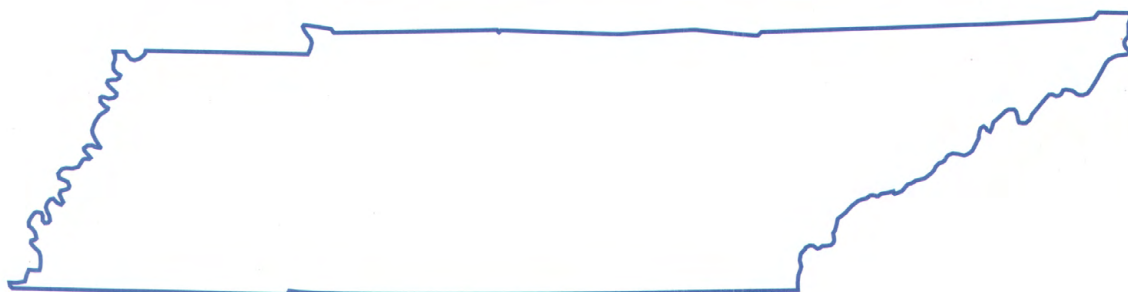
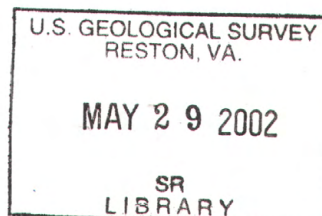


# Water Resources Data Tennessee Water Year 2001

Water-Data Report TN-01-1



# CALENDAR FOR WATER YEAR 2001

2000

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30
														31						

2001

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3					1	2	3
7	8	9	10	11	12	13	4	5	6	7	8	9	10	4	5	6	7	8	9	10
14	15	16	17	18	19	20	11	12	13	14	15	16	17	11	12	13	14	15	16	17
21	22	23	24	25	26	27	18	19	20	21	22	23	24	18	19	20	21	22	23	24
28	29	30	31				25	26	27	28				25	26	27	28	29	30	31

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7			1	2	3	4	5						1	2
8	9	10	11	12	13	14	6	7	8	9	10	11	12	3	4	5	6	7	8	9
15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16
22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23
29	30						27	28	29	30	31			24	25	26	27	28	29	30

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4							1
8	9	10	11	12	13	14	5	6	7	8	9	10	11	2	3	4	5	6	7	8
15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30	31					26	27	28	29	30	31		23	24	25	26	27	28	29
														30						

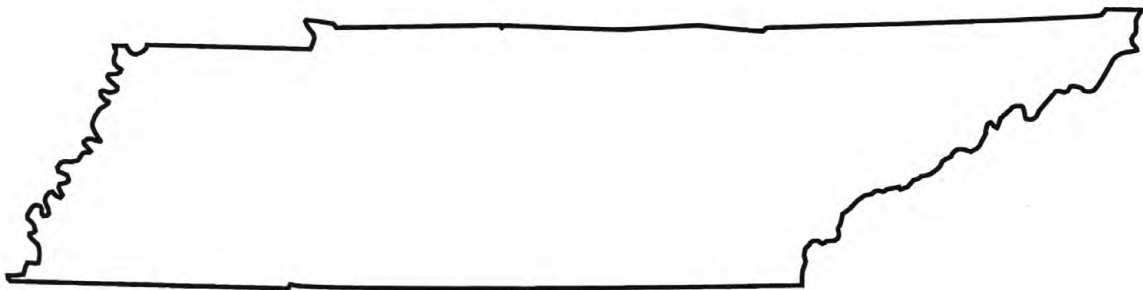


U.S. Department of the Interior  
U.S. Geological Survey

# Water Resources Data Tennessee Water Year 2001

By D.F. Flohr, J. W. Garrett, J.T. Hamilton, and T.D. Phillips

Water-Data Report TN-01-1



Prepared in cooperation with the  
State of Tennessee and with other agencies



**U.S. DEPARTMENT OF THE INTERIOR**  
**GALE A. NORTON, SECRETARY**  
**U.S. GEOLOGICAL SURVEY**  
**CHARLES G. GROAT, Director**

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640 Grassmere Park, Suite 100

Nashville, Tennessee 37211

2002



## PREFACE

This volume of the annual hydrologic data report of Tennessee is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, most of the data were collected, computed, and processed from the subdistrict offices. The following individuals supervised the collection, processing, and tabulation of the data:

Terry D. Phillips, Knoxville    Jerry W. Garrett, Memphis    J. Tim Hamilton, Nashville

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This report was prepared in cooperation with the State of Tennessee and with other agencies under the general supervision of Paul S. Hampson, Acting Data Management Section Chief, and W. Scott Gain, District Chief, Tennessee.

**REPORT DOCUMENTATION PAGE**Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE March 2002	3. REPORT TYPE AND DATES COVERED Annual-October 1, 2000 to September 30, 2001
4. TITLE AND SUBTITLE Water Resources Data - Tennessee, Water Year 2001			5. FUNDING NUMBERS
6. AUTHOR(S) D.F. Flohr, J.W. Garrett, J.T. Hamilton, T.D. Phillips			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) US Geological Survey, Water Resources Division 640 Grassmere Park, Suite 100 Nashville, TN 37211			8. PERFORMING ORGANIZATION REPORT NUMBER USGS-WDR-TN-01-1
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) US Geological Survey, Water Resources Division 640 Grassmere Park, Suite 100 Nashville, TN 37211			10. SPONSORING / MONITORING AGENCY REPORT NUMBER USGS-WDR-TN-01-1
11. SUPPLEMENTARY NOTES Prepared in cooperation with the Tennessee Department of Environment and Conservation; the Tennessee Valley Authority; and with other State, municipal, and Federal Agencies.			
12a. DISTRIBUTION / AVAILABILITY STATEMENT No restriction on distribution. This report may be purchased from: National Technical Information Services, Springfield, VA 22161			12b. DISTRIBUTION CODE
13. ABSTRACT (Maximum 200 words) Water resources data for the 2001 water year for Tennessee consists of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This report contains records for water discharge at 80 gaging stations; stage only for 1 gaging station, elevation and contents for 32 lakes reservoirs; water quality at 18 gaging stations and 6 wells; and water levels for 8 observation wells; and 1 precipitation station. Also included are data for 100 crest stage partial-record stations. Additional water data were collected at various stream sites not involved in the systematic data-collection program, and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the US Geological Survey and cooperating State and Federal agencies in Tennessee.			
14. SUBJECT TERMS *Tennessee, *Hydrologic data, *Surface water, *Groundwater, *Water quality, Flow rate, Gaging stations, Lake, Reservoirs, Chemical analyses, Sediment analyses, Water temperature, Sampling sites, Water level, Water analyses			15. NUMBER OF PAGES 391
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT



# CONTENTS

	Page
Preface.....	iii
List of surface-water stations, in downstream order, for which records are published in this volume.....	vii
List of ground-water wells for which records are published in this volume.....	ix
List of discontinued streamflow stations.....	x
List of discontinued surface-water quality stations.....	xix
Introduction.....	1
Cooperation.....	2
Summary of hydrologic conditions.....	3
Surface-water conditions.....	3
Ground-water levels.....	3
Water quality.....	4
Special networks and programs.....	6
Explanation of the records.....	7
Station identification numbers.....	7
Downstream order system.....	7
Numbering system for wells.....	7
Records of stage and water discharge.....	8
Data collection and computation.....	8
Data presentation.....	9
Identifying estimated daily discharge.....	12
Accuracy of the records.....	12
Other data available.....	12
Records of surface-water quality.....	13
Classification of records.....	13
Arrangement of records.....	13
On-site measurements and sample collection.....	13
Water temperature.....	14
Sediment.....	14
Laboratory measurements.....	14
Data presentation.....	15
Remark codes.....	16
Records of ground-water levels.....	17
Data collection and computation.....	17
Data presentation.....	18
Records of ground-water quality.....	19
Data collection and computation.....	19
Data presentation.....	19
Explanation of precipitation-quality records.....	19
Collection of the data.....	19
Access to WATSTORE data.....	19
Definition of terms.....	20
Publications on techniques of water-resources investigations.....	32
Station records, surface water.....	42
Discharge at partial-record stations.....	274
Crest-stage partial-record stations.....	274
Miscellaneous sites.....	289
Special studies.....	291
Analyses of samples collected at water-quality miscellaneous sites.....	294
Miscellaneous temperature measurements and field determinations.....	300
Water-level data for a wetland area near Millington.....	311

	Page
Station records, ground-water .....	324
Ground-water-levels .....	324
Periodic measurements of ground-water levels .....	330
Quality of ground water .....	334
Chemical quality of precipitation .....	361
Index .....	363

## ILLUSTRATIONS

	Page
Figure 1. Ground-water levels for the 2001 water year compared to the maximum, minimum, and median water levels for the period of record (Hamilton County) .....	5
2. Hydrograph of well Sh:Q-1 in Shelby County showing a long-term decline in the water level .....	5
3. System for numbering wells .....	7
4. Map showing location of streamflow gaging stations in Tennessee .....	37
5. Map showing location of crest-stage stations in Tennessee .....	39
6. Map showing location of water-quality and ground-water wells in Tennessee .....	41
7. Map showing location of study area and data-collection sites .....	311



## SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORD ARE PUBLISHED IN THIS VOLUME

[Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological,  
(t) water temperature, (s) sediment, (e) elevation, gage heights, or contents]

	Station number	Page
<b>OHIO RIVER BASIN</b>		
Ohio River:		
CUMBERLAND RIVER BASIN		
Cumberland River:		
New River (head of South Fork Cumberland River):		
New River at New River (d) .....	03408500	42
Clear Fork near Robbins (d) .....	03409500	44
East Fork Obey River near Jamestown (d) .....	03414500	46
Cumberland River at Celina (c,t) .....	03417500	48
Cumberland River below Cordell Hull Dam (c,t) .....	03418420	51
Caney Fork:		
Collins River near McMinnville (d) .....	03421000	54
Smith Fork at Temperance Hall (d) .....	03424730	56
Cumberland River at Old Hickory Dam (Tailwater), TN (d,c,t) .....	03426310	60
Stones River:		
Mansker Creek above Goodlettsville (d) .....	03426385	64
Dry Creek near Edenwold (d) .....	03426470	66
East Fork Stones River near Lascassas (d,c,t) .....	03427500	68
West Fork Stones River at Murfreesboro (d,c,t) .....	03428200	70
Stoners Creek near Hermitage (d) .....	03430147	76
Mill Creek near Nolensville (d) .....	03430550	78
Mill Creek at Thompson Lane near Woodbine (d) .....	03431060	80
Cumberland River at Omohundro Water Plant at Nashville (c,t) .....	03431091	82
Browns Creek at State Fairgrounds at Nashville (d) .....	03431300	86
Cumberland River at Woodland Street at Nashville (d) .....	034315005	88
Cumberland River near Bordeaux (c,t) .....	03431514	90
Whites Creek:		
Whites Creek near Bordeaux (d) .....	03431599	94
Richland Creek at Charlotte Avenue at Nashville (d) .....	03431700	96
Harpeth River at Franklin (d) .....	03432350	98
South Prong Spencer Creek near Franklin (d) .....	03432387	100
Spencer Creek near Franklin (d) .....	03432390	104
Harpeth River below Franklin (d) .....	03432400	106
Harpeth River at Bellevue (d) .....	03433500	108
Harpeth River near Kingston Springs (d) .....	03434500	110
Cumberland River below Cheatham Dam (c,t) .....	03435000	112
Red River:		
Red River below Highway 161 near Barren Plains (d) .....	03435305	116
Millers Creek at Turnersville (d) .....	03435970	118
Red River at Port Royal (d) .....	03436100	120
Yellow Creek at Ellis Mills (d) .....	03436690	122
Reservoirs in Cumberland River Basin .....		124
<b>TENNESSEE RIVER BASIN</b>		
French Broad River near Newport (d) .....	03455000	128
Pigeon River:		
Pigeon River at Newport (d) .....	03461500	130
Nolichucky River at Embreeville (d) .....	03465500	132
Big Limestone Creek near Limestone (d,c,b,s) .....	03466208	134
Nolichucky River near Lowland (c,b,s) .....	03467609	140
Little Pigeon River above Sevierville (d) .....	03469175	144
Holston River:		
Big Creek near Rogersville (d) .....	03491000	146
Crockett Creek below Rogersville (d) .....	03491544	148

## SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

	Station number	Page
<b>OHIO RIVER BASIN--Continued</b>		
<b>Ohio River--Continued</b>		
<b>TENNESSEE RIVER BASIN--Continued</b>		
<b>Tennessee River--Continued</b>		
Little River about Townsend (d) .....	03497300	150
Little River near Maryville (d) .....	03498500	152
Little River near Alcoa (d) .....	03498850	154
Clinch River above Tazewell (d) .....	03528000	156
Powell River near Arthur (d) .....	03532000	158
Beaver Creek:		
Beaver Creek at Solway (d) .....	03535400	160
Poplar Creek:		
East Fork Poplar Creek at Bear Creek Road at Oak Ridge (d) .....	03538235	162
Daddys Creek:		
Daddys Creek near Hebbertsburg (d) .....	03539600	164
Clear Creek:		
Clear Creek at Lilly Bridge near Lancing (d,c,t,b,s) .....	03539778	166
Emory River:		
Obed River near Lancing (d) .....	03539800	172
Emory River at Oakdale (d) .....	03540500	174
Hiwassee River:		
Hiwassee River at Charleston (d) .....	03566000	176
North Mouse Creek near Rocky Mount Hollow near Athens (d) .....	035661285	178
Tennessee River at Chattanooga (d,c,b,s) .....	03568000	180
Short Creek:		
Scarham Creek near McVile (d) .....	03573182	184
Tennessee River at Whitesburg (d) .....	03575500	186
Elk River:		
Elk River near Pelham (d) .....	03578000	188
Cane Creek near Howell (d,c,b,s) .....	035825882	190
Richland Creek at Hwy 64 near Pulaski (d) .....	03584020	194
Elk River at Prospect (c,t,b,s) .....	03584600	196
Shoal Creek at Iron City (d) .....	03588500	198
Tennessee River at Florence (d) .....	03589500	200
Tennessee River at Savannah (d) .....	03593500	202
Duck River:		
Garrison Fork above L&N Railroad at Wartrace (d) .....	03597210	204
Wartrace Creek below County Road at Wartrace (d) .....	03597590	206
Duck River at Shelbyville (d,t) .....	03597860	208
Duck River near Shelbyville (d) .....	03598000	212
North Fork Creek near Poplins Crossroads (d,c,t,b,s) .....	03598250	214
Duck River at Columbia (d) .....	03599500	218
Carters Creek at Petty Lane near Carters Creek (c,b,s) .....	03600085	220
Carters Creek Tributary near Carters Creek (c,b,s) .....	03600086	221
Carters Creek at Butler Road at Carters Creek (d,c,b,s) .....	03600088	222
Duck River at Highway 100 at Centerville (d) .....	03601990	226
Piney River at Cedar Hill (d) .....	03602219	228
Piney River at Vernon (d) .....	03602500	230
Duck River above Hurricane Mills (c,t,b,s) .....	03603000	232
Buffalo River near Flat Woods (d) .....	03604000	234
Cypress Creek at Camden (d) .....	03605078	236
Reservoirs in Tennessee River basin .....		237
<b>LOWER MISSISSIPPI RIVER BASIN</b>		
<b>Mississippi River :</b>		
<b>OBION RIVER BASIN</b>		
<b>Crooked Creek (head of Obion River):</b>		
Beaver Creek at Hwy 22 Bypass near Huntingdon (d) .....	07024305	244
Reelfoot Lake near Tiptonville (e) .....	07027000	246
South Fork Forked Deer River near Owl City (d) .....	07027720	248
Middle Fork Forked Deer River near Fairview (d) .....	07028960	250
<b>HATCHIE RIVER BASIN</b>		
Hatchie River at Bolivar (d) .....	07029500	252
<b>LOOSAHATCHIE RIVER BASIN</b>		
Loosahatchie River near Arlington (d) .....	07030240	254



## SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

	Station number	Page
<u>LOWER MISSISSIPPI RIVER BASIN--Continued</u>		
Mississippi River--Continued		
WOLF RIVER BASIN		
Wolf River at LaGrange (d,c,t,s).....	07030392	256
Wolf River at Rossville (d) .....	07030500	262
Wolf River at Germantown (d).....	07031650	264
Fletcher Creek at Sycamore View Road (d).....	07031692	266
Wolf River at Hollywood Street at Memphis (d) .....	07031740	270
NONCONNAH CREEK BASIN		
Nonconnah Creek near Germantown (d) .....	07032200	272

## GROUND-WATER WELLS, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

## GROUND-WATER LEVELS

<u>HAMILTON COUNTY</u>		
Well 351428085003600 Local number Hm:O-15 .....		324
<u>LAUDERDALE COUNTY</u>		
Well 353839089493500 Local number Ld:F-4 .....		325
<u>LINCOLN COUNTY</u>		
Well 350034086422800 Local number Li:G-1 .....		326
<u>SEVIER COUNTY</u>		
Well 353922083345600 Local number Sv:E-2 .....		327
<u>SHELBY COUNTY</u>		
Well 350857089591401 Local number Sh:P-99 .....		328
Well 350900089482300 Local number Sh:Q-1 .....		329

## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

<u>FAYETTE COUNTY</u>		
Well 352226089330101 Local number Fa:R-1 .....		330
Well 352226089330102 Local number Fa:R-2 .....		330
<u>SHELBY COUNTY</u>		
Well 350514089553700 Local number Sh:K-75 .....		331
Well 351435090005200 Local number Sh:O-1 .....		331
Well 350735089593300 Local number Sh:P-76 .....		332
Well 352112089571200 Local number Sh:U-1 .....		332
Well 352112089571300 Local number Sh:U-2 .....		333
<u>CRITTENDEN COUNTY, AK</u>		
Well 350344090130000 Local number Ar:H-2 .....		333

## QUALITY OF GROUND WATER, 2001 WATER YEAR

<u>SHELBY COUNTY</u>		
Well 350100090070301 Local number Sh:J-139 .....		355
Well 350446090013500 Local number Sh:J-154 .....		355
Well 350642089555000 Local number Sh:K-142 .....		356
Well 350230089512301 Local number Sh:L-37 .....		356
Well 350507089482401 Local number Sh:L-90 .....		357
Well 350449089480501 Local number Sh:L-92 .....		358
Well 350913090100801 Local number Sh:O-207 .....		359
Well 351420089570900 Local number Sh:P-131 .....		359
Well 351054089515301 Local number Sh:Q-33 .....		360
Well 350835089434100 Local number Sh:R-29 .....		360

## QUALITY OF PRECIPITATION

<u>HAYWOOD COUNTY</u>		
Hatchie National Wildlife Refuge rain gage at Hillville .....		361

## WATER RESOURCES DATA - TENNESSEE, 2001

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Tennessee have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (\*) after the station number are currently operated as crest-stage partial-record stations.

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only);  
Agency designations: USGS, U.S. Geological Survey; TVA, Tennessee Valley Authority]

Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Period of record
Red Boiling Spring at Red Boiling Springs (d)	03312250	USGS		1986
Salt Lick Creek at Red Boiling Springs (d)	03312255	USGS	12.6	1991-97
Crabapple Branch near La Follette (d)	03403718	USGS	1.07	1981-84
Indian Fork above Braytown (d)	03407804	USGS	4.32	1975-78
Green Branch near Hembree (d)	03407874	USGS	1.38	1976-78
Smoky Creek above Hembree (361240084245800) (d)	034078745	USGS	8.07	1982-83
Bills Branch near Hembree (d)	03407875	USGS	.67	1975-83
Shack Creek at Hembree (361341084253900) (d)	034078755	USGS	5.08	1982-84
Smoky Creek near Hembree (d)	03407876	USGS	17.2	1977-84
Bowling Branch above Smoky Junction (d)	03407877	USGS	2.19	1976-81
Anderson Branch near Montgomery (d)	03407881	USGS	.69	1976-80
Lowe Branch near Montgomery (d)	03407882	USGS	.92	1975-80
New River at Cordell (d)	03407908	USGS	198	10/75-77, 5/77-12/87
New River near New River (d)	03408000	USGS	314	1923-35
Long Branch near Grimsley (d)	03408600	USGS	1.11	1976-81
Crooked Creek tributary near Allardt (d)	03408810	USGS	.25	1976-79
Crooked Creek near Allardt (d)	03408815	USGS	3.62	1976-81
White Oak Creek at Sunbright (d)	03409000*	USGS	13.5	1932-33
White Oak Creek at Rugby (d)	03409400	USGS	98.0	1980-82
East Branch Bear Creek near Oneida (d)	03409700	USGS		1994-95
East Branch Bear Creek Tributary near Oneida (d)	03409710	FUSGS		1994-95
Pine Creek tributary at Oneida (d)	03410000	USGS	1.21	1932-33
South Fork Cumberland River at Leatherwood Ford (d)	03410210	USGS	806	1983-87
West Fork Obey River near Alpine (d)	03415000	USGS	115	1943-71, 1980-81
Obey River near Byrdstown (d)	03415500	USGS	445	1919-43
Obey River below Dale Hollow Dam (d)	03417000	USGS	936	1939-42, 1945-58
Roaring River near Hilham (d)	03418000	USGS	78.7	1932-75
Roaring River near Gainesboro (d)	03418188	USGS	276	1975
Cumberland River below Cordell Hull (d)	03418420	USGS	8,095	1980-97
Caney Fork at Clifty (d)	03418500	USGS	111	1931-49
Bee Creek at Herbert (d)	03419000	USGS	101	1931-37
Calfkiller River at Sparta (d)	03419500	USGS	157	1932-41
Calfkiller River below Sparta (d)	03420000	USGS	175	1940-71
Collins River at Beersheba Springs (d)	03420185	USGS	157	1994-95
Collins River near Tarlton (d)	03420200	USGS	174	1994-95
Barren Fork near Trousdale (d)	03420500	USGS	126	1932-57
Collins River near Rowland (d)	03421500	USGS	755	1916-24
Falling Water River near Cookeville (d)	03423000	USGS	67.0	1932-56
Falling Water River below Burgess Falls Dam (d)	03423152	USGS	124	1990-93
Taylor Creek near Cassville (d)	03423400	USGS	34.2	1989-93
Caney Fork below Center Hill Dam, near Lancaster (d)	03424500	USGS	2,183	1923-58
Spring Creek near Lebanon (d)	03425500	USGS	35.3	1955-61
Town Creek at Maple Street at Gallatin (d)	03425646	USGS	4.74	1984
Drakes Creek above Hendersonville (d)	03426000	USGS	19.2	1955-61
Cumberland River at Dam 3, near Old Hickory (d)	03426210	USGS	11,688	1931-42, 1947-53

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only);

Agency designations: USGS, U.S. Geological Survey; TVA, Tennessee Valley Authority]

Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Period of record
East Fork Stones River at Woodbury (d)	03426800*	USGS	39.1	1932-33, 1950, 1954, 1962-89
Bradley Creek at Lascassas (d)	03427000	USGS	37.0	1955-61
Bushman Creek at Pitts Lane Ford near Compton (d)	03427690	USGS	9.67	1989-92
West Fork Stones River near Murfreesboro (d)	03428000	USGS	128	1932-69
Lytle Creek at Sanbyrn Drive at Murfreesboro (d)	03428043	USGS	17.6	1990-92
Fox Camp Spring at Mankinville (d)	03428047	USGS		1978-80
West Fork Stones River at Manson Pike, at Murfreesboro (d)	03428070	USGS	165	1973-81
Stones River near Smyrna (d)	03429000	USGS	571	1925-67
Stewart Creek near Smyrna (Smyrna Airport) (d)	03429500	USGS	69.7	1953-58
Stones River below J. Percy Priest Dam (d)	03430100	USGS	892	1939-67
Collins Creek at Bell Road, near Antioch (d)	03430800	USGS	3.61	1976-77
Mill Creek near Antioch (d)	03431000	USGS	64.0	1954-61, 1964-75
Browns Creek at State Fairgrounds, at Nashville (d)	03431300	USGS	11.8	1964-75
Cumberland River at Nashville (d)	03431500	USGS	12,856	1893-54
Cummings Branch at Lickton (d)	03431517	USGS	2.40	1976-90
Whites Creek at Tucker Road, near Bordeaux (d)	03431600	USGS	51.6	1965-75
Richland Creek at Charlotte Ave, at Nashville (d)	03431700	USGS	24.3	1964-90
West Harpeth River near Leipers Fork (d)	03432500	USGS	66.9	1955-61
Red River near Portland (d)	03435030	USGS	15.1	1967-75
Red River near Adams (d)	03435500	USGS	706	1920-69
Sulphur Fork Red River near Adams (d)	03436000	USGS	186	1938-91
Piney River at Ft. Campbell, KY-TN (d)	03436420	USGS	50.2	1993-96
Little West Fork near Ft. Campbell, KY-TN (d)	03436426	USGS	128	1993-96
Cumberland River at Clarksville (lock C) (d)	03436500	USGS	15,897	1925-44
Yellow Creek near Shiloh (d)	03436700*	USGS	124	1958-80
Cumberland River at Dover (gaging station) (d)	03437000	USGS	16,437	1938-65
French Broad River near Newport (d)	03455000	TVA	1,858	1900 1901 1902-05, 1907 1920-94
Pigeon River at Hartford (d)	03461000	USGS	547	1925-48
Cosby Creek above Cosby (d)	03461200	USGS	10.1	1967-87
Pigeon River at Newport (d)	03461500	USGS	666	1900-29, 1945-46, 1948-82, 1982-83
North Indian Creek near Unicoi (d)	03465000	USGS	15.9	1944-57
Muddy Fork near Leesburg (d)	03465830	USGS	13.5	1994-95
Jockey Creek near Mount Bethel Church near Limestone (d)	03466098	USGS	18.5	1994-95
Nolichucky River below Nolichucky Dam (d) (e)	03466500	USGS	1,184	1902-09, 1919-26, 1946-73
Lick Creek near Holland Mill (d)	03466825	USGS	53.0	1994-95
Lick Creek at Mohawk (d)	03467000	USGS	220	1946-71
Nolichucky River near Morristown (d)	03467500	USGS	1,679	1921-57
Long Creek near White Pine (d)	03468050	TVA	30.8	1964-81
French Broad River below Douglas Dam (d)	03469000	USGS	4,543	1919-74
Millican Creek near Douglas Dam (d)	03469010	TVA	4.22	1942-62
Roaring Fork Creek at Hwy 441, at Gatlinburg (d)	03469282	TVA	7.23	1977-82
Dudley Creek at Gatlinburg (d)	03469390	TVA	8.84	1977-82



## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only);

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Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Period of record
West Prong Little Pigeon River near Pigeon Forge (d)	03469500	USGS	76.2	1946-49
		TVA		1967-69
Little Pigeon River at Sevierville (d)	03470000	USGS	353	1921-82
South Fork Holston River below South Holston Dam (d)	03476500	USGS	703	1951-74
South Fork Holston River at Bluff City (d)	03477000	USGS	813	1900-53
Beaver Creek at Bristol (d)	03478500	USGS	44.8	1932-34
Beaver Creek at Buffalo School, near Bluff City (d)	03478620	TVA	108	1934-38
Watauga River at North Carolina-Tennessee State Line (d)	03479500	USGS	152	1943-55
Watauga River at Stump Knob (d)	03480000	USGS	171	1928-31, 1934-45
Roan Creek near Neva (d)	03482000	USGS	102	1942-55
Roan Creek at Butler (d)	03482500	USGS	166	1901-02, 1934-48
Watauga River at Butler (d)	03483000	USGS	427	1900-02, 1921-48
Watauga River below Wilbur Dam (d)	03484000	USGS	471	1903-09, 1948-82
Watauga River at Siam (d)	03484110	TVA	480	1946
Doe River at Old Hopson School (d)	03484490	TVA	59.3	1967-69
Doe River at Blevins (d)	03484500	USGS	60.8	1912-15
Laurel Fork above Braemar (d)	03484900	TVA	23.0	1945-51
Laurel Fork above Hampton (d)	03484910	TVA	25.3	1948-52
Doe River at Elizabethton (d)	03485500	USGS	137	1912-16, 1921-82
Watauga River at Elizabethton (d)	03486000	USGS	692	1926-49, 1953-82
Buffalo Creek at Milligan College (d)	03486200	TVA	28.1	1965-81
Brush Creek at Johnson City (Tennessee Street) (d)	03486490	TVA	6.78	1969-73
Brush Creek at Johnson City (Elm Street) (d)	03486495	TVA	9.58	1969-72
Brush Creek at Johnson City (d)	03486500	USGS	10.3	1932-34
Fall Creek near Fort Patrick Henry Dam (d)	03486900	TVA	13.1	1953-56
South Fork Holston River at Kingsport (d)	03487500	USGS	1,935	1926-77
South Fork Holston River at Kingsport (auxiliary channel) (d)	03487501	USGS	1.0	1953-77
Reedy Creek at Orebank (d)	03487550*	USGS	36.3	1963-89
South Fork Holston River near Ridgefields Bridge, at Kingsport (d)	03487640	TVA	2,047	1968-69
Holston River at Surgoinville (d)	03490500	USGS	2,874	1941-88
Beech Creek at Kepler (d)	03491300	USGS	47.0	1965-87
Holston River near Rogersville (d)	03491500	USGS	3,035	1901-42
Poor Valley Creek near Mooresburg (near Spruce Pine School) (d)	03491800	USGS	32.3	1958-61
Poor Valley Creek near Mooresburg (d)	03491820	TVA	43.3	1959-60
Holston River near Morristown (d)	03492000	USGS	3,244	1937-42
Mossy Spring near Jefferson City (d)	03492500	USGS		1950-59
Mossy Creek at Jefferson City (d)	03493000	USGS	30.8	1932-34
Holston River near Jefferson City (d)	03494000	USGS	3,429	1937-74
Mill Spring near Jefferson City (d)	03494500	TVA		1941-48
		USGS		1951-59
Holston River near Knoxville (d)	03495500	USGS	3,747	1930-76, 1978-93
First Creek at Mineral Springs Avenue, at Knoxville (d)	03496000	USGS	15.7	1945-63
First Creek above Powers Avenue, at Knoxville (d)	03496200	USGS	17.2	1964-70
First Creek at Fifth Avenue, at Knoxville (d)	03496500	USGS	21.1	1932-34, 1945-59
Tennessee River at Knoxville (Gay Street Bridge) (d)	03497000	USGS	8,934	1900-82
Fourth Creek at Knoxville (d)	03497110	TVA	9.65	1942-43

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only);

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Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Period of record
Little River at Walland (d)	03497500	USGS	175	1925-31
Little River near Walland (d)	03498000	USGS	192	1931-52
Pistol Creek at Maryville (d)	03499000	USGS	13.5	1932-33
Little River below Rockford Dam, at Rockford (d)	03499100	TVA	346	1940-44
Little River near Rockford (d)	03499110	TVA	352	1936-37
Ten Mile Creek near Ebenezer (d)	03499200	TVA	13.2	1941-45
Muddy Creek near Fort Loudon Dam (d)	03499600	TVA	10.7	1941-59
Little Tennessee River at Calderwood (d)	03518000	USGS	1,862	1912-19, 1921-57
Little Tennessee River below Chilhowee Dam (d)	03518300	USGS	1,987	1958-79
North Fork Citico Creek near Tellico Plains (d)	03518400	TVA	7.04	1960-71
Tellico River at Tellico Plains (d)	03518500	USGS	118	1925-82
Little Tennessee River at McGhee (d)	03519500	USGS	2,443	1905-69
Baker Creek near Greenback (d)	03519640*	USGS	16.0	1966-75
Tennessee River at Loudon (d)	03520000	USGS	12,220	1923-55
Sweetwater Creek below Sweetwater (d)	03520045	TVA	26.4	1970-81
Sweetwater Creek near Sweetwater (d)	03520050	TVA	28.2	1964-70
Big Sycamore Creek near Sneedville (d)	03528100	TVA	5.49	1935-45
Big Barren Creek near New Tazewell (d)	03528300	TVA	22.5	1935-45
White Creek near Sharps Chapel (d)	03528400	TVA	2.68	1935-72
Powell River near Arthur (d)	03532000	USGS	685	1920-82
Davis Creek near Speedwell (d)	03532100	TVA	31.2	1936-37
Big Creek near La Follette (d)	03532220	TVA	26.2	1936-38
Clinch River below Norris Dam (d)	03533000	USGS	2,913	1904-74
Clear Creek near Norris (d)	03533100	TVA	2.83	1934-38
Coal Creek at Lake City (d)	03534000*	USGS	24.5	1932-34
Buffalo Creek at Norris (d)	03534500	USGS	9.92	1947-51
Bullrun Creek near Halls Crossroads (d)	03535000	USGS	68.5	1957-86
Scarboro Creek Tributary near Haw Ridge near Oak Ridge (d)	03535102	USGS	0.41	1989-91
Scarboro Creek Tributary near Oak Ridge (d)	03535103	USGS	0.41	1989-91
Whiteoak Creek near Melton Hill (d)	03536320	USGS	1.31	1987-95
Whiteoak Creek near Wheat (d)	03536380	USGS	2.10	1986-95
Northwest Tributary near Oak Ridge (d)	03536440	USGS	0.67	1987-95
First Creek near Oak Ridge (d)	03536450	USGS	0.33	1987-96
Whiteoak Creek at ORNL, near Oak Ridge (d)	03536500	USGS	2.08	1950-55
Whiteoak Creek below Melton Valley Drive near Oak Ridge (d)	03536550	USGS	3.28	1987-96
Whiteoak Creek below ORNL, near Oak Ridge (d)	03537000	USGS	3.62	1950-53, 1955-64
Melton Branch tributary (East Seven) near Oak Ridge (d)	03537050	USGS	.24	1987-91 1992-93
Melton Branch near Melton Hill, near Oak Ridge (d)	03537100	USGS	0.52	1985-95
Melton Branch tributary (Center Seven) near Oak Ridge (d)	03537200	USGS	.07	1987-91 1992-93
Melton Branch tributary (West Seven) near Oak Ridge (d)	03537300	USGS	.15	1987-89 1992-93
Melton Branch near Oak Ridge (d)	03537500	USGS	1.48	1955-64
Whiteoak Creek at Whiteoak Dam, near Oak Ridge (d)	03538000	USGS	6.01	1953-55, 1960-64
Clinch River near Oak Ridge (d)	03538150	USGS	3,385	1937-64, 1968
Poplar Creek near Oak Ridge (d)	03538225	USGS	82.5	1960-89
East Fork Poplar Creek at Y-12 at Oak Ridge (d)	03538231	USGS	0.81	1992-96
East Fork Poplar Creek near Oak Ridge (d)	03538250	USGS	19.5	1960-88
Bear Creek at Bear Creek Road near Oak Ridge (d)	03538256	USGS	0.42	1993-96

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only);

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Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Period of record
Bear Creek at County Line near Oak Ridge (d)	03538260	USGS	1.57	1993-96
Bear Creek tributary above Bear Creek Road near Wheat (d)	035382672	USGS	.30	1986-91
Bear Creek near Wheat (d)	035382673	USGS	3.20	1986-91
Bear Creek tributary near Wheat (d)	035382677	USGS	.14	1986-89
				1992-93
Bear Creek tributary at Hwy 95 near Wheat (d)	03538272	USGS	.14	1986-89
Bear Creek at Pine Ridge near Wheat (d)	03538273	USGS	5.0	1986-91
Bear Creek near Oak Ridge (d)	03538275	USGS	7.15	1960-64
Emory River near Wartburg (d)	03538500	USGS	83.2	1934-57,
				1966-68
Obed River at Crossville (d)	03538600	USGS	12.0	1950-51,
				1955-85,
				1991-95
Daddys Creek near Grassy Cove (d)	03539000	USGS	51.2	1925-30
Daddys Creek near Crab Orchard (d)	03539500	USGS	93.5	1931-58
Daddys Creek near Hebbertsburg (d)	03539600	USGS	139	1957-68
Clear Creek near Lancing (d)	03539750	USGS	153	1966-68
Obed River near Lancing (d)	03539800	USGS	518	1956-68,
				1973-88
Crooked Fork near Wartburg (d)	03539860	USGS	50.3	1966-68
Emory River at Deermont (d)	03540000	USGS	704	1920-28
Crab Orchard Creek near Deermont (d)	03540100	USGS	33.7	1966-68
Bitter Creek near Oakdale (d)	03541300	USGS	12.6	1967-75
Kingston Creek at Kingston (d)	03541400	TVA	.74	1940-41
Whites Creek near Glen Alice (d)	03541500	USGS	108	1934-55
Whites Creek at Glen Alice (d)	03542000	USGS	120	1931-34
Piney River at Spring City (d)	03542500	USGS	95.9	1927-31
Sewee Creek near Decatur (d)	03543500	USGS	117	1934-94
Tennessee River at Breedenton (d)	03544000	USGS	17,440	1934-40
Richland Creek near Dayton (d)	03544500	USGS	50.2	1927-31,
				1934-55,
				1979-82
Turtletown Creek at Turtletown (d)	03556000	USGS	26.9	1934-71
Hiwassee River near McFarland (d)	03556500	USGS	1,136	1943-81
Hiwassee River near Reliance (d)	03557000	USGS	1,233	1900-14,
				1918-48
Ocoee River at Copperhill (d)	03559500	USGS	352	1903-14,
				1943-70
North Potato Creek tributary, Copper Basin area 6, near Ducktown (d)	03560700	TVA	.01	1940-51
Burra-burra Creek tributary, Copper Basin area 5, near Ducktown (d)	03560800	TVA	.02	1940-51
North Potato Creek near Ducktown (d)	03561000	USGS	13.0	1934-70
North Potato Creek tributary No. 2, Copper Basin area 1-W, near Ducktown (d)	03561200	TVA	.01	1942-52
North Potato Creek tributary No. 3, Copper Basin area 1-E, near Ducktown (d)	03561300	TVA	.01	1942-52
Ocoee River at McHarg (d)	03561500	USGS	447	1917-43
Walkertown Branch tributary, Copper Basin area 4, near Ducktown (d)	03561700	TVA	.01	1940-45
Ocoee River tributary, Copper Basin area 3, near Ducktown (d)	03561800	TVA	.01	1940-51
Brush Creek near Ducktown (d)	03562000	USGS	14.4	1934-42
Hiwassee River above Charleston (d)	03565000	USGS	2,001	1954-76
Chestuee Creek above Englewood (d)	03565040	TVA	14.8	1944-57

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only);

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Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Period of record
Little Chestuee Creek below Wilson Station (d)	03565080	TVA	8.54	1947-57
Chestuee Creek at Zion Hill (d)	03565120	TVA	37.8	1944-62
Middle Creek below Hwy 39 near Englewood (d)	03565160	TVA	32.7	1944-62
Chestuee Creek near Athens (d)	03565200	TVA	77.9	1944-54
Chestuee Creek at Dentville (d)	03565250	USGS	114	1944-62
South Chestuee Creek near Benton (d)	03565300	USGS	31.8	1957-86
Oostanaula Creek near Sanford (d)	03565500	USGS	57.0	1954-89
Oostanaula Creek near Calhoun (d)	03565700	TVA	67.0	1940-44
Wolftever Creek near Ooltewah (d)	03566420*	USGS	18.8	1964-89
Long Savannah Creek near Snow Hill (d)	03566450	TVA	28.3	1939-44
North Chickamauga Creek at Upper Mill, near Hixson (d)	03566600	TVA	99.5	1937-43
North Chickamauga Creek near Hixson (d)	03566630	TVA	114	1937-43
South Chickamauga Creek near Chickamauga (d)	03567500	TVA	428	1928-78
				1980-94
South Chickamauga Creek near McCarty (d)	03567600	TVA	458	1937-45
Sequatchie River near College Station (d)	03570650	USGS	154	1966-68
Sequatchie River near Whitwell (d)	03571000	TVA	402	1920-94
Little Sequatchie River at Sequatchie (d)	03571500*	USGS	116	1932-34
Tennessee River at South Pittsburg (d)	03571850	USGS	22,640	1930-87
Elk River near Pelham (d)	03578000	USGS	65.6	1952-88
Bradley Creek Tributary at AEDC near Manchedster	03578455	USGS		1993-96
Bradley Creek near Prairie Plains (d)	03578500	USGS	41.3	1952-60
Brumalow Creek at AEDC near Manchester (d)	03578600	USGS		1993-96
Rowland Creek at AEDC near Manchester (d)	03578970	USGS		1994-96
Elk River near Estill Springs (d)	03579100	USGS	275	1921-81
Rock Creek at Tullahoma (d)	03579620	USGS	12.3	1991-96
Boiling Fork Creek south of Cowan (d)	03580000	USGS	20.2	1932
Boiling Fork Creek above Winchester (d)	03580300	USGS	55.9	1962-70
Boiling Fork Creek at Winchester (d)	03580500	USGS	77.1	1932-34
Elk River below Tims Ford Dam (d)	03580750	USGS	534	1966-76
Jack Daniel Spring at Lynchburg (d)	03580990	USGS		1970-78
East Fork Mulberry Creek below Jack Daniel Distillery at Lynchburg (d)	03580995	USGS	23.4	1987-94
East Fork Mulberry Creek at Lynchburg (d)	03581000	USGS	23.1	1932
East Fork Mulberry Creek near Lynchburg (d)	03581100	TVA	29.5	1967-69
East Fork Mulberry Creek near Mulberry (d)	03581200	TVA	49.4	1967-69
West Fork Mulberry Creek near Booneville at Mt. Herman (d)	03581400	TVA	17.4	1967-69
West Fork Mulberry Creek at Mulberry (d)	03581500	USGS	41.2	1954-62, 1966-68
Elk River above Fayetteville (d)	03582000	USGS	827	1934-82
Union Branch below Belleville (d)	03582140	USGS	2.37	1977
Elk River near Fayetteville (d)	03582500	USGS	897	1926-34
Bradshaw Creek at Frankewing (d)	03583000	USGS	36.5	1955-61, 1966-68
Richland Creek near Cornersville (d)	03583300*	USGS	47.5	1961-68
Factory Creek (head of Big Creek) near Campbellsville (d)	03583330	USGS	38.2	1966-68
Yokley Creek near Campbellsville (d)	03583360	USGS	20.2	1966-68
Weakley Creek near Bodenham (d)	03583500	USGS	24.4	1955-61, 1966-68
Richland Creek near Pulaski (d)	03584000	USGS	366	1934-75
Elk River at Prospect (d)	03584600	USGS	1805	1904-08, 1919-94



## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only);

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Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Period of record
Shoal Creek at Lawrenceburg (d)	03588000	USGS	55.4	1932-34 1967-91
Chisholm Creek at Westpoint (d)	03588400	USGS	43.0	1962-88
Shoal Creek at Iron City (d)	03588500	USGS	348	1925-94
Snake Creek near Adamsville (d)	03593300	TVA	49.4	1940-59
Holland Creek near Lowryville (d)	03593700	TVA	14.9	1965-78
Horse Creek near Savannah (d)	03594000	USGS	114	1929-34
Turkey Creek near Savannah (d)	03594040	TVA	53.7	1940-59
White Oak Creek near Milledgeville (d)	03594058	TVA	46.1	1940-59
White Oak Creek at Milledgeville (d)	03594110	TVA	49.2	1961-65
Middleton Creek near Milledgeville (d)	03594120	TVA	45.5	1940-59
Indian Creek near Cerro Gordo (d)	03594160	TVA	201	1940-59
Banjo Branch near Waynesboro (d)	03594164	USGS	2.14	1988-89
Beech River near Lexington (d)	03594415	TVA	15.9	1953-63
Wolf Creek at Graper Springs (d)	03594420	TVA	11.7	1953-55
Pine Tree Branch near Lexington (d)	03594425	TVA	.14	1941-78
Harmon Creek near Lexington (d)	03594430	TVA	6.87	1953-73
Piney Creek at Hwy 104 near Lexington (d)	03594435	TVA	19.2	1953-55, 1957-73
Cane Creek near Shady Hill (d)	03594437	TVA	20.7	1966-73
Haley Creek near Chesterfield (d)	03594441	TVA	8.30	1953-55
Beech River near Chesterfield (old channel before channelization) (d)	03594445	TVA	11.5	1940-54, 1960-65
Browns Creek near Chesterfield (d)	03594450	TVA	202	1953-63
Cane Creek near Shady Hill (d)	03594455	TVA	16.8	1953-64
Cane Creek near Chesterfield (old channel before channelization) (d)	03594460	TVA	222	1940-54
Beech River near Darden (old channel before channelization) (d)	03594465	TVA	165	1954-60
Flat Creek near Middleburg (d)	03594470	TVA	13.8	1953-55
Big Creek near Darden (d)	03594475	TVA	10.6	1953-55, 1966-73
Turkey Creek near Decaturville (d)	03594480	TVA	8.40	1953-63
Turkey Creek at Middleburg Road, near Decaturville (d)	03594482	TVA	11.5	1964-73
Rushing Creek near Decaturville (d)	03594485	TVA	17.0	1953-55
Tennessee River at Perryville (d)	03594500	USGS	34,550	1931-32
Duck River near Manchester (d)	03595000	USGS	55.2	1932-34
Little Duck River at Manchester (d)	03595500	USGS	40.4	1932-34
Duck River below Manchester (d)	03596000	USGS	107	1934-88
Duck River at Normandy (d)	03596500	USGS	208	1920-31, 1972-75
Garrison Fork at Fairfield (d)	03597000	USGS	66.3	1953-58, 1966-68
Wartrace Creek at Bell Buckle (d)	03597500	USGS	16.3	1953-61, 1966-75
Wartrace Creek at Wartrace (d)	03597600	USGS	36.4	1966-68
Fall Creek near Deason (d)	03598173	USGS	16.4	1994-95
Fall Creek near Halls Mill (d)	03598179	USGS	39.0	1994-95
North Fork Creek near Poplins Crossroad (d)	03598250	USGS	71.9	1994-95
Big Rock Creek at Lewisburg (d)	03599000	USGS	24.9	1953-61, 1966-68
Fountain Creek near Culleoka (d)	03599430	USGS	26.9	1966-68
Fountain Creek near Fountain Heights (d)	03599450	USGS	74.0	1966-68
Rutherford Creek near Carters Creek (d)	03600000	USGS	68.8	1953-58
Rutherford Creek (No. 4) near Columbia (d)	03600100	TVA	112	1948-53

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only);

Agency designations: USGS, U.S. Geological Survey; TVA, Tennessee Valley Authority]

Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Period of record
Rutherford Creek (No. 3) near Columbia (d)	03600200	TVA	116	1948-49
Little Bigby Creek at Experiment Lane at Columbia (d)	03600258	USGS	42.6	1990-92
Big Bigby Creek at Sandy Hook (d)	03600500	USGS	17.5	1953-87, 1988-89
Big Bigby Creek near Mount Pleasant (d)	03601000	USGS	25.8	1953-57
Big Bigby Creek at Cross Bridges (d)	03601500	USGS	112	1938-39
Duck River at Centerville (d)	03602000	USGS	2,048	1919-55
Piney River at Vernon (d)	03602500	USGS	193	1925-93
Duck River above Hurricane Mills (d)	03603000	USGS	2,557	1925-94
Hurricane Creek at Hurricane Mills (d)	03603500	USGS	75.1	1932-33
Coon Creek near Hohenwald (d)	03604100	USGS	10.0	1967-74
Buffalo River below Lobelville (d)	03604400	USGS	702	1927-89, 1989-94
Buffalo River near Lobelville (d)	03604500	USGS	707	1987-89
Blue Creek at State Hwy 13 near Waverly (d)	03604600	TVA	24.8	1964-71
Birdsong Creek near Holladay (d)	03604800	TVA	44.9	1940-68
Trace Creek at Waverly (d)	03605500	USGS	20.1	1932-33
Cotton Creek near Camden (d)	03606400	TVA	.43	1941-45
Big Sandy River at Big Sandy (d)	03607000	USGS	379	1935-44
Clifty Creek at Clifty Creek Road near Paris (d)	03607198	USGS	8.06	1994-95
Holly Fork Creek at Nobles (d)	03607225	USGS	26.8	1994-95
Beaverdam Creek at Sulphur Well Road near Nobles (d)	03607232	USGS	6.69	1994-95
Tennessee River near Buchanan (d)	03607500	USGS	39,730	1930-43
Crooked Creek at Highway 22 near Huntingdon (d)	07024200	USGS	89.8	1994-95
Beaver Creek at Huntingdon (d)	07024300*	USGS	55.5	1946, 1948, 1952-54, 1958-88
Beaver Creek at Hwy 22 Bypass near Huntingdon (d)	07024305	USGS	58.6	1994-96
South Fork Obion River near Greenfield (d)	07024500*	USGS	383	1929-89
Rutherford Fork Obion River near Bradford (d)	07025000	USGS	201	1929-57
North Fork Obion River near Union City (d)	07025500	USGS	480	1929-71, 1989-93
Obion River at U.S. Highway 51 near Obion (d)	07026040	USGS	1,875	1929-1958, 1966-1995
North Reelfoot Creek at State Hwy 22 near Clayton (d)	07026370	USGS	56.3	1980-83, 1984-89
South Reelfoot Creek near Clayton (d)	07026400	USGS	36.6	1984-89
Reelfoot Creek near Samburg (d)	07026500	USGS	110	1951-73
Reelfoot Lake near Phillippy (e)	07026690	USGS	240	1984-88
Indian Creek near Samburg (d)	07026795	USGS	8.01	1982-86
South Fork Forked Deer River at Jackson (d)	07027500	USGS	495	1929-73, 1988-91
South Fork Forked Deer River at Chestnut Bluff (d)	07028000	USGS	1,003	1929-57
North Fork Forked Deer River at Trenton (d)	07028500	USGS	73.5	1950-71
Middle Fork Forked Deer River near Alamo (d)	07029000	USGS	369	1929-73
Hatchie River near Stanton (d)	07030000	USGS	1,975	1929-58
Cane Creek at Three Point (d)	07030137	USGS	79.8	1985-87
Kelly Branch near Clopton (d)	07030245	USGS	7.79	1975-76
Beaver Creek near Arlington (d)	07030250	USGS	148	1994-95
Loosahatchie River tributary at New Allen Road at Memphis (d)	07030295	USGS	1.26	1977-83
Wolf River at Rossville (d)	07030500	USGS	503	1929-72
Marys Creek at Pisgah Road, near Fisherville (d)	07031500	USGS	13.6	1955-57
Fletcher Creek near Cordova (d)	07031680	USGS	1.45	1974-83
Fletcher Creek at Whitten Road at Memphis (d)	07031683	USGS	21.4	1978-82

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

[Letters after station name designate type of data collected: (d) discharge, (e) elevation (stage only);

Agency designations: USGS, U.S. Geological Survey; TVA, Tennessee Valley Authority]

Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Period of record
Unnamed tributary at Charles Bryan Road, near Cordova (d)	07031685	USGS	3.18	1975-77
Lick Creek at Dickinson Street, at Memphis (d)	07031777	USGS	2.96	1975-83
Nonconnah Creek near Germantown (d)	07032200	USGS	68.2	1969-1985 1985-1995
Johns Creek tributary at Holmes Road, near Memphis (d)	07032222	USGS	5.83	1975-85
Johns Creek at Raines Road, at Memphis (d)	07032224	USGS	19.4	1975-82, 1985
Black Bayou at Southern Avenue, at Memphis (d)	07032241	USGS	.59	1975-83
Cane Creek at East Person Avenue, at Memphis (d)	07032248	USGS	4.98	1975-85
Cypress Creek at Neely Road, at Memphis (d)	07032260	USGS	3.18	1975-85

## DISCONTINUED SURFACE-WATER QUALITY STATIONS

The following stations were discontinued as continuous-record surface-water-quality stations prior to the 1991 water year. Water-quality data (daily or periodic samples with collection frequency not less than quarterly) were collected and published for the period of record shown for each station. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Chief at the address given on the back of the title page of this report.

[Agency designations: USGS, U.S. Geological Survey; TVA, Tennessee Valley Authority.

Type of record: (B) biological, (C) chemical, (S) sediment, (T) temperature.]

Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Type of record	Period of record (water years)
Crabapple Branch near La Follette	03403718	USGS	1.07	C,T	1981-84
Indian Fork above Braytown	03407804	USGS	4.32	C	1975-81
New River at Stainville	03407850	USGS	66.0	C,S	1975-77, 1979-81
Green Branch near Hembree	03407874	USGS	1.38	C,S	1975-81
Smoky Creek above Hembree (361240084245800)	034078745	USGS	8.07	S	1982-83
Bills Branch near Hembree	03407875	USGS	.67	C,S	1975-83
		USGS		C,S,T	1980-83
Shack Creek at Hembree (361341084253900)	034078755	USGS	5.08	C,S,T	1982-84
Smoky Creek at Hembree	03407876	USGS	17.2	S	1978-84
		USGS		C,T	1980-84
Bowling Branch above Smoky Junction	03407877	USGS	2.19	C,S	1975-83
Smoky Creek at Smoky Junction	03407879	USGS	32.8	C,S	1975-77, 1979-81
Anderson Branch near Montgomery	03407881	USGS	.69	C	1975-81
Lowe Branch near Montgomery	03407882	USGS	.92	C	1975-81
New River at Cordell	03407908	USGS	198	C,S	1976-77, 1979-82
New River at New River	03408500	USGS	382	C,T	1977-86
		USGS		C,S	1965-67, 1975-77, 1979-81
Clear Fork near Robbins	03409500	USGS	272	T	1982-86
		USGS		C	1982, 1984-86
		USGS		C,S	1964-65, 1976-77, 1979-82, 1984
South Fork Cumberland River at Leatherwood Ford	03410210	USGS	806	C,S,T	1986
		USGS		C,S	1979-80, 1984-85
Cumberland River at Celina	03417500	USGS	7,307	C,T	1991-97
Roaring River near Hilham	03418000	USGS	78.7	T	1969-71
Roaring River above Gainesboro	03418070	USGS	210	C,S	1980-83
Cumberland River below Cordell Hull Dam	03418420	USGS	8,095	CT	1980-97
Collins River near McMinnville	03421000	USGS	640	C,S	1964-67, 1979-82
Cumberland River at Carthage	03425000	USGS	10,690	C,T	1975-81
East Fork Stones River near Lascassas	03427500	USGS	262	C,T	1975-1990
West Fork Stones River near Murfreesboro	03428000	USGS	128	C	1964-68
West Fork Stones River at Manson Pike, at Murfreesboro	03428070	USGS	165	C,T	1973-82
West Fork Stones River near Smyrna	03428500	USGS	237	T	1974-1990
Richland Creek at Charlotte Avenue, at Nashville	03431700	USGS	24.3	C,S	1901, 1979-83
Harpeth River near Kingston Springs	03434500	USGS	681	C,S	1979-83
Cumberland River below Cheatham Dam	03435000	USGS	14,163	C,T	1993-97
Sulphur Fork Red River near Greenbrier	03435637	USGS	34.9	T	1976-78
Sulphur Fork Red River above Beaverdam Creek, near Springfield	03435700	USGS	49.1	T	1975-77
Sulphur Fork Red River above Springfield	03435770	USGS	65.6	C,S	1976-83
Sulphur Fork Red River near Adams	03436000	USGS	186	C,S	1964, 1979-83
Red River at Port Royal	03436100	USGS	935	C,S	1979-83
Boiling Springs at Ft. Campbell, KY-TN	03436421	USGS		C,T	1994-96
Yellow Creek near Shiloh	03436700	USGS	124	C,S	1964-65, 1979-81
French Broad River below Hot Springs, NC	03454757	USGS	1,712	C	1970-73



## WATER RESOURCES DATA - TENNESSEE, 2001

## DISCONTINUED SURFACE-WATER QUALITY STATIONS--Continued

[Agency designations: USGS, U.S. Geological Survey; TVA, Tennessee Valley Authority.

Type of record: (B) biological, (C) chemical, (S) sediment, (T) temperature.]

Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Period of record
French Broad River near Newport	03455000	TVA	1,858	C 1946-47, 1960-61, 1969-70, 1974-75, 1979-80
Muddy Fork near Leesburg	03465830	USGS	13.5	C,S,T 1993-95
Nolichucky River at Embreeville	03465500	USGS	805	C,S 1979-82
Jockey Creek near Mount Bethel Church near Limestone	03466098	USGS	18.5	C,S,T 1993-95
Nolichucky River below Nolichucky Dam	03466500	TVA	1,184	C 1974-79
		TVA		T 1962
Lick Creek near Holland Mill	03466825	USGS	53.0	C,S,T 1993-95
French Broad River at Douglas Dam (tailwater)	03468510	TVA	4,541	C 1975-80
Little Pigeon River at Sevierville	03470000	TVA	353	C 1967-68, 1970
		TVA		T 1969-74
		USGS		C,S 1979-82
French Broad River near Knoxville	03470500	USGS	5,101	C,T 1975-82
		USGS		B,C,S,T 1975-86
South Fork Holston River at South Holston Dam	03476010	TVA	703	C 1975-80
Watauga River at Stump Knob	03480000	TVA	171	T 1962
Elk River at Elk Mills	03481450	TVA	74.0	C 1975-76
Roan Creek near Doevoile	03482100	TVA	110	T 1962, 1971-74
		TVA		C 1975-76
Watauga River below Watauga Dam	03483950	TVA	468	C 1973, 1975-80
Doe River at Hampton	03484800	TVA	100	T 1968-73
Doe River at Elizabethton	03485500	TVA	137	C 1967-68, 1971
		TVA		T 1954-63
		USGS		C,S 1979-82
South Fork Holston River at Boone Dam (tailwater)	03486810	TVA	1,840	C 1975-78
South Fork Holston River at Ft. Patrick Henry Dam	03487010	TVA	1,903	C 1975-80
Reedy Creek at Orebank	03487550	TVA	36.3	T 1964-66
		TVA		C 1964-67
		USGS		C,S 1979-82
Holston River near Church Hill	03490350	TVA	2,819	C 1974-78
Holston River at Surgoinville	03490500	USGS	2,874	T 1975-82
		TVA		C 1974-80
Big Creek near Rogersville	03491000	USGS	47.3	T 1972-75, 1977-79
Beech Creek at Kepler	03491300	TVA	47.0	T 1966-68
Holston River near Rogersville	03491500	TVA	3,035	T 1966-75
Holston River at Cherokee Dam (tailwater)	03493510	TVA	3,428	C 1975-80
Holston River near Knoxville	03495500	USGS	3,747	C,B,S 1977-93
First Creek above Powers Avenue, at Knoxville	03496200	USGS	17.2	T 1969-71
Tennessee River below Knoxville	03497100	TVA	8,963	T 1970-80
Little River above Townsend	03497300	USGS	106	T 1964-82
		USGS		C 1982
Little River near Maryville	03498500	TVA	269	C 1967-68
		USGS		C,S 1979-82
Tennessee River at Fort Loudon Dam (tailwater)	03499510	TVA	9,550	C 1975-80
Little Tennessee River at Calderwood Dam	03518210	TVA	1,977	C 1977-80
Little Tennessee River below Chilhowee Dam	03518300	TVA	1,987	T 1964-78
Tellico River at Tellico Plains	03518500	TVA	118	T 1964-78
		TVA		C 1969-70, 1973-76
		USGS		C,S 1979-82
Little Tennessee River at McGhee	03519500	TVA	2,443	T 1963
Little Tennessee River near Centersville	03519740	TVA		T 1976-79
Clinch River above Tazewell	03528000	TVA	1,474	T 1962-66, 1971-75
		TVA		C 1971-80

## DISCONTINUED SURFACE-WATER QUALITY STATIONS--Continued

[Agency designations: USGS, U.S. Geological Survey; TVA, Tennessee Valley Authority.

Type of record: (B) biological, (C) chemical, (S) sediment, (T) temperature.]

Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Type of record	Period of record (water years)
Powell River near Arthur	03532000	TVA	685	C,S	1965, 1969-72, 1974-82
		TVA		T	1963-66, 1971-75
Ollis Creek at Ivydell	03532190	TVA	13.3	C	1974-78
Clinch River below Norris Dam	03533000	TVA	2,913	C	1968-70, 1972-80
Clinch River at Coal Creek	03533500	TVA	2,921	T	1976-79
Clinch River near Clinton	03534100	TVA	2,980	C	1971-74, 1977
Clinch River at Edgemoor	03534900	TVA	3,089	C	1969-78
Bullrun Creek near Halls Crossroads	03535000	USGS	68.5	T	1967-74
Clinch River near Eaton Crossroads	03535915	TVA	3,346	T	1963-79
Poplar Creek near Oak Ridge	03538225	USGS	82.5	C,S	1961-65, 1979-81
		USGS		T	1962-65
East Fork Poplar Creek near Oak Ridge	03538250	USGS	19.5	T	1962-68
Bear Creek near Oak Ridge	03538275	USGS	7.15	T	1962-63
Emory River near Wartburg	03538500	TVA	83.2	C	1965-68, 1975-76
Obed River near Lancing	03539800	TVA	518	T	1965-66
		TVA		C	1965-68
Crooked Fork near Wartburg	03539860	TVA	50.3	C	1965-68
		USGS		C,S	1979-81
Crab Orchard Creek near Deermont	03540100	TVA	33.7	C	1966-68
		TVA		T	1967-68
		USGS		C,S	1979-81
Emory River at Oakdale	03540500	TVA	764	C,S	1965-67, 1974-81
Tennessee River at Watts Bar Dam (tailwater)	03543005	USGS	17,310	B,C,S,T	1975-86
		USGS		T,C	1976-81
Richland Creek near Dayton	03544500	TVA	50.2	C	1966-67
		USGS		C,S	1979-82
Hiwassee River near Wetmore	03557050	TVA	1,233	C	1973-74, 1976
Hiwassee River at Patty	03557400	TVA	1,358	T	1976-78
Hiwassee River near Benton	03557405	TVA	1,362	C	1978-80
Ocoee River at Parksville	03564500	TVA	595	C	1971-72, 1976-80
Oostanaula Creek near Sweetwater	03565428	USGS		C,S,T	1993-95
Oostanaula Creek below Johnson Branch near Athens	03565430	USGS		C,S,T	1993-95
Oostanaula Creek near Sanford	03565500	USGS	57.0	C,S	1979-82
Tennessee River at Sequoyah Nuclear Plant	03566404	TVA	20,630	C	1975-78
Tennessee River near Harrison Bay State Park	03566405	TVA	20,650	C	1969-73
Tennessee River at Chickamauga Dam (tailwater)	03566510	TVA	20,790	C	1975-80
Tennessee River at Nickajack Dam (tailwater gage)	03570525	TVA	21,849	C	1975-78
Sequatchie River near Dunlap	03570835	TVA	292	C	1975-78
Sequatchie River near Whitwell	03571000	TVA	402	T	1962-71
		TVA		C	1965, 1970, 1974-75
		USGS		C,S	1979-82
Sequatchie River at Whitwell Waterworks near Whitwell	03571200	TVA	410	C	1975-79
Tennessee River at South Pittsburg	03571850	USGS	22,640	T	1975-82
		USGS		C	1975-79, 1981
		USGS		B,C,S,T	1974-86
Bradley Creek Tributary at AEDC near Manchester	03578455	USGS		T	1993-95
Brumalow Creek at AEDC near Manchester	03578600	USGS		T	1993-95
Rowland Creek at AEDC near Manchester	03578970	USGS		T	1993-95
Elk River near Estill Springs	03579100	TVA	275	C	1974-78
		TVA		T	1971-77

## WATER RESOURCES DATA - TENNESSEE, 2001

## DISCONTINUED SURFACE-WATER QUALITY STATIONS--Continued

[Agency designations: USGS, U.S. Geological Survey; TVA, Tennessee Valley Authority.  
Type of record: (B) biological, (C) chemical, (S) sediment, (T) temperature.]

Station name	Station number	Agency	Drainage area (mi <sup>2</sup> )	Type of record	Period of record (water years)
Boiling Fork Creek near Decherd	03580110	TVA	37.7	T	1975-77
Elk River below Tims Ford Dam	03580750	TVA	534	T	1971-79
		TVA		C	1966-67, 1973-75-80
Elk River above Fayetteville	03582000	TVA	827	C	1974, 1977-80
		USGS		T	1961-64
Elk River at Fayetteville	03582400	TVA	895	T	1976-78
Cane Creek near Fayetteville	03582600	TVA	106	T	1969-73
Richland Creek near Pulaski	03584000	TVA	366	T	1965-73
Elk River near Prospect	03584500	TVA	1,784	T	1961-64
Shoal Creek at Iron City	03588500	TVA	348	C,S	1974-80
		USGS		C,S	1980-83
Tennessee River at Pickwick Landing Dam	03593005	USGS	32,820	C,T	1976-82
Beech River near Chesterfield	03594439	TVA	121	C	1969-71, 1976
Duck River below Manchester	03596000	TVA	107	C	1967-68, 1970-71
		TVA		T	1976-80
		USGS		C,S	1975, 1979-83
Duck River at Normandy	03596500	TVA	208	T	1969-75
Duck River at Shelbyville Waterworks	03597850	TVA	425	C	1975-80
Duck River near Shelbyville	03598000	TVA	481	T	1961-64, 1976-78
Duck River near Columbia	03599460	TVA	1,176	T	1974-82
Duck River at Columbia Waterworks	03599482	TVA	1,195	C	1975-80
Piney River at Vernon	03602500	TVA	193	T	1964-67
Duck River above Hurricane Mills	03603000	TVA	2,557	C	1966-67, 1974-80
		TVA		T	1961-64
Buffalo River near Flat Woods	03604000	TVA	447	T	1964-68
Buffalo River near Lobelville	03604500	TVA	707	T	1961-64
		TVA		C	1967-68, 1973-76
Trace Creek above Denver	03605555	USGS	31.9	C	1979-83
Big Sandy River at Bruceton	03606500	TVA	205	T	1971-78
		TVA		C	1968, 1970-72
		USGS		C,S	1976, 1979-83
North Reelfoot Creek at Clayton	07026360	USGS	54.7	C,S	1982-84
North Reelfoot Creek at State Hwy 22 near Clayton	07026370	USGS	56.3	C,S	1983-89
Obion River at Hwy 51 near Obion	07026040	USGS	1,875	C,S,T	1975-95
South Reelfoot Creek near Clayton	07026400	USGS	38.6	C,S	1984-89
Bayou Du Chien near Walnut Log	07026695	USGS	27.8	C,T	1986-88
Indian Creek near Samburg	07026795	USGS	8.01	C,S	1982-84
Reelfoot Lake Spillway near Tiptonville	07027002	USGS	240	C,T	1975-76, 1986-88
Mosses Creek near Pocahontas	07029410	USGS	47.6	C,S	1961, 1963, 1977-78
Hatchie River near Lacy	07029425	USGS	1,033	C,S	1977-78
Big Muddy Creek at Stanton	07030010	USGS	84.4	C,S	1977-78
Cane Creek at Ripley	07030100	USGS	33.9	S	1985-87
Cane Creek at Three Point	07030137	USGS	79.8	S	1985-87
Loosahatchie River near Arlington	07030240	USGS	262	C,S	1979-82
Wolf River at Rossville	07030500	USGS	503	C	1961, 1963-68
Nonconnah Creek near Germantown	07032200	USGS	68.2	C,S	1979-82

## INTRODUCTION

The Water Resources Division of the U.S. Geological Survey (USGS), in cooperation with State, local, and Federal agencies, obtains a large amount of data pertaining to the water resources of Tennessee each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the USGS, the data are published annually in this report series entitled "Water Resources Data - Tennessee."

This report consists of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains discharge records for 80 gaging stations; stage only at 1 gaging station; stage and contents at 32 lakes and reservoirs; water quality for 18 stations, and 6 wells; and water levels at 8 observation wells. Also included are data for 100 crest-stage partial-record stations. Locations of these sites are shown on figures 4 through 6. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and miscellaneous analyses or as seepage investigations.

This series of annual reports for Tennessee began with the 1961 water year with a report that contained only data relating to the quantities of surface water. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several years concurrent with it, water-resources data for Tennessee were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States." For the 1961 through 1970 years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Water of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from the Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225.

Publications similar to this report are published annually by the USGS for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report TN-01-1." For archiving and general distribution, the reports for the 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (615) 837-4700.



**WATER RESOURCES DATA - TENNESSEE, 2001****COOPERATION**

The USGS and agencies of the State of Tennessee have had cooperative agreements for the systematic collection of streamflow records since 1918, for ground-water levels since 1946, and for water-quality records since 1960. Organizations that assisted in collecting data contained in this report through cooperative agreement with the Survey are:

Athens Utility District  
Tennessee Department of Environment and Conservation  
Tennessee Department of Transportation  
Tennessee Wildlife Resources Agency  
Duck River Development Agency  
Harpeth Valley Utility District  
Hixson Utility District  
Savannah Valley Utility District  
Cities, Towns, or Counties;  
Alcoa  
Blount  
Camden  
Dickson  
Franklin  
Germantown  
Harriman  
Jackson  
Knox  
Lewisburg  
Lincoln  
Maryville  
Medina  
Memphis  
Metropolitan Government of Nashville and Davidson County  
Murfreesboro  
Rogersville  
Sevierville  
Shelby  
Springfield  
Wartrace

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, Nashville District, the Tennessee Valley Authority, and by the U.S. Department of Energy. All data are published in this report.

Organizations that supplied data are acknowledged in station descriptions.

## SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

The State of Tennessee derives many benefits from an abundance of streams, rivers, and lakes. Excluding the Mississippi River, which flows south along Tennessee's western boundary, the largest rivers in the State are the Tennessee and Cumberland Rivers. The Tennessee and Cumberland Rivers are highly regulated by an extensive system of multipurpose dams and reservoirs. Natural conditions generally only occur in tributaries to the major rivers or other streams draining relatively small basins throughout the State. Streamflow data from these unregulated streams can be used to describe hydrologic conditions across the State.

A comparison of annual mean discharges for the 2001 water year with means for the period-of-record for unregulated streams indicates that runoff during the 2001 water year, although higher than the 2000 water year, was significantly below average across the entire State. Discharge data from unregulated streams in Cumberland River basin averaged about 67 percent of the means for the period of record. Discharge data from unregulated streams in the Tennessee River basin averaged about 73 percent of the means for the period of record. Discharge data from unregulated streams draining directly to the Mississippi River averaged about 72 percent of period-of-record means. Most monthly mean discharges were below period-of record means for most of the water year throughout the State. The wettest month was February. The driest months were the annual low flow season from September to November.

There were several significant storms occurring in Tennessee during the 2001 water year. A general rainstorm occurring from February 14-17 produced the majority of the annual maximum discharges recorded during the water year. Several localized storms of high intensity occurred in Greene and Washington Counties during early August 2001. A 100-year recurrence interval flood was measured on Big Limestone Creek in Greene County, Tennessee on August 4, 2001.

Ground Water

Ground-water levels at key aquifers throughout Tennessee were affected by rainfall during the 2001 water year. Ground-water levels are recorded continuously at a series of observation wells across the State (fig. 1). Water levels at well Hm:O-15 (Hamilton County) are representative of conditions in Middle and East Tennessee. Water levels were below normal during the last 6 months of the year. Ground-waters in many areas of Tennessee continued to decline due to the lower than normal rainfall. Wells in Hamilton Count (Hm:O-15), Lauderdale County (Ld:F-4), and Shelby County (Sh:P-99) show declining water levels during 2001.

Water levels recorded from wells throughout Middle and East Tennessee generally respond faster with larger fluctuations than wells drilled into the sand and gravel aquifers of West Tennessee. Observation wells in Shelby County show that ground water levels are strongly affected by ground-water withdrawals by the City of Memphis and surrounding communities. At well Sh:Q-1 (fig. 2), near downtown Memphis, water levels declined steadily since 1972, although a slower rate of decline began in 1988. The decline in ground-water levels in the Memphis area are not indicative of a reduction in the available ground-water supplies, but the response of the aquifer to additional withdrawals. Hydrographs showing lowest monthly water levels for each of the continuous recording observation wells are included in the body of this report.

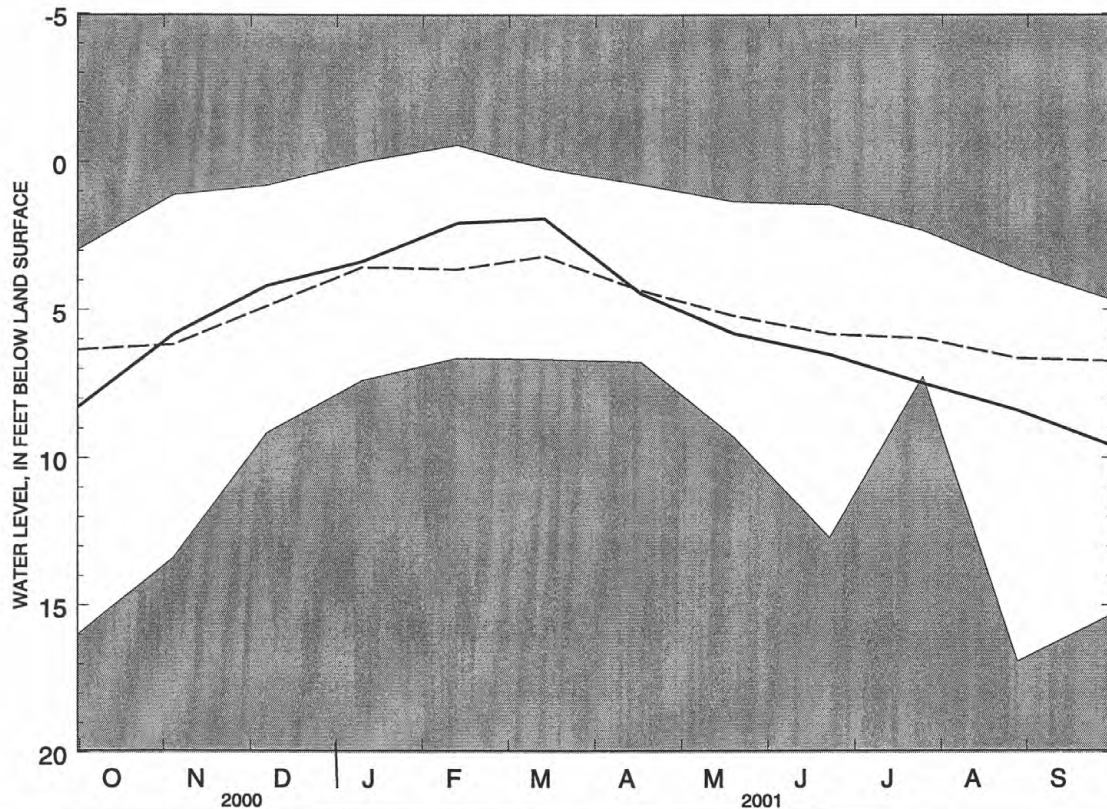
Water Quality

Water-quality data were collected at 17 surface-water sites and 41 ground-water sites during the 2000 water year. Most of these sites are located in the Tennessee River Basin and were sampled as part of the U.S. Geological Survey's National Water-Quality Assessment (NAWQA) Program. Other water-quality activities included:

- o Operation of four continuous monitors to measure temperature, dissolved oxygen, pH, and specific conductance in the Cumberland River Basin in support of the U.S. Army Corps of Engineers, Nashville District operations.
- o Operation of a continuous monitor to measure temperature, dissolved oxygen, pH, and specific conductance in the West Fork Stones River in support of a water-resources program in cooperation with the City of Murfreesboro, Tennessee.
- o Operation of a continuous monitor to measure temperature and dissolved oxygen in the Duck River in cooperation with the Duck River Development Agency.
- o Operation of a two continuous monitors to measure temperature, dissolved oxygen, pH, and specific conductance in the Cumberland River at Nashville in cooperation with the Davidson County Metropolitan area, Tennessee.
- o Quarterly samples at three sites for the determination of water quality in Carter's Creek in Maury County, Tennessee.

Data collected for NAWQA sites identified low-level concentrations of pesticides in surface water and shallow ground water. Fecal indicator bacteria exceeded 1,000 colonies per 100 milliliters in at least one sample collected at each of the NAWQA surface-water sites that were sampled monthly.

Hamilton County, Hm:O-15

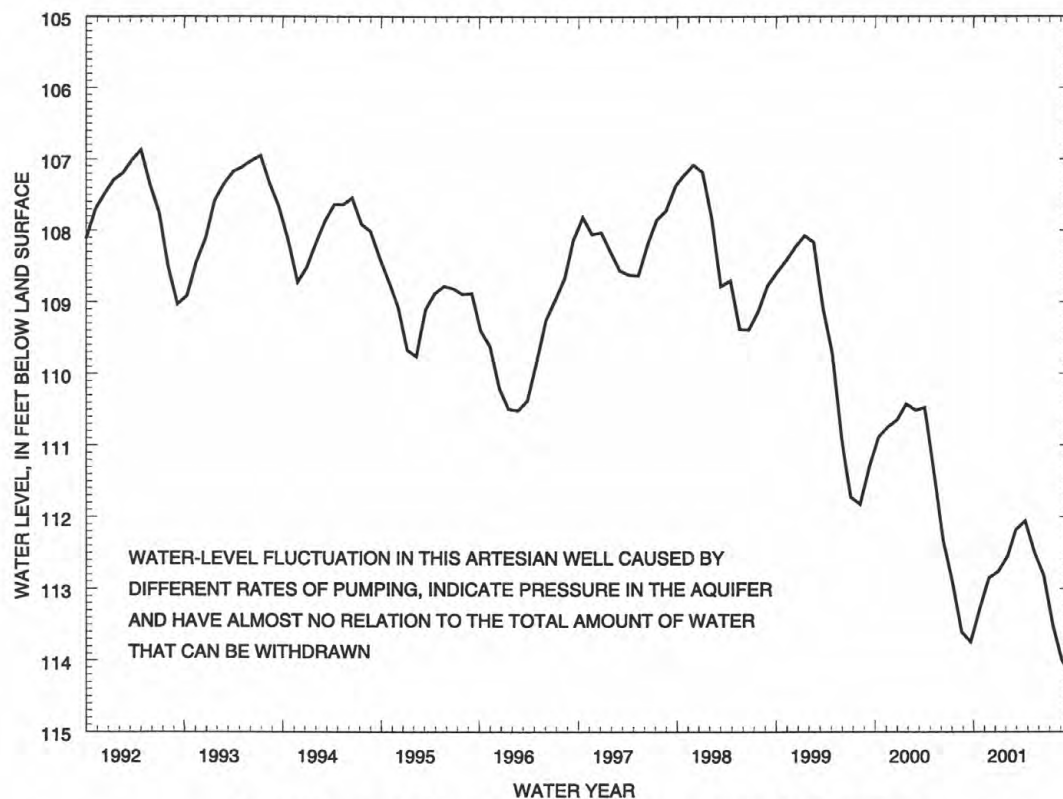


NOTE: ALL GROUND-WATER LEVELS SHOWN REPRESENT MONTHLY MAXIMUM DEPTH TO WATER

— — — MEDIAN FOR PERIOD OF RECORD

SHADED LINES SHOW EXTREMES FOR LOWEST WATER LEVEL RECORDED DURING THE MONTH FOR THE PERIOD OF RECORD

**Figure 1.** Ground-water levels for the 2001 water year compared to the maximum, minimum, and median water levels for the period of record.



**Figure 2.** Hydrograph of Shelby County showing long-term decline in the water-level.



## SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the affects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program can be found at <http://water.usgs.gov/hbn/>.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations were operated in the Mississippi, Columbia, Colorado, and Rio Grande. From 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at <http://water.usgs.gov/nasqan/>.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 225 precipitation chemistry monitoring sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as all data from the individual sites, can be found at <http://bqs.usgs.gov/acidrain/>.

Data from the network, as well as information about individual sites, are available through the World Wide Web at:

<http://nadp.sws.uiuc.edu/>

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program can be found at [http://water.usgs.gov/nawqa/nawqa\\_html](http://water.usgs.gov/nawqa/nawqa_html)

Radiochemical Program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface water. In addition to the surface water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

## EXPLANATION OF RECORDS

The surface-water and ground-water records published in this report are for the 2001 water year that began October 1, 2000, and ended September 30, 2001. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 4 through 7. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the USGS to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for surface-water stations and the "latitude-longitude" system is used for wells.

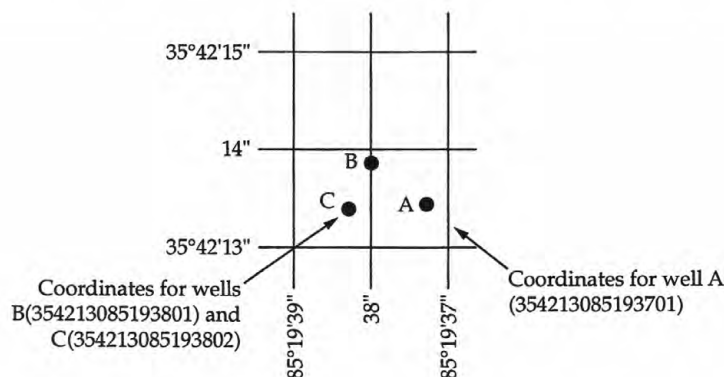
## Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

Each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete number for each station such as 03540500...., which appears just to the left of the station name, includes the 2-digit part number "03" plus the multi-digit downstream order number "540500...." This downstream numbering system is used in most cases; however, in some cases latitude and longitude numbers are assigned to hydrologic stations and partial-record stations as a means of identification (See Numbering System for Wells).

## Numbering system for wells

Downstream order station numbers are not assigned to wells. The well numbering system of the USGS is based on the grid system of latitude and longitude. The system provides the geographic location of the well and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells within a 1-second grid.



**Figure 3.**--System for numbering wells (latitude and longitude).

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relation between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relation between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the USGS. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water Resources Investigations (TWRI's), Book 3, Chapter A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed from gage heights and rating tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes of the personnel making the measurements are used in applying the gage heights to the rating tables. The shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and comparable records of discharge for other stations in the same or nearby basins.

At some stream-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed. If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.



For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

### Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

#### Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

**LOCATION.**--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileage is that determined and used by the USGS, Tennessee Valley Authority, U.S. Army Corps of Engineers, or other agencies using methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council.

**DRAINAGE AREA.**--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

**PERIOD OF RECORD.**--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one whose location was such that records from it can reasonably be considered equivalent with records from the present station.

**REVISED RECORDS.**--Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

**GAGE.**--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see "Definition of terms"), and a condensed history of the types, locations, and datums of previous gages are given under this heading.



**REMARKS.**--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent times. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

**COOPERATION.**--Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the USGS.

**REVISIONS.**--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

#### Data table of daily mean values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

#### Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum line (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS \_\_\_\_-\_\_\_\_, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar water year and for a designated period, as appropriate. The designated period selected, "WATER YEARS \_\_\_\_-\_\_\_\_," will consist of all the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (See line headings below), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. When the designated period is not the same as the station period of record published in the manuscript, values and dates of occurrence for daily and instantaneous extremes outside the designated period will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

**ANNUAL TOTAL.**--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnote.

**ANNUAL MEAN.**--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes. At least 5 complete years of record must be available before this statistic is published for the designated period.

**HIGHEST ANNUAL MEAN.**--The maximum annual mean discharge occurring for the designated period.

**LOWEST ANNUAL MEAN.**--The minimum annual mean discharge occurring for the designated period.

**HIGHEST DAILY MEAN.**--The maximum daily mean discharge for the year or for the designated period.

**LOWEST DAILY MEAN.**--The minimum daily mean discharge for the year or for the designated period.

**ANNUAL 7-DAY MINIMUM.**--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

**INSTANTANEOUS PEAK FLOW.**--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

**INSTANTANEOUS PEAK STAGE.**--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

**INSTANTANEOUS LOW FLOW.**--The minimum instantaneous discharge occurring for the water year or for the designated period.

**ANNUAL RUNOFF (AC-FT).**--Indicates the depth, in acre-feet, to which the drainage area would be covered if all the runoff for the year were uniformly distributed on it.

ANNUAL RUNOFF (CFSM).--Indicates the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area for the year.

ANNUAL RUNOFF (INCHES).--Indicates the depth to which the drainage area would be covered if all the runoff for the year were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that is exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

#### Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

#### Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft<sup>3</sup>/s; to the nearest tenth between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to 3 significant figures to more than 1,000 ft<sup>3</sup>/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

#### Other Data Available

Records of discharge, not published by the USGS, are collected in Tennessee at several sites by the U.S. Army Corps of Engineers and Tennessee Valley Authority. The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of these sites as well as an index of records of discharge collected by other agencies but not published by the USGS. Information on records at specific sites can be obtained from that office upon request.



Information used in the preparation of the records in this publication, such as discharge-measurements notes, gage-height records, temperature measurements, and rating tables are on file in the Tennessee District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

### Records of Surface-Water Quality

Records of surface-water quality ordinarily are collected at or near stream-gaging stations. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

#### Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

#### Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

#### On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in the publications on "Techniques of Water-Resources Investigations," Book 1, Chapter D2; Book 3, Chapter A1, A3, and A4; and Book 9, Chapters A1-A9." These references are listed in the PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS section of this report. These methods are consistent with ASTM standards and generally follow ISO standards.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (NASQAN) (see definitions) are obtained from at least several verticals.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.



Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ( $\mu\text{g/L}$ ) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter ( $\text{ng/L}$ ). Present data above the  $\mu\text{g/L}$  level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the USGS will begin using new trace-element protocols in the near future.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the USGS District Office whose address is given on the back of the title page of this report.

#### Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, maximum, minimum, and mean temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office and are also published in this report.

#### Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar water discharge. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

#### Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the USGS laboratories in Arvada, Colo. Methods used to analyze sediment samples and to compute sediment records are described in the TWRI Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

## Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature recorder, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made in the U.S. Geological Survey's distributed data system, NWIS, and subsequently to its web-base National data system, NWISWeb [<http://water.usgs/nwis/nwis>]. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of the U.S. Geological Survey water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure the most recent updates. Updates to NWISWeb are currently made on an annual basis.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

## Remark Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUTREMARK

E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colon count)
L	Biological organisms count less than 0.5 percent (organisms may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant
V	Analyte was detected in both the environmental sample and the associated blanks.

## Dissolved Trace-Element Concentrations

\*NOTE.--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ( $\mu\text{g/L}$ ) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter ( $\text{ng/L}$ ). Data above the  $\mu\text{g/L}$  level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

## Water Quality-Control Data

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples that may be collected by this district are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

## Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analyses of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collect in this district are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental

sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sampler preservatives used for and environmental sample.

#### Reference Samples

Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

#### Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process.

#### Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well -established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

#### Change in National Trends Network Procedures

\*NOTE.--Samples handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study is available from the NADP Program Office, Illinois State Water Survey, 2204 Griffith Drive, Champaign, IL 61820-7495 (Telephone: 217-333-7873).

#### Records of Ground-Water Levels

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

#### Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs.



Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

#### Data Presentation

Each well record consists of three parts, the station description, the data table of water levels observed during the current water year, and a graph of the water levels for the current water year or other selected period. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings of the well description.

**LOCATION.**--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

**AQUIFER.**--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

**WELL CHARACTERISTICS.**--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

**INSTRUMENTATION.**--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

**DATUM.**--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

**REMARKS.**--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that are also water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

**PERIOD OF RECORD.**--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the USGS and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the USGS, may be noted.

**EXTREMES FOR PERIOD OF RECORD.**--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; generally, only water-level lows are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level. A hydrograph for a selected period of record follows each water-level table.

### Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes slowly; therefore, for most general purposes one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

### Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey TWRI publications referred to in the "On-site Measurements and Sample Collection" and the "Laboratory Measurements" sections in this data report. In addition, the TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

### Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

## EXPLANATION OF PRECIPITATION-QUALITY RECORDS

### Collection of the Data

The precipitation-quality records in this report are for one site operated by the USGS in the National Trends Network. Field measurements of pH and specific conductance of weekly composite precipitation samples and daily precipitation quantity are made. Other chemical analyses for all National Trends Network sites are performed by the Central Analytical Laboratory of the Illinois Water Survey. A numerical agency code (17003) has been assigned to the Illinois Water-Survey for data storage purposes.

## ACCESS TO WATSTORE DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed at

<http://water.usgs.gov>

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page)

## DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units on the inside of the back cover.

**Acid neutralizing capacity (ANC)** is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

**Acre-foot (AC-FT, acre-ft)** is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also "Annual runoff")

**Adenosine triphosphate (ATP)** is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

**Algal growth potential (AGP)** is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

**Alkalinity** is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

**Annual runoff** is the total quantity of water that is discharged ("runs off") from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

**Annual 7-day minimum** is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 to September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

**Aroclor** is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the

molecular type and the last two digits represent the weight percent of the hydrogen substituted chlorine.

**Artificial substrate** is a device that is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

**Ash mass** is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter ( $\text{g}/\text{m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g}/\text{m}^2$ ). (See also "Biomass")

**Bacteria** are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

**Base discharge (for peak discharge)** is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peaks per year will be published.

**Base flow** is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

**Bedload** is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 ft) that are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler may also contain a component of the suspended load.

**Bedload discharge** (tons per day) is rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload" and "Sediment")



**Bed material** is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed. (See also “Bedload” and “Sediment”)

**Benthic organisms** are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

**Biochemical oxygen demand (BOD)** is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

**Biomass** is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

**Biomass pigment ratio** is an indicator of the total proportion of periphyton which are autotrophic (plants). This is also called the Autotrophic Index.

**Blue-green algae** (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also “Phytoplankton”)

**Bottom material** (See “Bed material”)

**Cells/volume** refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

**Cells volume** (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume ( $\mu\text{m}^3$ ) is determined by obtaining critical cell measurements on cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3 \pi r^3 \quad \text{cone } 1/3 \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

$\pi$  is the ratio of the circumference to the diameter of a circle;  $\pi = 3.14159\dots$

From cell volume, total algal biomass expressed as biovolume ( $\mu\text{m}^3/\text{mL}$ ) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes over all species.

**Cfs-day** (See “Cubic foot per second-day”)

**Chemical oxygen demand (COD)** is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also “Biochemical oxygen demand (BOD)”]

***Clostridium perfringens* (*C. perfringens*)** is a spore-forming bacterium that is common in the feces of human and other warm-blooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and presence of microorganisms that are resistant to disinfection and environmental stresses. (See also “Bacteria”)

**Coliphages** are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of waters and of the survival and transport of viruses in the environment.

**Color unit** is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

**Confined aquifer** is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

**Contents** is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

**Continuous-record station** is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

**Control** designates a feature in the channel downstream from a gaging station that physically influences the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

**Control structure** as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

**Cubic foot per second (CFS,  $\text{ft}^3/\text{s}$ )** is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term “second-foot” sometimes is used synonymously with “cubic feet per second” but is now obsolete.

**Cubic foot per second-day (CFS-DAY, Cfs-day,  $[(\text{ft}^3/\text{s})/\text{d}]$ )** is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily-mean discharges reported in the daily-value data tables are



numerically equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

**Cubic foot per second per square mile** [CFSM, (ft<sup>3</sup>/s)/mi<sup>2</sup>] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also “Annual runoff”)

**Daily mean suspended-sediment concentration** is the time-weighted concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also “Mean concentration of suspended sediment,” “Sediment,” and “Suspended-sediment concentration”)

**Daily-record station** is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

**Data Collection Platform** (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

**Data logger** is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from onsite data loggers for entry into office data systems.

**Datum** is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also “Gage datum,” “Land-surface datum,” “National Geodetic Vertical Datum of 1929,” and “North American Vertical Datum of 1988”)

**Diatoms** are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also “Phytoplankton”)

**Diel** is of or pertaining to a 24-hour period of time; a regular daily cycle.

**Discharge**, or flow, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediments or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents such as suspended sediment, bedload, and dissolved or suspended chemical constituents, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is

a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of “dissolved” constituent concentrations are made on sample water that has been filtered.

**Dissolved oxygen** (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

**Dissolved-solids concentration** in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the “residue-on-evaporation” method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO<sub>3</sub>) can be converted to carbonate concentration by multiplying by 0.60.

