1	17.8	18.0	12.0	11.3	11.6	9.3	9.2	9.3	5.4	5.0	5.2
21	17.9	17.7	17.8	12.3	11.6	11.8	9.4	9.1	9.2	5.5	5.3	5.4
22	18.3	17.5	17.7	11.7	11.2	11.5	9.5	9.3	9.4	5.5	5.3	5.4
23	18.2	17.4	17.6	11.2	10.5	10.9	9.6	9.4	9.5	5.3	4.6	5.0
24	17.4	17.3	17.4	11.0	10.4	10.7	9.6	9.5	9.6	4.9	4.4	4.7
25	17.4	17.3	17.3	10.8	10.5	10.7	9.5	8.9	9.2	5.1	4.7	4.9
26	17.8	17.2	17.4	10.6	10.0	10.4	8.9	8.4	8.7	5.1	4.9	5.0
27	17.7	17.0	17.2	10.0	9.5	9.8	8.4	8.1	8.2	4.9	4.5	4.7
28	17.2	17.0	17.1	9.6	8.8	9.3	8.1	7.9	8.0	4.7	4.5	4.6
29	17.6	17.1	17.2	9.1	8.6	8.9	7.9	7.8	7.8	5.2	4.7	4.9
30	17.2	16.6	16.9	9.0	8.5	8.8	8.0	7.7	7.8	5.3	5.1	5.2
31	16.8	16.3	16.6	---	---	---	8.0	7.9	7.9	5.5	5.2	5.3
MONTH	20.6	16.3	18.3	16.4	8.5	12.6	---	---	---	8.1	4.4	6.3
	FEBRUARY			MARCH			APRIL			MAY		
1	5.7	5.4	5.5	5.8	5.5	5.7	9.8	9.6	9.7	12.6	11.8	12.2
2	6.2	5.5	5.8	6.0	5.8	5.9	10.5	9.8	10.0	12.6	12.2	12.4
3	6.4	6.1	6.2	6.1	5.8	5.9	10.9	10.0	10.3	12.6	12.3	12.4
4	6.6	6.3	6.4	6.1	5.8	6.0	11.1	10.5	10.7	12.6	12.4	12.5
5	6.6	6.4	6.5	6.3	6.0	6.2	11.1	10.6	10.8	12.5	12.3	12.4
6	6.6	6.5	6.5	6.4	6.2	6.3	11.1	10.7	10.9	12.8	12.3	12.5
7	6.5	6.2	6.4	6.5	6.1	6.3	11.3	11.0	11.2	12.9	12.7	12.8
8	6.4	6.0	6.2	6.5	6.2	6.3	11.3	10.9	11.1	13.9	12.9	13.4
9	6.3	6.0	6.2	6.4	6.3	6.3	10.9	10.2	10.6	14.7	13.9	14.3
10	6.3	6.0	6.1	6.5	6.1	6.3	10.2	9.7	9.9	15.3	14.6	14.9
11	6.1	5.8	5.9	6.7	6.2	6.5	10.4	9.6	10	15.4	15.0	15.2
12	5.9	5.6	5.8	7.0	6.5	6.7	10.3	9.6	9.9	15.4	14.9	15.2
13	5.7	5.4	5.6	7.1	6.6	6.8	10.3	9.6	9.9	15.4	15.1	15.2
14	5.6	5.4	5.5	7.6	7.1	7.3	10.6	10.2	10.4	15.2	15.0	15.1
15	6.1	5.4	5.6	7.9	7.6	7.7	10.7	10.3	10.5	15.2	14.8	14.9
16	7.6	6.1	6.7	7.9	7.7	7.8	10.8	10.3	10.5	14.9	14.3	14.6
17	7.9	7.4	7.7	7.8	7.6	7.7	10.9	10.6	10.7	14.3	13.4	13.9
18	7.4	6.8	7.1	8.1	7.6	7.8	10.9	10.6	10.7	13.6	13.2	13.3
19	6.8	6.2	6.4	8.4	8.0	8.2	10.9	10.5	10.7	13.6	13.3	13.4
20	6.2	6.0	6.1	8.9	8.2	8.5	11.2	10.5	10.8	13.5	13.1	13.2
21	6.3	6.0	6.2	8.9	8.7	8.8	11.8	11.0	11.3	13.4	13.1	13.3
22	6.7	6.3	6.5	9.2	8.8	9.0	11.8	11.3	11.6	13.5	13.3	13.4
23	7.0	6.6	6.8	9.4	9.2	9.2	11.7	11.5	11.6	13.5	13.1	13.3
24	7.1	7.0	7.1	10.6	9.7	10.0	11.6	10.9	11.2	13.9	13.4	13.6
25	7.0	6.2	6.6	10.9	10.3	10.5	10.9	10.6	10.7	13.7	13.3	13.6
26	6.2	5.6	5.8	10.9	10.5	10.7	10.8	10.4	10.6	13.4	13.1	13.2