**Diversity index** (H) (Shannon Index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

where  $n_i$  is the number of individuals per taxon,  $n$  is the total number of individuals, and  $s$  is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

**Drainage area** of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See “Drainage area”)

**Dry mass** refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also “Ash mass,” “Biomass,” and “Wet mass”)

**Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved.

Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

**Enterococcus bacteria** are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis*, *Streptococcus feacium*, *Streptococcus avium*, and their variants. (See also "Bacteria")

**EPT Index** is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that are generally considered pollution sensitive, the index usually decreases with pollution.

**Escherichia coli** (*E. coli*) are bacteria present in the intestine and feces of warm-blooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium. Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Estimated (E) value** of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

**Euglenoids** (*Euglenophyta*) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

**Extractable organic halides** (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried streambed sediments. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediments.

**Fecal coliform bacteria** are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their

concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Fecal streptococcal bacteria** are present in the intestine of warm-blooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Fire algae** (*Pyrrophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

**Flow-duration percentiles** are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

**Gage datum** is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly larger than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any National geodetic datum. However, if the elevation of the gage datum relative to the National datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the National datum by adding the elevation of the gage datum to the gage reading.

**Gage height** (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

**Gage values** are values that are recorded, transmitted and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

**Gaging station** is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

**Gas chromatography/flame ionization detector** (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

**Green algae** have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as



number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

**Habitat quality index** is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

**Hardness** of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ( $\text{CaCO}_3$ ).

**High tide** is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA web site:

<http://www.co-ops.nos.noaa.gov/tideglos.html>

**Hilsenhoff's Biotic Index (HBI)** is an indicator of organic pollution which uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \frac{\sum (n)(a)}{N}$$

where  $n$  is the number of individuals of each taxon,  $a$  is the tolerance value of each taxon, and  $N$  is the total number of organisms in the sample.

**Horizontal datum** (See "Datum")

**Hydrologic benchmark station** is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a benchmark station may be used to separate effects of natural from human-induced changes in other basins that have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped benchmark basin.

**Hydrologic index stations** referred to in this report are four continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

**Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

**Inch** (IN., in.), as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it. (See also "Annual runoff")

**Instantaneous discharge** is the discharge at a particular instant of time. (See also "Discharge")

**Laboratory Reporting Level (LRL)** is generally equal to twice the yearly determined long-term method detection level (LT-

MDL). The LRL controls false negative error. The probability of falsely reporting a non-detection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually based on the most current quality-control data and may, therefore, change. [Note: In several previous NWQL documents (Connor and others, 1998; NWQL Technical Memorandum 98.07, 1998), the LRL was called the non-detection value or NDV—a term that is no longer used.)

**Land-surface datum** (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

**Light-attenuation coefficient**, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation

$$I = I_0 e^{-\lambda L}$$

where  $I_0$  is the source light intensity,  $I$  is the light intensity at length  $L$  (in meters) from the source,  $\lambda$  is the light-attenuation coefficient, and  $e$  is the base of the natural logarithm. The light attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}$$

**Lipid** is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

**Long-Term Method Detection Level (LT-MDL)** is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. See NOAA web site: <http://www.co-ops.nos.noaa.gov/tideglos.html>

**Macrophytes** are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that are usually arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

**Mean concentration of suspended sediment** (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section

during a given time period. (See also “Daily mean suspended-sediment concentration” and “Suspended-sediment concentration”)

**Mean discharge (MEAN)** is the arithmetic mean of individual daily mean discharges during a specific period. (See also “Discharge”)

**Mean high or low tide** is the average of all high or low tides, respectively, over a specific period.

**Mean sea level** is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also “Datum”)

**Measuring point (MP)** is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

**Membrane filter** is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

**Metamorphic stage** refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

**Method Detection Limit (MDL)** is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

**Methylene blue active substances (MBAS)** are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

**Micrograms per gram (UG/G,  $\mu\text{g/g}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

**Micrograms per kilogram (UG/KG,  $\mu\text{g/kg}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

**Micrograms per liter (UG/L,  $\mu\text{g/L}$ )** is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

**Microsiemens per centimeter (US/CM,  $\mu\text{S/cm}$ )** is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

**Milligrams per liter (MG/L,  $\text{mg/L}$ )** is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in  $\text{mg/L}$  and is based on the mass of dry sediment per liter of water-sediment mixture.

**Minimum Reporting Level (MRL)** is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method (Timme, 1995).

**Miscellaneous site**, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

**Most probable number (MPN)** is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

**Multiple-plate samplers** are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

**Nanograms per liter (NG/L,  $\text{ng/L}$ )** is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

**National Geodetic Vertical Datum of 1929 (NGVD of 1929)** is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called “Sea Level Datum of 1929” or “mean sea level.” Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. See NOAA web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88> (See “North American Vertical Datum of 1988”)

**Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also “Substrate”)

**Nekton** are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

**Nephelometric turbidity unit (NTU)** is the measurement for reporting turbidity that is based on use of a standard suspension of Formazin. Turbidity measured in NTU uses nephelometric



methods that depend on passing specific light of a specific wavelength through the sample.

**North American Vertical Datum of 1988 (NAVD 1988)** is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the U.S. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and U.S. first-order terrestrial leveling networks.

**Open or screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

**Organic carbon (OC)** is a measure of organic matter present in aqueous solution, suspension, or bottom sediments. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

**Organic mass** or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

**Organism count/area** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m<sup>2</sup>), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

**Organism count/volume** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

**Organochlorine compounds** are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

**Parameter Code** is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

**Partial-record station** is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

**Particle size** is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, Sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

**Particle-size classification**, as used in this report, agrees with the recommendation made by the American Geophysical Union

Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	0.004 - 0.062	Sedimentation
Sand	0.062 - 2.0	Sedimentation/sieve
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

**Peak flow (peak stage)** is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation to the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

**Percent composition or percent of total** is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, mass, or volume.

**Percent shading** is determined by using a clinometer to estimate left and right bank shading. The values are added together and divided by 180 to determine percent shading relative to a horizontal surface.

**Periodic-record station** is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year, but at a frequency insufficient to develop a daily record.

**Periphyton** is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

**Pesticides** are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

**pH** of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions

with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

**Phytoplankton** is the plant part of the plankton. They are usually microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae. (See also "Plankton")

**Picocurie (PC, pCi)** is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

**Plankton** is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL of sample).

**Polychlorinated biphenyls (PCBs)** are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

**Polychlorinated naphthalenes (PCNs)** are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

**Primary productivity** is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

**Primary productivity (carbon method)** is expressed as milligrams of carbon per area per unit time [ $\text{mg C}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg C}/(\text{m}^3/\text{time})$ ] for phytoplankton. Carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Primary productivity (oxygen method)** is expressed as milligrams of oxygen per area per unit time [ $\text{mg O}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg O}/(\text{m}^3/\text{time})$ ] for phytoplankton. Oxygen method defines production and res-

piration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Radioisotopes** are isotopic forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

**Recoverable from bed (bottom) material** is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. (See also "Bed material")

**Recurrence interval**, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or non-exceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day 10-year low flow ( $7Q_{10}$ ) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the non-exceedances of the  $7Q_{10}$  occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous non-exceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent



chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

**Replicate samples** are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

**Return period** (See “Recurrence interval”)

**River mileage** is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council, and typically used to denote location along a river.

**Runoff** is the quantity of water that is discharged (“runs off”) from a drainage basin in a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

**Sea level**, as used in this report, refers to one of the two commonly used national vertical datums, (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums. See conversion of units page (inside back cover) for identification of the datum used in this report.

**Sediment** is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

**Seven-day 10-year low flow ( $7Q_{10}$ )** is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-run average. The recurrence interval of the  $7Q_{10}$  is 10 years; the chance that the annual 7-day minimum flow will be less than the  $7Q_{10}$  is 10 percent in any given year. (See also “Recurrence interval” and “Annual 7-day minimum”)

**Sodium adsorption ratio (SAR)** is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

**Specific electrical conductance (conductivity)** is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

**Stable isotope ratio** (per MIL/MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific waters, to evaluate mixing of different waters, as an aid in determining reaction rates, and other chemical or hydrologic processes.

**Stage** (See “Gage height”)

**Stage-discharge relation** is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

**Streamflow** is the discharge that occurs in a natural channel.

Although the term “discharge” can be applied to the flow of a canal, the word “streamflow” uniquely describes the discharge in a surface stream course. The term “streamflow” is more general than “runoff” as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

**Substrate** is the physical surface upon which an organism lives.

**Substrate Embeddedness Class** is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2mm, sand or finer). Below are the class categories expressed as percent covered by fine sediment:

0	< no gravel or larger substrate		
1	> 75%		
2	51-75%	4	5-25%
3	26-50%	5	< 5%

**Surface area of a lake** is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

**Surficial bed material** is the upper surface (0.1 to 0.2 ft) of the bed material such as that material which is sampled using U.S. Series Bed-Material Samplers.

**Suspended** (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is operationally defined as the material retained on a 0.45-micrometer filter.

**Suspended, recoverable** is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of “suspended, recoverable” constituents are made either by directly analyzing the suspended material collected on

the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

**Suspended sediment** is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also "Sediment")

**Suspended-sediment concentration** is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

**Suspended-sediment discharge** (tons/day) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft<sup>3</sup>/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

**Suspended-sediment load** is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

**Suspended, total** is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

**Suspended solids, total residue at 105 °C concentration** is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

**Synoptic studies** are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

**Taxa richness** is the total number of distinct species or groups and usually decreases with pollution. (See also "Percent Shading")

**Taxonomy** is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

#### Temperature preferences:

Cold – preferred water temperature for the species is less than 20 °C or spawning temperature preference less than 16 °C and native distribution is considered to be predominantly north of 45° N. latitude.

Warm – preferred water temperatures for the species is greater than 20 °C or spawning temperature preference greater than 16 °C and native distribution is considered to be predominantly south of 45° N. latitude.

Cool – intermediate between cold and warm water temperature preferences.

**Thermograph** is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table descriptions and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

**Time-weighted average** is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

**Tons per acre-foot (T/acre-ft)** is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

**Tons per day (T/DAY, tons/d)** is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

**Total** is the amount of a given constituent in a representative whole-water (unfiltered) sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology



used, is required to judge when the results should be reported as “total.” (Note that the word “total” does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined at least 95 percent of the constituent in the sample.)

**Total coliform bacteria** are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

**Total discharge** is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

**Total in bottom material** is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as “total in bottom material.”

**Total length** (fish) is the straight-line distance from the anterior point of a fish specimen’s snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

**Total load** refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

**Total organism count** is the number of organisms collected and enumerated in any particular sample. (See also “Organism count/volume.”)

**Total recoverable** is the amount of a given constituent in a whole-water sample after a sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

**Total sediment discharge** is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that

passes a cross section in a given time. It is a rate and is reported as tons per day. (See also “Sediment,” “Suspended sediment,” “Suspended-Sediment Concentration,” “Bedload,” and “Bed-load discharge”)

**Total sediment load** or total load is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It differs from total sediment discharge in that load refers to the material whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also “Sediment,” “Suspended-Sediment Load,” and “Total load”)

#### **Trophic group:**

**Filter feeder** – diet composed of suspended plant and/or animal material.

**Herbivore** – diet composed predominantly of plant material.

**Invertivore** – diet composed predominantly of invertebrates.

**Omnivore** – diet composed of at least 25-percent plant and 25-percent animal material.

**Piscivore** – diet composed predominantly of fish.

**Turbidity** is the reduction in the transparency of a solution due to the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to EPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values. Consequently, the method of measurement and type of instrument used to derive turbidity records should be included in the “REMARKS” column of the Annual Data Report.

**Ultraviolet (UV) absorbance (absorption)** at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of pathlength of UV light through a sample.

**Vertical datum** (See “Datum”)

**Volatile organic compounds (VOCs)** are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuti-

cals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

**Water table** is the level in the saturated zone at which the pressure is equal to the atmospheric pressure.

**Water-table aquifer** is an unconfined aquifer within which is found the water table.

**Water year** in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2001, is called the "2001 water year."

**WDR** is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976.)

**Weighted average** is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

**Wet mass** is the mass of living matter plus contained water. (See also "Biomass" and "Dry mass")

**Wet weight** refers to the weight of animal tissue or other substance including its contained water. (See also "Dry weight")

**WSP** is used as an acronym for "Water-Supply Paper" in reference to previously published reports.

**Zooplankton** is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also "Plankton")

## TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The U.S.G.S. publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, section A of book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S.G.S., Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be made in the form of a check or money order payable to the "U.S. Geological Survey." Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations."

**Book 1. Collection of Water Data by Direct Measurement****Section D. Water Quality**

- 1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J.F. Ficke, and G. F. Smoot: USGS–TWRI book 1, chap. D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 pages.

**Book 2. Collection of Environmental Data****Section D. Surface Geophysical Methods**

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A. R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 pages.

**Section E. Subsurface Geophysical Methods**

- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 pages.

**Section F. Drilling and Sampling Methods**

- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI book 2, chap. F1. 1989. 97 pages.

**Book 3. Applications of Hydraulics****Section A. Surface-Water Techniques**

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS–TWRI book 3, chap. A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS–TWRI book 3, chap. A5. 1967. 29 pages.



## TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY--Continued

- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS-TWRI book 3, chap. A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS-TWRI book 3, chap. A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 3, chap. A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS-TWRI book 3, chap. A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI book 3, chap. A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS-TWRI book 3, chap. A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI book 3, chap. A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI book 3, chap. A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI book 3, chap. A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS-TWRI book 3, chap. A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS-TWRI book 3, chap. A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS-TWRI book 3, chap. A21. 1995. 56 pages.

**Section B. Ground-Water Techniques**

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI book 3, chap. B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS-TWRI book 3, chap. B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI book 3, chap. B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS-TWRI book 3, chap. B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS-TWRI book 3, chap. B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS-TWRI book 3, chap. B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS-TWRI book 3, chap. B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS-TWRI book 3, chap. B7. 1992. 190 pages.



**TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY--Continued****Section C. Sedimentation and Erosion Techniques**

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI book 3, chap. C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H.P. Guy and V.W. Norman: USGS-TWRI book 3, chap. C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI book 3, chap. C3. 1972. 66 pages.

**Book 4. Hydrologic Analysis and Interpretation****Section A. Statistical Analysis**

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS-TWRI book 4, chap. A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS-TWRI book 4, chap. A2. 1968. 15 pages.

**Section B. Surface Water**

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI book 4, chap. B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS-TWRI book 4, chap. B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS-TWRI book 4, chap. B3. 1973. 15 pages.

**Section D. Interrelated Phases of the Hydrologic Cycle**

- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS-TWRI book 4, chap. D1. 1970. 17 pages.

**Book 5. Laboratory Analysis****Section A. Water Analysis**

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- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS-TWRI book 5, chap. A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS-TWRI book 5, chap. A5. 1977. 95 pages.
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**Section C. Sediment Analysis**

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**Book 6. Modeling Techniques****Section A. Ground Water**

- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS-TWRI book 6, chap. A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS-TWRI book 6, chap. A2. 1991. 68 pages.
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- 6-A6. A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction, by Eric D. Swain and Eliezer J. Wexler. 1996. 125 pages.

**Book 7. Automated Data Processing and Computations****Section C. Computer Programs**

- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS-TWRI book 7, chap. C1. 1976. 116 pages.
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- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS-TWRI book 8, chap. A2. 1983. 57 pages.

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- 9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A1. 1998. 47 p.
- 9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A2. 1998. 94 p.
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- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS-TWRI book 9, chap. A9. 1998. 60 pages.

Map number	Station number and name	Page	Map number	Station number and name	Page
1	03408500 NEW RIVER AT NEW RIVER, TN	42-43	40	03535400 BEAVER CREEK AT SOLWAY	160-161
2	03409500 CLEAR FORK NEAR ROBBINS, TN	44-45	41	03538235 EAST FORK POPLAR CR AT BEAR CR RD AT OAK RIDGE	162-163
3	03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN	46-47	42	03539600 DADDY'S CREEK NEAR HEBBERTSBURG	164-165
4	03421000 COLLINS RIVER NEAR MCMINNVILLE	54-55	43	03539778 CLEAR CREEK AT LILLY BRIDGE NEAR LANCING	166-170
5	03424730 SMITH FORK AT TEMPERANCE HALL	56-57	44	03539800 OBED RIVER NEAR LANCING, TN	172-173
6	03426310 CUMBERLAND RIVER AT OLD HICKORY DAM	58-63	45	03540500 EMORY RIVER AT OAKDALE	174-175
7	03426385 MANSKER CREEK ABOVE GOODLETTSVILLE	64-65	46	03566000 HIWASSEE RIVER AT CHARLESTON	176-177
8	03426470 DRY CREEK NEAR EDENWOLD	66-67	47	035661285 NORTH MOUSE CR NR ROCKY MTN. HOLLOW NR ATHENS	178-179
9	03427500 EAST FORK RIVER NEAR LASCASSAS	68-69	48	03568000 TENNESSEE RIVER AT CHATTANOOGA	180-182
10	03428200 WEST FORK STONES RIVER AT MURFREESBORO	70-74	49	03578000 ELK RIVER NEAR PELHAM	188-189
11	03430147 STONERS CREEK NEAR HERMITAGE	76-77	50	035825882 CANE CREEK NEAR HOWELL, TN	190-193
12	03430550 MILL CREEK NEAR NOLENSVILLE	78-79	51	03584020 RICHLAND CREEK AT HWY 64 NEAR PULASKI	194-195
13	03431060 MILL CREEK AT THOMPSON LANE NEAR WOODBINE	80-81	52	03588500 SHOAL CREEK AT IRON CITY	198-199
14	03431300 BROWNS CR AT STATE FAIRGROUND AT NASHVILLE	86-87	53	03593500 TENNESSEE RIVER AT SAVANNAH	202-203
15	034315005 CUMBERLAND RIVER AT WOODLAND ST AT NASHVILLE	88-89	54	03597210 GARRISON FORK ABOVE L&N RAILROAD AT WARTRACE	204-205
16	03431599 WHITES CREEK NEAR BORDEAUX	94-95	55	03597590 WARTRACE CREEK BELOW COUNTY ROAD AT WARTRACE	206-207
17	03431700 RICHLAND CREEK AT CHARLOTTE AVE AT NASHVILLE	96-97	56	03597860 DUCK RIVER AT SHELBYVILLE	208
18	03432350 HARPETH RIVER AT FRANKLIN	98-99	57	03598000 DUCK RIVER NEAR SHELBYVILLE	212-213
19	03432387 SOUTH PRONG SPENCER CREEK NEAR FRANKLIN	100-102	58	03598250 NORTH FORK CREEK NEAR POPLINS CROSSROADS	214-217
20	03432390 SPENCER CREEK NEAR FRANKLIN	104-105	59	03599500 DUCK RIVER AT COLUMBIA	218-219
21	03432400 HARPETH RIVER BELOW FRANKLIN	106-107	60	03600088 CARTERS CREEK AT BUTLER ROAD AT CARTERS CREEK	222-224
22	03433500 HARPETH RIVER AT BELLEVUE	108-109	61	03601990 DUCK RIVER AT HWY 100 AT CENTERVILLE	226
23	03434500 HARPETH RIVER NEAR KINGSTON SPRINGS	110-111	62	03602219 PINEY RIVER AT CEDAR HILL	228
24	03435305 RED RIVER BELOW HWY 161 AT BARREN PLAINS	116-117	63	03602500 PINEY RIVER AT VERNON	230-231
25	03435970 MILLERS CREEK AT TURNERSVILLE	118-119	64	03604000 BUFFALO RIVER NEAR FLATWOODS	234-235
26	03436100 RED RIVER AT PORT ROYAL	120-121	65	03605078 CYPRESS CREEK AT CAMDEN, TN	236
27	03436690 YELLOW CREEK AT ELLIS MILLS	122-123	66	07024305 BEAVER CREEK AT HWY 22 BYPASS NEAR HUNTINGDON	244-245
28	03455000 FRENCH BROAD RIVER NEAR NEWPORT	128-129	67	07027000 REELFOOT LAKE NEAR TIPTONVILLE	246-247
29	03461500 PIGEON RIVER AT NEWPORT	130-131	68	07027720 SOUTH FORK FORKED DEER RIVER NEAR OWL CITY	248
30	03465500 NOLICHUCKY RIVER AT EMBREEVILLE	132-133	69	07028960 MIDDLE FORK FORKED DEER RIVER NEAR FAIRVIEW	250-251
31	03466208 BIG LIMESTONE CREEK NEAR LIMESTONE	134-139	70	07029500 HATCHIE RIVER AT BOLIVAR	252-253
32	03469175 LITTLE PIGEON RIVER ABOVE SEVIERVILLE	144-145	71	07030240 LOOSAHATCHIE RIVER NEAR ARLINGTON	254-255
33	03491000 BIG CREEK NEAR ROGERSVILLE	146-147	72	07030392 WOLF RIVER AT LAGRANGE	256-260
34	03491544 CROCKETT CREEK BELOW ROGERSVILLE	148-149	73	07030500 WOLF RIVER AT ROSSVILLE	262-263
35	03497300 LITTLE RIVER ABOVE TOWNSEND	150-151	74	07031650 WOLF RIVER AT GERMANTOWN	264-265
36	03498500 LITTLE RIVER NEAR MARYVILLE	152-153	75	07031692 FLETCHER CREEK AT SYCAMORE VIEW	266-269
37	03498850 LITTLE RIVER NEAR ALCOA	154-155	76	07031740 WOLF RIVER AT HOLLYWOOD STREET AT MEMPHIS	270-271
38	03528000 CLINCH RIVER ABOVE TAZEWEEL	156-157	77	07032200 NONCONNAH CREEK NEAR GERMANTOWN	272-273
39	03532000 POWELL RIVER NEAR ARTHUR	158-159			

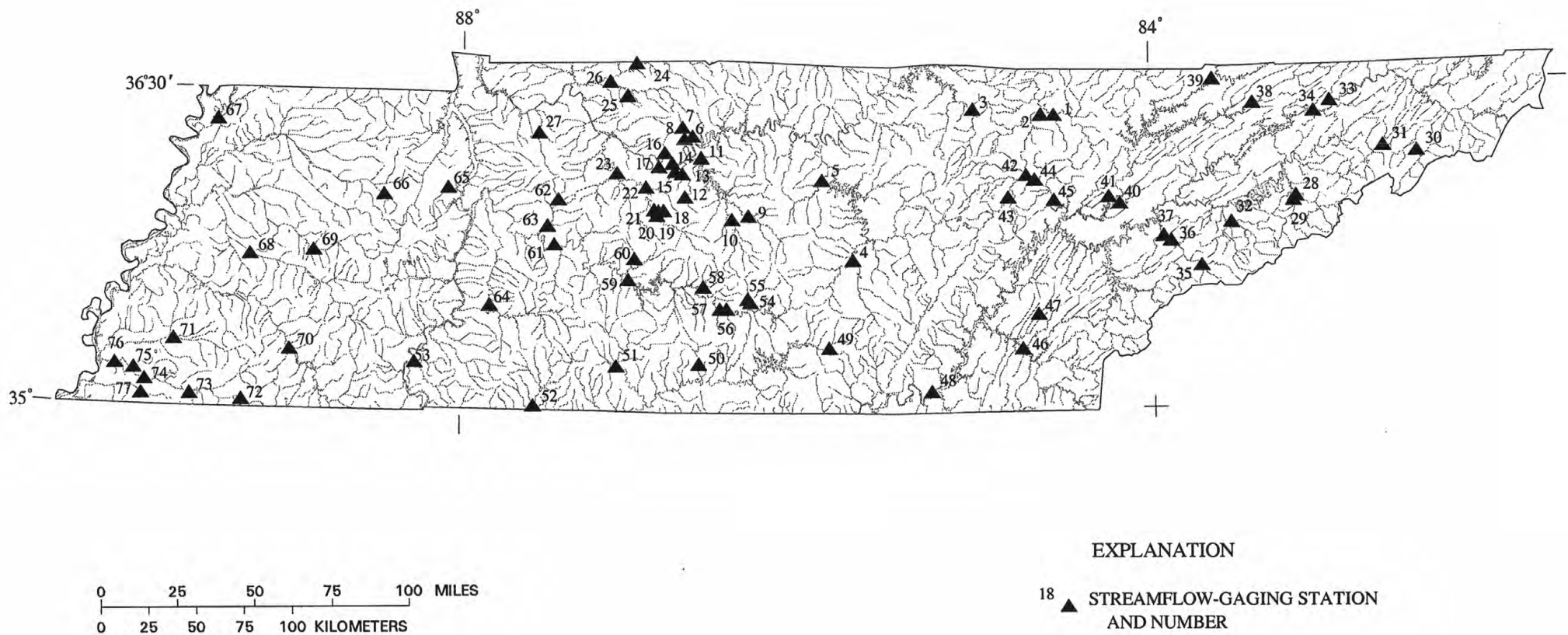


Figure 4. Location of streamflow-gaging stations in Tennessee.



Map number	Station number and name	Page
1	03409000 WHITE OAK CREEK NEAR SUNBRIGHT	274
2	03416000 WOLF RIVER NEAR BYRDSTOWN	274
3	03418201 DOE CREEK AT GAINESBORO	274
4	03419200 CANE CREEK NEAR SPENCER	275
5	03421200 CHARLES CREEK NEAR MCMINNVILLE	275
6	03424900 MULHERRIN CREEK NEAR GORDONSVILLE	275
7	03425040 PEYTON CREEK AT MONOVILLE	275
8	03425365 SECOND CREEK NEAR WALNUT GROVE	275
9	03425637 STATION CAMP CREEK AT COTTONTOWN	275
10	03426800 EAST FORK STONES RIVER AT WOODBURY	275
11	03426874 BRAWLEYS FORK BELOW BRADYVILLE	275
12	034269424 REED CREEK NEAR BRADYVILLE	276
13	03427500 EAST FORK STONES RIVER NEAR LASCASSAS	276
14	03427690 BUSHMANN CREEK AT PITTS LANE FORD NEAR COMPTON	276
15	03428043 LYTLE CREEK SANBYRNE DRIVE AT MURFREESBORO	276
16	03428276 UNNAMED SINK NEAR ALMAVILLE	276
17	03428500 WEST FORK STONES RIVER NEAR SMYRNA	276
18	03428513 UNNAMED SINK ON I-840 AT LEANNA	277
19	03428515 UNNAMED SINK AT LEANNA	277
20	03430118 MCCRORY CREEK AT IRONWOOD DRIVE AT DONELSON	277
21	03430400 MILL CREEK AT NOLENSVILLE	277
22	03431000 MILL CREEK NEAR ANTIOCH	277
23	03431040 SEVENMILE CREEK AT BLACKMAN ROAD	277
24	03431062 MILL CREEK TRIB AT GLENROSE AVENUE AT WOODBINE	277
25	03431120 WEST FK BROWNS CR @ GEN. BATES DR @ NASHVILLE	278
26	03431242 EAST FORK BROWNS CREEK AT 100 OAKS MALL AT NASHVILLE	278
27	03431340 BROWNS CREEK AT FACTORY STREET AT NASHVILLE	278
28	03431490 PAGES BRANCH AT AVONDALE	278
29	03431550 EARTHMAN FORK AT WHITES CREEK	278
30	03431581 EWING CREEK BELOW KNIGHT ROAD NEAR BORDEAUX	278
31	03431677 SUGARTREE CR @ YMCA ACCESS RD @ GREEN HILLS	278
32	03431679 SUGARTREE CR @ ABBOTT MARTIN RD @ GREEN HILLS	279
33	03431800 SYCAMORE CREEK NEAR ASHLAND CITY	279
34	03432470 MURFREES FORK ABOVE BURWOOD	279
35	03432925 LITTLE HARPEH RIVER AT GRANNY WHITE PIKE	279
36	03434590 JONES CREEK NEAR BURNS	279
37	034350021 BARTONS CREEK NEAR CUMBERLAND FURNACE	279
38	034350035 LOUISE CREEK NEAR GREYS CHAPEL	279
39	034351105 HONEY RUN CREEK NEAR CROSS PLAINS	280
40	034351113 HONEY RUN CREEK BELOW CROSS PLAINS	280
41	03435739 BEAVER DAM CREEK ABOVE SPRINGFIELD	280
42	03435770 SULPHUR FORK RED RIVER ABOVE SPRINGFIELD	280
43	03435930 SPRING CREEK TRIB NEAR CEDAR HILL	280
44	03436082 SULPHUR FORK CREEK ABOVE PORT ROYAL	280
45	03436130 PASSENGER CREEK NEAR SANGO	280
46	03436505 CUMMINGS CREEK NEAR DOTSONVILLE	280
47	03436700 YELLOW CREEK NEAR SHILOH	281
48	03461230 CANEY CREEK NEAR COSBY	281
49	03465607 CHEROKEE CREEK NEAR EMBREEVILLE	281
50	03465780 CLEAR FORK NEAR FAIRVIEW	281

Map number	Station number and name	Page
51	03466890 LICK CREEK NEAR ALBANY	281
52	03467480 BENT CREEK AT TAYLOR GAP	281
53	03467992 CARTER BRANCH NEAR WHITE PINE	281
54	03467993 CEDAR CREEK NEAR VALLEY HOME	281
55	03467998 SINKING FORK AT WHITE PINE	282
56	03470215 DUMPLIN CREEK AT MT. HAREB	282
57	03476960 INDIAN CREEK AT CHILDRESS	282
58	03487550 REEDY CREEK AT OREBANK	282
59	03490522 FORGEY CREEK AT ZION HILL	282
60	03491540 ROBERTSON CREEK NEAR PERSIA	282
61	03494714 DRY LAND CREEK TRIB NEAR NEW MARKET	283
62	03494990 FLAT CREEK AT LUTTRELL	283
63	03498010 LITTLE ELLEJOY CREEK AT PROSPECT	283
64	034991105 STOKES CREEK AT PICKENS GAP RD NR HIGH BLUFF	283
65	03499175 TEN MILE CREEK AT ROBINSON ROAD NEAR KNOXVILLE	283
66	03519610 BAKER CREEK TRIB NEAR BINFIELD	283
67	03527800 BIG WAR CREEK AT LUTHER	283
68	03528390 CROOKED CREEK NEAR MAYNARDVILLE	283
69	03534000 COAL CREEK AT LAKE CITY	284
70	03535180 WILLOW FORK NEAR HALLS CROSSROAD	284
71	035351830 BEAVER CREEK NR WILLOW FORK AT HALLS CROSSROAD	284
72	03535195 BEAVER CREEK AT BRICKYARD ROAD NEAR POWELL	284
73	03535617 CONNER CREEK AT STEELE ROAD NEAR SOLWAY	284
74	03555900 COKER CREEK NEAR IRONSBURG	284
75	03566420 WOLFTFEVER CREEK NEAR OOLTEWAH	284
76	03566599 NORTH CHICKAMAUGA CR AT GREENS MILL NR HIXSON	284
77	03569168 STRINGERS BRANCH AT LEAWOOD DRIVE AT RED BANK	285
78	03571500 LITTLE SEQUATCHIE RIVER AT SEQUATCHIE	285
79	03571730 STANDIFER BRANCH AT JASPER	285
80	03571800 BATTLE CREEK NEAR MONTEAGLE	285
81	03583300 RICHLAND CREEK NEAR CORNERSVILLE	285
82	03594153 INDIAN CREEK AT HWY 64 NEAR OLIVEHILL	285
83	035944242 OWL CREEK AT LEXINGTON	285
84	03597300 WARTRACE CREEK ABOVE BELL BUCKLE	285
85	035994430 FOUNTAIN CREEK NEAR CULLEOKA	286
86	03602170 WEST PINEY RIVER NEAR DICKSON	286
87	03604090 COON CREEK ABOVE CHOP HOLLOW NEAR HOHENWALD	286
88	03604580 BLUE CREEK NEAR NEW HOPE	286
89	03605555 TRACE CREEK ABOVE DENVER	286
90	03605880 CANE CREEK NEAR STEWART	286
91	07024225 NEIL DITCH NEAR HENRY	287
92	07024370 LITTLE REEDY CREEK NEAR HUNTINGDON	287
93	07024500 SOUTH FORK OBION RIVER NEAR GREENFIELD	287
94	07024760 SPRING CREEK NEAR GREENFIELD	287
95	07025400 NORTH FORK OBION RIVER NEAR MARTIN	287
96	07025500 NORTH FORK OBION RIVER NEAR UNION CITY	287
97	07028505 NORTH FORK FORKED DEER RIVER AT TRENTON	287
98	07029090 LEWIS CREEK NEAR DYERSBURG	287
99	07029900 HATCHIE RIVER AT SUNNYHILL	288
100	07030100 CANE CREEK AT RIPLEY	288

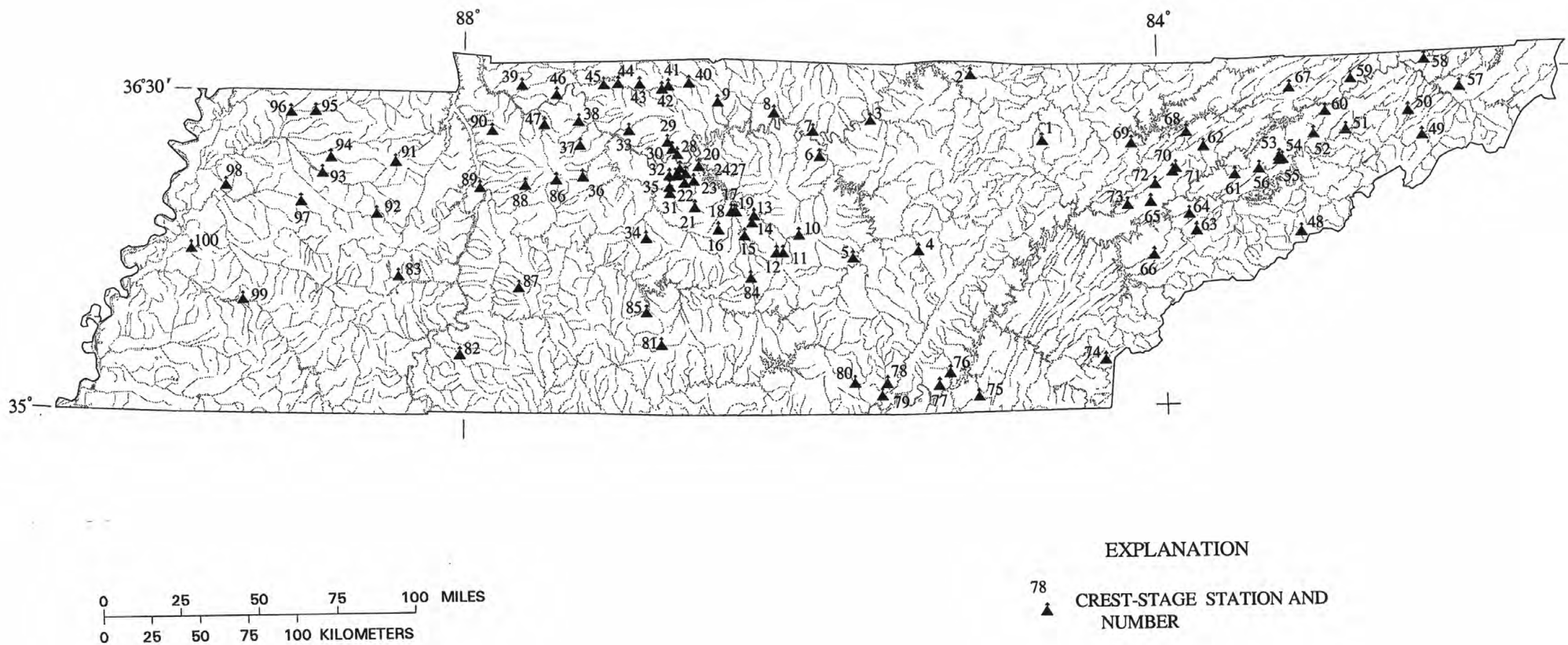


Figure 5. Location of crest-stage stations in Tennessee.

Map number	Station number and name	Page	Map number	Station number and name	Page
1	03417500 CUMBERLAND RIVER AT CELINA	48-50	13	03597860 DUCK RIVER AT SHELBYVILLE	209-210
2	03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM	51-53	14	03598250 NORTH FORK CREEK NEAR POPLINS CROSSROADS, TN	216-217
3	03426310 CUMBERLAND RIVER AT OLD HICKORY DAM	60-63	15	03600085 CARTERS CREEK AT PETTY LANE NEAR CARTERS CREEK	220
4	03428200 WEST FORK STONES RIVER AT MURFREESBORO	72-74	16	03600086 CARTERS CREEK TRIB NEAR CARTERS CREEK	221
5	03431091 CUMBERLAND RIVER AT OMAHUNDRO WATER PLANT	82-84	17	03600088 CARTERS CREEK AT BUTLER ROAD AT CARTERS CREEK	224
6	03431514 CUMBERLAND RIVER NEAR BORDEAUX	90-92	18	03603000 DUCK RIVER ABOVE HURRICANE MILL, TN	232
7	03435000 CUMBERLAND RIVER BELOW CHEATHAM DAM	112-114	19	350034086422800 LI:G-1	326
8	03466208 BIG LIMESTONE CREEK NR LIMESTONE	136-139	20	350900089482300 SH:Q-1	329
9	03467609 NOLICHUCKY RIVER NR LOWLAND	140-142	21	350857089591401 SH:P-99	328
10	03568000 TENNESSEE RIVER AT CHATTANOOGA	182	22	351428085003600 HM:O-15	324
11	035825882 CANE CREEK NEAR HOWELL, TN	192-193	23	353839089493500 LD:F-4	325
12	03584600 ELK RIVER AT PROSPECT, TN	196	24	353922083345600 SV:E-2	327



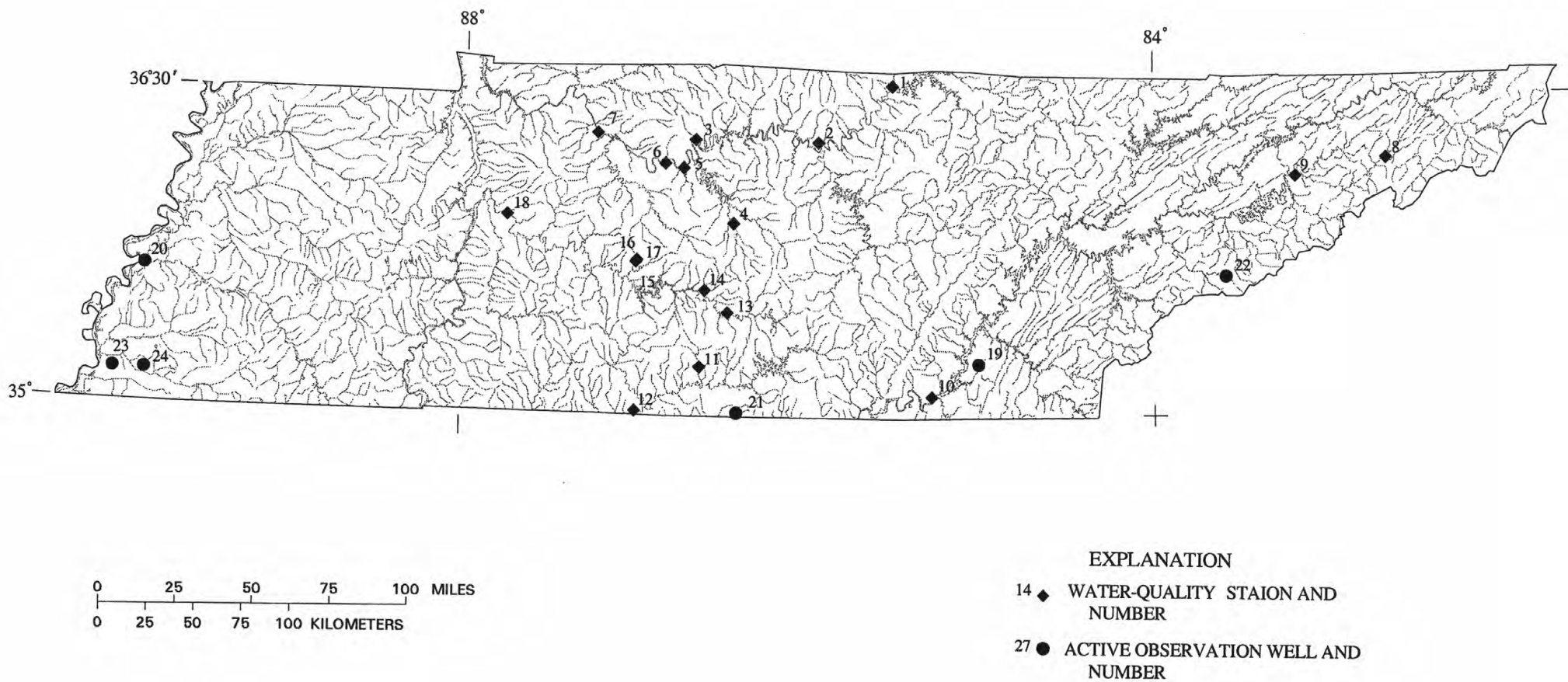


Figure 6. Location of water-quality stations and active observation wells in Tennessee.

## 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 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. 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 ft<sup>3</sup>/s, May 27, 1973, gage height, 37.91 ft, from high water mark in gage well, from rating curve extended above 27,000 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan 19	1900	12,200	15.19	Feb 17	0500	*19,800	*19.45

Minimum discharge, 0.40 ft<sup>3</sup>/s, Oct. 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	3.1	19	44	507	816	414	166	80	96	406	45
2	7.8	6.0	17	47	409	693	409	221	82	84	304	81
3	6.4	7.3	19	38	345	580	432	184	134	66	298	104
4	5.6	7.4	19	40	294	576	574	153	142	53	1360	182
5	3.8	7.4	18	36	264	985	576	133	121	86	719	168
6	3.4	7.6	20	39	237	1010	552	119	139	154	437	109
7	3.5	7.6	20	39	208	853	514	308	207	107	295	82
8	2.9	11	20	40	185	721	460	284	365	82	210	62
9	1.6	21	19	39	168	619	421	218	364	103	243	49
10	.83	154	19	34	460	523	386	183	240	83	471	42
11	.65	136	18	37	692	448	356	170	169	89	317	35
12	.58	68	18	35	558	402	335	166	128	72	601	30
13	.57	43	27	40	471	431	1470	146	102	53	e780	30
14	.53	31	378	48	807	451	2320	120	89	39	e600	27
15	.48	23	423	49	5290	508	1620	101	96	31	337	21
16	.47	18	357	50	9810	1080	1610	89	134	25	226	19
17	.93	19	2460	59	12000	1010	1210	81	98	22	161	18
18	1.6	20	853	68	2930	830	942	71	77	20	130	16
19	1.7	15	443	5620	1620	716	751	63	59	20	106	17
20	1.7	25	287	4720	1130	742	622	57	46	25	91	28
21	1.7	22	197	1540	872	1220	522	54	39	34	80	78
22	1.7	17	152	880	1310	1560	439	91	79	39	66	82
23	1.7	15	104	614	1800	1380	378	234	150	61	54	49
24	1.7	14	98	468	1290	1090	341	174	136	54	48	53
25	1.7	16	89	375	1370	872	305	131	88	36	46	82
26	2.8	15	82	297	1750	708	267	121	66	30	48	117
27	7.6	14	75	257	1290	583	239	96	105	30	54	75
28	5.6	17	70	225	1020	490	216	107	253	372	50	53
29	4.2	21	67	195	---	445	193	125	192	1550	44	41
30	3.3	21	61	315	---	457	172	119	119	2610	36	33
31	2.9	---	54	636	---	430	---	91	---	778	37	---
TOTAL	89.94	802.4	6503	16924	49087	23229	19046	4376	4099	6904	8655	1828
MEAN	2.90	26.7	210	546	1753	749	635	141	137	223	279	60.9
MAX	10	154	2460	5620	12000	1560	2320	308	365	2610	1360	182
MIN	.47	3.1	17	34	168	402	172	54	39	20	36	16
CFM	.01	.07	.55	1.43	4.59	1.96	1.66	.37	.36	.58	.73	.16
IN.	.01	.08	.63	1.65	4.78	2.26	1.85	.43	.40	.67	.84	.18

e Estimated

## CUMBERLAND RIVER BASIN

43

03408500 NEW RIVER AT NEW RIVER, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	139	498	1072	1383	1472	1534	1079	673	350	275	163	127
MAX	1035	2683	3359	4206	3891	4371	2564	3095	2850	1986	1159	1235
(WY)	1990	1958	1991	1937	1939	1975	1977	1973	1989	1967	1942	1989
MIN	.64	2.35	43.9	42.1	112	530	216	60.6	4.54	3.99	5.71	2.68
(WY)	1953	1940	1966	1981	1941	1985	1942	1936	1936	1944	1936	1953

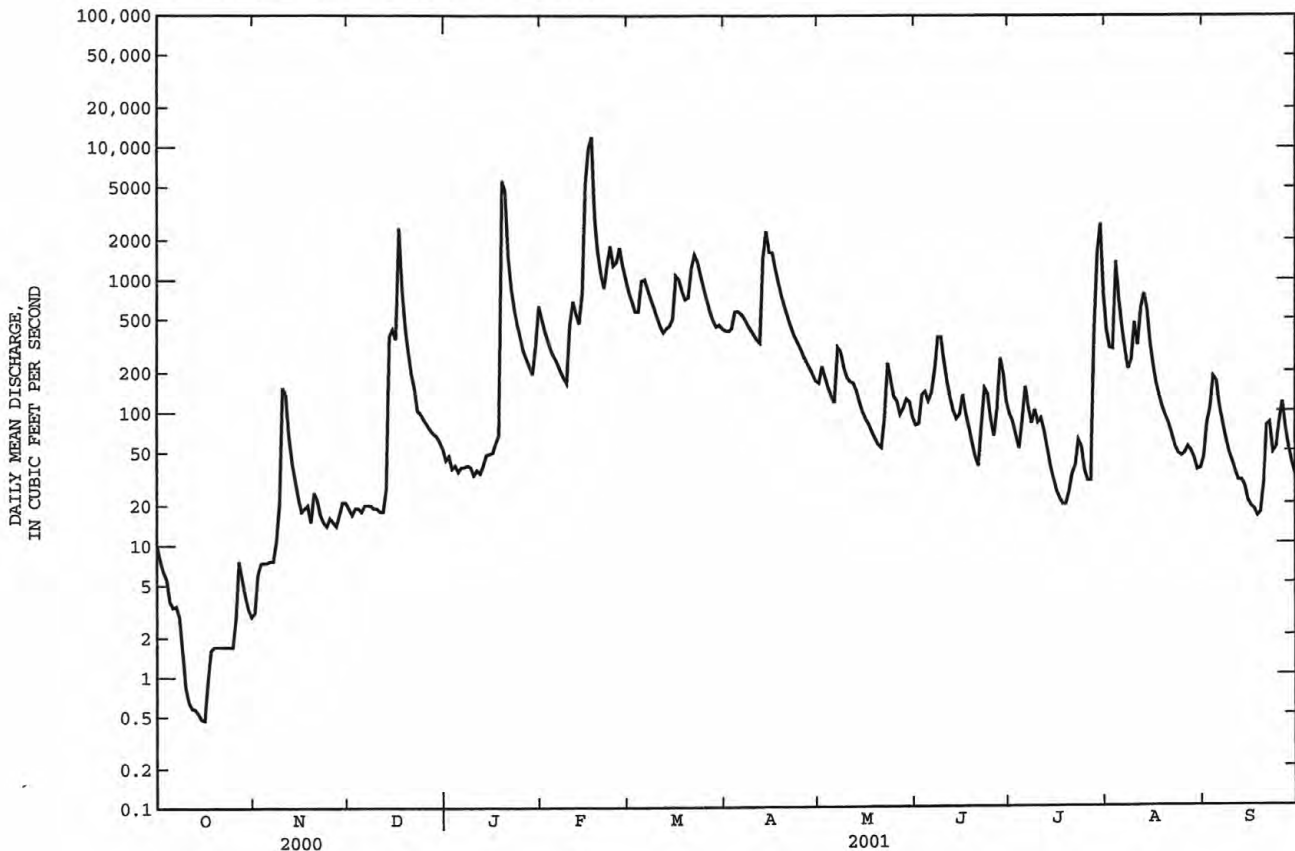
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1934 - 2001
ANNUAL TOTAL	161844.58	141543.34	
ANNUAL MEAN	442	388	729
HIGHEST ANNUAL MEAN			1350
LOWEST ANNUAL MEAN			341
HIGHEST DAILY MEAN	19000	12000	38000
LOWEST DAILY MEAN	.47	.47	.10
ANNUAL SEVEN-DAY MINIMUM	.59	.59	.10
MAXIMUM PEAK FLOW		19800	a63700
MAXIMUM PEAK STAGE		19.45	b37.91
INSTANTANEOUS LOW FLOW		c.40	d.00
ANNUAL RUNOFF (CFSM)	1.16	1.02	1.91
ANNUAL RUNOFF (INCHES)	15.76	13.78	25.92
10 PERCENT EXCEEDS	1150	872	1630
50 PERCENT EXCEEDS	107	103	258
90 PERCENT EXCEEDS	4.0	7.7	17

a Highest daily mean and instantaneous peak flow from rating curve extended above 27,000 ft on basis of slope-area and contracted opening measurements of peak flow.

b Maximum stage from high-water mark in gage well.

c Also occurred Oct. 16.

d 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 mi<sup>2</sup>.

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. 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 ft<sup>3</sup>/s, from rating curve extended above 14,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan 19	2030	9,550	10.64	Feb 17	0300	*14,000	*12.59

Minimum discharge, 3.5 ft<sup>3</sup>/s, Oct. 13, 14, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	8.9	27	142	404	583	267	158	53	30	108	15
2	13	7.7	25	96	339	497	254	585	47	43	65	16
3	11	6.9	26	112	291	436	258	319	54	34	54	22
4	9.5	6.3	25	86	255	427	348	218	73	25	155	24
5	8.3	6.0	25	83	236	559	330	169	66	22	178	22
6	7.3	6.4	25	84	214	552	302	141	58	25	114	21
7	6.9	7.3	26	86	192	487	281	140	62	44	81	19
8	5.9	11	28	85	175	431	256	179	97	35	56	16
9	4.8	23	28	83	163	384	233	168	115	25	45	13
10	4.0	62	29	90	321	333	215	161	85	25	111	11
11	3.8	94	32	81	513	294	198	148	62	28	195	9.1
12	3.8	65	36	78	432	270	191	128	47	24	157	7.7
13	3.8	48	40	89	384	293	802	114	38	18	276	6.9
14	3.6	37	675	98	681	297	1610	99	32	14	363	6.3
15	4.0	31	581	99	4210	305	1160	84	50	10	162	5.4
16	5.0	28	760	99	7690	650	1330	74	52	8.0	100	4.9
17	5.2	27	3390	93	9630	622	930	66	37	6.7	70	4.3
18	4.7	25	1170	98	3000	511	687	57	28	5.9	51	4.0
19	6.4	26	609	4620	1520	434	533	47	22	4.9	39	4.1
20	6.5	27	408	5380	1030	443	436	43	19	4.5	33	6.5
21	5.7	25	297	1830	773	878	362	38	16	5.8	27	7.9
22	4.6	23	230	1010	1060	905	303	44	24	6.3	25	17
23	4.5	22	202	711	1510	766	260	70	67	5.5	23	16
24	4.0	21	198	551	1050	625	227	85	77	6.5	22	20
25	3.7	23	168	446	1060	511	198	72	47	9.9	22	21
26	4.8	25	147	354	1220	425	174	61	33	8.7	19	21
27	5.8	29	130	308	895	358	155	51	26	7.7	18	28
28	6.5	35	125	267	723	309	141	59	24	14	19	23
29	6.3	34	118	232	---	284	126	57	21	193	17	14
30	6.3	30	112	330	---	283	114	64	31	280	15	11
31	5.9	---	110	495	---	279	---	62	---	213	14	---
TOTAL	190.6	820.5	9802	18216	39971	14431	12681	3761	1463	1182.4	2634	417.1
MEAN	6.15	27.4	316	588	1428	466	423	121	48.8	38.1	85.0	13.9
MAX	15	94	3390	5380	9630	905	1610	585	115	280	363	28
MIN	3.6	6.0	25	78	163	270	114	38	16	4.5	14	4.0
CFSM	.02	.10	1.16	2.16	5.25	1.71	1.55	.45	.18	.14	.31	.05
IN.	.03	.11	1.34	2.49	5.47	1.97	1.73	.51	.20	.16	.36	.06

## CUMBERLAND RIVER BASIN

45

03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	92.3	291	643	906	1035	991	722	457	212	161	103	94.1
MAX	747	1303	2470	3418	2794	2757	1968	2043	1742	1122	940	974
(WY)	1990	1958	1991	1937	1939	1963	1977	1984	1989	1967	1971	1982
MIN	1.84	4.97	28.6	32.4	141	333	152	64.1	8.29	6.40	8.07	2.92
(WY)	1954	1954	1964	1981	1941	1969	1942	1948	1988	1944	1987	1953

## SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1931 - 2001

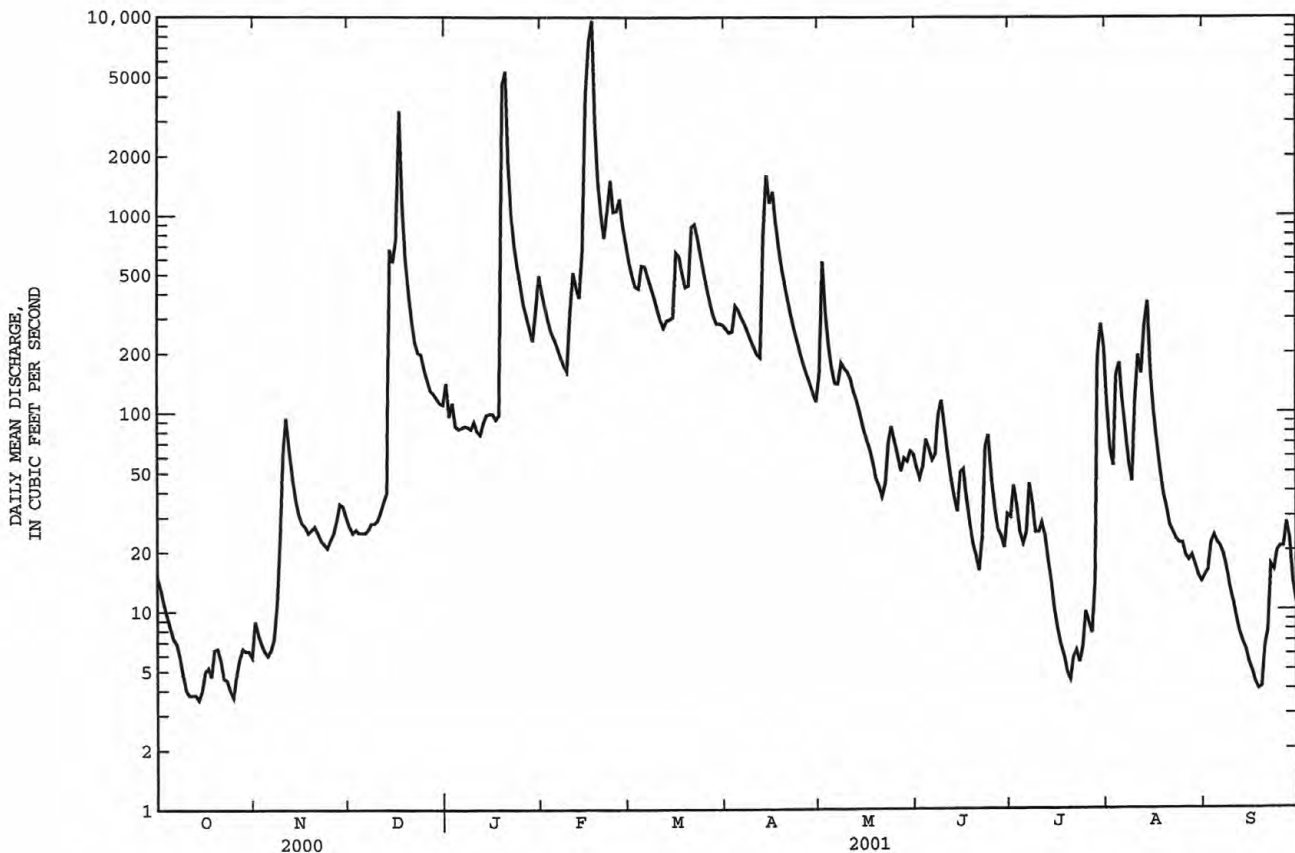
ANNUAL TOTAL	121927.3	105569.6	
ANNUAL MEAN	333	289	473
HIGHEST ANNUAL MEAN			864
LOWEST ANNUAL MEAN			215
HIGHEST DAILY MEAN	6840	Apr 4	9630
LOWEST DAILY MEAN	3.6	Oct 14	3.6
ANNUAL SEVEN-DAY MINIMUM	4.0	Oct 9	4.0
MAXIMUM PEAK FLOW			14000
MAXIMUM PEAK STAGE			12.59
INSTANTANEOUS LOW FLOW			c3.5
ANNUAL RUNOFF (CFSM)	1.22	1.06	1.74
ANNUAL RUNOFF (INCHES)	16.68	14.44	23.63
10 PERCENT EXCEEDS	838	614	1100
50 PERCENT EXCEEDS	106	65	156
90 PERCENT EXCEEDS	7.3	6.4	11

a Highest daily-mean and instantaneous peak flows from rating curve extended above 14,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

b Maximum stage from flood marks, site and datum then in use.

c Also occurred Oct. 14, 25

d Also occurred Sept. 20, 21, 1932.



## CUMBERLAND RIVER BASIN

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 mi<sup>2</sup>, includes 6.0 mi<sup>2</sup> without surface drainage.

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 September 2001. 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.--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 ft<sup>3</sup>/s, May 27, 1973, gage height, 30.46 ft, from rating curve extended above 32,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum, 3.6 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 16	2330	*15,400	*18.36	No other peak greater than base discharge.			

Minimum discharge, 8.0 ft<sup>3</sup>/s, Oct 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	13	20	63	345	509	210	88	43	73	89	34
2	16	12	20	61	282	424	194	90	41	56	109	39
3	15	12	20	56	233	354	213	88	52	42	97	38
4	14	12	20	53	201	338	234	78	50	40	146	41
5	13	12	20	57	177	535	224	71	51	58	125	35
6	13	11	20	57	156	565	206	67	49	88	88	29
7	12	12	19	57	139	476	193	112	63	53	68	25
8	11	14	19	58	124	409	180	119	97	39	54	23
9	9.8	24	19	58	120	349	168	104	86	36	217	21
10	9.4	33	19	53	398	291	158	100	67	30	173	20
11	9.1	28	19	52	536	253	148	110	51	24	111	18
12	8.9	32	19	57	424	227	140	101	41	20	229	18
13	8.6	28	24	68	355	235	738	95	33	18	278	17
14	8.5	23	328	75	929	235	1090	84	28	17	198	19
15	8.5	21	338	79	4690	290	903	72	25	16	123	34
16	8.5	20	1270	80	7300	490	970	62	25	14	91	25
17	8.7	21	3580	76	6760	487	700	56	24	13	74	20
18	8.7	20	910	90	1860	415	537	49	22	13	59	18
19	9.5	19	507	4040	1080	355	424	43	20	13	50	19
20	8.9	19	329	2860	757	422	345	38	18	13	46	26
21	8.4	19	227	1100	583	862	280	35	17	12	42	28
22	9.5	19	167	676	863	1020	236	56	19	12	35	33
23	9.6	18	119	500	953	819	204	86	19	12	30	26
24	9.9	18	115	389	723	632	178	83	23	14	32	32
25	9.9	22	97	317	1170	502	157	68	29	15	34	54
26	10	22	89	251	1150	407	137	58	24	15	31	58
27	12	21	83	217	816	330	123	49	31	17	28	43
28	12	22	82	184	631	276	113	51	54	20	24	33
29	14	22	80	162	---	246	103	59	60	43	23	28
30	14	21	74	271	---	233	94	59	58	197	22	23
31	14	---	69	406	---	222	---	50	---	122	22	---
TOTAL	342.4	590	8722	12523	33755	13208	9600	2281	1220	1155	2748	877
MEAN	11.0	19.7	281	404	1206	426	320	73.6	40.7	37.3	88.6	29.2
MAX	18	33	3580	4040	7300	1020	1090	119	97	197	278	58
MIN	8.4	11	19	52	120	222	94	35	17	12	22	17
CFSM	.06	.10	1.44	2.06	6.15	2.17	1.63	.38	.21	.19	.45	.15
IN.	.06	.11	1.66	2.38	6.41	2.51	1.82	.43	.23	.22	.52	.17



## CUMBERLAND RIVER BASIN

47

03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2001, BY WATER YEAR (WY)

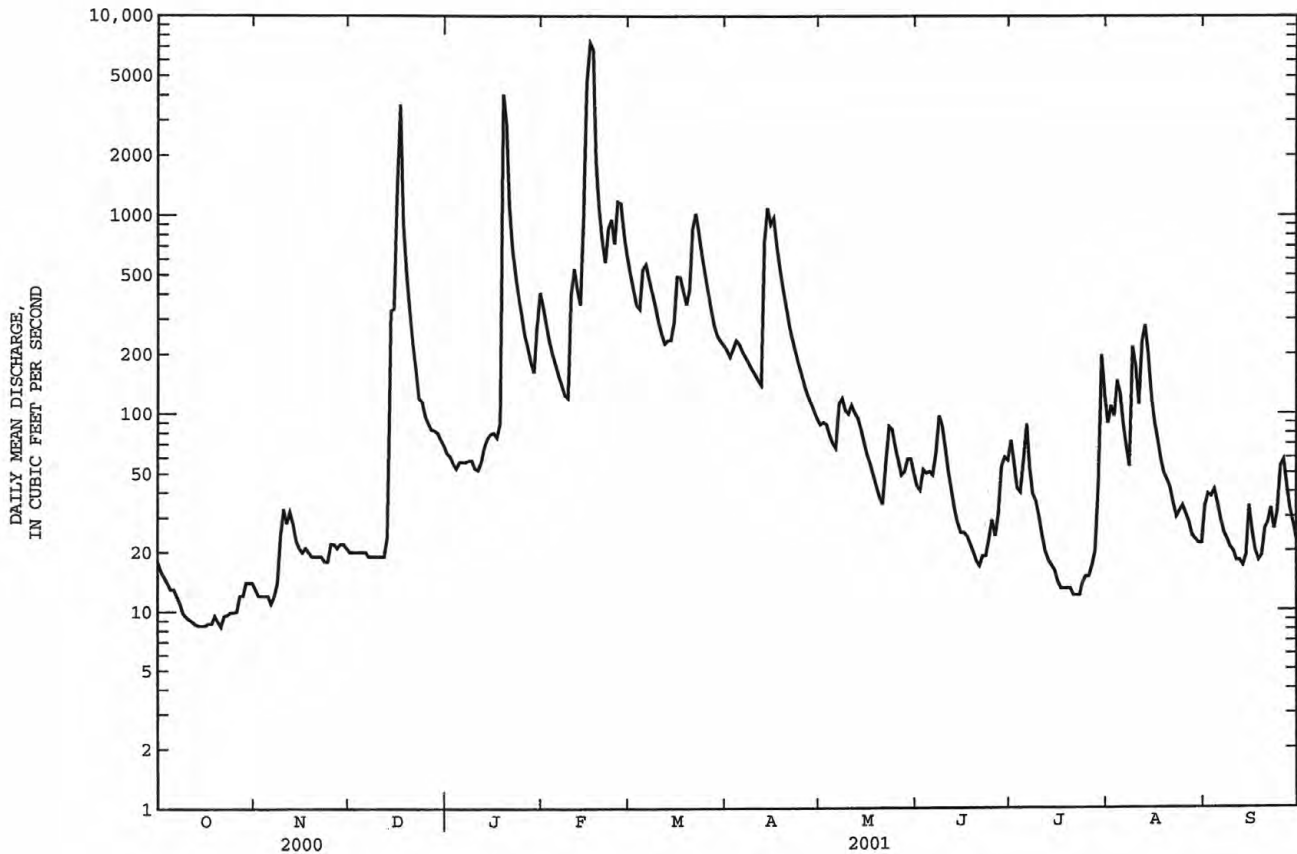
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	98.2	295	631	781	852	864	606	416	178	116	75.0	79.9
MAX	589	973	2066	2253	1900	2897	1369	1909	682	961	722	494
(WY)	1990	1958	1991	1950	1956	1975	1977	1984	1989	1967	1982	1944
MIN	4.76	8.05	22.1	43.6	161	206	139	66.7	10.9	9.73	10.0	7.18
(WY)	1948	1954	1964	1981	1968	1983	1986	1962	1988	1944	1962	1953

## SUMMARY STATISTICS

FOR 2001 WATER YEAR

WATER YEARS 1943 - 2001

ANNUAL TOTAL	87021.4	
ANNUAL MEAN	238	414
HIGHEST ANNUAL MEAN		743
LOWEST ANNUAL MEAN		218
HIGHEST DAILY MEAN	7300	23200
LOWEST DAILY MEAN	8.4	3.6
ANNUAL SEVEN-DAY MINIMUM	8.6	3.9
MAXIMUM PEAK FLOW	15400	44800
MAXIMUM PEAK STAGE	18.36	30.46
INSTANTANEOUS LOW FLOW	8.0	3.6
ANNUAL RUNOFF (CFSM)	1.22	2.11
ANNUAL RUNOFF (INCHES)	16.52	28.72
10 PERCENT EXCEEDS	508	947
50 PERCENT EXCEEDS	57	160
90 PERCENT EXCEEDS	13	14



## 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 mi<sup>2</sup>.

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.

## 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, 19.6°C, July 31, 2001; 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, 237 microsiemens, Jan. 19, 30; minimum, 171 microsiemens, Dec. 17, 18.

pH: Maximum, 8.5 units, Feb. 7, 8, 9; minimum, 7.0 units, June 21, 22, July 2, Aug. 4.

WATER TEMPERATURE: Maximum, 19.6°C, July 31; minimum, 3.2°C, Jan. 3.

DISSOLVED OXYGEN: Maximum, 14.9 mg/L, Feb. 6, 7; minimum, 7.8 mg/L, Sept. 20.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	202	205	219	233	229	219	210	202	220	---	209
2	200	202	202	220	229	233	219	216	205	223	205	209
3	200	202	201	211	223	233	221	215	206	217	193	210
4	200	202	203	210	219	232	222	216	207	210	189	209
5	200	203	203	214	219	232	216	217	208	209	203	208
6	199	202	203	218	220	230	221	217	206	209	---	209
7	198	202	204	219	219	229	221	216	205	210	---	209
8	197	202	204	219	217	226	223	214	206	208	207	209
9	197	213	204	219	215	229	223	213	206	208	210	210
10	197	213	204	217	222	231	220	219	207	208	210	209
11	197	220	204	215	221	231	215	219	208	206	208	208
12	198	215	204	215	222	230	214	217	200	206	214	208
13	198	211	206	215	218	229	215	215	200	206	217	208
14	196	207	222	215	222	223	215	213	198	206	215	208
15	195	207	223	217	194	220	215	213	198	210	211	207
16	197	206	222	217	190	224	214	213	198	---	210	208
17	200	204	183	213	182	225	210	214	199	210	209	209
18	202	205	182	214	191	224	207	211	198	---	210	210
19	202	205	212	213	209	224	210	215	200	211	211	208
20	202	204	225	197	226	221	206	214	201	---	213	206
21	201	204	222	207	232	215	205	212	202	---	213	210
22	202	206	223	222	230	208	207	214	208	---	211	212
23	203	206	220	228	228	216	207	217	211	---	210	212
24	203	204	219	230	221	222	207	214	213	---	209	213
25	203	205	222	227	219	226	204	211	206	---	211	217
26	202	210	219	226	223	228	204	209	206	---	213	214
27	202	209	214	226	217	221	203	209	206	---	213	212
28	202	210	217	226	219	219	206	207	211	---	212	212
29	203	209	215	226	---	220	206	206	216	---	210	212
30	202	208	211	231	---	221	207	202	217	---	209	212
31	202	---	217	229	---	219	---	199	---	---	209	---

## CUMBERLAND RIVER BASIN

49

03417500 CUMBERLAND RIVER AT CELINA, TN--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.5	7.5	7.6	7.5	7.8	7.7	7.9	7.8	8.2	8.0	7.6	7.5
2	7.6	7.5	7.6	7.6	7.8	7.6	7.9	7.9	8.2	7.9	7.7	7.5
3	7.6	7.4	7.6	7.5	7.7	7.6	8.0	7.8	8.2	8.0	7.7	7.5
4	7.5	7.4	7.6	7.5	7.8	7.7	7.8	7.7	8.2	7.9	7.6	7.4
5	7.5	7.5	7.6	7.5	7.8	7.7	7.9	7.8	8.2	8.0	7.5	7.4
6	7.5	7.4	7.6	7.6	7.8	7.6	7.9	7.9	8.4	8.2	7.9	7.5
7	7.5	7.4	7.6	7.5	7.8	7.6	7.9	7.9	8.5	8.3	7.9	7.8
8	7.5	7.4	7.6	7.5	7.8	7.7	8.0	7.9	8.5	8.2	8.0	7.9
9	7.5	7.4	7.6	7.5	7.8	7.7	8.0	7.9	8.5	8.1	8.1	7.9
10	7.6	7.5	7.6	7.5	7.8	7.6	8.0	7.9	8.2	7.9	8.1	8.0
11	7.6	7.5	7.6	7.5	7.7	7.6	8.0	7.9	8.0	7.8	8.2	8.0
12	7.5	7.5	7.5	7.5	7.8	7.6	8.0	7.9	8.0	7.8	8.2	7.9
13	7.6	7.5	7.5	7.5	7.8	7.7	8.1	7.9	8.0	7.8	8.0	7.9
14	7.6	7.5	7.6	7.5	7.7	7.7	8.1	8.0	8.0	7.7	7.9	7.8
15	7.6	7.4	7.6	7.6	7.7	7.6	8.1	8.0	7.7	7.5	7.8	7.7
16	7.6	7.5	7.6	7.5	7.7	7.7	8.2	8.0	7.5	7.5	7.8	7.7
17	7.6	7.5	7.6	7.5	7.7	7.6	8.1	8.0	7.5	7.5	7.8	7.7
18	7.5	7.4	7.6	7.4	7.6	7.6	8.1	8.0	7.5	7.5	7.8	7.7
19	7.5	7.4	7.5	7.4	7.7	7.6	8.0	7.9	7.6	7.5	8.0	7.8
20	7.5	7.4	7.5	7.4	7.8	7.7	7.9	7.8	7.6	7.5	8.0	7.7
21	7.5	7.4	7.7	7.4	7.8	7.8	7.9	7.8	7.6	7.5	7.7	7.6
22	7.5	7.4	7.8	7.6	7.8	7.7	8.0	7.9	7.6	7.5	7.6	7.5
23	7.5	7.4	7.8	7.7	7.8	7.8	8.3	7.9	7.6	7.5	7.8	7.6
24	7.5	7.4	7.8	7.6	7.8	7.8	8.3	8.2	7.6	7.5	7.8	7.7
25	7.5	7.5	7.6	7.5	7.8	7.8	8.3	8.2	7.6	7.4	7.9	7.8
26	7.5	7.1	7.6	7.5	7.8	7.8	8.3	8.1	7.5	7.4	8.1	7.9
27	7.5	7.5	7.8	7.6	7.8	7.8	8.2	8.1	7.4	7.4	8.1	7.6
28	7.5	7.4	7.9	7.7	7.8	7.8	8.3	8.1	7.5	7.4	7.6	7.6
29	7.6	7.4	7.9	7.7	7.8	7.8	8.3	8.1	---	---	7.7	7.6
30	7.6	7.5	7.8	7.7	7.9	7.8	8.2	8.1	---	---	7.8	7.7
31	7.6	7.5	---	---	7.9	7.8	8.2	8.0	---	---	7.7	7.7
MONTH	7.6	7.1	7.9	7.4	7.9	7.6	8.3	7.7	8.5	7.4	8.2	7.4
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.8	7.7	7.8	7.5	7.5	7.3	7.1	7.1	7.3	7.2	7.4	7.4
2	7.8	7.7	7.8	7.6	7.5	7.3	7.3	7.0	7.3	7.2	7.4	7.4
3	7.7	7.7	7.8	7.6	7.4	7.3	7.4	7.3	7.3	7.1	7.5	7.4
4	7.7	7.7	7.8	7.6	7.4	7.2	7.4	7.3	7.1	7.0	7.6	7.4
5	7.7	7.6	7.8	7.6	7.5	7.2	7.4	7.3	7.2	7.1	7.4	7.3
6	7.8	7.7	7.8	7.6	7.3	7.1	7.4	7.3	7.3	7.2	7.3	7.2
7	7.7	7.7	7.7	7.5	7.3	7.2	7.5	7.3	7.4	7.1	7.3	7.2
8	7.7	7.7	7.6	7.5	7.3	7.2	7.4	7.3	7.4	7.2	7.3	7.2
9	7.7	7.7	7.6	7.5	7.2	7.2	7.6	7.4	7.5	7.4	7.3	7.2
10	7.7	7.6	7.6	7.4	7.3	7.2	7.6	7.5	7.5	7.4	7.3	7.3
11	7.6	7.5	7.7	7.3	7.4	7.1	7.5	7.4	7.5	7.4	7.4	7.3
12	7.6	7.5	7.7	7.5	7.6	7.3	7.5	7.4	7.4	7.3	7.3	7.3
13	7.6	7.6	7.8	7.6	7.5	7.2	7.5	7.4	7.5	7.4	7.3	7.1
14	7.6	7.6	7.8	7.5	7.6	7.1	7.5	7.4	7.6	7.4	7.2	7.2
15	7.6	7.6	7.8	7.6	7.4	7.1	7.5	7.4	7.5	7.4	7.3	7.2
16	7.7	7.6	7.8	7.6	7.4	7.2	7.5	7.3	7.4	7.4	7.3	7.2
17	7.7	7.6	7.8	7.4	7.3	7.1	7.6	7.4	7.4	7.4	7.4	7.3
18	7.6	7.6	7.8	7.4	7.4	7.1	7.5	7.3	7.4	7.4	7.3	7.2
19	7.7	7.5	7.5	7.2	7.3	7.1	7.5	7.3	7.4	7.4	7.2	7.1
20	7.6	7.5	7.6	7.4	7.2	7.1	7.4	7.3	7.5	7.4	7.2	7.1
21	7.5	7.4	7.5	7.3	7.2	7.0	7.4	7.3	7.6	7.4	7.2	7.1
22	7.5	7.4	7.5	7.3	7.2	7.0	7.4	7.3	7.6	7.4	7.2	7.1
23	7.7	7.5	7.5	7.4	7.1	7.1	7.4	7.2	7.5	7.4	7.2	7.1
24	7.8	7.7	7.7	7.4	7.2	7.1	7.4	7.3	7.5	7.4	7.2	7.2
25	7.8	7.7	7.7	7.5	7.3	7.1	7.4	7.2	7.5	7.4	7.3	7.2
26	7.8	7.7	7.8	7.6	7.3	7.2	7.4	7.3	7.5	7.4	7.2	7.1
27	7.8	7.7	7.8	7.5	7.3	7.2	7.4	7.3	7.6	7.5	7.1	7.1
28	7.8	7.6	7.9	7.6	7.3	7.2	7.3	7.2	7.6	7.4	7.1	7.1
29	7.7	7.6	7.9	7.5	7.3	7.1	7.3	7.2	7.5	7.4	7.1	7.1
30	7.7	7.5	7.7	7.5	7.2	7.1	7.3	7.3	7.5	7.4	7.2	7.1
31	---	---	7.5	7.4	---	---	7.3	7.2	7.5	7.4	---	---
MONTH	7.8	7.4	7.9	7.2	7.6	7.0	7.6	7.0	7.6	7.0	7.6	7.1

## CUMBERLAND RIVER BASIN

03417500 CUMBERLAND RIVER AT CELINA, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	15.5	9.5	4.5	7.0	8.5	8.5	13.5	11.5	12.0	15.0	12.5
2	16.5	16.0	9.5	4.0	6.5	8.5	8.5	14.5	11.5	12.5	13.0	13.0
3	17.0	16.0	8.5	4.0	5.5	9.0	9.0	15.0	11.5	13.0	13.0	13.3
4	17.5	16.0	8.5	6.0	5.0	9.0	9.5	15.5	12.0	12.5	13.5	13.5
5	17.5	15.5	8.5	6.0	5.0	8.5	10.5	16.5	13.5	13.0	14.5	13.0
6	17.5	14.5	8.5	6.0	5.0	7.5	10.5	16.5	13.5	12.5	15.5	13.3
7	16.0	14.5	8.5	5.5	5.5	7.0	10.5	16.5	12.5	13.0	14.5	14.0
8	14.0	15.0	8.5	5.5	6.5	7.0	10.5	15.5	13.0	14.0	13.0	14.0
9	13.0	15.5	8.5	5.0	8.0	7.0	11.0	14.0	13.0	14.0	14.0	14.0
10	13.0	15.0	9.0	4.5	8.5	7.5	10.5	13.5	13.5	14.5	15.5	14.5
11	13.0	13.5	10.0	4.5	7.0	8.0	10.0	13.5	14.0	12.5	14.5	14.5
12	14.0	13.0	9.5	5.0	7.0	8.5	10.5	14.0	15.5	12.5	12.5	14.0
13	14.0	12.0	8.5	5.5	7.0	9.0	10.5	14.5	16.0	12.5	14.0	14.0
14	14.5	12.0	8.5	6.0	7.5	9.0	10.0	14.5	15.0	12.5	14.0	14.0
15	15.0	11.5	8.0	6.5	9.5	9.0	10.0	14.5	15.0	12.5	13.0	14.0
16	15.5	11.5	9.5	6.5	10.0	8.5	10.5	15.5	15.0	13.5	12.5	14.5
17	16.0	11.0	9.5	6.5	9.0	7.5	9.5	16.0	15.0	15.5	12.5	15.0
18	16.5	10.0	7.5	6.0	7.5	8.0	8.5	16.5	16.5	15.0	12.5	15.0
19	16.0	10.0	6.0	6.5	7.0	8.5	8.5	16.5	17.0	13.5	12.5	14.5
20	15.5	10.0	5.5	6.0	6.5	8.5	9.0	16.5	15.5	13.0	13.5	14.5
21	15.5	9.5	6.0	5.5	7.0	7.5	9.0	16.0	14.0	12.5	15.0	14.5
22	16.0	8.5	5.5	5.0	7.5	8.0	10.0	15.5	13.0	13.0	14.0	14.5
23	16.5	8.5	5.0	4.5	7.5	8.5	11.5	14.5	12.5	14.0	13.5	15.0
24	16.5	9.0	6.5	4.5	7.5	9.0	12.5	13.5	12.5	15.5	13.5	15.0
25	16.5	10.5	5.5	5.0	9.5	9.0	11.5	13.0	13.5	14.5	13.5	15.0
26	17.0	11.0	5.5	4.5	10.0	8.5	10.5	13.0	14.0	13.5	14.0	13.5
27	16.5	11.0	6.0	4.5	10.0	8.0	11.0	13.0	12.0	13.0	14.5	13.5
28	16.5	10.5	6.5	4.0	9.5	7.5	11.5	14.0	12.0	12.5	14.5	14.0
29	16.5	11.0	6.0	4.0	---	8.0	12.0	14.5	11.5	13.5	12.5	14.0
30	16.0	10.0	5.5	6.0	---	8.0	12.5	13.0	12.0	15.0	13.0	14.0
31	15.5	---	5.0	7.0	---	8.0	---	12.0	---	17.5	13.0	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	9.3	11.6	12.6	12.4	12.4	11.8	11.5	10.8	---	---	8.8
2	8.2	9.4	11.3	13.0	12.5	12.8	12.0	11.3	10.8	---	9.3	8.9
3	8.2	9.2	11.3	12.8	13.2	12.7	11.8	11.0	10.7	11.2	9.1	9.3
4	8.2	9.1	11.8	11.5	13.3	12.5	11.8	11.0	10.6	11.6	8.8	9.4
5	8.2	9.0	11.9	11.3	13.7	12.3	11.5	10.8	10.5	11.6	8.4	8.7
6	8.1	9.2	11.8	11.7	14.5	12.9	11.8	10.5	10.0	11.2	8.4	8.6
7	8.1	9.2	11.8	12.0	14.6	13.2	11.8	10.2	---	10.6	9.3	8.6
8	8.7	9.2	11.8	12.2	14.4	13.6	11.7	9.9	---	---	9.0	8.5
9	9.2	8.9	11.5	12.4	13.9	13.7	11.7	10.2	---	---	9.0	8.5
10	9.6	8.8	11.1	12.6	12.7	13.7	11.7	10.4	---	10.4	9.3	8.9
11	9.5	9.2	10.8	12.7	12.7	13.6	11.6	10.7	11.6	10.3	9.2	9.1
12	9.3	9.8	10.8	12.7	12.8	13.4	11.6	10.8	11.8	10.3	9.0	8.7
13	9.5	10.2	11.2	12.7	12.8	12.7	11.5	10.8	11.8	10.4	9.3	8.4
14	9.7	10.5	11.1	12.6	13.0	12.3	11.6	10.8	12.1	10.5	9.6	8.2
15	9.8	10.9	10.8	12.5	11.5	12.2	11.5	10.8	12.0	10.6	9.3	8.2
16	9.6	10.9	10.7	12.8	11.2	12.3	11.5	10.8	11.8	10.5	9.1	8.3
17	9.3	10.9	10.5	12.5	11.5	12.2	11.8	10.7	11.5	10.8	9.1	8.7
18	8.9	11.1	10.8	12.5	12.0	12.5	11.9	10.6	11.1	10.7	9.1	9.0
19	8.9	11.3	11.5	12.3	12.3	12.9	12.0	10.2	---	10.7	9.1	8.5
20	8.9	11.2	12.0	12.3	12.9	12.5	11.7	10.2	---	10.8	9.5	8.1
21	8.7	11.4	12.0	12.6	12.8	11.9	11.4	10.1	---	10.7	9.8	8.0
22	8.5	12.0	11.9	13.2	12.7	11.8	11.3	10.0	---	10.7	9.6	8.2
23	8.7	12.6	12.5	13.6	12.6	11.9	11.3	10.1	---	10.7	9.4	8.2
24	8.9	12.2	12.0	13.8	12.7	12.0	11.1	10.4	---	10.9	9.3	8.5
25	8.9	11.1	12.2	13.7	12.2	---	11.2	10.6	11.1	10.6	9.1	8.7
26	9.0	10.6	12.4	13.6	11.8	---	11.4	11.0	11.4	10.6	9.3	8.6
27	9.2	10.9	12.0	13.6	11.5	---	11.8	11.1	11.6	10.4	9.4	8.5
28	9.0	11.3	11.8	14.0	11.6	---	11.6	10.9	11.8	10.5	9.5	8.6
29	9.1	11.5	11.8	14.3	---	11.7	---	10.9	11.0	---	9.0	8.7
30	9.4	11.5	11.9	13.3	---	11.8	---	11.3	11.1	---	9.1	8.5
31	9.3	---	12.1	12.7	---	11.8	---	11.2	---	---	9.0	---
MEAN	8.9	10.4	11.6	12.8	12.7	12.6	11.6	10.7	11.3	10.7	9.2	8.6
MAX	9.8	12.6	12.5	14.3	14.6	13.7	12.0	11.5	12.1	11.6	9.8	9.4
MIN	8.1	8.8	10.5	11.3	11.2	11.7	11.1	9.9	10.0	10.3	8.4	8.0



## CUMBERLAND RIVER BASIN

51

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 mi<sup>2</sup>.

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. Minimum dissolved oxygen for current year not reported because low concentrations measured by water-quality monitor were during periods of no flow and may not represent water-quality conditions in the main channel.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

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

pH: Maximum, 8.8 units, June 29, 2001; minimum, 6.6 units, May 31, 1994.

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, 232 microsiemens, March 21, 22, 23; minimum, 171 microsiemens, Feb. 25.

pH: Maximum, 8.8 units, June 29; minimum, 7.0 units, Sept. 4, 5, 6, 7, 9.

WATER TEMPERATURE: Maximum, 23.0°C, June 28, 29; minimum, 2.6°C, Jan. 6.

DISSOLVED OXYGEN: Maximum, 14.7 mg/L, Jan. 23, 29, Feb. 13.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	209	212	186	211	189	225	218	218	202	209	211
2	213	208	213	188	210	195	226	219	218	207	209	216
3	212	209	212	191	210	200	226	217	218	208	208	215
4	211	209	212	193	209	203	225	216	220	208	207	216
5	211	209	211	196	209	210	223	217	219	206	207	215
6	210	209	211	198	208	212	223	217	219	206	210	215
7	209	208	211	199	208	214	222	216	218	206	210	216
8	208	209	210	199	207	214	222	216	214	207	211	216
9	209	208	209	200	207	214	222	216	215	208	211	217
10	208	207	208	201	209	214	223	214	215	206	213	217
11	208	209	208	202	212	214	222	215	216	206	210	216
12	207	209	208	203	216	213	222	213	216	209	213	215
13	207	210	208	203	218	213	221	214	216	209	213	213
14	207	209	209	204	218	215	221	215	216	209	214	214
15	206	208	209	205	222	215	221	217	217	209	215	216
16	206	208	208	206	225	217	219	216	218	211	214	215
17	207	208	204	207	218	219	217	220	215	213	213	213
18	207	208	203	208	202	225	217	220	214	211	213	215
19	207	207	204	208	195	227	217	221	213	211	212	213
20	208	207	207	210	186	227	218	221	212	212	216	210
21	207	207	206	211	182	230	219	220	212	212	215	212
22	207	206	205	212	177	231	220	219	212	213	214	214
23	207	206	204	214	174	229	221	218	211	212	214	214
24	207	206	203	214	173	228	219	218	210	209	213	214
25	208	206	201	215	174	229	217	220	209	211	214	213
26	207	207	195	215	177	229	217	219	209	211	213	209
27	208	208	189	216	178	228	218	217	207	211	215	210
28	208	209	183	215	181	225	217	218	207	210	213	210
29	208	211	175	214	---	222	218	216	206	211	213	211
30	208	212	175	213	---	220	218	217	204	209	215	213
31	209	---	181	211	---	222	---	217	---	209	211	---

## CUMBERLAND RIVER BASIN

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	8.2	8.0	8.3	7.8	7.6	7.3	8.2	7.8	8.4	7.7	7.6	7.4
2	8.3	8.1	8.1	7.7	7.9	7.3	8.3	7.3	8.4	7.7	7.6	7.1
3	8.3	8.2	8.1	7.6	7.7	7.4	8.2	7.5	8.3	7.4	7.5	7.1
4	8.4	8.1	7.9	7.5	7.8	7.3	8.2	7.5	8.4	7.7	7.5	7.0
5	8.3	8.1	7.9	7.5	7.8	7.5	7.8	7.5	8.1	7.8	7.6	7.0
6	8.1	8.0	7.8	7.5	7.7	7.5	8.2	7.5	8.1	7.6	7.6	7.0
7	8.0	7.9	8.1	7.5	7.7	7.5	8.2	7.5	8.5	7.5	7.5	7.0
8	8.1	7.9	7.8	7.6	7.7	7.5	8.0	7.3	8.1	7.5	7.4	7.1
9	8.2	7.9	8.1	7.5	7.8	7.5	7.9	7.2	8.1	7.6	7.4	7.0
10	8.2	7.7	8.0	7.6	7.6	7.5	7.9	7.5	7.9	7.5	7.3	7.1
11	8.2	7.7	8.4	7.6	7.8	7.5	8.3	7.6	8.3	7.5	7.5	7.2
12	8.0	7.8	7.8	7.7	7.6	7.4	8.4	7.5	8.5	7.6	7.5	7.2
13	8.1	7.6	7.8	7.5	7.7	7.3	8.4	7.4	8.1	7.8	7.5	7.2
14	8.2	7.8	7.9	7.5	7.7	7.3	8.4	7.6	8.1	7.7	7.5	7.1
15	8.0	7.5	7.8	7.4	8.0	7.5	8.5	7.7	8.5	7.6	7.4	7.2
16	7.9	7.6	7.8	7.5	7.7	7.4	7.9	7.5	8.7	7.6	7.4	7.1
17	7.8	7.6	8.0	7.5	7.7	7.5	8.1	7.2	8.5	7.5	7.4	7.2
18	7.8	7.4	7.8	7.5	7.8	7.4	7.9	7.2	8.7	7.9	7.6	7.1
19	8.0	7.6	7.7	7.5	8.2	7.5	7.9	7.3	8.1	7.8	7.6	7.1
20	7.8	7.5	7.6	7.4	7.8	7.5	8.3	7.1	8.0	7.4	7.6	7.3
21	7.9	7.5	7.6	7.3	8.1	7.5	8.1	7.2	8.4	7.2	7.6	7.2
22	8.1	7.4	7.5	7.3	7.8	7.5	8.1	7.1	8.5	7.4	7.6	7.2
23	8.1	7.4	7.5	7.3	7.9	7.6	7.8	7.0	8.2	7.3	7.6	7.1
24	8.1	7.9	7.5	7.4	7.9	7.4	8.3	7.4	8.3	7.2	7.5	7.1
25	8.1	7.8	7.5	7.4	8.0	7.5	8.1	7.5	8.1	7.2	7.5	7.1
26	8.4	7.8	7.5	7.3	8.5	7.5	8.1	7.5	7.8	7.5	7.6	7.2
27	8.4	7.9	7.5	7.3	8.5	7.6	8.0	7.6	8.0	7.1	7.7	7.3
28	8.4	7.9	7.4	7.2	8.6	7.5	8.3	7.7	8.1	7.3	7.7	7.4
29	8.3	7.7	7.6	7.3	8.8	7.7	8.0	7.7	8.1	7.5	7.6	7.2
30	8.4	7.9	7.7	7.2	8.4	7.5	8.1	7.7	7.9	7.3	7.6	7.2
31	---	---	7.8	7.4	---	---	8.4	7.7	7.7	7.3	---	---
MONTH	8.4	7.4	8.4	7.2	8.8	7.3	8.5	7.0	8.7	7.1	7.7	7.0

## CUMBERLAND RIVER BASIN

53

03418420 CUMBERLAND RIVER BELOW CORDELL HULL DAM, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	17.5	9.5	3.5	6.0	9.5	9.5	15.0	19.0	19.5	19.5	19.0
2	19.0	17.0	9.5	3.5	5.5	9.5	9.5	15.0	19.0	19.5	19.5	18.5
3	19.0	17.5	9.0	3.5	5.5	9.5	9.5	14.5	19.0	19.0	19.5	18.5
4	19.0	17.0	8.5	3.0	5.5	9.5	10.0	14.5	19.5	19.0	19.5	18.0
5	19.0	17.0	8.0	3.0	5.5	9.5	10.0	15.0	19.5	18.0	19.5	18.0
6	18.5	17.0	8.0	3.5	6.0	9.0	10.5	15.0	19.0	18.0	19.5	18.5
7	18.0	17.5	7.5	3.5	6.0	9.0	11.0	15.5	19.0	18.0	20.0	18.0
8	17.5	17.5	7.5	3.5	6.0	9.0	12.0	15.5	18.5	18.0	20.0	18.0
9	17.5	17.5	7.5	3.5	6.5	9.0	13.0	15.5	18.0	18.0	19.5	18.0
10	17.5	17.0	7.5	3.5	6.5	9.0	13.5	16.0	17.5	18.0	18.5	18.0
11	17.5	16.0	7.5	3.5	6.5	9.5	14.0	17.0	17.5	19.0	19.0	18.0
12	17.0	16.0	7.0	3.5	6.0	9.5	14.5	16.5	17.5	19.0	19.0	18.0
13	17.0	15.5	7.0	4.0	6.5	10.0	15.0	16.0	17.0	19.5	19.0	18.5
14	16.5	15.0	7.0	4.0	7.0	10.0	15.0	16.5	17.0	19.5	19.0	18.5
15	16.5	14.5	7.0	4.0	7.0	10.5	14.5	17.0	17.5	19.5	19.5	18.0
16	16.5	14.5	7.5	4.5	7.5	10.5	14.0	17.0	17.5	19.0	20.0	18.0
17	16.5	14.0	7.0	4.5	8.5	10.5	13.5	17.5	17.0	19.0	20.0	18.0
18	16.5	13.0	7.0	4.5	9.0	10.5	13.0	17.5	17.5	18.5	20.5	18.0
19	16.5	12.5	7.0	4.5	9.5	10.0	13.0	18.0	18.0	18.0	19.5	18.0
20	17.0	12.0	6.5	5.0	9.5	10.0	12.5	17.5	18.5	18.5	19.0	18.0
21	16.5	11.5	6.0	4.5	9.5	9.5	12.5	18.0	18.5	18.5	19.5	18.0
22	16.5	11.0	5.5	5.0	9.0	9.5	13.0	17.5	19.0	18.0	19.5	17.5
23	16.5	10.5	5.5	5.0	9.0	9.5	13.5	17.5	19.0	17.5	19.5	18.0
24	16.5	10.5	5.5	5.0	9.0	9.5	13.5	17.5	19.5	17.5	19.5	18.0
25	16.5	10.5	5.5	5.0	9.5	9.5	13.0	17.5	20.0	18.0	19.5	17.0
26	16.5	10.5	5.5	5.0	9.5	9.5	13.5	17.5	20.5	18.5	19.0	17.5
27	16.5	10.0	5.5	5.0	9.5	9.5	13.5	18.0	21.0	18.5	19.0	17.5
28	16.5	10.0	5.0	5.0	9.5	9.5	14.0	18.0	21.5	18.5	19.5	17.5
29	17.0	10.0	5.0	5.0	---	9.5	14.0	18.5	21.0	18.5	20.0	17.0
30	17.0	10.0	4.5	5.5	---	9.5	15.0	19.0	20.5	18.5	20.0	17.0
31	17.0	---	4.0	6.0	---	9.5	---	19.0	---	19.0	19.5	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7.3	12.1	---	13.4	10.6	12.4	10.9	7.0	8.3	8.9	9.1
2	---	7.1	12.3	---	12.8	10.7	12.7	11.0	6.9	6.7	8.9	8.0
3	8.2	6.9	12.5	---	12.6	10.8	12.9	11.2	7.0	9.1	8.5	7.7
4	8.3	6.9	12.6	---	12.9	10.8	13.2	11.0	7.2	8.9	8.2	7.6
5	8.3	6.8	12.8	12.4	13.0	10.9	13.4	10.7	7.9	8.7	8.7	8.4
6	8.0	7.7	12.9	12.6	13.5	11.4	13.1	10.4	8.0	8.9	8.1	8.4
7	8.0	8.2	---	12.8	13.6	11.4	12.8	10.8	8.3	8.9	8.1	8.3
8	8.5	7.3	---	12.9	13.7	11.2	12.6	10.7	8.5	8.4	7.3	8.2
9	8.7	6.9	---	13.0	13.5	11.2	12.5	10.7	8.6	7.4	8.0	7.6
10	9.0	7.6	---	13.3	13.6	11.1	12.2	11.0	8.7	8.8	7.1	7.7
11	9.0	7.2	---	13.5	13.9	11.2	12.0	11.0	8.5	9.2	7.7	9.1
12	8.9	7.1	---	13.6	14.1	11.3	11.7	11.1	8.3	8.8	8.2	9.2
13	8.8	6.8	---	13.6	14.2	11.3	11.6	10.8	8.4	8.9	8.3	9.0
14	8.6	7.5	---	13.7	14.2	11.3	11.6	10.7	8.4	9.0	8.2	8.6
15	8.5	7.5	12.6	13.7	13.7	11.5	11.3	9.9	8.4	9.0	8.0	9.0
16	8.5	7.1	12.4	14.0	13.0	11.6	11.3	10.6	8.1	8.4	8.0	8.8
17	8.0	8.1	12.5	14.1	11.7	11.5	11.2	9.6	8.1	7.3	7.8	8.8
18	8.4	8.1	12.3	14.2	11.0	11.7	11.2	9.3	8.0	7.5	8.8	7.1
19	8.1	9.0	12.2	14.0	10.7	11.9	11.3	8.8	8.2	7.7	8.8	8.0
20	8.3	9.3	12.2	13.5	10.4	11.8	11.3	8.4	8.1	7.4	7.0	9.1
21	8.0	9.5	12.3	13.6	10.3	12.0	11.2	8.6	8.1	7.3	6.7	8.5
22	7.7	10.2	12.3	13.6	10.3	11.9	11.2	8.3	7.7	6.8	8.5	7.6
23	7.9	10.5	11.9	13.9	10.3	11.9	11.1	8.4	7.8	6.6	8.5	8.2
24	7.8	10.8	11.7	13.9	10.3	12.0	11.3	8.4	7.3	8.8	8.6	7.4
25	7.6	11.1	11.8	14.0	10.4	12.0	11.4	8.4	7.4	8.9	8.4	7.5
26	8.3	11.3	11.5	14.0	10.4	12.3	11.7	8.4	7.3	8.9	8.9	8.4
27	8.3	11.3	11.1	13.8	10.5	12.5	11.8	8.5	7.5	8.7	7.9	8.2
28	7.8	11.3	10.8	13.8	10.5	12.6	11.9	8.2	7.2	9.0	8.9	8.7
29	8.1	11.5	10.6	13.8	---	12.4	11.4	8.4	7.4	8.6	9.3	7.8
30	8.1	11.9	10.9	13.7	---	12.3	11.8	8.0	7.4	8.9	9.0	7.9
31	7.5	---	---	13.4	---	12.2	---	7.2	---	8.8	9.1	---

## 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 mi<sup>2</sup>.

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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 17	1130	15,900	17.33	Feb 17	1100	*23,900	*22.21
Jan 20	0330	14,200	16.23				

Minimum discharge, 91 ft<sup>3</sup>/s, Oct. 28, Nov. 4, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	101	364	506	1720	2090	833	456	293	262	521	214
2	203	99	332	470	1400	1740	765	563	268	185	375	201
3	178	97	314	434	1190	1510	725	666	274	168	390	257
4	162	94	289	403	1030	1390	694	577	276	259	396	285
5	149	94	272	397	919	1500	680	503	276	435	370	261
6	140	94	257	390	828	1510	655	448	285	356	356	229
7	131	96	250	383	750	1340	627	422	351	297	333	205
8	125	114	241	372	684	1210	597	398	711	243	338	182
9	120	272	232	361	656	1090	568	415	543	208	316	171
10	117	2840	225	348	1460	974	543	511	501	194	867	189
11	115	1870	216	331	1580	880	516	492	419	206	3200	169
12	112	996	213	370	1400	832	514	606	337	211	3140	160
13	110	655	224	517	1400	1020	3960	577	278	197	3400	157
14	108	500	852	633	3300	1300	6350	497	239	180	3170	158
15	106	413	1360	618	7280	1380	4240	406	221	166	2230	152
16	104	375	4160	582	15200	2410	3870	350	243	155	1350	146
17	101	377	13300	539	21000	2100	2670	314	249	148	827	141
18	101	520	6380	545	10200	1660	1980	282	236	140	599	138
19	97	571	3260	5750	4950	1390	1570	258	205	137	504	162
20	99	490	2200	11700	3200	3480	1320	243	180	133	425	214
21	97	421	1670	5640	2670	6300	1110	238	168	134	364	384
22	96	371	1350	3210	5230	3920	948	255	164	132	308	371
23	96	335	1110	2310	4800	2780	831	266	161	127	262	287
24	96	312	937	1790	3300	2160	756	289	160	124	229	512
25	95	325	824	1490	4910	1750	695	272	158	154	209	462
26	96	468	735	1260	5340	1470	629	240	329	231	196	393
27	94	623	674	1100	3510	1260	572	222	201	179	186	341
28	93	530	641	968	2620	1090	525	237	169	261	178	283
29	109	457	622	873	---	986	483	266	241	308	172	238
30	106	403	589	1550	---	926	445	333	289	1020	170	210
31	102	---	543	2140	---	884	---	327	---	933	196	---
TOTAL	3703	14913	44636	47980	112527	54332	40671	11929	8425	7883	25577	7272
MEAN	119	497	1440	1548	4019	1753	1356	385	281	254	825	242
MAX	245	2840	13300	11700	21000	6300	6350	666	711	1020	3400	512
MIN	93	94	213	331	656	832	445	222	158	124	170	138
CFSM	.19	.78	2.25	2.42	6.28	2.74	2.12	.60	.44	.40	1.29	.38
IN.	.22	.87	2.59	2.79	6.54	3.16	2.36	.69	.49	.46	1.49	.42



## CUMBERLAND RIVER BASIN

55

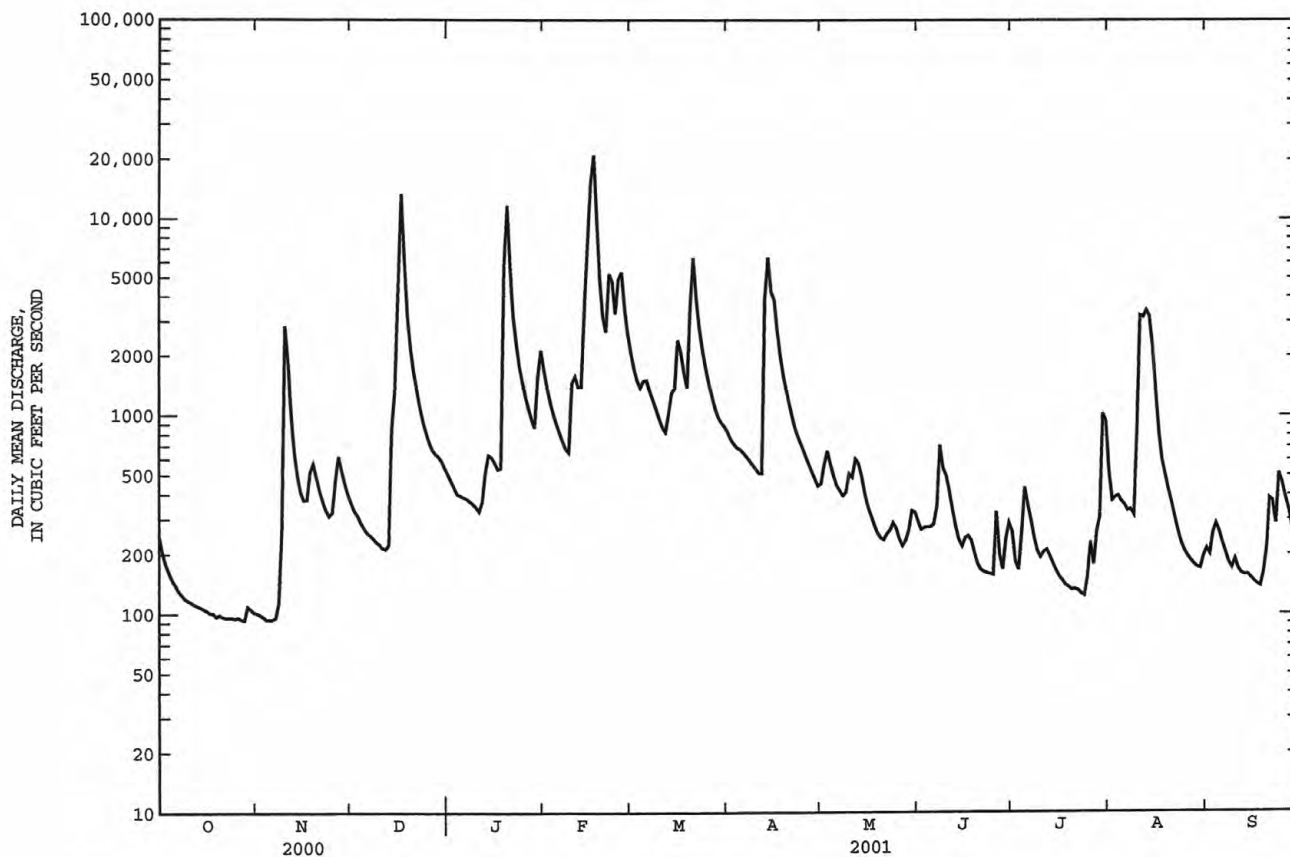
03421000 COLLINS RIVER NEAR MCMINNVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	318	772	1590	2118	2393	2509	1794	1069	637	434	322	291
MAX	2345	4286	6783	6262	6564	6279	4412	3825	4216	2091	1439	1204
(WY)	1976	1958	1991	1974	1939	1929	1994	1984	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

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1925 - 2001
ANNUAL TOTAL	325935	379848	
ANNUAL MEAN	891	1041	1182
HIGHEST ANNUAL MEAN			2193
LOWEST ANNUAL MEAN			409
HIGHEST DAILY MEAN	17900	Apr 4	21000
LOWEST DAILY MEAN	93	Oct 28	93
ANNUAL SEVEN-DAY MINIMUM	95	Oct 22	95
MAXIMUM PEAK FLOW		23900	Feb 17
MAXIMUM PEAK STAGE		22.21	Feb 17
INSTANTANEOUS LOW FLOW		a91	Oct 28
ANNUAL RUNOFF (CFSM)	1.39	1.63	1.85
ANNUAL RUNOFF (INCHES)	18.94	22.08	25.08
10 PERCENT EXCEEDS	1960	2640	2600
50 PERCENT EXCEEDS	402	396	531
90 PERCENT EXCEEDS	128	133	113

a Also occurred Nov. 4, 6.



## 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 mi<sup>2</sup>.

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

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

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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	2330	8,710	16.79	Feb 17	0100	*11,600	*19.83
Jan 19	1400	6,450	14.19	Feb 25	1030	4,690	11.84
Feb 15	2330	5,420	12.89	Mar 20	1830	8,430	16.48

Minimum discharge, 9.6 ft<sup>3</sup>/s, Oct. 7, 8, 13, 14, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	21	39	53	265	317	138	66	57	234	28	23
2	15	20	35	51	203	263	126	70	126	96	23	27
3	14	20	33	49	167	223	121	69	97	77	20	29
4	13	20	32	47	144	216	116	60	75	66	26	29
5	12	20	32	46	129	365	109	55	63	319	36	27
6	12	19	32	46	116	327	102	51	80	133	34	26
7	11	27	31	46	103	266	97	49	86	79	36	22
8	10	28	31	45	93	228	93	54	142	56	32	19
9	11	71	30	44	90	204	90	66	135	48	26	16
10	12	227	30	42	444	179	86	65	89	89	166	16
11	12	107	29	40	350	164	83	68	67	75	82	15
12	11	67	29	43	256	154	83	74	54	51	115	17
13	11	52	90	47	212	157	643	65	47	42	75	24
14	10	44	1100	48	541	140	550	53	43	36	55	50
15	10	39	316	48	3720	147	631	47	52	29	43	31
16	10	36	3170	48	5350	237	642	44	122	25	35	23
17	11	39	2820	47	5070	220	367	42	94	23	30	20
18	12	42	646	77	1170	192	270	39	60	21	26	18
19	12	41	362	3900	649	175	218	37	45	21	24	20
20	15	38	243	1690	440	3170	185	35	39	20	21	225
21	15	36	182	652	339	1980	161	40	33	20	19	114
22	16	32	142	387	708	804	139	132	30	19	18	59
23	20	30	113	282	663	501	123	182	31	17	17	39
24	20	30	96	221	450	369	114	99	30	17	16	47
25	20	39	86	179	2170	294	107	74	27	16	15	137
26	23	67	76	147	1040	242	95	60	25	20	15	81
27	23	71	70	130	585	208	88	50	24	23	18	53
28	27	57	67	115	409	184	83	48	30	23	16	40
29	22	48	64	108	---	173	78	51	37	30	15	33
30	20	42	60	567	---	165	71	51	99	36	16	28
31	21	---	56	405	---	152	---	47	---	34	17	---
TOTAL	468	1430	10142	9650	25876	12416	5809	1943	1939	1795	1115	1308
MEAN	15.1	47.7	327	311	924	401	194	62.7	64.6	57.9	36.0	43.6
MAX	27	227	3170	3900	5350	3170	643	182	142	319	166	225
MIN	10	19	29	40	90	140	71	35	24	16	15	15
CFSM	.07	.22	1.53	1.45	4.32	1.87	.90	.29	.30	.27	.17	.20
IN.	.08	.25	1.76	1.68	4.50	2.16	1.01	.34	.34	.31	.19	.23

## CUMBERLAND RIVER BASIN

57

03424730 SMITH FORK AT TEMPERANCE HALL, TN--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	80.5	184	429	572	522	711	453	249	231	126	72.6	75.5
MAX	270	559	811	1081	1190	1516	1095	506	768	460	225	389
(WY)	1996	1997	1992	1999	1994	1994	1994	1995	1998	1992	1996	1992
MIN	15.1	29.5	72.7	82.9	212	401	158	61.4	52.7	25.6	22.5	12.5
(WY)	2001	2000	2000	2000	1993	2001	1992	1992	1993	2000	1999	1999

## SUMMARY STATISTICS

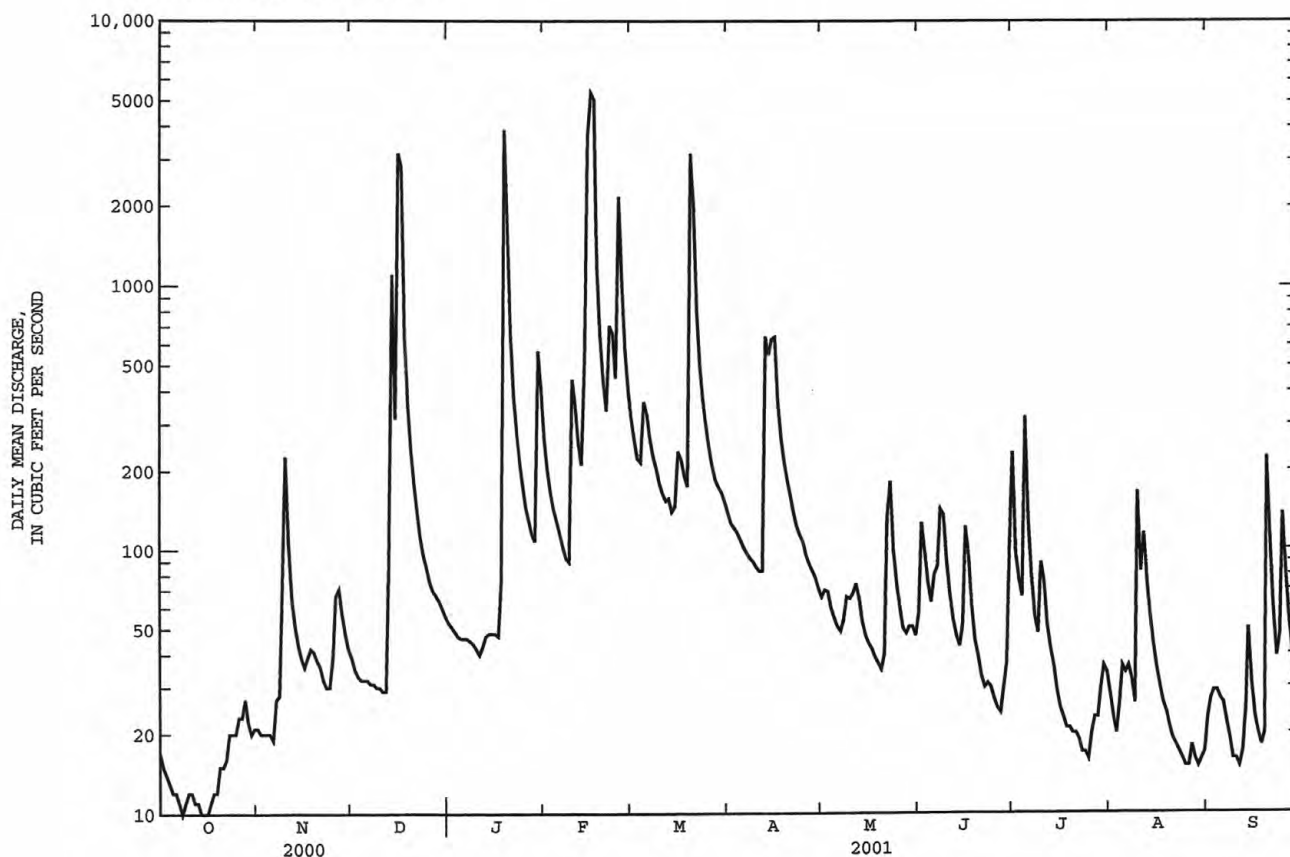
## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1991 - 2001

ANNUAL TOTAL	76776	73891	
ANNUAL MEAN	210	202	
HIGHEST ANNUAL MEAN			309
LOWEST ANNUAL MEAN			488
HIGHEST DAILY MEAN	5690	Mar 20	5350
LOWEST DAILY MEAN	10	Oct 8	10
ANNUAL SEVEN-DAY MINIMUM	11	Oct 11	11
MAXIMUM PEAK FLOW			11600
MAXIMUM PEAK STAGE			19.83
INSTANTANEOUS LOW FLOW			9.6
ANNUAL RUNOFF (CFSM)	.98		.95
ANNUAL RUNOFF (INCHES)	13.35		12.84
10 PERCENT EXCEEDS	365		363
50 PERCENT EXCEEDS	63		53
90 PERCENT EXCEEDS	19		17

a Also occurred Oct. 8, 13, 14, 16.



## CUMBERLAND RIVER BASIN

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 mi<sup>2</sup>.

## 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 sea level.

REMARKS.--Flow regulated by six lakes or reservoirs (see p. 124).

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173,000 ft<sup>3</sup>/s, Jan. 29, 1937; maximum gage height, 438.80 ft, Mar. 14, 1975; minimum daily discharge, 86 ft<sup>3</sup>/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 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 77,700 ft<sup>3</sup>/s, Feb. 17; minimum daily, 2,840 ft<sup>3</sup>/s, May 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5300	5260	5300	5700	7660	17600	11800	5700	9580	6900	11200	11800
2	5780	5350	4320	6380	6550	18200	12600	6220	8790	7930	15000	11600
3	5300	5100	3840	9520	7520	17100	10800	4980	6530	10300	12200	8480
4	5310	4410	3830	12000	9460	12400	12200	4980	6800	8360	11300	9640
5	5410	4430	5840	10200	7620	13600	15200	4990	6850	10900	10100	12900
6	5320	4400	5830	6760	5790	14500	15600	4990	8400	10500	7090	17800
7	4320	5540	4920	6760	6150	12400	14400	5060	9840	10100	8620	17000
8	3840	5780	5890	4700	6560	13600	14800	5040	9800	8070	10300	13400
9	6580	13000	3820	5910	6790	11800	13000	5950	9800	7840	11800	10800
10	7860	10400	3810	7770	15600	10100	13400	6810	5730	9020	8670	10700
11	7910	5740	4340	8620	9230	10000	13100	8160	6400	10300	7020	10500
12	8700	5730	6210	6580	8930	10100	13300	4270	6240	11200	7600	12200
13	5780	5930	7030	5030	11600	9910	13900	4280	6180	11200	11800	13600
14	4090	5310	8820	4530	11800	11800	17800	5080	5580	8280	8250	15700
15	3850	5280	12300	6770	46600	12600	18600	5350	5680	7550	8160	13700
16	4080	5300	23400	5260	64400	12600	16300	6700	4530	9990	10800	10100
17	4090	5290	48100	5760	77700	11400	18900	6980	5060	9040	12400	8130
18	4080	5020	29800	6660	50600	8170	20200	4350	5070	9430	12400	8870
19	4070	4990	16300	23100	27200	7820	20500	3140	7590	9170	11000	8960
20	4320	5010	7800	38300	20200	13200	20600	2840	7990	8550	11000	12000
21	4320	6150	7190	25300	19100	31700	13800	4350	6940	8520	10300	13600
22	4330	6330	9890	11300	18100	19900	11100	4820	8700	8020	11400	5380
23	4320	5700	8180	7150	22700	19500	11500	11900	6610	7780	14500	13500
24	5330	5700	9300	6550	23200	14100	9040	10700	6010	7770	17500	11200
25	5080	6260	8580	6640	24300	12200	10500	5790	7140	9240	12700	11200
26	4680	5730	10100	6670	28800	12300	10800	4990	8120	10100	10600	11100
27	5050	5730	13500	4340	25900	15900	11700	5050	9160	10900	10500	12800
28	4320	4790	14000	4330	20200	18200	11300	4300	9600	9940	11300	12900
29	5260	6040	13100	5100	---	20500	7910	5010	10900	12200	13700	9780
30	4790	6060	10500	8840	---	20800	5710	6940	9760	7840	17400	8670
31	5280	---	5700	10400	---	20800	---	7700	---	11600	15200	---
TOTAL	158750	175760	321540	282930	590260	454800	410360	177420	225380	288540	351810	348010
MEAN	5121	5859	10370	9127	21080	14670	13680	5723	7513	9308	11350	11600
MAX	8700	13000	48100	38300	77700	31700	20600	11900	10900	12200	17500	17800
MIN	3840	4400	3810	4330	5790	7820	5710	2840	4530	6900	7020	5380



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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9133	12190	21660	28050	27270	31080	28350	20220	15740	12720	12040	9976
MAX	29430	29530	43590	79580	61700	73880	74400	65100	40510	28410	21400	27600
(WY)	1990	1980	1979	1974	1957	1975	1994	1984	1997	1967	1982	1979
MIN	2660	3449	3974	4656	8524	6778	6963	5465	6048	4211	4991	2723
(WY)	1969	1981	1981	1981	1981	1981	1986	1988	1988	1974	1975	1968

## SUMMARY STATISTICS

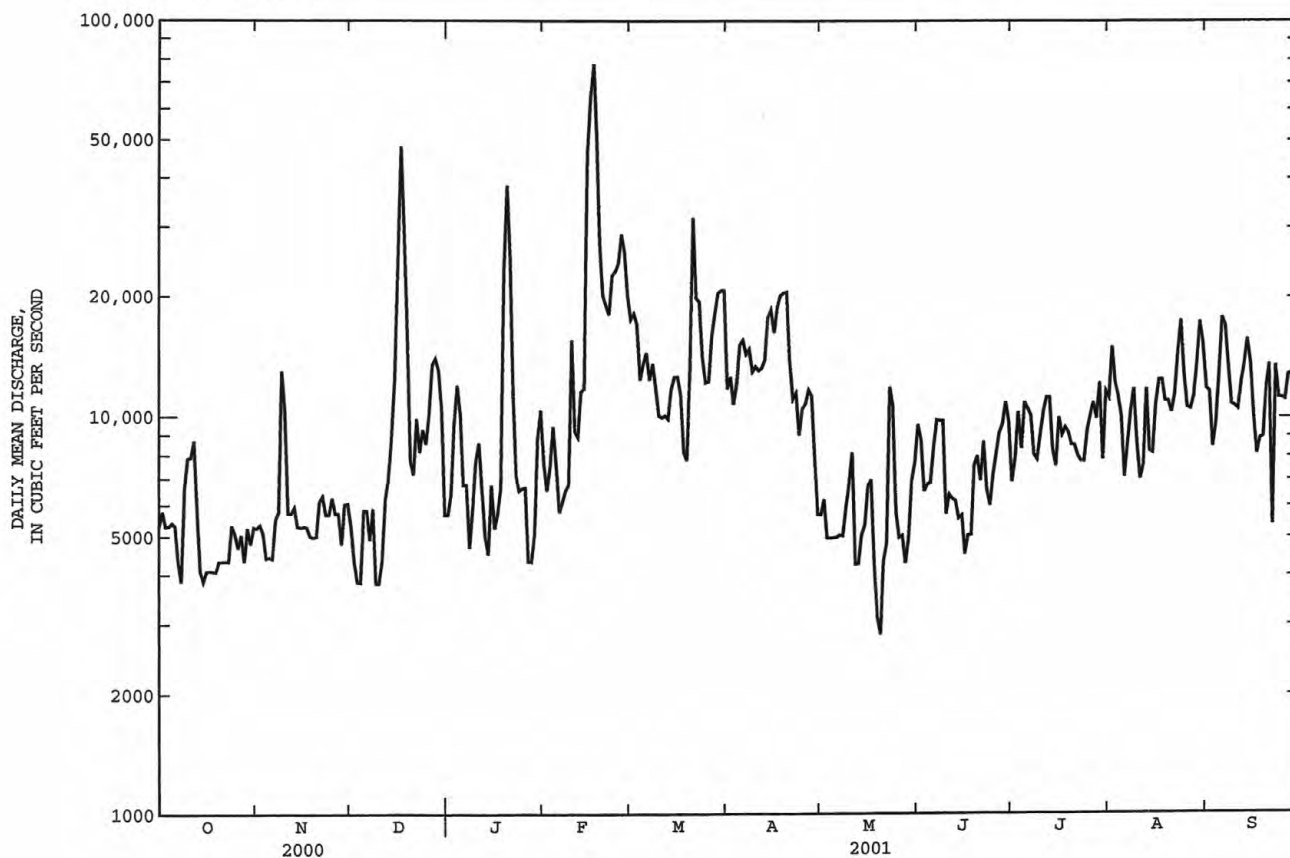
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

\*WATER YEARS 1957 - 2001

ANNUAL TOTAL	3622280	3785560	19000	
ANNUAL MEAN	9897	10370	28560	1974
HIGHEST ANNUAL MEAN			8780	1988
LOWEST ANNUAL MEAN			146000	Mar 14 1975
HIGHEST DAILY MEAN	64300	Mar 20	77700	Feb 17
LOWEST DAILY MEAN	3320	Mar 18	2840	May 20
ANNUAL SEVEN-DAY MINIMUM	4080	Oct 14	4080	Oct 14
10 PERCENT EXCEEDS	19300		17500	
50 PERCENT EXCEEDS	7460		8670	
90 PERCENT EXCEEDS	4330		5270	

\* Regulated period only.



## CUMBERLAND RIVER BASIN

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.

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.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 262 microsiemens, April 15, Dec. 2, 1988; 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, 17.2 mg/L, February 8, 2001; 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, 2000 water year; Sept. 20, 1997.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 238 microsiemens, Feb. 10; minimum, 190 microsiemens, Aug. 16.

pH: Maximum, 8.9 units, several days; minimum, 7.2 units, several days.

WATER TEMPERATURE: Maximum, 26.1°C, June 26; minimum, 2.9°C, Jan. 3.

DISSOLVED OXYGEN: Maximum, 17.2 mg/L, Feb. 8; minimum, 3.2 mg/L, May 30.

TURBIDITY: Maximum, 130 NTU, Feb. 16; minimum, 2 NTU, Oct. 29, 30, 31.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	206	208	218	232	230	214	221	208	224	220	202	199
2	206	207	219	232	229	211	219	208	223	219	201	199
3	207	207	221	231	230	208	215	209	223	218	201	197
4	208	206	221	228	231	206	212	209	220	215	203	200
5	208	208	222	221	234	206	210	210	218	214	203	198
6	204	208	223	218	236	206	210	209	217	216	204	198
7	206	207	223	215	236	206	211	209	216	214	204	200
8	207	207	221	215	236	205	211	208	214	213	206	203
9	206	205	221	213	236	203	213	207	214	216	206	204
10	206	205	220	212	236	203	214	208	213	214	205	205
11	207	206	219	211	235	202	216	210	213	214	205	205
12	207	206	217	208	233	201	216	209	215	214	206	205
13	209	206	216	205	232	201	216	210	218	211	206	205
14	209	207	214	205	232	202	217	212	221	206	207	205
15	210	207	211	204	228	201	218	212	218	206	206	205
16	211	207	208	204	223	202	220	211	---	207	204	206
17	212	207	209	204	223	204	223	211	---	209	207	206
18	212	206	212	204	222	204	224	210	220	210	204	207
19	212	206	211	202	216	203	226	208	217	213	204	207
20	212	207	207	205	217	201	226	210	221	213	204	206
21	212	207	208	206	219	198	230	211	221	213	208	206
22	213	208	209	212	220	199	230	209	225	214	208	206
23	213	208	208	214	224	200	229	213	221	216	209	205
24	213	209	209	215	225	203	220	215	220	216	209	204
25	212	209	210	220	222	208	220	217	217	215	210	203
26	212	210	212	221	217	213	217	218	211	213	211	203
27	211	211	215	223	214	214	214	219	211	211	210	204
28	209	213	219	224	216	216	210	220	215	206	200	203
29	209	215	223	224	---	222	210	223	214	204	196	201
30	210	217	228	226	---	227	209	223	218	204	197	200
31	209	---	231	228	---	226	---	223	---	203	199	---

## CUMBERLAND RIVER BASIN

61

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

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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

## CUMBERLAND RIVER BASIN

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	19.5	10.5	3.5	6.0	9.5	10.5	17.0	22.0	24.0	24.0	22.5
2	21.5	19.5	10.0	3.5	6.0	10.0	11.0	17.5	21.5	23.5	24.0	22.5
3	21.5	19.0	9.5	3.0	6.0	10.0	11.0	17.0	21.5	24.0	23.5	22.5
4	21.5	19.0	9.0	3.0	6.0	10.5	11.5	17.5	21.5	24.0	23.5	22.5
5	21.5	19.0	8.5	3.5	6.0	10.0	11.5	17.5	21.5	24.0	24.0	23.0
6	21.0	18.5	8.5	4.0	6.5	9.5	12.0	18.0	21.5	24.5	24.0	23.5
7	20.5	18.5	8.5	4.0	6.5	9.0	13.0	18.5	21.5	25.0	24.5	23.5
8	19.5	18.5	8.0	4.0	7.0	9.0	14.0	18.0	21.5	25.0	24.5	23.5
9	18.5	18.5	8.0	4.0	7.5	9.0	14.5	18.5	21.5	24.5	24.5	23.5
10	18.0	17.5	8.0	4.0	7.5	9.5	15.0	19.0	22.5	25.5	24.0	23.0
11	18.0	16.5	8.0	4.5	7.0	9.5	15.5	19.5	22.5	25.5	24.0	23.0
12	18.0	16.0	8.0	4.5	7.5	10.0	16.0	18.5	23.0	25.0	24.0	23.0
13	17.5	16.0	7.0	5.0	7.5	10.0	16.5	19.0	22.5	25.0	24.5	22.5
14	17.5	15.5	7.0	5.0	8.0	10.0	17.0	19.5	22.5	25.0	24.0	22.5
15	18.0	15.0	7.0	5.0	8.5	10.5	17.0	19.5	23.5	25.0	24.0	23.0
16	18.0	14.5	7.5	5.0	9.0	10.5	17.0	19.5	---	25.0	24.5	22.0
17	18.0	14.0	7.5	5.0	9.0	10.0	16.5	20.0	---	25.0	24.5	22.0
18	18.0	13.0	7.0	5.5	9.0	10.0	16.0	20.5	24.0	24.5	24.5	22.0
19	18.5	12.5	6.5	5.5	9.0	10.0	16.0	20.5	24.5	24.5	24.0	22.0
20	18.5	12.0	6.0	5.5	9.0	10.0	15.5	20.5	24.5	24.0	24.0	21.0
21	18.5	11.5	5.5	5.5	9.0	10.0	16.0	21.0	24.5	24.5	24.0	21.5
22	18.5	11.0	5.0	5.0	9.0	10.0	16.5	20.0	24.0	24.5	24.5	21.0
23	18.5	10.5	5.0	5.0	9.0	10.5	17.0	21.5	24.5	24.5	24.5	21.5
24	18.5	10.5	5.0	5.5	9.0	10.5	15.5	21.5	24.5	24.5	24.5	21.0
25	18.5	10.5	5.0	5.0	9.5	10.5	16.5	21.5	24.5	25.0	25.0	21.0
26	19.0	10.5	4.5	5.0	10.0	10.5	17.0	21.5	25.0	25.0	24.5	20.5
27	18.5	10.5	4.5	5.0	10.0	10.5	16.5	21.5	25.0	24.5	23.5	20.0
28	18.5	10.5	4.5	5.0	9.5	10.0	16.5	21.5	24.5	24.0	23.0	20.0
29	19.0	10.5	4.5	5.0	---	10.5	17.0	21.5	24.5	23.5	22.5	20.0
30	19.0	10.5	4.0	5.5	---	10.5	17.0	22.0	24.5	23.5	22.5	19.5
31	19.0	---	4.0	6.0	---	11.0	---	22.5	---	24.0	22.5	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	7.4	10.3	12.4	13.6	11.1	12.9	---	6.6	6.7	7.0	7.2
2	8.9	7.2	10.4	12.6	13.7	10.9	13.3	---	6.9	6.2	6.8	7.5
3	8.6	6.6	10.8	12.9	13.9	10.6	13.4	---	7.1	6.5	6.9	7.6
4	8.2	6.4	10.8	13.0	14.1	10.4	13.6	10.3	8.0	6.9	6.7	6.7
5	7.9	7.4	11.2	13.0	14.4	10.6	13.7	10.2	8.1	6.2	6.9	7.6
6	6.9	7.6	11.1	13.0	14.8	10.9	13.2	10.1	7.9	5.4	6.6	8.4
7	8.4	7.7	11.0	13.2	15.7	11.2	12.6	9.7	8.1	6.2	6.5	8.2
8	9.2	7.3	10.8	13.2	16.6	11.4	12.6	9.2	7.6	5.7	6.3	8.1
9	9.7	7.8	10.8	13.2	16.7	11.4	12.6	9.1	8.0	4.7	6.4	8.1
10	9.4	7.6	11.1	13.6	15.9	11.6	12.7	8.8	8.6	4.9	6.0	7.4
11	9.1	7.7	11.1	13.9	15.9	11.8	12.0	8.6	7.9	4.8	5.6	7.9
12	9.5	8.2	11.5	13.6	16.1	11.8	11.1	7.7	6.7	5.0	5.8	8.3
13	9.6	8.0	11.6	13.5	15.6	11.5	10.8	7.8	5.5	5.2	5.8	8.2
14	9.3	7.9	11.7	13.7	14.8	11.6	10.4	7.8	5.1	6.2	5.8	8.3
15	9.0	7.9	11.8	13.9	14.8	11.8	9.9	7.8	5.7	6.2	6.4	9.0
16	8.9	8.2	12.3	14.0	14.2	11.5	10.1	7.7	---	6.3	6.7	8.4
17	8.4	8.2	14.2	13.4	13.5	11.4	10.2	7.8	---	6.1	5.8	8.1
18	7.6	8.4	12.0	13.5	12.4	11.4	10.5	7.8	5.2	6.3	6.3	8.3
19	8.9	8.7	11.4	13.5	11.1	11.7	10.9	7.8	5.7	6.1	6.5	8.1
20	9.3	9.0	11.3	13.5	11.0	11.7	10.8	7.3	4.9	6.2	6.6	7.9
21	9.0	9.2	11.2	13.4	10.9	11.6	10.8	6.9	4.9	6.5	6.1	8.8
22	7.9	9.4	11.0	13.8	10.8	11.5	11.1	6.1	4.3	6.5	6.7	7.7
23	7.9	9.7	10.8	14.1	10.7	11.4	---	7.2	5.0	5.7	6.5	8.7
24	7.6	9.8	10.8	14.4	10.7	11.6	---	7.5	5.6	5.5	6.8	8.0
25	7.6	9.9	10.9	14.2	10.8	11.8	---	7.3	5.8	5.5	7.1	8.3
26	7.6	10.1	11.0	14.4	11.1	12.0	---	7.8	6.8	5.6	6.7	9.0
27	7.3	10.1	11.0	14.3	11.3	12.4	---	7.9	6.8	5.8	6.6	8.9
28	7.4	10.1	11.2	14.3	11.3	12.3	---	7.7	6.5	6.0	6.7	8.6
29	8.1	10.0	11.6	14.3	---	12.2	---	7.1	6.8	6.2	6.9	8.7
30	7.9	10.1	12.0	14.0	---	12.6	---	7.0	7.2	6.6	7.2	8.6
31	7.6	---	12.2	13.8	---	12.8	---	7.9	---	7.0	7.2	---



## CUMBERLAND RIVER BASIN

63

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

TURBIDITY (NTU), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12	8	7	4	8	6	8	5	14	10	25	21
2	11	8	6	3	9	5	6	4	15	9	33	23
3	14	8	8	3	10	6	7	4	11	9	35	28
4	11	7	8	3	8	5	6	4	11	9	30	25
5	12	7	8	3	9	6	5	4	10	8	26	23
6	13	6	8	4	8	6	6	3	12	8	23	21
7	14	6	8	3	9	5	5	3	12	7	22	18
8	13	7	9	5	6	3	4	3	12	9	26	16
9	14	9	9	6	6	3	5	3	12	9	18	15
10	15	10	10	6	5	3	5	3	13	9	19	16
11	12	9	10	6	5	3	6	4	16	9	16	14
12	12	9	9	6	7	3	8	4	12	9	16	13
13	15	9	10	5	6	4	7	5	12	9	17	13
14	11	7	13	5	6	3	11	6	13	8	15	12
15	11	7	10	6	5	3	8	6	20	9	16	13
16	12	7	11	6	10	3	10	6	130	16	16	13
17	9	7	10	7	13	5	10	8	100	51	16	13
18	13	6	11	8	17	7	10	7	89	42	16	12
19	10	5	12	8	27	17	12	7	47	35	16	13
20	9	5	10	7	26	22	10	8	38	26	17	13
21	9	5	9	6	28	20	10	8	32	26	17	13
22	8	4	9	6	28	23	10	9	34	24	15	13
23	8	4	9	7	30	22	11	8	26	19	15	12
24	7	3	10	7	28	23	11	8	24	19	14	12
25	7	4	9	7	28	20	13	9	23	18	16	13
26	7	3	8	6	26	17	13	11	22	17	15	13
27	8	4	8	7	18	14	14	10	26	18	17	14
28	8	3	8	6	15	10	13	10	24	20	18	14
29	6	2	7	6	12	8	13	10	---	---	17	14
30	9	2	8	6	9	7	14	11	---	---	16	14
31	6	2	---	---	9	6	13	12	---	---	16	13
MONTH	15	2	13	3	30	3	14	3	130	7	35	12
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16	13	14	12	11	6	13	8	15	8	14	10
2	16	12	16	12	12	8	12	8	13	8	14	11
3	16	12	16	11	13	9	16	9	13	9	14	11
4	15	12	14	12	14	9	17	10	12	8	19	9
5	14	12	14	12	14	7	14	10	13	10	19	10
6	16	13	14	11	14	11	14	10	13	9	13	7
7	17	13	18	10	14	10	16	12	13	9	9	7
8	18	13	14	10	16	8	14	10	14	9	8	5
9	15	13	13	10	18	12	15	11	16	10	8	5
10	21	13	18	10	16	12	16	12	19	11	9	6
11	18	13	12	9	16	12	16	12	13	9	8	5
12	19	16	12	8	15	12	16	11	13	10	8	5
13	---	---	12	7	13	7	15	11	16	10	9	6
14	---	---	13	8	12	7	16	12	15	10	9	6
15	---	---	11	9	10	8	16	10	19	11	8	5
16	12	9	12	8	---	---	15	11	18	11	8	5
17	14	9	10	7	---	---	15	10	18	11	8	5
18	13	8	12	7	7	6	16	12	16	11	8	3
19	12	8	12	8	10	4	15	10	17	12	7	3
20	13	10	12	7	8	4	14	10	18	12	8	4
21	13	10	14	7	9	5	14	9	21	12	7	4
22	18	11	10	6	8	5	13	9	16	12	7	3
23	15	12	11	7	8	4	13	8	17	12	8	5
24	18	14	12	8	9	6	14	9	16	12	7	4
25	18	13	11	7	10	5	14	9	17	12	7	4
26	24	16	10	5	13	8	14	9	16	12	7	4
27	23	13	11	7	13	8	14	9	15	12	8	4
28	18	12	9	6	13	8	12	7	16	12	7	4
29	19	12	11	6	14	8	12	10	17	12	8	4
30	14	12	10	4	15	9	13	8	17	12	6	3
31	---	---	11	6	---	---	15	9	16	11	---	---
MONTH	24	8	18	4	18	4	17	7	21	8	19	3

## CUMBERLAND RIVER BASIN

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 mi<sup>2</sup>, includes Slater Creek.

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

GAGE.--Data collection platform. Datum of gage is 434.99 ft above sea level.

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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	1130	*2,510	*9.02	Feb 16	1645	1,850	7.71
Feb 14	2030	2,500	9.00				

Minimum daily discharge, 0.57 ft<sup>3</sup>/s, Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.9	7.6	6.1	35	46	20	7.9	76	19	3.3	2.4
2	1.1	1.8	7.2	4.6	28	39	18	7.4	34	14	2.6	2.2
3	.95	1.8	7.3	4.8	23	35	44	6.7	26	11	21	2.3
4	.89	1.8	6.7	4.9	20	61	46	6.1	30	9.6	17	2.2
5	.91	1.8	6.3	5.0	18	84	37	5.7	28	49	7.3	1.8
6	1.4	2.7	6.0	4.9	16	60	32	5.2	46	30	5.1	1.5
7	1.1	2.5	5.9	5.0	14	49	28	13	97	18	3.7	1.3
8	1.0	20	5.6	4.9	13	41	25	17	61	13	5.4	1.2
9	1.0	160	5.5	4.2	20	35	22	11	35	9.5	8.9	.95
10	1.1	28	5.5	4.0	40	31	20	8.7	24	7.8	7.9	1.6
11	1.2	14	5.8	4.6	33	28	18	31	17	6.5	5.4	1.1
12	1.1	9.8	6.2	6.0	28	27	18	20	13	5.5	12	1.0
13	1.2	7.8	16	5.8	27	28	43	11	10	4.6	31	.95
14	1.2	6.2	32	5.9	473	25	37	9.1	8.1	3.7	16	.79
15	1.1	5.5	24	5.9	662	33	69	6.8	29	3.2	9.0	.75
16	1.1	6.3	632	5.5	701	51	59	5.8	46	3.0	8.0	.77
17	1.1	5.8	158	5.6	272	45	41	5.0	18	2.8	5.7	.74
18	1.2	5.0	56	21	126	39	33	4.2	12	3.1	4.2	.85
19	1.3	4.6	35	239	83	35	27	3.8	8.8	2.8	3.6	1.2
20	1.4	4.2	24	115	60	52	23	4.2	6.7	2.3	2.9	.87
21	1.7	4.0	19	55	48	92	20	32	5.7	2.5	2.5	.72
22	1.8	3.9	14	38	114	69	17	72	6.5	2.0	2.3	.68
23	1.7	4.0	12	32	81	53	16	26	5.1	1.8	2.0	.61
24	1.7	8.3	11	27	64	43	26	16	4.2	1.6	2.4	.99
25	2.0	33	8.9	23	201	37	18	11	3.6	4.3	2.1	1.2
26	1.9	23	8.2	20	112	32	15	8.6	3.1	6.6	2.4	.74
27	2.0	16	7.7	17	77	28	13	7.8	33	3.3	3.8	.59
28	2.0	12	7.2	15	58	26	11	11	17	5.6	2.7	.57
29	2.0	10	6.6	29	---	24	9.5	7.7	75	18	2.4	.61
30	2.0	8.7	6.1	82	---	23	8.6	6.4	32	8.4	2.4	.58
31	2.0	---	5.5	48	---	22	---	7.0	---	4.9	2.2	---
TOTAL	43.35	414.4	1158.8	848.7	3447	1293	814.1	395.1	810.8	277.4	207.2	33.76
MEAN	1.40	13.8	37.4	27.4	123	41.7	27.1	12.7	27.0	8.95	6.68	1.13
MAX	2.0	160	632	239	701	92	69	72	97	49	31	2.4
MIN	.89	1.8	5.5	4.0	13	22	8.6	3.8	3.1	1.6	2.0	.57
CFSM	.05	.50	1.35	.99	4.44	1.51	.98	.46	.98	.32	.24	.04
IN.	.06	.56	1.56	1.14	4.63	1.74	1.09	.53	1.09	.37	.28	.05

03426385 MANSKER CREEK ABOVE GOODLETTSVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.46	28.7	48.7	71.5	80.4	96.5	64.1	46.2	39.5	8.14	5.07	8.25
MAX	21.7	81.9	123	157	169	251	116	97.3	127	12.7	14.0	52.2
(WY)	1996	1997	1997	1999	1994	1997	1998	1998	1998	1998	1994	1996
MIN	1.40	2.94	10.1	15.4	46.4	39.4	23.2	12.7	5.31	2.58	1.17	.38
(WY)	2001	1999	2000	2000	1995	2000	1995	2001	2000	1995	1993	1999

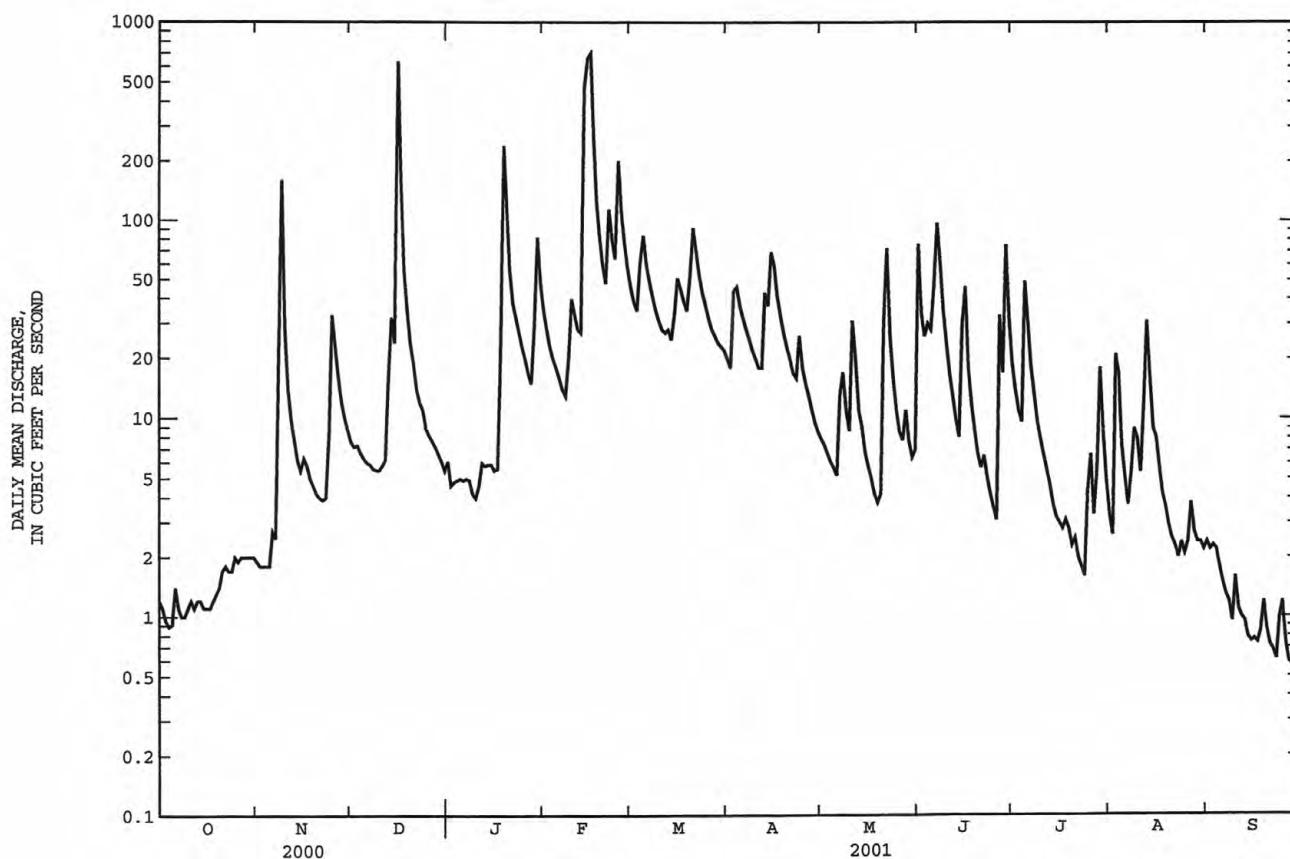
## SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1993 - 2001

ANNUAL TOTAL	8754.96		9743.61		41.3		1997	
ANNUAL MEAN	23.9		26.7		63.9		1997	
HIGHEST ANNUAL MEAN					1.99		1993	
LOWEST ANNUAL MEAN					1890		Mar 2 1997	
HIGHEST DAILY MEAN	632		701		.02		Sep 9 1999	
LOWEST DAILY MEAN	.40		.57		.04		Sep 3 1999	
ANNUAL SEVEN-DAY MINIMUM	.58		.75		12500		Mar 2 1997	
MAXIMUM PEAK FLOW			2510		13.31		Mar 2 1997	
MAXIMUM PEAK STAGE			9.02		1.49			
ANNUAL RUNOFF (CFSM)	.86		.96		20.25			
ANNUAL RUNOFF (INCHES)	11.76		13.09		84			
10 PERCENT EXCEEDS	53		51		12			
50 PERCENT EXCEEDS	7.4		8.3		1.5			
90 PERCENT EXCEEDS	.97		1.2					



## 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 mi<sup>2</sup>.

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

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

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 1,050 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	1200	2,360	8.53	Jun 29	1445	*2,890	*8.84
Feb 14	2015	1,400	7.83				

Minimum discharge, 0.08 ft<sup>3</sup>/s, Oct. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.19	1.4	1.4	7.0	9.9	3.8	1.5	2.3	6.4	.41	.93
2	.16	.17	1.3	1.3	5.4	8.1	3.5	1.4	2.2	3.2	.35	.82
3	.14	.17	1.2	1.3	4.6	6.7	6.6	1.2	2.3	1.9	17	.76
4	.12	.18	1.2	1.3	4.0	9.7	5.1	1.1	2.0	1.8	4.0	.70
5	.10	.20	1.1	1.3	3.5	11	4.3	1.1	1.7	1.5	1.8	.54
6	.24	.51	1.1	1.3	2.9	9.0	3.9	1.0	1.9	1.2	1.7	.42
7	.24	.33	1.0	1.2	2.5	7.6	3.7	2.2	5.5	.91	1.1	.57
8	.22	10	1.0	1.1	2.3	6.7	3.5	3.5	4.3	.76	.94	.41
9	.21	60	.96	1.1	7.1	5.8	3.3	2.7	2.7	.68	1.2	.75
10	.20	5.9	.95	1.1	11	5.2	3.1	2.0	1.8	.64	1.1	.88
11	.20	2.5	1.0	1.2	7.4	4.7	2.9	1.5	1.5	.54	.92	.57
12	.20	1.7	1.2	1.6	5.8	4.4	3.5	1.3	1.3	.46	1.0	.43
13	.19	1.4	7.1	1.4	5.5	4.8	15	1.1	1.1	.39	14	.31
14	.17	1.2	11	1.4	142	4.3	8.1	1.0	.99	.36	3.9	.25
15	.16	1.0	7.3	1.4	191	8.1	28	.98	7.9	.29	1.8	.22
16	.16	1.2	363	1.3	258	14	14	.89	9.3	.26	2.0	.20
17	.14	1.2	42	1.4	80	8.9	9.5	.81	2.5	.26	1.7	.19
18	.14	1.1	13	12	30	7.2	7.3	.76	1.5	.28	1.2	.20
19	.14	1.0	7.6	112	18	6.3	6.2	.89	1.2	.27	.94	.40
20	.14	.95	5.0	35	13	13	5.1	1.0	1.1	.46	.79	.33
21	.19	.94	4.0	14	11	20	4.3	9.3	1.0	.51	.71	.24
22	.20	.90	3.3	9.1	68	13	3.8	21	1.1	.34	.66	.19
23	.17	.90	2.8	7.2	22	10	3.7	5.6	.93	.25	.58	.21
24	.16	2.9	2.5	5.6	15	8.5	5.9	3.4	.72	.19	.55	.66
25	.16	11	2.3	4.6	98	7.2	3.7	2.3	.59	.20	.46	.41
26	.17	5.2	2.1	4.0	24	6.2	3.1	1.7	.55	.35	.38	.33
27	.17	2.9	1.9	3.4	16	5.5	2.6	1.4	11	.28	.44	.26
28	.18	2.0	1.7	2.9	12	5.0	2.2	1.5	3.5	.45	.44	.22
29	.19	1.9	1.5	7.6	---	4.5	1.9	1.3	240	1.0	.43	.18
30	.19	1.6	1.5	16	---	4.2	1.7	1.1	22	.81	.51	.18
31	.19	---	1.4	9.4	---	4.0	---	1.3	---	.58	.89	---
TOTAL	5.40	121.14	494.41	264.9	1067.0	243.5	173.3	77.83	336.48	27.52	63.90	12.76
MEAN	.17	4.04	15.9	8.55	38.1	7.85	5.78	2.51	11.2	.89	2.06	.43
MAX	.24	60	363	112	258	20	28	21	240	6.4	17	.93
MIN	.10	.17	.95	1.1	2.3	4.0	1.7	.76	.55	.19	.35	.18
CFSM	.02	.53	2.09	1.12	4.99	1.03	.76	.33	1.47	.12	.27	.06
IN.	.03	.59	2.41	1.29	5.20	1.19	.84	.38	1.64	.13	.31	.06



## CUMBERLAND RIVER BASIN

67

03426470 DRY CREEK NEAR EDENWOLD, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.85	9.56	16.0	20.8	19.5	21.7	17.3	8.40	20.0	2.16	1.09	.77
MAX	5.15	30.8	34.2	49.9	38.1	57.0	48.5	20.8	47.3	4.06	2.06	2.58
(WY)	1997	1997	1997	1999	2001	1997	1998	1998	1999	2001	2001	1997
MIN	.17	.68	4.46	6.56	10.6	7.85	5.78	2.51	1.16	.33	.20	.12
(WY)	2001	1999	2000	2000	2000	2001	2001	2001	2000	2000	2000	1999

## SUMMARY STATISTICS

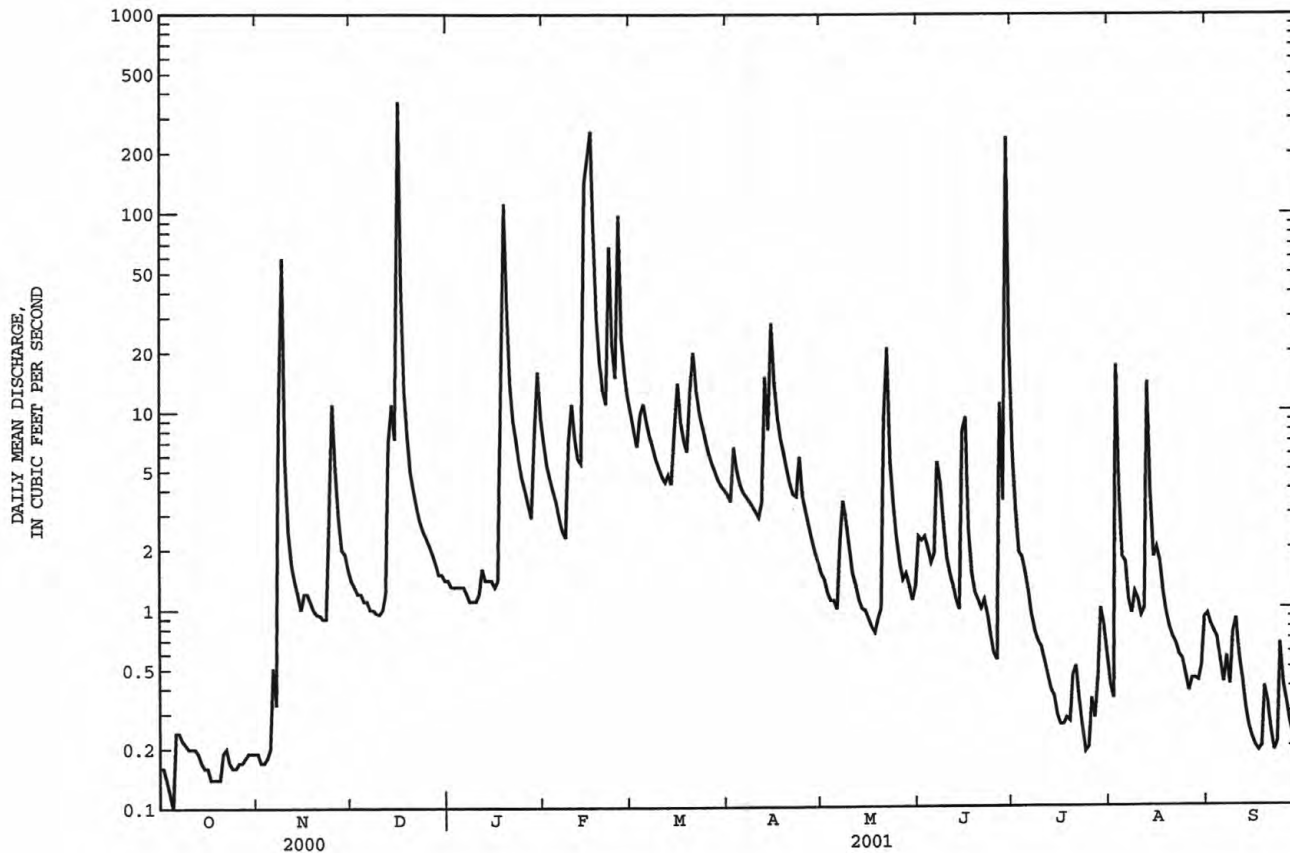
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1997 - 2001

ANNUAL TOTAL	2290.31	2888.14	
ANNUAL MEAN	6.26	7.91	11.5
HIGHEST ANNUAL MEAN			17.6
LOWEST ANNUAL MEAN			5.12
HIGHEST DAILY MEAN	363	Dec 16	679
LOWEST DAILY MEAN	.02	Aug 23	.02
ANNUAL SEVEN-DAY MINIMUM	.04	Aug 20	.04
MAXIMUM PEAK FLOW			2890
MAXIMUM PEAK STAGE			8.84
INSTANTANEOUS LOW FLOW			a.08
ANNUAL RUNOFF (CFSM)	.82	1.04	1.51
ANNUAL RUNOFF (INCHES)	11.15	14.06	20.51
10 PERCENT EXCEEDS	11	11	21
50 PERCENT EXCEEDS	1.4	1.4	2.6
90 PERCENT EXCEEDS	.09	.20	.21

a Also occurred Oct. 6.



## 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 mi<sup>2</sup>.

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 September 2001. 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.--Water-stage encoder and satellite telemeter at station. 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.--No estimated daily discharges. Records good. 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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	2330	10,600	21.49	Feb 17	0200	*14,200	*25.45
Jan 19	1500	9,670	20.42	Mar 20	1830	9,230	19.91

Minimum discharge, 5.5 ft<sup>3</sup>/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	8.8	38	80	381	427	134	63	123	44	37	28
2	14	8.6	35	76	273	342	119	63	141	72	27	51
3	12	8.5	34	71	218	286	109	62	100	70	22	53
4	11	8.8	32	67	188	284	105	57	78	64	59	47
5	11	9.9	31	66	167	603	97	52	70	138	65	32
6	10	9.8	30	65	150	492	90	49	70	106	40	25
7	9.6	9.9	28	64	135	378	84	47	65	60	29	21
8	8.9	12	26	62	123	307	79	53	335	43	28	18
9	7.9	266	25	60	118	260	76	61	209	129	89	15
10	7.4	328	24	58	869	220	72	81	119	230	164	14
11	7.7	128	23	55	574	192	69	70	82	68	204	12
12	7.8	76	22	62	389	177	70	86	63	83	106	11
13	7.9	54	125	83	328	181	1140	90	53	72	281	54
14	7.5	43	1920	91	1870	169	927	66	45	42	268	30
15	8.2	36	560	88	5420	178	934	54	42	31	143	19
16	8.9	34	4890	83	7540	339	913	48	73	25	81	15
17	8.4	45	4560	78	8420	308	513	44	74	22	54	13
18	7.6	66	1080	206	2030	253	343	41	52	18	40	11
19	6.5	53	611	6560	1030	219	262	39	41	19	32	14
20	5.8	43	384	3110	691	3430	214	37	35	16	27	202
21	6.9	36	273	1110	513	2830	179	39	31	16	24	124
22	7.7	32	214	643	961	1110	151	88	31	16	21	61
23	7.5	29	175	427	868	683	129	174	31	14	18	43
24	7.9	30	152	314	607	480	120	92	30	12	17	234
25	9.1	60	135	244	3040	355	112	71	27	13	16	153
26	8.9	126	121	203	1420	281	96	60	28	15	15	98
27	8.6	91	114	179	797	233	87	49	30	15	13	67
28	8.8	66	108	157	569	198	81	45	32	17	13	52
29	9.1	52	102	148	---	178	74	45	35	19	12	42
30	9.7	44	94	946	---	165	68	48	44	150	11	37
31	9.0	---	86	626	---	149	---	48	---	63	13	---
TOTAL	277.3	1814.3	16052	16082	39689	15707	7447	1922	2189	1702	1969	1596
MEAN	8.95	60.5	518	519	1417	507	248	62.0	73.0	54.9	63.5	53.2
MAX	16	328	4890	6560	8420	3430	1140	174	335	230	281	234
MIN	5.8	8.5	22	55	118	149	68	37	27	12	11	11
CFSM	.03	.23	1.98	1.98	5.41	1.93	.95	.24	.28	.21	.24	.20
IN.	.04	.26	2.28	2.28	5.64	2.23	1.06	.27	.31	.24	.28	.23

## CUMBERLAND RIVER BASIN

69

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2001, BY WATER YEAR (WY)

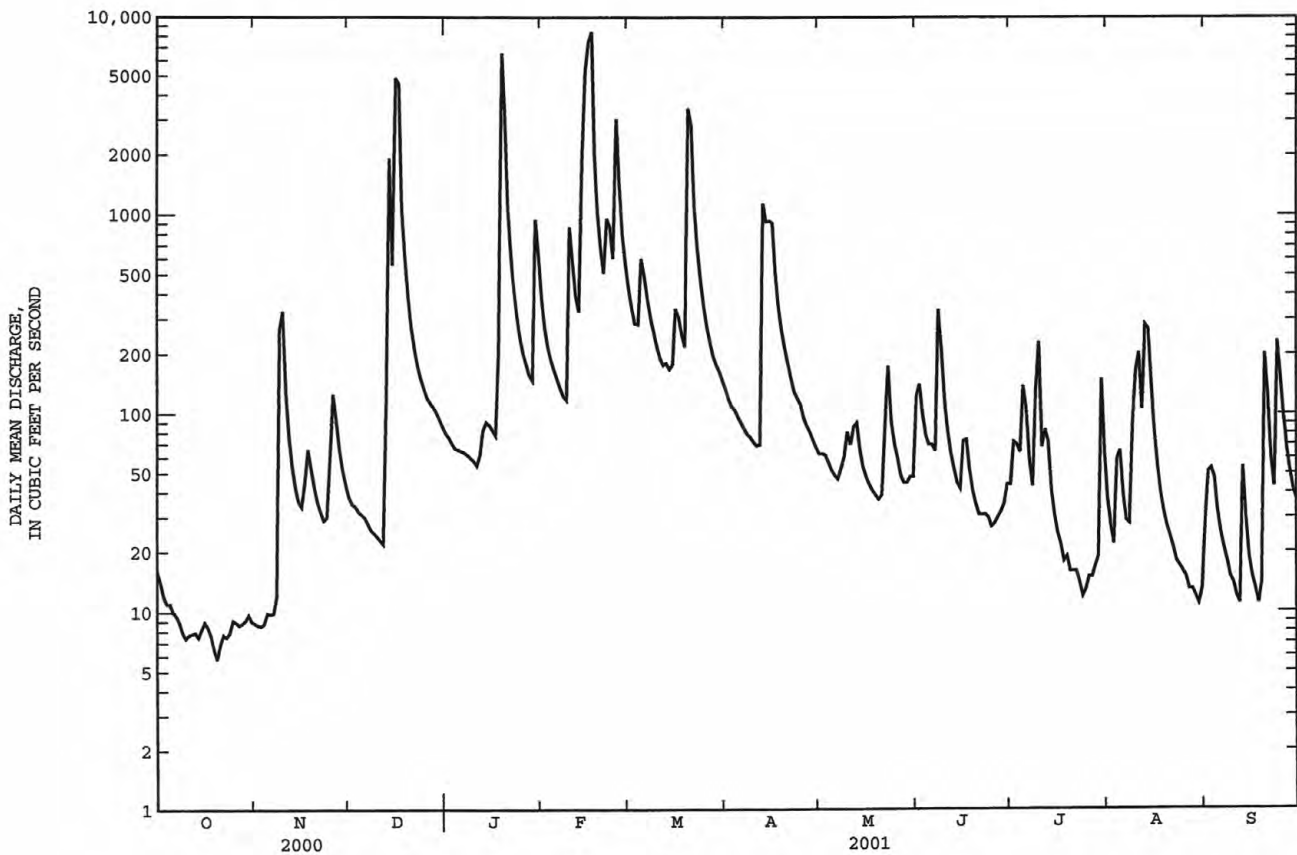
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	151	393	754	809	879	927	628	451	178	123	83.7	150
MAX	1211	1466	2027	2184	2136	3201	1605	2214	1261	898	448	1078
(WY)	1976	1987	1991	1974	1956	1975	1973	1984	1989	1989	1966	1986
MIN	7.13	9.56	19.6	55.4	205	205	69.5	34.6	9.62	16.8	13.3	10.9
(WY)	1954	1954	1966	1981	1968	1966	1986	1988	1988	1988	1957	1968

## SUMMARY STATISTICS

FOR 2001 WATER YEAR

WATER YEARS 1951 - 2001

ANNUAL TOTAL	106446.6	
ANNUAL MEAN	292	456
HIGHEST ANNUAL MEAN		921
LOWEST ANNUAL MEAN		141
HIGHEST DAILY MEAN	8420	Feb 17
LOWEST DAILY MEAN	5.8	Oct 20
ANNUAL SEVEN-DAY MINIMUM	7.1	Oct 18
MAXIMUM PEAK FLOW	14200	Feb 17
MAXIMUM PEAK STAGE	25.45	Feb 17
INSTANTANEOUS LOW FLOW	5.5	Oct 20
ANNUAL RUNOFF (CFSM)	1.11	
ANNUAL RUNOFF (INCHES)	15.11	
10 PERCENT EXCEEDS	564	974
50 PERCENT EXCEEDS	66	119
90 PERCENT EXCEEDS	11	16



## 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 mi<sup>2</sup>, includes 17 mi<sup>2</sup> 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 sea level.

REMARKS.--No estimated daily discharges. Records good. Flow is affected by Murfreesboro sewage treatment plant outflow. An annual average of 11.6 ft<sup>3</sup>/s, with a maximum of 15.5 ft<sup>3</sup>/s is discharged to the West Fork Stones River 25 ft above the station. Prior to July 1987 an annual average of 7.7 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 17	0330	6,010	13.49	Feb 17	0600	*11,300	*17.99
Jan 19	1730	4,940	12.05	Mar 20	2200	5,840	13.27
Feb 16	0300	4,860	11.94				

Minimum discharge, 9.1 ft<sup>3</sup>/s, Oct. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	20	51	85	377	427	165	58	78	149	58	59
2	30	19	56	80	311	376	144	55	53	101	46	49
3	28	17	53	74	263	340	135	51	46	78	43	53
4	26	18	49	70	232	359	123	46	53	83	196	55
5	26	20	45	67	208	491	114	42	46	121	144	46
6	28	18	42	65	183	425	104	39	41	288	89	40
7	25	20	40	62	160	361	94	39	58	157	65	35
8	22	29	37	60	140	316	87	74	108	99	57	32
9	22	316	36	58	148	279	82	51	131	132	81	33
10	21	189	35	54	354	249	76	46	85	275	316	37
11	21	141	34	53	348	225	71	83	68	180	168	28
12	20	100	35	67	302	220	81	74	59	173	138	34
13	19	82	98	76	312	224	705	54	50	131	984	123
14	18	72	732	86	1460	199	610	49	42	87	1360	50
15	17	63	392	85	2930	235	474	46	49	67	415	43
16	18	67	2170	78	4480	361	485	40	88	58	275	40
17	17	68	3120	74	6340	316	334	36	50	51	206	39
18	16	57	803	143	1400	265	264	32	42	49	155	36
19	15	55	555	3160	875	235	222	33	36	46	124	56
20	16	56	416	1910	671	1960	188	35	33	41	104	207
21	16	54	342	837	553	2110	161	34	31	93	87	83
22	32	47	290	593	702	810	140	61	70	49	75	63
23	23	43	248	468	661	575	133	52	45	42	68	55
24	20	43	212	392	520	452	127	39	35	39	58	341
25	20	85	181	337	1560	372	109	46	31	34	52	159
26	20	76	158	287	912	316	95	40	126	32	47	108
27	21	97	141	254	629	274	85	35	154	32	46	87
28	18	82	129	223	509	242	75	37	80	32	44	75
29	17	72	113	229	---	215	68	49	125	46	38	66
30	18	63	103	705	---	201	64	39	204	95	35	59
31	18	---	91	523	---	181	---	45	---	77	46	---
TOTAL	658	2089	10807	11255	27540	13611	5615	1460	2117	2937	5620	2191
MEAN	21.2	69.6	349	363	984	439	187	47.1	70.6	94.7	181	73.0
MAX	32	316	3120	3160	6340	2110	705	83	204	288	1360	341
MIN	15	17	34	53	140	181	64	32	31	32	35	28



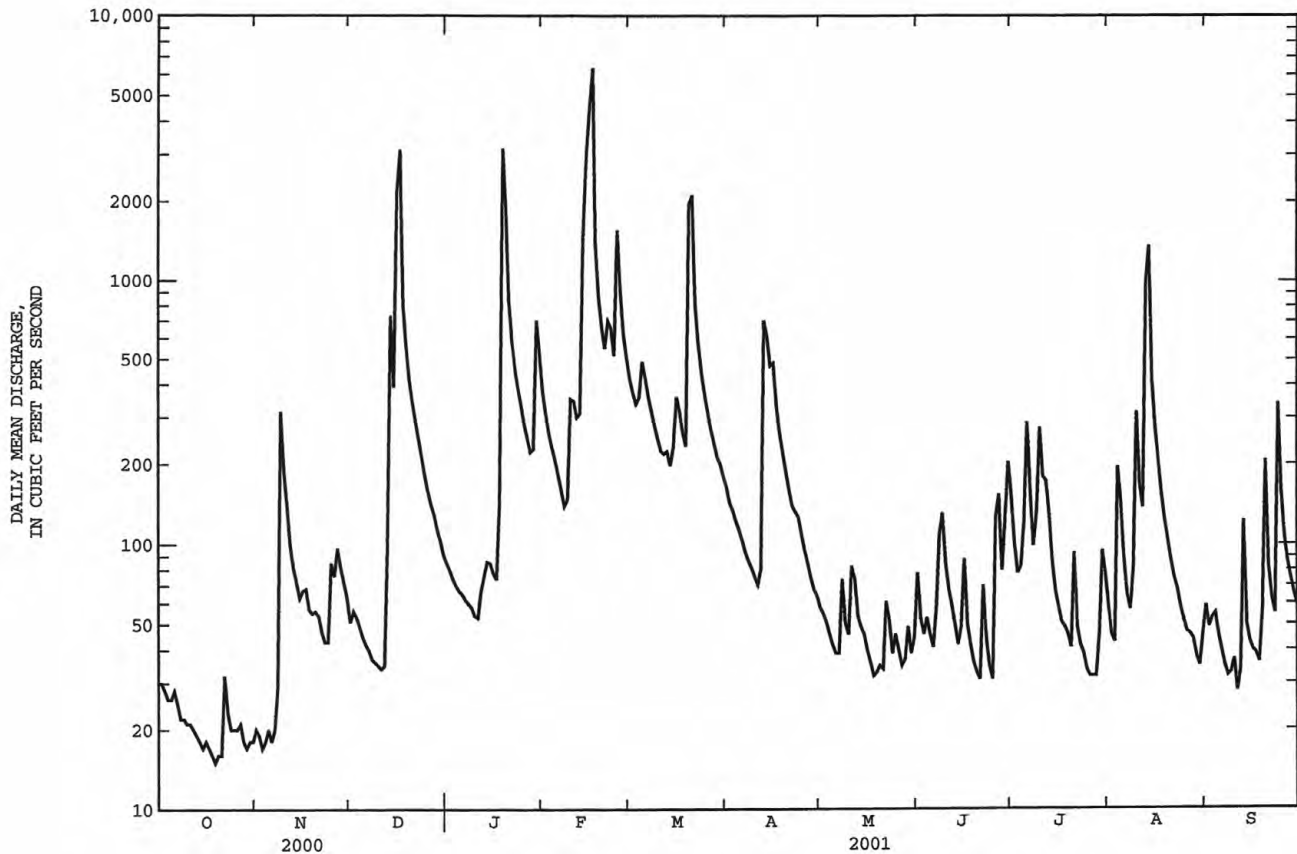
03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	140	270	481	571	524	671	340	206	161	98.4	72.9	134
MAX	894	1035	1259	1453	1156	1773	954	818	765	658	348	880
(WY)	1976	1987	1991	1974	1991	1975	1994	1973	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

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		aWATER YEARS 1972 - 2001	
ANNUAL TOTAL	71369		85900			
ANNUAL MEAN	195		235		310	
HIGHEST ANNUAL MEAN					517	
LOWEST ANNUAL MEAN					76.0	
HIGHEST DAILY MEAN	4010		6340		21200	
LOWEST DAILY MEAN	15		15		4.7	
ANNUAL SEVEN-DAY MINIMUM	16		16		5.3	
MAXIMUM PEAK FLOW			11300		31000	
MAXIMUM PEAK STAGE			17.99		23.80	
INSTANTANEOUS LOW FLOW			9.1		2.9	
10 PERCENT EXCEEDS	435		478		634	
50 PERCENT EXCEEDS	68		76		106	
90 PERCENT EXCEEDS	20		29		15	

a See REMARKS.



## CUMBERLAND RIVER BASIN

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.

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, 18.9 mg/L, Apr. 1, 2001; minimum, 1.6 mg/L, Sept. 12, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 484 microsiemens, Nov. 29, Dec. 3, 4; minimum, 133 microsiemens, Feb. 17.

pH: Maximum, 8.7 units, Mar. 27; minimum, 7.2 units, Oct. 28, 29, 30, June 30, July 1.

WATER TEMPERATURE: Maximum, 30.4, Aug. 1; minimum, 7.2°C, Jan. 3.

DISSOLVED OXYGEN: Maximum, 18.9 mg/L, Apr. 1; minimum, 3.7 mg/L, July 20.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	399	432	474	442	356	366	345	364	354	350	380	398
2	405	430	478	454	381	370	340	364	364	369	380	404
3	407	431	479	465	391	372	347	365	362	375	360	399
4	406	433	478	453	398	371	351	373	364	---	356	388
5	403	441	474	443	400	366	355	369	373	---	375	396
6	402	448	474	440	399	362	353	367	380	366	387	396
7	401	448	475	445	395	364	352	366	383	349	359	393
8	404	439	471	438	391	366	352	350	377	363	335	394
9	409	316	466	433	392	368	353	359	378	358	315	392
10	410	357	464	426	382	366	354	357	386	345	372	388
11	413	419	467	424	385	362	351	345	386	358	391	393
12	415	430	464	433	383	367	346	346	385	361	323	386
13	416	454	430	466	388	368	312	347	384	355	281	331
14	416	458	347	444	311	364	282	354	383	347	230	362
15	416	459	307	424	251	359	331	367	377	359	344	371
16	416	457	273	422	213	364	358	366	353	379	396	373
17	415	457	204	420	187	367	357	366	352	383	421	374
18	415	456	313	420	289	371	367	365	353	383	433	374
19	413	457	361	290	327	372	371	368	340	384	439	365
20	414	458	382	255	345	305	375	374	333	381	441	354
21	418	468	396	332	356	224	373	370	330	333	439	365
22	426	473	406	365	344	316	364	359	329	353	437	372
23	434	470	412	382	337	341	364	361	348	344	432	379
24	436	466	418	391	346	352	365	364	352	316	430	318
25	436	452	424	396	279	355	362	362	343	310	418	291
26	439	450	429	401	277	353	362	367	309	335	390	319
27	440	452	434	405	333	349	359	373	286	354	374	335
28	440	478	436	407	356	347	358	377	308	363	379	350
29	438	479	439	405	---	353	358	381	336	363	381	361
30	438	476	441	377	---	356	362	382	299	356	384	369
31	435	---	442	324	---	356	---	372	---	349	390	---

## CUMBERLAND RIVER BASIN

73

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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

## CUMBERLAND RIVER BASIN

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	19.5	7.5	2.5	10.0	11.0	12.5	22.0	22.5	24.0	29.0	25.0
2	21.0	19.5	7.0	2.0	9.0	12.0	13.5	22.0	21.0	25.0	29.0	25.0
3	22.0	19.5	6.0	1.5	7.5	12.5	14.5	22.5	20.5	26.0	27.5	25.0
4	22.5	18.5	6.0	2.5	7.0	12.0	15.5	23.0	22.0	26.0	27.0	25.0
5	22.0	16.5	6.0	3.0	7.0	11.0	16.5	23.5	23.5	25.5	27.0	26.0
6	21.0	16.0	5.0	3.5	7.5	10.0	18.0	24.0	24.0	25.5	27.0	27.0
7	17.0	17.0	5.0	4.5	8.9	9.5	19.5	23.5	24.0	25.5	27.5	27.5
8	13.5	17.5	5.5	4.5	10.5	10.0	21.0	22.0	24.0	26.5	27.5	27.0
9	12.5	18.5	6.0	3.5	11.5	10.5	21.5	21.5	24.0	27.5	26.5	27.0
10	12.0	15.5	7.5	3.0	10.5	10.5	22.5	22.5	24.5	26.5	25.5	26.0
11	12.5	13.5	9.0	3.0	9.0	11.0	23.0	22.5	24.5	27.0	25.0	24.5
12	13.0	13.0	7.0	4.5	9.0	12.0	22.5	22.0	25.5	26.5	25.5	24.0
13	13.5	12.5	5.0	5.0	9.5	13.0	20.0	21.5	26.5	25.5	24.0	24.5
14	14.5	11.0	6.5	5.5	11.0	13.0	17.5	21.0	27.5	25.5	23.0	24.0
15	15.5	10.0	8.0	7.0	13.0	13.5	17.5	22.5	27.0	25.5	23.5	22.5
16	17.0	10.0	10.0	6.5	12.5	13.0	17.5	24.5	26.5	25.5	24.0	22.5
17	18.0	9.5	9.5	6.0	9.0	11.5	15.5	25.0	26.5	26.5	24.5	23.0
18	18.5	7.5	7.0	6.5	8.5	10.5	14.5	25.5	27.5	26.5	24.5	23.0
19	17.0	7.5	7.0	7.0	9.5	11.0	14.5	25.0	27.5	27.0	25.0	23.0
20	17.0	7.5	5.5	6.5	10.5	9.5	15.0	24.5	27.5	27.0	25.0	22.5
21	18.5	6.0	5.5	6.5	11.5	8.5	16.5	25.0	27.0	26.5	25.0	22.5
22	19.0	5.5	5.0	7.0	10.5	10.5	18.5	24.0	25.5	27.0	25.5	23.0
23	20.0	7.0	4.5	7.0	10.0	12.0	19.5	21.5	24.0	28.5	26.5	23.0
24	20.0	9.0	5.5	7.5	11.0	12.5	20.0	21.0	25.0	29.0	26.5	21.5
25	20.0	9.5	4.5	7.0	13.5	11.5	18.5	20.5	25.0	28.5	26.5	19.0
26	20.0	10.0	4.5	6.0	13.0	11.0	18.0	21.0	24.0	27.5	27.0	17.5
27	20.0	9.5	5.5	6.0	12.0	11.0	19.0	22.0	22.5	28.0	27.0	17.5
28	20.0	9.5	5.0	6.0	11.0	10.5	20.5	22.0	23.0	28.5	26.5	18.0
29	20.0	10.5	4.0	7.0	---	11.0	20.5	22.0	23.5	28.0	27.0	17.5
30	18.5	9.0	3.0	9.5	---	11.0	21.5	23.0	23.5	28.5	26.5	17.5
31	19.5	---	2.5	10.1	---	12.0	---	23.0	---	28.5	25.5	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.4	7.9	12.6	13.4	11.7	12.1	14.2	8.3	8.0	7.0	6.4	6.7
2	10.3	8.2	12.4	13.8	12.5	11.5	13.3	8.8	8.5	6.1	6.1	6.5
3	10.5	8.2	13.0	---	13.5	11.6	11.7	8.6	8.6	7.0	5.3	6.7
4	10.3	7.9	13.9	---	13.6	10.6	11.5	7.6	---	7.0	6.2	7.2
5	9.8	8.9	14.2	---	14.1	11.9	10.9	7.2	---	6.1	6.5	7.0
6	8.6	9.5	13.9	---	14.5	12.8	11.0	7.1	7.4	6.9	6.5	7.7
7	9.3	9.6	14.1	---	14.5	13.1	9.9	6.6	6.8	---	6.5	7.8
8	10.6	9.5	14.3	---	14.2	13.3	9.2	6.3	7.4	---	6.1	7.6
9	10.7	---	14.2	---	12.4	13.5	8.3	6.1	7.8	6.6	5.6	7.2
10	11.2	---	13.1	---	11.3	13.7	7.9	6.2	8.1	---	6.2	6.9
11	10.6	---	11.9	---	13.1	13.5	7.8	6.1	8.0	---	---	6.5
12	10.2	---	12.0	---	12.5	11.9	7.7	6.7	8.3	9.0	---	6.5
13	10.0	---	12.8	---	12.2	12.2	8.0	6.9	8.0	9.4	7.2	5.8
14	10.1	10.1	11.3	---	11.5	12.2	9.3	7.2	7.6	9.4	7.7	5.1
15	9.8	10.9	10.9	---	10.8	11.4	9.4	8.7	7.0	8.4	8.1	---
16	9.1	10.3	10.0	---	10.8	10.1	10.0	8.3	8.0	7.1	8.4	---
17	7.9	11.0	10.1	---	12.1	10.9	10.4	7.0	7.0	6.8	8.9	---
18	6.7	11.8	11.2	12.8	12.9	12.5	11.8	6.2	7.5	5.9	9.5	8.0
19	6.4	12.3	11.2	12.2	12.6	12.7	12.4	5.4	9.0	5.4	10.3	7.4
20	6.6	12.5	11.6	12.6	12.0	11.9	11.4	6.2	9.6	4.9	9.8	7.9
21	5.2	13.1	11.5	12.7	11.8	---	11.9	5.9	8.0	5.4	8.7	8.2
22	6.4	13.8	11.9	12.7	11.8	12.1	11.9	6.7	5.7	6.1	7.8	8.2
23	6.9	13.7	12.2	12.8	12.5	12.1	10.8	7.2	6.7	6.4	6.2	8.0
24	6.6	12.5	11.9	12.7	12.1	11.8	10.5	7.3	6.9	6.7	---	---
25	6.5	10.8	12.1	13.0	10.9	12.9	10.4	8.1	6.8	6.0	---	---
26	6.3	10.9	12.2	13.0	11.1	13.6	10.7	8.3	6.8	5.5	---	---
27	5.8	11.6	11.9	13.6	11.4	14.3	10.6	8.2	6.1	5.9	---	---
28	5.6	12.2	11.8	14.2	11.8	14.4	10.1	7.3	7.9	5.7	7.9	8.8
29	5.6	12.1	11.8	13.4	---	13.3	9.6	8.5	7.8	5.3	7.8	8.9
30	5.4	12.4	12.8	11.4	---	13.1	8.9	8.3	6.2	5.5	7.0	9.2
31	6.4	---	13.1	11.3	---	13.3	---	8.2	---	5.5	6.3	---



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## CUMBERLAND RIVER BASIN

03430147 STONERS CREEK NEAR HERMITAGE, TN

LOCATION.--Lat 36°11'40", long 86°36'28", Davidson County, Hydrologic Unit 05130203, on downstream end of pier at center of culvert under Andrew Jackson Parkway, 0.8 mi southwest of Hermitage.

DRAINAGE AREA.--20.6 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1992 to current year.

GAGE.--Data logger. Datum of gage is 411.70 ft above sea level.