27	5.6	5.4	5.5	10.9	10.6	10.7	10.9	10.5	10.7	13.7	13.2	13.4
28	5.6	5.4	5.5	10.8	10.5	10.6	11.2	10.6	10.9	13.9	13.0	13.5
29	---	---	---	10.7	10.5	10.6	11.6	10.8	11.2	13.9	13.4	13.7
30	---	---	---	10.6	10.0	10.5	12.1	11.5	11.7	14.7	13.7	14.2
31	---	---	---	10.0	9.6	9.7	---	---	---	14.8	14.2	14.5
MONTH	7.9	5.4	6.2	10.9	5.5	8.0	12.1	9.6	10.7	15.4	11.8	13.7

CUMBERLAND RIVER BASIN

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, 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	15.3	14.3	14.8	16.3	16.0	16.1	19.9	19.4	19.6	21.7	19.9	20.4
2	15.8	14.8	15.1	16.8	16.1	16.4	20.1	18.8	19.4	20.6	19.7	20.1
3	15.9	15.0	15.5	17.4	16.4	16.9	---	---	---	21.2	19.6	20.2
4	15.9	14.7	15.3	17.7	16.8	17.1	19.3	18.8	19.0	21.6	20.0	20.6
5	16.3	15.0	15.4	18.3	17.2	17.8	20.4	18.8	19.5	21.8	20.0	20.7
6	16.9	15.5	16.1	18.5	16.9	17.6	20.9	19.4	20.0	20.8	20.2	20.4
7	16.4	15.7	16.1	18.5	16.9	17.6	20.3	19.6	19.9	20.3	20.0	20.2
8	16.3	15.9	16.0	18.3	17.1	17.7	20.5	19.6	20.0	20.9	19.9	20.3
9	16.4	15.7	16.0	18.7	17.3	17.8	20.9	19.9	20.3	21.1	20.0	20.6
10	16.3	15.5	15.8	20.7	17.3	18.5	21.0	19.9	20.5	21.7	20.1	20.9
11	17.2	15.6	16.4	19.8	17.6	18.7	20.6	19.7	20.2	21.9	20.2	21.1
12	17.8	16.8	17.2	20.7	18.4	19.4	20.4	19.4	19.9	21.7	20.2	21.1
13	18.3	17.0	17.5	21.0	18.9	19.7	20.4	19.4	19.9	21.7	20.5	21.1
14	18.7	17.9	18.2	21.4	19.2	20.2	19.9	19.4	19.7	21.4	20.5	21.0
15	18.7	17.9	18.4	22.1	19.4	20.3	20.3	19.3	19.8	21.2	20.3	20.8
16	19.3	17.5	18.4	21.4	19.8	20.6	20.4	19.2	19.8	21.4	20.6	21.0
17	19.0	17.2	18.2	22.0	20.1	20.7	20.5	19.1	19.9	21.4	20.2	20.7
18	18.4	17.4	17.8	22.4	20.4	21.2	20.4	19.2	19.9	21.2	20.3	20.7
19	17.4	17.1	17.2	22.5	20.5	21.4	21.0	19.5	20.1	21.0	20.1	20.6
20	17.1	16.5	16.7	23.0	20.5	21.5	21.4	19.6	20.3	20.7	19.9	20.3
21	16.5	15.6	15.9	23.2	20.7	21.7	21.2	19.5	20.2	20.4	20.0	20.2
22	15.7	15.3	15.6	22.9	20.7	21.6	21.9	19.6	20.3	20.4	19.6	20.1
23	15.8	15.5	15.6	22.4	20.7	21.5	20.9	19.5	20.1	19.8	19.5	19.6
24	15.9	15.6	15.8	22.3	20.5	21.3	21.3	19.9	20.5	19.5	19.3	19.4
25	16.4	15.7	15.9	22.1	20.1	21.2	21.7	20.3	20.7	19.9	19.1	19.3
26	16.2	15.8	16.0	21.7	19.6	20.9	21.3	20.2	20.7	20.3	19.0	19.5
27	16.2	15.8	16.0	21.1	19.4	20.3	21.1	20.7	20.9	20.0	19.3	19.6