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 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov 9	0245	961	6.85	Feb 16	1815	*1,640	*8.38
Dec 16	1700	1,190	7.41	Feb 25	0415	1,210	7.47

Minimum daily discharge, 0.10 ft<sup>3</sup>/s, Oct. 14, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.53	5.3	5.6	20	41	14	5.3	21	7.2	1.3	1.0
2	.37	.43	4.7	5.1	16	36	13	5.3	15	4.6	1.0	1.2
3	.33	.43	4.4	4.3	13	31	13	4.2	12	3.3	13	1.2
4	.40	.43	4.1	2.8	12	42	12	3.7	11	2.8	8.1	1.0
5	.25	.43	3.9	3.8	11	44	11	3.2	8.5	21	23	.75
6	.85	1.7	3.7	4.0	10	35	10	2.9	6.9	8.8	12	.64
7	.32	.59	3.4	3.9	9.1	31	9.5	6.8	10	4.5	4.5	.49
8	.17	41	3.2	3.7	8.1	28	8.8	26	8.3	3.2	18	.47
9	.17	281	3.0	3.4	23	25	8.2	13	6.3	2.4	22	.94
10	.15	27	2.9	3.1	49	23	7.8	9.9	5.1	2.1	12	.84
11	.21	13	2.8	3.5	26	21	7.1	7.0	4.2	1.9	6.6	.50
12	.13	9.0	3.1	4.7	22	21	7.1	5.8	3.5	1.6	4.7	.41
13	.11	6.9	30	4.1	20	24	40	4.8	3.0	1.2	4.8	.38
14	.10	5.3	45	3.9	201	20	19	4.1	2.6	.97	3.4	.39
15	.10	4.4	23	3.8	462	32	41	3.7	16	.80	2.5	.48
16	.12	5.1	421	3.6	785	38	26	3.0	21	.73	4.5	.45
17	.29	5.0	123	4.0	279	30	18	2.7	8.3	2.5	4.4	.43
18	.57	4.3	52	20	120	27	15	2.3	5.7	1.6	2.7	.41
19	.51	3.8	33	287	80	25	13	2.3	4.3	1.6	1.9	5.0
20	.46	3.2	23	107	60	77	12	2.5	3.5	.90	1.5	8.3
21	.73	2.8	18	54	48	72	11	15	3.0	.82	1.2	2.1
22	1.2	2.7	14	36	84	47	9.2	97	4.4	.66	.98	1.2
23	.65	2.7	12	27	58	36	8.3	22	2.9	.57	.81	1.8
24	.53	5.5	10	21	47	29	11	13	2.5	.52	.74	10
25	.49	32	8.8	17	386	24	7.9	11	2.1	.73	.70	3.4
26	.52	18	8.0	15	97	21	7.0	7.7	2.2	18	.62	2.0
27	.54	12	7.5	13	67	19	6.2	6.0	3.6	7.8	.77	1.4
28	.59	8.8	6.9	11	51	17	5.6	19	5.3	3.7	.63	1.1
29	.62	7.6	6.3	16	---	17	5.1	11	4.8	4.8	1.1	.86
30	.65	6.1	5.9	36	---	16	4.9	7.9	12	2.7	1.1	.76
31	.55	---	5.9	22	---	15	---	12	---	1.8	.67	---
TOTAL	13.09	511.74	897.8	749.3	3064.2	964	381.7	340.1	219.0	115.80	161.22	49.90
MEAN	.42	17.1	29.0	24.2	109	31.1	12.7	11.0	7.30	3.74	5.20	1.66
MAX	1.2	281	421	287	785	77	41	97	21	21	23	10
MIN	.10	.43	2.8	2.8	8.1	15	4.9	2.3	2.1	.52	.62	.38
CFSM	.02	.83	1.41	1.17	5.31	1.51	.62	.53	.35	.18	.25	.08
IN.	.02	.92	1.62	1.35	5.53	1.74	.69	.61	.40	.21	.29	.09

## CUMBERLAND RIVER BASIN

77

03430147 STONERS CREEK NEAR HERMITAGE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.12	21.9	36.0	51.5	51.3	66.8	37.8	27.0	27.4	11.9	4.15	4.53
MAX	43.3	53.1	75.6	108	119	149	112	83.6	101	62.0	13.3	11.5
(WY)	1996	1996	1997	1999	1994	1997	1994	1995	1998	1992	1994	1995
MIN	.42	1.12	11.4	21.8	27.5	31.1	10.6	5.24	3.24	1.37	.79	.28
(WY)	2001	1999	2000	2000	1995	1998	1992	1992	2000	2000	1993	1998

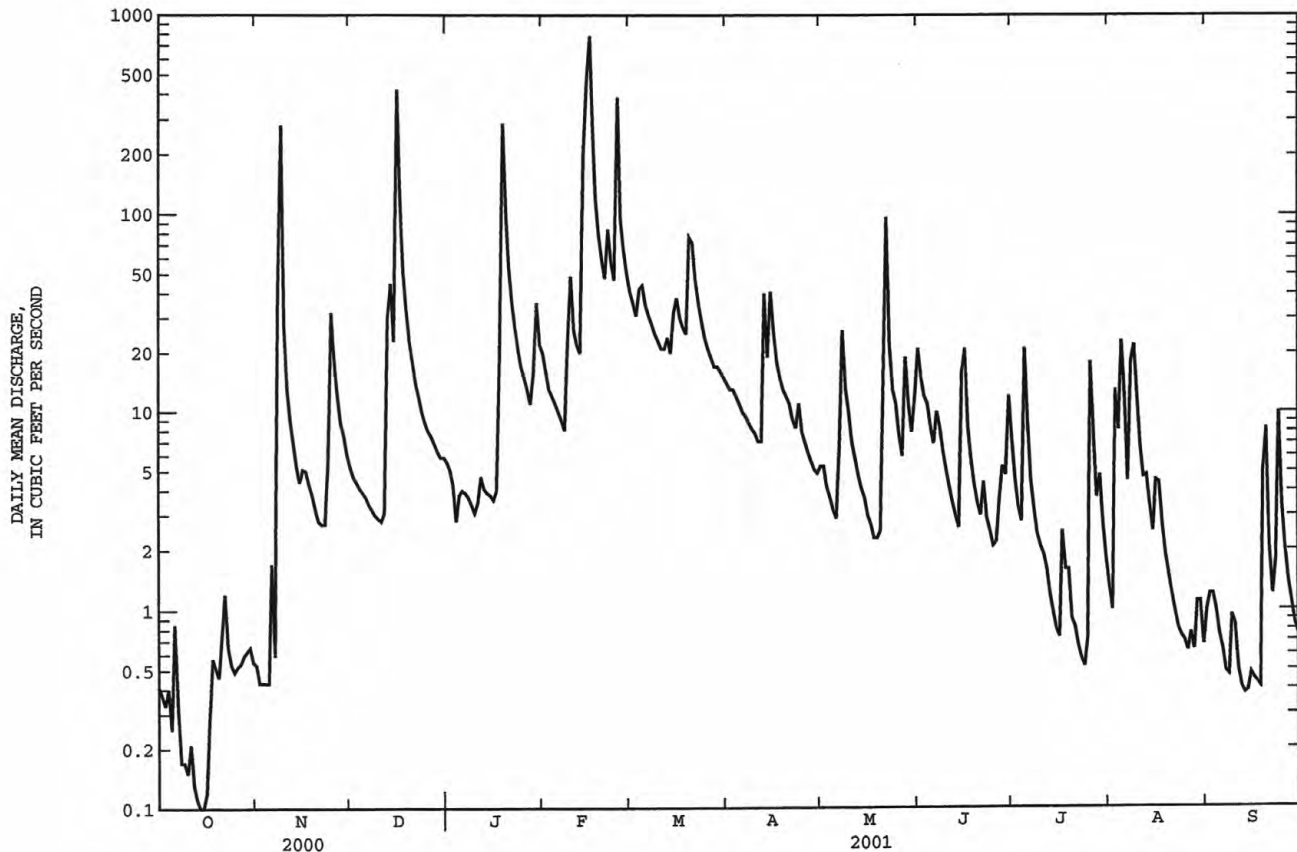
## SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1992 - 2001

ANNUAL TOTAL	6477.65	7467.85	
ANNUAL MEAN	17.7	20.5	29.3
HIGHEST ANNUAL MEAN			44.2
LOWEST ANNUAL MEAN			15.3
HIGHEST DAILY MEAN	421	785	1260
LOWEST DAILY MEAN	.10 Dec 16	.10 Feb 16	.04 Jul 3 1992
ANNUAL SEVEN-DAY MINIMUM	.13 Oct 14	.13 Oct 10	.05 Sep 5 1999
MAXIMUM PEAK FLOW		1640	a4220
MAXIMUM PEAK STAGE		8.38	12.60
ANNUAL RUNOFF (CFSM)	.86	.99	1.42
ANNUAL RUNOFF (INCHES)	11.70	13.49	19.33
10 PERCENT EXCEEDS	39	36	58
50 PERCENT EXCEEDS	5.9	5.3	10
90 PERCENT EXCEEDS	.35	.53	.77

a From rating curve extended above 500 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow.

## CUMBERLAND RIVER BASIN

03430550 MILL CREEK NEAR NOLENSVILLE, TN

LOCATION.--Lat 36°00'33", long 86°42'06", Davidson County, Hydrologic Unit 05130202, near left bank on downstream side of bridge on US Highway 31A, 800 ft upstream from Holt Creek, 0.6 mi upstream from Owl Creek, 4.6 mi northwest of Nolensville, and at mile 19.6.

DRAINAGE AREA.--40.5 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1992 to current year.

REVISED RECORD.--WRD TN-94-1: 1992 (M).

GAGE.--Data logger. Datum of gage is 527.74 ft above sea level.

REMARKS.--No estimated daily discharges. Records fair. 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 2,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov 9	0300	4,280	11.61	Feb 16	1100	3,370	10.64
Dec 16	1615	*7,110	*14.12	Feb 16	1730	6,300	13.46
Feb 15	1700	3,120	10.35	Feb 25	0330	4,340	11.67

Minimum daily discharge, 0.25 ft<sup>3</sup>/s, Oct. 20, 21, 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	.52	11	11	72	93	34	8.6	179	9.5	2.1	3.0
2	.61	.59	10	11	61	81	30	8.0	68	4.5	2.5	3.0
3	.53	.65	9.2	11	53	73	29	7.1	42	3.7	17	3.4
4	.36	.67	7.8	10	47	96	27	6.4	34	3.7	15	3.8
5	.34	.71	7.2	10	42	115	25	5.9	23	6.3	3.7	3.5
6	.53	.86	6.7	9.7	38	92	22	5.7	19	4.0	2.8	2.9
7	.42	1.1	6.1	9.3	34	79	20	6.3	21	2.7	2.0	2.7
8	.39	.65	5.6	9.0	31	71	18	17	20	1.8	1.6	2.5
9	.36	.905	5.2	8.2	66	63	16	16	13	1.1	2.0	2.1
10	.38	.75	5.2	10	143	58	15	10	10	1.0	4.0	2.2
11	.38	.32	5.2	8.2	89	53	13	12	8.4	1.2	7.8	2.0
12	.39	.18	5.3	13	74	54	13	11	7.0	1.6	6.7	1.9
13	.40	.12	136	13	71	52	131	8.7	5.6	1.6	3.6	1.9
14	.41	9.2	157	13	140	46	70	7.3	9.0	1.3	2.8	1.6
15	.39	7.3	76	12	1050	67	123	5.9	45	1.1	2.1	1.5
16	.39	7.4	1630	11	2420	86	81	4.9	28	1.7	1.4	1.5
17	.41	7.9	289	11	521	73	56	4.3	12	2.8	1.2	1.1
18	.36	6.5	136	76	237	64	45	3.8	7.7	2.2	.79	.79
19	.27	5.9	90	860	163	58	37	3.5	5.6	2.5	1.3	1.8
20	.25	5.4	64	272	124	439	31	4.0	4.3	2.4	.96	2.0
21	.25	4.9	52	154	99	273	26	6.4	3.6	2.4	.72	2.3
22	.30	4.7	41	110	177	163	22	133	5.2	2.2	.57	1.5
23	.36	4.6	33	86	128	119	18	43	5.0	2.0	.50	1.2
24	.40	7.1	29	72	104	94	23	24	3.9	2.1	1.1	2.4
25	.43	.63	24	61	799	77	17	16	3.1	30	1.5	1.8
26	.32	.41	21	54	196	66	15	11	2.4	5.7	1.7	1.6
27	.25	.25	20	48	142	57	13	9.2	4.4	3.1	1.9	1.6
28	.30	.18	17	42	113	51	11	10	3.2	2.9	1.7	1.4
29	.32	.15	15	63	---	46	10	11	6.6	3.4	1.4	1.2
30	.38	.12	18	142	---	42	9.3	8.8	7.9	3.2	1.4	1.1
31	.50	---	12	90	---	38	---	56	---	2.7	1.8	---
TOTAL	12.15	1357.00	2944.5	2310.4	7234	2839	1000.3	484.8	606.9	116.4	95.64	61.29
MEAN	.39	45.2	95.0	74.5	258	91.6	33.3	15.6	20.2	3.75	3.09	2.04
MAX	.77	.905	1630	860	2420	439	131	133	179	30	17	3.8
MIN	.25	.52	5.2	8.2	31	38	9.3	3.5	2.4	1.0	.50	.79
CFSM	.01	1.12	2.34	1.84	6.37	2.26	.82	.39	.50	.09	.08	.05
IN.	.01	1.25	2.70	2.12	6.64	2.61	.92	.44	.56	.11	.09	.06



## CUMBERLAND RIVER BASIN

79

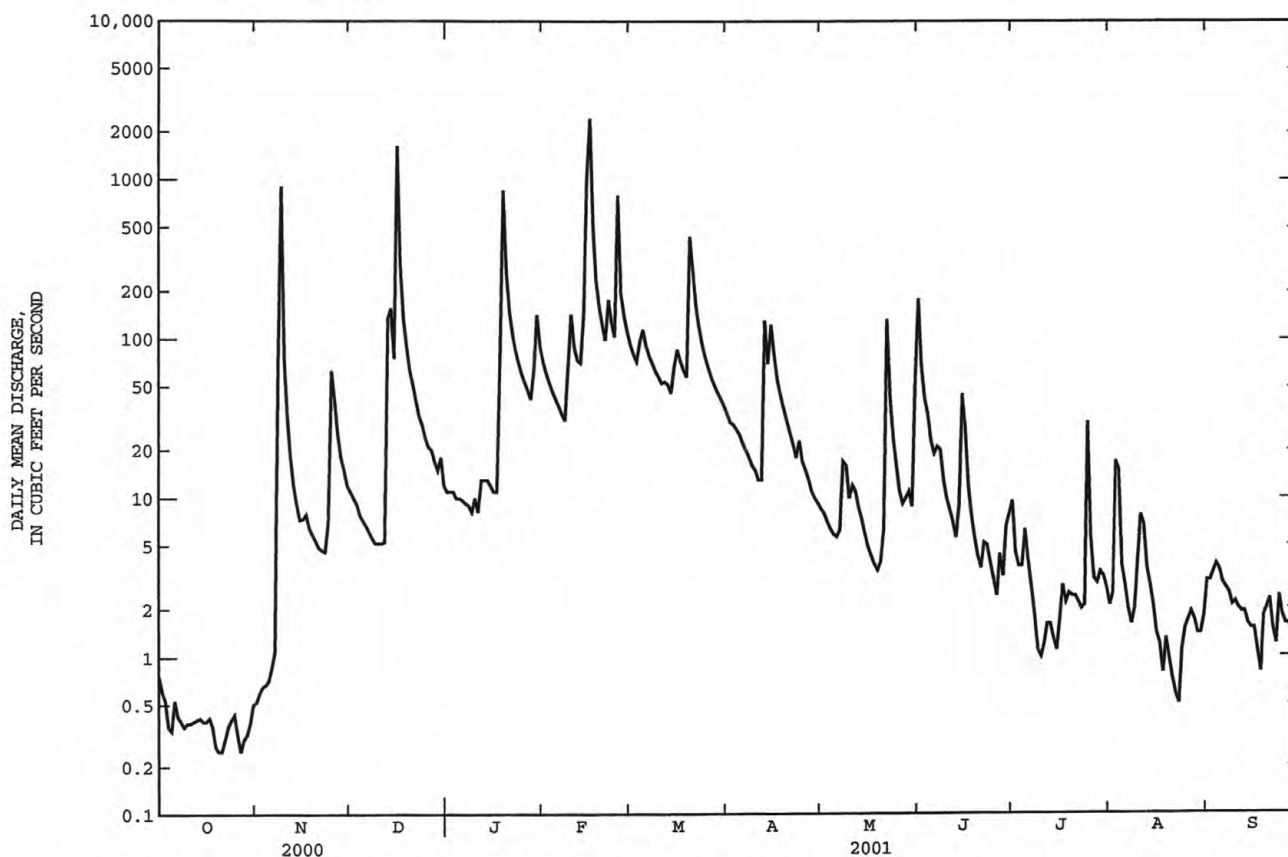
03430550 MILL CREEK NEAR NOLENSVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.1	41.5	78.9	120	127	176	79.2	69.5	49.5	18.6	8.85	5.76
MAX	146	122	159	225	263	372	209	190	210	58.8	35.0	16.1
(WY)	1996	1996	1997	1999	1994	1997	1994	1995	1998	1992	1995	1994
MIN	.39	1.67	28.4	39.2	60.6	81.9	20.3	8.40	5.54	2.35	1.03	.85
(WY)	2001	1999	2000	2000	1995	1998	1992	1992	1999	2000	2000	2000

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1992 - 2001	
ANNUAL TOTAL	24055.88		19062.38		67.4	
ANNUAL MEAN	65.7		52.2		104	
HIGHEST ANNUAL MEAN					41.3	
LOWEST ANNUAL MEAN					1993	
HIGHEST DAILY MEAN	3420	May 25	2420	Feb 16	4070	Mar 27 1994
LOWEST DAILY MEAN	.15	Sep 20	a.25	Oct 20	.08	Sep 13 1993
ANNUAL SEVEN-DAY MINIMUM	.22	Sep 15	.31	Oct 18	.10	Sep 9 1993
MAXIMUM PEAK FLOW			7110	Dec 16	13000	Oct 5 1995
MAXIMUM PEAK STAGE			14.12	Dec 16	17.88	May 25 2000
ANNUAL RUNOFF (CFSM)	1.62		1.29		1.66	
ANNUAL RUNOFF (INCHES)	22.08		17.50		22.59	
10 PERCENT EXCEEDS	124		97		126	
50 PERCENT EXCEEDS	15		9.2		18	
90 PERCENT EXCEEDS	.43		.69		1.3	

a Also occurred Oct. 21, 27.



## CUMBERLAND RIVER BASIN

03431060 MILL CREEK AT THOMPSON LANE NEAR WOODBINE, TN

LOCATION.--Lat 36°07'04", long 86°43'08", Davidson County, Hydrologic Unit 05130202, at bridge on Thompson Lane, 1.4 miles west of Arlington Church, 1.5 miles upstream from U.S. Highway 41 and 70S, and 1.6 miles downstream from Sevenmile Creek, and at mile 6.3.

DRAINAGE AREA.--93.4 mi<sup>2</sup>.

PERIOD OF RECORD.--Crest-stage gage July 1964 to September 1996. October 1996 to current year.

GAGE.--Data collection platform and crest-stage gage. Datum of gage is 432.55 ft above sea level. July 1964 to September 1996, crest-stage gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good, except for Oct. 9 to Nov. 7, Dec. 8-12, Aug. 20 to Sept. 17, 28-30, 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 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov 9	0630	4,570	9.83	Feb 16	1815	*8,620	*13.00
Dec 16	2030	6,580	11.56	Feb 25	0645	4,540	9.80
Feb 15	1945	4,510	9.78				

Minimum daily discharge, 1.3 ft<sup>3</sup>/s, Oct. 16, Nov. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.4	24	25	86	171	61	28	393	34	4.5	9.3
2	1.6	1.4	23	25	69	142	56	25	126	27	3.0	7.8
3	1.4	1.3	24	25	58	123	53	23	84	21	42	5.2
4	1.4	1.4	25	24	51	178	51	21	71	26	32	4.6
5	1.4	1.4	23	23	46	201	49	20	52	39	11	3.8
6	4.8	12	22	23	41	151	47	19	43	26	6.9	3.4
7	4.0	3.5	22	22	37	124	45	24	56	19	4.7	3.0
8	2.4	239	22	22	34	108	41	67	46	16	4.4	2.5
9	2.0	2000	21	21	118	96	40	86	36	15	7.8	3.0
10	1.8	142	21	21	249	87	38	52	29	14	5.6	2.5
11	1.7	62	20	24	120	80	38	71	26	13	51	2.0
12	1.8	42	20	32	91	81	39	46	23	14	100	1.9
13	1.6	33	273	29	86	81	270	31	20	15	42	1.8
14	1.5	28	369	28	505	69	121	26	18	15	14	1.7
15	1.4	25	123	29	2510	113	273	24	116	15	10	1.6
16	1.3	29	2650	28	4890	136	154	19	120	14	8.5	1.6
17	1.7	27	795	28	1850	105	102	17	42	12	6.3	1.6
18	1.4	23	253	109	681	88	79	16	30	8.4	5.3	1.6
19	1.4	21	149	1900	409	79	68	15	26	6.1	7.1	13
20	1.4	21	101	666	276	788	58	56	22	5.1	5.0	7.1
21	1.6	21	79	271	210	667	53	110	17	5.3	4.3	1.7
22	1.5	24	63	165	345	336	45	552	29	5.0	4.8	2.2
23	1.6	21	52	119	242	222	41	128	20	3.2	4.0	3.1
24	1.5	34	47	93	187	166	60	79	17	4.1	3.4	23
25	1.5	92	41	74	1920	129	41	56	15	13	3.0	5.3
26	1.7	61	36	63	501	110	38	41	38	19	3.6	3.6
27	1.6	42	34	55	308	96	34	33	31	8.2	3.3	3.2
28	4.5	34	32	47	223	84	31	41	28	6.6	3.0	2.6
29	2.5	30	30	93	---	77	29	41	107	5.5	2.6	1.9
30	1.5	27	28	216	---	73	27	30	51	3.6	2.2	1.8
31	1.5	---	26	121	---	67	---	56	---	3.8	8.1	---
TOTAL	58.6	3100.4	5448	4421	16143	5028	2082	1853	1732	431.9	413.4	127.4
MEAN	1.89	103	176	143	577	162	69.4	59.8	57.7	13.9	13.3	4.25
MAX	4.8	2000	2650	1900	4890	788	273	552	393	39	100	23
MIN	1.3	1.3	20	21	34	67	27	15	15	3.2	2.2	1.6
CFSM	.02	1.11	1.88	1.53	6.17	1.74	.74	.64	.62	.15	.14	.05
IN.	.02	1.23	2.17	1.76	6.43	2.00	.83	.74	.69	.17	.16	.05

## CUMBERLAND RIVER BASIN

81

03431060 MILL CREEK AT THOMPSON LANE NEAR WOODBINE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.6	79.3	173	264	290	316	150	153	203	31.3	15.8	16.8
MAX	59.2	167	349	521	577	771	298	336	586	48.8	25.3	65.3
(WY)	1997	1997	1997	1999	2001	1997	2000	2000	1998	1997	1997	1997
MIN	1.89	13.4	71.5	103	175	162	52.9	59.8	22.5	8.14	6.99	4.09
(WY)	2001	1999	2000	2000	1997	2001	1997	2001	2000	2000	2000	2000

## SUMMARY STATISTICS

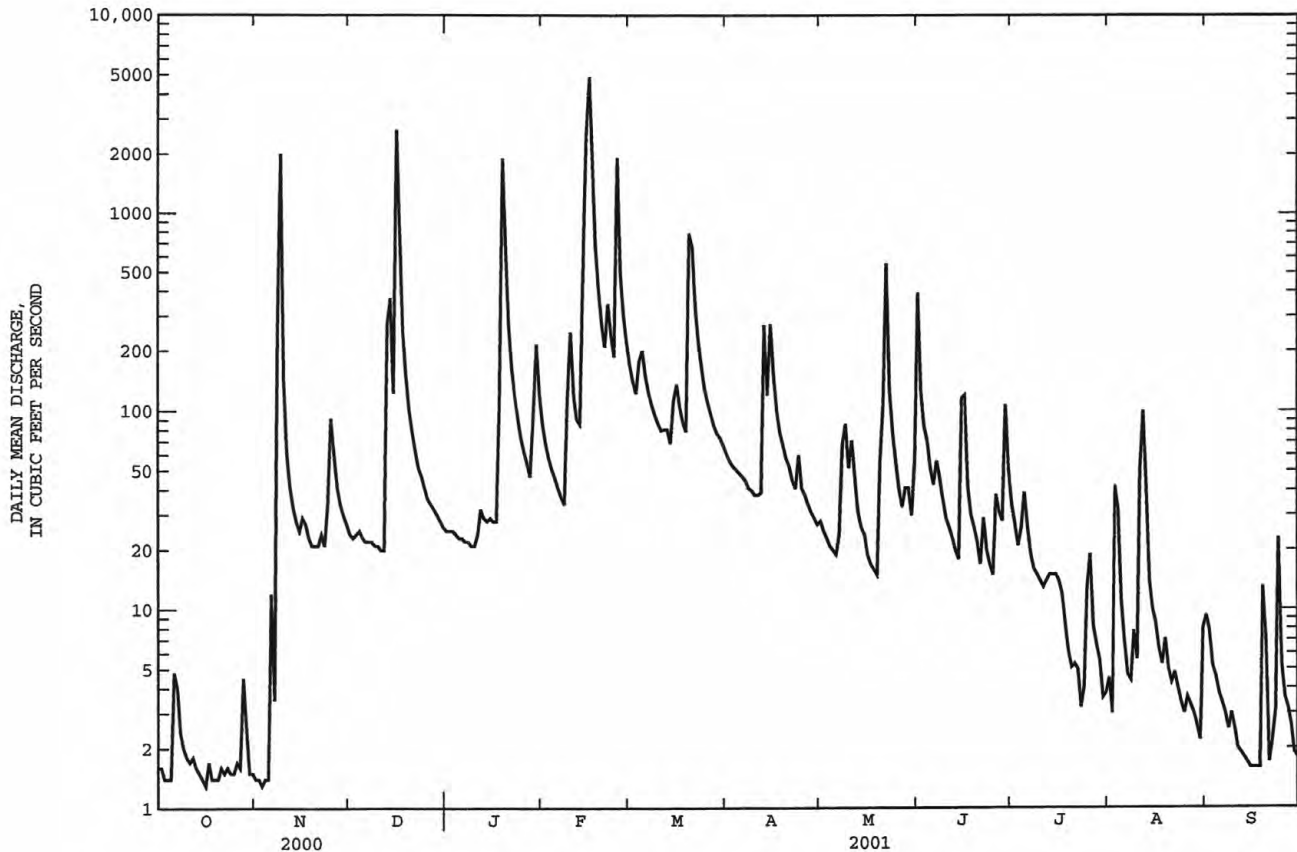
## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1997 - 2001

ANNUAL TOTAL	44095.13	40838.7	
ANNUAL MEAN	120	112	142
HIGHEST ANNUAL MEAN			207
LOWEST ANNUAL MEAN			106
HIGHEST DAILY MEAN	6160	May 25	4890
LOWEST DAILY MEAN	.75	Sep 21	a1.3
ANNUAL SEVEN-DAY MINIMUM	.95	Sep 16	1.4
MAXIMUM PEAK FLOW			8620
MAXIMUM PEAK STAGE			13.00
INSTANTANEOUS LOW FLOW			
ANNUAL RUNOFF (CFSM)	1.29	1.20	1.52
ANNUAL RUNOFF (INCHES)	17.56	16.27	20.67
10 PERCENT EXCEEDS	205	182	272
50 PERCENT EXCEEDS	30	28	44
90 PERCENT EXCEEDS	1.6	1.8	3.2

a Also occurred Nov. 3.



## CUMBERLAND RIVER BASIN

03431091 CUMBERLAND RIVER AT OMOHUNDRO WATER PLANT AT NASHVILLE, TN

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°09'46", long 86°43'31", Davidson County, Hydrologic Unit 05130202, on left bank 0.8 mi downstream from Mill Creek, at intake of Omohundro Filtration Plant, and at mile 193.7.

DRAINAGE AREA.--12,819 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1996 to September 1999, October 2000 to September 2001.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1996 to September 1999, October 2000 to September 2001.

pH: October 1996 to September 1999, October 2000 to September 2001.

WATER TEMPERATURE: October 1996 to September 1999, October 2000 to September 2001.

DISSOLVED OXYGEN: October 1996 to September 1999, October 2000 to September 2001.

INSTRUMENTATION.--Water-quality monitor since October 1996.

REMARKS.--Flow regulated by Old Hickory Dam and other reservoirs above station. Dissolved oxygen and specific conductance record poor October 1 to August 6, due to instrument malfunctions.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 276 microsiemens, Nov. 21, 29, 1996; minimum, 166 microsiemens, June 4, 1998.

pH: Maximum, 9.1 units, Feb. 11, 12, 13, 2001; minimum, 6.9 units, July 30, 1997.

WATER TEMPERATURE: Maximum, 27.3°C, July 31, 1997; minimum, 3.0°C, Jan. 5, 2001.

DISSOLVED OXYGEN: Maximum, 14.2 mg/L, Feb. 12, 2001; minimum, 3.7 mg/L, Nov. 4, 2001.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 262 microsiemens, July 3; minimum, 191 microsiemens, Mar. 16, Aug. 6.

pH: Maximum, 9.1 units, Feb. 11, 12, 13; minimum, 7.3 units, Dec. 20, Mar. 7, Aug. 21.

WATER TEMPERATURE: Maximum, 26.9°C, July 8; minimum, 3.0°C, Jan. 5.

DISSOLVED OXYGEN: Maximum, 14.2 mg/L, Feb. 12; minimum, 3.7 mg/L, Nov. 4.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	209	227	223	237	237	218	214	224	233	208	213
2	---	214	230	230	244	236	215	211	231	231	216	210
3	---	214	228	238	243	233	206	214	231	233	212	209
4	---	213	224	227	232	233	205	214	236	223	207	207
5	---	206	227	221	227	235	208	212	234	218	207	205
6	---	201	223	217	233	228	208	211	231	228	200	205
7	---	210	228	213	240	234	206	211	223	225	203	205
8	---	215	231	210	236	225	206	216	218	219	211	209
9	---	213	231	218	237	226	206	211	230	220	203	213
10	214	219	233	223	239	220	205	214	215	221	206	210
11	217	224	225	216	226	218	208	206	216	225	218	212
12	216	226	228	216	228	215	208	207	222	232	210	211
13	214	219	226	218	233	211	212	211	242	234	209	211
14	213	223	231	216	235	201	212	215	218	227	211	210
15	211	227	232	210	231	201	213	217	234	222	221	208
16	205	229	221	209	224	202	216	23	235	229	225	212
17	213	227	231	208	221	205	216	220	236	228	217	213
18	217	229	223	209	229	202	223	217	242	230	218	214
19	225	221	225	222	227	204	226	223	222	220	211	212
20	223	212	227	218	234	208	227	216	218	225	209	211
21	222	211	226	223	243	203	223	215	219	217	220	209
22	214	208	226	231	247	206	228	215	232	220	218	213
23	213	208	227	248	247	206	226	218	233	229	219	211
24	224	207	224	250	245	207	227	214	230	225	220	208
25	224	209	223	248	243	213	222	215	228	230	219	208
26	226	212	225	248	240	216	219	215	224	223	219	207
27	224	213	221	242	236	218	215	217	217	223	222	209
28	221	231	221	246	240	216	214	214	231	211	219	209
29	212	229	224	243	---	217	208	209	231	207	208	210
30	207	225	226	243	---	222	209	204	233	209	209	211
31	220	---	222	240	---	221	---	213	---	210	209	---



## 03431091 CUMBERLAND RIVER AT OMOHUNDRO WATER PLANT AT NASHVILLE, TN--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	8.0	7.6	8.0	7.8	7.9	7.8	8.4	8.2	7.7	7.5
2	---	---	8.0	7.5	8.0	7.8	7.9	7.8	8.3	8.2	7.8	7.4
3	---	---	7.9	7.6	8.0	7.8	8.0	7.9	8.3	8.2	7.7	7.5
4	---	---	7.9	7.5	8.2	7.8	8.0	7.9	8.4	8.2	7.6	7.4
5	---	---	7.9	7.5	8.1	7.8	8.0	7.9	8.5	8.3	7.6	7.5
6	---	---	7.9	7.6	8.1	7.9	8.1	7.9	8.6	8.3	7.7	7.5
7	---	---	8.1	7.7	8.2	7.8	8.1	7.9	8.6	8.2	7.7	7.3
8	---	---	7.9	7.6	8.0	7.8	8.1	7.9	8.8	8.5	7.8	7.4
9	---	---	7.8	7.7	8.3	7.8	8.2	7.9	8.9	8.6	7.8	7.4
10	8.1	7.7	7.8	7.6	8.1	7.8	8.3	8.0	9.0	8.6	7.7	7.3
11	8.2	7.7	7.8	7.6	8.0	7.7	8.4	8.1	9.1	8.9	7.8	7.4
12	8.3	7.7	7.8	7.6	8.1	7.8	8.4	8.2	9.1	8.8	7.7	7.4
13	8.3	7.9	7.9	7.6	8.0	7.8	8.6	8.1	9.1	8.8	8.0	7.4
14	8.5	7.7	7.8	7.7	7.9	7.8	8.3	8.0	9.0	8.7	7.8	7.7
15	8.6	7.7	7.8	7.6	8.0	7.8	8.5	8.0	8.8	8.5	7.9	7.6
16	8.6	8.2	7.7	7.6	7.8	7.6	8.7	8.1	8.5	8.1	7.9	7.7
17	8.4	7.6	7.8	7.6	7.7	7.6	8.6	8.2	8.1	7.8	7.9	7.8
18	8.2	7.6	7.8	7.7	8.0	7.5	8.4	8.1	7.8	7.7	8.0	7.7
19	8.1	7.5	8.0	7.6	7.6	7.4	8.1	8.0	7.8	7.8	8.1	7.7
20	7.9	7.6	8.2	7.8	8.0	7.3	8.2	8.1	7.9	7.8	8.0	7.9
21	8.1	7.6	8.3	7.8	8.0	7.8	8.2	8.1	7.9	7.8	8.0	7.9
22	8.1	7.7	8.2	7.9	8.0	7.9	8.3	8.1	7.9	7.8	7.9	7.8
23	8.1	7.8	8.1	7.8	8.0	7.9	8.2	8.1	7.9	7.8	8.0	7.8
24	8.0	7.6	8.1	7.8	8.0	7.8	8.3	8.0	7.9	7.7	8.0	7.8
25	7.9	7.5	8.0	7.8	7.9	7.8	8.4	8.2	7.7	7.6	8.0	7.8
26	7.7	7.5	8.1	7.9	7.9	7.8	8.2	8.2	7.7	7.6	8.1	7.9
27	7.8	7.5	8.4	7.8	7.8	7.7	8.4	8.1	7.8	7.6	8.1	7.9
28	7.9	7.6	8.0	7.8	7.8	7.7	8.4	8.2	7.7	7.5	8.1	8.0
29	8.0	7.6	8.1	7.8	7.8	7.8	8.3	8.2	---	---	8.1	7.9
30	7.8	7.7	8.0	7.8	7.9	7.8	8.4	8.1	---	---	8.1	7.9
31	7.8	7.5	---	---	7.9	7.8	8.4	8.2	---	---	8.1	8.0
MONTH	8.6	7.5	8.4	7.5	8.3	7.3	8.7	7.8	9.1	7.5	8.1	7.3
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.4	8.1	8.5	8.1	8.1	7.7	8.5	8.0	8.0	7.8	7.9	7.7
2	8.3	8.1	8.1	7.9	7.8	7.6	8.3	8.0	8.1	7.8	7.8	7.6
3	8.3	8.1	8.2	7.8	8.0	7.6	8.1	7.8	8.0	7.8	8.4	7.7
4	8.3	8.1	8.1	7.8	7.9	7.6	8.1	7.7	8.0	7.8	8.1	7.6
5	8.3	8.1	8.0	7.7	8.1	7.7	8.0	7.7	7.9	7.7	8.4	7.4
6	8.3	8.0	8.0	7.6	8.2	7.7	8.1	7.7	7.8	7.7	8.1	7.8
7	8.4	7.9	7.8	7.6	7.9	7.6	7.9	7.7	7.7	7.4	8.1	7.7
8	8.4	8.0	7.8	7.6	7.9	7.7	8.4	7.8	7.8	7.4	7.9	7.7
9	8.4	8.0	7.9	7.6	7.8	7.7	8.1	7.8	7.8	7.6	8.2	7.6
10	8.5	8.0	7.8	7.6	8.2	7.7	7.9	7.7	7.9	7.6	8.4	7.6
11	8.6	8.1	7.8	7.6	8.4	7.8	8.0	7.7	7.7	7.4	8.0	7.5
12	8.4	8.1	7.8	7.5	8.0	7.7	8.0	7.8	7.7	7.5	8.2	7.7
13	8.2	7.8	7.9	7.6	7.9	7.5	8.1	7.8	7.7	7.5	8.1	7.7
14	8.2	8.0	7.7	7.5	7.8	7.7	8.2	7.8	7.8	7.5	7.9	7.7
15	8.2	8.1	7.7	7.6	7.8	7.6	8.3	7.8	7.7	7.4	8.2	7.7
16	8.2	7.9	7.8	7.4	7.7	7.5	8.3	7.8	7.8	7.4	8.2	7.8
17	8.6	8.0	7.6	7.3	7.8	7.6	8.3	7.9	7.9	7.5	8.1	7.8
18	8.6	8.3	7.7	7.4	7.7	7.5	8.3	7.8	7.7	7.4	8.0	7.6
19	8.6	8.4	7.7	7.5	7.8	7.5	8.2	7.8	8.0	7.5	8.2	7.6
20	8.5	8.4	7.8	7.4	7.8	7.5	8.1	7.8	7.7	7.6	8.3	7.8
21	8.5	8.3	7.8	7.5	7.7	7.5	8.1	7.7	7.8	7.3	8.4	7.7
22	8.6	8.2	7.8	7.5	7.6	7.5	8.4	7.9	8.1	7.4	8.3	7.7
23	8.6	8.2	7.6	7.4	7.6	7.5	8.2	7.8	8.2	7.5	8.3	7.8
24	8.7	8.3	8.0	7.6	7.7	7.6	8.2	7.7	7.9	7.7	8.0	7.7
25	8.4	7.9	8.1	7.7	7.7	7.5	8.0	7.6	8.2	7.7	7.9	7.5
26	8.6	8.4	8.0	7.8	7.9	7.5	8.1	7.6	8.3	7.7	8.0	7.8
27	8.6	8.5	8.1	7.8	8.5	7.6	8.0	7.7	7.8	7.6	8.1	7.8
28	8.7	8.2	8.2	7.8	8.3	7.9	8.1	7.5	7.8	7.5	8.3	7.9
29	8.6	8.1	7.9	7.7	8.3	7.8	8.0	7.8	8.1	7.7	8.3	8.0
30	8.6	8.2	8.3	7.6	8.2	7.9	7.9	7.7	7.9	7.7	8.4	8.0
31	---	---	8.0	7.6	---	---	8.1	7.4	8.0	7.7	---	---
MONTH	8.7	7.8	8.5	7.3	8.5	7.5	8.5	7.4	8.3	7.3	8.4	7.4

## CUMBERLAND RIVER BASIN

03431091 CUMBERLAND RIVER AT OMOHUNDRO WATER PLANT AT NASHVILLE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	19.5	10.5	3.5	6.0	9.5	11.5	18.5	22.5	25.0	25.5	23.5
2	---	19.5	10.5	3.5	6.0	10.0	11.5	18.0	22.0	25.0	24.5	23.0
3	---	19.5	9.5	3.5	5.5	10.0	11.5	18.5	22.0	24.0	24.5	23.0
4	---	19.5	9.0	3.5	6.0	10.0	12.0	19.0	22.0	24.5	24.0	23.0
5	---	18.5	9.0	3.5	6.0	10.0	12.0	19.0	22.5	24.5	24.5	23.5
6	---	18.5	8.5	4.0	6.0	9.5	13.0	19.5	22.0	24.5	24.5	24.0
7	---	19.0	8.5	4.0	6.5	9.5	13.5	19.5	22.0	24.5	---	24.5
8	---	18.5	8.5	4.5	7.0	9.5	14.5	19.0	22.0	26.0	24.5	24.0
9	---	18.5	8.5	4.0	7.5	9.5	15.0	19.5	22.0	25.5	25.0	24.0
10	18.5	17.5	8.5	4.0	7.5	9.5	16.0	19.5	22.5	25.0	25.0	24.0
11	18.0	16.5	8.5	4.0	7.0	9.5	16.5	20.0	23.0	25.5	24.5	23.0
12	18.0	16.5	8.0	4.5	7.5	10.0	17.0	20.5	22.5	25.0	25.0	23.5
13	18.0	16.0	7.5	4.5	7.5	10.5	17.0	20.5	22.0	25.0	25.0	23.5
14	18.0	15.5	7.5	5.0	8.0	10.5	17.0	20.0	23.0	25.0	25.0	23.0
15	18.0	15.0	7.5	5.5	8.5	10.5	17.5	20.5	23.0	25.5	24.0	23.0
16	18.0	15.0	8.0	5.0	8.5	10.5	17.0	21.5	23.5	25.0	23.5	23.0
17	18.5	14.0	8.0	5.0	8.5	10.5	16.5	20.5	24.0	25.0	24.5	22.5
18	18.5	13.0	7.5	5.5	8.5	10.5	16.0	21.0	24.0	24.5	24.5	22.5
19	18.5	13.0	7.0	5.5	8.5	10.5	16.0	21.0	24.5	25.0	25.0	22.0
20	18.0	12.0	6.0	5.5	8.5	10.0	16.0	21.5	25.0	25.0	24.5	22.0
21	19.0	11.0	6.0	5.5	8.5	10.0	16.5	22.0	25.0	25.0	24.0	21.5
22	19.0	11.0	5.5	5.0	8.5	10.0	17.0	21.5	24.5	25.5	24.5	22.5
23	19.5	11.0	5.5	5.0	8.5	10.5	17.5	---	24.0	25.5	25.0	22.0
24	19.0	11.0	5.5	5.0	9.0	11.0	17.5	22.5	24.5	25.5	25.0	21.5
25	19.0	11.0	5.0	5.0	9.5	10.5	16.5	22.0	24.5	25.0	25.5	20.5
26	19.0	11.0	5.0	4.5	9.5	10.5	17.0	22.0	24.5	25.0	25.5	20.5
27	19.0	10.5	5.0	4.5	9.5	10.5	17.5	22.5	24.5	25.5	25.0	20.5
28	19.5	11.0	5.0	4.5	9.5	10.5	18.0	22.5	25.0	25.0	24.0	20.0
29	19.0	11.5	4.5	5.0	---	10.5	17.5	22.0	24.5	24.5	23.5	20.0
30	19.0	11.0	4.0	5.5	---	10.5	18.5	22.0	24.5	24.5	23.5	20.0
31	19.0	---	4.0	6.0	---	11.0	---	22.0	---	24.5	23.5	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	6.7	9.5	11.7	11.1	10.8	11.9	9.8	6.5	6.4	---	7.6
2	---	6.1	9.5	11.9	11.4	10.4	12.2	9.3	6.1	6.4	---	7.6
3	---	5.8	9.6	12.2	11.6	10.3	12.2	9.0	6.6	6.6	---	8.1
4	---	5.7	10.0	12.6	11.8	10.2	12.2	9.1	6.7	6.9	---	7.8
5	---	6.4	10.3	12.6	11.9	10.4	12.3	8.9	7.2	6.9	---	7.9
6	---	7.2	10.6	12.8	12.2	10.8	12.1	8.3	7.5	6.4	---	8.6
7	---	7.1	10.9	12.7	12.3	11.1	11.3	7.9	6.9	6.8	7.6	8.8
8	---	7.1	11.0	12.6	13.1	10.8	11.1	7.5	7.2	7.4	6.2	8.5
9	---	7.2	11.5	12.5	13.2	10.8	11.0	---	7.1	6.9	5.9	8.5
10	---	7.2	11.3	12.3	13.3	10.8	11.0	---	7.6	6.2	6.1	8.7
11	7.2	6.8	11.3	12.3	13.6	11.1	10.9	---	7.9	---	5.4	8.1
12	7.3	7.0	11.7	12.1	13.6	11.0	10.5	---	7.0	---	5.7	9.0
13	7.8	7.7	11.7	12.4	13.2	11.4	9.5	---	6.0	---	5.8	8.8
14	7.9	7.7	11.8	11.7	12.5	11.4	9.6	---	6.8	---	6.0	8.8
15	8.2	7.6	11.9	11.9	12.9	11.2	9.7	---	5.6	---	5.6	9.1
16	8.8	6.9	11.6	11.9	13.4	11.1	9.9	---	5.9	---	5.6	9.2
17	7.4	7.8	---	12.5	12.8	11.4	10.4	---	6.2	---	6.0	8.9
18	7.0	7.7	10.7	11.9	12.3	11.3	10.6	---	5.7	---	5.5	8.6
19	6.6	8.2	---	11.8	11.3	11.3	10.9	---	5.7	---	6.5	8.3
20	6.5	9.5	10.7	12.2	10.9	11.6	11.2	---	5.2	---	6.5	8.8
21	6.3	9.6	10.5	12.0	11.0	11.9	10.9	---	5.1	---	6.4	9.0
22	7.0	9.7	10.7	11.9	10.8	11.8	11.1	7.5	5.0	---	6.8	9.4
23	7.7	9.4	10.6	11.8	10.6	11.7	11.1	6.7	5.0	---	6.8	8.8
24	5.9	9.4	10.6	12.2	10.8	11.4	10.8	6.9	5.4	---	6.5	8.6
25	5.7	9.5	10.8	12.0	10.8	11.4	10.4	6.5	5.8	---	7.2	8.3
26	5.4	9.7	10.9	11.1	10.8	11.6	11.0	6.8	5.9	---	7.4	8.9
27	5.7	10.1	10.8	11.3	10.8	11.7	10.9	7.1	6.8	---	6.7	9.1
28	5.8	9.4	10.9	11.4	10.8	11.7	10.4	7.1	5.9	---	6.8	9.3
29	6.7	9.5	11.0	11.2	---	11.5	10.3	6.6	6.1	---	7.2	9.5
30	6.7	9.5	11.4	11.0	---	11.5	10.3	7.0	6.1	---	7.6	9.6
31	5.9	---	11.7	11.1	---	11.6	---	6.5	---	---	7.4	---

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## CUMBERLAND RIVER BASIN

03431300 BROWNS CREEK AT STATE FAIRGROUNDS, AT NASHVILLE, TN

LOCATION.--Lat 36°07'47", long 86°45'40", Davidson County, Hydrologic Unit 05130202, near center of span on downstream side of bridge on access road to pit area of the race track at State Fairgrounds, 300 ft west of Craighead Street, 0.3 mi upstream from bridge on U.S. Highway 31A and 41A, and 2.8 mi southwest of the State Capitol in Nashville.

DRAINAGE AREA.--11.8 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1963 to September 1975. August 1993 to current year.

REVISED RECORDS.--WDR TN-94-1: 1975 (p ).

GAGE.--Data collection platform. Datum of gage is 439.81 ft above sea level.

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 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov 8	2305	797	5.19	Feb 25	0120	1,140	6.05
Nov 9	0045	761	5.09	Apr 15	0725	541	4.39
Dec 16	1330	949	5.59	Jul 25	1325	582	4.53
Feb 14	0745	524	4.33	Aug 3	1930	*1,360	*6.53
Feb 16	1640	917	5.51	Aug 12	1520	1,320	6.44

Minimum discharge, 0.98 ft<sup>3</sup>/s, Oct. 14, 15, 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.3	3.3	4.1	13	26	9.7	4.9	15	3.2	1.7	2.8
2	1.4	1.2	3.2	3.8	11	22	8.1	4.6	11	2.8	1.5	2.4
3	1.4	1.1	3.2	3.7	9.8	20	7.5	4.4	11	2.5	61	2.4
4	1.3	1.1	2.9	3.6	8.8	35	6.9	4.3	7.9	4.8	10	2.3
5	1.2	1.1	2.8	3.5	7.7	23	6.4	4.1	6.3	4.4	4.4	2.1
6	3.7	6.0	2.6	3.4	6.9	20	6.0	4.0	16	3.0	2.9	2.0
7	1.6	2.7	2.5	3.4	6.3	17	5.7	19	21	2.6	2.6	1.9
8	1.4	70	2.5	3.3	6.0	15	5.4	8.8	11	2.4	2.3	1.8
9	1.3	112	2.4	3.2	31	14	5.4	13	8.1	2.2	2.8	2.6
10	1.2	15	2.4	3.2	20	13	5.2	5.5	6.4	2.1	2.2	2.3
11	1.2	8.5	3.5	7.2	15	11	5.0	6.5	5.5	2.0	6.8	2.0
12	1.2	5.8	2.7	5.0	13	12	6.6	4.9	4.7	1.8	112	1.9
13	1.1	5.0	29	4.0	16	11	43	4.3	4.3	1.7	36	1.8
14	1.0	4.0	14	3.7	123	9.3	12	4.0	3.9	1.6	13	1.7
15	1.0	3.5	18	3.6	202	22	39	3.7	14	1.5	8.5	1.6
16	.98	5.4	184	3.4	379	15	16	3.5	8.7	1.4	20	1.7
17	1.4	3.5	57	4.1	168	12	13	3.3	4.5	1.4	7.1	1.7
18	1.2	3.1	27	29	86	10	11	3.1	3.9	1.5	6.1	1.8
19	1.2	3.0	19	103	58	9.4	9.3	3.0	3.6	1.4	6.6	19
20	1.2	2.8	14	48	40	47	8.1	9.2	3.3	1.6	3.9	2.7
21	1.2	2.6	11	29	32	35	7.2	29	4.2	1.5	3.5	2.0
22	1.2	2.6	8.9	21	42	27	6.6	64	7.1	1.5	3.4	1.8
23	1.2	2.5	7.5	17	26	22	11	16	3.2	1.5	3.0	6.5
24	1.3	18	7.0	14	22	19	12	15	3.0	2.6	2.8	3.7
25	1.3	12	6.0	12	181	17	7.1	10	2.7	2.1	2.6	2.3
26	1.3	6.6	5.3	10	58	15	6.3	7.6	3.2	3.0	2.9	2.0
27	1.3	4.9	4.9	8.5	41	13	5.9	6.5	6.4	2.6	2.9	1.8
28	1.9	4.6	4.7	7.3	31	12	5.5	11	3.1	4.1	2.5	1.7
29	1.3	4.3	4.4	28	---	11	5.2	6.6	13	2.5	2.3	1.5
30	1.3	3.5	4.1	21	---	12	5.1	5.2	4.2	2.3	2.2	1.5
31	1.4	---	4.2	16	---	9.5	---	24	---	2.1	4.6	---
TOTAL	42.28	317.7	464.0	430.0	1653.5	556.2	301.2	313.0	220.2	90.6	344.1	83.3
MEAN	1.36	10.6	15.0	13.9	59.1	17.9	10.0	10.1	7.34	2.92	11.1	2.78
MAX	3.7	112	184	103	379	47	43	64	21	21	112	19
MIN	.98	1.1	2.4	3.2	6.0	9.3	5.0	3.0	2.7	1.4	1.5	1.5
CFSM	.12	.90	1.27	1.18	5.00	1.52	.85	.86	.62	.25	.94	.24
IN.	.13	1.00	1.46	1.36	5.21	1.75	.95	.99	.69	.29	1.08	.26



## CUMBERLAND RIVER BASIN

87

03431300 BROWNS CREEK AT STATE FAIRGROUNDS, AT NASHVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.90	12.7	20.9	26.5	26.3	36.1	23.2	19.0	14.5	6.72	6.27	5.46
MAX	24.5	34.8	63.8	86.5	59.1	102	50.3	39.2	61.0	19.8	23.2	21.0
(WY)	1996	1974	1973	1974	2001	1975	1973	2000	1998	1967	1971	1974
MIN	.71	1.36	1.28	5.79	5.87	9.70	4.36	5.42	1.71	.96	1.65	.92
(WY)	1966	1966	1966	1966	1967	1966	1967	1971	1966	1964	1968	1965

## SUMMARY STATISTICS

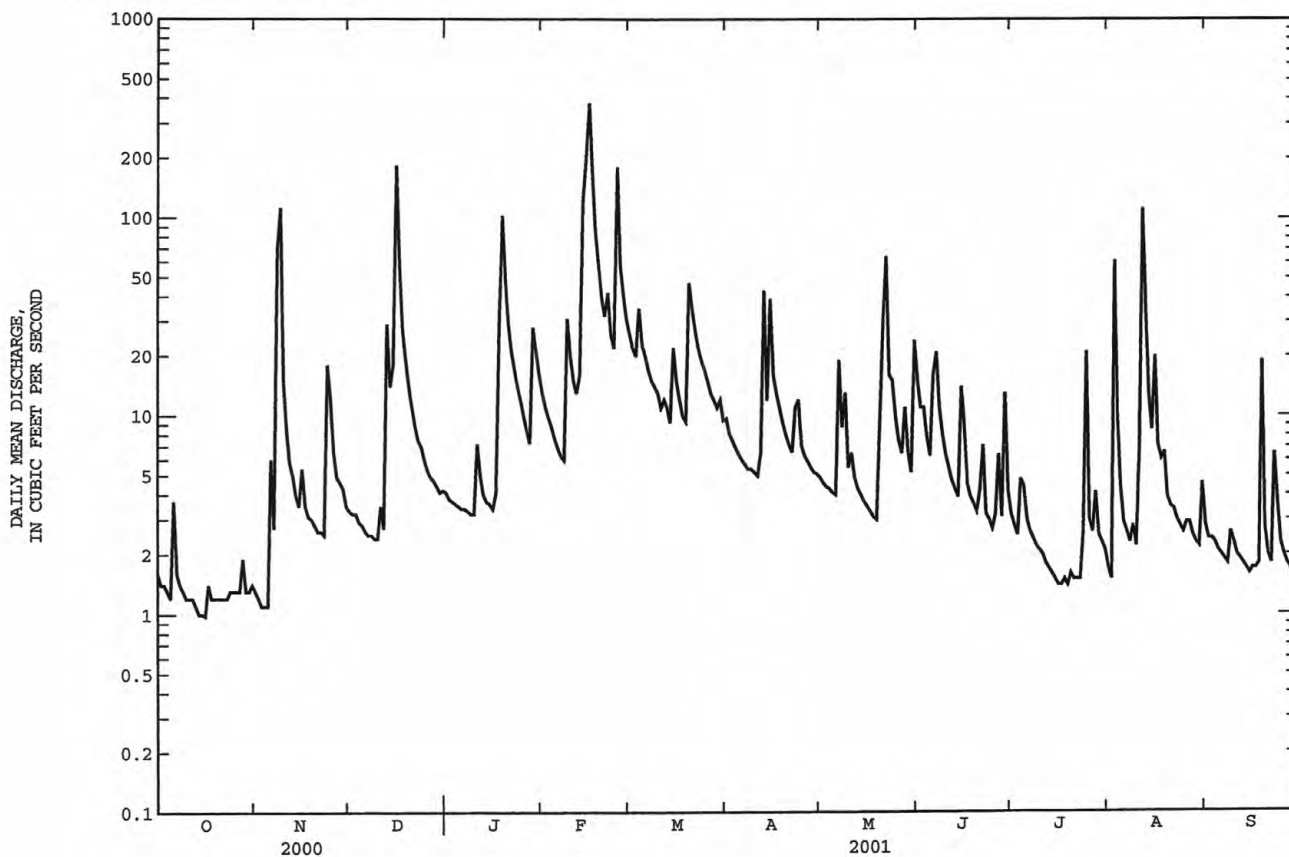
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1964 - 2001

ANNUAL TOTAL	4755.38	4816.08	
ANNUAL MEAN	13.0	13.2	17.0
HIGHEST ANNUAL MEAN			29.6
LOWEST ANNUAL MEAN			6.67
HIGHEST DAILY MEAN	506	May 25	696
LOWEST DAILY MEAN	.98	Oct 16	.29
ANNUAL SEVEN-DAY MINIMUM	1.1	Oct 10	.36
MAXIMUM PEAK FLOW			2210
MAXIMUM PEAK STAGE			8.20
INSTANTANEOUS LOW FLOW			.15
ANNUAL RUNOFF (CFSM)	1.10		1.44
ANNUAL RUNOFF (INCHES)	14.99		19.58
10 PERCENT EXCEEDS	25		37
50 PERCENT EXCEEDS	6.0		6.4
90 PERCENT EXCEEDS	1.3		1.3

a Also occurred Oct. 15, 16, 17.



## CUMBERLAND RIVER BASIN

034315005 CUMBERLAND RIVER AT WOODLAND STREET AT NASHVILLE, TN

LOCATION.--Lat 36°10'02", long 86°46'35", Davidson County, Hydrologic Unit 05130202, on left bank at northwest corner of Woodland Street Bridge, at Nashville, 3.5 mi downstream from Mill Creek, and at mile 190.9.

DRAINAGE AREA.--12,860 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--May 1992 to current year. October 1892 to September 1954, monthly and yearly discharges published in WSP 1306 and 1726, October 1986 to September 1991, gage height, published as "at Nashville." Gage height record collected in this vicinity since 1873 are contained in reports of U.S. Weather Bureau.

GAGE.--Data collection platform and acoustic velocity meter. Datum of gage is 368.17 ft above sea level. Prior to fall of 1922 inclined and vertical staff gage at site 350 ft downstream and from fall of 1922 to Apr. 9, 1940, staff gage at site 400 ft downstream, both gages at same datum. Nov. 1, 1930, to Sept. 30, 1954, upper staff gage at former lock 1, 2.7 mi downstream was used as auxiliary gage. Prior to May 1992 at site 0.2 mi upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 203,000 ft<sup>3</sup>/s, Jan. 1, 1927, gage height 56.2 ft; minimum gage height observed after first filling of pool at dam 1, 6.1 ft, Oct. 19, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 89,200 ft<sup>3</sup>/s, Feb. 17, maximum gage height, 33.32 ft, Feb. 17, minimum daily discharge, 3,220 ft<sup>3</sup>/s, May 20; minimum gage height, 16.24 ft, Dec. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6130	6160	8110	5320	11500	e24000	15700	6350	9720	9110	11600	12500
2	5680	6940	5970	7670	9540	e24600	13400	6680	10200	8450	14500	12800
3	6040	6860	5240	10400	9310	e23400	11400	5810	7510	11300	14300	9370
4	6330	5270	5460	12600	10200	e18400	12200	5590	7530	8950	12200	8980
5	6280	5690	7200	10800	9880	e19700	15200	5410	7950	12000	11000	13300
6	6150	6030	7290	7440	8040	e19400	15700	5930	9140	11800	8250	17500
7	4810	6680	6790	6930	8080	e15900	15300	5890	11100	10800	9430	17600
8	4500	6630	8290	6180	8650	e17200	15100	5800	11100	8650	10800	14700
9	6760	16700	4650	6180	9030	e15200	14200	6250	10600	8050	12000	11600
10	8580	15000	4460	8350	14500	e12000	14300	7250	7630	10400	10300	11700
11	9590	8330	5090	8810	12700	e11400	13600	8080	8000	11400	8090	10100
12	9860	6330	6980	8960	10400	e11900	14300	6140	8440	12000	7940	12200
13	7300	8530	9520	5630	13200	10300	14600	4940	8220	12300	12600	13300
14	4780	8510	10900	4910	14600	11000	18500	5450	6420	10700	10200	15000
15	4460	8500	13500	7130	e54200	12900	19500	6050	7340	e10000	9680	15100
16	e6220	8140	25300	5180	e74700	14500	18300	7980	5840	e17000	12400	11100
17	e5440	8180	57400	5920	e89200	12600	21200	7990	5940	e17200	14300	9120
18	e5440	6320	45600	7440	e59600	10200	21600	6520	6100	e17500	13500	8610
19	e5610	5440	24900	22700	e34200	8560	22900	3370	8210	10200	12300	9470
20	6100	5110	15000	47200	e29300	13300	22300	3220	8570	9330	12100	10700
21	4850	6780	11000	36600	e29900	36200	16200	5250	7810	8660	11200	16600
22	4850	5780	15100	18700	e28800	28100	12600	6550	9350	8630	11600	5270
23	5250	6050	14700	12100	e33700	23800	11900	10200	7570	8820	16100	13300
24	6690	6080	11700	9610	e34100	18300	10300	13000	6980	8690	18100	12100
25	6270	6680	12800	10600	e35400	15900	11300	7310	7590	9810	15500	11100
26	5950	6380	14800	11100	e40300	15700	12000	5920	9350	10500	10800	11300
27	6110	7200	16400	7190	e39400	18900	12200	5760	9360	11300	11000	12900
28	5440	7380	17700	6980	e38300	20400	11200	5410	9530	10000	11600	14200
29	5570	8290	17700	8170	---	22500	9740	5780	11400	13700	13100	10500
30	5550	8740	12800	10200	---	22300	6560	8150	11200	9380	16400	9480
31	5330	---	7600	13600	---	21700	---	8390	---	12000	16400	---
TOTAL	187920	224710	429950	350600	770730	550260	443300	202420	255700	338630	379290	361500
MEAN	6062	7490	13870	11310	27530	17750	14780	6530	8523	10920	12240	12050
MAX	9860	16700	57400	47200	89200	36200	22900	13000	11400	17500	18100	17600
MIN	4460	5110	4460	4910	8040	8560	6560	3220	5840	8050	7940	5270

e Estimated

## CUMBERLAND RIVER BASIN

89

034315005 CUMBERLAND RIVER AT WOODLAND STREET AT NASHVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10020	12300	19980	29050	30570	36830	32500	21110	20440	14240	13910	10940
MAX	18380	22670	40930	43570	71760	82050	92860	47660	50810	20320	20680	18820
(WY)	1993	1996	1997	1994	1994	1994	1994	1998	1997	1992	1996	1992
MIN	6062	6813	7084	6978	10950	13280	10680	6530	8523	10440	10490	8176
(WY)	2001	2000	2000	2000	2000	2000	1995	2001	2001	2000	1993	1993

## SUMMARY STATISTICS

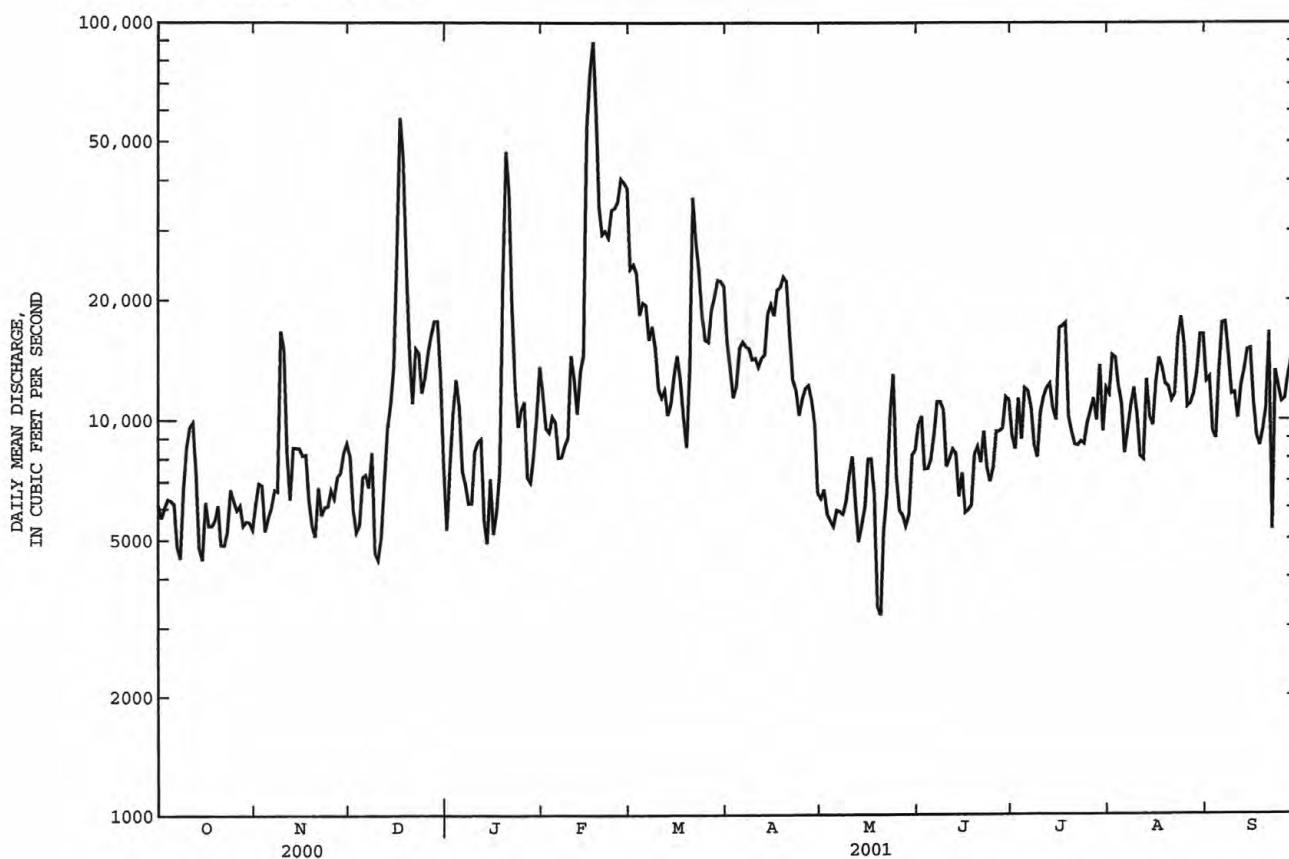
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

\*WATER YEARS 1992 - 2001

ANNUAL TOTAL	4293600	4495010	
ANNUAL MEAN	11730	12320	
HIGHEST ANNUAL MEAN			20950
LOWEST ANNUAL MEAN			34940
HIGHEST DAILY MEAN	77300	Mar 21	89200
LOWEST DAILY MEAN	4220	Jan 2	3220
ANNUAL SEVEN-DAY MINIMUM	5250	May 17	5360
MAXIMUM PEAK FLOW			33.32
MAXIMUM PEAK STAGE			Feb 17
10 PERCENT EXCEEDS	23400		19600
50 PERCENT EXCEEDS	8540		10200
90 PERCENT EXCEEDS	5340		5690

\* Period of daily discharge only.



## CUMBERLAND RIVER BASIN

03431514 CUMBERLAND RIVER NEAR BORDEAUX, TN

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°10'59", long 86°49'56", Davidson County, Hydrologic Unit 05130202, on center pier of Nashville to Ashland City Railroad Bridge, 0.8 mi south of Bordeaux, 2.6 mi upstream of Whites Creek, and at mile 185.2.

DRAINAGE AREA.--12,862 mi<sup>2</sup>, approximately.

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

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1996 to current year.

pH: November 1996 to current year.

WATER TEMPERATURE: November 1996 to current year.

DISSOLVED OXYGEN: November 1996 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1996.

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

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 303 microsiemens, March 14, 2000; minimum, 171 microsiemens, June 4, 1998.

pH: Maximum, 9.0 units, Feb. 11, 2001; minimum, 6.6 units, Nov. 30, 1997, June 11, 1997.

WATER TEMPERATURE: Maximum, 27.8°C, July 14, 2000; minimum, 4.4°C, Feb. 3, 2000.

DISSOLVED OXYGEN: Maximum, 15.9 mg/L, Feb. 12, 2001; minimum, 3.6 mg/L, Oct. 26, 2001.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 280 microsiemens, Feb. 27; minimum, 199 microsiemens, Sept. 7.

pH: Maximum, 9.0 units, Feb. 11; minimum, 7.2 units, June 23, 27, July 30.

WATER TEMPERATURE: Maximum, 27.0°C, July 9; minimum, 3.1°C, Jan. 3, 4.

DISSOLVED OXYGEN: Maximum, 16.0 mg/L, Feb. 12; minimum, 3.6 mg/L, Oct. 26.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	232	237	246	252	235	232	216	237	225	212	206
2	213	219	240	245	257	232	231	219	233	227	213	206
3	212	232	245	250	261	227	227	217	234	230	208	206
4	221	226	241	246	259	228	225	222	236	227	209	208
5	219	229	238	238	250	235	220	223	239	222	210	206
6	219	223	237	235	254	232	216	221	243	221	210	205
7	221	218	236	231	263	229	215	220	233	221	212	202
8	222	228	234	229	265	229	214	221	234	218	217	204
9	219	223	238	225	261	230	212	223	235	212	211	209
10	220	228	239	232	262	231	214	226	230	220	213	211
11	218	236	237	222	246	225	215	221	230	221	220	211
12	219	242	231	221	250	225	217	221	233	220	222	209
13	218	238	228	225	258	230	217	226	247	218	216	208
14	220	230	237	231	255	231	216	225	241	216	218	209
15	222	236	238	218	248	232	217	226	246	210	227	208
16	232	239	234	212	236	233	218	226	244	211	223	210
17	215	238	---	215	232	235	222	227	239	216	223	213
18	228	237	225	217	240	235	223	232	238	220	224	215
19	230	237	238	228	239	232	223	223	239	218	214	216
20	231	236	237	215	245	234	224	241	231	216	209	214
21	236	224	245	221	255	223	225	242	224	211	212	210
22	233	216	242	222	259	225	228	228	230	211	216	211
23	227	218	241	245	259	223	229	231	230	208	217	211
24	223	216	242	253	255	223	232	225	234	212	216	209
25	235	220	236	253	249	230	228	228	231	213	216	210
26	236	223	240	252	251	235	224	233	230	216	216	208
27	236	227	237	260	269	238	221	236	229	209	218	208
28	233	228	235	255	251	233	218	236	219	209	220	208
29	234	248	239	257	---	231	214	238	219	---	211	209
30	221	235	243	264	---	235	213	239	222	213	204	209
31	218	---	243	255	---	235	---	250	---	216	205	---



## CUMBERLAND RIVER BASIN

91

03431514 CUMBERLAND RIVER NEAR BORDEAUX, TN--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.0	7.7	7.8	7.6	7.8	7.7	7.7	7.6	8.3	8.2	7.8	7.8
2	7.9	7.6	7.9	7.8	7.8	7.7	7.6	7.6	8.2	8.2	7.9	7.8
3	7.9	7.5	7.9	7.5	7.7	7.6	7.8	7.6	8.3	8.2	7.8	7.8
4	7.7	7.5	7.8	7.6	7.7	7.6	7.8	7.7	8.4	8.2	7.8	7.8
5	7.6	7.3	7.8	7.6	7.7	7.6	7.9	7.7	8.4	8.2	7.8	7.8
6	7.6	7.3	7.7	7.6	7.7	7.7	7.8	7.7	8.5	8.3	7.9	7.8
7	7.5	7.3	8.0	7.7	7.9	7.7	7.9	7.7	8.6	8.3	7.9	7.9
8	7.6	7.4	7.9	7.7	7.9	7.8	8.1	7.7	8.7	8.4	7.9	7.9
9	7.8	7.4	7.8	7.7	7.9	7.9	8.2	7.9	8.8	8.6	8.0	7.9
10	7.8	7.6	7.8	7.7	8.0	7.8	8.2	8.1	8.9	8.6	8.0	7.9
11	7.8	7.5	7.8	7.7	8.0	7.9	8.2	8.1	9.0	8.9	8.0	7.9
12	8.0	7.6	7.8	7.6	8.0	7.9	8.3	8.2	8.9	8.8	7.9	7.9
13	7.9	7.6	7.8	7.7	8.1	8.0	8.2	8.1	8.9	8.6	8.1	7.9
14	8.0	7.6	7.8	7.7	8.0	7.8	8.2	8.1	8.9	8.5	8.0	7.9
15	8.2	7.6	7.8	7.7	8.1	7.9	8.2	8.0	8.6	8.3	8.0	7.9
16	8.0	7.5	7.7	7.6	8.0	7.7	8.3	8.0	8.3	7.9	8.0	7.9
17	8.2	7.7	7.7	7.6	---	---	8.7	8.2	7.9	7.7	8.0	7.9
18	7.9	7.5	7.8	7.7	7.8	7.8	8.5	8.3	7.8	7.7	8.0	7.8
19	7.7	7.4	7.8	7.7	7.8	7.8	8.3	8.0	7.7	7.7	8.2	7.9
20	7.7	7.4	7.8	7.7	7.8	7.8	8.3	8.1	7.8	7.7	8.2	8.0
21	7.7	7.4	7.9	7.8	7.8	7.7	8.3	8.2	7.8	7.7	8.2	8.1
22	7.8	7.5	8.0	7.8	7.8	7.6	8.3	8.2	7.7	7.7	8.2	8.1
23	7.9	7.4	7.9	7.8	7.8	7.7	8.3	8.3	7.7	7.7	8.3	8.1
24	7.9	7.7	7.9	7.8	7.8	7.7	8.4	8.3	7.7	7.7	8.3	8.1
25	7.7	7.5	7.8	7.6	7.8	7.6	8.4	8.3	7.7	7.7	8.3	8.2
26	7.8	7.5	7.7	7.7	7.8	7.7	8.4	8.3	7.8	7.7	8.4	8.2
27	7.7	7.5	7.8	7.7	7.7	7.6	8.3	8.2	7.9	7.8	8.3	8.2
28	7.7	7.5	7.9	7.8	7.7	7.6	8.3	8.2	7.9	7.8	8.4	8.3
29	7.7	7.5	7.8	7.7	7.7	7.6	8.3	8.2	---	---	8.3	8.2
30	7.7	7.6	7.8	7.7	7.7	7.7	8.2	8.1	---	---	8.3	8.2
31	7.8	7.7	---	---	7.8	7.6	8.3	8.1	---	---	8.4	8.3
MONTH	8.2	7.3	8.0	7.5	8.1	7.6	8.7	7.6	9.0	7.7	8.4	7.8
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.6	8.4	8.6	8.4	7.8	7.6	7.8	7.5	7.8	7.4	8.1	7.8
2	8.6	8.5	8.4	8.1	7.8	7.5	8.3	7.6	7.7	7.5	8.0	7.7
3	8.6	8.5	8.1	7.9	7.7	7.5	7.9	7.5	7.7	7.5	8.1	7.7
4	8.6	8.5	8.2	7.9	8.1	7.7	7.7	7.4	7.6	7.5	8.5	7.9
5	8.6	8.5	8.1	7.9	8.1	7.7	7.7	7.5	7.6	7.5	8.3	7.8
6	8.7	8.5	7.9	7.7	8.3	7.9	7.6	7.5	7.6	7.5	8.4	7.7
7	8.7	8.5	7.8	7.7	8.0	7.7	7.7	7.5	7.8	7.4	8.8	7.9
8	8.6	8.4	7.8	7.6	7.9	7.7	8.1	7.5	7.7	7.3	8.3	7.9
9	8.6	8.5	7.7	7.5	8.0	7.7	8.2	7.7	7.7	7.5	8.2	7.8
10	8.6	8.4	7.7	7.6	8.2	7.6	7.7	7.5	7.7	7.4	8.3	7.8
11	8.8	8.4	7.7	7.6	8.2	7.8	7.6	7.4	7.7	7.3	8.3	7.8
12	8.7	8.3	7.7	7.6	8.2	7.6	7.7	7.5	7.4	7.3	8.2	7.8
13	8.6	8.4	7.7	7.5	7.7	7.5	7.7	7.5	7.4	7.3	8.3	8.0
14	8.5	8.4	7.9	7.6	7.8	7.5	7.8	7.5	7.7	7.4	8.2	8.0
15	8.4	8.3	7.7	7.5	7.7	7.5	8.1	7.6	7.6	7.3	8.4	7.9
16	8.4	8.2	7.8	7.5	7.5	7.4	7.9	7.7	7.5	7.3	8.6	8.4
17	8.4	8.2	7.8	7.5	7.6	7.4	7.9	7.8	7.7	7.3	8.4	8.1
18	8.4	8.3	7.6	7.5	7.6	7.4	8.0	7.6	7.5	7.3	8.2	8.0
19	8.5	8.2	7.7	7.5	7.6	7.4	7.9	7.6	7.9	7.2	8.0	7.8
20	8.4	8.2	7.8	7.5	7.5	7.4	7.7	7.5	7.9	7.5	8.2	8.0
21	8.3	8.1	7.7	7.5	7.7	7.4	7.6	7.5	7.9	7.6	8.1	7.6
22	8.4	8.1	7.5	7.4	7.4	7.3	7.9	7.5	7.9	7.6	8.6	8.1
23	8.5	8.2	7.6	7.4	7.4	7.2	8.0	7.8	7.9	7.7	8.4	7.9
24	8.5	8.2	7.8	7.3	7.5	7.3	7.9	7.6	7.8	7.6	8.1	7.8
25	8.4	8.0	7.7	7.6	7.5	7.3	7.6	7.5	8.2	7.7	8.1	7.7
26	8.5	8.0	7.9	7.7	7.5	7.3	7.6	7.4	8.2	7.7	8.4	7.8
27	8.6	8.3	8.1	7.7	7.6	7.2	7.6	7.5	8.1	7.6	8.4	8.1
28	8.5	8.2	7.8	7.6	7.9	7.4	7.6	7.4	7.8	7.5	8.3	8.1
29	8.4	8.2	8.2	7.6	7.7	7.3	7.6	7.3	8.0	7.6	8.5	8.0
30	8.6	8.4	8.0	7.6	7.7	7.5	7.7	7.2	8.1	7.6	8.5	7.9
31	---	---	7.9	7.5	---	---	7.6	7.5	8.0	7.7	---	---
MONTH	8.8	8.0	8.6	7.3	8.3	7.2	8.3	7.2	8.2	7.2	8.8	7.6

## CUMBERLAND RIVER BASIN

03431514 CUMBERLAND RIVER NEAR BORDEAUX, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	19.5	11.0	4.0	6.0	9.5	11.0	18.5	22.0	25.0	25.0	23.0
2	21.5	19.5	10.5	3.5	6.0	10.0	11.5	18.5	22.0	25.5	25.0	23.0
3	22.0	19.5	10.0	3.5	6.0	10.0	11.5	18.0	21.5	25.0	24.5	23.0
4	22.0	19.5	9.5	3.5	6.0	10.0	11.5	19.0	22.0	24.5	24.5	24.0
5	22.0	19.0	9.0	3.5	6.0	10.0	12.0	19.5	22.0	24.5	24.5	23.5
6	22.0	18.5	9.0	4.0	6.5	9.5	12.5	19.5	22.5	24.5	25.0	24.0
7	21.0	18.5	8.5	4.0	6.5	9.5	13.5	19.5	22.0	25.0	25.0	24.5
8	19.5	18.5	8.5	4.0	6.5	9.5	14.0	19.5	21.5	25.5	24.5	24.0
9	18.5	18.5	8.5	4.0	7.5	9.5	14.5	19.5	22.0	26.5	25.0	24.0
10	18.0	17.5	8.5	4.0	7.5	9.5	15.5	19.5	22.0	25.5	25.0	24.0
11	18.0	16.5	8.5	4.0	7.0	9.5	16.0	19.5	23.0	25.5	25.0	23.5
12	18.0	16.5	8.5	4.5	7.5	10.0	16.5	20.0	23.5	25.5	25.0	23.5
13	18.0	16.0	7.5	4.5	7.5	10.5	17.0	20.5	22.5	25.5	25.0	23.5
14	18.0	15.5	7.5	5.0	8.0	10.5	17.0	20.5	23.0	25.0	25.0	23.0
15	18.5	15.0	7.5	5.5	8.5	10.5	17.0	20.5	23.0	26.0	24.5	23.0
16	18.5	15.0	---	5.5	9.0	10.5	17.0	21.0	23.5	25.5	24.5	23.5
17	18.5	14.5	---	5.5	8.5	10.5	16.5	21.5	24.0	25.5	24.5	23.0
18	18.5	13.5	7.5	5.5	9.0	10.0	16.0	21.0	25.0	25.5	24.5	22.5
19	18.5	13.0	6.5	5.5	8.5	10.5	16.0	21.5	25.0	25.5	25.0	22.5
20	18.5	13.0	6.5	5.5	8.5	10.5	16.0	21.5	25.0	25.5	25.0	22.5
21	18.5	12.0	6.0	5.5	8.5	10.0	16.0	21.5	25.5	25.0	24.5	21.5
22	19.0	11.0	5.5	5.5	8.5	10.0	16.5	22.0	25.0	25.5	24.5	22.0
23	19.5	11.0	5.5	5.5	8.5	10.5	17.5	21.5	24.5	26.0	25.5	22.0
24	19.5	11.0	5.5	5.5	9.0	11.0	17.5	21.0	24.5	26.0	25.0	21.5
25	19.5	11.0	5.0	5.0	10.0	10.5	17.0	21.5	25.0	25.5	25.5	21.0
26	19.5	11.0	5.0	5.0	9.5	10.5	16.5	21.5	25.0	25.0	25.5	20.5
27	19.5	11.0	5.0	4.5	9.5	10.5	17.5	22.0	25.0	25.5	25.5	20.5
28	19.5	10.5	5.0	5.0	9.5	10.5	17.5	22.0	25.0	25.5	24.5	20.5
29	19.5	11.5	4.5	5.0	---	10.5	17.5	22.5	25.0	---	23.5	20.0
30	19.0	11.0	4.0	5.5	---	10.5	18.0	22.0	25.0	25.0	23.5	20.0
31	19.0	---	4.0	6.0	---	11.0	---	22.0	---	25.0	23.5	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	6.1	9.8	14.1	13.0	10.2	12.0	11.1	---	6.9	7.9	7.5
2	8.7	7.2	9.7	14.2	13.0	10.4	12.4	10.6	---	7.9	7.8	7.5
3	8.5	5.7	9.9	14.4	13.3	10.4	12.4	9.9	---	7.4	7.4	7.5
4	8.0	5.9	10.2	14.6	13.5	10.0	12.5	10.1	7.4	6.9	7.3	8.4
5	7.0	6.3	10.6	14.7	13.6	10.0	12.6	9.7	7.6	7.5	7.5	8.4
6	6.4	6.4	10.7	14.5	13.9	10.3	12.6	9.2	8.1	7.0	7.4	8.4
7	6.2	7.7	11.0	14.6	14.0	10.6	12.4	8.8	7.5	7.1	7.8	8.9
8	6.5	7.7	11.0	14.0	14.5	10.8	12.1	8.1	7.1	7.7	6.8	8.6
9	7.3	7.6	11.7	13.6	15.0	11.1	12.3	7.9	7.7	8.4	6.7	8.6
10	7.9	8.0	12.2	14.0	14.8	11.2	12.4	7.8	7.5	6.5	6.9	8.8
11	7.9	7.9	12.5	13.9	15.4	11.3	12.4	7.8	8.3	6.4	6.8	8.7
12	8.3	7.6	12.5	13.7	15.6	11.5	12.1	7.6	8.2	6.2	6.4	8.8
13	8.7	8.1	12.9	13.3	15.1	11.4	11.4	7.6	6.5	6.2	6.5	9.0
14	9.1	8.6	13.0	13.0	14.4	11.3	11.2	7.7	6.6	6.3	6.9	8.5
15	9.8	8.6	13.4	---	13.2	11.2	10.8	7.6	6.1	6.9	6.5	8.7
16	8.5	7.8	12.8	---	13.1	11.0	10.5	7.8	5.6	6.7	6.0	9.4
17	9.7	7.9	---	---	12.4	10.8	10.4	7.5	6.0	6.3	6.7	8.9
18	7.9	8.4	12.8	11.7	12.1	11.5	10.5	7.0	6.0	---	5.9	8.6
19	6.8	8.4	12.8	10.9	11.5	11.3	10.9	7.2	5.7	7.1	6.3	8.2
20	---	8.3	12.8	11.4	11.5	11.0	10.9	7.2	5.7	6.5	7.5	8.3
21	---	8.8	13.0	11.4	11.9	10.7	10.7	7.2	6.1	6.2	6.7	8.1
22	---	9.5	13.2	11.6	11.7	10.8	10.9	6.8	4.8	6.8	6.7	9.2
23	6.7	9.7	13.2	12.0	11.6	10.8	11.3	6.6	4.9	7.6	7.0	8.9
24	6.3	9.8	13.2	12.4	11.5	10.9	11.2	6.7	4.8	7.1	6.5	7.9
25	5.1	9.7	13.3	12.7	11.2	11.0	11.0	7.2	5.9	6.2	7.1	7.8
26	5.1	9.7	13.4	12.6	11.0	11.2	11.1	7.8	6.2	5.5	7.4	8.2
27	5.1	9.9	13.4	12.7	10.3	11.3	11.4	8.4	6.7	6.1	7.1	8.4
28	5.6	10.4	13.4	13.3	10.1	11.6	11.2	8.1	7.2	5.9	6.8	8.4
29	5.8	9.7	13.5	13.3	---	11.5	11.0	8.6	6.7	---	7.0	8.6
30	6.7	10.0	13.8	13.0	---	11.5	11.3	7.6	6.8	5.9	7.4	8.7
31	7.0	---	14.0	12.9	---	11.7	---	---	---	6.9	7.3	---

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## CUMBERLAND RIVER BASIN

03431599 WHITES CREEK NEAR BORDEAUX, TN

LOCATION.--Lat 36°13'03", long 86°49'13", Davidson County, Hydrologic Unit 05130202, on right bank on downstream side of bridge on Buena Vista Pike, 0.4 mi downstream from Ewing Creek, 1.8 mi northeast of Bordeaux, 2.1 mi above Drakes Branch, and at mile 6.1.

DRAINAGE AREA.--51.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to April 1975 (published as at Tucker Road, near Bordeaux), August 1993 to current year. Occasional low-flow measurements, water years 1962-64.

GAGE.--Data collection platform. Datum of gage is 402.87 ft above sea level. Oct. 1964 to April 1975 at site 0.4 mi downstream at datum 1.23 ft lower, August 1993 to Sept. 1995 at datum 3.85 ft higher.

REMARKS.--No estimated daily discharges. Records good. Peak discharge of 12,200 ft<sup>3</sup>/s, Feb. 23, 1975, gage height 17.06 ft, occurred at Tucker Road near Bordeaux site. 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 3,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	1330	*5,940	*15.60	Feb 16	1745	4,210	13.42
Feb 14	2215	4,790	14.18				

Minimum discharge, 0.42 ft<sup>3</sup>/s, July 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.1	13	15	52	80	21	11	56	10	1.0	3.4
2	2.2	2.0	12	15	37	59	18	10	38	6.1	.78	2.8
3	2.0	2.0	12	14	27	44	26	9.6	29	4.5	30	2.4
4	1.9	2.1	12	14	22	98	26	8.0	26	3.4	22	2.2
5	1.8	2.2	11	13	18	130	22	7.3	17	6.5	35	1.8
6	2.7	2.8	11	14	15	96	19	6.1	16	6.2	16	1.5
7	3.0	3.4	11	13	13	76	17	17	73	3.5	4.1	1.3
8	2.7	30	10	13	11	61	16	37	63	2.5	3.5	1.1
9	2.7	338	10	12	39	46	16	22	33	2.1	15	1.1
10	2.4	53	9.7	12	88	36	13	14	19	2.0	7.2	2.3
11	2.6	25	9.8	13	54	28	12	12	12	1.8	9.8	1.7
12	2.5	17	12	16	40	28	16	13	9.3	1.7	28	1.4
13	2.2	14	31	14	37	30	117	10	7.4	1.3	65	1.2
14	2.0	13	59	14	725	23	70	7.8	6.2	1.2	20	1.1
15	1.7	12	39	12	1340	39	154	6.5	28	.95	8.4	.94
16	1.6	12	1470	12	1640	84	122	5.6	87	.86	6.7	1.4
17	1.5	13	333	12	616	56	88	4.9	23	.79	7.6	.84
18	1.5	12	145	60	274	44	67	4.4	12	.83	4.9	.84
19	1.8	11	98	541	173	37	55	4.2	8.0	.91	3.7	4.0
20	2.0	10	68	250	120	101	43	4.4	6.2	1.2	3.1	2.8
21	2.0	10	50	132	88	163	34	52	5.1	1.4	2.6	1.2
22	2.1	9.7	38	89	339	120	27	149	5.4	1.1	2.2	.97
23	1.9	9.2	31	66	185	95	25	54	4.4	.79	1.8	.90
24	1.9	15	25	49	128	77	59	37	3.4	.62	1.8	2.2
25	1.9	57	21	37	553	59	31	21	2.8	.62	2.0	1.7
26	2.0	38	19	29	223	48	23	13	2.6	1.0	1.4	1.2
27	1.9	23	18	21	147	39	20	10	2.5	1.6	1.5	.94
28	2.2	18	17	17	106	32	16	37	4.2	2.3	1.5	.82
29	2.2	16	17	45	---	28	13	14	126	4.2	1.7	.76
30	2.2	14	16	130	---	27	12	9.9	27	2.3	1.9	.70
31	2.2	---	16	79	---	24	---	11	---	1.4	3.1	---
TOTAL	65.7	786.5	2644.5	1773	7110	1908	1198	622.7	752.5	75.67	313.28	47.51
MEAN	2.12	26.2	85.3	57.2	254	61.5	39.9	20.1	25.1	2.44	10.1	1.58
MAX	3.0	338	1470	541	1640	163	154	149	126	10	65	4.0
MIN	1.5	2.0	9.7	12	11	23	12	4.2	2.5	.62	.78	.70
CFSM	.04	.51	1.66	1.11	4.95	1.20	.78	.39	.49	.05	.20	.03
IN.	.05	.57	1.92	1.29	5.16	1.38	.87	.45	.55	.05	.23	.03



## CUMBERLAND RIVER BASIN

95

03431599 WHITES CREEK NEAR BORDEAUX, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2001, BY WATER YEAR (WY)

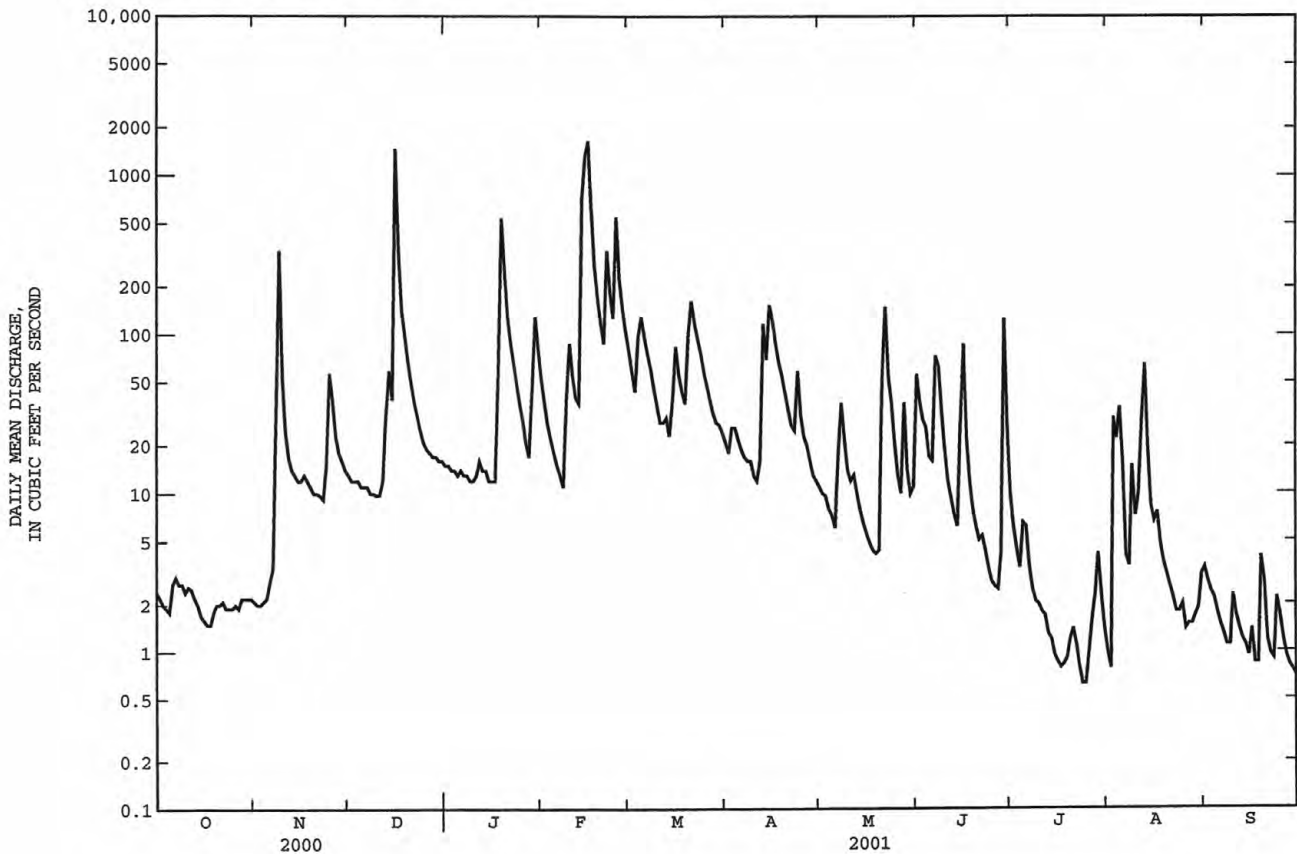
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.3	53.0	103	131	152	182	125	85.9	50.9	15.1	16.0	16.8
MAX	67.1	138	286	288	369	530	286	277	264	48.3	87.2	122
(WY)	1996	1973	1973	1999	1975	1975	1994	1995	1998	1967	1972	1974
MIN	2.05	6.30	8.18	25.2	36.3	46.0	18.8	20.1	4.70	1.11	1.79	.98
(WY)	1970	1999	1966	1966	1968	1966	1967	2001	1966	1966	1999	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1965 - 2001	
ANNUAL TOTAL	16168.1		17297.36			
ANNUAL MEAN	44.2		47.4		75.5	
HIGHEST ANNUAL MEAN					129	
LOWEST ANNUAL MEAN					35.2	
HIGHEST DAILY MEAN	1470		1640		5100	
LOWEST DAILY MEAN	1.5		.62		.19	
ANNUAL SEVEN-DAY MINIMUM	1.7		.95		.30	
MAXIMUM PEAK FLOW			5940		a12200	
MAXIMUM PEAK STAGE			15.60		b19.08	
INSTANTANEOUS LOW FLOW			.42		c.07	
ANNUAL RUNOFF (CFSM)	.86		.92		1.47	
ANNUAL RUNOFF (INCHES)	11.72		12.54		20.00	
10 PERCENT EXCEEDS	97		88		169	
50 PERCENT EXCEEDS	12		13		21	
90 PERCENT EXCEEDS	2.1		1.5		2.4	

a From rating curve extended above 6,900 ft<sup>3</sup>/s on basis of contracted opening measurement of peak flow, see REMARKS.

b Current site and datum.

c Also occurred Sept. 11, 1999.



## CUMBERLAND RIVER BASIN

03431700 RICHLAND CREEK AT CHARLOTTE AVENUE, AT NASHVILLE, TN

LOCATION.--Lat 36°09'04", long 86°51'16", Davidson County, Hydrologic Unit 05130202, near right bank on downstream end of pier of Charlotte Avenue bridge on U.S. Highway 70, 4.0 mi southwest of the State Capitol in Nashville, and at mile 3.7.

DRAINAGE AREA.--24.3 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1964 to September 1990, August 1993 to current year.

GAGE.--Data collection platform and crest-stage gage. Datum of gage is 409.56 ft above sea level.

REMARKS.--No estimated daily discharges. Records good, except below 5 ft<sup>3</sup>/s which are fair. Diversions above station used for irrigation of golf courses. Periodic observations of specific conductance and water temperature are published in this report as miscellaneous water quality data.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	1315	*2,340	*7.67	Feb 25	0230	2,280	7.56
Feb 16	1700	1,570	6.25				

Minimum discharge, 0.89 ft<sup>3</sup>/s, July 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.4	7.2	8.9	27	47	17	7.8	18	2.7	1.8	6.6
2	3.0	1.9	6.3	8.3	23	39	16	7.7	14	2.6	1.7	4.6
3	2.6	1.8	6.3	8.3	19	34	15	7.1	12	2.3	29	3.6
4	2.0	1.8	5.9	8.3	18	63	14	6.3	11	3.0	7.3	3.0
5	2.2	1.7	5.9	8.3	16	52	13	6.6	9.2	8.1	8.1	2.7
6	4.3	4.4	5.7	8.2	15	41	13	5.7	11	5.0	3.9	2.5
7	2.5	3.1	5.5	8.0	13	35	12	18	34	2.9	2.9	2.8
8	2.3	57	5.5	7.7	13	30	12	17	19	2.6	3.2	2.5
9	2.1	173	5.0	7.3	41	26	11	24	13	2.3	4.4	3.0
10	2.0	28	4.9	6.8	46	23	11	12	11	2.1	3.2	2.8
11	1.9	14	5.5	9.4	31	21	10	11	9.0	2.2	16	2.3
12	1.8	10	5.7	9.7	26	21	12	10	7.6	2.2	31	2.0
13	1.8	8.5	34	8.3	27	20	62	8.4	6.6	1.8	17	2.1
14	1.9	7.1	32	8.1	244	17	24	7.1	5.5	2.0	5.9	1.8
15	1.7	6.4	23	7.7	407	30	57	7.0	26	1.8	4.3	1.9
16	1.6	7.2	447	7.2	678	31	32	6.3	27	2.0	21	1.9
17	1.8	6.4	113	7.6	251	22	26	5.0	12	1.6	8.0	1.9
18	1.9	5.9	59	38	136	20	20	4.4	8.8	1.7	5.0	1.6
19	1.9	5.7	40	204	94	18	17	4.5	6.9	1.6	10	22
20	2.4	5.3	28	97	69	77	16	6.0	5.9	1.5	5.1	6.1
21	2.0	5.0	22	60	56	78	14	36	5.5	1.6	4.1	3.2
22	2.2	4.5	18	43	73	54	13	101	6.2	1.5	3.3	2.7
23	2.0	4.4	15	34	50	43	15	28	5.0	1.4	3.3	2.5
24	1.8	17	14	27	42	36	24	19	4.3	15	2.9	4.8
25	2.0	27	12	23	362	31	13	15	3.8	4.3	2.8	2.7
26	1.9	15	12	19	107	27	12	12	3.6	3.0	2.7	2.4
27	2.0	11	11	17	78	24	11	9.5	4.7	2.5	3.2	2.2
28	2.1	8.8	10	15	59	21	9.7	15	3.7	4.6	2.8	2.2
29	2.4	8.7	10	41	---	20	8.9	11	3.3	3.4	2.7	2.0
30	2.2	7.3	9.5	55	---	20	8.3	8.8	3.1	2.2	3.8	2.0
31	2.5	---	9.0	36	---	18	---	19	---	2.2	4.9	---
TOTAL	67.8	460.3	987.9	847.1	3021	1039	538.9	456.2	310.7	93.7	225.3	104.4
MEAN	2.19	15.3	31.9	27.3	108	33.5	18.0	14.7	10.4	3.02	7.27	3.48
MAX	4.3	173	447	204	678	78	62	101	34	15	31	22
MIN	1.6	1.7	4.9	6.8	13	17	8.3	4.4	3.1	1.4	1.7	1.6
CFSM	.09	.63	1.31	1.12	4.44	1.38	.74	.61	.43	.12	.30	.14
IN.	.10	.70	1.51	1.30	4.62	1.59	.82	.70	.48	.14	.34	.16

## CUMBERLAND RIVER BASIN

97

03431700 RICHLAND CREEK AT CHARLOTTE AVENUE, AT NASHVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.0	31.7	54.2	51.7	56.4	62.8	43.7	37.2	22.0	11.0	7.93	12.1
MAX	53.0	89.8	247	151	205	208	146	131	107	42.0	24.6	127
(WY)	1976	1987	1965	1974	1989	1975	1979	1984	1998	1979	1994	1979
MIN	.41	1.79	2.57	3.96	10.3	18.2	5.76	5.06	1.33	1.34	1.18	.92
(WY)	1966	1972	1966	1986	1968	1966	1986	1977	1988	1966	1980	1980

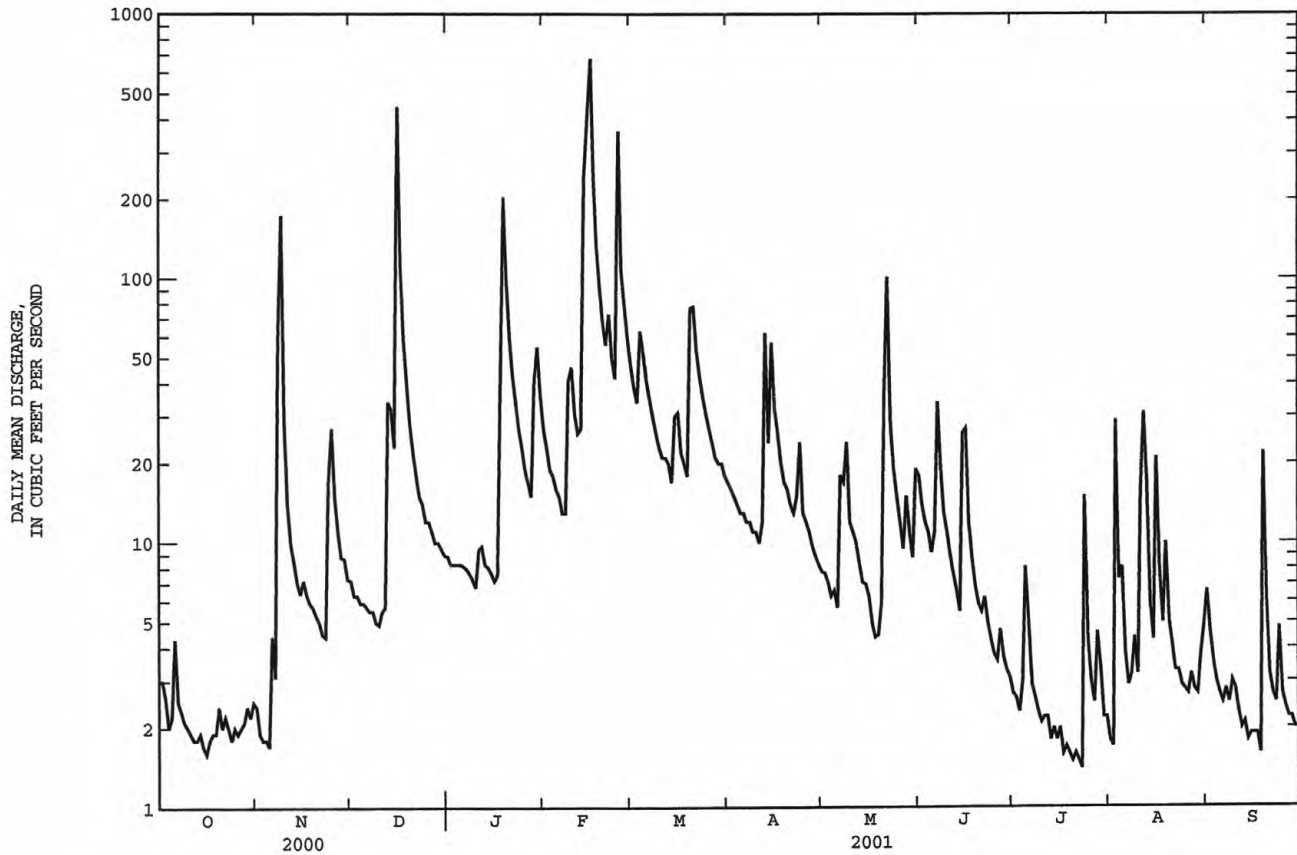
## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1964 - 2001

ANNUAL TOTAL	8043.0	8152.3	
ANNUAL MEAN	22.0	22.3	33.4
HIGHEST ANNUAL MEAN			71.3
LOWEST ANNUAL MEAN			13.6
HIGHEST DAILY MEAN	1000	May 25	7020
LOWEST DAILY MEAN	1.3	Jul 11	.05
ANNUAL SEVEN-DAY MINIMUM	1.5	Jul 11	.23
MAXIMUM PEAK FLOW			9470
MAXIMUM PEAK STAGE			15.13
INSTANTANEOUS LOW FLOW			.05
ANNUAL RUNOFF (CFSM)	.90		1.38
ANNUAL RUNOFF (INCHES)	12.31		18.69
10 PERCENT EXCEEDS	41		73
50 PERCENT EXCEEDS	8.6		11
90 PERCENT EXCEEDS	1.9		1.6



## CUMBERLAND RIVER BASIN

03432350 HARPETH RIVER AT FRANKLIN, TN

LOCATION.--Lat 35°55'14", long 86°51'56", Williamson County, Hydrologic Unit 05130204, on left bank 15 ft downstream from State Highway 96 bridge, 0.4 mi southeast of the courthouse in Franklin, and at mile 88.1.

DRAINAGE AREA.--191 mi<sup>2</sup>, includes 15 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Data collection platform and crest-stage gage. Datum of gage is 604.42 ft above sea level.

REMARKS.--Records good except those below 5.0 ft<sup>3</sup>/s, which are poor. The Franklin Utility District diverts part of its municipal water supply from the river above the gage. This water along with other water is returned to the river through the sewage treatment plant 2.7 mi below gage. 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 2,900 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 17	0530	6,460	21.59	Feb 25	1100	2,940	14.27
Jan 19	1800	3,960	16.90	Mar 20	2200	3,170	14.91
Feb 17	0730	*9,520	*25.90				

Minimum daily discharge, 1.6 ft<sup>3</sup>/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	2.4	56	82	326	437	138	42	256	159	19	23
2	2.4	2.5	51	71	262	366	119	39	141	68	9.7	15
3	2.3	2.3	50	58	214	313	109	36	87	53	8.8	13
4	2.2	2.8	53	65	185	344	105	34	74	43	636	12
5	2.5	2.8	50	55	163	497	104	38	57	33	141	11
6	6.5	4.5	42	51	144	416	100	36	44	26	72	17
7	4.0	6.3	33	48	129	345	93	37	46	21	42	9.5
8	3.2	43	31	49	116	291	86	50	59	18	27	2.3
9	2.9	1600	32	41	132	244	76	33	60	17	45	2.0
10	2.6	355	38	35	455	214	69	30	45	14	76	4.2
11	2.2	153	37	47	355	198	65	32	42	19	125	8.6
12	2.0	102	32	70	294	179	66	49	32	20	73	5.6
13	1.9	78	63	81	266	170	512	49	22	15	224	1.8
14	2.0	62	1050	67	828	150	487	33	55	5.1	662	3.9
15	2.3	51	422	54	3310	178	390	22	86	3.1	205	6.3
16	2.2	47	2450	55	5110	294	356	18	250	3.4	122	7.1
17	2.2	47	4150	64	7920	225	236	16	94	9.9	100	1.8
18	2.2	55	927	97	1700	182	176	22	61	9.1	90	1.7
19	2.5	49	594	2650	1010	160	146	22	46	5.1	70	35
20	2.8	40	419	1930	738	1020	127	23	38	2.5	48	23
21	2.2	34	339	919	577	1880	119	30	40	3.7	30	14
22	2.6	29	272	626	829	903	106	136	84	2.7	27	7.2
23	2.4	31	221	472	694	620	90	77	52	4.4	e20	5.3
24	2.5	45	187	387	519	474	91	47	34	2.6	e55	17
25	2.6	124	159	321	2060	382	76	35	28	7.8	23	14
26	2.3	175	133	270	1100	320	70	35	28	8.1	10	15
27	2.2	121	118	227	720	268	71	32	29	5.9	43	17
28	2.3	99	106	183	544	215	66	27	21	6.6	17	13
29	2.4	85	100	196	---	176	60	23	16	6.0	13	8.5
30	3.2	68	96	607	---	161	49	21	169	22	18	2.2
31	2.2	---	88	449	---	153	---	63	---	17	19	---
TOTAL	79.4	3516.6	12399	10327	30700	11775	4358	1187	2096	631.0	3070.5	317.0
MEAN	2.56	117	400	333	1096	380	145	38.3	69.9	20.4	99.0	10.6
MAX	6.5	1600	4150	2650	7920	1880	512	136	256	159	662	35
MIN	1.6	2.3	31	35	116	150	49	16	16	2.5	8.8	1.7
CFSM	.01	.61	2.09	1.74	5.74	1.99	.76	.20	.37	.11	.52	.06
IN.	.02	.68	2.41	2.01	5.98	2.29	.85	.23	.41	.12	.60	.06

e Estimated



## CUMBERLAND RIVER BASIN

99

03432350 HARPETH RIVER AT FRANKLIN, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	89.7	256	462	526	550	654	361	301	124	63.2	40.6	66.9
MAX	610	778	1172	1472	1358	1945	1066	1489	574	431	208	971
(WY)	1976	1980	1991	1979	1990	1975	1979	1984	1997	1989	1998	1979
MIN	.52	4.08	16.2	14.4	139	159	62.2	21.8	1.25	1.44	1.58	1.17
(WY)	1981	1981	1981	1986	1978	1985	1986	1988	1988	1988	1988	1980

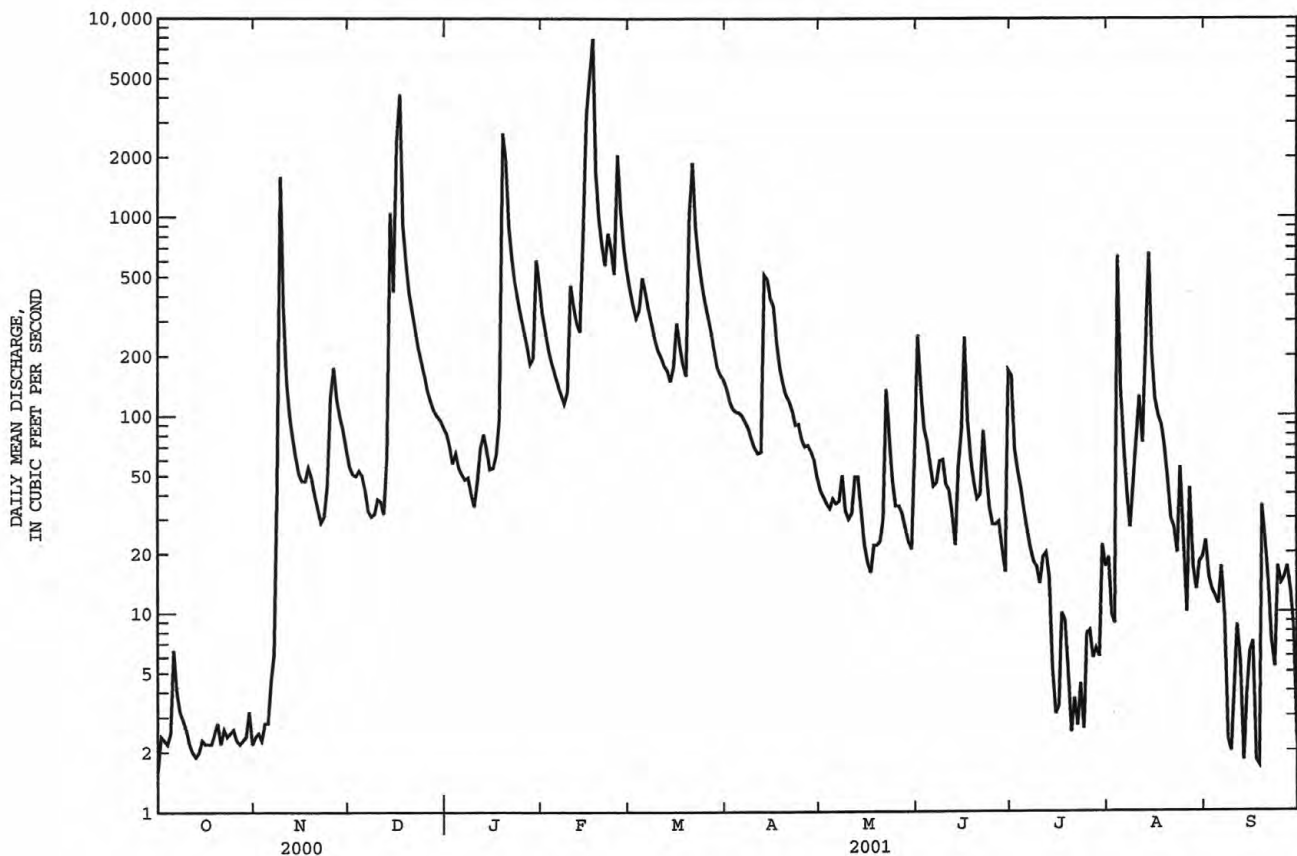
## SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1975 - 2001

ANNUAL TOTAL	74743.24	80456.5	
ANNUAL MEAN	204	220	
HIGHEST ANNUAL MEAN			290
LOWEST ANNUAL MEAN			522
HIGHEST DAILY MEAN	4150	Dec 17	18500
LOWEST DAILY MEAN	.65	Aug 16	68.7
ANNUAL SEVEN-DAY MINIMUM	.73	Aug 15	.30
MAXIMUM PEAK FLOW			.32
MAXIMUM PEAK STAGE			20200
INSTANTANEOUS LOW FLOW			33.65
ANNUAL RUNOFF (CFSM)	1.07		.30
ANNUAL RUNOFF (INCHES)	14.56		1.52
10 PERCENT EXCEEDS	515		20.64
50 PERCENT EXCEEDS	51		90
90 PERCENT EXCEEDS	1.9		2.8



## CUMBERLAND RIVER BASIN

03432387 SOUTH PRONG SPENCER CREEK NEAR FRANKLIN, TN

LOCATION.--Lat 35°56'39", long 86°49'35", Williamson County, Hydrologic Unit 05130204, on left upstream side of the bridge on Cool Spring Blvd., 1.7 miles northeast of Franklin, Tennessee.

DRAINAGE AREA.--2.66 mi<sup>2</sup>.

PERIOD OF RECORD.--June 2000 to September 2001.

GAGE.--Data logger.

REMARKS.--Records fair except of periods of estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 270 ft<sup>3</sup>/s, Nov. 9, gage height, 9.06 ft; minimum daily discharge, 0.01 ft<sup>3</sup>/s, on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR JUNE 2000 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	e2.7	.21	.04	.03
2	---	---	---	---	---	---	---	---	e2.4	.17	.03	.04
3	---	---	---	---	---	---	---	---	e2.1	.12	.02	.02
4	---	---	---	---	---	---	---	---	e1.9	.10	2.1	.02
5	---	---	---	---	---	---	---	---	e1.7	.09	.45	.02
6	---	---	---	---	---	---	---	---	e1.5	.08	.10	.02
7	---	---	---	---	---	---	---	---	1.4	.07	.07	.01
8	---	---	---	---	---	---	---	---	1.3	.07	1.7	.01
9	---	---	---	---	---	---	---	---	1.2	.05	.14	.01
10	---	---	---	---	---	---	---	---	1.0	.04	.40	.01
11	---	---	---	---	---	---	---	---	.92	.04	.10	e.01
12	---	---	---	---	---	---	---	---	.70	1.9	.07	.71
13	---	---	---	---	---	---	---	---	.56	.21	.06	.03
14	---	---	---	---	---	---	---	---	.50	.14	.04	.03
15	---	---	---	---	---	---	---	---	.40	.16	.03	.02
16	---	---	---	---	---	---	---	---	.39	.16	.02	.02
17	---	---	---	---	---	---	---	---	1.4	.11	.02	.01
18	---	---	---	---	---	---	---	---	.78	.05	.02	.01
19	---	---	---	---	---	---	---	---	.44	.08	.02	.01
20	---	---	---	---	---	---	---	---	.48	.21	.02	e.01
21	---	---	---	---	---	---	---	---	.28	.07	.02	e.01
22	---	---	---	---	---	---	---	---	.23	.04	.02	e.01
23	---	---	---	---	---	---	---	---	.19	.04	.01	.02
24	---	---	---	---	---	---	---	---	.15	.03	.02	4.5
25	---	---	---	---	---	---	---	---	.13	.03	.01	1.6
26	---	---	---	---	---	---	---	---	.13	.03	.03	.78
27	---	---	---	---	---	---	---	---	2.2	.03	1.7	.37
28	---	---	---	---	---	---	---	---	.73	.03	.30	.27
29	---	---	---	---	---	---	---	---	.40	.29	.61	.21
30	---	---	---	---	---	---	---	---	.25	.36	.05	.18
31	---	---	---	---	---	---	---	---	---	.08	.04	---
TOTAL	---	---	---	---	---	---	---	---	28.46	5.09	8.26	9.00
MEAN	---	---	---	---	---	---	---	---	.95	.16	.27	.30
MAX	---	---	---	---	---	---	---	---	2.7	1.9	2.1	4.5
MIN	---	---	---	---	---	---	---	---	.13	.03	.01	.01
CFSM	---	---	---	---	---	---	---	---	.36	.06	.10	.11
IN.	---	---	---	---	---	---	---	---	.40	.07	.12	.13

e Estimated

## CUMBERLAND RIVER BASIN

101

03432387 SOUTH PRONG SPENCER CREEK NEAR FRANKLIN, TN--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	e.01	.57	1.0	3.6	6.5	1.5	.49	5.3	.87	.21	1.7
2	.13	e.01	.50	.96	3.1	5.1	1.4	.46	2.6	.83	.20	1.5
3	.11	.01	.45	.93	2.7	4.3	1.3	.42	2.6	.79	1.8	1.4
4	.09	.01	.40	.86	2.3	7.0	1.2	.41	2.1	.82	.37	1.3
5	.08	e.01	.36	.83	2.1	5.0	1.1	.39	2.0	.73	.29	1.2
6	.19	.66	.33	.78	1.8	4.0	.98	.37	1.7	.71	.25	1.1
7	.09	.18	.30	.73	1.5	3.4	.89	3.1	2.1	.66	.23	1.1
8	.08	30	.28	.72	1.3	3.0	.82	1.3	1.6	.63	.22	1.1
9	.07	50	.25	.66	5.6	2.6	.79	.63	1.5	.62	.39	1.2
10	.07	5.6	.24	.60	5.1	2.4	.74	.51	1.4	.62	3.1	1.1
11	.06	2.8	.37	.97	3.8	2.2	.72	1.3	1.2	.82	1.1	1.0
12	.06	2.0	.25	.79	3.1	2.5	1.1	.47	1.1	.58	.47	.97
13	.06	1.5	13	.73	4.0	2.0	7.2	.41	1.0	.54	.41	.94
14	.05	1.1	5.3	.70	8.7	1.6	2.3	.42	5.2	.53	.39	.91
15	.05	.93	5.8	.65	48	3.1	5.4	.33	13	.51	.30	.88
16	.05	1.3	40	.60	113	2.0	2.6	.30	12	.48	.32	.87
17	.05	.84	17	.57	38	1.7	2.1	.28	4.1	.47	.28	.83
18	.05	.73	10	4.8	24	1.5	1.7	.26	2.7	.48	.26	.80
19	.05	.62	6.7	27	16	1.3	1.5	.36	2.0	.47	.26	2.9
20	.05	.53	4.8	16	12	16	1.2	.29	1.6	.43	.24	.52
21	.04	.47	3.6	11	9.0	14	1.0	3.9	2.8	.48	.24	.45
22	.03	.39	2.9	7.9	12	10	.92	25	3.0	.41	.22	.38
23	.03	.33	2.5	5.7	7.4	7.4	1.3	3.0	1.5	.44	3.3	.53
24	.02	2.6	2.2	4.4	5.8	5.5	1.6	2.4	1.3	1.7	.70	1.3
25	.14	2.0	2.0	3.5	49	4.3	.88	2.0	1.2	1.3	.44	.42
26	.03	1.3	1.7	2.9	16	3.5	.78	1.7	1.0	.34	.35	.38
27	.02	1.1	1.6	2.4	12	2.9	.70	1.5	.98	.29	10	.34
28	.01	.88	1.4	2.0	8.8	2.5	.61	1.9	.92	.31	2.0	.31
29	e.01	.78	1.3	6.1	---	2.2	.56	1.5	.92	.27	1.5	.29
30	e.01	.66	1.2	6.9	---	2.1	.52	1.3	1.1	.25	1.4	.27
31	e.01	---	1.1	4.6	---	1.7	---	11	---	.23	2.0	---
TOTAL	1.94	109.35	128.40	118.28	419.7	133.3	45.41	67.70	81.52	18.61	33.24	27.99
MEAN	.063	3.64	4.14	3.82	15.0	4.30	1.51	2.18	2.72	.60	1.07	.93
MAX	.19	50	40	27	113	16	7.2	25	13	1.7	10	2.9
MIN	.01	.01	.24	.57	1.3	1.3	.52	.26	.92	.23	.20	.27
CFSM	.02	1.37	1.56	1.43	5.64	1.62	.57	.82	1.02	.23	.40	.35
IN.	.03	1.53	1.80	1.65	5.87	1.86	.64	.95	1.14	.26	.46	.39

e Estimated

## CUMBERLAND RIVER BASIN

03432387 SOUTH PRONG SPENCER CREEK NEAR FRANKLIN, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.063	3.64	4.14	3.82	15.0	4.30	1.51	2.18	1.83	.38	.67	.62
MAX	.063	3.64	4.14	3.82	15.0	4.30	1.51	2.18	2.72	.60	1.07	.93
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
MIN	.063	3.64	4.14	3.82	15.0	4.30	1.51	2.18	.95	.16	.27	.30
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000	2000	2000

## SUMMARY STATISTICS

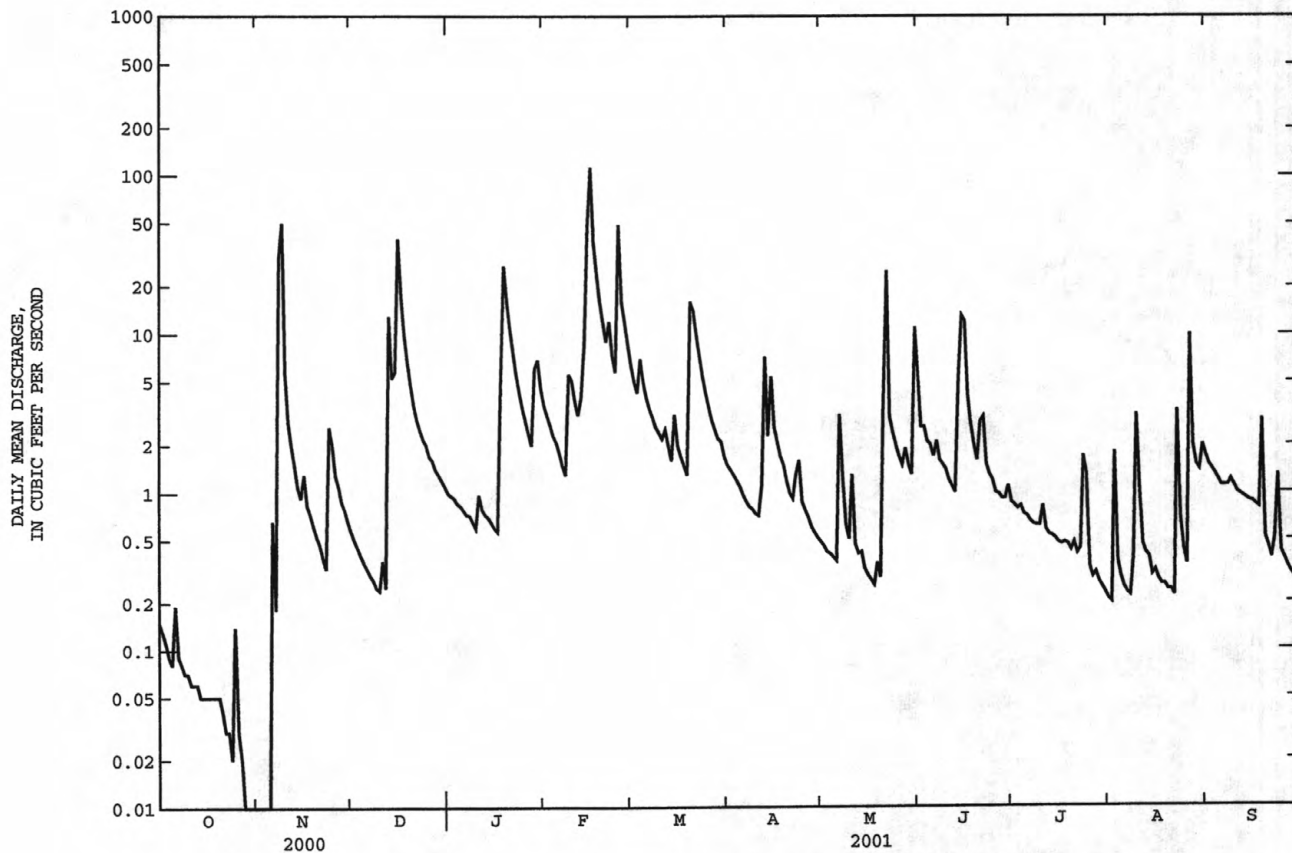
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 2000 - 2001

ANNUAL TOTAL												
ANNUAL MEAN							1185.44					
HIGHEST ANNUAL MEAN							3.25			3.25		
LOWEST ANNUAL MEAN										3.25		2001
HIGHEST DAILY MEAN				50	Nov 9		113	Feb 16		113	Feb 16	2001
LOWEST DAILY MEAN				.01	Aug 23		a.01	Oct 28		.01	Aug 23	2000
ANNUAL SEVEN-DAY MINIMUM				.01	Oct 28		.01	Oct 28		.01	Oct 28	2000
MAXIMUM PEAK FLOW							270	Nov 9		270	Nov 9	2000
MAXIMUM PEAK STAGE							9.06	Nov 9		9.06	Nov 9	2000
ANNUAL RUNOFF (CFSM)							1.22			1.22		
ANNUAL RUNOFF (INCHES)							16.58			16.59		
10 PERCENT EXCEEDS				2.2			6.8			5.2		
50 PERCENT EXCEEDS				.16			1.0			.73		
90 PERCENT EXCEEDS				.01			.19			.03		

a Many days





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## CUMBERLAND RIVER BASIN

03432390 SPENCER CREEK NEAR FRANKLIN, TN

LOCATION.--Lat 35°56'35", long 86°51'18", Williamson County, Hydrologic Unit 05130204, on right downstream side of bridge on U.S. Highway 31, 1.5 mi northeast of Franklin.

DRAINAGE AREA.--10.3 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1999 to current year. Occasional low-flow measurements, water year 1959, 1975.

GAGE.--Data collection platform and crest-stage gage at present.

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 CURRENT YEAR.--Peak discharges greater than base discharge of 517 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov 9	0145	*1,400	*10.30	Feb 16	1715	1,060	9.73
Dec 13	1830	561	8.47	Feb 25	0300	1,120	9.85
Dec 16	1345	726	8.96	May 22	0130	726	8.96
Feb 15	1545	612	8.63	Aug 27	0215	596	8.58

Minimum discharge, 1.2 ft<sup>3</sup>/s, Oct. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.4	5.0	3.9	14	24	8.9	3.4	30	4.9	2.5	7.9
2	2.4	1.4	4.7	3.6	11	21	8.1	3.6	15	4.2	2.2	6.3
3	2.5	1.4	4.4	3.4	9.2	19	8.7	3.2	15	3.8	20	5.9
4	2.0	1.4	4.1	3.3	8.2	40	8.1	3.0	11	6.3	7.2	5.1
5	2.2	1.4	3.9	3.2	7.5	24	7.4	2.9	9.5	4.7	4.2	4.5
6	3.6	6.2	3.6	4.1	6.7	22	6.8	2.8	7.7	3.9	3.3	4.0
7	1.8	4.0	3.5	3.5	6.0	17	6.4	29	13	3.6	2.9	3.9
8	1.6	137	3.3	3.3	5.5	15	6.1	26	8.5	3.2	2.6	3.9
9	1.6	289	3.2	2.7	41	e18	5.8	8.1	7.0	3.1	8.5	5.2
10	1.5	31	3.2	2.4	21	e17	5.5	5.8	6.0	3.5	31	5.7
11	1.5	19	3.7	5.0	15	e16	5.3	26	5.4	3.4	13	3.7
12	1.4	14	4.1	4.6	13	e22	6.7	7.2	4.8	2.8	7.2	3.4
13	1.4	13	68	3.5	19	e16	57	5.1	4.4	2.6	6.2	3.3
14	1.4	9.8	25	3.3	50	e14	13	4.1	16	2.5	5.0	3.2
15	1.7	9.4	28	3.0	242	e24	37	3.5	53	2.4	4.1	3.2
16	1.3	12	198	2.7	453	14	14	3.2	56	2.4	4.1	3.2
17	1.3	8.2	77	2.7	179	11	11	2.8	16	2.3	3.7	3.1
18	1.3	6.6	38	37	89	9.7	8.9	2.5	12	2.6	3.2	3.0
19	1.4	5.8	24	165	59	8.9	7.3	3.7	9.1	2.5	3.1	22
20	1.7	5.1	18	69	40	83	6.9	2.9	7.6	2.5	2.8	4.9
21	1.9	4.9	15	38	29	51	6.3	11	10	2.5	2.6	4.0
22	1.9	4.7	11	26	55	34	5.4	136	21	2.2	2.4	3.6
23	1.8	4.0	9.3	20	26	26	5.2	18	8.2	4.2	15	3.5
24	1.9	22	8.0	16	22	22	14	13	6.7	18	5.7	14
25	2.1	20	6.8	13	234	17	5.5	10	5.8	28	4.0	4.6
26	1.8	10	6.2	11	62	15	4.7	7.9	5.2	7.5	3.4	3.8
27	1.8	10	5.7	9.0	43	13	4.1	6.8	4.8	4.8	70	3.5
28	1.8	7.8	5.9	7.8	29	12	3.7	11	4.5	4.6	8.9	3.0
29	1.6	7.2	5.4	42	---	11	3.6	7.7	4.7	3.6	6.6	2.8
30	1.5	5.7	4.2	28	---	12	3.6	6.3	6.3	3.2	5.7	2.6
31	1.6	---	3.9	18	---	10	---	56	---	2.6	10	---
MEAN	1.80	22.4	19.5	18.0	63.9	21.2	9.83	14.0	12.8	4.79	8.75	5.03
MAX	3.6	289	198	165	453	83	57	136	56	28	70	22
MIN	1.3	1.4	3.2	2.4	5.5	8.9	3.6	2.5	4.4	2.2	2.2	2.6

e Estimated

## CUMBERLAND RIVER BASIN

105

03432390 SPENCER CREEK NEAR FRANKLIN, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.41	15.1	14.5	16.7	43.4	20.2	16.7	23.8	8.57	5.06	5.41	4.02
MAX	5.03	22.4	19.5	18.0	63.9	21.2	29.9	44.3	12.8	6.97	8.75	5.03
(WY)	2000	2001	2001	2001	2001	2001	2000	2000	2001	1999	2001	2001
MIN	1.80	7.77	9.54	15.4	23.6	19.2	9.83	13.1	6.21	3.42	2.73	2.44
(WY)	2001	2000	2000	2000	2000	2000	2001	1999	2000	2000	1999	1999

## SUMMARY STATISTICS

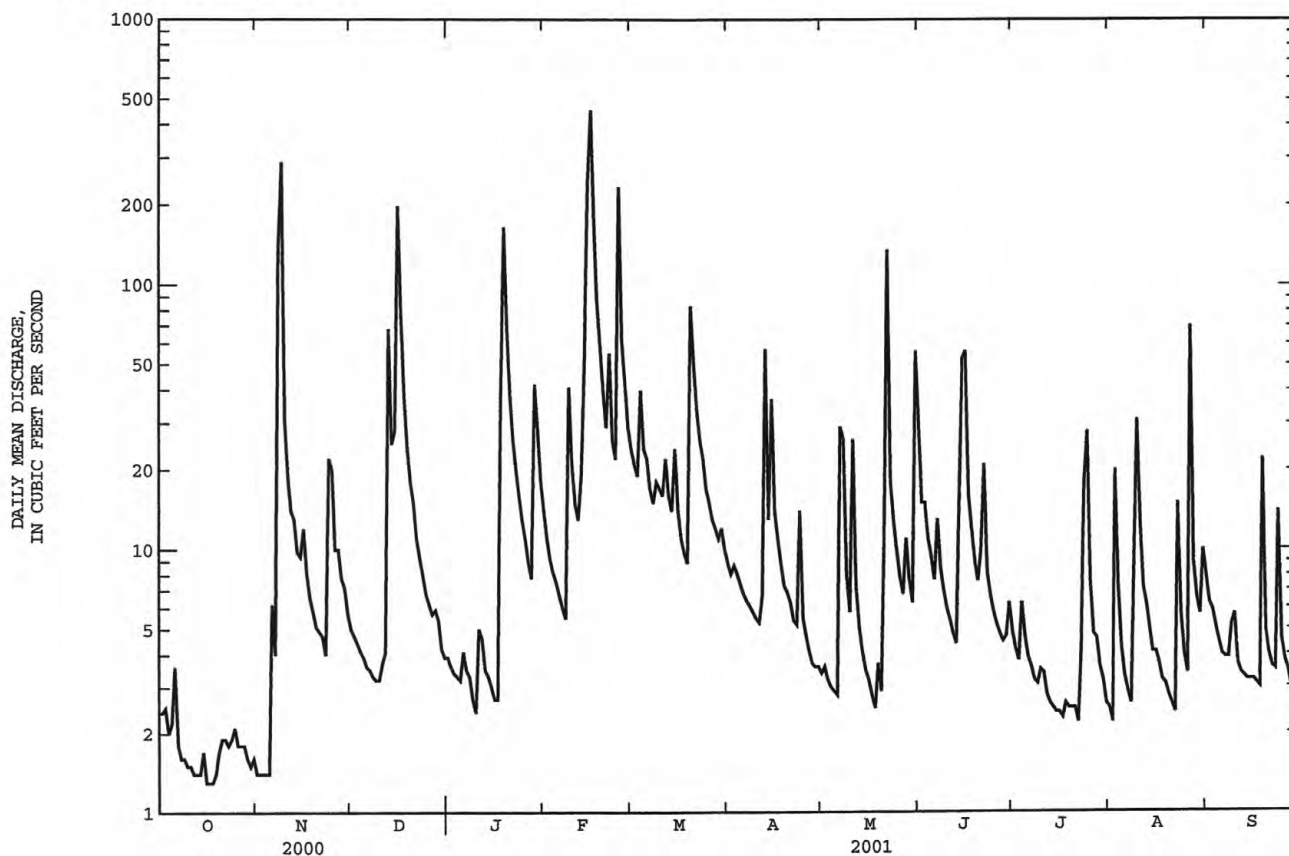
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1999 - 2001

ANNUAL MEAN	16.2	16.5	15.5
HIGHEST ANNUAL MEAN			16.5
LOWEST ANNUAL MEAN			14.5
HIGHEST DAILY MEAN	550	May 25	550
LOWEST DAILY MEAN	1.2	Sep 19	.78
ANNUAL SEVEN-DAY MINIMUM	1.4	Oct 12	.99
MAXIMUM PEAK FLOW			3250
MAXIMUM PEAK STAGE			11.75
INSTANTANEOUS LOW FLOW			.77
10 PERCENT EXCEEDS	30		26
50 PERCENT EXCEEDS	6.6		5.4
90 PERCENT EXCEEDS	1.8		1.9

a From high-water mark.



## CUMBERLAND RIVER BASIN

03432400 HARPETH RIVER BELOW FRANKLIN, TN

LOCATION.--Lat 35°56'53", long 86°52'54", Williamson County, Hydrologic Unit 05130204, on right bank 0.1 mi below bridge on U.S. Highway 431, 1.2 mi downstream from Spence Creek, 1.8 mi northwest of the courthouse in Franklin, and at mile 84.3.

DRAINAGE AREA.--210 mi<sup>2</sup>, includes 15 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--August 1988 to September 1999, discharge for gage height of 6.00 ft and below only, October 1999 to current year.

GAGE.--Data collection platform.

REMARKS.--Records good. Flow is affected by Franklin sewage treatment plant outflow 1.1 mi upstream. Periodic observations of water temperature and specific conductance are published in the report as miscellaneous water-quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, not determined; maximum gage height, 28.97 ft, Feb. 4, 1990; minimum discharge, 3.0 ft<sup>3</sup>/s, Aug. 19, 1988, Sept. 12, 18, 1999; minimum daily, 4.1 ft<sup>3</sup>/s, Aug. 18, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 17	0730	6,620	20.77	Feb 17	0915	*9,730	*25.27
Jan 19	1900	4,450	16.70	Mar 20	2345	3,540	14.79

Minimum discharge, 3.2 ft<sup>3</sup>/s, Oct. 15.

Minimum daily discharge, 8.5 ft<sup>3</sup>/s, Oct. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.6	66	107	381	564	177	53	346	203	30	47
2	10	9.1	59	94	311	478	155	50	217	96	23	35
3	9.6	9.6	55	75	255	413	143	46	144	72	30	32
4	9.4	10	58	92	222	470	137	41	119	60	673	30
5	9.3	10	54	76	196	599	135	46	93	50	189	27
6	13	18	49	76	174	493	130	43	72	42	98	31
7	11	19	39	72	156	417	120	58	79	35	57	27
8	11	185	38	78	141	361	111	108	88	30	40	17
9	10	2070	37	69	192	312	98	51	91	30	58	16
10	9.7	494	44	56	505	278	87	44	68	27	139	22
11	9.0	223	43	58	400	257	82	70	63	29	171	22
12	8.9	145	41	85	334	239	81	65	51	30	116	18
13	8.6	109	149	101	309	228	584	64	39	27	212	14
14	8.9	85	1110	94	872	199	566	47	88	15	746	13
15	8.8	69	502	82	3790	234	476	33	183	13	259	17
16	9.1	67	2670	76	5770	363	422	28	398	11	164	21
17	8.7	61	4650	82	8650	288	289	23	163	17	134	15
18	9.0	65	1070	151	2200	235	223	29	105	19	119	12
19	8.5	59	694	2910	1240	208	187	30	80	17	94	64
20	9.0	49	502	2280	892	1110	164	32	64	12	66	55
21	10	44	406	1030	710	2210	153	52	72	13	43	31
22	8.9	40	340	717	978	1000	136	361	151	12	39	21
23	9.5	38	287	557	825	700	116	142	87	12	67	19
24	8.8	63	250	453	637	544	132	88	59	32	120	46
25	9.1	165	214	372	2570	435	100	67	49	50	42	29
26	9.2	238	183	313	1350	367	88	60	44	33	26	27
27	9.7	160	161	268	882	314	88	54	45	22	155	29
28	10	129	144	223	691	264	80	55	39	21	44	26
29	9.8	107	135	263	---	221	72	48	32	18	34	22
30	9.4	83	128	664	---	206	61	42	196	34	37	14
31	11	---	115	523	---	195	---	142	---	28	41	---
TOTAL	297.9	4832.3	14293	12097	35633	14202	5393	2072	3325	1110	4066	799
MEAN	9.61	161	461	390	1273	458	180	66.8	111	35.8	131	26.6
MAX	13	2070	4650	2910	8650	2210	584	361	398	203	746	64
MIN	8.5	8.6	37	56	141	195	61	23	32	11	23	12



## CUMBERLAND RIVER BASIN

107

03432400 HARPETH RIVER BELOW FRANKLIN, TN--Continued

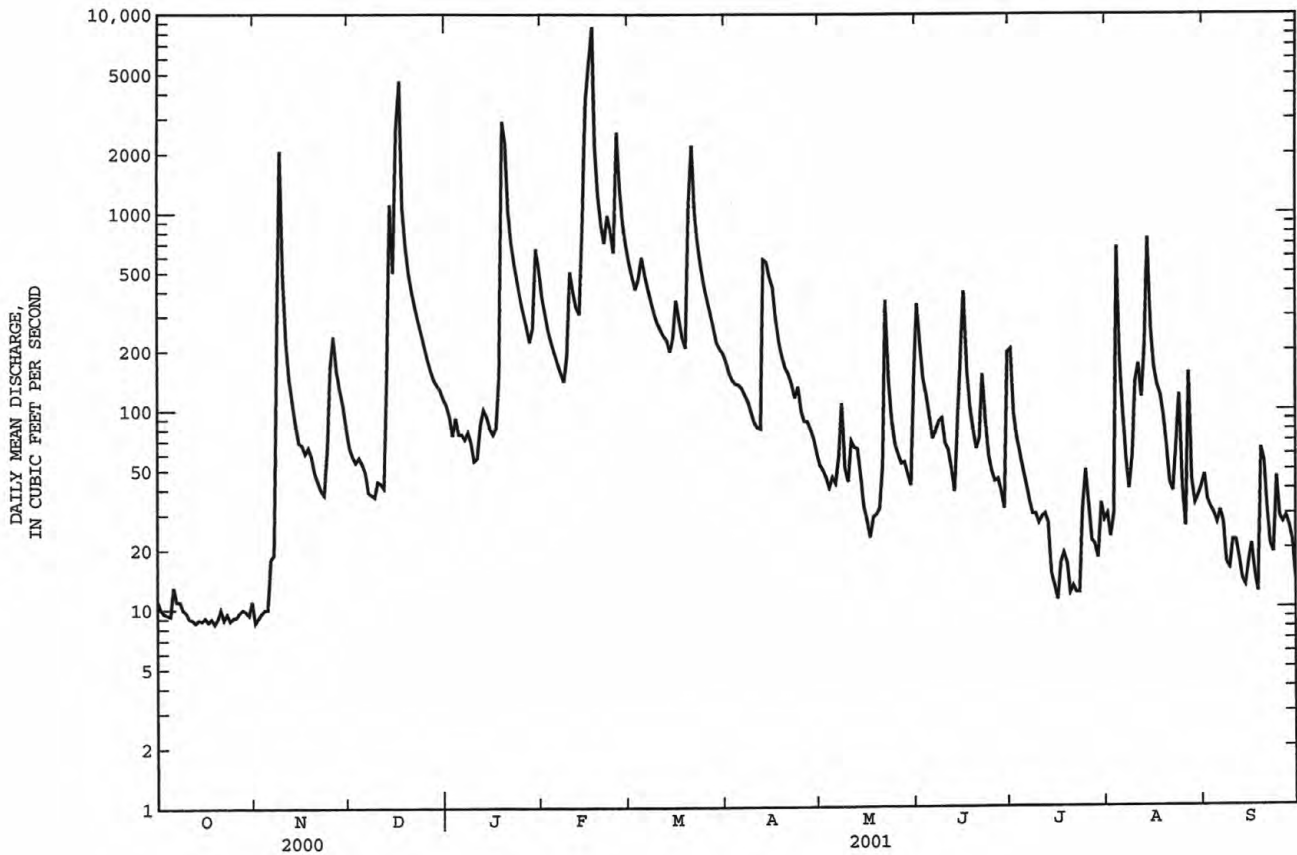
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	32.7	59.1	288	282	887	483	297	172	67.4	33.9	33.5	23.2
MAX	104	161	461	390	1273	507	748	284	111	45.9	131	43.7
(WY)	1995	2001	2001	2001	2001	2000	2000	2000	2001	1994	2001	1994
MIN	7.68	16.7	115	173	515	458	110	66.8	40.5	17.8	8.22	10.0
(WY)	1994	1999	2000	2000	2000	2001	1999	2001	1999	2000	1988	1993

## SUMMARY STATISTICS

WATER YEARS 1988 - 2001

ANNUAL MEAN	238	
HIGHEST ANNUAL MEAN	269	2001
LOWEST ANNUAL MEAN	207	2000
HIGHEST DAILY MEAN	8650	Feb 17 2001
LOWEST DAILY MEAN	4.1	Aug 18 1988
ANNUAL SEVEN-DAY MINIMUM	4.4	Aug 12 1988
MAXIMUM PEAK FLOW	NOT DETERMINED	Feb 4 1990
MAXIMUM PEAK STAGE	28.97	Feb 4 1990
INSTANTANEOUS LOW FLOW	3.0	Aug 19 1988
10 PERCENT EXCEEDS	331	
50 PERCENT EXCEEDS	76	
90 PERCENT EXCEEDS	10	



## CUMBERLAND RIVER BASIN

03433500 HARPETH RIVER AT BELLEVUE, TN

LOCATION.--Lat 36°03'16", long 86°55'42", Davidson County, Hydrologic Unit 05130204, on right bank 45 ft upstream from bridge on State Highway 100, 0.1 mi downstream from Little Harpeth River, 0.9 mi southeast of Bellevue, and at mile 62.1.

DRAINAGE AREA.--408 mi<sup>2</sup>, includes 15 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--April 1920 to current year. Monthly discharge only November 1929 to December 1931, published in WSP 1306.

REVISED RECORDS.--WSP 953: 1920-30, 1932-35. WSP 1386: 1948. WSP 1556: Drainage area. WSP 1910: 1960.

GAGE.--Data collection platform. Datum of gage is 541.04 ft above sea level (levels by U.S. Army Corps of Engineers). Apr. 11, 1920, to Oct. 31, 1929, Jan. 1, 1932, to Sept. 30, 1933, nonrecording gage at site 2.8 mi downstream at datum 7.85 ft lower.

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.--Maximum stage since at least 1897, that of Feb. 13, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 17	0800	8,560	13.29	Feb 17	1430	*14,800	*17.90

Minimum discharge, 11 ft<sup>3</sup>/s, Oct. 14, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	28	125	188	780	1030	365	138	765	274	47	65
2	17	29	108	175	633	893	326	151	693	204	46	73
3	15	27	99	154	526	781	304	139	405	182	47	59
4	14	27	93	149	457	834	295	106	342	143	438	53
5	13	29	91	148	413	1010	294	91	274	114	350	47
6	14	32	84	136	377	888	280	88	231	168	167	42
7	14	41	77	132	348	768	255	84	246	130	106	44
8	16	73	68	128	327	678	242	164	257	103	73	41
9	15	3230	65	125	328	600	228	162	233	81	56	32
10	14	1020	65	110	930	531	209	124	195	73	101	31
11	14	441	70	102	850	488	195	113	164	73	211	32
12	13	277	66	130	714	458	183	163	145	67	279	30
13	12	207	118	154	640	443	702	152	123	55	190	30
14	12	163	1320	163	1180	397	1080	125	105	46	704	26
15	12	129	898	148	6230	408	824	96	215	34	452	22
16	13	116	3600	135	11200	546	813	78	679	29	257	24
17	14	115	7560	130	14100	516	581	66	387	27	200	26
18	15	101	2120	172	6950	435	464	59	266	28	173	36
19	14	99	1200	3640	2430	391	391	64	203	34	204	35
20	14	86	875	4650	1710	703	344	69	164	34	203	80
21	18	73	702	1920	1320	3710	326	147	140	29	157	57
22	20	67	577	1290	1450	1830	295	780	214	26	82	46
23	22	63	479	1010	1500	1260	281	491	203	28	75	31
24	20	63	417	837	1150	993	283	296	150	25	139	35
25	20	190	357	689	5390	814	245	221	118	115	109	63
26	26	369	312	584	2880	688	219	168	102	114	66	51
27	27	293	282	510	1690	594	206	142	105	73	139	45
28	26	225	254	439	1280	528	198	131	99	50	116	40
29	28	187	235	435	---	457	170	136	89	44	68	38
30	28	158	220	1180	---	426	156	115	115	40	53	31
31	28	---	203	1050	---	408	---	121	---	52	59	---
TOTAL	547	7958	22740	20813	67783	24506	10754	4980	7427	2495	5367	1265
MEAN	17.6	265	734	671	2421	791	358	161	248	80.5	173	42.2
MAX	28	3230	7560	4650	14100	3710	1080	780	765	274	704	80
MIN	12	27	65	102	327	391	156	59	89	25	46	22
CFSM	.04	.65	1.80	1.65	5.93	1.94	.88	.39	.61	.20	.42	.10
IN.	.05	.73	2.07	1.90	6.18	2.23	.98	.45	.68	.23	.49	.12

## CUMBERLAND RIVER BASIN

109

03433500 HARPETH RIVER AT BELLEVUE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2001, BY WATER YEAR (WY)

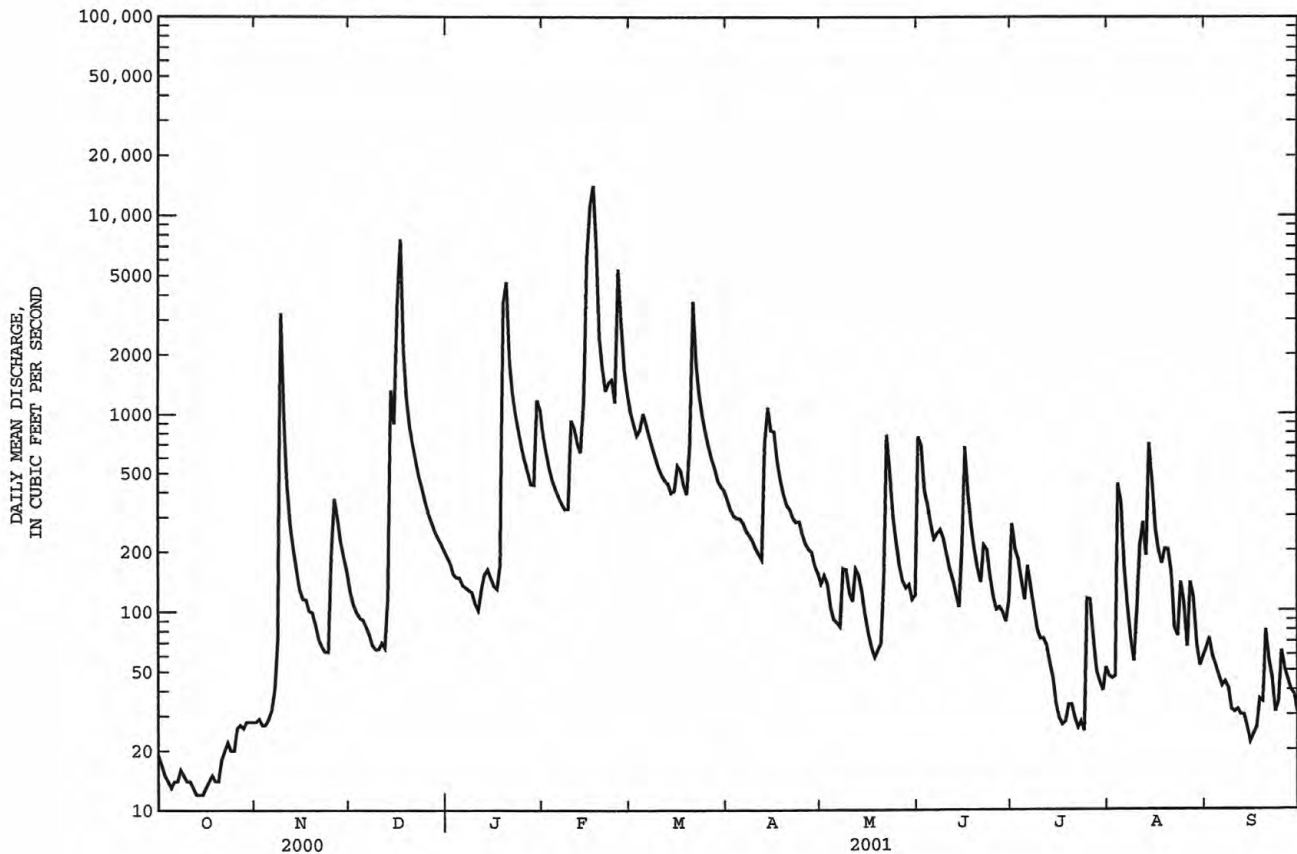
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	112	364	830	1161	1290	1333	874	565	283	144	114	116
MAX	953	1678	3952	4305	3606	4263	2579	3232	1834	827	663	1685
(WY)	1976	1987	1927	1937	1950	1975	1927	1984	1928	1989	1926	1979
MIN	1.90	10.4	32.3	40.5	90.2	167	138	38.7	13.1	15.6	5.76	1.28
(WY)	1932	1940	1940	1940	1941	1941	1967	1941	1988	1954	1954	1948

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1920 - 2001	
ANNUAL TOTAL	161386		176635		595	
ANNUAL MEAN	441		484		1157	
HIGHEST ANNUAL MEAN					137	
LOWEST ANNUAL MEAN					32400	
HIGHEST DAILY MEAN	7560	Dec 17	14100	Feb 17		Mar 13 1975
LOWEST DAILY MEAN	10	Sep 22	12	Oct 13	.00	Oct 5 1922
ANNUAL SEVEN-DAY MINIMUM	12	Aug 17	13	Oct 10	.07	Oct 4 1922
MAXIMUM PEAK FLOW			14800	Feb 17	40000	Feb 13 1948
MAXIMUM PEAK STAGE			17.90	Feb 17	a24.34	Feb 13 1948
INSTANTANEOUS LOW FLOW			b11	Oct 14	c.00	Oct 5 1922
ANNUAL RUNOFF (CFSM)	1.08		1.19		1.46	
ANNUAL RUNOFF (INCHES)	14.71		16.10		19.82	
10 PERCENT EXCEEDS	1060		955		1380	
50 PERCENT EXCEEDS	138		154		188	
90 PERCENT EXCEEDS	15		27		17	

a From floodmarks.

b Also occurred Oct. 15.

c Also occurred Oct. 6-10, 1922.



## CUMBERLAND RIVER BASIN

03434500 HARPETH RIVER NEAR KINGSTON SPRINGS, TN

LOCATION.--Lat 36°07'19", long 87°05'56", Cheatham County, Hydrologic Unit 05130204, on right bank 400 ft upstream from bridge on U.S. Highway 70, 1.7 mi northeast of Kingston Springs, 3.0 mi downstream from Turnbull Creek, and at mile 32.4.

DRAINAGE AREA.--681 mi<sup>2</sup>, includes 15 mi<sup>2</sup> without surface drainage.

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

REVISED RECORDS.--WSP 953: 1927, 1933, 1935-36. WSP 1033: 1927(M), 1932-33(M), 1935(M), 1937(M). WSP 1706: 1945(P). WSP 2110: Drainage area.

GAGE.--Data collection platform. Datum of gage is 447.04 ft above sea level. July 8, 1925, to Jan. 22, 1939, nonrecording gage at site 150 ft downstream, and Jan. 22, 1939, to July 26, 1988, water-stage recorder at present site at datum 1.0 ft higher.

REMARKS.--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.--Maximum stage since at least 1897, that of Jan. 7, 1946. Flood of March 1902 reached a stage about 3 ft lower than that of Jan. 7, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	2100	12,200	15.77	Feb 17	0100	*23,000	*23.07

Minimum discharge, 46 ft<sup>3</sup>/s, Sept. 17, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	67	248	299	1320	1880	638	250	539	191	83	150
2	73	64	213	269	1050	1600	572	250	1140	306	90	152
3	64	62	197	318	870	1410	525	250	691	237	86	139
4	61	64	183	317	745	1500	498	225	536	213	114	122
5	56	66	173	249	658	1890	511	203	437	201	550	109
6	59	68	169	237	577	1720	488	188	369	220	307	100
7	62	78	161	228	511	1470	453	187	515	209	201	90
8	58	99	153	222	459	1310	424	236	585	168	153	85
9	55	3350	140	213	463	1160	397	296	449	138	124	87
10	59	2430	136	200	1390	1010	364	258	380	166	112	91
11	61	913	136	193	1510	908	337	212	318	140	153	80
12	61	530	143	230	1180	864	335	233	277	126	298	66
13	60	376	153	245	1010	836	1080	253	246	117	365	64
14	59	300	1050	256	1730	770	1880	223	222	103	357	62
15	57	246	1630	256	8280	729	1560	196	227	93	801	56
16	57	216	5170	234	15300	880	1540	168	646	84	376	52
17	59	212	9190	221	16800	933	1150	147	761	74	294	49
18	55	198	4410	271	11500	807	876	131	425	70	230	49
19	52	181	2020	3100	4150	724	725	122	328	75	234	56
20	54	174	1460	6750	2960	779	621	134	269	77	219	72
21	54	158	1160	3210	2330	3750	541	246	231	102	162	93
22	56	144	961	2080	2250	2980	486	1310	235	87	130	112
23	57	138	786	1590	2500	2050	435	1210	294	70	104	86
24	56	140	687	1310	2010	1620	543	624	254	64	99	77
25	56	333	577	1100	7300	1340	465	422	209	99	151	77
26	57	511	502	922	5520	1140	387	334	182	191	137	87
27	55	555	443	802	3040	987	344	280	161	184	151	85
28	58	399	407	686	2320	874	322	265	194	134	208	79
29	60	339	370	633	---	787	294	264	164	113	171	72
30	60	288	339	1630	---	727	268	244	171	105	122	69
31	63	---	321	1810	---	692	---	241	---	95	106	---
TOTAL	1836	12699	33688	30081	99733	40127	19059	9602	11455	4252	6688	2568
MEAN	59.2	423	1087	970	3562	1294	635	310	382	137	216	85.6
MAX	82	3350	9190	6750	16800	3750	1880	1310	1140	306	801	152
MIN	52	62	136	193	459	692	268	122	161	64	83	49
MED	58	205	370	299	1870	1010	493	244	306	117	153	82
CFSM	.09	.62	1.60	1.42	5.23	1.90	.93	.45	.56	.20	.32	.13
IN.	.10	.69	1.84	1.64	5.45	2.19	1.04	.52	.63	.23	.37	.14



## CUMBERLAND RIVER BASIN

111

03434500 HARPEETH RIVER NEAR KINGSTON SPRINGS, TN--Continued

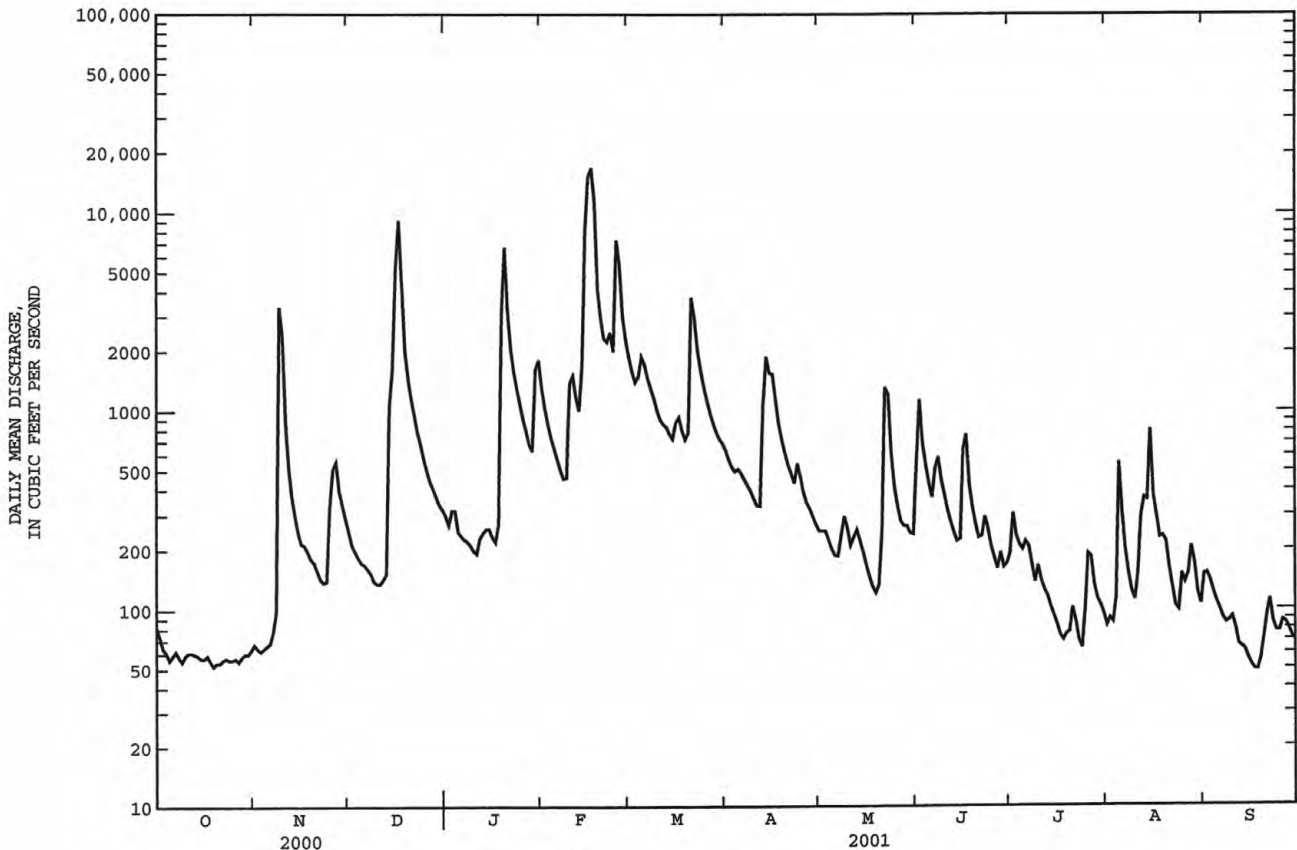
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	224	612	1297	1863	2063	2152	1478	1019	526	272	211	211
MAX	1516	2761	6274	6975	6078	6806	3942	5107	2849	1071	1099	2530
(WY)	1976	1980	1927	1937	1950	1975	1927	1984	1928	1989	1926	1979
MIN	28.9	63.2	94.9	116	187	279	269	99.3	59.0	62.7	38.5	25.0
(WY)	1932	1955	1936	1940	1941	1941	1967	1941	1988	1954	1954	1939

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1925 - 2001
ANNUAL TOTAL	249567	271788	
ANNUAL MEAN	682	745	989
HIGHEST ANNUAL MEAN			2000
LOWEST ANNUAL MEAN			249
HIGHEST DAILY MEAN	10500	May 25	43100
LOWEST DAILY MEAN	32	Sep 22	16
ANNUAL SEVEN-DAY MINIMUM	36	Sep 17	18
MAXIMUM PEAK FLOW		23000	60000
MAXIMUM PEAK STAGE		23.07	a32.20
INSTANTANEOUS LOW FLOW		b46	12
ANNUAL RUNOFF (CFSM)	1.00	1.09	1.45
ANNUAL RUNOFF (INCHES)	13.63	14.85	19.74
10 PERCENT EXCEEDS	1630	1610	2230
50 PERCENT EXCEEDS	244	248	347
90 PERCENT EXCEEDS	55	64	71

a From high-water mark in gage house.

b Also occurred Sept. 18.



## CUMBERLAND RIVER BASIN

03435000 CUMBERLAND RIVER BELOW CHEATHAM DAM, TN

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°19'22", long 87°13'42", Cheatham County, Hydrologic Unit 05130205, on left bank 0.4 mi downstream from Cheatham Dam, 2.0 mi southwest of Neptune, 2.6 mi upstream from Half Pone Creek, 9.7 mi west of Ashland City, and at mile 148.4.

DRAINAGE AREA.--14,163 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1993 to September 1997, October 1998 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1993 to September 1997, October 1998 to current year.

pH: February 1993 to September 1997, October 1998 to current year.

WATER TEMPERATURE: February 1993 to September 1997, October 1998 to current year.

DISSOLVED OXYGEN: February 1993 to September 1997, October 1998 to current year.

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

REMARKS.--Flow regulated by Cheatham Dam and other reservoirs above station. Interruptions in the record were due to instrument malfunctions. Minimum dissolved oxygen for current year not reported because low concentrations measured by water-quality monitor were during periods of no flow and may not represent water-quality conditions in the main channel.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 298 microsiemens, May 4, 1995; minimum, 152 microsiemens, Jan. 23, 1999.

pH: Maximum, 8.9 units, May 16, 17, 18, 1993; minimum, 6.0 units, June 13, 1993.

WATER TEMPERATURE: Maximum, 28.4°C, Aug. 2, 3, 1995; minimum, 2.3°C, Feb. 6, 1996.

DISSOLVED OXYGEN: Maximum, 16.0 mg/L, Jan. 16, 2001; minimum, 3.7 mg/L, June 29, 1994.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 276 microsiemens, Jan. 31, Feb. 13; minimum, 195 microsiemens, Feb. 18.

pH: Maximum, 8.7 units, Apr. 8, 9, 10, 12; minimum, 6.9 units, Nov. 5.

WATER TEMPERATURE: Maximum, 27.5°C, July 12; minimum, 2.6°C, Jan. 9.

DISSOLVED OXYGEN: Maximum, 16.0 mg/L, Jan. 16.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229	243	238	246	270	246	238	225	231	219	215	215
2	226	244	237	247	269	247	237	222	234	215	213	216
3	224	243	256	249	261	243	236	221	240	223	216	216
4	224	239	252	252	258	244	236	220	240	229	213	218
5	222	228	246	252	260	242	232	220	237	232	214	216
6	221	228	245	253	265	243	229	220	234	235	217	214
7	221	235	246	256	270	245	227	224	235	232	217	212
8	222	230	250	252	259	242	222	223	240	229	217	212
9	226	237	246	248	256	242	220	224	247	229	218	211
10	232	239	246	245	266	243	221	227	241	229	219	210
11	234	230	250	239	273	240	219	229	241	232	225	214
12	233	231	248	237	273	236	218	231	237	228	223	217
13	226	234	244	232	268	235	219	231	237	234	220	216
14	231	239	246	238	262	232	225	235	234	233	223	216
15	233	244	252	240	247	229	225	232	233	232	229	214
16	231	249	248	236	223	230	222	227	234	232	223	215
17	231	242	224	236	204	231	223	227	242	231	223	215
18	232	239	216	239	200	233	226	229	257	231	232	216
19	232	242	228	238	217	233	226	230	250	223	232	214
20	234	246	243	242	223	235	227	229	247	222	226	215
21	234	248	252	224	228	238	230	230	246	226	228	218
22	241	246	252	229	232	231	229	226	244	231	224	224
23	234	244	255	237	236	224	231	234	241	227	218	217
24	238	246	256	238	237	230	231	235	236	224	223	214
25	248	244	252	246	234	233	234	233	233	224	221	216
26	249	235	254	262	---	234	234	228	232	223	222	217
27	249	231	246	266	240	233	234	230	233	225	222	214
28	247	234	247	267	241	236	229	226	232	229	224	213
29	234	232	244	268	---	234	224	220	228	226	226	213
30	235	234	243	265	---	231	223	226	226	222	228	213
31	242	---	246	272	---	232	---	228	---	222	222	---

## CUMBERLAND RIVER BASIN

113

03435000 CUMBERLAND RIVER BELOW CHEATHAM DAM, TN--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.6	7.4	7.5	7.4	7.8	7.7	8.0	7.9	8.0	7.9	7.6	7.6
2	7.7	7.4	7.4	7.1	7.8	7.7	8.0	7.9	8.0	7.8	7.6	7.6
3	7.7	7.5	7.3	7.2	7.8	7.7	8.0	7.9	8.0	7.8	7.6	7.6
4	7.8	7.6	7.3	7.2	7.8	7.7	8.0	7.9	8.0	7.9	7.6	7.6
5	7.8	7.4	7.3	6.9	7.8	7.7	8.0	7.9	7.9	7.9	7.6	7.6
6	7.7	7.5	7.5	7.2	7.8	7.7	8.1	7.9	8.2	7.9	7.7	7.6
7	7.8	7.5	7.5	7.4	7.8	7.7	8.2	8.0	8.2	8.0	7.6	7.6
8	7.6	7.4	7.6	7.5	7.8	7.7	8.3	8.1	8.4	8.1	7.7	7.6
9	7.7	7.3	7.5	7.4	7.9	7.7	8.4	8.1	8.3	8.1	7.7	7.6
10	7.7	7.5	7.6	7.5	7.9	7.7	8.3	8.1	8.4	8.2	7.8	7.6
11	7.6	7.5	7.6	7.5	8.2	7.7	8.3	8.2	8.5	8.3	7.9	7.8
12	7.6	7.4	7.5	7.4	8.2	8.0	8.3	8.1	8.4	8.4	7.9	7.8
13	7.7	7.4	7.6	7.5	8.1	8.0	8.4	8.1	8.6	8.4	8.0	7.9
14	7.7	7.5	7.7	7.5	8.1	8.0	8.3	8.2	8.6	8.5	8.0	7.9
15	7.8	7.4	7.8	7.7	8.1	8.0	8.4	8.1	8.5	8.0	8.0	7.9
16	7.7	7.4	7.7	7.6	8.1	7.9	8.5	8.2	8.0	7.7	8.0	7.9
17	7.8	7.4	7.8	7.6	8.0	7.8	8.5	8.4	7.7	7.6	8.0	7.9
18	7.9	7.5	7.8	7.7	7.9	7.8	8.5	8.3	7.6	7.6	8.0	7.9
19	7.9	7.6	7.8	7.7	7.9	7.9	8.4	8.1	7.6	7.6	8.1	7.9
20	7.9	7.5	7.9	7.7	8.0	7.9	8.1	7.7	7.6	7.6	8.0	8.0
21	7.8	7.6	7.8	7.7	8.0	8.0	7.9	7.8	7.6	7.6	8.1	8.0
22	7.7	7.4	7.8	7.7	8.0	7.9	8.0	7.9	7.7	7.6	8.1	8.0
23	8.0	7.5	7.8	7.7	8.0	7.9	8.0	7.9	7.6	7.6	8.1	8.0
24	8.0	7.8	7.8	7.7	8.1	7.9	8.1	7.9	7.6	7.6	8.1	8.0
25	7.9	7.7	7.8	7.7	8.1	7.9	8.1	8.0	7.6	7.6	8.1	8.0
26	7.7	7.7	7.9	7.8	8.0	7.9	8.1	7.9	7.6	7.5	8.2	8.0
27	7.7	7.6	7.9	7.8	7.9	7.8	8.1	7.9	7.6	7.6	8.2	8.1
28	7.6	7.4	7.9	7.8	8.0	7.8	8.1	8.0	7.6	7.6	8.3	8.1
29	7.8	7.5	7.9	7.7	7.9	7.8	8.1	8.0	---	---	8.3	8.2
30	7.7	7.3	7.8	7.7	8.0	7.8	8.0	7.9	---	---	8.3	8.2
31	7.5	7.3	---	---	8.0	7.9	8.0	7.9	---	---	8.2	8.1
MONTH	8.0	7.3	7.9	6.9	8.2	7.7	8.5	7.7	8.6	7.5	8.3	7.6
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	8.0	8.6	8.5	7.6	7.5	7.7	7.5	7.9	7.7	7.9	7.7
2	8.3	8.0	8.6	8.2	7.5	7.4	7.7	7.3	8.0	7.8	7.9	7.7
3	8.4	8.2	8.6	8.3	7.5	7.3	7.8	7.6	7.9	7.8	7.9	7.8
4	8.4	8.2	8.6	8.0	7.5	7.3	7.9	7.6	7.9	7.7	8.1	7.5
5	8.6	8.2	8.6	8.0	7.9	7.5	7.8	7.5	7.9	7.7	8.1	7.8
6	8.6	8.3	8.5	8.3	7.9	7.7	7.7	7.6	8.1	7.8	8.2	7.9
7	8.6	8.3	8.4	8.0	7.9	7.7	7.7	7.5	7.9	7.7	8.3	7.8
8	8.7	8.4	8.2	7.9	8.0	7.8	7.9	7.6	7.8	7.7	8.3	7.9
9	8.7	8.4	8.2	7.9	8.0	7.8	7.8	7.6	7.8	7.7	8.2	7.9
10	8.7	8.4	8.2	7.9	8.0	7.8	7.8	7.6	7.8	7.7	8.2	8.0
11	8.6	8.6	8.0	7.8	7.9	7.5	8.0	7.6	7.8	7.7	8.2	8.0
12	8.7	8.6	8.0	7.8	8.2	7.5	7.9	7.7	7.9	7.5	8.1	7.9
13	8.6	8.6	8.0	7.7	8.2	7.5	7.8	7.6	7.9	7.7	8.1	7.9
14	8.6	8.5	8.4	7.4	8.1	7.5	7.8	7.6	7.9	7.8	8.1	7.8
15	8.5	8.2	8.2	7.6	8.0	7.6	8.0	7.7	7.9	7.7	8.3	7.9
16	8.4	8.2	8.2	7.9	8.0	7.7	7.8	7.5	7.9	7.8	8.1	7.9
17	8.3	8.2	7.9	7.6	7.9	7.4	7.8	7.7	8.1	7.8	7.9	7.9
18	8.4	8.1	7.8	7.5	7.9	7.3	7.9	7.5	7.9	7.7	7.9	7.7
19	8.4	8.2	7.6	7.4	7.9	7.6	7.9	7.7	7.8	7.7	8.1	7.8
20	8.4	8.2	7.6	7.5	7.7	7.5	7.9	7.7	7.9	7.7	8.1	7.9
21	8.3	8.0	7.6	7.5	7.8	7.4	7.9	7.7	7.9	7.6	8.0	7.8
22	8.3	7.9	7.5	7.5	7.6	7.5	7.9	7.7	8.2	7.6	7.9	7.5
23	8.4	8.2	7.6	7.5	7.6	7.4	8.0	7.7	8.2	8.0	8.2	7.8
24	8.4	8.2	7.6	7.4	7.6	7.4	8.2	7.8	8.0	7.8	8.2	7.8
25	8.3	8.1	7.5	7.4	7.7	7.3	8.1	7.9	8.0	7.7	8.2	7.8
26	8.4	8.2	7.5	7.3	7.6	7.3	8.1	7.9	7.9	7.8	8.1	7.8
27	8.5	8.2	7.6	7.4	7.6	7.5	8.0	7.8	8.1	7.8	8.0	7.6
28	8.4	8.3	7.7	7.4	7.7	7.5	7.9	7.7	8.1	7.7	7.9	7.4
29	8.6	8.3	7.7	7.3	7.7	7.4	7.7	7.6	8.1	7.8	8.1	7.9
30	8.6	8.5	7.6	7.4	7.8	7.6	7.8	7.6	8.0	7.6	8.2	8.0
31	---	---	7.6	7.5	---	---	7.9	7.6	7.9	7.6	---	---
MONTH	8.7	7.9	8.6	7.3	8.2	7.3	8.2	7.3	8.2	7.5	8.3	7.4

## CUMBERLAND RIVER BASIN

03435000 CUMBERLAND RIVER BELOW CHEATHAM DAM, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	19.5	10.5	3.5	6.0	10.0	11.0	19.0	22.5	25.5	26.5	24.0
2	21.5	19.5	10.0	3.5	6.5	10.0	11.0	19.5	22.5	26.0	26.5	24.0
3	22.0	19.5	9.5	3.0	6.5	10.0	11.5	19.5	22.0	26.0	26.0	24.0
4	22.0	19.5	9.5	3.0	6.0	10.0	12.0	20.0	22.0	26.5	26.5	24.0
5	22.0	19.0	9.0	3.5	6.0	9.5	12.0	20.0	22.5	26.5	26.0	24.5
6	22.0	18.5	9.0	3.5	6.0	9.5	12.5	20.5	23.0	26.0	26.0	24.5
7	21.0	19.0	8.5	3.5	6.0	9.5	13.5	20.5	23.0	25.5	26.0	24.5
8	20.5	18.5	8.5	3.0	6.5	9.5	14.0	20.5	23.0	26.0	26.0	24.5
9	19.5	18.5	8.5	3.0	7.0	9.5	15.0	21.0	23.5	26.0	26.0	25.0
10	19.5	17.5	8.5	3.0	7.0	9.5	15.5	21.0	23.5	26.5	26.0	25.0
11	19.0	17.0	8.5	3.5	7.5	9.5	16.0	21.0	23.5	26.5	25.5	24.5
12	18.5	16.5	8.0	3.5	7.5	10.0	16.5	21.0	23.5	27.0	26.0	24.5
13	18.0	16.5	7.5	4.0	7.5	10.0	17.0	21.0	24.0	26.5	26.0	24.5
14	18.0	15.5	7.5	4.0	7.5	10.5	17.5	21.0	24.5	26.0	26.0	24.0
15	18.0	15.0	7.0	4.0	9.0	10.5	17.5	21.5	24.5	26.0	26.0	24.0
16	18.0	15.0	7.0	4.5	9.5	11.0	17.5	21.5	25.0	26.0	26.0	23.5
17	18.5	14.0	8.0	4.5	9.0	10.5	17.0	22.0	25.0	26.0	26.0	23.0
18	18.5	13.5	7.5	5.0	8.5	10.5	16.0	22.5	25.5	26.0	25.5	23.0
19	18.5	13.0	6.5	5.0	8.5	10.5	16.0	23.0	25.5	26.5	25.0	23.5
20	18.5	12.5	6.0	5.5	8.5	10.5	16.0	23.0	25.5	26.5	25.5	23.5
21	18.5	12.0	5.5	5.5	9.0	10.0	16.0	22.5	25.5	26.5	25.5	23.0
22	18.5	11.5	5.5	5.5	8.5	10.0	16.5	22.5	26.0	26.5	25.5	23.0
23	19.0	11.5	5.0	5.5	8.5	10.0	17.0	22.5	25.5	26.5	26.0	23.0
24	19.0	11.5	5.0	5.5	8.5	10.5	17.5	22.0	25.5	27.0	25.5	22.5
25	19.0	11.5	4.5	5.0	9.5	10.5	18.0	21.5	26.0	27.0	26.0	21.5
26	19.0	11.0	4.5	5.0	10.5	11.0	18.0	21.5	26.0	27.0	26.0	21.5
27	19.0	10.5	4.5	5.0	10.0	10.5	18.5	21.5	25.5	27.0	26.0	21.0
28	19.5	10.5	4.5	5.0	10.0	10.5	18.0	21.5	25.0	27.0	26.5	20.5
29	19.5	10.5	4.5	5.0	---	10.5	18.0	22.0	25.5	26.5	26.5	20.5
30	19.5	10.5	4.0	5.0	---	10.5	18.5	22.0	25.5	26.5	26.0	20.5
31	19.5	---	4.0	5.5	---	10.5	---	22.5	---	27.0	24.5	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	7.3	10.2	13.1	13.5	10.6	12.3	---	7.7	6.8	6.9	6.7
2	8.7	7.3	10.8	13.3	13.2	10.5	12.5	---	7.4	6.8	7.3	6.8
3	9.3	7.2	10.6	13.6	13.3	10.4	12.7	---	7.3	7.0	7.3	7.0
4	9.6	7.2	10.3	13.9	13.5	10.3	12.9	---	7.2	7.2	7.0	7.1
5	9.7	7.4	10.5	---	13.3	10.3	13.2	---	7.9	7.6	6.9	7.3
6	9.5	7.3	10.2	---	13.6	10.3	13.1	---	7.7	7.6	7.2	7.6
7	9.5	6.9	10.3	---	13.7	10.3	12.9	---	7.7	7.6	6.8	7.8
8	9.1	7.1	---	---	13.9	10.5	12.9	---	8.2	7.7	6.9	7.8
9	9.2	6.5	---	---	13.7	10.7	12.7	---	8.2	7.9	6.6	7.5
10	9.2	7.3	---	---	13.8	10.8	12.6	---	8.2	7.4	6.2	7.8
11	8.9	7.1	11.0	---	14.2	11.3	12.6	8.7	8.2	8.0	5.8	7.7
12	8.9	6.7	11.2	---	14.1	11.4	12.5	8.6	8.8	8.3	5.9	7.9
13	9.5	7.4	11.4	---	14.2	11.3	12.2	8.5	8.9	7.7	5.9	8.0
14	9.5	7.8	11.4	---	14.3	11.4	11.6	9.1	9.0	7.6	6.3	8.0
15	9.7	8.3	11.7	---	12.4	11.3	10.6	9.0	8.9	7.7	6.6	8.5
16	9.6	7.9	11.7	---	11.5	11.3	10.4	9.5	8.3	7.5	6.8	8.1
17	9.8	8.5	10.8	15.4	11.0	11.0	10.3	8.6	7.8	7.2	7.1	8.2
18	9.8	8.8	11.3	15.3	11.2	11.1	10.4	7.9	7.7	7.1	6.8	8.2
19	10.0	8.8	11.7	14.6	11.1	11.5	10.6	7.3	8.6	6.7	6.3	8.1
20	9.9	9.2	11.9	13.1	10.7	11.4	10.5	7.3	8.1	---	6.4	7.8
21	9.5	9.5	12.1	13.2	10.6	11.6	10.3	7.3	7.7	---	5.9	8.2
22	8.8	9.8	12.1	13.4	10.9	11.5	9.8	7.2	5.9	---	6.5	7.9
23	8.6	10.2	12.1	13.6	10.8	11.7	10.3	7.2	6.0	---	7.3	8.7
24	8.5	10.1	12.3	13.9	10.8	11.9	10.0	7.1	6.7	7.8	7.0	8.7
25	8.2	10.1	12.5	14.2	10.5	11.7	10.1	6.7	7.4	7.3	6.8	8.8
26	7.7	10.6	12.5	14.3	10.1	11.9	10.6	6.7	7.0	7.3	6.6	8.5
27	7.5	11.0	12.4	14.4	10.5	12.2	11.0	7.1	6.9	6.9	6.8	8.2
28	7.4	11.1	12.5	14.6	10.6	12.4	11.2	7.5	6.8	6.3	6.7	8.5
29	8.3	10.7	12.6	14.5	---	12.4	11.4	7.7	7.4	5.7	6.6	8.7
30	8.2	10.3	12.8	14.2	---	12.3	11.5	7.2	7.4	6.0	6.6	8.8
31	7.7	---	13.0	13.9	---	12.0	---	7.5	---	6.4	6.7	---



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## CUMBERLAND RIVER BASIN

03435305 RED RIVER BELOW HIGHWAY 161 NEAR BARREN PLAINS, TN

LOCATION.--Lat 36°38'32", long 86°59'18", Robertson County, Hydrologic Unit 05130206, on left bank in pump house of Springfield water plant, 0.2 mi south of Kentucky-Tennessee state line, 0.7 mi below Highway 161 bridge, 4.8 mi northwest of Barren Plains.

DRAINAGE AREA.--549 mi<sup>2</sup>, includes 246 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--October 1994 to current year. Occasional low-flow measurements, water years 1966-1967 at site 1.8 mi upstream.

GAGE.-- Data collection platform. Datum of gage is 440.00 ft above sea level (levels based on information provided by City of Springfield).

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 4,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 17	0600	*6,810	*13.43	No other peak greater than base discharge.			

Minimum daily discharge, 38 ft<sup>3</sup>/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	52	66	121	498	1280	394	198	634	303	111	76
2	52	52	61	113	399	1150	372	194	499	244	98	67
3	55	51	59	129	343	1030	378	186	436	178	94	61
4	45	54	53	108	306	1050	565	180	430	156	203	56
5	45	57	52	106	286	1530	516	173	412	231	296	65
6	52	58	51	103	266	1280	451	169	365	379	155	54
7	49	66	49	103	249	1110	421	170	364	244	121	49
8	48	70	49	100	231	1000	394	325	340	201	103	46
9	46	184	47	97	226	918	372	373	323	174	111	47
10	46	335	47	96	259	824	357	491	289	154	121	58
11	44	161	47	93	357	754	342	353	261	142	155	55
12	45	104	48	94	302	703	325	334	245	129	125	61
13	45	82	49	96	281	689	322	302	225	121	107	60
14	45	73	60	98	349	679	333	255	212	111	95	49
15	46	66	146	97	3160	625	337	235	203	107	84	46
16	45	64	350	96	3620	634	394	222	326	98	81	43
17	47	59	2460	96	4920	665	364	206	361	92	73	41
18	46	58	839	98	2590	579	317	192	235	97	71	42
19	43	55	529	170	2000	517	290	187	197	93	74	50
20	46	52	398	758	1690	509	280	176	177	91	67	60
21	50	49	320	580	1460	609	272	613	167	90	64	67
22	53	46	266	435	1490	737	260	944	170	86	56	59
23	50	47	227	367	1650	658	246	970	163	83	54	56
24	50	51	203	339	1370	600	275	725	156	81	53	58
25	50	70	184	314	2150	544	272	585	141	85	54	50
26	52	98	169	279	2290	492	252	495	134	106	53	47
27	53	136	161	258	1710	453	237	426	128	151	54	44
28	53	111	155	241	1470	423	226	377	133	138	54	42
29	52	89	142	228	---	410	213	335	185	181	54	40
30	53	75	133	414	---	408	201	302	211	168	54	38
31	53	---	125	711	---	403	---	304	---	138	54	---
TOTAL	1514	2525	7545	6938	35922	23263	9978	10997	8122	4652	2949	1587
MEAN	48.8	84.2	243	224	1283	750	333	355	271	150	95.1	52.9
MAX	55	335	2460	758	4920	1530	565	970	634	379	296	76
MIN	43	46	47	93	226	403	201	169	128	81	53	38
CFSM	.09	.15	.44	.41	2.34	1.37	.61	.65	.49	.27	.17	.10
IN.	.10	.17	.51	.47	2.43	1.58	.68	.75	.55	.32	.20	.11

## CUMBERLAND RIVER BASIN

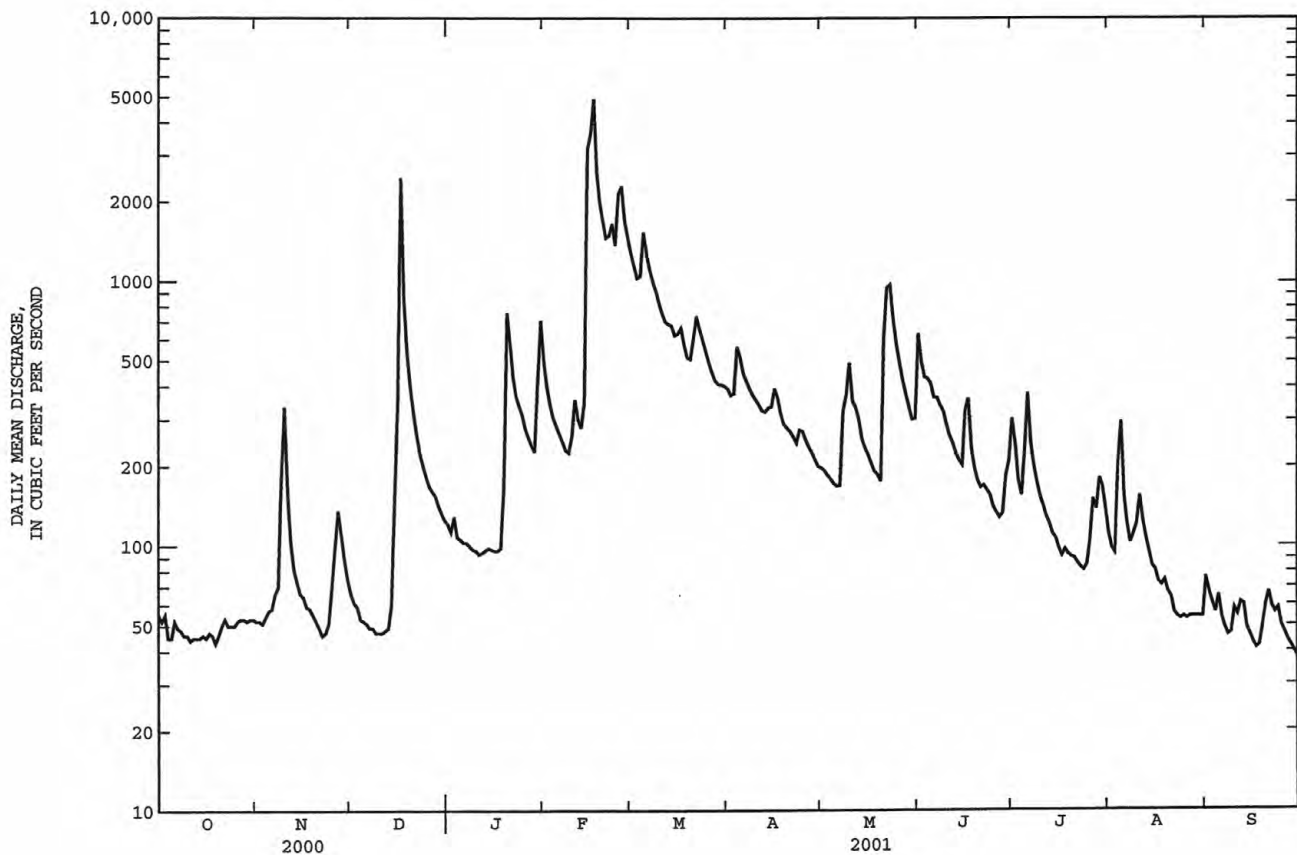
117

03435305 RED RIVER BELOW HIGHWAY 161 NEAR BARREN PLAINS, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	147	314	618	1033	1133	1465	827	989	890	312	230	145
MAX	422	1073	2335	2718	1829	4219	1594	1794	3219	655	507	529
(WY)	1997	1997	1997	1999	1997	1997	1998	1995	1998	1998	1998	1996
MIN	47.3	48.4	166	121	525	406	333	355	200	110	77.1	42.3
(WY)	2000	2000	2000	2000	2000	2000	2001	2001	1999	2000	1999	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1994 - 2001
ANNUAL TOTAL	108221	115992	
ANNUAL MEAN	296	318	673
HIGHEST ANNUAL MEAN			1170
LOWEST ANNUAL MEAN			286
HIGHEST DAILY MEAN	2620	Feb 19	19800
LOWEST DAILY MEAN	43	Oct 19	30
ANNUAL SEVEN-DAY MINIMUM	45	Oct 10	31
MAXIMUM PEAK FLOW		6810	22100
MAXIMUM PEAK STAGE		13.43	28.49
ANNUAL RUNOFF (CFSM)	.54	.58	1.23
ANNUAL RUNOFF (INCHES)	7.33	7.86	16.66
10 PERCENT EXCEEDS	743	671	1530
50 PERCENT EXCEEDS	127	163	314
90 PERCENT EXCEEDS	52	49	67



## CUMBERLAND RIVER BASIN

03435970 MILLERS CREEK AT TURNERSVILLE, TN

LOCATION.--Lat 36°29'16", long 87°02'22", Robertson County, Hydrologic Unit 05130206, on Maxie road, at the confluence of Honey Run Creek and Millers Creek, at Turnersville.