28	16.2	15.8	15.9	21.1	19.0	20.1	21.1	19.9	20.4	19.4	19.1	19.2
29	16.3	15.8	15.9	20.7	18.8	19.9	21.2	19.8	20.4	19.3	18.8	19.1
30	16.5	16.0	16.2	21.1	18.9	19.9	20.9	19.6	20.3	19.4	19.0	19.2
31	---	---	---	20.7	19.1	20.1	20.9	19.6	20.2	---	---	---
MONTH	19.3	14.3	16.4	23.2	16.0	19.5	---	---	---	21.9	18.8	20.3

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	---	---	---	8.6	2.0	7.0	11.8	11.4	11.7	12.2	10.9	11.9
2	---	---	---	8.8	2.8	6.8	12.1	11.6	11.9	12.3	11.5	12.0
3	---	---	---	9.0	2.3	7.0	12.2	11.7	11.9	12.5	12.1	12.3
4	---	---	---	9.3	3.6	8.2	12.1	11.4	11.9	12.4	11.7	12.3
5	---	---	---	9.3	1.4	7.8	12.0	11.9	11.9	12.4	12.2	12.3
6	---	---	---	9.5	6.2	9.0	12.0	11.6	11.9	12.4	11.9	12.1
7	8.5	7.0	7.7	9.9	8.9	9.6	11.7	11.3	11.4	12.3	11.4	12.1
8	8.5	5.9	7.3	10.3	8.0	9.5	11.3	11.2	11.3	12.5	12.0	12.1
9	8.4	6.6	7.4	10.0	8.0	9.5	11.4	11.2	11.2	12.4	12.0	12.2
10	8.2	6.6	7.4	10.4	6.9	9.9	11.3	11.0	11.2	12.7	12.2	12.4
11	8.2	6.6	7.4	10.4	4.2	8.7	11.2	11.1	11.2	12.8	12.2	12.6
12	8.0	7.1	7.4	10.6	5.0	9.6	11.2	11.0	11.1	13.4	12.3	12.8
13	7.8	6.4	7.1	11.0	3.2	8.0	11.1	10.9	11.0	13.2	12.6	13.0
14	7.8	5.5	6.8	11.2	7.7	9.9	---	---	---	13.0	12.8	12.9
15	7.2	6.0	6.7	11.0	6.0	9.2	---	---	---	13.1	12.6	12.9
16	7.4	4.3	6.1	---	---	---	---	---	---	13.1	12.6	12.9
17	7.5	4.7	6.6	---	---	---	10.3	10.3	10.2	13.5	12.9	13.2
18	8.0	2.4	6.6	---	---	---	10.5	10.2	10.4	13.6	13.2	13.5
19	---	---	---	10.8	10.3	10.4	10.8	10.5	10.6	13.8	13.0	13.5
20	7.9	1.7	5.7	10.8	10.3	10.5	11.0	10.7	10.9	13.7	13.4	13.6
21	8.2	2.3	6.3	11.1	10.4	10.7	11.1	10.9	11.0	13.6	13.1	13.5
22	8.4	2.7	6.8	11.0	10.5	10.7	11.2	11.0	11.1	13.8	12.8	13.6
23	8.6	4.8	7.2	11.0	10.5	10.7	11.2	11.0	11.1	14.2	13.6	14.0
24	10.0	2.0	7.4	11.0	10.6	10.8	11.2	11.1	11.1	14.4	13.9	14.2
25	---	---	---	11.4	10.8	11.0	11.2	11.0	11.1	14.3	13.8	14.1
26	---	---	---	11.0	10.6	10.9	11.3	11.1	11.2	14.2	13.9	14.1
27	9.0	1.5	6.6	11.3	10.8	11.1	11.6	11.2	11.4	14.5	13.9	14.3
28	8.6	---	7.3	11.4	11.0	11.2	11.7	11.4	11.6	14.6	14.1	14.5
29	8.8	2.2	6.7	11.6	11.1	11.4	11.9	11.6	11.8	14.5	14.2	14.4
30	8.4	4.6	6.8	11.8	11.3	11.6	11.9	11.8	11.9	14.4	14.3	14.4
31	8.4	1.5	6.0	---	---	---	12.0	11.2	11.8	14.5	14.2	14.5
MONTH	---	---	---	---	---	---	---	---	---	14.6	10.9	13.2