DRAINAGE AREA.--20.5 mi<sup>2</sup>.

PERIOD OF RECORD.--March 2000 to current year.

GAGE.--Data collection platform and crest-stage gage.

REMARKS.--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 175 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 15	1745	209	3.94	Feb 25	0245	234	4.01
Feb 16	1745	*464	*4.49	Jun 29	1715	223	3.98

Minimum daily discharge, 0.41 ft<sup>3</sup>/s, Sept. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	4.5	2.1	2.7	17	35	11	5.2	6.8	6.6	1.6	1.3
2	2.6	4.2	2.1	2.6	12	30	9.9	5.0	5.7	4.2	1.4	1.3
3	2.9	4.2	2.1	2.5	9.4	26	30	4.7	6.0	3.3	1.6	1.2
4	2.7	3.9	2.0	2.6	7.7	43	32	4.6	6.9	4.2	1.9	1.1
5	2.7	4.0	1.9	2.7	7.0	59	25	4.5	5.5	4.1	1.6	1.0
6	2.9	4.5	1.9	2.6	6.3	46	20	4.5	4.8	4.0	1.4	1.0
7	3.0	6.4	1.9	2.5	5.6	38	17	7.9	5.5	3.1	1.3	1.0
8	2.9	7.1	1.9	2.5	4.8	32	15	11	5.1	2.8	1.6	.97
9	3.1	14	1.9	2.5	5.8	28	13	7.6	4.7	2.7	1.3	.89
10	3.4	9.8	1.8	2.3	15	24	12	6.7	4.3	2.8	1.5	.96
11	3.5	5.7	1.7	2.4	14	22	11	5.9	3.9	2.5	1.3	.81
12	3.5	4.4	1.9	2.7	12	20	9.9	5.6	3.7	2.2	1.3	.81
13	3.4	4.2	2.4	2.6	11	20	12	4.9	3.5	2.0	1.2	.67
14	3.3	4.0	6.5	2.6	49	17	11	4.7	3.5	2.0	1.1	.49
15	3.3	3.6	4.3	2.5	175	17	14	4.5	4.4	1.9	1.1	.41
16	3.4	3.8	51	2.5	235	18	15	4.3	4.3	1.8	1.2	.55
17	3.4	4.1	44	2.5	173	17	12	4.1	3.7	1.8	1.1	.61
18	3.5	3.8	22	3.2	93	15	11	4.0	3.3	2.4	1.1	.64
19	3.9	3.5	13	34	65	14	9.5	4.1	3.2	2.3	1.3	.99
20	3.8	3.4	7.9	37	49	15	8.9	4.3	3.1	2.4	1.2	.67
21	6.6	3.0	6.2	24	38	18	8.6	6.3	3.4	4.4	1.0	.63
22	6.7	2.8	4.7	16	50	19	7.7	14	4.3	2.3	.94	.63
23	5.9	2.5	4.2	12	45	18	7.5	10	3.9	2.0	.88	.55
24	5.5	3.0	3.8	10	39	17	8.7	7.4	3.3	1.9	.89	.67
25	5.4	7.3	3.4	8.4	125	15	7.3	6.0	3.2	1.8	1.1	.68
26	5.4	6.6	3.2	7.0	75	14	6.7	5.1	3.2	2.1	1.1	.60
27	5.4	4.4	3.2	6.6	54	13	6.3	4.7	4.1	1.7	1.5	.57
28	5.2	3.3	3.2	5.6	42	12	5.8	4.9	6.0	2.5	1.3	.59
29	4.6	2.8	3.0	7.0	---	12	5.4	4.5	30	3.2	1.1	.61
30	4.5	2.4	2.9	31	---	12	5.2	4.2	14	2.4	1.0	.63
31	4.6	---	2.8	25	---	11	---	5.3	---	1.9	1.2	---
TOTAL	123.4	141.2	214.9	270.1	1434.6	697	368.4	180.5	167.3	85.3	39.11	23.53
MEAN	3.98	4.71	6.93	8.71	51.2	22.5	12.3	5.82	5.58	2.75	1.26	.78
MAX	6.7	14	51	37	235	59	32	14	30	6.6	1.9	1.3
MIN	2.4	2.4	1.7	2.3	4.8	11	5.2	4.0	3.1	1.7	.88	.41
CFSM	.19	.23	.34	.43	2.50	1.10	.60	.28	.27	.13	.06	.04
IN.	.22	.26	.39	.49	2.60	1.26	.67	.33	.30	.15	.07	.04



## 03435970 MILLERS CREEK AT TURNERSVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

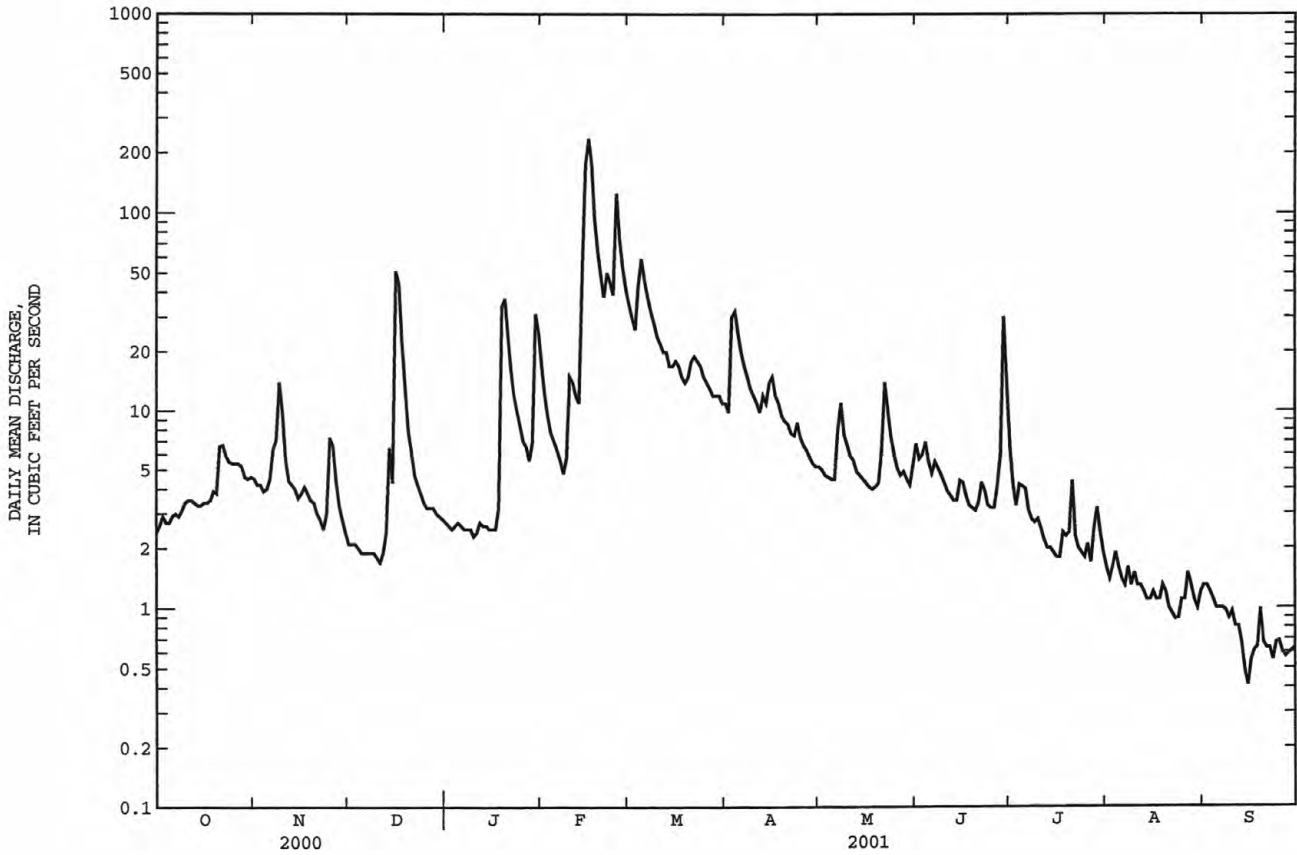
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.98	4.71	6.93	8.71	51.2	16.3	24.4	23.0	6.53	3.05	2.07	1.56
MAX	3.98	4.71	6.93	8.71	51.2	22.5	36.4	40.2	7.47	3.35	2.87	2.34
(WY)	2001	2001	2001	2001	2001	2001	2000	2000	2000	2000	2000	2000
MIN	3.98	4.71	6.93	8.71	51.2	10.1	12.3	5.82	5.58	2.75	1.26	.78
(WY)	2001	2001	2001	2001	2001	2000	2001	2001	2001	2001	2001	2001

## SUMMARY STATISTICS

FOR 2001 WATER YEAR

WATER YEARS 2000 - 2001

ANNUAL TOTAL	3745.34		
ANNUAL MEAN	10.3		
HIGHEST ANNUAL MEAN		10.3	
LOWEST ANNUAL MEAN		10.3	2001
HIGHEST DAILY MEAN	235	Feb 16	322 May 25 2000
LOWEST DAILY MEAN	.41	Sep 15	.41 Sep 15 2001
ANNUAL SEVEN-DAY MINIMUM	.60	Sep 12	.60 Sep 12 2001
MAXIMUM PEAK FLOW	464	Feb 16	1580 May 25 2000
MAXIMUM PEAK STAGE	4.49	Feb 16	5.68 May 25 2000
ANNUAL RUNOFF (CFSM)	.50		.50
ANNUAL RUNOFF (INCHES)	6.80		6.80
10 PERCENT EXCEEDS	23		28
50 PERCENT EXCEEDS	4.2		4.4
90 PERCENT EXCEEDS	1.1		1.6



## CUMBERLAND RIVER BASIN

03436100 RED RIVER AT PORT ROYAL, TN

LOCATION.--Lat 36°33'17", long 87°08'31", Montgomery County, Hydrologic Unit 05130206, on left bank at county road bridge at Port Royal, 250 ft downstream from Sulphur Fork, and at mile 25.5.

DRAINAGE AREA.--935 mi<sup>2</sup> includes 437 mi<sup>2</sup> without surface drainage.

PERIOD OF RECORD.--July 1961 to September 1991. October 1991 to September 1996, crest-stage partial record station. October 1997 to current year.

GAGE.--Water-stage encoder, crest-stage gage and satellite telemeter at station. Datum of gage is 376.25 ft above sea level. July 13, 1961, to Oct. 9, 1963, nonrecording gage and crest-stage gage at same site and 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 of Jan. 23, 1937, reached a stage of 44.4 ft; from flood profile of U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 17	1030	10,300	20.71				

Minimum discharge, 70 ft<sup>3</sup>/s, Sept. 18, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	93	145	254	1020	2130	650	373	886	425	217	125
2	109	92	134	259	815	1860	625	366	821	431	184	142
3	106	92	130	234	709	1650	636	356	689	345	168	128
4	107	92	125	251	640	1690	816	343	714	304	336	117
5	97	92	121	230	594	2470	841	333	674	310	451	117
6	103	95	118	224	557	2240	729	323	619	925	319	117
7	100	102	117	211	518	1830	682	328	577	538	233	103
8	94	118	118	205	483	1620	649	461	577	399	199	100
9	92	224	115	200	459	1470	616	620	546	346	190	97
10	92	608	113	193	552	1310	597	605	496	315	208	98
11	94	414	112	188	672	1180	577	573	454	286	314	119
12	94	254	112	194	640	1100	558	516	422	264	257	105
13	95	188	120	194	583	1070	562	485	400	240	229	109
14	96	157	152	195	820	1030	575	433	378	220	213	101
15	96	142	222	191	5180	991	591	401	365	203	166	88
16	96	134	569	187	7330	979	677	384	473	191	148	83
17	93	130	3970	186	9400	1020	654	366	622	181	141	79
18	93	124	1810	193	5350	919	576	347	454	184	130	77
19	92	121	1050	431	3660	831	531	334	374	189	129	94
20	88	116	787	1230	2920	806	509	326	338	192	127	115
21	87	111	639	1160	2390	889	494	574	317	185	117	117
22	94	107	543	864	2430	1120	472	1160	318	175	114	117
23	93	105	462	736	2820	1020	455	1310	312	163	105	104
24	90	109	418	677	2290	929	487	991	296	155	108	114
25	88	143	375	633	3590	854	496	808	279	154	104	101
26	89	205	347	575	4470	783	460	694	260	176	109	91
27	90	251	325	534	3090	730	435	618	250	266	169	86
28	94	247	311	496	2540	695	419	563	313	249	146	83
29	93	196	298	469	---	675	400	515	403	317	122	81
30	91	163	283	749	---	672	383	478	493	315	111	77
31	98	---	267	1340	---	663	---	492	---	268	106	---
TOTAL	2958	5025	14408	13683	66522	37226	17152	16476	14120	8911	5670	3085
MEAN	95.4	168	465	441	2376	1201	572	531	471	287	183	103
MAX	114	608	3970	1340	9400	2470	841	1310	886	925	451	142
MIN	87	92	112	186	459	663	383	323	250	154	104	77
CFSM	.10	.18	.50	.47	2.54	1.28	.61	.57	.50	.31	.20	.11
IN.	.12	.20	.57	.54	2.65	1.48	.68	.66	.56	.35	.23	.12

## CUMBERLAND RIVER BASIN

121

03436100 RED RIVER AT PORT ROYAL, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	255	635	1693	1981	2456	2631	2026	1592	1069	590	308	367
MAX	855	3610	5054	5984	7429	9874	6482	7183	5467	2858	809	3939
(WY)	1980	1980	1991	1974	1989	1975	1979	1983	1998	1989	1998	1979
MIN	68.2	74.4	73.4	91.7	562	724	490	270	140	143	130	83.4
(WY)	1964	1964	1964	1981	1964	2000	1986	1988	1988	1988	1988	1999

## SUMMARY STATISTICS

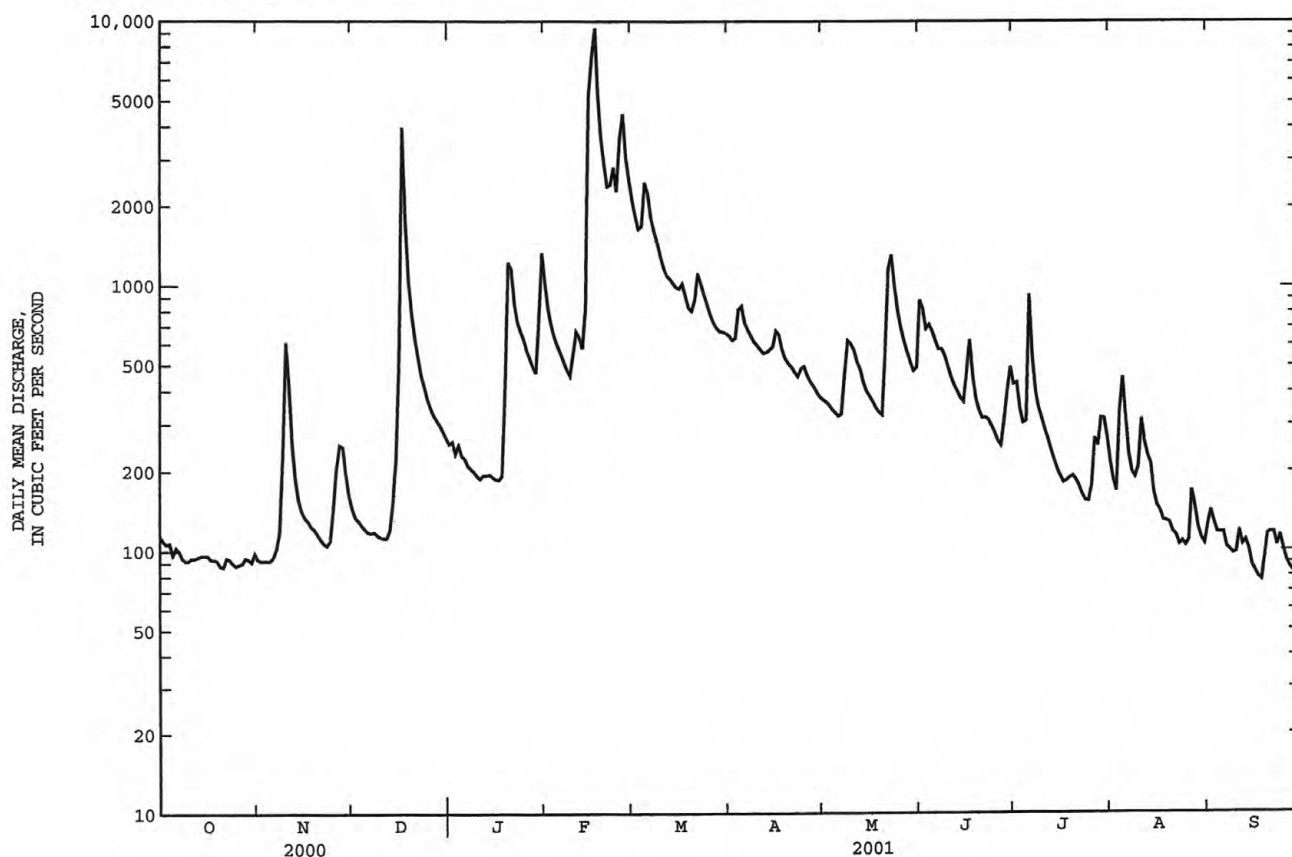
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1961 - 2001

ANNUAL TOTAL	194659	205236	
ANNUAL MEAN	532	562	
HIGHEST ANNUAL MEAN			1305
LOWEST ANNUAL MEAN			2594
HIGHEST DAILY MEAN	4240	Feb 19	514
LOWEST DAILY MEAN	87	Oct 21	56600
ANNUAL SEVEN-DAY MINIMUM	90	Oct 20	55
MAXIMUM PEAK FLOW			58
MAXIMUM PEAK STAGE			60300
INSTANTANEOUS LOW FLOW			48.26
ANNUAL RUNOFF (CFSM)	.57		54
ANNUAL RUNOFF (INCHES)	7.74		1.40
10 PERCENT EXCEEDS	1270		18.96
50 PERCENT EXCEEDS	248		2900
90 PERCENT EXCEEDS	102		581
			121

a Also occurred Sept. 30.



## CUMBERLAND RIVER BASIN

03436690 YELLOW CREEK AT ELLIS MILLS, TN

LOCATION.--Lat 36°18'39", long 87°33'15", Houston County, Hydrologic Unit 05130205, on right bank at downstream end of bridge on county road, 0.3 mi northeast of Ellis Mills, 1.0 mi upstream from Leatherwood Creek, 1.0 mi downstream from Williamson Branch.

DRAINAGE AREA.--103 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1980 to September 1991. October 1991 to September 1997, crest-stage partial record station. October 2000 to September 2001.

GAGE.--Water-stage encoder, crest-stage gage and satellite telemeter at station. Elevation of gage is 417 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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, 14,400 ft<sup>3</sup>/s May 6, 1984, gage height, 18.47 ft recorded, 18.95 ft, from floodmarks, from rating curve extended above 9,500 ft<sup>3</sup>/s on basis of regression formula and peak discharge at Station No. 03436700 Yellow Creek near Shiloh, TN; minimum, 7.2 ft<sup>3</sup>/s Oct. 14, 1986, result of upstream regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 15	1400	2,000	8.65	Feb 16	2200	*2,380	*9.23

Minimum discharge, 17 ft<sup>3</sup>/s, Aug. 24, 25, 26, Sept. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e24	e20	24	29	94	252	105	80	214	54	32	31
2	e23	e21	24	27	82	225	100	77	163	61	30	33
3	e23	e22	23	26	74	203	99	74	132	52	29	32
4	e22	e21	22	26	68	212	99	70	115	48	32	30
5	e22	e22	22	26	64	245	105	68	98	146	29	28
6	e22	e23	22	26	59	242	105	64	88	165	28	27
7	e21	e33	21	25	55	226	104	67	91	108	26	28
8	e21	e72	21	25	52	210	104	105	93	83	26	28
9	e21	e110	21	24	52	193	103	89	87	76	30	27
10	e20	e64	21	23	62	178	102	239	81	80	33	28
11	e21	e40	21	24	67	165	99	152	76	67	29	26
12	e22	e27	20	27	67	158	98	116	71	60	27	24
13	e21	e26	22	27	67	155	106	98	67	55	30	23
14	e21	e26	29	27	103	145	108	87	64	51	29	21
15	e22	e25	31	27	1490	142	130	79	67	47	25	21
16	e22	e24	113	26	1340	145	167	74	74	45	23	21
17	e22	23	160	26	1090	140	161	69	65	43	21	21
18	e21	22	106	31	548	136	146	64	60	43	20	20
19	e21	21	79	83	392	134	136	62	56	44	29	24
20	e20	21	64	134	310	138	128	61	53	43	26	25
21	e20	20	56	111	262	141	120	70	53	41	22	23
22	e22	20	49	93	300	143	111	86	65	38	21	22
23	e21	20	45	82	296	142	107	79	59	36	19	21
24	e20	22	41	74	271	139	115	71	53	34	19	20
25	e21	34	38	67	540	132	105	66	49	34	18	20
26	e20	35	36	62	432	126	99	62	46	34	18	20
27	e21	32	34	58	339	119	95	58	73	33	37	20
28	e22	29	33	54	286	115	90	62	72	32	44	20
29	e23	27	32	57	---	114	85	59	59	56	32	19
30	e22	25	30	92	---	115	82	55	54	44	28	18
31	e20	---	29	107	---	111	---	108	---	37	28	---
TOTAL	664	927	1289	1546	8862	5041	3314	2571	2398	1790	840	721
MEAN	21.4	30.9	41.6	49.9	316	163	110	82.9	79.9	57.7	27.1	24.0
MAX	24	110	160	134	1490	252	167	239	214	165	44	33
MIN	20	20	20	23	52	111	82	55	46	32	18	18
CFSM	.21	.30	.40	.48	3.07	1.58	1.07	.81	.78	.56	.26	.23
IN.	.24	.33	.47	.56	3.20	1.82	1.20	.93	.87	.65	.30	.26

e Estimated

## CUMBERLAND RIVER BASIN

123

03436690 YELLOW CREEK AT ELLIS MILLS, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.2	82.4	211	181	356	237	238	233	131	60.7	33.1	32.3
MAX	83.8	253	499	490	845	477	609	795	437	173	47.8	82.0
(WY)	1990	1985	1991	1989	1989	1989	1983	1984	1981	1989	1989	1982
MIN	16.2	27.2	34.1	22.9	101	124	78.5	46.8	30.0	26.1	19.2	16.4
(WY)	1988	1988	1981	1981	1984	1981	1986	1986	1988	1988	1987	1987

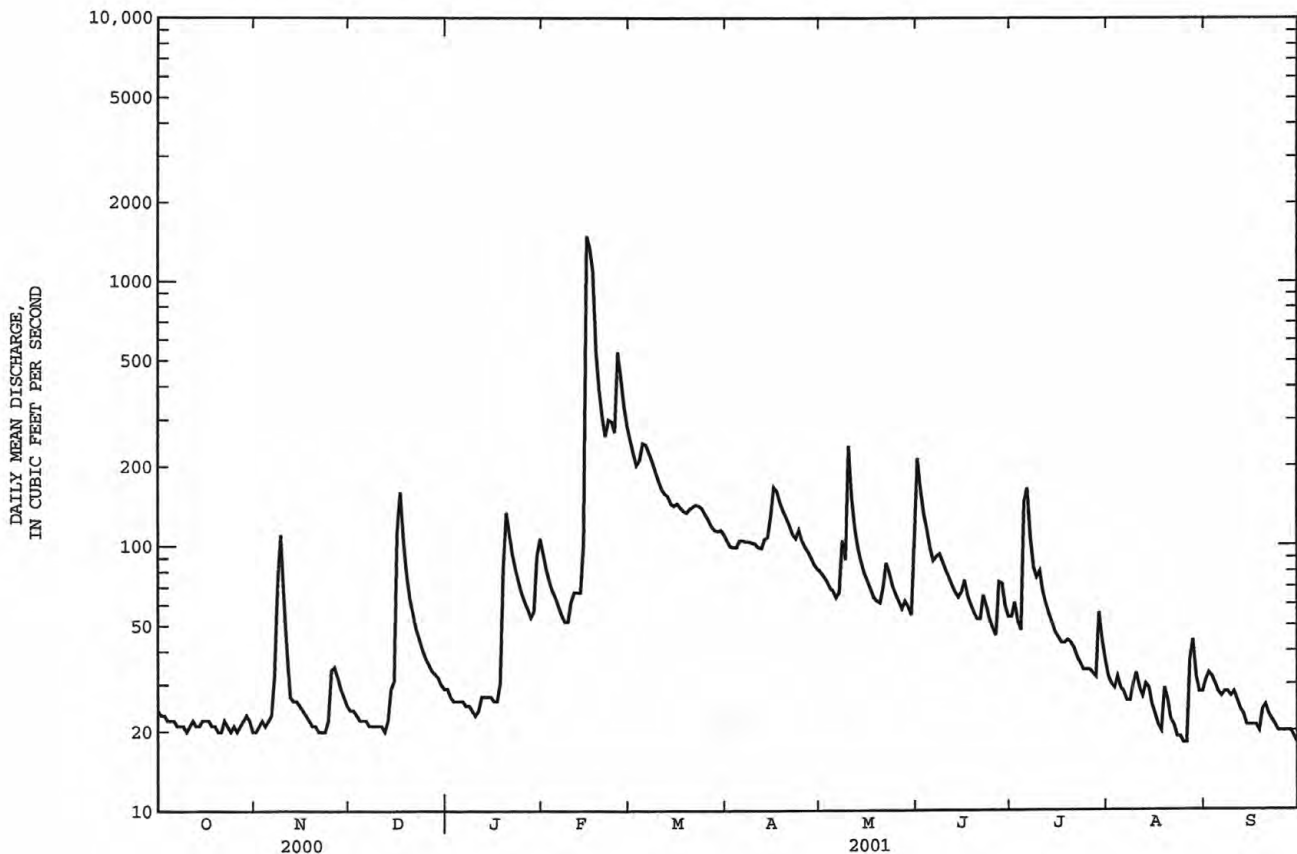
## SUMMARY STATISTICS

FOR 2001 WATER YEAR

WATER YEARS 1981 - 2001

ANNUAL TOTAL	29963	
ANNUAL MEAN	82.1	151
HIGHEST ANNUAL MEAN		270
LOWEST ANNUAL MEAN		82.1
HIGHEST DAILY MEAN	1490	Feb 15
LOWEST DAILY MEAN	18	Aug 25
ANNUAL SEVEN-DAY MINIMUM	20	Sep 24
MAXIMUM PEAK FLOW	2380	Feb 16
MAXIMUM PEAK STAGE	9.23	Feb 16
INSTANTANEOUS LOW FLOW	a17	Aug 24
ANNUAL RUNOFF (CFSM)	.80	
ANNUAL RUNOFF (INCHES)	10.82	
10 PERCENT EXCEEDS	146	303
50 PERCENT EXCEEDS	52	67
90 PERCENT EXCEEDS	21	22

a Also occurred Aug. 25, 26, Sept. 29, 30.





## RESERVOIRS IN CUMBERLAND RIVER BASIN

- 03413500 LAKE CUMBERLAND.--Lat 36°52'09", long 85°08'45", Russell County, KY, Hydrologic Unit 05130103, in pylon of Wolf Creek Dam on Cumberland River and 10 mi southwest of Jamestown, Ky. DRAINAGE AREA, 5,789 mi<sup>2</sup>. PERIOD OF RECORD, April 1950 to current year. Prior to October 1954, published as Wolf Creek Reservoir. April to June 1950, published in WSP 1726. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to Dec. 6, 1950, nonrecording gage at same site at datum 545.0 ft higher.
- REVISIONS.--WSP 1556: Drainage area.
- REMARKS.--Reservoir is formed by earth embankment and concrete gravity dam surmounted by 10 taintor gates, each 37 high by 50 ft wide. Final closure of dam made Aug. 7, 1950. Total capacity at elevation 760.00 ft top of gates, is 3,070,000 cfs-days, of which 1,056,000 cfs-days above elevation 723.00 ft, crest of spillway, are reserved for flood control and 1,080,000 cfs-days between elevation 673.00 ft, minimum power pool, and 723.00 ft are used for power production. Figures given herein represent total contents, of which 934,000 cfs-days below elevation 673.00 ft is dead storage. Reservoir is used for flood control, power, navigation, and recreation.
- COOPERATION.--Records furnished by U.S. Army Corps of Engineers.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,811,000 cfs-days, May 13, 1984, elevation, 751.70 ft; minimum, first filling, 934,400 cfs-days, Jan. 1, 1956, elevation, 673.01 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,047,700 cfs-days, Apr. 8, elevation, 724.33 ft; minimum, 1,166,300 cfs-days, Dec. 15, elevation, 685.29 ft.
- 03416500 DALE HOLLOW LAKE.--Lat 36°32'19", long 85°27'05", Clay County, Hydrologic Unit 05130105, at Dale Hollow Dam on Obey River, 3.0 mi east of Celina, and 7.3 mi upstream from mouth. DRAINAGE AREA, 936 mi<sup>2</sup>. PERIOD OF RECORD, August 1943 to current year. Prior to October 1965, published as Dale Hollow Reservoir. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to June 25, 1946, nonrecording gage at same site and datum.
- REVISIONS.--WSP 1306: 1944. WSP 2110: Drainage area.
- REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with six taintor gates, each 12 ft high by 60 ft wide. Closure of dam was made Aug. 30, 1943; water in reservoir first reached minimum pool elevation May 7, 1944. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 663.0 ft, top of gates, is 859,800 cfs-days of which 177,500 cfs-days between elevations 663.00 ft and 651.00 ft, crest of spillway, are reserved for flood control, and 250,200 cfs-days between elevations 651.00 ft and 631.00 ft, ordinary minimum pool, are used for power production. Contents of 432,100 cfs-days below elevation 631.00 ft is dead storage. Reservoir is used for flood control, navigation, and power.
- COOPERATION.--Records furnished by U.S. Army Corps of Engineers.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 828,600 cfs-days, Mar. 15, 1975, elevation, 660.98 ft; minimum, first filling, 428,000 cfs-days, Sept. 11, 1944, elevation, 630.63 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 680,600 cfs-days, Apr. 23, elevation, 650.88 ft; minimum, 481,000 cfs-days, Dec. 11, elevation, 635.30 ft.
- 03418400 CORDELL HULL RESERVOIR.--Lat 36°17'23", long 85°56'39", Smith County, Hydrologic Unit 05130108, at Cordell Hull Dam Cumberland River, 2.7 mi north of Carthage, and at mile 313.5. DRAINAGE AREA, 8,095 mi<sup>2</sup>. PERIOD OF RECORD, October 1972 to current year. GAGE, water-stage recorder. Datum of gage is sea level.
- REMARKS.--Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with five gates, each 41 ft high and 45 ft wide. Closure of dam was made Oct. 4, 1967; water in reservoir first reached ordinary minimum pool Mar. 13, 1973. Total capacity at elevation 508.0 ft, maximum surcharge pool, is 156,700 cfs-days, of which 53,400 cfs-days is controlled storage between elevations 508.0 ft and 499.0 ft, ordinary minimum pool. Contents of 5,000 cfs-days between elevation of 499.0 ft and 500.0 ft full winter pool, is available for power production. Contents of 48,400 cfs-days above 500.0 ft is available for flood control during the winter, and 26,100 cfs-days above 504.0 ft, full pool during spring to fall season, is available for flood control the rest of the year. Contents of 103,300 cfs-days below elevation 499.0 ft is dead storage. Reservoir is used for navigation, power, and flood control.
- COOPERATION.--Records furnished by U.S. Army Corps of Engineers.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 156,700 cfs-days, Mar. 13, 1975, May 8, 1984, elevation, 508.00 ft; minimum, after first filling to ordinary minimum pool, 96,700 cfs-days, Apr. 18, 1974, elevation, 497.65 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 136,600 cfs-days, Sept. 5, elevation, 504.97 ft; minimum, 102,900 cfs-days, Dec. 23, elevation, 498.92 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
03413500 LAKE CUMBERLAND				03416500 DALE HOLLOW LAKE			03418400 CORDELL HULL RESERVOIR		
Sept. 30...	696.70	1,400,500	-	637.76	510,100	-	504.33	132,700	-
Oct. 31...	691.52	1,291,900	-108,600	636.44	494,400	-15,700	502.16	119,900	-12,800
Nov. 30...	687.35	1,207,200	-84,700	635.53	483,700	-10,700	500.02	108,400	-11,500
Dec. 31...	688.15	1,223,300	+16,100	636.47	494,700	+11,000	500.05	108,600	+200
CAL YR 2000	-	-	+93,300	-	-	+14,400	-	-	-1,600
Jan. 31...	693.80	1,339,200	+115,900	639.15	527,000	+32,300	500.37	110,200	+1,600
Feb. 28...	715.33	1,824,200	+485,000	647.68	636,700	+109,700	500.57	111,300	+1,100
Mar. 31...	722.90	2,011,300	+187,100	650.11	669,900	+33,200	500.50	110,900	-400
Apr. 30...	721.98	1,988,100	-23,200	650.75	678,800	+8,900	503.96	130,400	+19,500
May 31...	720.90	1,961,000	-27,100	649.75	665,000	-13,800	504.42	133,200	+2,800
June 30...	717.69	1,881,600	-79,400	648.33	645,500	-19,500	504.44	133,300	+100
July 31...	714.50	1,804,200	-77,400	645.44	606,900	-38,600	504.59	134,300	+1,000
Aug. 31...	709.27	1,680,700	-123,500	643.21	577,900	-29,000	504.40	133,100	-1,200
Sept. 30...	699.40	1,458,800	-221,900	639.43	530,500	-47,400	504.02	130,800	-2,300
WTR YR 2001	-	-	+58,300	-	-	+20,400	-	-	-1,900

## RESERVOIRS IN CUMBERLAND RIVER BASIN--CONTINUED

03422000 GREAT FALLS LAKE.--Lat 35°48'21", long 85°38'09", Warren County, Hydrologic Unit 05130108, at pen-stock inlet on Collins River, 700 ft southwest of powerhouse of Tennessee Valley Authority, 1.5 mi northwest of Rock Island, 1.8 mi upstream from mouth of Collins River, and 2.0 mi upstream from Great Falls Dam on Caney Fork. DRAINAGE AREA, 1,677 mi<sup>2</sup>. PERIOD OF RECORD, January 1917 to current year. GAGE, remote indicator gage. Datum of gage is sea level. REVISIONS.--WSP 2110: Drainage area.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with 18 taintor gates, each 14 ft high by 25 ft wide. Closure of dam was made in 1916; dam redesigned and crest raised 35 ft in 1925. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 805.3 ft top of gates, is 25,900 cfs-days, of which 18,700 cfs-days are controlled storage above elevation 780.0 ft, normal minimum pool. Contents of 1,500 cfs-days below elevation 762.0 ft is dead storage. Reservoir is used primarily for power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum midnight elevation, 817.48 ft, Mar. 23, 1929, contents not determined; minimum midnight contents, 1,700 cfs-days, Aug. 19, 1918, elevation, 756.3 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,300 cfs-days, Aug. 13, elevation, 805.31 ft; minimum, 9,840 cfs-days, Nov. 9, elevation, 784.84 ft.

03424000 CENTER HILL LAKE.--Lat 36°05'48", long 85°49'38", DeKalb County, Hydrologic Unit 05130108, at Center Hill Dam on Caney Fork, 10 mi north of Smithville, 14 mi southeast of Carthage, and at mile 26.6. DRAINAGE AREA, 2,174 mi<sup>2</sup>. PERIOD OF RECORD, October 1948 to current year. Prior to October 1965, published as Center Hill Reservoir. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to Mar. 14, 1949, nonrecording gage at site 1,320 ft upstream at same datum. REVISIONS.--WSP 1910: Drainage area.

REMARKS.--Reservoir is formed by earth embankment and concrete gravity dam. Spillway is equipped with eight taintor gates, each 37 ft high by 50 ft wide. Closure of dam was made Nov. 27, 1948; water in reservoir first reached minimum pool elevation Jan. 11, 1949. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 685.0 ft, top of gates, is 1,054,800 cfs-days, of which 384,500 cfs-days between 685.0 ft and 648.0 ft, crest of spillway, are reserved for flood control, and 248,000 cfs-days between elevations 648.0 ft and 618.0 ft, ordinary minimum pool, are used for power production. Contents of 422,300 cfs-days below 618.0 ft is dead storage. Reservoir is used for flood control, navigation, and power.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,014,600 cfs-days, May 10, 1984, elevation, 681.52 ft; minimum, after first filling, 171,000 cfs-days, Dec. 1, 2, 1949, elevation, 576.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 709,600 cfs-days, Feb. 27, elevation, 652.21 ft; minimum, 473,900 cfs-days, Dec. 11, elevation, 624.82 ft.

03426300 OLD HICKORY LAKE.--Lat 36°17'50", long 86°39'20", Sumner County, Hydrologic Unit 05130201, at Old Hickory Dam on Cumberland River, 2.0 mi west of Hendersonville, 10 mi northeast of the State Capitol in Nashville, and at mile 216.2. DRAINAGE AREA, 11,673 mi<sup>2</sup>. PERIOD OF RECORD, June 1954 to current year. GAGE, water-stage recorder. Datum of gage is sea level; gage readings have been reduced to elevations NGVD. Prior to Apr. 4, 1957, nonrecording gage at same site and datum. REVISIONS.--WSP 2110: Drainage area.

REMARKS.--Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with six taintor gates, each 41 ft high and 45 ft wide. Closure of dam was made in June 1954 and water in reservoir was raised sufficiently to maintain navigation through the lock. Water in reservoir first reached ordinary minimum pool elevation Dec. 30, 1956. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 450.0 ft, maximum surcharge pool, 274,600 cfs-days of which 63,000 cfs-days between elevations 450.0 ft and 445.0 ft, normal pool, are induced surcharge storage provided to compensate for loss of natural valley storage incurred by construction of the project, and 31,800 cfs-days between elevations 445.0 ft and 442.0 ft, ordinary minimum pool, are used for power production. Contents of 179,800 cfs-days below elevation 442.0 ft, is dead storage. Reservoir is used for navigation and power.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 277,200 cfs-days, May 9, 1984, elevation, 450.18 ft; minimum, after first filling to ordinary minimum pool, 179,400 cfs-days, Oct. 22, 1957, Oct. 28, 1969, elevation, 441.96 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 226,200 cfs-days, Feb. 17, elevation, 446.25 ft, minimum, 198,700 cfs-days, Dec. 20, elevation, 443.83 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
03422000 GREAT FALLS LAKE				03424000 CENTER HILL LAKE			03426300 OLD HICKORY LAKE		
Sept. 30...	800.60	21,000	-	631.19	524,600	-	444.64	207,600	-
Oct. 31...	785.19	10,000	-11,000	628.40	502,100	-22,500	444.78	209,100	+1,500
Nov. 30...	787.24	11,200	+1,200	626.14	484,200	-17,900	444.76	208,900	-200
Dec. 31...	793.62	15,400	+4,200	630.05	515,400	+31,200	444.86	210,000	+1,100
CAL YEAR 2000	-	-	+5,100	-	-	+49,400	-	-	1,800
Jan. 31...	800.08	20,500	+5,100	636.18	566,000	+50,600	444.80	209,400	-600
Feb. 28...	804.80	24,800	+4,300	651.59	703,700	+137,700	444.60	207,100	-2,300
Mar. 31...	799.41	20,000	-4,800	646.91	660,300	-43,400	444.70	208,200	+1,100
Apr. 30...	792.87	14,900	-5,100	647.12	662,200	+1,900	444.65	207,700	-500
May 31...	787.17	11,200	-3,700	646.36	655,300	-6,900	444.90	210,500	+2,800
June 30...	796.01	17,200	+6,000	644.83	641,500	-13,800	444.70	208,200	-2,300
July 31...	802.74	22,800	+5,600	640.91	606,700	-34,800	444.95	211,000	+2,800
Aug. 31...	800.11	20,600	-2,200	637.56	577,800	-28,900	444.68	208,000	-3,000
Sept. 30...	800.36	20,800	+200	632.25	533,300	-44,500	444.50	206,000	-2,000
WTR YR 2001	-	-	-200	-	-	+8,700	-	-	-1,600

## RESERVOIRS IN CUMBERLAND RIVER BASIN--CONTINUED

03430050 J. PERCY PRIEST RESERVOIR.--Lat 36°09'23", long 86°37'07", Davidson County, Hydrologic Unit 05130203, on upstream face of J. Percy Priest Dam on Stones River, 2.6 mi east of Donelson, and 6.8 mi above mouth. DRAINAGE AREA, 892 mi<sup>2</sup>. PERIOD OF RECORD, September 1967 to current year. GAGE, water-stage recorder. Datum of gage is sea level. Prior to Dec. 15, 1967, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete gravity dam with earth embankments. Spillway is equipped with four taintor gates, each 41 ft high by 45 ft wide. Closure of dam was made Sept. 18, 1967; water in reservoir first reached ordinary minimum pool May 15, 1968. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 504.5 ft, maximum controlled pool, is 328,700 cfs-days of which 193,600 cfs-days is controlled storage between elevations 504.5 ft and 480.0 ft, ordinary minimum pool. Contents of 17,200 cfs-days between elevations 480.0 ft and 483.0 ft, full winter pool, is available for power production. Contents of 176,400 cfs-days above 483.0 ft is available for flood control during the winter, and 131,100 cfs-days above 490.0 ft, full pool during spring-to-fall season, is available for flood control the rest of the year. Contents of 135,100 cfs-days below elevation 480.0 ft is dead storage. Reservoir is used for flood control, power, recreation, and wildlife.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 336,600 cfs-days, May 9, 1984, elevation, 505.18 ft; minimum, after first filling to ordinary minimum pool, 109,500 cfs-days, Dec. 5, 1968, elevation, 474.75 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 227,800 cfs-days, Feb. 19, elevation, 494.01 ft, minimum, 148,600 cfs-days, Jan. 12, elevation, 482.39 ft.

03434900 CHEATHAM LAKE.--Lat 36°18'56", long 87°13'10", Cheatham County, Hydrologic Unit 05130202, at Cheatham Dam on Cumberland River, 9.4 mi west of Ashland City, 16 mi southeast of the courthouse in Clarksville, and at mile 148.7. DRAINAGE AREA, 14,159 mi<sup>2</sup>.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with seven semi-submersible taintor gates, each 27 ft high by 60 ft wide. Total capacity at elevation 385.0 ft, normal pool, is 52,200 cfs-days, of which 9,800 cfs-days are controlled storage. Records of contents not published herein.

03438210 LAKE BARKLEY.--Lat 37°01'17", long 88°13'16", Lyon County, KY, Hydrologic Unit 05130205, in powerhouse of Barkley Dam on Cumberland River, 1.4 mi northeast of Grand Rivers, KY, and at mile 30.6. DRAINAGE AREA, 17,598 mi<sup>2</sup>. PERIOD OF RECORD, July 1964 to current year. GAGE, water-stage recorder. Datum of gage is sea level, (levels by U.S. Army Corps of Engineers). Prior to Jan. 1, 1966, nonrecording gage, 1,200 ft upstream from Barkley Dam at same datum.

REMARKS.--Reservoir is formed by concrete gravity dam with earth embankments. Spillway is equipped with 12 taintor gates, each 50 ft high by 55 ft wide. Construction cofferdam was closed and limited storage began July 1, 1964; reservoir reached ordinary minimum pool elevation of 354.0 ft Feb. 16, 1966. Total level pool capacity at elevation 375.0 ft, top of gates, is 1,049,600 cfs-days, of which 742,000 cfs-days is controlled storage above 354.0 ft, ordinary minimum pool. Contents of 130,500 cfs-days between ordinary minimum pool elevation, 354.0 ft, and full pool elevation, 359.0 ft, is available for power during the spring-to-fall season. Minimum pool elevation in advance of floods is 346.0 ft, contents 171,000 cfs-days. Reservoir is used for navigation, flood control, power, and recreation. Barkley-Kentucky Canal opened June 13, 1966, for navigation and power use. Canal is 1.75 mi long and interconnects Lake Barkley and Kentucky Lake at a point 2.2 mi upstream from Barkley Dam. For daily discharges through the canal, see station 03438190, Kentucky reports.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 370.04 ft, May 13, 1984; minimum after reaching permanent pool elevation, 353.20 ft, Dec. 20, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 501,900 cfs-days, June 14, elevation, 361.10 ft; minimum content, 296,500 cfs-days, Mar. 4, minimum, 353.50 ft. Contents based on backwater profile.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-day)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03430050	J. PERCY PRIEST LAKE		*03438210	LAKE BARKLEY	
Sept. 30.....	490.44	200,800	-	355.15	334,600	-
Oct. 31.....	487.60	181,000	-19,800	355.00	331,000	-3,600
Nov. 30.....	484.87	163,600	-17,400	354.45	318,000	-13,000
Dec. 31.....	483.10	152,900	-10,700	355.45	342,000	+24,000
CAL YR 2000	-	-	+5,200	-	-	+28,700
Jan. 31.....	484.88	163,600	+10,700	354.35	315,700	-26,300
Feb. 29.....	488.60	187,800	+24,200	354.15	311,100	-4,600
Mar. 31.....	487.16	178,100	-9,700	355.85	352,100	+41,000
Apr. 30.....	490.00	197,600	+19,500	359.35	448,400	+96,300
May 31.....	490.47	201,000	+3,400	359.55	454,300	+5,900
June 30.....	490.70	202,700	+1,700	359.45	451,300	-3,000
July 31.....	490.30	199,800	-2,900	357.90	406,700	-44,600
Aug. 31.....	489.98	197,500	-2,300	357.25	388,800	-17,900
Sept. 30.....	490.27	199,600	+2,100	355.45	342,000	-46,800
WTR YR 2001	-	-	-1,200	-	-	+7,400

\* Contents based on backwater profile.

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## TENNESSEE RIVER BASIN

03455000 FRENCH BROAD RIVER NEAR NEWPORT, TN

LOCATION.--Lat 35°58'54", long 83°09'40", Cocke County, Hydrologic Unit 06010105, on left bank, 200 ft upstream from bridge on U.S. Highway 321, 1.0 mi northeast of Newport city limits, 3.7 mi upstream from Pigeon River, and at mile 77.5.

DRAINAGE AREA.--1,858 mi<sup>2</sup>.

PERIOD OF RECORD.--September to December 1900, February to August 1901, October to November 1901, November 1902 to December 1905, September to December 1907, October 1920 to September 1994, October 1996 to September 1997. Monthly discharge only October to November 1920, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1933-34, WSP 823: Drainage area. WSP 893: 1928(M), WSP 1306: 1900-1908. WSP 1336: 1903(M), 1921-22(M), 1923, 1925(M), 1927(M), 1928, 1932. WSP 1706: 1901(M).

GAGE.--Water-stage recorder. Datum of gage is 1,011.61 ft above sea level. See WSP 1910 for history of changes prior to Mar. 31, 1934.

REMARKS.--No estimated daily discharges. Records good. Diurnal fluctuation during low flow caused by powerplants 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.--From reports of Tennessee Valley Authority, the flood of Mar. 7, 1867, gage height, 24 ft, present datum, discharge estimated, 110,000 ft<sup>3</sup>/s, has not been exceeded since that date. From the same reports, other outstanding floods occurred Feb. 28, 1902, gage height, 23.0 ft present datum, discharge estimated, 101,000 ft<sup>3</sup>/s; and July 17, 1916, gage height, 22.5 ft present datum, discharge estimated 97,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jul 29	1930	*19,800	*9.24	Aug 4	2000	18,300	8.78

Minimum discharge, 380 ft<sup>3</sup>/s, Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	733	538	1090	757	1610	2480	5720	1000	1270	3030	2780	1390
2	721	549	1040	841	1380	2180	5210	1160	1500	2090	2160	1790
3	704	551	1000	777	1280	2030	4250	1040	1820	1760	1820	1790
4	701	558	976	733	1230	2120	4010	983	1670	2480	7520	2010
5	677	574	969	866	1180	2390	3660	961	1450	3780	6700	2200
6	651	580	928	988	1160	2420	3280	1120	1350	2560	3410	1970
7	650	602	894	980	1130	2180	2930	1140	1340	1700	2520	1600
8	606	599	880	978	1100	1960	2710	1160	1840	1440	2110	1320
9	591	671	851	996	1080	1880	2500	928	2160	1560	2050	1210
10	594	1820	858	884	1140	1780	2360	935	1760	1440	1820	1270
11	578	3410	832	916	1200	1700	2240	919	1690	1280	1640	1460
12	565	2140	850	924	1130	1650	1940	1080	1570	1170	2200	1200
13	541	1330	852	975	1160	1690	1970	1050	1340	1070	7030	1150
14	600	1060	862	1050	1410	2050	2420	1020	1220	1050	5120	1020
15	534	950	986	1060	2410	2150	2150	965	1160	1110	2830	977
16	541	873	1290	1030	2580	2910	2220	926	1740	981	2160	1110
17	528	872	2070	1020	4800	2940	1990	922	1600	935	1690	973
18	601	863	4410	1060	4110	2470	1810	947	1270	859	1490	891
19	563	852	2850	1930	2840	2160	1750	988	1090	898	1410	860
20	553	869	1950	5730	2200	2110	1600	1380	1020	1000	1270	931
21	546	846	1600	4770	1910	3670	1530	1430	963	1290	1140	1140
22	560	817	1440	3030	1890	5420	1450	1400	1110	1480	1040	1600
23	563	756	1210	2310	2020	5610	1450	1480	2090	1260	973	1200
24	562	777	1170	1960	2060	4840	1290	1610	1650	1040	1220	1330
25	568	820	1170	1710	2070	4210	1200	2570	1460	997	1600	2780
26	567	1720	1070	1530	3690	3750	1180	2940	1480	1630	1210	2770
27	544	2960	1120	1400	4060	3320	1150	2360	1470	2800	1140	1830
28	561	1900	1090	1360	3020	2930	1090	1910	3310	2660	1170	1440
29	572	1480	1060	1310	---	2800	1020	1510	2040	8150	1360	1260
30	565	1230	1020	1330	---	6030	971	1350	2180	10700	1510	1160
31	590	---	914	1460	---	7260	---	1290	---	4660	1520	---
TOTAL	18430	33567	39302	46665	56850	93090	69051	40474	47613	68860	73613	43632
MEAN	595	1119	1268	1505	2030	3003	2302	1306	1587	2221	2375	1454
MAX	733	3410	4410	5730	4800	7260	5720	2940	3310	10700	7520	2780
MIN	528	538	832	733	1080	1650	971	919	963	859	973	860
CFSM	.32	.60	.68	.81	1.09	1.62	1.24	.70	.85	1.20	1.28	.78
IN.	.37	.67	.79	.93	1.14	1.86	1.38	.81	.95	1.38	1.47	.87



TENNESSEE RIVER BASIN

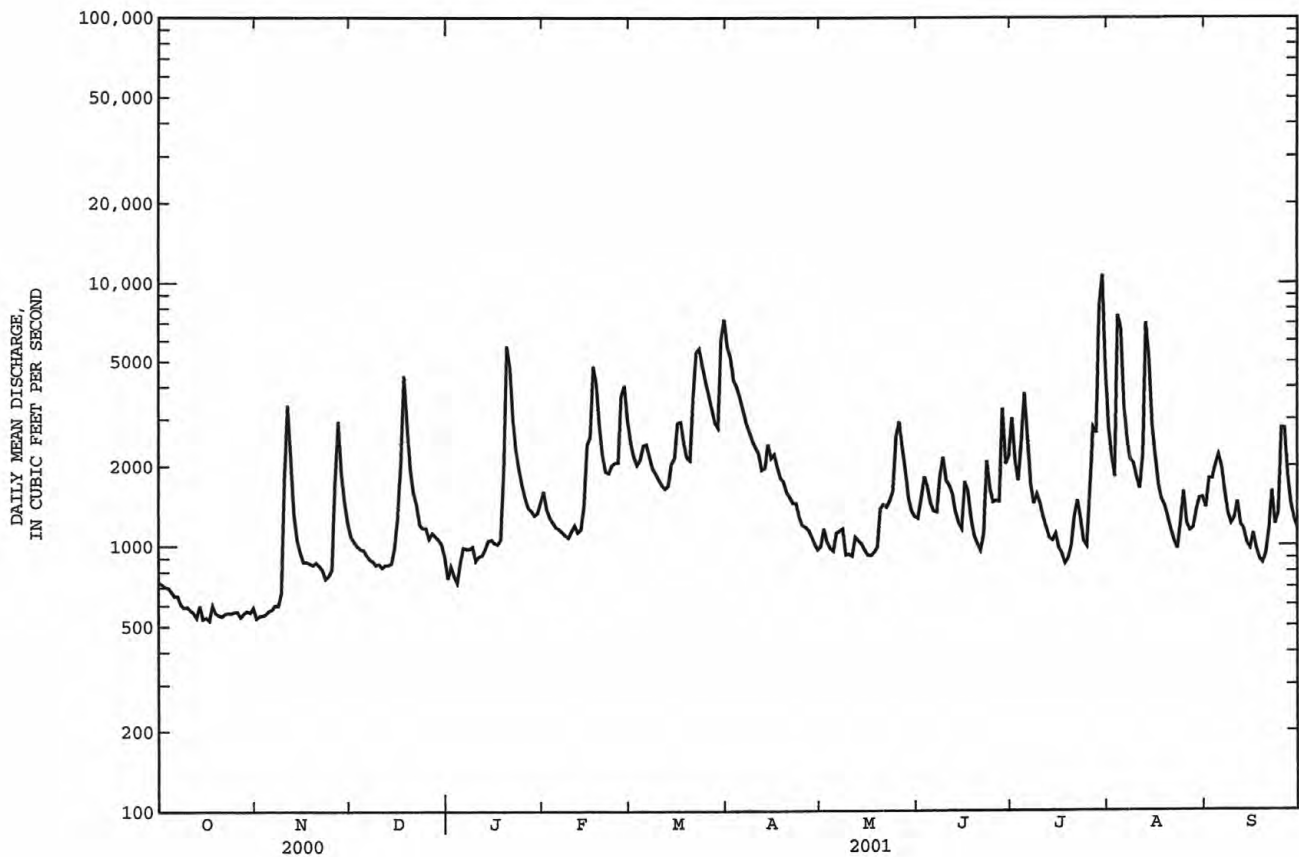
129

03455000 FRENCH BROAD RIVER NEAR NEWPORT, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1876	2126	2835	3545	4220	4840	4332	3343	2597	2224	2286	1730
MAX	9875	7249	7478	9533	8814	12710	11650	9448	6148	7620	14640	6358
(WY)	1965	1980	1962	1937	1990	1903	1903	1901	1901	1905	1901	1928
MIN	508	713	819	968	1450	1399	1362	1252	722	711	380	421
(WY)	1955	1932	1940	1956	1941	1988	1986	1941	1988	1986	1925	1925

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1901 - 2001	
ANNUAL TOTAL	672042		631147			
ANNUAL MEAN	1836		1729		2939	
HIGHEST ANNUAL MEAN					4641	
LOWEST ANNUAL MEAN					1348	
HIGHEST DAILY MEAN	13400		10700		62200	
LOWEST DAILY MEAN	528		528		240	
ANNUAL SEVEN-DAY MINIMUM	552		552		276	
MAXIMUM PEAK FLOW			19800		76300	
MAXIMUM PEAK STAGE			9.24		19.25	
INSTANTANEOUS LOW FLOW			380		208	
ANNUAL RUNOFF (CFSM)	.99		.93		1.58	
ANNUAL RUNOFF (INCHES)	13.46		12.64		21.49	
10 PERCENT EXCEEDS	3440		2980		5450	
50 PERCENT EXCEEDS	1410		1330		2270	
90 PERCENT EXCEEDS	626		691		966	



## TENNESSEE RIVER BASIN

## 03461500 PIGEON RIVER AT NEWPORT, TN

LOCATION.--Lat 35°57'38", long 83°10'28", Cocke County, Hydrologic Unit 06010106, on left bank 100 ft upstream from bridge on U.S. Highway 25 and 70 at Newport, 0.6 mi downstream from Morell Branch, and at mile 6.8

DRAINAGE AREA.--666 mi<sup>2</sup>.

## WATER-DISCHARGE RECORD

PERIOD OF RECORD.-- September 1900 to September 1929, October 1944 to September 1946, August 1948 to February 1982, October 1996 to current year. Monthly discharge only for some periods, published in WSP 1306. Published as "near Newport" 1945-46.

REVISED RECORDS.--WSP 1143: Drainage area. WSP 1306: 1901, 1904-10. WSP 1336: 1903, 1917(M), 1919-20(M), 1921, 1924(M), 1927-29(M), 1948-52 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 1,038.76 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1929, nonrecording gage at present site at datum 2.00 ft higher. May 8, 1945, to July 22, 1946, water-stage recorder at site 4.8 mi downstream at datum 35.85 ft lower. August 13, 1948, to Sept. 30, 1970, at present site at datum 2.00 ft higher.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data. Considerable regulation by Lakes Junaluska, Logan, and Walters for periods of low flow, combined usable capacity of reservoirs about 12,500 cfs-days. The largest of these, Lake Walters, usable capacity, 10,400 cfs-days was completed in 1929.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Mar. 7, 1867, and June 17, 1876, reached a stage of 23 ft present datum, under present conditions about 21.1 ft, due to removal of mill dam in 1945, discharge, 48,000 ft<sup>3</sup>/s, and flood of August 30, 1940, reached a stage of 19.3 ft present datum, discharge 36,000 ft<sup>3</sup>/s, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jul 29	2115	*7,570	*7.75	No other peak greater than base discharge.			

Minimum discharge, 116 ft<sup>3</sup>/s, Nov. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	291	170	424	371	823	1540	2480	568	762	917	2270	705
2	209	264	404	407	728	1360	2300	863	946	1380	1060	632
3	198	280	393	413	676	1270	2010	737	634	773	597	566
4	197	195	392	364	661	1410	2200	720	377	824	997	791
5	206	203	387	399	648	1490	1990	551	908	1950	910	890
6	257	220	380	391	623	1300	1830	572	687	855	693	555
7	243	211	362	377	587	1200	1700	618	890	765	1140	400
8	206	264	354	407	552	1080	1550	1090	1390	475	914	340
9	401	672	334	437	550	1050	1430	466	1260	1410	861	262
10	224	2640	329	371	690	1010	1270	326	854	1060	579	615
11	295	1480	326	344	681	946	1170	448	1260	864	801	567
12	196	563	325	380	603	903	1060	775	841	623	1250	521
13	182	1340	329	443	605	1170	1540	540	611	518	1580	578
14	175	483	415	430	879	1200	1930	451	590	511	1600	498
15	171	1130	737	414	1310	1240	1590	676	318	548	1100	329
16	314	157	644	456	1720	1580	1640	561	766	278	714	227
17	194	153	2180	446	4020	1440	1450	606	521	783	600	203
18	194	138	1690	472	2770	1280	1350	512	476	363	977	204
19	249	123	1300	2820	1960	1140	1270	541	765	508	415	340
20	227	120	1050	4870	1570	1190	1190	594	456	323	524	326
21	207	532	802	2740	1410	1930	1110	480	542	445	655	375
22	205	419	695	1980	1630	2130	1040	778	470	359	613	280
23	256	389	611	1450	1810	2410	983	692	621	199	829	546
24	177	341	604	1190	1500	2110	940	696	323	533	469	781
25	215	376	595	1050	1730	1880	929	1540	254	490	663	1340
26	189	905	527	867	2810	1680	869	1520	597	802	637	1220
27	367	708	513	837	2110	1480	716	945	488	1140	1150	372
28	226	572	499	797	1760	1330	618	798	683	671	900	247
29	276	516	479	725	---	1300	770	992	376	3220	404	240
30	223	457	450	836	---	2590	722	703	666	2500	681	236
31	199	---	411	978	---	2480	---	930	---	1660	378	---
TOTAL	7169	16021	18941	28462	37416	46119	41647	22289	20332	27747	26961	15186
MEAN	231	534	611	918	1336	1488	1388	719	678	895	870	506
MAX	401	2640	2180	4870	4020	2590	2480	1540	1390	3220	2270	1340
MIN	171	120	325	344	550	903	618	326	254	199	378	203
CFSM	.35	.80	.92	1.38	2.01	2.23	2.08	1.08	1.02	1.34	1.31	.76
IN.	.40	.89	1.06	1.59	2.09	2.58	2.33	1.24	1.14	1.55	1.51	.85

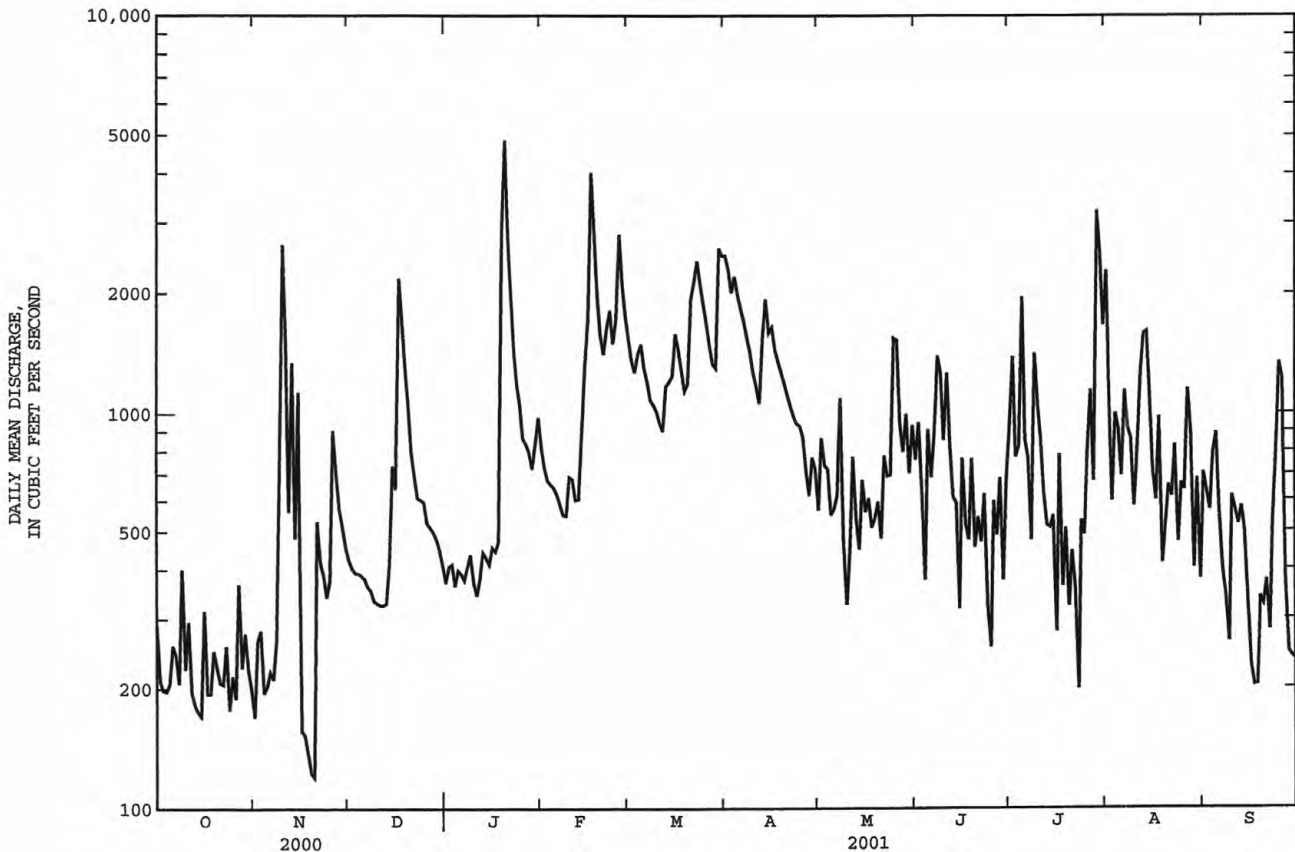
## 03461500 PIGEON RIVER AT NEWPORT, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	628	763	1236	1596	1829	2190	1813	1314	1070	906	772	605
MAX	2263	2265	3271	3407	4762	5136	4270	2693	2436	2498	2229	2182
(WY)	1965	1980	1962	1974	1957	1963	1903	1929	1967	1916	1928	1928
MIN	148	234	391	369	853	907	716	651	457	328	158	145
(WY)	1979	1954	1904	1981	1904	1915	1967	1914	1925	1925	1925	1953

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1901 - 2001	
ANNUAL TOTAL	300941		308290			
ANNUAL MEAN	822		845		1220	
HIGHEST ANNUAL MEAN					1761	
LOWEST ANNUAL MEAN					644	
HIGHEST DAILY MEAN	7040	Apr 4	4870	Jan 20	31000	Apr 2 1920
LOWEST DAILY MEAN	120	Nov 20	120	Nov 20	48	Sep 21 1953
ANNUAL SEVEN-DAY MINIMUM	204	Oct 12	204	Oct 12	65	Nov 7 1980
MAXIMUM PEAK FLOW			7570	Jul 29	50000	Feb 28 1902
MAXIMUM PEAK STAGE			7.75	Jul 29	a23.40	Feb 28 1902
INSTANTANEOUS LOW FLOW			116	Nov 20	38	Oct 5 1952
ANNUAL RUNOFF (CFSM)	1.23		1.27		1.83	
ANNUAL RUNOFF (INCHES)	16.81		17.22		24.88	
10 PERCENT EXCEEDS	1740		1670		2420	
50 PERCENT EXCEEDS	584		648		925	
90 PERCENT EXCEEDS	226		238		330	

a Present datum, under present conditions, the stage for this flood would be about 1.9 ft lower due to removal of dam 1.3 miles downstream in 1945, from reports of Tennessee Valley Authority.



## TENNESSEE RIVER BASIN

03465500 NOLICHUCKY RIVER AT EMBREEVILLE, TN

LOCATION.--Lat 36°10'35", long 82°27'27", Washington County, Hydrologic Unit 06010108, on left bank, at Embreeville, 1,000 ft upstream from bridge on State Highway 81, 3 mi northwest of Erwin, 5.2 mi downstream from North Indian Creek, and at mile 89.0.

DRAINAGE AREA.--805 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1900 to May 1901 (published as "near Chucky Valley"), October 1919 to current year. Monthly discharge only October 1919 to June 1920, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1935(M). WSP 823: Drainage area. WSP 1336: 1921-24, 1931(M).

GAGE.--Data collection platform. Datum of gage is 1,519.30 ft above sea level. Sept. 1, 1900 to May 21, 1901, nonrecording gage at site 3 mi downstream at different datum, destroyed by flood of May 21, 1901. July 1, 1920 to Sept. 30, 1931, nonrecording gage at bridge 2,000 ft downstream at datum 6.33 ft lower.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 21, 1901, reached a stage of 24 ft, discharge, 120,000 ft<sup>3</sup>/s, present site and datum, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug 13	1500	*16,700	*6.72	No other peak greater than base discharge.			

Minimum discharge, 241 ft<sup>3</sup>/s, Nov. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	343	251	389	362	654	1180	3800	663	508	795	1530	930
2	331	250	375	368	588	1070	3390	675	705	811	1160	1000
3	329	255	367	411	550	1000	2780	660	720	686	1140	1070
4	313	260	358	364	520	1180	2660	618	608	980	2650	2430
5	306	265	345	416	511	1820	2420	647	617	1230	2220	1620
6	292	263	330	393	496	e1800	2140	631	532	1070	1510	1150
7	285	262	332	341	478	e1650	2040	636	538	776	1120	924
8	279	265	330	387	461	e1500	1810	579	632	679	914	791
9	270	321	322	382	449	e1370	1600	561	647	1140	998	703
10	266	1400	322	308	495	e1230	1440	553	580	980	1060	813
11	270	912	320	324	536	e1100	1310	527	529	730	1540	827
12	274	510	326	417	493	e975	1210	517	538	592	2590	699
13	273	408	320	451	483	1130	1330	530	472	507	9750	606
14	268	375	326	430	708	1250	1490	481	419	452	5480	558
15	266	353	420	477	1880	1170	1250	453	465	410	2560	522
16	265	331	459	490	2010	1460	1240	439	685	385	1670	496
17	265	343	1220	460	3300	1330	1140	440	504	367	1290	470
18	265	357	1230	502	2480	1180	1110	433	410	355	1090	436
19	265	355	802	2230	1650	1060	1060	424	370	370	944	423
20	265	347	606	4740	1300	1060	1020	462	346	415	835	484
21	265	334	470	2190	1150	2860	988	554	335	485	768	560
22	265	296	532	1450	1220	3420	938	518	419	433	675	482
23	265	299	409	1140	1330	3230	896	570	751	372	635	419
24	265	328	421	961	1280	2580	863	478	616	338	969	463
25	265	344	457	844	1360	2240	851	1070	475	371	1110	642
26	279	823	456	701	2020	1910	803	1080	654	677	769	571
27	293	735	479	705	1630	1610	755	790	1510	892	684	463
28	284	527	459	648	1360	1390	725	626	932	1370	692	413
29	270	446	373	596	---	1440	694	572	782	4530	631	392
30	264	405	395	636	---	5560	663	517	845	5910	735	378
31	256	---	335	756	---	4370	---	470	---	2570	830	---
TOTAL	8661	12620	14285	24880	31392	56125	44416	18174	18144	31678	50549	21735
MEAN	279	421	461	803	1121	1810	1481	586	605	1022	1631	724
MAX	343	1400	1230	4740	3300	5560	3800	1080	1510	5910	9750	2430
MIN	256	250	320	308	449	975	663	424	335	338	631	378
MED	270	344	389	477	929	1390	1220	554	559	679	1090	566
CFSM	.35	.52	.57	1.00	1.39	2.25	1.84	.73	.75	1.27	2.03	.90
IN.	.40	.58	.66	1.15	1.45	2.59	2.05	.84	.84	1.46	2.34	1.00

e Estimated

TENNESSEE RIVER BASIN

133

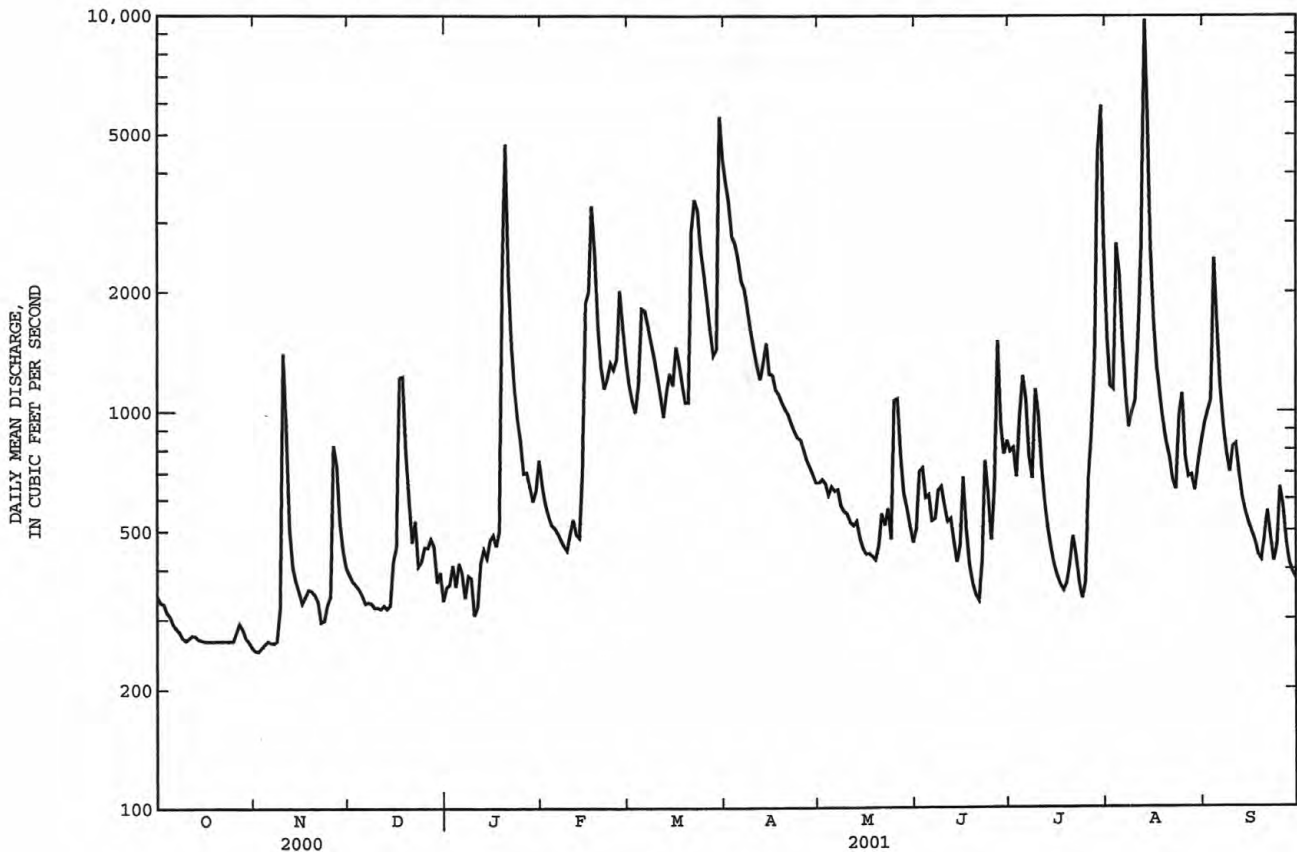
03465500 NOLICHUCKY RIVER AT EMBREEVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	807	1005	1276	1704	2049	2344	2017	1569	1123	940	921	757
MAX	2630	4720	3073	4020	4494	5102	4169	3171	3196	2525	4876	2648
(WY)	1930	1978	1962	1995	1957	1963	1983	1984	1992	1949	1940	1928
MIN	246	294	353	382	635	649	699	586	376	351	182	187
(WY)	1954	1940	1940	1940	1941	1988	1986	2001	1988	1988	1925	1925

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1920 - 2001
ANNUAL TOTAL	369333	332659	
ANNUAL MEAN	1009	911	1372
HIGHEST ANNUAL MEAN			1948
LOWEST ANNUAL MEAN			694
HIGHEST DAILY MEAN	7570	Apr 4	50800
LOWEST DAILY MEAN	250	Nov 2	88
ANNUAL SEVEN-DAY MINIMUM	257	Oct 31	121
MAXIMUM PEAK FLOW			a110000
MAXIMUM PEAK STAGE			21.52
INSTANTANEOUS LOW FLOW			b85
ANNUAL RUNOFF (CFSM)	1.25	1.13	1.70
ANNUAL RUNOFF (INCHES)	17.07	15.37	23.15
10 PERCENT EXCEEDS	2120	1720	2560
50 PERCENT EXCEEDS	725	606	1000
90 PERCENT EXCEEDS	293	303	399

a From rating curve extended above 48,000 ft<sup>3</sup>/s on basis of contracted opening and slope-area measurements of peak flow.  
b Also occurred on Sept. 9, 1925.





## TENNESSEE RIVER BASIN

03466208 BIG LIMESTONE CREEK NEAR LIMESTONE, TN

LOCATION.--Lat 36°12'21", long 82°39'02", Greene County, Hydrologic Unit 06010108, on right bank, 0.6 mi above confluence with Nolichucky River, 1.8 mi southwest of Limestone, and at mile 0.6.

DRAINAGE AREA.--79.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1996 to February 2000, August 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,340 ft above sea level, from topographic map.

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD.--Maximum discharge, 10,400 ft<sup>3</sup>/s, Aug. 4, 2001, gage height, 12.33 ft minimum, 9.7 ft<sup>3</sup>/s, Jan. 10, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,400 ft<sup>3</sup>/s, Aug. 4, gage height, 12.33 ft; minimum, 9.7 ft<sup>3</sup>/s, Jan. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	19	16	25	24	99	125	50	39	42	64	102
2	22	19	16	18	23	97	118	49	43	48	56	117
3	21	18	17	29	22	94	116	47	40	37	55	175
4	21	18	17	16	22	94	115	46	39	110	3790	148
5	20	18	17	15	21	103	107	45	37	172	432	119
6	20	17	16	14	21	93	104	45	33	73	196	107
7	21	17	16	14	20	86	102	44	35	58	167	100
8	20	19	16	16	20	82	97	43	35	54	153	95
9	19	30	16	15	20	79	96	43	33	85	140	90
10	20	44	16	17	23	75	93	40	30	59	130	87
11	20	23	17	17	21	73	90	39	29	49	129	84
12	20	20	15	15	20	73	88	38	28	42	192	80
13	21	19	14	15	20	81	98	38	28	38	165	77
14	20	19	15	15	49	73	91	36	27	35	132	75
15	19	18	16	15	233	80	83	35	31	34	120	72
16	20	18	18	15	203	83	76	34	26	35	112	70
17	21	20	35	14	249	75	72	34	25	34	111	68
18	21	19	27	16	156	71	70	34	25	33	108	66
19	22	18	22	79	131	68	68	32	25	35	101	65
20	21	17	19	115	118	69	66	32	25	37	97	73
21	20	16	23	67	110	148	65	31	25	30	93	67
22	21	16	17	50	156	136	63	37	25	29	89	62
23	21	17	26	42	143	111	61	38	38	29	85	60
24	20	16	17	37	122	101	60	33	27	27	92	65
25	20	17	22	33	128	96	60	58	26	28	83	66
26	21	18	28	30	127	90	57	45	37	31	130	58
27	21	18	16	29	113	87	55	37	42	35	112	56
28	21	17	16	27	106	84	54	40	57	55	86	55
29	20	17	15	26	---	96	52	38	60	227	80	53
30	19	17	15	28	---	165	51	34	83	137	91	53
31	19	---	15	26	---	126	---	35	---	79	96	---
TOTAL	634	579	571	890	2421	2888	2453	1230	1053	1817	7487	2465
MEAN	20.5	19.3	18.4	28.7	86.5	93.2	81.8	39.7	35.1	58.6	242	82.2
MAX	22	44	35	115	249	165	125	58	83	227	3790	175
MIN	19	16	14	14	20	68	51	31	25	27	55	53
CFSM	.26	.24	.23	.36	1.09	1.18	1.04	.50	.44	.74	3.06	1.04
IN.	.30	.27	.27	.42	1.14	1.36	1.16	.58	.50	.86	3.53	1.16

TENNESSEE RIVER BASIN

135

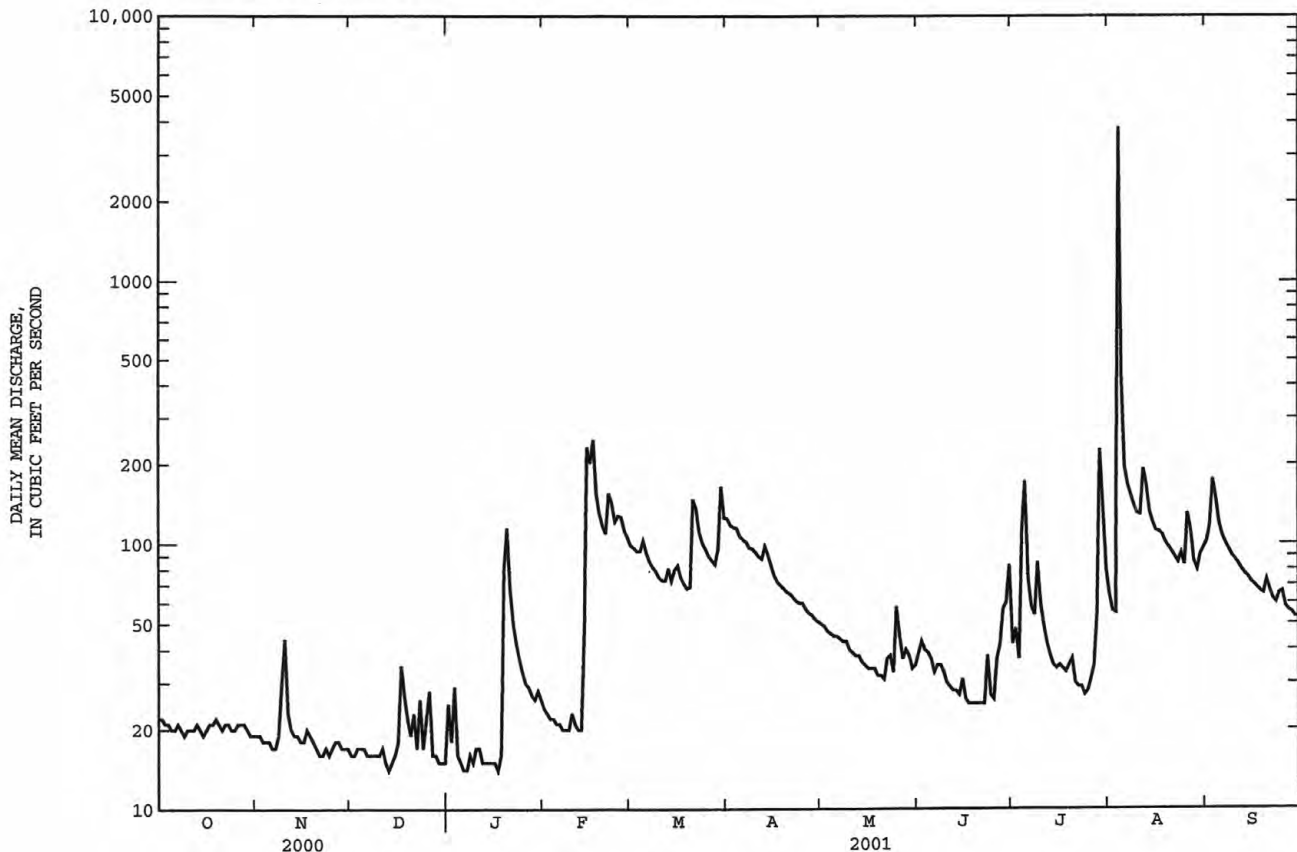
03466208 BIG LIMESTONE CREEK NEAR LIMESTONE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.4	31.2	46.7	76.7	104	133	113	92.9	67.2	65.5	79.2	38.7
MAX	34.9	67.5	127	172	175	264	165	137	104	93.0	242	82.2
(WY)	1997	1997	1997	1997	1997	1997	1998	1998	1998	1998	2001	2001
MIN	16.0	19.0	17.1	26.7	41.6	93.2	73.9	39.7	35.1	38.0	20.8	15.5
(WY)	2000	2000	2000	2000	2000	2001	1999	2001	2001	1999	1999	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1996 - 2001	
ANNUAL TOTAL			24488			
ANNUAL MEAN			67.1		76.5	
HIGHEST ANNUAL MEAN					106	
LOWEST ANNUAL MEAN					51.6	
HIGHEST DAILY MEAN	162	Aug 10	3790	Aug 4	3790	Aug 4 2001
LOWEST DAILY MEAN	14	Dec 13	14	Dec 13	14	Sep 16 1999
ANNUAL SEVEN-DAY MINIMUM	16	Dec 8	15	Jan 12	15	Sep 12 1999
MAXIMUM PEAK FLOW			10400		a10400	
MAXIMUM PEAK STAGE			12.33		12.33	
INSTANTANEOUS LOW FLOW			9.7		b9.7	
ANNUAL RUNOFF (CFSM)			.85		.97	
ANNUAL RUNOFF (INCHES)			11.53		13.15	
10 PERCENT EXCEEDS	51		117		139	
50 PERCENT EXCEEDS	22		38		51	
90 PERCENT EXCEEDS	16		17		19	

a From rating curve extended above 3,400 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow.  
b Ice regulation may have occurred.



## TENNESSEE RIVER BASIN

03466208 BIG LIMESTONE CREEK NEAR LIMESTONE, TN--Continued

## WATER-QUALITY RECORDS

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
OCT 30...	1430	19	482	8.2	14.0	738	--	9.7	98	E63	E33	230	11
NOV 21...	1400	13	470	8.3	4.5	737	--	13.5	108	150	97	240	--
DEC 20...	1500	18	533	8.4	1.0	734	--	14.5	106	180	180	260	25
FEB 22...	1500	186	419	8.1	8.0	726	--	10.2	91	K14000	K22000	200	25
MAR 27...	1400	86	486	8.2	9.5	734	--	12.6	115	--	49	240	31
APR 18...	1245	68	487	8.4	10.5	733	--	12.2	114	--	220	250	33
MAY 31...	1400	34	480	8.3	18.0	726	--	7.0	77	--	750	250	22
JUL 25...	1415	25	492	8.2	23.5	723	14	6.0	75	--	200	240	27
AUG 27...	1515	98	418	8.0	21.0	723	46	6.7	77	--	K500	200	--
SEP 11...	1515	83	467	8.1	19.5	--	6.7	8.4	92	--	770	250	46

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
OCT 30...	69.7	13.9	2.5	2	.1	4.65	--	269	221	9.6	6.5	.4	8.1
NOV 21...	73.0	14.7	3.1	3	.1	3.71	10	297	259	13.4	6.3	.2	7.2
DEC 20...	78.6	14.5	4.0	3	.1	5.43	--	282	231	18.5	9.2	.2	7.2
FEB 22...	61.1	10.6	3.2	3	.1	6.56	--	209	171	13.6	8.8	<.2	7.7
MAR 27...	75.4	13.4	3.2	3	.1	3.09	2	255	214	11.2	8.2	<.2	6.6
APR 18...	76.9	13.8	2.9	2	.1	2.89	4	256	219	9.9	7.6	.2	8.2
MAY 31...	74.3	14.4	3.0	3	.1	3.69	--	272	223	9.4	6.6	.2	10.4
JUL 25...	71.5	14.1	2.8	2	.1	4.50	--	255	209	9.1	6.9	.2	8.2
AUG 27...	63.5	10.5	2.6	3	.1	6.49	--	256	210	10	7.4	.2	8.2
SEP 11...	76.7	13.2	2.8	2	.1	3.83	--	244	200	8.5	6.9	.2	9.8

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

137

03466208 BIG LIMESTONE CREEK NEAR LIMESTONE, TN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT 30...	272	251	.37	--	<.008	.747	<.041	.16	.28	1.0	.075	.058	.041
NOV 21...	276	284	.38	--	<.008	1.47	<.041	.22	.17	1.6	.054	.047	.035
DEC 20...	301	284	.41	1.77	.014	1.78	.050	.32	.40	2.2	.105	.060	.053
FEB 22...	246	227	.33	2.60	.017	2.62	.137	.63	1.9	4.5	.605	.219	.201
MAR 27...	277	260	.38	2.48	.008	2.49	<.041	.16	.44	2.9	.043	.026	.021
APR 18...	--	262		2.19	.012	2.21	<.041	.10	.20	2.4	.048	.033	.022
MAY 31...	273	264	.37	1.75	.020	1.77	<.041	.21	.37	2.1	.122	.084	.065
JUL 25...	275	252	.37	2.01	.021	2.03	<.040	.26	.38	2.4	.125	.090	.071
AUG 27...	252	235	.34	1.97	.018	1.99	<.040	.46	.74	2.7	.247	.161	.132
SEP 11...	243	253	.33	2.53	.011	2.54	<.040	.17	.24	2.8	.081	.061	.041

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ACETO- CHLOR, WATER, FILTRD REC (UG/L) (49260)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	FONOFOS WATER DISS REC (UG/L) (04095)
OCT 30...	10	9.5	<.002	<.004	.044	<.005	<.002	<.005	<.018	E.065	<.005	<.005	<.003
NOV 21...	10	6.1	<.002	<.004	.039	<.005	<.002	<.005	<.018	E.049	<.005	<.005	<.003
DEC 20...	20	11.1	<.002	<.004	.030	<.005	<.002	<.005	<.018	E.042	<.005	<.005	<.003
FEB 22...	30	9.1	<.002	<.004	.026	<.005	<.002	<.005	<.018	E.033	<.005	<.005	<.003
MAR 27...	10	12.5	<.002	<.004	.031	<.005	<.002	<.005	<.018	E.050	<.005	<.005	<.003
APR 18...	<10	14.6	<.002	<.004	.037	<.005	<.002	<.005	<.018	E.059	<.005	<.005	<.003
MAY 31...	<10	17.7	<.002	.130	.254	<.005	<.002	<.005	<.018	E.042	<.005	<.005	<.003
JUL 25...	<10	15.2	<.002	.007	.071	<.005	<.002	<.005	<.018	E.028	<.005	<.005	<.003
AUG 27...	10	8.3	<.002	<.004	.034	<.005	<.002	<.005	<.018	E.021	<.005	<.005	<.003
SEP 11...	<10	11.1	<.002	<.004	.034	<.005	<.002	<.005	<.018	E.033	<.005	<.005	<.003

E--Estimated

## TENNESSEE RIVER BASIN

03466208 BIG LIMESTONE CREEK NEAR LIMESTONE, TN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	LINDANE DIS- SOLVED (UG/L) (39341)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	BEN- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82673)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
OCT 30...	<.004	<.027	<.006	E.007	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003
NOV 21...	<.004	<.027	<.006	.014	<.003	<.007	<.010	E.003	<.011	<.010	<.041	<.020	<.003
DEC 20...	<.004	<.027	<.006	.023	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003
FEB 22...	<.004	<.027	<.006	.042	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003
MAR 27...	<.004	<.027	<.006	.014	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003
APR 18...	<.004	<.027	<.006	E.010	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003
MAY 31...	<.004	<.027	<.006	.146	<.003	<.007	<.010	<.015	E.002	<.010	<.041	<.020	<.003
JUL 25...	<.004	<.027	<.006	.199	<.003	<.007	<.010	E.004	E.006	<.010	<.041	<.020	<.003
AUG 27...	<.004	<.027	<.006	.049	<.003	<.007	<.010	E.011	<.011	<.010	<.041	<.020	<.003
SEP 11...	<.004	<.027	<.006	.042	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003
DATE	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)
OCT 30...	<.002	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006
NOV 21...	<.002	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006
DEC 20...	<.002	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006
FEB 22...	<.002	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006
MAR 27...	<.002	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006
APR 18...	<.002	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006
MAY 31...	<.002	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	E.004	<.002	<.010	<.006
JUL 25...	<.002	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	E.005	<.002	<.010	<.006
AUG 27...	<.002	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006
SEP 11...	<.002	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006

E--Estimated



## 03466208 BIG LIMESTONE CREEK NEAR LIMESTONE, TN--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 30...	<.011	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	15
NOV 21...	<.011	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	3
DEC 20...	<.011	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	10
FEB 22...	<.011	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	273
MAR 27...	<.011	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	128
APR 18...	<.011	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	36
MAY 31...	<.011	<.004	<.011	<.023	E.004	<.034	<.017	<.002	<.009	<.005	144
JUL 25...	<.011	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	160
AUG 27...	<.011	<.004	<.011	<.023	E.001	<.034	<.017	<.002	<.009	<.005	58
SEP 11...	<.011	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	44

E--Estimated

## TENNESSEE RIVER BASIN

03467609 NOLICHUCKY RIVER NEAR LOWLAND, TN

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°07'34", long 83°10'31", Cocke County, Hydrologic Unit 06010108, on left bank at Jones Bridge on Tennessee Highway 160, 2.85 mi southeast of Lowland, and at mile 10.3.

DRAINAGE AREA.--1,687 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1996 to February 1998 (destroyed by flood of February 1998). Re-established November 1998 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	
OCT 30...	1100	405	259	8.0	16.0	746	--	9.1	95	K28	K45	100	8	
NOV 21...	1045	527	211	8.0	6.0	748	--	12.1	99	K56	K45	89	3	
DEC 20...	1130	1120	202	8.3	<.5	745	--	17.4	122	160	30	78	9	
FEB 22...	1115	3920	240	7.5	7.5	735	--	10.9	95	K3000	1100	110	25	
MAR 27...	1100	2710	167	8.0	8.5	745	--	11.1	97	--	K30	69	12	
APR 18...	1000	1740	215	8.0	13.0	743	--	9.9	97	--	33	95	13	
MAY 31...	1030	871	185	7.9	20.5	735	--	7.2	83	--	K23	80	11	
JUL 25...	1100	1030	227	7.9	26.0	732	180	6.4	82	--	K220	96	14	
AUG 27...	1130	1240	234	8.0	25.0	733	4.5	7.8	98	--	77	110	15	
SEP 11...	1100	1220	223	8.1	23.0	--	5.1	7.3	--	--	45	110	17	
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
OCT 30...	30.6	6.61	6.8	12	.3	3.06	117	96	12.2	8.9	.7	2.9	141	
NOV 21...	26.2	5.63	6.2	13	.3	2.85	104	85	12.2	8.2	.2	6.5	123	
DEC 20...	23.2	4.85	4.8	12	.2	2.09	84	69	15.0	6.3	.4	5.9	112	
FEB 22...	34.0	5.88	3.8	7	.2	2.21	103	84	16.6	6.3	<.2	7.3	140	
MAR 27...	20.9	4.23	3.7	10	.2	1.30	70	57	10.2	5.7	<.2	7.3	104	
APR 18...	28.8	5.47	3.5	7	.2	1.52	99	81	13.3	4.8	.2	6.1	122	
MAY 31...	23.8	5.01	3.9	9	.2	2.00	84	69	10.5	5.0	.3	7.9	99	
JUL 25...	28.5	5.99	5.8	11	.3	3.04	100	82	11.1	7.7	.3	3.8	120	
AUG 27...	33.4	6.14	4.1	7	.2	1.95	114	92	8.1	5.9	.2	4.5	134	
SEP 11...	33.1	5.93	3.3	6	.1	2.15	110	90	8.3	4.8	<.2	7.4	130	

K--Results based on non-ideal colony count.

## 03467609 NOLICHUCKY RIVER NEAR LOWLAND, TN--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO- GEN, TOTAL (MG/L) AS N) (00600)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)
OCT 30...	130	.19	--	<.006	.074	<.041	.13	.24	.31	.023	.015	<.018	20
NOV 21...	121	.17	--	<.006	.532	<.041	.27	.17	.70	.042	.036	.024	30
DEC 20...	106	.15	.477	.008	.485	<.041	.12	.32	.80	.049	.015	<.018	30
FEB 22...	132	.19	--	<.006	1.20	<.041	.24	.72	1.9	.209	.058	.047	30
MAR 27...	91	.14	--	<.006	.752	<.041	.11	.25	1.0	.046	.014	<.018	20
APR 18...	115	.17	.505	.031	.536	<.041	<.1	.21	.74	.041	.017	<.018	30
MAY 31...	102	.13	.587	.006	.593	<.040	.13	.28	.88	.065	.039	.025	20
JUL 25...	119	.16	.659	.009	.668	<.040	.20	.52	1.2	.261	.053	.038	<10
AUG 27...	120	.18	.57	.021	.588	<.040	.11	.18	.77	.026	.018	<.020	20
SEP 11...	123	.18	.790	.006	.796	<.040	.14	.23	1.0	.047	.027	<.020	10

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ACETO- CHLOR, WATER, FLTRD REC (UG/L) (49260)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)
OCT 30...	8.0	<.002	<.004	.013	<.005	<.002	<.005	<.018	E.016	<.005	<.005	<.003	<.004
NOV 21...	3.9	<.002	<.004	.007	<.005	<.002	<.005	<.018	E.009	<.005	<.005	<.003	<.004
DEC 20...	E1.7	<.002	<.004	.008	<.005	<.002	<.005	<.018	E.011	<.005	<.005	<.003	<.004
FEB 22...	8.1	<.002	<.004	E.005	<.005	<.002	<.005	<.018	E.007	<.005	<.005	<.003	<.004
MAR 27...	3.8	<.002	<.004	E.005	<.005	<.002	<.005	<.018	E.006	<.005	<.005	<.003	<.004
APR 18...	6.6	<.002	<.004	.020	<.005	<.002	<.005	<.018	E.005	<.005	<.005	<.003	<.004
MAY 31...	3.3	<.002	<.004	.062	<.005	<.002	<.005	<.018	E.008	E.003	<.005	<.003	<.004
JUL 25...	13.3	<.002	<.004	.016	<.005	<.002	<.005	<.018	E.008	<.005	<.005	<.003	<.004
AUG 27...	5.3	<.002	<.004	.015	<.005	<.002	<.005	<.018	E.007	<.005	<.005	<.003	<.004
SEP 11...	3.9	<.002	<.004	.011	<.005	<.002	<.005	<.018	E.008	<.005	<.005	<.003	<.004

DATE	MALA- THION, DIS- SOLVED (UG/L) (39532)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	BEN- FLUR- ALIN WAT FLD 0.7 U (UG/L) (82673)	CAR- BARYL WATER FLTRD 0.7 U (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U (UG/L) (82674)	DCPA WATER FLTRD 0.7 U (UG/L) (82682)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)
OCT 30...	<.027	<.006	E.006	<.003	<.007	<.010	E.005	E.005	<.010	<.041	<.020	<.003	<.002
NOV 21...	<.027	<.006	E.006	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002
DEC 20...	<.027	<.006	E.003	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002
FEB 22...	<.027	<.006	E.002	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002
MAR 27...	<.027	<.006	E.003	<.003	<.007	<.010	<.015	E.010	<.010	<.041	<.020	<.003	<.002
APR 18...	<.027	<.006	E.005	<.003	<.007	<.010	E.004	E.010	<.010	<.041	<.020	<.003	<.002
MAY 31...	<.027	.013	.017	<.003	<.007	<.010	E.003	.013	<.010	<.041	<.020	<.003	<.002
JUL 25...	<.027	.302	.020	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002
AUG 27...	<.027	<.006	E.008	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002
SEP 11...	<.027	<.006	E.008	<.003	<.007	<.010	E.004	E.007	<.010	<.041	<.020	<.003	<.002

E--Estimated

## TENNESSEE RIVER BASIN

03467609 NOLICHUCKY RIVER NEAR LOWLAND, TN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	EPIC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)
OCT 30...	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011
NOV 21...	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011
DEC 20...	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011
FEB 22...	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011
MAR 27...	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011
APR 18...	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011
MAY 31...	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011
JUL 25...	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	.020	<.002	<.010	<.006	<.011
AUG 27...	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011
SEP 11...	<.021	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011

DATE	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 30...	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	4
NOV 21...	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	3
DEC 20...	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	11
FEB 22...	<.004	<.011	<.023	.032	<.034	<.017	<.002	<.009	<.005	114
MAR 27...	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	22
APR 18...	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	17
MAY 31...	<.004	<.011	<.023	E.011	<.034	<.017	<.002	<.009	<.005	--
JUL 25...	<.004	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	--
AUG 27...	<.004	<.011	<.023	E.004	<.034	<.017	<.002	<.009	<.005	9
SEP 11...	<.004	<.011	<.023	E.008	<.034	<.017	<.002	<.009	<.005	13

E--Estimated

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## TENNESSEE RIVER BASIN

03469175 LITTLE PIGEON RIVER ABOVE SEVIERVILLE, TN

LOCATION.--Lat 35°51'55", long 83°32'01", Sevier County, Hydrologic Unit 06010107, on left bank of county road, 1.2 mi downstream from East Fork, 1.2 mi upstream from West Prong, 0.8 mi east of Sevierville, and at mi 7.5.

DRAINAGE AREA.-- 184 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1988 to current year.

REVISED RECORD.--WDR TN-94-1: 1989-91 (M): 1992, 1993(P).

GAGE.--Data collection platform. Datum of gage is 898.08 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. The town of Sevierville diverts an average of about 1.5 ft<sup>3</sup>/s (1.0 MGD) for municipal supply above gage. 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 4,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jul 29	2045	*4,580	*8.25	No peak greater than base discharge.			

Minimum discharge, 30 ft<sup>3</sup>/s, Oct. 20, Nov. 2, Jan. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	33	67	e70	187	337	462	114	138	236	262	282
2	75	33	64	e65	162	285	422	112	205	163	195	378
3	69	32	66	e60	142	264	410	106	147	134	155	294
4	63	34	66	e60	132	298	584	99	134	241	217	301
5	57	38	60	54	122	446	458	93	119	222	270	211
6	50	40	57	52	113	412	372	89	110	164	253	163
7	49	35	54	50	104	315	319	93	122	129	179	137
8	50	53	52	65	98	263	273	89	471	111	150	118
9	46	530	52	73	93	237	240	91	373	221	143	106
10	44	551	51	e80	138	209	214	85	217	243	467	97
11	43	170	50	e75	137	190	192	78	163	161	682	91
12	42	113	51	67	117	186	178	82	133	131	506	85
13	41	90	51	81	117	491	1100	86	116	110	911	78
14	39	78	160	75	377	323	1050	76	112	97	511	74
15	39	69	141	81	943	357	758	70	103	85	336	71
16	37	64	115	88	1290	443	692	67	161	77	254	68
17	36	95	579	83	2930	340	490	63	132	71	213	65
18	37	101	264	173	1220	276	379	60	104	65	190	62
19	39	80	179	2000	627	235	313	58	90	62	172	61
20	36	76	e140	1530	430	221	272	164	80	63	230	101
21	36	67	e130	633	411	315	244	104	72	74	140	98
22	37	61	e110	373	925	408	216	121	124	58	118	71
23	36	60	e105	274	807	347	196	292	273	54	106	64
24	34	60	e95	220	551	290	183	145	148	50	101	280
25	34	82	e80	185	873	263	179	951	122	60	117	457
26	35	140	e80	155	915	231	158	439	162	71	97	225
27	34	103	71	143	566	205	145	233	145	57	95	156
28	33	88	69	128	424	185	135	193	119	52	106	125
29	35	78	e65	117	---	192	126	172	107	1840	96	108
30	33	74	e65	276	---	334	119	136	168	1610	120	98
31	33	---	e65	241	---	443	---	117	---	436	135	---
TOTAL	1356	3128	3254	7627	14951	9341	10879	4678	4670	7148	7527	4525
MEAN	43.7	104	105	246	534	301	363	151	156	231	243	151
MAX	84	551	579	2000	2930	491	1100	951	471	1840	911	457
MIN	33	32	50	50	93	185	119	58	72	50	95	61
CFSM	.24	.57	.57	1.34	2.90	1.64	1.97	.82	.85	1.25	1.32	.82
IN.	.27	.63	.66	1.54	3.02	1.89	2.20	.95	.94	1.45	1.52	.91

e Estimated

TENNESSEE RIVER BASIN

145

03469175 LITTLE PIGEON RIVER ABOVE SEVIERVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	125	199	348	530	596	671	481	366	328	242	188	145
MAX	335	374	743	873	1024	1426	1141	576	635	510	477	530
(WY)	1990	1990	1992	1994	1994	1994	1994	1989	1997	1999	1996	1989
MIN	32.5	59.1	105	246	240	301	124	151	121	90.7	61.7	29.8
(WY)	1999	1999	2001	2001	1993	2001	1995	2001	1990	1993	1999	1998

SUMMARY STATISTICS

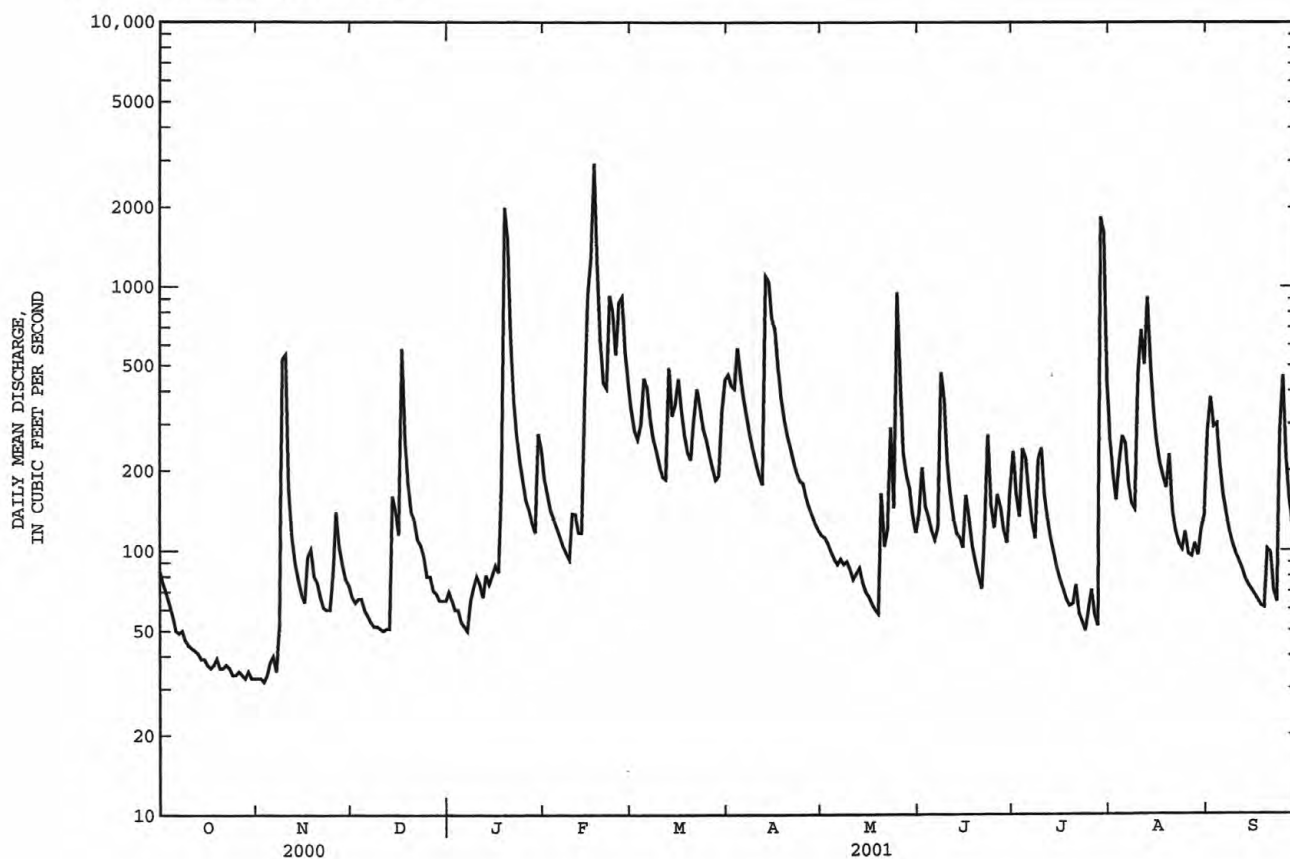
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1988 - 2001

ANNUAL TOTAL	85614	79084	
ANNUAL MEAN	234	217	351
HIGHEST ANNUAL MEAN			573
LOWEST ANNUAL MEAN			217
HIGHEST DAILY MEAN	3270	Apr 4	2930
LOWEST DAILY MEAN	32	Nov 3	32
ANNUAL SEVEN-DAY MINIMUM	33	Oct 28	33
MAXIMUM PEAK FLOW			4580
MAXIMUM PEAK STAGE			8.25
INSTANTANEOUS LOW FLOW			a30
ANNUAL RUNOFF (CFSM)	1.27		1.18
ANNUAL RUNOFF (INCHES)	17.31		15.99
10 PERCENT EXCEEDS	483		450
50 PERCENT EXCEEDS	136		121
90 PERCENT EXCEEDS	43		51

a Also occurred on Nov. 2, Jan. 11.



## TENNESSEE RIVER BASIN

03491000 BIG CREEK NEAR ROGERSVILLE, TN

LOCATION.--Lat 36°25'34", long 82°57'07", Hawkins County, Hydrologic Unit 06010104, on left bank 300 ft upstream from county road bridge, 3 mi northeast of Rogersville, and at mile 2.0.

DRAINAGE AREA.--47.3 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1941 to June 1949. Occasional low-flow measurements, water years 1950-55, 1957. Annual maximum, water years 1955-57; October 1957 to current year.

REVISED RECORDS.--WSP 1436: 1945.

GAGE.--Data collection platform and crest-stage gage. Datum of gage is 1,128.9 ft above sea level (levels based on City of Rogersville construction plans for pumping station). Dec. 7, 1954, to Sept. 30, 1957, crest-stage gage at same site and datum.

REMARKS.--Records good except for period Oct. 1 to Dec. 17, which are fair. 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 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 17	0430	*1,310	*4.81	No peak greater than base discharge.			

Minimum discharge, 1.9 ft<sup>3</sup>/s, Nov 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.2	6.7	4.1	11	64	40	12	16	7.3	24	29
2	2.7	2.6	5.9	4.0	10	54	64	12	38	6.4	17	31
3	2.5	2.9	6.3	3.9	9.2	46	65	12	25	6.5	14	33
4	2.5	2.8	6.3	3.8	8.4	40	101	11	19	7.8	16	60
5	2.6	3.3	6.4	3.9	8.2	37	74	10	18	15	33	28
6	2.7	4.0	6.6	4.1	8.0	33	57	11	15	12	25	18
7	2.7	3.4	6.7	4.1	7.6	29	49	12	13	8.0	20	13
8	2.6	3.2	6.4	4.5	7.2	26	41	12	13	6.9	14	10
9	2.5	8.3	6.4	4.6	7.3	24	36	12	12	6.7	11	8.2
10	2.4	34	6.5	4.3	9.2	22	32	11	11	7.5	9.4	7.1
11	2.6	21	6.4	4.0	12	21	28	9.7	9.0	6.9	17	7.1
12	2.4	12	5.9	4.3	11	20	26	9.4	8.0	6.0	18	6.3
13	3.0	8.3	5.4	4.5	10	31	62	9.0	7.3	5.1	25	5.8
14	3.2	7.0	8.5	4.9	115	53	104	8.1	6.9	4.6	18	5.4
15	3.1	6.2	19	4.9	469	57	69	7.5	6.7	4.6	12	5.3
16	3.1	6.3	17	5.0	291	121	56	6.8	6.9	4.7	9.9	5.2
17	2.8	6.9	76	4.9	650	80	43	6.6	6.5	4.6	9.1	5.0
18	3.0	7.4	30	5.2	178	57	37	6.8	5.7	4.5	8.5	4.8
19	2.6	7.5	16	157	108	44	32	7.0	4.7	5.5	8.2	5.0
20	2.3	7.7	11	163	77	38	27	6.0	4.3	7.2	11	6.8
21	3.1	8.1	8.6	67	62	55	25	8.6	4.3	7.4	7.9	8.0
22	3.6	7.8	7.3	38	116	82	24	110	4.5	6.4	6.8	6.7
23	3.6	7.2	6.3	27	143	63	21	108	11	5.7	6.0	5.6
24	4.2	6.7	5.8	21	91	51	20	41	11	7.1	7.2	7.5
25	4.4	7.1	5.6	17	192	42	19	41	8.8	31	10	17
26	6.5	7.5	5.2	14	198	36	17	45	8.6	24	7.5	12
27	6.8	7.8	5.0	12	112	30	15	29	7.6	20	7.8	8.2
28	4.6	7.4	5.2	11	83	27	14	24	6.4	60	7.7	6.9
29	3.0	7.0	5.1	10	---	25	14	22	6.7	125	6.7	6.4
30	2.4	6.8	4.8	11	---	34	13	17	7.2	93	7.2	5.8
31	2.3	---	4.4	13	---	33	---	14	---	39	40	---
TOTAL	98.9	230.4	322.7	640.0	3004.1	1375	1225	651.5	322.1	556.4	434.9	378.1
MEAN	3.19	7.68	10.4	20.6	107	44.4	40.8	21.0	10.7	17.9	14.0	12.6
MAX	6.8	34	76	163	650	121	104	110	38	125	40	60
MIN	2.3	2.2	4.4	3.8	7.2	20	13	6.0	4.3	4.5	6.0	4.8
CFSM	.07	.16	.22	.44	2.27	.94	.86	.44	.23	.38	.30	.27
IN.	.08	.18	.25	.50	2.36	1.08	.96	.51	.25	.44	.34	.30

TENNESSEE RIVER BASIN

147

03491000 BIG CREEK NEAR ROGERSVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.2	29.2	70.2	103	131	129	89.3	57.1	29.4	23.2	16.9	11.7
MAX	109	124	258	331	472	366	342	206	150	96.5	67.1	58.7
(WY)	1972	1974	1992	1974	1994	1963	1998	1958	1989	1960	1942	1989
MIN	3.19	4.43	5.06	9.33	33.3	27.4	15.4	10.7	7.61	4.35	2.45	2.60
(WY)	2001	1988	1966	1981	2000	1983	1986	1985	1941	1988	1988	1999

SUMMARY STATISTICS

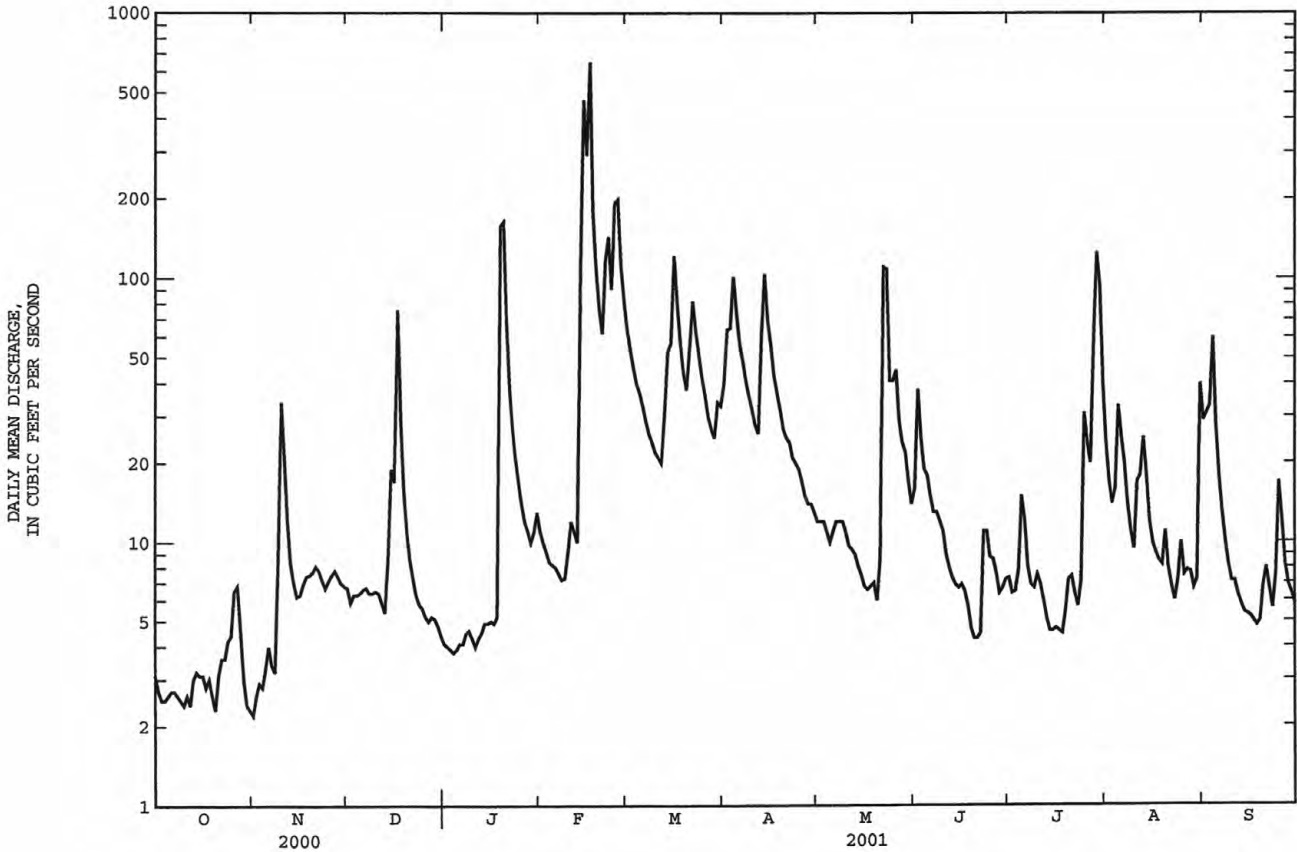
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1941 - 2001

ANNUAL TOTAL	7417.2	9239.1	
ANNUAL MEAN	20.3	25.3	58.3
HIGHEST ANNUAL MEAN			123
LOWEST ANNUAL MEAN			20.1
HIGHEST DAILY MEAN	611	Apr 4	650
LOWEST DAILY MEAN	1.7	Sep 20	2.2
ANNUAL SEVEN-DAY MINIMUM	1.9	Sep 14	2.6
MAXIMUM PEAK FLOW			1310
MAXIMUM PEAK STAGE			4.81
INSTANTANEOUS LOW FLOW			1.9
ANNUAL RUNOFF (CFSM)	.43		.54
ANNUAL RUNOFF (INCHES)	5.83		7.27
10 PERCENT EXCEEDS	46		60
50 PERCENT EXCEEDS	7.9		8.6
90 PERCENT EXCEEDS	2.8		4.0

- a From rating curve extended above 3,000 ft<sup>3</sup>/s on basis of contracted-opening measurements of peak flow.  
b Due to backwater from debris.



## TENNESSEE RIVER BASIN

03491544 CROCKETT CREEK BELOW ROGERSVILLE, TN

LOCATION.--Lat 36°22'47", long 83°02'48", Hawkins County, Hydrologic Unit 06010104, on right bank at Rogersville sewage treatment plant, 3.0 mi southwest of Rogersville, and at mile 1.2.

DRAINAGE AREA.--4.67 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to September 2001 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1092.53 ft above sea level.

REMARKS.--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 250 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jul 25	1000	*259	*3.09	No other peak greater than base discharge.			

Minimum discharge, 0.31 ft<sup>3</sup>/s, Oct. 19, 20, 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	.63	.50	.58	1.2	5.0	6.4	1.0	6.8	1.6	4.2	3.4
2	.52	.56	.50	.55	1.1	4.5	3.6	1.0	2.9	1.3	3.6	1.6
3	.48	.54	.62	.57	.99	3.9	6.0	.98	2.2	13	3.1	7.6
4	.46	.55	.59	.58	.95	3.6	4.4	.95	2.4	5.1	5.7	2.6
5	.42	.58	.57	.56	.90	3.5	3.8	.93	1.7	2.6	3.5	1.9
6	.41	.59	.55	.54	.89	2.9	3.5	4.7	1.5	2.0	2.6	1.5
7	.40	.59	.54	.52	.95	2.6	3.1	2.0	1.6	1.7	2.2	1.4
8	.39	.99	.51	.82	.92	2.4	3.0	1.4	1.7	2.3	2.0	1.2
9	.40	8.5	.47	.60	.91	2.2	2.6	1.3	1.3	2.4	1.8	1.1
10	.40	1.6	.49	.53	2.6	2.0	2.2	1.2	1.1	1.7	1.6	.99
11	.39	1.0	.50	.50	1.2	1.9	2.0	1.1	1.0	1.7	4.7	.90
12	.39	.80	.45	.72	1.2	2.5	2.3	1.3	.97	1.3	2.7	.84
13	.37	.68	.44	.62	1.4	3.3	12	1.0	.92	1.1	7.1	.80
14	.37	.62	4.6	.55	11	2.2	5.0	.95	.85	1.0	2.6	.75
15	.37	.58	1.2	.56	29	5.1	5.5	.92	.81	.97	2.0	.69
16	.36	.65	6.8	.51	39	3.6	3.8	.89	.80	.93	1.7	.66
17	.36	1.1	10	.50	32	3.0	3.3	.86	.74	.95	1.6	.63
18	.35	.72	2.5	1.3	12	2.6	2.8	.81	.69	.93	1.4	.62
19	.34	.62	2.0	35	8.7	2.4	2.5	.84	.66	.94	6.0	.96
20	.35	.55	1.5	9.6	6.7	2.5	2.3	.86	.63	.95	2.1	1.5
21	.37	.57	1.3	5.2	5.7	4.4	2.1	2.0	.61	.82	1.5	.86
22	.36	.52	1.1	4.0	14	3.4	1.9	11	2.7	.73	1.3	.76
23	.35	.50	1.0	3.0	7.8	3.1	1.8	2.2	1.6	.66	1.2	.70
24	.35	.49	.93	2.4	6.2	2.7	1.7	1.8	.96	.62	1.1	5.7
25	.44	.87	.83	1.9	15	2.4	1.5	6.4	1.4	20	1.0	1.6
26	.45	.65	.78	1.7	9.6	2.2	1.4	2.2	9.7	2.0	1.0	1.2
27	.39	.57	.81	1.5	7.0	2.0	1.3	1.7	1.8	4.2	.93	1.0
28	.47	.55	.75	1.3	5.9	1.9	1.2	2.2	1.4	30	.87	.96
29	.62	.55	.67	1.3	---	2.7	1.1	1.6	5.3	25	.83	.90
30	.64	.52	.62	2.1	---	2.6	1.1	1.3	1.9	8.5	.88	.80
31	.64	---	.59	1.4	---	2.3	---	1.3	---	5.4	1.7	---
TOTAL	13.17	28.24	44.71	81.51	224.81	91.4	95.2	58.69	58.64	142.40	74.51	46.12
MEAN	.42	.94	1.44	2.63	8.03	2.95	3.17	1.89	1.95	4.59	2.40	1.54
MAX	.64	8.5	10	35	39	5.1	12	11	9.7	30	7.1	7.6
MIN	.34	.49	.44	.50	.89	1.9	1.1	.81	.61	.62	.83	.62
CFSM	.09	.20	.31	.56	1.72	.63	.68	.41	.42	.98	.51	.33
IN.	.10	.22	.36	.65	1.79	.73	.76	.47	.47	1.13	.59	.37



TENNESSEE RIVER BASIN

149

03491544 CROCKETT CREEK BELOW ROGERSVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.33	2.61	6.34	8.90	11.6	10.3	7.40	4.81	3.88	3.05	2.56	2.00
MAX	3.75	4.69	18.7	16.2	31.3	26.4	22.6	9.82	9.95	7.51	5.39	7.63
(WY)	1990	1990	1992	1996	1994	1994	1998	1995	1989	1996	1994	1989
MIN	.42	.80	1.29	2.63	2.94	2.95	1.62	1.89	1.01	.59	.78	.42
(WY)	2001	1999	2000	2001	2000	2001	1995	2001	1993	1993	1999	1999

SUMMARY STATISTICS

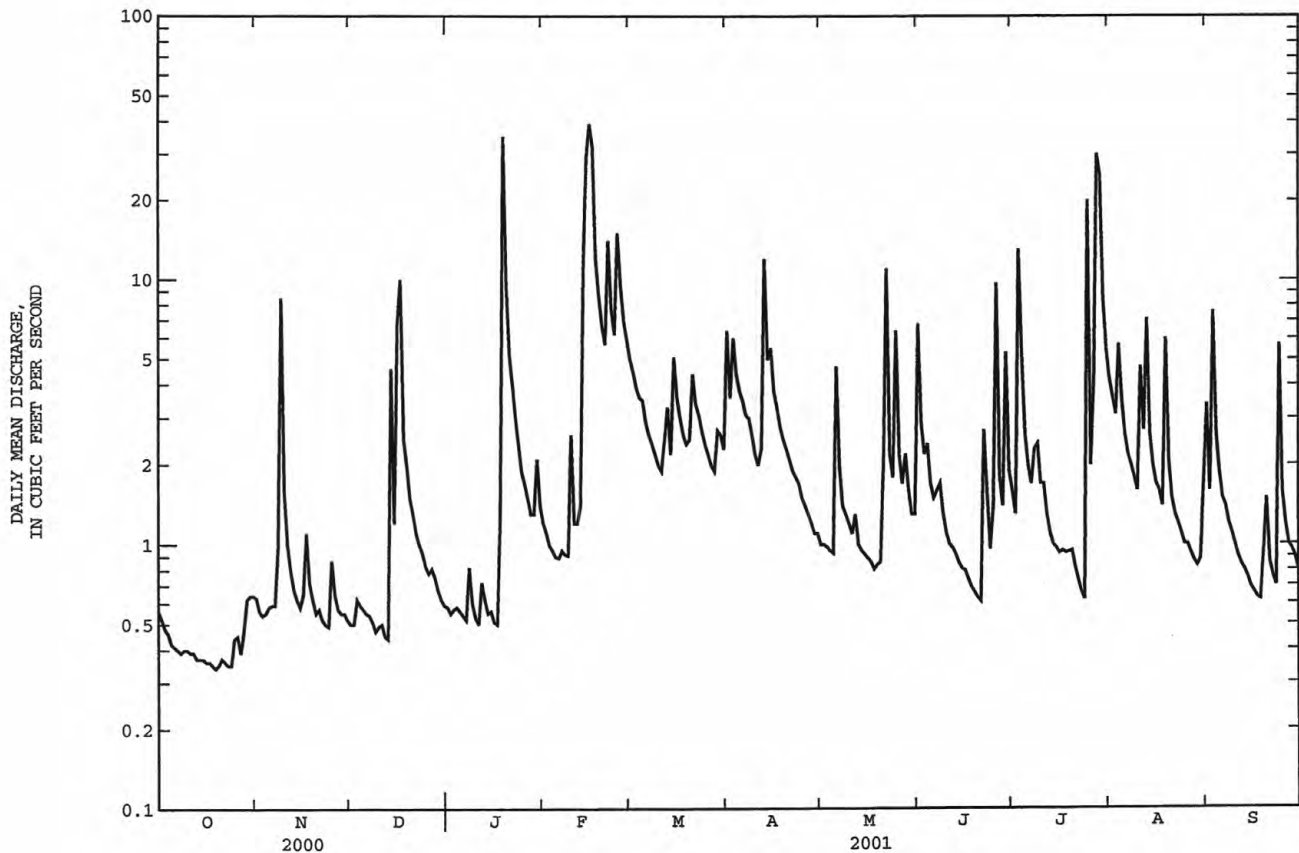
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1989 - 2001

ANNUAL TOTAL	834.29	959.40	
ANNUAL MEAN	2.28	2.63	5.36
HIGHEST ANNUAL MEAN			10.1
LOWEST ANNUAL MEAN			2.33
HIGHEST DAILY MEAN	36	Apr 4	223
LOWEST DAILY MEAN	.34	Oct 19	.31
ANNUAL SEVEN-DAY MINIMUM	.35	Oct 18	.34
MAXIMUM PEAK FLOW		259	996
MAXIMUM PEAK STAGE		3.09	5.39
INSTANTANEOUS LOW FLOW		a.31	.28
ANNUAL RUNOFF (CFSM)	.49	.56	1.15
ANNUAL RUNOFF (INCHES)	6.65	7.64	15.61
10 PERCENT EXCEEDS	4.7	5.7	11
50 PERCENT EXCEEDS	1.1	1.3	2.5
90 PERCENT EXCEEDS	.47	.50	.71

a Also occurred on Oct. 20, 24.



## TENNESSEE RIVER BASIN

03497300 LITTLE RIVER ABOVE TOWNSEND, TN

LOCATION.--Lat 35°39'52", long 83°42'41", Blount County, Hydrologic Unit 06010201, in Great Smoky Mountains National Park, on left bank along Tennessee Highway 73, 0.3 mi upstream from Rush Branch, 0.4 mi southeast of Park entrance, 2.2 mi southeast of Townsend, and at mile 35.3.

DRAINAGE AREA.--106 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Data logger and crest-stage gage. Datum of gage is 1,106.92 ft above sea level.

REMARKS.--Records good except for periods of estimated record, which are fair. 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 3,100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan 19	1645	*2,500	*5.10	No peak greater than base discharge.			

Minimum discharge, 36 ft<sup>3</sup>/s, Oct. 31, Nov. 1, 2, 3, 4, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	37	91	114	257	396	329	141	192	257	271	230
2	79	37	88	91	237	345	300	136	218	169	250	268
3	72	37	89	83	215	323	e350	130	191	150	208	336
4	66	39	83	98	201	340	e475	120	167	153	200	313
5	61	44	79	93	187	346	416	114	147	168	185	238
6	58	39	75	85	172	303	375	120	144	133	197	193
7	60	38	73	80	161	277	332	140	163	115	165	162
8	55	97	70	111	151	259	294	113	347	107	159	140
9	52	754	69	92	144	250	265	113	349	233	172	128
10	51	488	68	98	229	230	243	113	259	168	240	113
11	50	239	68	97	176	219	224	103	212	143	288	106
12	48	177	78	126	174	243	219	113	180	124	329	97
13	47	145	74	123	177	435	797	110	164	110	383	91
14	45	124	174	122	322	342	610	95	204	99	323	87
15	44	107	140	148	509	441	511	89	215	90	229	83
16	43	102	186	151	903	480	451	86	184	84	186	77
17	43	168	715	141	1750	420	395	82	157	79	165	73
18	43	126	393	298	943	358	345	78	137	74	147	70
19	42	115	304	1760	633	313	309	77	122	72	129	71
20	41	108	236	1320	481	303	278	90	112	76	124	115
21	41	97	219	718	425	301	254	77	104	77	108	86
22	41	87	180	490	564	298	233	92	e120	87	97	70
23	41	89	184	375	560	291	217	134	e175	67	89	65
24	41	87	155	313	487	283	210	93	e130	61	93	239
25	41	123	134	265	744	272	197	570	e106	76	96	343
26	41	138	126	231	752	254	178	300	115	79	100	193
27	41	118	122	215	592	237	167	209	125	64	100	152
28	42	109	119	191	482	222	159	190	112	59	124	129
29	40	103	109	180	---	234	149	179	100	846	90	114
30	39	97	101	346	---	267	144	148	173	746	173	103
31	38	---	93	282	---	330	---	135	---	352	174	---
TOTAL	1535	4069	4695	8837	12628	9612	9426	4290	5124	5118	5594	4485
MEAN	49.5	136	151	285	451	310	314	138	171	165	180	150
MAX	89	754	715	1760	1750	480	797	570	349	846	383	343
MIN	38	37	68	80	144	219	144	77	100	59	89	65
CFSM	.47	1.28	1.43	2.69	4.25	2.93	2.96	1.31	1.61	1.56	1.70	1.41
IN.	.54	1.43	1.65	3.10	4.43	3.37	3.31	1.51	1.80	1.80	1.96	1.57

e Estimated

TENNESSEE RIVER BASIN

151

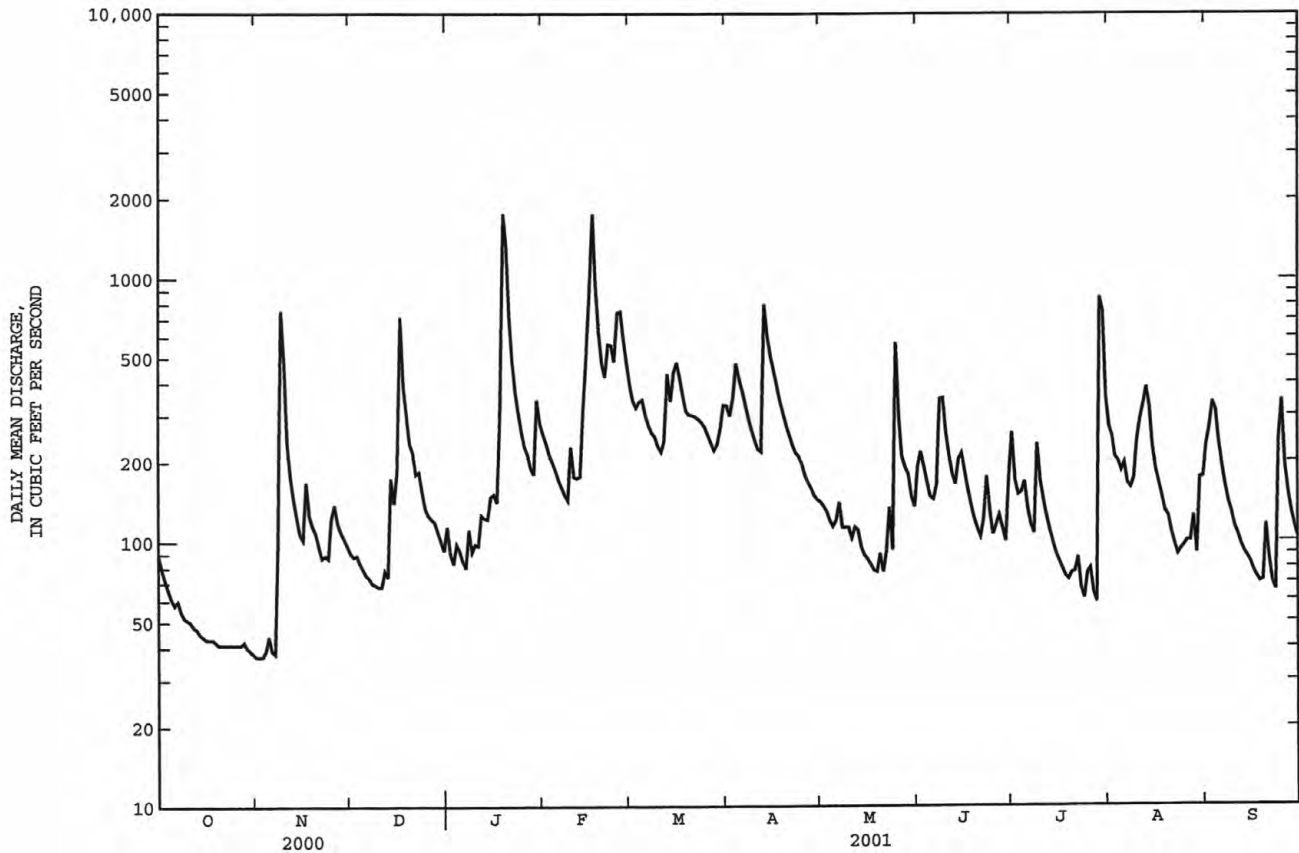
03497300 LITTLE RIVER ABOVE TOWNSEND, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	123	206	333	412	451	515	391	280	224	195	168	117
MAX	373	436	725	796	857	1195	818	774	648	815	530	492
(WY)	1973	1967	1992	1996	1990	1994	1998	1984	1989	1971	1966	1989
MIN	28.9	36.0	58.8	72.7	191	185	141	124	50.4	63.8	40.5	31.9
(WY)	1988	1988	1966	1981	1978	1988	1995	1986	1988	1993	1987	1998

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1964 - 2001
ANNUAL TOTAL	78385	75413	
ANNUAL MEAN	214	207	284
HIGHEST ANNUAL MEAN			460
LOWEST ANNUAL MEAN			141
HIGHEST DAILY MEAN	1980	Apr 4	9000
LOWEST DAILY MEAN	31	Sep 20	22
ANNUAL SEVEN-DAY MINIMUM	33	Sep 14	23
MAXIMUM PEAK FLOW		2500	27100
MAXIMUM PEAK STAGE		5.10	a15.75
INSTANTANEOUS LOW FLOW		b36	c21
ANNUAL RUNOFF (CFSM)	2.02	1.95	2.68
ANNUAL RUNOFF (INCHES)	27.51	26.47	36.38
10 PERCENT EXCEEDS	473	394	556
50 PERCENT EXCEEDS	142	147	194
90 PERCENT EXCEEDS	44	63	60

- a From flood marks in gage house.  
b Also occurred on Nov. 1, 2, 3, 4, 7.  
c Results of freezee-up.



## TENNESSEE RIVER BASIN

03498500 LITTLE RIVER NEAR MARYVILLE, TN

LOCATION.--Lat 35°47'10", long 83°53'04", Blount County, Hydrologic Unit 06010201, on left bank 200 ft above bridge on U.S. Highway 411, 0.8 mi downstream from Crooked Creek, 5.0 mi east of Maryville, and at mile 17.3.

DRAINAGE AREA.--269 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Data-collection platform and crest-stage gage. Datum of gage is 850.00 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Diurnal fluctuations of flow caused by small mills above station. The town of Maryville diverted an average of about 4.0 ft<sup>3</sup>/s (2.6 MGD) for municipal supply 100 ft upstream from gage. 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 Feb. 25, 1875, reached a stage of 31 ft, discharge, 50,000 ft<sup>3</sup>/s, and flood of April 1, 1896, reached a stage of 26 ft, discharge, 36,000 ft<sup>3</sup>/s, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 17	0745	*6,700	*12.81	No other peak greater than base discharge.			

Minimum discharge, 59 ft<sup>3</sup>/s, Nov. 1, 2, 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	61	125	120	414	788	525	294	237	394	365	273
2	113	61	121	133	385	695	499	289	350	285	355	366
3	104	61	125	106	357	639	587	276	302	241	282	537
4	97	62	123	111	336	664	784	260	272	245	271	543
5	90	64	116	130	318	820	717	248	242	269	273	363
6	85	66	110	124	302	729	648	243	248	230	315	289
7	84	64	107	116	281	636	578	287	361	203	246	245
8	85	139	104	138	265	565	508	254	479	190	238	215
9	79	1030	102	155	252	521	455	248	590	298	224	195
10	78	1010	100	113	455	466	417	245	413	269	292	177
11	77	347	99	126	373	431	390	231	338	227	517	169
12	76	244	99	160	342	427	377	226	294	202	609	158
13	74	196	109	202	335	701	2450	229	258	184	602	149
14	73	170	188	183	856	606	1890	211	265	169	675	143
15	71	150	210	192	1550	712	1200	196	321	159	386	138
16	70	141	200	200	2540	819	1020	182	280	149	295	133
17	69	237	1070	188	5160	731	834	175	250	143	257	125
18	67	209	609	333	2230	641	725	168	223	135	235	122
19	66	170	430	4540	1270	557	642	164	204	133	208	127
20	66	160	330	3570	928	519	570	175	191	139	223	167
21	65	144	277	1510	825	551	510	170	180	145	182	164
22	65	133	245	932	1570	523	460	167	227	149	164	130
23	65	129	195	742	1340	498	421	224	348	135	153	119
24	65	126	207	620	991	476	403	187	234	123	148	246
25	65	140	183	520	1810	466	391	609	195	125	163	464
26	66	176	167	440	1840	441	360	483	211	146	156	272
27	65	156	163	405	1180	405	340	325	215	129	161	212
28	68	144	161	366	932	379	324	304	207	119	174	181
29	66	137	152	341	---	384	308	301	230	918	154	164
30	63	132	144	512	---	471	297	250	261	1790	235	152
31	62	---	130	474	---	499	---	227	---	560	272	---
TOTAL	2365	6059	6501	17802	29437	17760	19630	7848	8426	8603	8830	6738
MEAN	76.3	202	210	574	1051	573	654	253	281	278	285	225
MAX	126	1030	1070	4540	5160	820	2450	609	590	1790	675	543
MIN	62	61	99	106	252	379	297	164	180	119	148	119
CFSM	.28	.75	.78	2.13	3.91	2.13	2.43	.94	1.04	1.03	1.06	.83
IN.	.33	.84	.90	2.46	4.07	2.46	2.71	1.09	1.17	1.19	1.22	.93

## 03498500 LITTLE RIVER NEAR MARYVILLE, TN--Continued

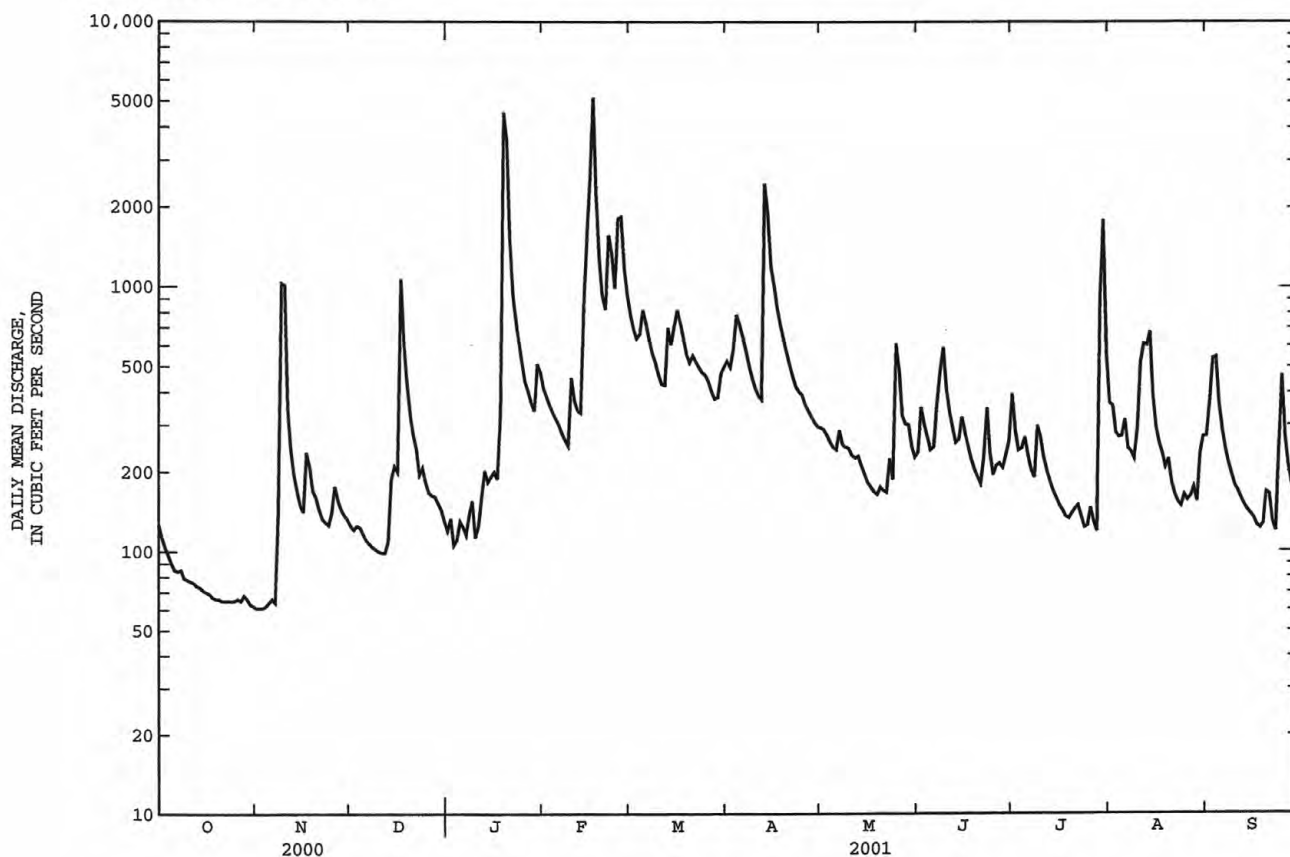
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	195	337	610	797	944	1003	759	495	380	322	252	177
MAX	830	1160	1679	1792	2254	2517	1701	1782	1261	1391	867	1019
(WY)	1973	1958	1962	1974	1957	1994	1994	1984	1989	1971	1971	1989
MIN	50.7	65.4	103	121	308	385	224	208	86.1	100	78.1	55.6
(WY)	1988	1988	1966	1981	1954	1988	1986	1986	1988	1952	1987	1954

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1951 - 2001	
ANNUAL TOTAL	136094		139999			
ANNUAL MEAN	372		384		521	
HIGHEST ANNUAL MEAN					862	
LOWEST ANNUAL MEAN					220	
HIGHEST DAILY MEAN	6740		5160		23100	
LOWEST DAILY MEAN	53		61		43	
ANNUAL SEVEN-DAY MINIMUM	56		62		45	
MAXIMUM PEAK FLOW			6700		a42100	
MAXIMUM PEAK STAGE			12.81		27.95	
INSTANTANEOUS LOW FLOW			b59		32	
ANNUAL RUNOFF (CFSM)	1.38		1.43		1.94	
ANNUAL RUNOFF (INCHES)	18.82		19.36		26.30	
10 PERCENT EXCEEDS	764		727		1030	
50 PERCENT EXCEEDS	228		241		314	
90 PERCENT EXCEEDS	71		99		100	

a From rating curve extended above 14,800 ft<sup>3</sup>/s on the basis of a contracted opening measurement and road overflow computations.

b Also occurred on Nov. 2, 3.





## TENNESSEE RIVER BASIN

03498850 LITTLE RIVER NEAR ALCOA, TN

LOCATION.--Lat 35°48'32", long 83°55'36", Blount County, Hydrologic Unit 06010201, at Singleton Bend on left bank, 3.0 mi northeast of Alcoa, and at mile 9.7.

DRAINAGE AREA.--300 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is 814.22 ft above sea level.

REMARKS.--Records good. Diurnal fluctuations at low flow caused by small mills above station. The town of Maryville diverts an average of about 4.0 ft<sup>3</sup>/s (2.6 MGD) for municipal supply 7.6 mi upstream from gage and the town of Alcoa at the gage diverts about 17.2 ft<sup>3</sup>/s (11.1 MGD). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 7,450, Jan. 19, gage height 12.15 ft; minimum 39 ft<sup>3</sup>/s, Nov. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	53	120	136	444	828	519	262	210	372	418	288
2	117	52	116	143	384	710	508	258	334	268	400	397
3	106	53	131	125	338	654	551	245	291	214	311	566
4	99	54	148	112	325	665	739	229	262	217	290	621
5	92	69	125	141	304	793	667	222	226	236	273	433
6	86	54	106	136	293	725	608	216	224	207	348	339
7	83	59	127	126	275	638	562	252	355	174	259	283
8	84	114	108	140	261	585	514	228	405	159	259	246
9	78	707	93	183	254	549	472	219	618	238	233	218
10	76	1270	110	138	453	515	436	214	439	256	242	197
11	75	449	116	128	438	475	399	203	334	200	580	184
12	74	295	116	164	364	460	377	190	279	173	618	169
13	72	237	118	234	352	654	2130	207	238	151	583	155
14	71	205	163	216	774	600	1980	183	239	134	738	147
15	68	176	280	219	1460	655	1140	169	292	121	445	140
16	66	159	205	232	2510	813	1000	160	255	108	324	135
17	65	245	914	220	5290	711	790	152	226	104	268	125
18	63	266	678	247	2540	618	686	144	196	100	246	119
19	61	219	513	4610	1360	561	605	140	175	95	211	126
20	60	190	409	4180	998	523	553	146	159	96	268	169
21	60	162	333	1550	855	539	508	155	146	108	190	183
22	59	146	309	942	1540	525	464	148	181	118	162	134
23	59	132	243	718	1430	513	425	196	325	106	146	117
24	60	128	241	595	1070	492	396	175	215	87	141	195
25	59	145	218	523	1690	477	385	499	166	84	156	513
26	61	193	196	476	2000	461	349	539	174	107	147	325
27	51	188	190	434	1230	421	324	327	179	106	148	238
28	51	168	187	375	981	392	303	292	180	92	157	198
29	59	167	179	342	---	377	285	297	182	634	150	172
30	62	139	166	458	---	481	265	241	227	1990	200	154
31	54	---	149	499	---	495	---	211	---	633	321	---
TOTAL	2264	6494	7107	18742	30213	17905	18940	7119	7732	7688	9232	7286
MEAN	73.0	216	229	605	1079	578	631	230	258	248	298	243
MAX	133	1270	914	4610	5290	828	2130	539	618	1990	738	621
MIN	51	52	93	112	254	377	265	140	146	84	141	117

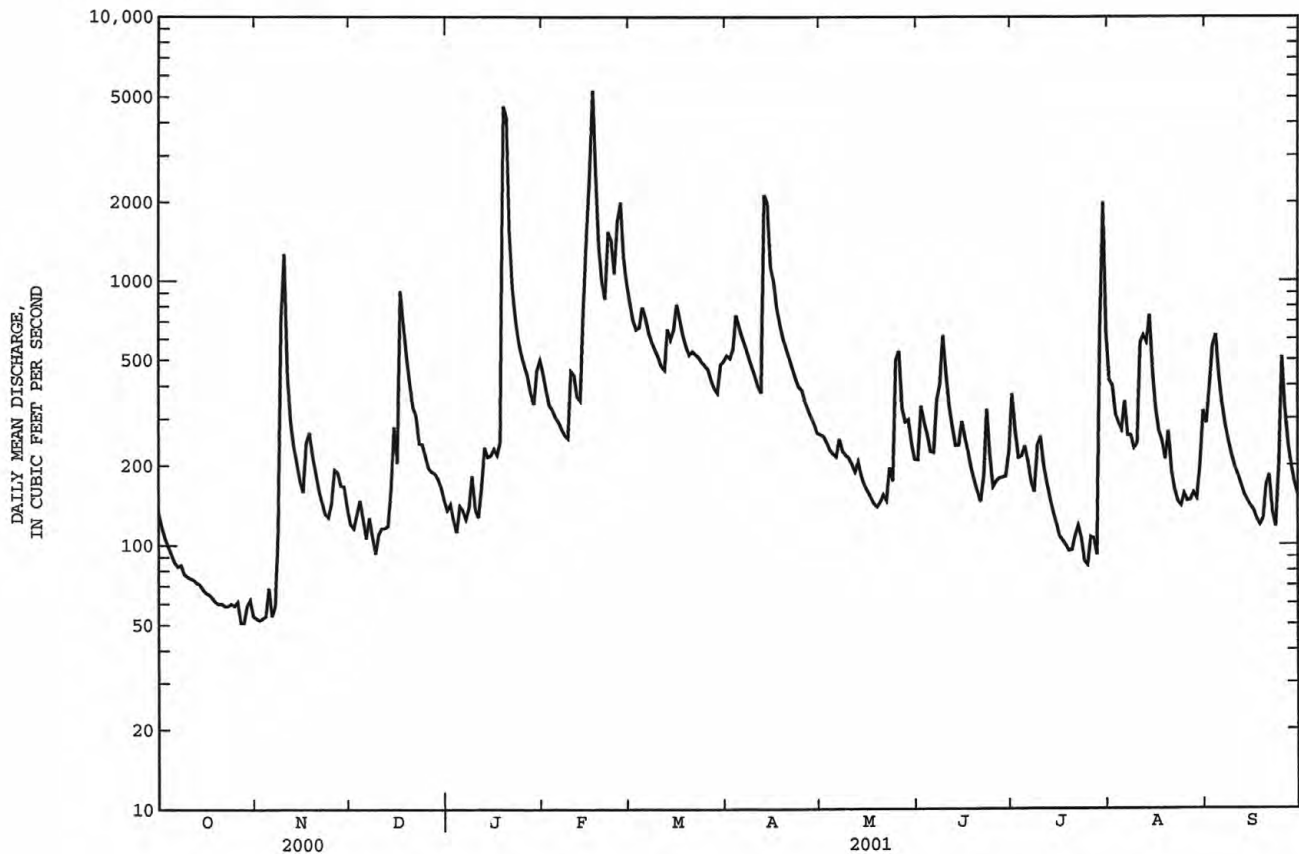
03498850 LITTLE RIVER NEAR ALCOA, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	182	302	592	878	1003	1071	796	525	476	330	231	209
MAX	779	783	1624	1410	1980	2764	2008	989	1335	782	586	1123
(WY)	1990	1990	1992	1996	1994	1994	1994	1989	1989	1999	1994	1989
MIN	43.4	60.6	176	432	435	403	295	199	73.6	106	69.0	59.8
(WY)	1988	1988	1988	1988	1988	1988	1995	1988	1988	1988	1987	1998

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1987 - 2001
ANNUAL TOTAL	138111	140722	
ANNUAL MEAN	377	386	
HIGHEST ANNUAL MEAN			547
LOWEST ANNUAL MEAN			953
HIGHEST DAILY MEAN			220
LOWEST DAILY MEAN	6380	Apr 4	5290
ANNUAL SEVEN-DAY MINIMUM	42	Sep 19	a51
MAXIMUM PEAK FLOW	45	Sep 14	55
MAXIMUM PEAK STAGE			7450
INSTANTANEOUS LOW FLOW			12.15
10 PERCENT EXCEEDS	772		708
50 PERCENT EXCEEDS	232		233
90 PERCENT EXCEEDS	67		92

a Also occurred Oct. 28.  
b Also occurred Nov. 6.  
e Estimated



## TENNESSEE RIVER BASIN

03528000 CLINCH RIVER ABOVE TAZEWEILL, TN

LOCATION.--Lat 36°25'30", long 83°23'54", Claiborne County, Hydrologic Unit 06010205, on right bank 0.4 mi upstream from Grissom Island, 4.6 mi downstream from Big War Creek, 10 mi east of Tazewell, and at mile 159.8.

DRAINAGE AREA.--1,474 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1918 to current year. Published as "near Lone Mountain" October 1918 to September 1927; as "near Tazewell" August 1927 to December 1936; and as "above Tazewell" July 1935 to current year. Prior to April 1919, monthly discharge only, published in WSP 1306. Gage-height record "near Tazewell" January 1937 to July 1941.

REVISED RECORDS.--WSP 803: Drainage area at site "near Tazewell". WSP 1306: Drainage area at site "near Lone Mountain". WSP 1336: 1928.

GAGE.--Data collection platform. Datum of gage is 1,060.7 ft above sea level. April 1, 1919, to Sept. 30, 1927, nonrecording gage on railroad bridge 23.3 mi downstream at datum 102.7 ft lower. Aug. 8, 1927, to July 16, 1941, water-stage recorder at site 8.0 mi downstream at datum 47.2 ft lower. Water-stage recorder at present site and datum since July 29, 1935.

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 February 1862 reached a stage of about 24 ft, present site and datum, from information by local resident, discharge, about 66,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 14,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 18	0200	14,500	9.74	Jul 30	1030	*22,200	*12.56

Minimum discharge, 161 ft<sup>3</sup>/s, Jan. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	394	203	210	334	694	2230	3290	686	1510	683	7260	576
2	332	193	206	312	675	1870	3270	672	1580	607	3730	742
3	295	188	216	317	670	1630	3710	679	1640	546	2550	1160
4	271	185	215	312	618	1440	4930	659	1470	627	2330	1000
5	253	181	209	322	572	1330	4860	613	1380	1270	3520	806
6	239	181	207	287	541	1550	3840	588	1420	1880	2970	776
7	226	183	204	283	521	2820	3130	669	1350	1600	2330	660
8	213	198	201	280	499	2230	2610	655	1400	1410	1740	568
9	203	237	196	273	478	1850	2220	607	3660	1100	1400	503
10	199	372	193	276	505	1670	1930	575	3580	2660	1190	456
11	200	362	193	305	524	1650	1700	546	2450	3040	1230	429
12	201	533	193	258	523	1550	1530	522	1800	1800	1170	401
13	198	593	194	255	516	1530	2040	494	1420	1310	1120	376
14	194	454	282	269	845	1870	3380	473	1170	998	1330	359
15	199	363	341	283	3770	2440	2930	454	1030	809	1220	375
16	199	312	412	291	5150	3230	2400	433	908	691	992	346
17	197	293	1140	299	11600	3620	1980	414	798	610	832	322
18	196	275	1890	342	13200	3180	1700	443	705	549	716	318
19	189	261	1550	1990	7170	2620	1510	908	634	521	677	319
20	181	242	1130	5770	4010	2200	1370	1360	579	507	687	326
21	180	233	870	5380	2880	2070	1270	1180	534	518	626	335
22	182	225	659	3510	2720	2830	1170	4130	518	506	579	356
23	185	219	450	2290	3030	3410	1090	8870	586	474	532	367
24	189	215	477	1670	2550	3550	1020	7370	1080	428	511	494
25	199	217	393	1320	2910	3010	953	4220	1080	397	506	498
26	214	215	445	1090	4370	2510	903	3310	978	423	539	439
27	214	217	381	923	3750	2100	846	2970	912	421	544	456
28	233	217	382	806	2820	1800	796	2520	927	1820	516	461
29	212	220	351	719	---	1590	756	2180	910	6760	635	423
30	247	217	343	702	---	1580	711	1820	780	21100	594	368
31	225	---	321	692	---	2300	---	1680	---	17200	553	---
TOTAL	6859	8004	14454	32160	78111	69260	63845	52700	38789	73265	45129	15015
MEAN	221	267	466	1037	2790	2234	2128	1700	1293	2363	1456	500
MAX	394	593	1890	5770	13200	3620	4930	8870	3660	21100	7260	1160
MIN	180	181	193	255	478	1330	711	414	518	397	506	318
MED	201	220	341	322	1700	2100	1820	672	1080	691	992	434
CFSM	.15	.18	.32	.70	1.89	1.52	1.44	1.15	.88	1.60	.99	.34
IN.	.17	.20	.36	.81	1.97	1.75	1.61	1.33	.98	1.85	1.14	.38

TENNESSEE RIVER BASIN

157

03528000 CLINCH RIVER ABOVE TAZEWEILL, TN--Continued

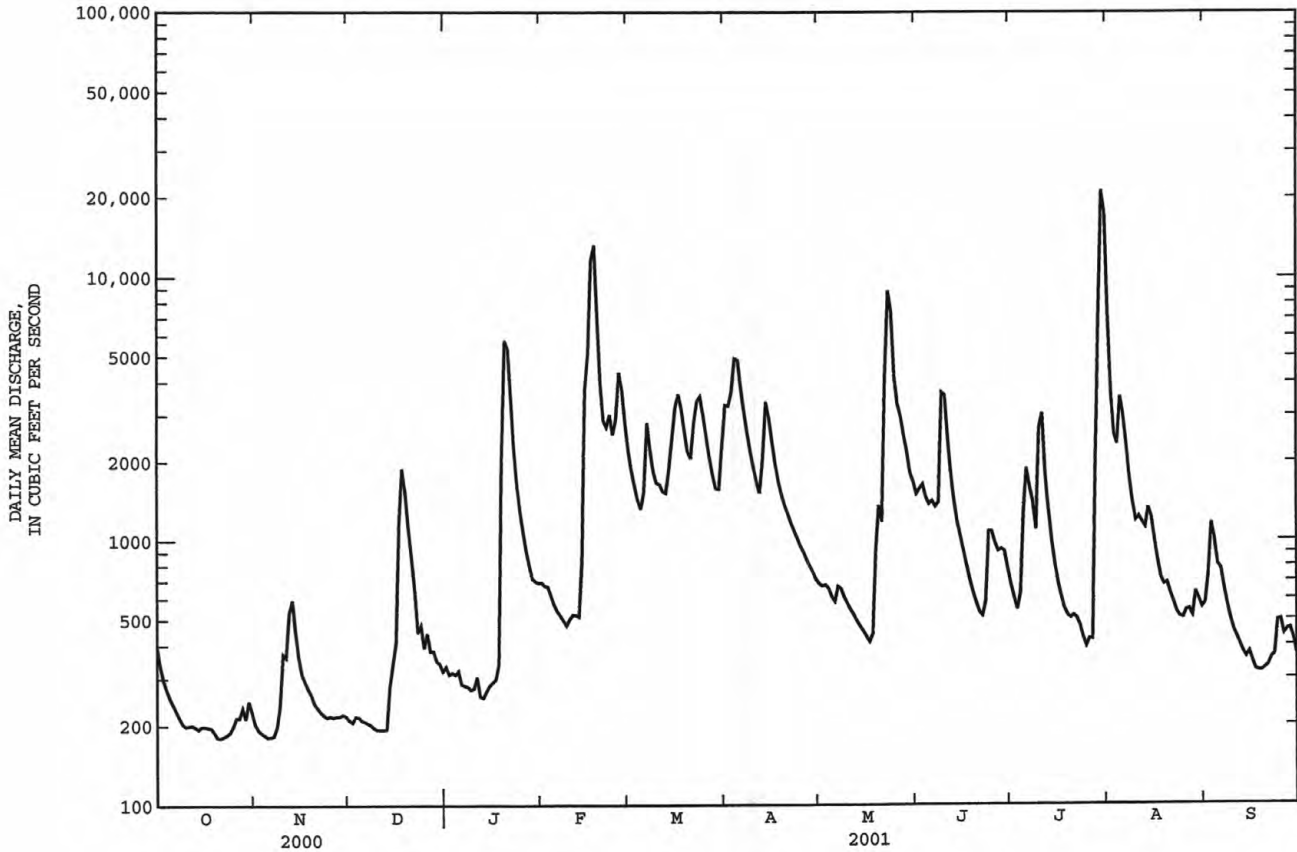
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	647	1087	2301	3423	4101	4262	3083	2288	1281	972	866	527
MAX	2871	4794	9107	9500	9426	11950	8860	6382	3865	3251	4411	2939
(WY)	1990	1978	1927	1937	1957	1963	1977	1929	1989	1938	1942	1989
MIN	145	159	217	285	572	990	711	547	301	239	169	136
(WY)	1964	1940	1940	1940	1941	1988	1986	1941	1988	1988	1925	1955

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1919 - 2001

ANNUAL TOTAL	398766	497591	
ANNUAL MEAN	1090	1363	2061
HIGHEST ANNUAL MEAN			3269
LOWEST ANNUAL MEAN			850
HIGHEST DAILY MEAN	10500	Apr 5	21100
LOWEST DAILY MEAN	180	Oct 21	180
ANNUAL SEVEN-DAY MINIMUM	186	Oct 18	186
MAXIMUM PEAK FLOW			22200
MAXIMUM PEAK STAGE			12.56
INSTANTANEOUS LOW FLOW			161
ANNUAL RUNOFF (CFSM)	.74	.92	1.40
ANNUAL RUNOFF (INCHES)	10.06	12.56	19.00
10 PERCENT EXCEEDS	2610	3150	4620
50 PERCENT EXCEEDS	607	659	1100
90 PERCENT EXCEEDS	211	211	265

a From floodmarks.



## TENNESSEE RIVER BASIN

03532000 POWELL RIVER NEAR ARTHUR, TN

LOCATION.--Lat 36°32'30", long 83°37'49", Claiborne County, Hydrologic Unit 06010206, on left bank, 500 ft upstream from bridge on U.S. Highway 25E, 2.3 mi east of Arthur, 2.4 mi downstream from Indian Creek, and at mile 65.4.

DRAINAGE AREA.--685 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1919 to February 1982, October 1996 to current year. Gage-height records collected at same site December 1892 to August 1893, September 1904 to March 1925 are in reports of U.S. Weather Bureau (published as "near Tazewell").

REVISED RECORDS.--WSP 1336: 1920, 1921(M), 1923.

GAGE.--Water-stage recorder. Datum of gage is 1,043.84 ft above sea level, Tennessee River Survey datum. Prior to July 23, 1927, nonrecording gage, and July 23, 1927, to Sept. 30, 1970, water-stage recorder, at same site at datum 2.00 ft higher.

REMARKS.--Records good. Periodic observation of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1826 reached a stage of 29.5 ft present datum, discharge, 34,000 ft<sup>3</sup>/s, and flood of Jan. 29, 1918, reached a stage of 29.2 ft present datum, discharge, 33,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 18	0915	*9,380	*13.84	No other peak greater than base discharge.			

Minimum discharge, 61 ft<sup>3</sup>/s, Oct. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	104	96	157	433	1590	880	414	514	224	1550	299
2	106	100	93	171	419	1310	919	484	479	215	1070	388
3	96	94	99	132	370	1120	1260	463	505	200	772	524
4	91	92	107	156	340	1000	1960	420	541	242	635	497
5	89	90	104	152	319	929	2470	394	560	396	595	388
6	89	88	98	152	307	873	1870	383	614	639	849	324
7	82	93	95	144	296	837	1500	401	624	641	681	284
8	78	101	93	147	281	769	1260	434	556	517	518	250
9	78	126	92	145	266	716	1090	656	526	556	426	229
10	77	191	90	126	320	673	962	546	524	569	393	213
11	80	190	89	130	373	643	861	501	482	667	421	202
12	83	249	88	151	382	613	788	446	420	497	850	190
13	84	281	85	148	368	645	1300	401	376	384	1170	181
14	85	196	242	143	521	723	2010	373	339	317	1980	171
15	86	150	385	146	2230	1020	1850	348	333	265	1200	161
16	87	126	420	145	4300	1430	1530	329	297	229	804	158
17	90	127	789	142	8380	1690	1290	307	300	209	617	158
18	89	122	1180	153	8370	1520	1080	309	267	195	497	154
19	85	114	1140	1320	3900	1270	953	354	244	188	442	154
20	80	109	692	4360	2350	1080	859	404	226	201	425	177
21	81	105	513	4060	1710	1010	785	424	211	280	364	171
22	78	99	395	1950	1780	1270	714	875	241	221	325	172
23	83	94	295	1210	2490	1790	662	3030	277	214	298	215
24	89	92	259	894	2450	1770	616	4170	239	192	276	297
25	90	96	248	722	2220	1540	586	1880	308	172	274	498
26	92	99	211	608	2580	1290	556	1280	300	174	273	683
27	94	96	231	521	2490	1080	519	988	260	185	274	540
28	100	97	215	445	1980	933	484	829	314	403	249	389
29	99	99	194	406	---	838	454	740	301	809	250	313
30	106	98	184	422	---	805	434	672	257	5630	352	271
31	112	---	169	435	---	838	---	588	---	3990	302	---
TOTAL	2778	3718	8991	19993	52225	33615	32502	23843	11435	19621	19132	8651
MEAN	89.6	124	290	645	1865	1084	1083	769	381	633	617	288
MAX	119	281	1180	4360	8380	1790	2470	4170	624	5630	1980	683
MIN	77	88	85	126	266	613	434	307	211	172	249	154
CFSM	.13	.18	.42	.94	2.72	1.58	1.58	1.12	.56	.92	.90	.42
IN.	.15	.20	.49	1.09	2.84	1.83	1.77	1.29	.62	1.07	1.04	.47



TENNESSEE RIVER BASIN

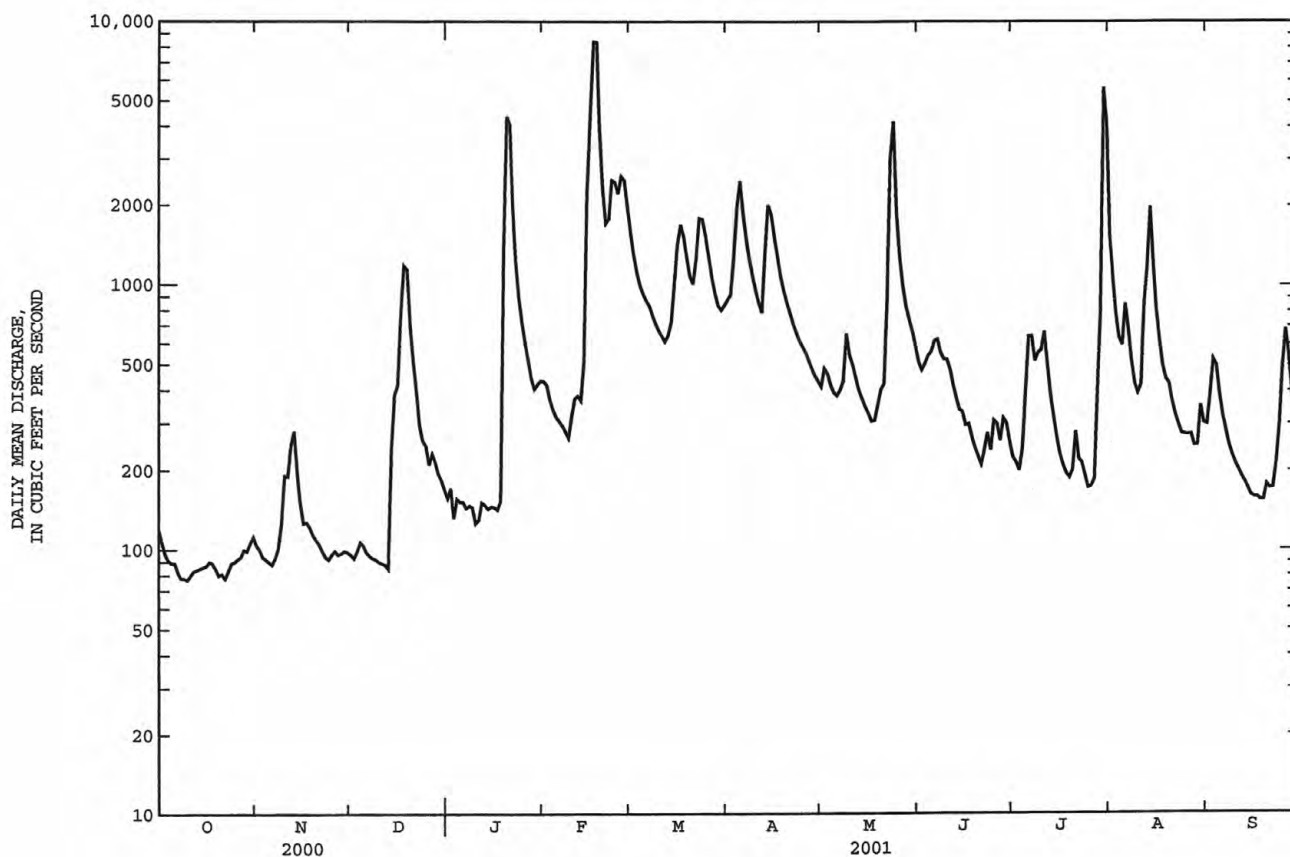
159

03532000 POWELL RIVER NEAR ARTHUR, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	317	657	1317	1982	2178	2377	1719	1125	667	554	455	249
MAX	1648	3045	5557	5812	4887	6596	5224	4220	2495	1917	2030	1081
(WY)	1978	1974	1927	1937	1956	1963	1977	1929	1928	1941	1942	1928
MIN	75.5	96.4	117	143	268	887	477	268	168	137	117	79.7
(WY)	1955	1940	1966	1940	1941	1931	1942	1941	1936	1944	1925	1955

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1920 - 2001	
ANNUAL TOTAL	212501		236504			
ANNUAL MEAN	581		648		1126	
HIGHEST ANNUAL MEAN					1858	
LOWEST ANNUAL MEAN					486	
HIGHEST DAILY MEAN	8040		8380		50300	
LOWEST DAILY MEAN	77		77		60	
ANNUAL SEVEN-DAY MINIMUM	80		80		65	
MAXIMUM PEAK FLOW			9380		59500	
MAXIMUM PEAK STAGE			13.84		38.96	
INSTANTANEOUS LOW FLOW			61		47	
ANNUAL RUNOFF (CFSM)	.85		.95		1.64	
ANNUAL RUNOFF (INCHES)	11.54		12.84		22.34	
10 PERCENT EXCEEDS	1280		1510		2520	
50 PERCENT EXCEEDS	319		368		579	
90 PERCENT EXCEEDS	93		94		136	



## TENNESSEE RIVER BASIN

03535400 BEAVER CREEK AT SOLWAY, TN

LOCATION.--Lat 35°57'51", long 84°01'41", Knox County, Hydrologic Unit 06010207, at bridge on Solway Road, 1.1 mi southwest of Solway and 5.9 mi southeast of intersection of State Highways 95 and 62 in Oak Ridge.

DRAINAGE AREA.--86.8 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1961 to September 1964, low-flow partial-record site, August 1998 to April 1999, flood crest-stage partial-record site, April 1999 to September 2000.

GAGE.--Data logger.

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 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 17	1945	*2,050	*10.90	No peak greater than base discharge.			

Minimum discharge, 16 ft<sup>3</sup>/s, Oct. 8, 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	25	24	30	89	206	82	47	38	51	94	61
2	23	25	25	30	75	178	78	47	61	43	70	64
3	23	25	28	28	64	166	77	47	66	35	60	112
4	22	25	36	28	58	155	79	43	56	32	53	162
5	22	24	35	28	55	143	75	40	45	37	49	96
6	21	22	32	27	52	127	70	39	41	41	45	64
7	20	23	30	27	49	111	65	45	40	37	41	54
8	19	33	28	28	46	102	63	58	56	33	38	46
9	19	108	28	29	44	94	62	47	50	31	36	42
10	19	148	26	28	67	87	61	44	44	32	34	40
11	20	74	26	26	74	80	59	41	37	29	33	37
12	20	42	25	27	60	82	59	39	35	27	57	35
13	20	37	25	29	60	116	103	37	32	25	53	35
14	20	34	82	29	158	124	176	35	35	23	41	34
15	20	30	97	28	447	129	154	35	33	22	37	33
16	21	21	78	27	1100	189	181	34	30	23	35	32
17	23	37	194	27	1950	165	139	33	28	23	33	32
18	18	41	159	31	1580	129	120	33	27	25	31	32
19	18	35	96	559	662	113	105	31	26	27	30	35
20	17	33	74	759	392	105	93	32	26	23	37	50
21	20	28	61	533	284	104	85	34	25	26	34	51
22	20	24	53	206	468	100	79	50	27	80	29	39
23	22	26	47	154	581	91	73	109	42	29	29	34
24	22	25	43	129	471	82	68	69	39	37	29	105
25	22	28	39	110	373	73	62	51	35	67	33	164
26	20	33	36	95	425	68	58	43	44	44	31	66
27	18	31	36	83	343	64	56	39	33	30	29	46
28	21	28	36	76	250	62	52	37	48	35	28	37
29	22	26	35	68	---	67	49	38	49	289	27	31
30	21	25	34	99	---	94	48	36	54	576	107	31
31	23	---	32	113	---	92	---	35	---	261	68	---
TOTAL	639	1116	1600	3491	10277	3498	2531	1348	1202	2093	1351	1700
MEAN	20.6	37.2	51.6	113	367	113	84.4	43.5	40.1	67.5	43.6	56.7
MAX	23	148	194	759	1950	206	181	109	66	576	107	164
MIN	17	21	24	26	44	62	48	31	25	22	27	31
CFSM	.24	.43	.59	1.30	4.23	1.30	.97	.50	.46	.78	.50	.65
IN.	.27	.48	.69	1.50	4.40	1.50	1.08	.58	.52	.90	.58	.73

TENNESSEE RIVER BASIN

161

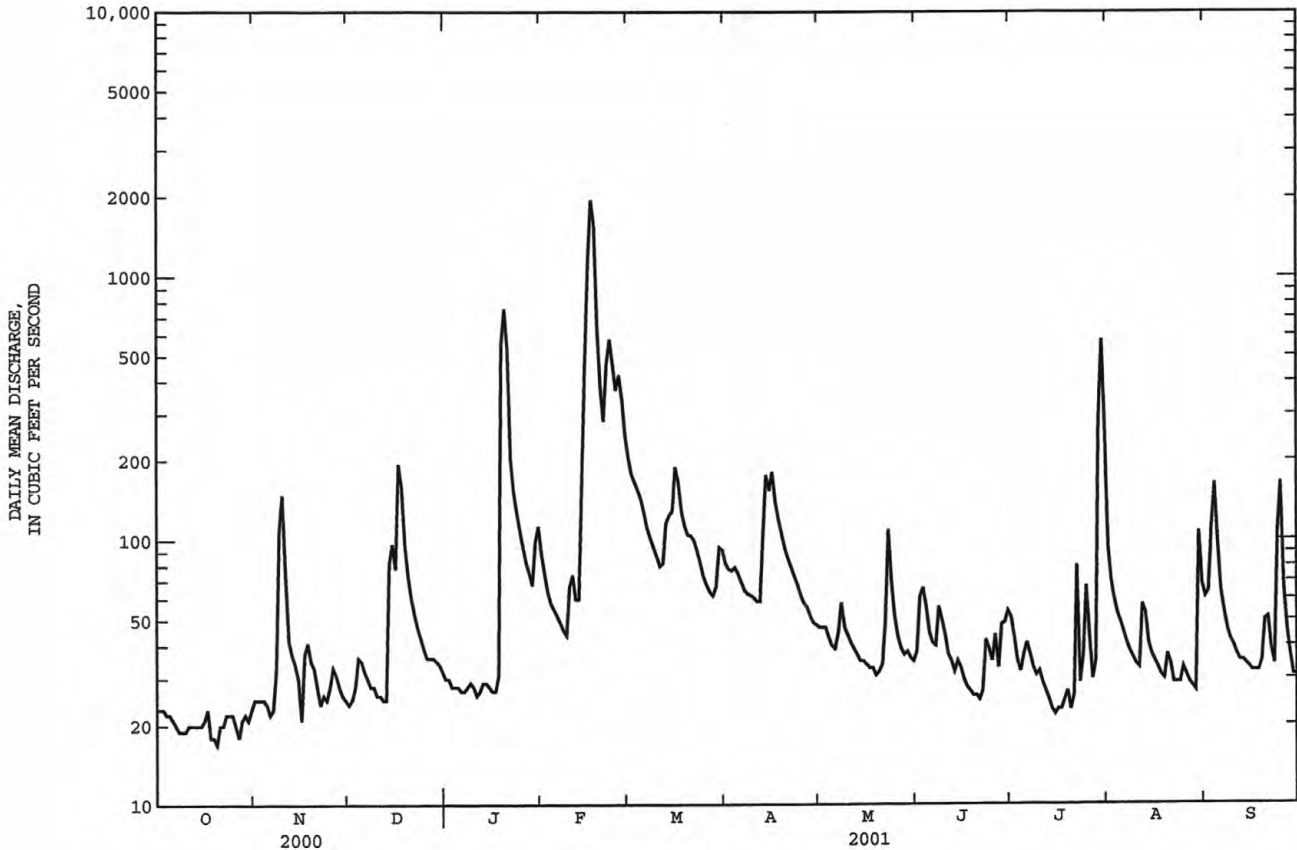
03535400 BEAVER CREEK AT SOLWAY, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.6	36.6	43.2	105	249	139	142	114	92.8	111	37.3	36.5
MAX	28.5	37.2	51.6	113	367	165	245	168	154	227	43.6	56.7
(WY)	2000	2001	2001	2001	2001	2000	2000	1999	1999	1999	2001	2001
MIN	20.6	36.0	34.9	98.1	135	113	84.4	43.5	40.1	37.8	27.0	25.6
(WY)	2001	2000	2000	2000	2000	2001	2001	2001	2001	2000	2000	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1998 - 2001	
ANNUAL TOTAL	32154		30846			
ANNUAL MEAN	87.9		84.5		85.8	
HIGHEST ANNUAL MEAN					87.0	
LOWEST ANNUAL MEAN					84.5	
HIGHEST DAILY MEAN	1140	Apr 5	1950	Feb 17	1950	Feb 17 2001
LOWEST DAILY MEAN	17	Oct 20	17	Oct 20	17	Oct 20 2000
ANNUAL SEVEN-DAY MINIMUM	18	Sep 14	20	Oct 7	18	Sep 14 2000
MAXIMUM PEAK FLOW			2050	Feb 17	2050	Feb 17 2001
MAXIMUM PEAK STAGE			10.90	Feb 17	10.90	Feb 17 2001
INSTANTANEOUS LOW FLOW			a16	Oct 8	16	Sep 16 2000
ANNUAL RUNOFF (CFSM)	1.01		.97		.99	
ANNUAL RUNOFF (INCHES)	13.78		13.22		13.42	
10 PERCENT EXCEEDS	162		150		162	
50 PERCENT EXCEEDS	46		40		45	
90 PERCENT EXCEEDS	22		23		24	

a Also occurred Oct. 18, 19.



## TENNESSEE RIVER BASIN

03538235 EAST FORK POPLAR CREEK AT BEAR CREEK ROAD AT OAK RIDGE, TN

LOCATION.--Lat 35°59'48", long 84°14'25", Anderson County, Hydrologic Unit 06010207, on left bank upstream from bridge on Bear Creek Road, 0.5 mi south of Oak Ridge, and at mile 14.4.

DRAINAGE AREA.--1.69 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1992 to current year.

GAGE.--Water-stage recorder and concrete weir. Datum of gage is 890 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good below 100 ft<sup>3</sup>/s. Flow affected by operations of the Department of Energy, Y-12 Plant. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 770 ft<sup>3</sup>/s, gage height, 5.41 ft, July 22; minimum, 3.9 ft<sup>3</sup>/s, gage height, 1.27 ft, Dec. 22, 23, Jan. 1, April 6; minimum daily, 5.3 ft<sup>3</sup>/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	11	10	11	12	10	10	21	11	11	16
2	7.9	11	11	11	11	12	10	11	13	12	11	17
3	5.3	11	15	10	11	12	12	10	12	12	12	42
4	6.0	11	11	9.5	11	13	10	10	12	15	12	14
5	6.1	11	11	9.6	11	10	9.9	10	12	22	12	11
6	7.1	11	11	9.5	11	12	9.6	12	16	13	12	11
7	8.6	11	11	9.5	10	11	9.7	14	13	12	12	11
8	8.5	16	11	11	9.2	11	9.8	11	12	12	12	11
9	8.5	37	11	11	12	11	9.8	11	12	12	12	11
10	8.5	13	11	11	12	11	9.8	10	12	12	12	10
11	8.5	12	11	11	9.6	11	9.8	11	12	12	14	9.6
12	11	10	11	12	10	13	12	10	12	11	13	9.6
13	14	11	19	11	14	13	21	10	12	11	12	9.7
14	14	11	18	11	23	11	11	10	12	11	11	9.7
15	14	11	12	11	41	17	17	10	12	11	11	9.5
16	14	16	31	11	99	13	11	10	11	11	11	9.5
17	15	13	15	11	23	12	11	10	11	11	11	10
18	15	11	12	20	14	11	11	10	11	11	10	11
19	15	11	12	58	12	11	11	11	11	12	12	21
20	15	11	11	17	11	12	11	10	12	14	12	19
21	15	11	11	13	12	9.0	11	13	12	12	12	12
22	15	11	9.7	12	34	10	11	31	12	53	11	11
23	15	10	7.9	12	14	10	11	12	11	13	11	12
24	15	11	11	10	13	10	11	13	11	12	13	30
25	15	12	11	11	25	10	11	12	12	12	11	12
26	12	11	11	11	14	10	10	11	11	12	11	11
27	10	11	11	11	13	10	10	11	11	11	12	10
28	11	11	11	11	12	9.7	10	12	11	13	13	11
29	11	11	11	12	---	12	11	11	12	78	15	11
30	11	11	11	15	---	11	11	11	12	16	15	11
31	11	---	11	11	---	10	---	12	---	12	21	---
TOTAL	353.0	370	382.6	404.1	502.8	350.7	333.4	360	366	492	380	403.6
MEAN	11.4	12.3	12.3	13.0	18.0	11.3	11.1	11.6	12.2	15.9	12.3	13.5
MAX	15	37	31	58	99	17	21	31	21	78	21	42
MIN	5.3	10	7.9	9.5	9.2	9.0	9.6	10	11	11	10	9.5

## 03538235 EAST FORK POPLAR CREEK AT BEAR CREEK ROAD AT OAK RIDGE, TN--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.11	10.4	10.8	12.4	12.8	12.7	12.9	11.1	11.8	12.3	10.5	10.0
MAX	11.9	14.5	15.0	17.4	18.1	16.7	23.8	15.9	17.5	20.8	15.5	13.5
(WY)	1998	1997	1999	1999	1994	1997	1998	2000	1998	1999	1996	2001
MIN	5.47	6.47	5.82	7.56	7.42	7.37	4.87	6.04	4.53	4.14	5.03	5.28
(WY)	1995	1995	1995	1993	1995	1995	1995	1994	1995	1995	1995	1995

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

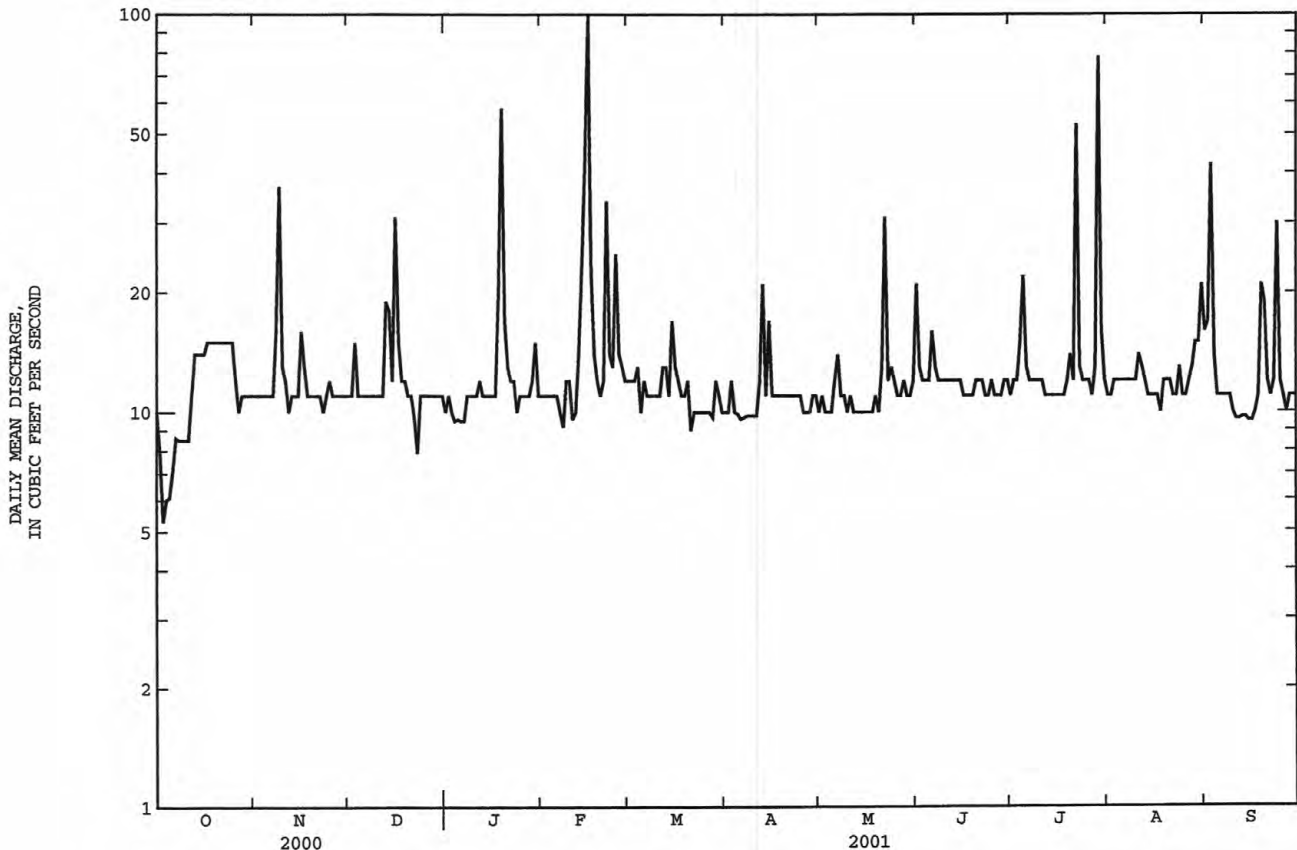
## WATER YEARS 1993 - 2001

ANNUAL TOTAL	5069.3	4698.2	
ANNUAL MEAN	13.9	12.9	11.8
HIGHEST ANNUAL MEAN			14.1
LOWEST ANNUAL MEAN			6.30
HIGHEST DAILY MEAN	119	Apr 3	99
LOWEST DAILY MEAN	5.3	Oct 3	5.3
ANNUAL SEVEN-DAY MINIMUM	7.1	Oct 2	7.1
MAXIMUM PEAK FLOW			770
MAXIMUM PEAK STAGE			5.41
INSTANTANEOUS LOW FLOW			c3.9
10 PERCENT EXCEEDS	17		15
50 PERCENT EXCEEDS	12		11
90 PERCENT EXCEEDS	11		10
			16
			11
			4.8

a From area-velocity estimate at contracted section downstream.

b Affected by backwater. From high-water marks.

c Also occurred Dec. 23, Jan. 1, April 6.





## TENNESSEE RIVER BASIN

03539600 DADDYS CREEK NEAR HEBBERTSBURG, TN

LOCATION.--Lat 35°59'53", long 84°49'24", Cumberland County, Hydrologic Unit 06010208, on right bank, 200 ft downstream of Antioch Bridge, 2.1 mi southeast of Hebbertsburg, 6.9 mi northeast of Crab Orchard, and at mile 9.1.

DRAINAGE AREA.--139 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1956 to September 1968, April 1999 to current year. Prior to May 1957 monthly discharge only, published in WSP 1726.

GAGE.--Data logger. Datum of gage is 1,445 ft above sea level, from topographic map, datum of 1929, supplementary adjustment of 1936. Prior to May 24, 1965, graphic water-stage recorder at same site and datum of 1929.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,910 ft<sup>3</sup>/s, maximum gage height 9.00, Feb. 17; minimum 1.2 ft<sup>3</sup>/s, Oct. 15-17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	2.9	9.5	64	340	359	116	54	18	9.1	75	6.5
2	3.4	2.8	8.4	63	279	286	109	65	21	8.0	56	6.9
3	3.0	2.6	8.9	e63	227	236	104	57	26	52	44	7.9
4	2.8	2.6	8.4	56	190	221	140	51	29	98	38	9.9
5	2.6	2.6	9.0	46	165	233	148	45	27	39	36	8.5
6	2.3	2.3	9.6	46	145	214	135	43	24	26	29	7.6
7	2.1	2.8	10	45	129	185	123	55	28	18	27	6.7
8	2.0	4.5	11	45	116	159	109	53	39	14	22	6.0
9	1.8	44	11	44	108	130	97	51	60	11	20	5.4
10	1.6	76	11	e44	246	117	86	52	47	9.8	52	5.0
11	1.4	34	11	e42	336	107	77	48	34	8.5	223	4.5
12	1.3	21	11	e51	295	101	72	43	27	7.9	206	4.0
13	1.4	13	11	87	278	137	827	38	23	7.3	270	3.8
14	1.4	9.4	221	102	702	160	1100	34	20	6.2	162	3.7
15	1.3	7.4	290	91	1750	235	737	30	17	5.4	85	3.5
16	1.2	6.6	653	84	4150	481	720	27	18	4.8	56	3.2
17	1.3	7.3	1730	77	4300	414	513	24	14	4.3	40	3.0
18	1.8	9.6	830	92	1530	330	365	21	14	4.2	30	2.8
19	2.0	9.4	447	2750	815	261	296	18	13	4.0	24	3.2
20	1.9	9.3	294	2660	548	296	240	16	11	4.1	19	6.8
21	2.0	8.2	225	1060	406	614	198	16	9.3	4.7	23	23
22	1.4	7.0	184	583	862	554	166	25	9.5	9.1	37	18
23	1.3	6.3	149	424	987	423	142	31	10	10	36	12
24	1.9	6.0	131	309	640	334	124	31	8.6	8.1	16	12
25	2.2	8.2	116	257	822	271	110	25	8.1	6.7	11	15
26	2.3	15	103	214	958	218	93	24	8.1	6.0	8.0	18
27	2.4	16	95	180	632	178	82	22	8.8	6.8	6.8	14
28	2.2	14	91	158	461	148	72	21	10	15	6.2	10
29	2.2	13	86	139	---	137	62	20	9.3	91	5.9	8.6
30	2.8	11	80	381	---	134	55	18	8.9	309	5.5	7.4
31	2.9	---	71	462	---	123	---	17	---	151	5.7	---
TOTAL	64.2	374.8	5925.8	10719	22417	7796	7218	1075	600.6	959.0	1675.1	246.9
MEAN	2.07	12.5	191	346	801	251	241	34.7	20.0	30.9	54.0	8.23
MAX	4.0	76	1730	2750	4300	614	1100	65	60	309	270	23
MIN	1.2	2.3	8.4	42	108	101	55	16	8.1	4.0	5.5	2.8
CFSM	.01	.09	1.38	2.49	5.76	1.81	1.73	.25	.14	.22	.39	.06
IN.	.02	.10	1.59	2.87	6.00	2.09	1.93	.29	.16	.26	.45	.07

e Estimated

TENNESSEE RIVER BASIN

165

03539600 DADDYS CREEK NEAR HEBBERTSBURG, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.2	226	366	387	479	610	432	227	92.0	117	47.7	36.3
MAX	220	1271	860	870	887	1011	812	512	457	587	140	209
(WY)	1958	1958	1968	1962	1962	1963	1962	1958	1961	1967	1959	1960
MIN	.52	2.44	12.5	188	99.2	251	94.1	27.2	13.6	10.3	1.66	.62
(WY)	1964	1964	1964	2000	1968	2001	1963	1962	1960	1960	1957	1968

SUMMARY STATISTICS

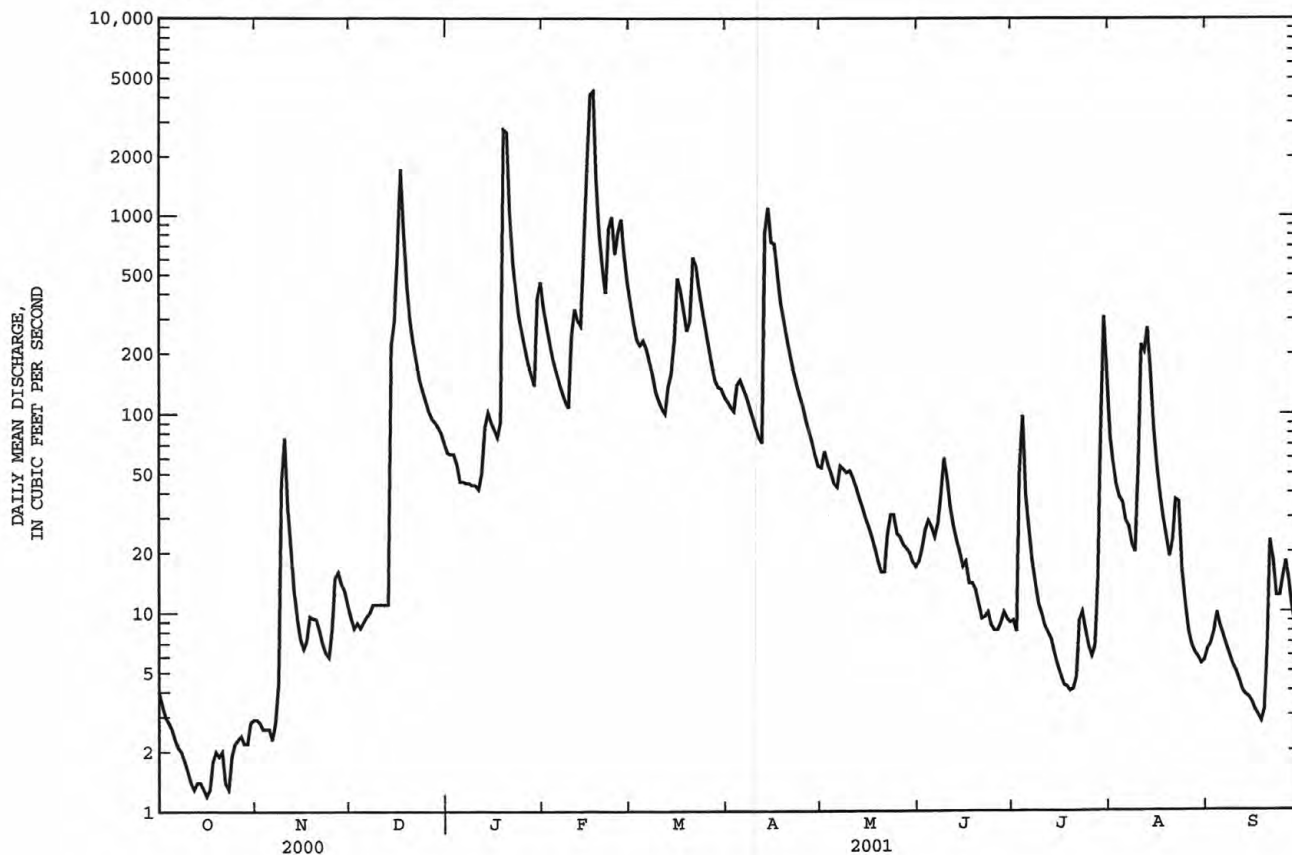
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1957 - 2001

ANNUAL TOTAL	65082.3	59071.4	
ANNUAL MEAN	178	162	251
HIGHEST ANNUAL MEAN			368
LOWEST ANNUAL MEAN			162
HIGHEST DAILY MEAN	5280	Apr 4	7910
LOWEST DAILY MEAN	1.2	Oct 16	.20
ANNUAL SEVEN-DAY MINIMUM	1.3	Oct 11	.27
MAXIMUM PEAK FLOW			all200
MAXIMUM PEAK STAGE			a13.23
INSTANTANEOUS LOW FLOW			1.2
ANNUAL RUNOFF (CFSM)	1.28		1.80
ANNUAL RUNOFF (INCHES)	17.42		24.49
10 PERCENT EXCEEDS	414		584
50 PERCENT EXCEEDS	49		91
90 PERCENT EXCEEDS	2.8		4.3

a From rating curve extended above 6,600 ft<sup>3</sup>/s from site and datum.  
b Also occurred Oct. 16-17.



## TENNESSEE RIVER BASIN

03539778 CLEAR CREEK AT LILLY BRIDGE NEAR LANCING, TN

LOCATION.--Lat 36°06'11", long 84°43'06", Morgan County, Hydrologic Unit 06010208, on right bank 200 yards upstream of Lilly Bridge, 0.1 mi downstream of Little Clear Creek, 3.8 mi west-southwest of Lancing, and at mile 1.6.

DRAINAGE AREA.--170 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1997 to current year.

GAGE.--Data collection platform. Datum of gage is 1,060 ft above sea level, from topographic map.

REMARKS.--Records good except during periods of missing record, which are fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREME FOR CURRENT YEAR.--Maximum daily discharge, 8,500 ft<sup>3</sup>/s, estimated gage height unknown; minimum, 0.43 ft<sup>3</sup>/s, Nov. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	.52	15	60	237	318	145	89	41	35	106	7.7
2	6.3	.50	14	56	204	264	132	184	38	40	71	7.1
3	5.5	.54	15	62	177	232	124	146	43	29	58	7.1
4	5.2	.67	14	62	157	236	138	114	45	22	73	6.9
5	4.9	.71	14	52	146	287	136	97	45	18	70	7.6
6	4.7	.67	14	50	133	270	126	86	49	17	60	9.2
7	4.1	.85	14	51	122	239	120	105	73	17	61	9.0
8	3.4	1.7	14	49	112	216	113	121	61	16	59	8.1
9	2.9	e20	14	48	106	197	106	113	54	14	43	7.1
10	2.7	e70	14	47	206	174	101	125	50	12	57	6.2
11	2.4	e30	15	43	279	158	96	121	36	10	77	5.3
12	2.2	28	16	47	243	147	93	112	26	8.9	227	4.6
13	2.0	25	18	54	227	169	425	100	21	7.7	226	4.1
14	1.8	19	e100	61	e840	182	680	84	17	6.7	149	3.5
15	1.6	16	e130	61	e3350	215	537	71	15	5.9	101	2.9
16	1.6	14	e305	60	e7780	413	611	61	16	5.3	72	2.5
17	1.5	14	e1190	58	e8500	354	443	51	18	4.9	55	2.2
18	1.4	13	e585	64	e1800	293	339	43	16	4.5	41	2.0
19	1.3	13	331	e3640	e820	251	274	36	13	3.9	32	2.1
20	1.1	14	230	e3530	e530	261	232	31	11	4.4	26	2.7
21	.96	13	176	e1350	e445	453	201	28	9.8	7.1	22	4.4
22	.99	12	146	e685	e905	441	172	62	11	6.6	20	4.5
23	1.0	12	117	e390	e1030	365	151	76	9.9	7.2	17	3.8
24	1.0	12	115	e280	877	305	134	79	9.2	5.7	15	6.9
25	1.0	13	107	e240	873	258	119	62	9.9	5.3	14	8.4
26	.98	13	90	e210	909	222	106	52	12	5.5	13	8.9
27	.91	13	82	183	622	194	96	43	17	4.6	11	8.9
28	.83	15	79	160	427	171	87	41	35	9.4	9.9	10
29	.74	15	77	144	---	160	78	46	66	194	9.2	8.8
30	.65	15	72	227	---	159	76	59	50	280	8.3	7.2
31	.59	---	65	292	---	153	---	51	---	181	7.7	---
TOTAL	73.15	415.16	4188	12316	32057	7757	6191	2489	917.8	988.6	1811.1	179.7
MEAN	2.36	13.8	135	397	1145	250	206	80.3	30.6	31.9	58.4	5.99
MAX	6.9	70	1190	3640	8500	453	680	184	73	280	227	10
MIN	.59	.50	14	43	106	147	76	28	9.2	3.9	7.7	2.0
CFSM	.01	.08	.79	2.34	6.73	1.47	1.21	.47	.18	.19	.34	.04
IN.	.02	.09	.92	2.70	7.01	1.70	1.35	.54	.20	.22	.40	.04

e Estimated

## 03539778 CLEAR CREEK AT LILLY BRIDGE NEAR LANCING, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.18	16.0	180	612	605	407	467	301	283	107	39.2	3.49
MAX	9.46	36.6	423	962	1145	516	1118	635	782	349	104	5.99
(WY)	1999	1998	1999	1999	2001	1998	1998	1998	1997	1999	1998	2001
MIN	.81	5.07	32.4	141	314	250	206	80.3	30.6	11.9	4.65	1.66
(WY)	2000	1999	2000	2000	2000	2001	2001	2001	2001	2000	1997	1997

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

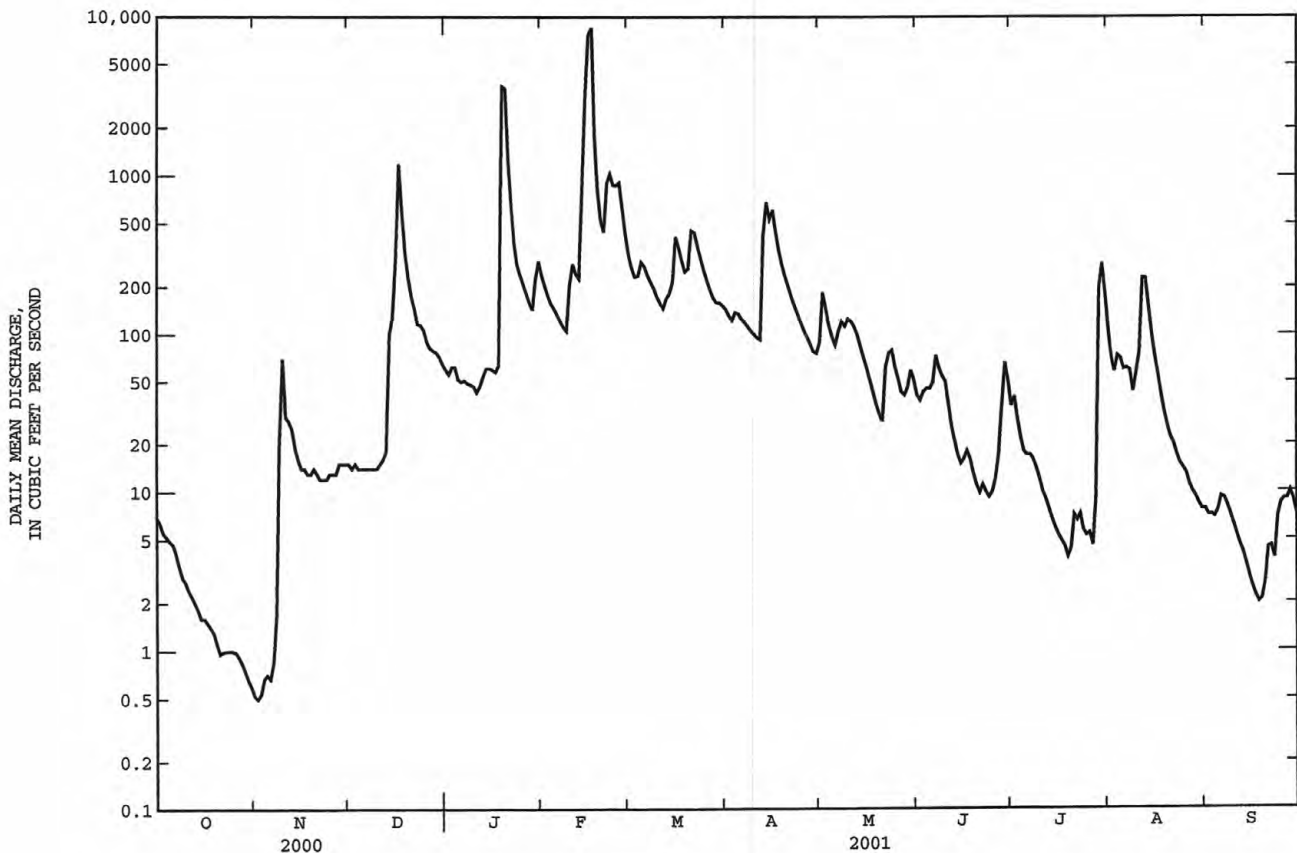
## WATER YEARS 1997 - 2001

ANNUAL TOTAL	54009.78	69383.51	
ANNUAL MEAN	148	190	246
HIGHEST ANNUAL MEAN			378
LOWEST ANNUAL MEAN			138
HIGHEST DAILY MEAN	4230	Apr 4	e8500
LOWEST DAILY MEAN	.50	Nov 2	.50
ANNUAL SEVEN-DAY MINIMUM	.60	Oct 30	.60
MAXIMUM PEAK FLOW			UNKNOWN
MAXIMUM PEAK STAGE			UNKNOWN
INSTANTANEOUS LOW FLOW			.43
ANNUAL RUNOFF (CFSM)	.87		1.12
ANNUAL RUNOFF (INCHES)	11.82		15.18
10 PERCENT EXCEEDS	357		305
50 PERCENT EXCEEDS	40		50
90 PERCENT EXCEEDS	1.6		2.9

a From rating curve extended above 6,710 ft<sup>3</sup>/s.

b Also occurred on Oct. 9.

e Estimated



## TENNESSEE RIVER BASIN

03539778 CLEAR CREEK AT LILLY BRIDGE NEAR LANCING, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB 23...	1130	1010	39	6.3	6.5	744	--	11.8	98	K330	K1700	12	7
MAR 28...	1230	171	42	6.4	7.0	740	--	11.3	96	--	<1	12	8
APR 17...	1215	441	38	6.7	12.5	739	--	12.6	122	--	K68	11	6
JUN 01...	1130	41	53	6.4	20.0	728	--	8.2	95	--	21	15	6
JUL 26...	1130	5.4	71	6.5	26.0	735	.5	6.2	79	--	--	17	0
AUG 23...	1130	17	58	6.3	24.0	736	.4	7.9	95	--	K11	16	5
SEP 12...	1100	--	68	7.7	23.0	737	.3	7.8	91	--	K8	17	2
DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD HCO3 CACO3 (MG/L AS) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
FEB 23...	3.40	.873	1.4	18	.2	1.21	6	5	6.3	3.4	<.2	3.3	30
MAR 28...	3.22	.859	1.7	22	.2	.85	5	4	5.8	3.3	<.2	3.1	47
APR 17...	3.09	.808	1.6	22	.2	.99	6	5	5.3	3.1	<.2	3.5	25
JUN 01...	4.35	1.07	2.7	26	.3	1.14	11	9	6.4	4.0	<.2	2.3	46
JUL 26...	4.79	1.26	5.8	40	.6	1.26	20	16	5.1	5.5	<.2	1.2	37
AUG 23...	4.53	1.05	2.9	27	.3	1.55	13	11	5.6	4.6	<.2	2.5	41
SEP 12...	4.56	1.24	5.3	39	.6	1.55	18	15	5.0	5.8	<.2	1.4	39
DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB 23...	25	.04	<.006	.442	<.041	.12	.15	.59	.024	.008	<.018	40	8.6
MAR 28...	22	.06	<.006	.174	<.041	.13	.09	.27	.004	<.006	<.018	10	3.8
APR 17...	22	.03	--	--	--	<.1	.13	--	.008	<.006	--	20	3.9
JUN 01...	28	.06	<.006	.098	<.040	<.1	.17	.27	.007	<.006	<.020	50	7.3
JUL 26...	35	.05	<.006	.051	<.040	.13	.18	.24	.006	<.006	<.020	30	26.2
AUG 23...	30	.06	<.006	.101	<.040	.14	.23	.33	.005	<.006	<.020	50	11.2
SEP 12...	34	.05	<.006	.064	<.040	.17	.18	.25	.009	<.006	.020	50	15.6

K--Results based on non-ideal colony count.



03539778 CLEAR CREEK AT LILLY BRIDGE NEAR LANCING, TN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ACETO- CHLOR, WATER, FLTRD REC (UG/L) (49260)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	MALA- THON, DIS- SOLVED (UG/L) (39532)
FEB 23...	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005	<.003	<.004	<.027
MAR 28...	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005	<.003	<.004	<.027
APR 17...	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005	<.003	<.004	<.027
JUN 01...	<.002	<.004	.014	<.005	<.002	<.005	<.018	E.005	<.005	<.005	<.003	<.004	<.027
JUL 26...	<.002	<.004	E.002	<.005	<.002	<.005	<.018	<.006	<.005	<.005	<.003	<.004	<.027
AUG 23...	<.002	<.004	.009	<.005	<.002	<.005	<.018	E.003	<.005	<.005	<.003	<.004	<.027
SEP 12...	<.002	<.004	E.006	<.005	<.002	<.005	<.018	E.003	<.005	<.005	<.003	<.004	<.027
DATE	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THON, DIS- SOLVED (UG/L) (39542)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
FEB 23...	<.006	<.013	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002	<.021
MAR 28...	<.006	<.013	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002	<.021
APR 17...	<.006	<.013	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002	<.021
JUN 01...	<.006	<.013	<.003	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002	<.021
JUL 26...	<.006	<.013	<.003	<.007	<.010	E.013	<.011	<.010	<.041	<.020	<.003	<.002	<.021
AUG 23...	<.006	<.013	<.003	<.007	<.010	E.005	<.011	<.010	<.041	<.020	<.003	<.002	<.021
SEP 12...	<.006	<.013	<.003	<.007	<.010	E.004	<.011	<.010	<.041	<.020	<.003	<.002	<.021
DATE	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THON WAT FLT 0.7 U GF, REC (UG/L) (82667)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
FEB 23...	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004
MAR 28...	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004
APR 17...	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004
JUN 01...	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004
JUL 26...	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004
AUG 23...	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004
SEP 12...	<.009	<.005	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004

E--Estimated

## TENNESSEE RIVER BASIN

03539778 CLEAR CREEK AT LILLY BRIDGE NEAR LANCING, TN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
FEB									
23...	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	9
MAR									
28...	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	1
APR									
17...	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	3
JUN									
01...	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	2
JUL									
26...	<.011	<.023	<.016	<.034	<.017	<.002	<.009	<.005	1
AUG									
23...	<.011	<.023	E.016	<.034	<.017	<.002	<.009	<.005	1
SEP									
12...	<.011	<.023	E.009	<.034	<.017	<.002	<.009	<.005	<1

E--Estimated

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## TENNESSEE RIVER BASIN

03539800 OBED RIVER NEAR LANCING, TN

LOCATION.--Lat 36°04'53", long 84°40'15", Morgan County, Hydrologic Unit 06010208, on left bank at Alley Ford, 2.9 mi southwest of Lancing, 3.0 mi downstream from Clear Creek, and at mile 1.5.

DRAINAGE AREA.--518 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1956 to September 1968, March 1973 to December 1987, March 1999 to current year. Prior to May 1957 monthly discharge only, published in WSP 1726.

GAGE.--Water-stage recorder. Datum of gage is 891.91 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records goods except for Dec. 22 to Jan. 9 and Aug. 24 to 27, 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 on Mar. 23, 1929, reached a stage of 33.9 ft, 35 ft downstream from gage, from high water marks by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 13,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan 19	1945	16,200	12.40	Feb 17	0230	*27,600	*16.10

Minimum discharge, 1.7 ft<sup>3</sup>/s, Oct. 17, 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	6.6	36	e175	1070	1280	518	286	93	80	380	27
2	11	6.0	33	e165	867	1070	484	486	87	71	268	25
3	9.3	5.7	33	e150	719	903	454	441	93	60	219	26
4	7.9	5.5	31	e140	613	853	514	342	113	139	236	31
5	6.8	5.7	30	e130	550	995	551	289	122	138	220	34
6	5.9	5.6	30	e125	489	943	517	263	128	96	187	36
7	5.1	5.6	32	e120	441	818	483	313	163	70	253	35
8	4.4	6.7	34	e120	402	728	450	355	150	56	205	31
9	3.8	12	34	e118	371	654	413	332	171	47	153	27
10	3.3	182	35	114	683	578	387	640	172	39	263	24
11	2.9	132	36	116	1150	526	358	575	125	33	928	21
12	2.7	85	36	117	1000	489	339	448	90	28	1010	18
13	2.5	59	37	123	1000	566	1580	374	72	24	981	16
14	2.3	43	463	216	2280	659	3270	310	62	21	737	15
15	2.1	35	993	221	7420	733	2320	260	57	19	446	13
16	1.9	29	1100	211	13800	1700	2500	223	53	17	314	12
17	1.8	29	4940	197	16800	1470	1870	188	54	15	234	11
18	1.8	27	2430	210	5730	1200	1410	148	50	14	173	10
19	1.8	30	1320	7480	3130	1010	1110	117	47	13	128	11
20	1.9	35	874	9200	2110	991	904	96	39	12	94	14
21	2.2	32	626	3840	1600	1910	750	86	34	17	78	14
22	2.3	28	e500	2200	3280	1910	640	128	33	21	86	49
23	2.3	25	e400	1560	3950	1580	553	191	31	17	91	51
24	2.2	24	e350	1180	2550	1290	481	206	28	15	e85	46
25	2.4	26	e300	944	2420	1070	422	167	26	20	e70	46
26	2.6	28	e270	764	2760	884	371	128	29	19	e55	47
27	2.7	41	e250	652	2050	746	327	106	31	23	e40	64
28	3.1	47	e230	561	1600	650	298	96	74	20	35	54
29	3.1	44	e220	491	---	595	267	99	123	257	34	45
30	3.9	41	e215	926	---	582	251	119	130	883	31	36
31	5.7	---	e190	1460	---	551	---	109	---	710	28	---
TOTAL	125.7	1081.4	16108	34026	80835	29934	24792	7921	2480	2994	8062	889
MEAN	4.05	36.0	520	1098	2887	966	826	256	82.7	96.6	260	29.6
MAX	14	182	4940	9200	16800	1910	3270	640	172	883	1010	64
MIN	1.8	5.5	30	114	371	489	251	86	26	12	28	10
CFSM	.01	.07	1.00	2.12	5.57	1.86	1.60	.49	.16	.19	.50	.06
IN.	.01	.08	1.16	2.44	5.81	2.15	1.78	.57	.18	.22	.58	.06

e Estimated

03539800 OBED RIVER NEAR LANCING, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	283	980	1452	1710	1740	2246	1532	1080	388	407	153	160
MAX	1552	3829	3149	4780	3611	6220	3522	4066	1475	2572	587	856
(WY)	1976	1958	1968	1974	1962	1975	1977	1984	1961	1979	1985	1982
MIN	1.58	4.98	43.5	69.5	354	682	261	115	70.7	11.3	7.13	1.43
(WY)	1981	1964	1964	1981	1968	1985	1986	1962	1958	1980	1980	1968

## SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

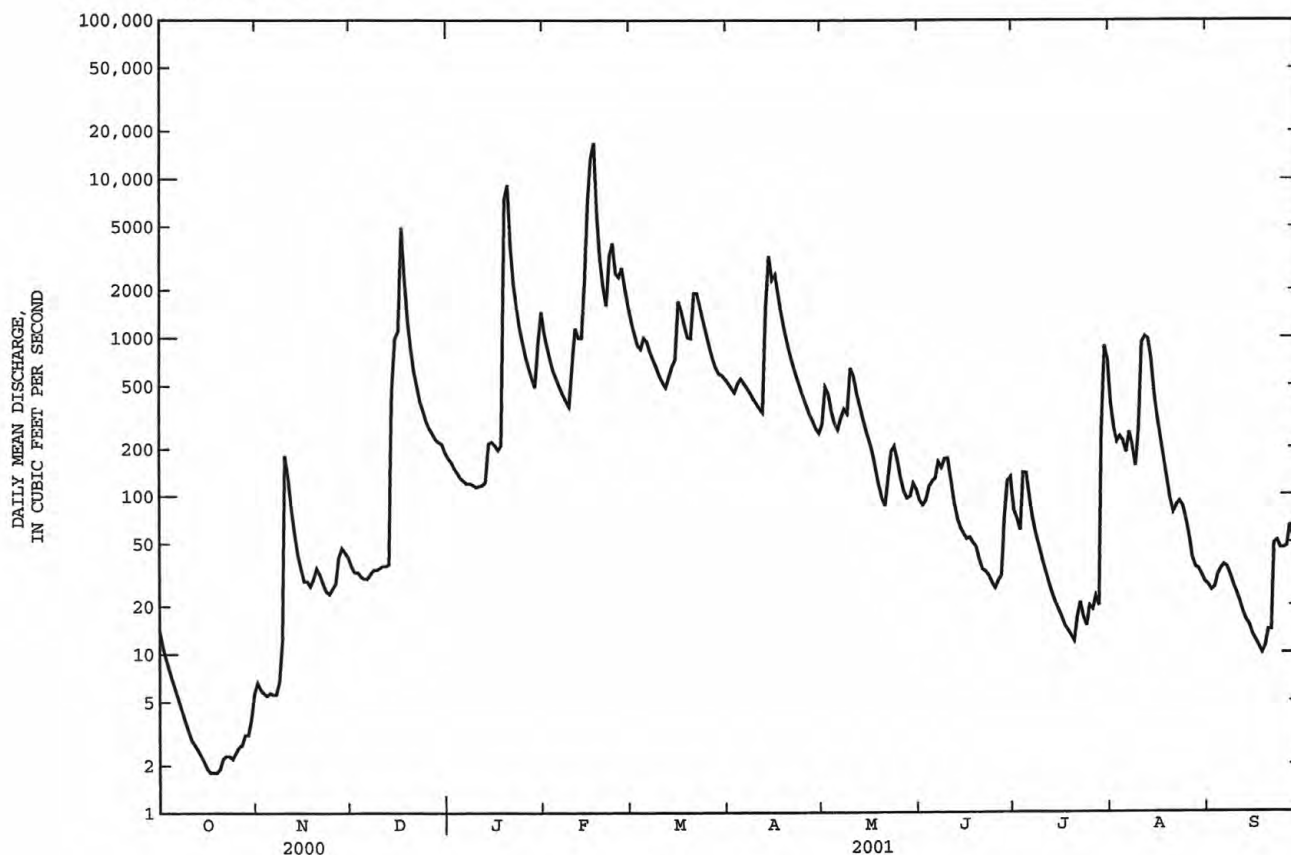
WATER YEARS 1957 - 2001

ANNUAL TOTAL	211236.4	209248.1	
ANNUAL MEAN	577	573	995
HIGHEST ANNUAL MEAN			1553
LOWEST ANNUAL MEAN			484
HIGHEST DAILY MEAN	17100	Apr 4	1553
LOWEST DAILY MEAN	1.8	Oct 17	484
ANNUAL SEVEN-DAY MINIMUM	1.9	Oct 15	45000
MAXIMUM PEAK FLOW			.50
MAXIMUM PEAK STAGE			.61
INSTANTANEOUS LOW FLOW			a105000
ANNUAL RUNOFF (CFSM)	1.11	1.11	b29.51
ANNUAL RUNOFF (INCHES)	15.17	15.03	.40
10 PERCENT EXCEEDS	1520	1280	1.92
50 PERCENT EXCEEDS	139	128	26.09
90 PERCENT EXCEEDS	5.7	8.7	2340
			382
			18

a From rating curve extended above 33,000 ft<sup>3</sup>/s on basis of slope conveyance study at gage height, 22.40 ft and slope-area measurement of peak flow.

b From cross line in gage well, 30.5 ft, from flood marks.

c Also occurred Oct. 18, 19.





## TENNESSEE RIVER BASIN

03540500 EMORY RIVER AT OAKDALE, TN

LOCATION.--Lat 35°58'59", long 84°33'29", Morgan County, Hydrologic Unit 06010208, on left bank, at Oakdale, 1,000 ft downstream from highway bridge, 1,100 ft downstream from Mud Lick Creek, and at mile 18.3.

DRAINAGE AREA.--764 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1927 to current year. Prior to October 1929, published as Emory River at Harriman and October 1929 to September 1934 as Emory River at Oakdale.

REVISED RECORDS.--WSP 823: Drainage area. WSP 923: 1940. WSP 1386: 1928-30(M), 1932, 1943, 1945(P).

GAGE.--Data collection platform and data logger. Datum of gage is 761.38 ft above sea level. Prior to Oct. 1, 1929, nonrecording gage at site 5.8 mi downstream at datum 43.60 ft lower, and Oct. 1, 1929, to Dec. 29, 1969, water-stage recorder at present site at datum 2.00 ft higher.

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.--Maximum stage since at least 1857, that of Mar. 23, 1929, from report of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 19,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan 19	2000	24,400	18.22	Feb 17	0330	*38,800	*21.92

Minimum discharge, 4.3 ft<sup>3</sup>/s, Oct. 19, 20, 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	4.7	80	254	1510	1840	770	517	135	141	655	55
2	27	5.0	74	263	1260	1520	730	631	124	98	469	65
3	21	6.9	76	204	1070	1310	692	656	125	97	378	73
4	18	7.3	74	217	930	1220	729	500	142	96	676	96
5	15	6.7	72	233	835	1360	775	410	157	250	591	99
6	12	6.4	71	218	749	1340	747	349	179	203	431	85
7	10	6.7	72	214	674	1220	694	397	340	137	363	73
8	8.1	10	74	208	611	1110	654	481	515	103	334	63
9	7.1	54	75	203	561	1010	610	458	462	83	232	55
10	6.6	194	76	169	806	885	574	691	361	79	370	46
11	6.2	280	77	163	1450	796	537	759	259	85	1120	39
12	6.0	186	78	213	1340	740	506	603	188	70	1200	30
13	5.8	136	79	221	1310	811	2540	502	138	56	1200	26
14	5.5	102	534	297	3180	931	5260	414	110	45	1080	22
15	5.2	82	1330	313	10600	1040	3570	337	135	35	673	18
16	5.1	71	1860	301	20100	2300	3740	283	102	28	453	15
17	5.0	69	7360	291	24900	2160	2790	242	92	24	321	13
18	4.8	66	3430	319	8280	1750	2060	196	85	21	239	11
19	4.5	65	1790	11200	4470	1470	1620	159	75	19	185	14
20	4.4	70	1220	14000	2980	1390	1320	139	67	18	143	29
21	4.5	72	888	5530	2190	2270	1120	121	56	67	111	52
22	4.3	66	738	3050	4180	2510	947	129	48	63	96	40
23	4.4	60	561	2110	5740	2150	815	240	50	47	103	63
24	4.7	56	547	1600	3660	1790	714	270	49	35	102	76
25	5.0	61	466	1300	3650	1500	629	238	48	28	94	77
26	7.3	66	425	1080	4250	1270	552	186	45	42	81	74
27	6.3	72	379	940	3080	1090	485	150	68	48	80	72
28	5.3	93	355	827	2350	943	430	139	116	45	68	79
29	5.0	94	342	732	---	863	383	142	170	846	58	68
30	4.8	87	325	1110	---	859	343	149	197	1870	52	58
31	4.7	---	285	1900	---	807	---	149	---	1150	53	---
TOTAL	267.6	2155.7	23813	49680	116716	42255	37336	10637	4638	5929	12011	1586
MEAN	8.63	71.9	768	1603	4168	1363	1245	343	155	191	387	52.9
MAX	34	280	7360	14000	24900	2510	5260	759	515	1870	1200	99
MIN	4.3	4.7	71	163	561	740	343	121	45	18	52	11
MED	5.5	66	342	301	2270	1270	730	283	124	67	321	56
CFSM	.01	.09	1.01	2.10	5.46	1.78	1.63	.45	.20	.25	.51	.07
IN.	.01	.10	1.16	2.42	5.68	2.06	1.82	.52	.23	.29	.58	.08

TENNESSEE RIVER BASIN

175

03540500 EMORY RIVER AT OAKDALE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	282	1060	2204	2812	2989	3145	2172	1322	721	500	282	228
MAX	1971	6214	7938	7941	8136	8962	5808	5804	6731	3694	2107	1562
(WY)	1976	1958	1991	1937	1939	1975	1977	1973	1989	1967	1942	1944
MIN	.57	.37	42.1	97.8	422	946	374	140	16.3	5.55	7.70	.91
(WY)	1954	1954	1940	1981	1941	1985	1986	1962	1936	1944	1930	1954

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1927 - 2001

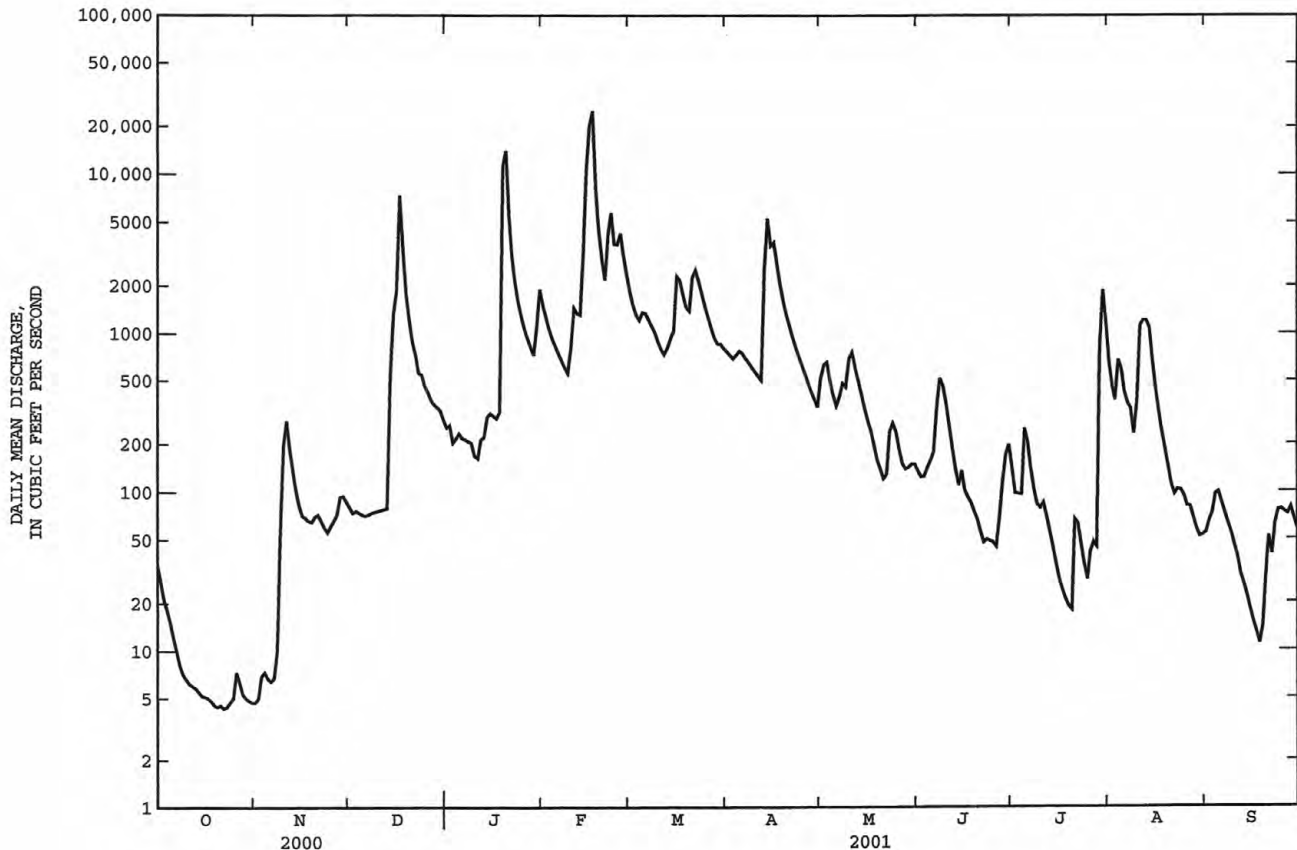
ANNUAL TOTAL	313790.1	307024.3	
ANNUAL MEAN	857	841	1469
HIGHEST ANNUAL MEAN			2653
LOWEST ANNUAL MEAN			670
HIGHEST DAILY MEAN	29500	Apr 4	103000
LOWEST DAILY MEAN	4.3	Oct 22	a.00
ANNUAL SEVEN-DAY MINIMUM	4.5	Oct 18	.00
MAXIMUM PEAK FLOW			b195000
MAXIMUM PEAK STAGE			c41.20
INSTANTANEOUS LOW FLOW			.00
ANNUAL RUNOFF (CFSM)	1.12	1.10	1.92
ANNUAL RUNOFF (INCHES)	15.28	14.95	26.13
10 PERCENT EXCEEDS	2020	1850	3410
50 PERCENT EXCEEDS	234	204	550
90 PERCENT EXCEEDS	7.7	14	20

a Also occurred on Aug. 14, 15, 1944; Nov. 7, 8, 9, 1952.

b From rating curve extended above 85,000 ft<sup>3</sup>/s confirmed by slope-area measurements of May 28, 1973, flood at gage height 38.68 ft.

c From floodmarks and flood profile, present site and datum, 61.1 ft at site and datum then in use.

d Also occurred Oct. 20, 22, 23.



## TENNESSEE RIVER BASIN

03566000 HIWASSEE RIVER AT CHARLESTON, TN

LOCATION.--Lat 35°17'16", long 84°45'07", until April 9, 1996, lat 35°17'17", long 84°45'10", until Nov. 10, 1998, lat 35°17'42", long 84°45'36" thereafter, Hydrologic Unit 06020002, on left bank 250 ft upstream from Norfolk Southern Railway bridge until April 9, 1996, at Norfolk Southern Railway bridge until Nov. 10, 1998, on right bank at dolphin at Bowater Southern Paper Company's barge facility thereafter, 0.3 mi downstream from bridge on U.S. Highway 11 at Charleston, and at mile 18.2.

DRAINAGE AREA.--2,298 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1898 to April 1899, November 1899 to April 1903, October 1919 to January 1940, January 1963 to January 1977, September 1979 to December 1981 (vane lost), August 1987 to current year. Gage-height records collected at this station during the period December 1884 to December 1889 are contained in the United States War Department Stages of Ohio River and Principal Tributaries, 1858-89, Part 1, and during period January 1890 to December 1943 in reports of the U.S. Weather Bureau.

REVISED RECORDS.--WSP 853: Drainage area. WSP 1436: 1902, 1922(M), 1928, 1936(M).

GAGE.--Data collection platform and velocity recorder. Datum of gage is 665.56 ft above sea level. Prior to July 18, 1925, non-recording gages, and July 18, 1925 to September 6, 1926, water-stage recorder, at present site, at datum 1.50 ft higher. September 1926 to January 1940, January 1963 to January 1977, September 1979 to December 1981, August 1987 to April 1996, on left bank 250 ft upstream of present site, at same datum.

REMARKS.--Records good except for estimated daily Nov. 23-26, which are poor. Some diversions above gage for industrial and municipal water supplies. Flow regulated by seven reservoirs (see p. 237 and Water Resources Data for Georgia and North Carolina). Reverse flow has occurred for short periods each year since closure of Chickamauga Dam on Tennessee River in 1939. 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. 31, 1886, reached a stage of 34.0 ft, present datum, discharge about 70,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,800 ft<sup>3</sup>/s, Jan. 20; maximum gage height, 17.88 ft, July 31; minimum daily, 804 ft<sup>3</sup>/s, Dec. 25, minimum gage height, 9.86 ft, Nov. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1890	3560	3610	909	2070	5910	1720	1780	1660	2250	3260	5300
2	1770	2570	2640	1810	2790	5560	2190	1720	2280	2120	3520	5290
3	3900	2490	999	2830	2240	4260	1890	1460	2510	2960	3730	3390
4	3030	2330	2130	2620	1450	3480	1660	1570	4290	2680	2870	4570
5	4020	1770	3240	1490	1540	3530	1580	1580	1990	3090	2180	3930
6	3270	1960	3090	1110	1920	5110	1440	965	1570	3200	2960	4210
7	2050	2940	3100	887	2240	4320	1510	1550	1620	2690	3940	3470
8	1650	3800	2100	1180	1630	3310	1690	1420	2500	2240	3760	3500
9	2380	5520	1830	1720	1400	2800	1330	1680	3300	2830	2820	3830
10	3330	8260	1030	1160	1050	1830	1520	1500	2620	3090	4060	3650
11	3110	3520	811	1060	2120	1640	1420	2010	2390	2840	4200	3260
12	2680	2760	1890	975	2080	1900	1390	1440	2460	3140	3520	3530
13	2290	2620	3330	1270	1770	3230	1820	1310	2710	3140	4340	3260
14	2320	3620	3090	922	2480	3110	2610	1430	3210	2590	4140	4080
15	1370	4280	2330	1080	3170	4280	2480	1490	2570	2210	3530	3890
16	2080	3740	1650	1310	3060	6650	2740	1870	2390	1940	3410	2840
17	3430	4450	2510	972	8660	4500	2650	1590	2120	2360	3580	2930
18	3330	4580	3840	1880	7570	3100	2160	1390	2070	2590	3210	3680
19	2970	3810	4790	8180	6590	2370	1950	1760	2470	2780	2350	3600
20	3860	3290	5120	12400	5500	4130	1890	1170	2380	2530	3180	4310
21	2370	4640	4080	7870	4700	5690	1150	1490	2650	2260	3990	3850
22	2350	4680	3950	5440	5930	4130	1410	1750	2480	1850	3620	3630
23	3130	e1100	3280	5110	7440	3600	1850	1140	2080	2370	3590	3960
24	3790	e4000	1990	4640	5620	2640	1400	1200	1740	2590	3540	4580
25	3860	e1000	804	4220	4740	2080	1910	1980	1610	2470	3270	4340
26	4110	e1400	1630	5360	7590	2560	1410	1860	2140	2580	3220	3800
27	3620	2650	2930	3460	6370	2370	1470	1430	2480	2840	3760	4300
28	2690	2720	3320	1790	6150	3550	1360	1850	2330	1950	4560	4150
29	2000	2670	2000	1930	---	2840	1310	3440	2450	1590	4160	3570
30	2340	3220	1560	2300	---	2440	1400	2420	3290	1920	3970	3090
31	3030	---	1330	3140	---	2420	---	3620	---	3560	4400	---
TOTAL	88020	99950	80004	91025	109870	109340	52310	52865	72360	79250	110640	115790
MEAN	2839	3332	2581	2936	3924	3527	1744	1705	2412	2556	3569	3860
MAX	4110	8260	5120	12400	8660	6650	2740	3620	4290	3560	4560	5300
MIN	1370	1000	804	887	1050	1640	1150	965	1570	1590	2180	2840

e Estimated

TENNESSEE RIVER BASIN

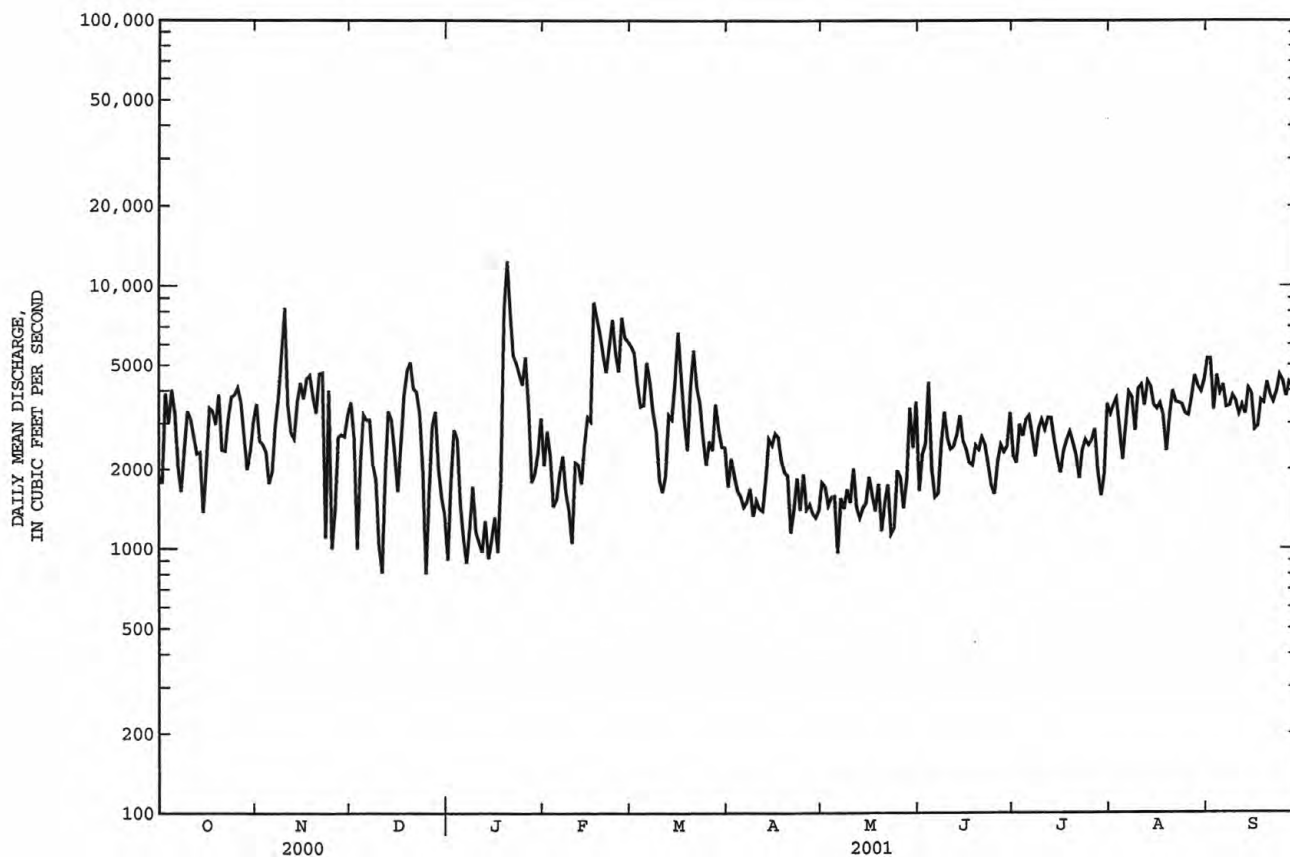
177

03566000 HIWASSEE RIVER AT CHARLESTON, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3925	4324	5382	6011	6350	6084	4434	3716	3901	3799	3853	3595
MAX	9332	8638	12980	13060	16270	13860	11950	7922	8897	6975	6201	5118
(WY)	1990	1968	1968	1974	1990	1990	1994	1973	1989	1967	1967	1967
MIN	1442	1681	2070	2318	1623	1866	1110	971	1395	1750	1810	1747
(WY)	1989	1982	1988	2000	2000	1988	1988	1988	1988	1988	1988	1987

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1964 - 2001
ANNUAL TOTAL	921615	1061424	
ANNUAL MEAN	2518	2908	4606
HIGHEST ANNUAL MEAN			6891
LOWEST ANNUAL MEAN			1894
HIGHEST DAILY MEAN	21200	Apr 4	54000
LOWEST DAILY MEAN	569	Jan 2	524
ANNUAL SEVEN-DAY MINIMUM	1150	Feb 6	817
MAXIMUM PEAK FLOW		14800	57000
MAXIMUM PEAK STAGE		17.88	29.42
10 PERCENT EXCEEDS	3820	4520	7500
50 PERCENT EXCEEDS	2260	2640	4030
90 PERCENT EXCEEDS	1280	1410	2070



## TENNESSEE RIVER BASIN

035661285 NORTH MOUSE CREEK NEAR ROCKY MOUNT HOLLOW NEAR ATHENS, TN

LOCATION.--Lat 35°26'55", long 84°39'23", McMinn County, Hydrologic Unit 06020002, on right bank at downstream end of culvert at county road, 1.5 mi west of Athens.

DRAINAGE AREA.--42.1 mi<sup>2</sup>

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

GAGE.--Water-stage recorder. Datum of gage is 775 ft above sea level, from topographic map.

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 CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan 19	1415	*1,400	*12.69	No other peak greater than base discharge.			

Minimum discharge, 14 ft<sup>3</sup>/s, Sept. 15, 17, 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	20	29	31	92	142	69	58	45	30	44	23
2	29	20	28	30	86	129	66	56	41	30	37	20
3	29	21	37	29	80	121	64	52	34	33	34	23
4	28	20	36	30	75	118	63	50	34	43	31	22
5	27	19	37	29	72	113	61	48	39	40	31	21
6	27	19	35	28	69	101	60	47	41	31	32	19
7	24	20	34	27	e65	94	59	49	40	29	28	19
8	24	96	33	29	e65	89	58	47	51	28	27	17
9	23	286	31	28	e65	86	57	47	39	41	31	17
10	23	91	30	27	e100	81	55	45	36	37	37	17
11	23	53	30	27	e70	77	54	44	33	30	29	17
12	23	44	30	32	e65	101	61	46	31	28	27	17
13	23	41	31	29	e65	126	309	42	30	27	32	17
14	22	38	101	27	99	94	160	41	39	25	27	16
15	21	34	53	27	171	142	161	39	97	25	25	15
16	22	40	61	28	322	127	137	38	106	24	24	15
17	21	60	96	27	629	111	116	38	46	24	27	15
18	21	44	64	62	260	102	105	36	40	24	23	15
19	21	40	61	1010	195	96	97	35	37	24	22	29
20	22	37	55	458	163	125	89	36	36	25	26	25
21	21	35	51	219	149	110	84	36	34	23	22	18
22	21	33	48	173	248	100	78	40	37	22	22	17
23	21	32	44	150	179	93	75	37	37	22	21	16
24	21	32	42	135	151	88	71	36	33	21	21	41
25	21	45	39	120	356	84	69	42	33	28	20	26
26	21	39	38	109	232	79	66	34	30	24	19	21
27	20	35	37	102	182	77	63	33	37	23	20	19
28	20	33	36	92	159	74	61	38	32	21	20	18
29	19	31	34	87	---	80	59	39	30	113	19	18
30	19	30	33	137	---	84	57	34	37	64	19	17
31	19	---	32	103	---	73	---	33	---	39	22	---
TOTAL	705	1388	1346	3442	4464	3117	2584	1296	1235	998	819	590
MEAN	22.7	46.3	43.4	111	159	101	86.1	41.8	41.2	32.2	26.4	19.7
MAX	29	286	101	1010	629	142	309	58	106	113	44	41
MIN	19	19	28	27	65	73	54	33	30	21	19	15
CFSM	.54	1.10	1.03	2.64	3.79	2.39	2.05	.99	.98	.76	.63	.47
IN.	.62	1.23	1.19	3.04	3.94	2.75	2.28	1.15	1.09	.88	.72	.52

e Estimated



TENNESSEE RIVER BASIN

179

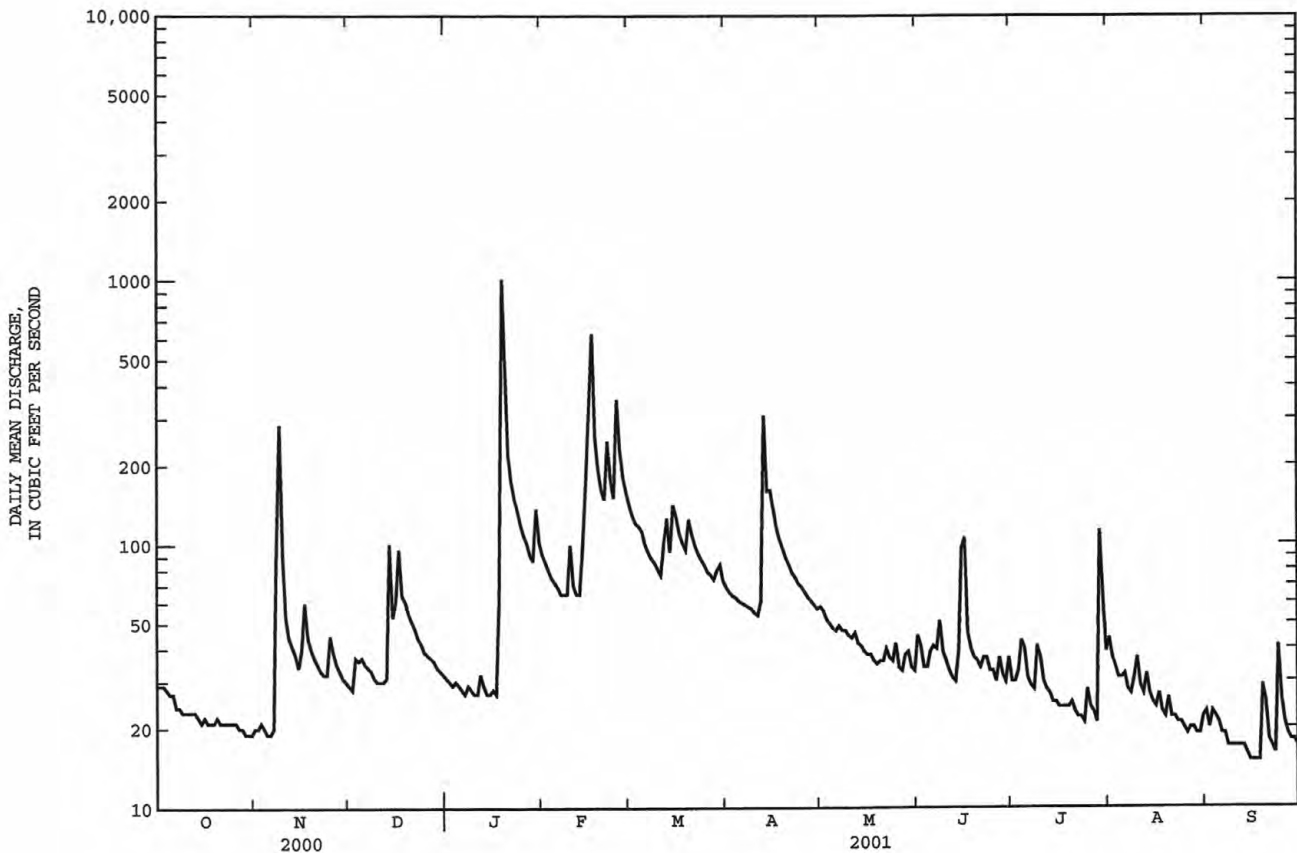
035661285 NORTH MOUSE CREEK NEAR ROCKY MOUNT HOLLOW NEAR ATHENS, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.4	48.5	61.7	132	142	161	145	83.3	76.0	56.8	37.4	31.9
MAX	59.5	113	139	225	258	297	381	125	191	113	80.7	43.4
(WY)	1996	1996	1997	1996	1994	1994	1994	1999	1997	1994	1994	2000
MIN	15.1	19.1	19.7	48.2	58.2	64.2	53.1	41.8	34.0	28.2	26.4	19.7
(WY)	1994	1999	2000	2000	2000	2000	1995	2001	2000	2000	2001	2001

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1994 - 2001
ANNUAL TOTAL	19081	21984	
ANNUAL MEAN	52.1	60.2	83.8
HIGHEST ANNUAL MEAN			125
LOWEST ANNUAL MEAN			48.1
HIGHEST DAILY MEAN	970	1010	2580
LOWEST DAILY MEAN	17	15	13
ANNUAL SEVEN-DAY MINIMUM	18	16	14
MAXIMUM PEAK FLOW		1400	5790
MAXIMUM PEAK STAGE		12.69	15.74
INSTANTANEOUS LOW FLOW		a14	b12
ANNUAL RUNOFF (CFSM)	1.24	1.43	1.99
ANNUAL RUNOFF (INCHES)	16.86	19.43	27.05
10 PERCENT EXCEEDS	91	114	159
50 PERCENT EXCEEDS	36	37	51
90 PERCENT EXCEEDS	21	20	22

a Also occurred Sept. 17, 18, 19.  
b Also occurred Oct. 29, 1993.



## TENNESSEE RIVER BASIN

03568000 TENNESSEE RIVER AT CHATTANOOGA, TN

LOCATION.--Lat 35°05'12", long 85°16'43", Hamilton County, Hydrologic Unit 06020001, 0.5 mi downstream from South Chickamauga Creek, 3.0 mi downstream from Chickamauga Dam, 3.5 mi upstream from Walnut Street Bridge in Chattanooga, and at mile 467.6.

DRAINAGE AREA.--21,400 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1874 to current year. Monthly discharges only for some periods, published in WSP 1306. July 1930 to December 1935, published as "at Hales Bar, near Chattanooga." Gage-height records collected in this vicinity since 1874 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 353: 1874-1912. WSP 783: 1917. WSP 823: 1875(M). WSP 973: 1942. WSP 1306: 1916(M). WSP 1386: 1932-34 (station at Hales Bar near Chattanooga).

GAGE.--Water-stage recorder. Datum of gage is 621.12 ft above sea level. Prior to Feb. 1, 1939, nonrecording or recording gages at several sites from 7.0 mi upstream from Chattanooga to Hales Bar Dam 33 mi downstream at or within 0.2 ft of present datum, except nonrecording gage at Bridgeport, AL, 49.9 mi downstream at different datum Oct. 22, 1913, to Feb. 28, 1915, and Oct. 1, 1918, to Jan. 5, 1921. Auxiliary gages at several sites parts of periods since Feb. 28, 1915. Present auxiliary gage at site 2.2 mi downstream from base gage at same datum.

REMARKS.--No estimated discharges. Records fair. Flow regulated since 1936 by many upstream reservoirs (see p. 237 and Water Resources Data for adjoining states).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 410,000 ft<sup>3</sup>/s, Mar. 1, 1875, gage height, 53.8 ft, present datum, at Walnut Street, from rating curve extended above 250,000 ft<sup>3</sup>/s; minimum daily, 1,200 ft<sup>3</sup>/s, Nov. 1, 1953; minimum gage height, 0.0 ft, Sept. 11-14, 1881, Sept. 19, 1883.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 57.9 ft, Mar. 11, 1867, present datum at Walnut Street, discharge about 459,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 86,100 ft<sup>3</sup>/s, Feb. 18; maximum gage height, 18.91 ft, Feb. 19; minimum daily discharge, 7,580 ft<sup>3</sup>/s, Apr. 12; minimum gage height, 11.02 ft, Apr. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27600	30500	27900	11000	17500	56300	7630	11100	16500	11700	45300	24600
2	16500	29100	9620	16000	31000	47100	21400	9760	11100	20100	42000	20000
3	34400	22700	10500	18600	17600	43100	7750	11300	13300	18800	45000	25900
4	34500	14300	24900	12200	13900	38300	8150	11000	18200	17900	24200	27600
5	23900	10800	17700	11200	24400	26700	8410	12200	19700	18600	23100	31800
6	23800	24200	18300	9310	24100	32900	8360	11800	17500	19700	38500	31400
7	26100	24900	17500	8800	15800	29700	8670	13200	19400	12800	34300	31200
8	31500	24100	13800	8950	12200	26900	7760	12400	20500	12000	33000	18900
9	34400	30800	7920	10900	15800	21600	7890	14000	12300	19100	39000	33100
10	29100	30600	12100	16000	10500	8680	10000	16200	13900	20900	29800	34700
11	27100	21700	8670	11700	17600	11900	9670	22900	19400	19200	29400	29300
12	24700	19000	21900	9270	24200	14200	7580	8960	18200	20200	21100	32800
13	29600	34600	19700	10200	15200	29500	8680	10200	19300	18900	37400	36300
14	12500	36100	12300	10900	15200	18500	9410	10900	19400	10400	40300	37400
15	18700	30800	11000	9560	25300	37900	9390	11100	18900	12900	40500	27300
16	32300	33700	11900	8880	38700	33500	16800	14000	11600	16300	34900	12500
17	29200	33800	12000	10000	51900	14200	28000	11600	12200	16900	33400	30800
18	33000	25100	27200	11000	61800	17200	22200	12300	19600	19200	30400	21800
19	33000	23600	32900	39300	75000	20700	24200	10900	18900	19700	23500	22300
20	33700	31000	32500	56000	74100	22700	19400	10400	19800	20700	26500	27800
21	30900	32900	33200	51800	72700	24500	9670	11100	19500	11700	30900	27700
22	21300	31200	37000	37400	72100	21700	9110	10800	15100	11200	36600	24700
23	32500	11500	30400	39200	67900	18400	18000	12300	11100	20300	38600	23000
24	34700	15000	16400	40300	62500	14600	11700	11300	11800	20700	32700	32100
25	33300	9630	15100	40400	63200	11600	7970	10200	17700	22100	39500	33600
26	30100	8810	30200	38300	63500	23600	8010	10600	17800	17000	32400	26800
27	31500	17800	30100	39400	62300	22800	7830	10800	20500	17300	32900	29900
28	25800	16700	35300	36700	61500	33000	9180	10900	21700	11900	38100	35600
29	19300	25500	15100	27800	---	18100	9600	10200	18900	14700	31100	23900
30	26100	25400	11600	33600	---	9120	8430	13600	14200	41400	33100	16900
31	27700	---	10400	13500	---	13800	---	13200	---	45700	31700	---
TOTAL	868800	725840	615110	698170	1107500	762800	350850	371220	508000	580000	1049200	831700
MEAN	28030	24190	19840	22520	39550	24610	11700	11970	16930	18710	33850	27720
MAX	34700	36100	37000	56000	75000	56300	28000	22900	21700	45700	45300	37400
MIN	12500	8810	7920	8800	10500	8680	7580	8960	11100	10400	21100	12500

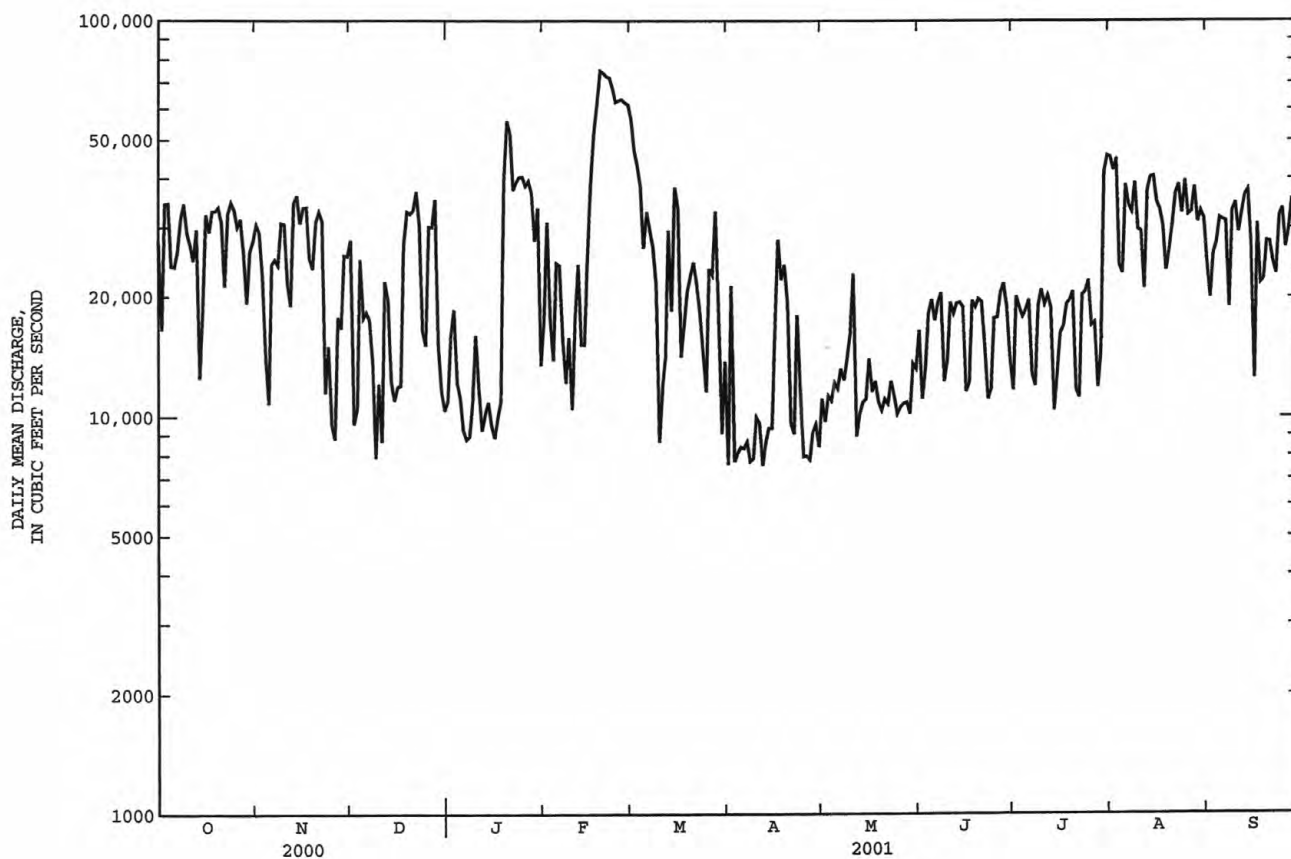
03568000 TENNESSEE RIVER AT CHATTANOOGA, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29220	34010	43490	48470	49970	46580	28680	28280	29540	29620	31550	28610
MAX	63270	68330	94270	127900	132800	98850	107800	87890	65280	49670	41590	42140
(WY)	1990	1958	1973	1974	1957	1963	1994	1984	1989	1989	1994	1967
MIN	16690	16340	13660	17370	20520	14380	7503	7805	11310	11230	12740	14090
(WY)	1984	1988	1988	1986	2000	1988	1986	1988	1988	1988	1988	1968

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	*WATER YEARS 1954 - 2001
ANNUAL TOTAL	8479680	8469190	
ANNUAL MEAN	23170	23200	35620
HIGHEST ANNUAL MEAN			53260
LOWEST ANNUAL MEAN			15070
HIGHEST DAILY MEAN	105000	Apr 5	75000
LOWEST DAILY MEAN	6820	May 7	7580
ANNUAL SEVEN-DAY MINIMUM	10400	May 16	8140
MAXIMUM PEAK FLOW			86100
MAXIMUM PEAK STAGE			18.91
10 PERCENT EXCEEDS	34700		38200
50 PERCENT EXCEEDS	21400		20100
90 PERCENT EXCEEDS	11600		9900

\* Regulated period only.



## TENNESSEE RIVER BASIN

03568000 TENNESSEE RIVER AT CHATTANOOGA, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
OCT 11...	1200	27800	176	8.0	20.0	--	5.5	7.1	77	20	71.0	7	19.7	
JAN 09...	1100	30900	193	8.3	6.0	754	2.3	12.1	98.3	K1	76.0	4	21.7	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	
OCT 11...	5.26	9.6	22.3	.497	1.68	78	64	15.9	8.1	<.2	4.7	106	104	
JAN 09...	5.32	11.0	23.5	.550	1.72	88	72	17.2	10.1	<.2	3.5	120	115	
DATE		SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
OCT 11...	.1	.116	.007	.123	.055	.17	.27	.388	.037	.021	.024	<10	E2.9	
JAN 09...	.2	--	<.006	.300	E.021	.12	.24	.544	.025	.011	<.018	<10	9.6	
DATE						CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC-ULATE TOTAL (MG/L AS C) (00689)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)					
OCT 11...						2.7	.6	6	90					
JAN 09...						--	--	2	87					

K--Results based on non-ideal colony count.  
E--Estimated

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## TENNESSEE RIVER BASIN

03573182 SCARHAM CREEK NEAR MCVILLE, AL

LOCATION.--Lat 34°17'54", long 86°07'00", Marshall County, Hydrologic Unit 06030001, on right downstream bank, 40 ft downstream of Colvin Bridge on County Road 372 (also know as McVilleville Road), 2.4 mi southeast of Painter. and at mile 8.6.

DRAINAGE AREA.--50 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Data recorder and pressure sensor. Datum of gage is 890 ft above sea level from topographic map.

REMARKS.--No estimated daily discharge. Records good.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar 12	1814	2,060	9.61	Mar 20	1144	*2,410	*10.16

No flow Oct. 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.03	41	36	125	138	115	21	32	11	13	12
2	.21	.04	38	35	110	130	99	19	44	9.7	9.1	33
3	.23	.04	35	37	98	183	117	18	29	14	6.8	135
4	.22	.03	32	37	91	283	232	15	23	32	5.9	114
5	.21	.04	31	33	84	217	365	14	24	64	5.2	71
6	.19	.04	30	33	77	168	207	12	22	76	9.1	51
7	.16	.09	29	32	71	143	166	11	55	41	3.9	39
8	.15	.37	27	74	68	127	145	14	79	26	3.6	33
9	.12	296	26	66	67	115	128	20	50	18	3.7	27
10	.09	126	24	52	159	103	114	18	34	41	65	22
11	.08	52	24	50	110	94	99	17	26	40	67	19
12	.08	35	24	63	112	802	86	18	22	28	71	16
13	.07	28	23	60	206	664	102	16	17	24	69	14
14	.05	24	41	55	204	284	99	12	14	15	75	11
15	.04	20	41	53	166	839	164	10	13	11	42	9.1
16	.03	26	61	49	222	388	137	8.6	12	8.6	29	7.8
17	.02	80	155	48	491	256	97	7.4	11	7.2	21	6.9
18	.02	60	96	143	238	205	81	6.4	8.2	6.1	17	6.0
19	.01	49	85	840	186	197	73	5.7	6.5	5.0	21	5.8
20	.01	47	72	516	157	1670	66	8.7	5.3	9.4	19	6.6
21	.01	39	67	256	139	797	58	15	4.5	90	14	6.0
22	.01	34	62	194	259	380	52	10	5.4	26	11	4.8
23	.01	32	55	161	193	275	46	8.2	12	15	8.6	4.2
24	.01	43	54	139	151	224	42	7.8	8.5	10	7.1	7.2
25	.00	125	51	119	332	186	40	9.3	6.0	8.3	6.1	9.0
26	.03	91	47	107	222	159	35	10	4.7	7.6	5.3	6.5
27	.03	69	48	99	172	140	32	8.4	4.0	6.4	4.6	5.0
28	.03	58	52	88	162	126	29	70	18	5.1	4.0	4.0
29	.02	51	47	92	---	137	25	132	18	5.1	4.1	3.4
30	.03	46	41	279	---	159	23	50	10	25	4.1	3.0
31	.03	---	37	161	---	133	---	32	---	25	5.7	---
TOTAL	2.43	1431.68	1496	4007	4672	9722	3074	624.5	618.1	710.5	630.9	692.3
MEAN	.078	47.7	48.3	129	167	314	102	20.1	20.6	22.9	20.4	23.1
MAX	.23	296	155	840	491	1670	365	132	79	90	75	135
MIN	.00	.03	23	32	67	94	23	5.7	4.0	5.0	3.6	3.0
CFSM	.00	.95	.97	2.59	3.34	6.27	2.05	.40	.41	.46	.41	.46
IN.	.00	1.07	1.11	2.98	3.48	7.23	2.29	.46	.46	.53	.47	.52

03573182 SCARHAM CREEK NEAR MCVILLE, AL--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.13	17.9	35.5	143	169	197	132	35.8	48.4	75.0	8.27	7.80
MAX	.31	47.7	53.8	227	283	314	231	71.9	110	199	20.4	23.1
(WY)	2000	2001	1999	1999	1999	2001	2000	1999	1999	1999	2001	2001
MIN	.000	2.11	4.63	73.9	60.3	129	63.8	15.4	14.2	3.01	.24	.16
(WY)	1999	1999	2000	2000	2000	1999	1999	2000	2000	2000	2000	1999

## SUMMARY STATISTICS

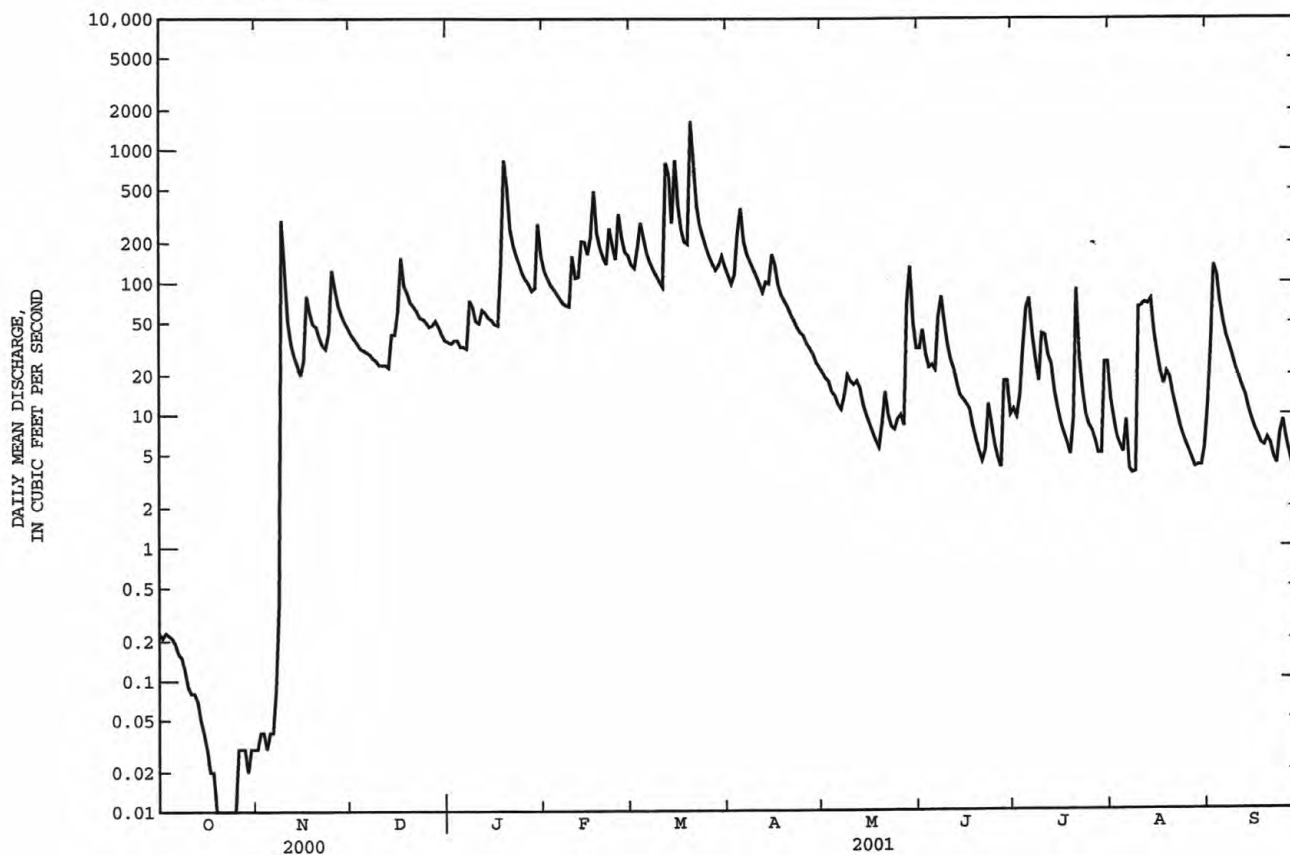
## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1998 - 2001

ANNUAL TOTAL	19475.08	27681.41	
ANNUAL MEAN	53.2	75.8	72.0
HIGHEST ANNUAL MEAN			94.4
LOWEST ANNUAL MEAN			45.9
HIGHEST DAILY MEAN	1770	Apr 3	1670
LOWEST DAILY MEAN	.00	Aug 17	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 17	.01
MAXIMUM PEAK FLOW			2410
MAXIMUM PEAK STAGE			10.16
INSTANTANEOUS LOW FLOW			a.00
ANNUAL RUNOFF (CFSM)	1.06		1.52
ANNUAL RUNOFF (INCHES)	14.49		20.59
10 PERCENT EXCEEDS	117		176
50 PERCENT EXCEEDS	23		32
90 PERCENT EXCEEDS	.02		.23

a Also occurred Oct. 25.



## TENNESSEE RIVER BASIN

03575500 TENNESSEE RIVER AT WHITESBURG, AL

LOCATION.--Lat 34°34'18", long 86°33'29", Madison County, Hydrologic Unit 06030002, at Whitesburg, on right bank 2,500 ft upstream from Aldridge Creek, 3,000 ft upstream from Clement C. Clay Bridge on U.S. Highway 231, 11.0 mi south of Huntsville, 15.1 mi downstream from Guntersville Dam, and at mile 333.9.

DRAINAGE AREA.--25,610 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1924 to September 1997. October 1997 to September 1999 (gage height only). Monthly discharge only for some periods, published in WSP 1306. October 1999 to current year (discharge). Prior to October 1936, published as "at Decatur." Gage-height records collected in this vicinity since 1875 (fragmentary prior to April 1909) are contained in files of U.S. Army Corps of Engineers and in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 549.00 ft above sea level. Oct. 1, 1924, to Dec. 2, 1926, nonrecording gage, and Dec. 3, 1926, to Sept. 30, 1936, water-stage recorder, at site 28.3 mi downstream at datum 14.70 ft lower. Oct. 1, 1936, to Sept. 30, 1960, water-stage recorder 830 ft downstream at same datum. Since Mar. 4, 1937, auxiliary gage is located 28.3 mi downstream.

REMARKS.--No estimated daily discharges, records fair. Flow almost completely regulated.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 323,000 ft<sup>3</sup>/s, Mar. 19, 1973, gage height 26.06 ft. Maximum gage height (since October 1997), 16.41 ft, Jan. 9, 1998; minimum gage height (since October 1997), 1.08 ft, Jan. 3, 4, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 121,000, Jan. 21; maximum gage height, 13.13 ft; minimum discharge, 0 ft<sup>3</sup>/s, many days, minimum gage height 1.08 ft, Jan. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11300	29600	35100	9420	31200	79400	8240	16500	8100	14600	33300	13900
2	23900	28100	12000	25700	34200	67800	24400	15800	13200	27100	29700	12800
3	36200	24900	21800	10500	32100	51700	8060	12500	13800	12700	31800	28500
4	45200	5300	27100	4550	2300	43800	8100	10300	30400	11600	21900	33700
5	36800	4370	22900	11800	17000	36600	13700	5590	14300	13600	25300	33000
6	22500	23800	16800	6580	17900	36700	9060	6280	21400	40200	24900	34000
7	11900	15400	19900	7730	23600	36100	6030	9120	23800	20600	23500	36400
8	21100	23300	11400	9650	14300	34400	12300	9410	29700	19400	24100	22600
9	32800	38200	10700	8040	21500	33200	11200	14500	19200	27500	22800	19900
10	32500	53300	11900	18400	16800	8830	10800	13900	28700	12700	30700	20100
11	19200	26700	9030	9250	24500	15400	9340	15300	26100	14300	61100	23200
12	25500	23600	37800	9250	31100	8820	9450	6970	25500	13100	37600	24700
13	26800	34600	24000	5580	11800	27800	8960	3570	16100	6700	47300	26100
14	10300	42700	11300	7230	23800	37400	13400	12000	17300	13000	35900	35500
15	12200	34800	5260	6730	32900	48000	22400	12100	9980	9660	41400	1560
16	25800	34200	8920	11000	46400	56200	29500	22200	17900	25600	46800	8010
17	19900	31400	47900	9230	79000	39300	36900	13900	14200	10800	45600	30400
18	33900	32600	58700	24900	89100	35200	30800	13400	21500	9920	29300	30200
19	30200	17300	68200	62400	94700	35400	30300	5500	14200	6740	25400	28900
20	32800	29900	53600	94900	99400	61300	20000	3020	13100	5810	29000	22500
21	13300	34300	37600	119000	97400	86200	6500	4530	12700	13800	29200	32100
22	6840	37500	42800	103000	96100	64600	7660	7120	11100	12700	30900	18400
23	35500	5570	32000	66300	92500	54100	21200	4680	9530	20500	31400	8930
24	38100	11200	14200	53800	84400	24000	8860	5660	9230	13200	20100	37700
25	37000	10500	13800	50800	85000	21100	3150	3040	28500	13100	26400	31700
26	31700	6530	34800	49600	87300	35300	5040	3800	11500	10700	26800	22500
27	25200	14200	32800	43800	86500	34900	4070	3520	12500	4020	31400	15000
28	13300	16100	31400	35600	83600	35000	4650	3940	12400	14800	38300	19500
29	15100	23900	17500	40000	---	31900	4410	32000	26700	16500	29300	7030
30	22400	38300	8550	46000	---	33700	14800	31300	19800	40300	28100	6480
31	19500	---	12900	29200	---	10600	---	13200	---	33800	23200	---
TOTAL	768740	752170	792660	989940	1456400	1224750	403280	334650	532440	509050	982500	685310
MEAN	24800	25070	25570	31930	52010	39510	13440	10800	17750	16420	31690	22840
MAX	45200	53300	68200	119000	99400	86200	36900	32000	30400	40300	61100	37700
MIN	6840	4370	5260	4550	2300	8820	3150	3020	8100	4020	20100	1560

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## TENNESSEE RIVER BASIN

03578000 ELK RIVER NEAR PELHAM, TN

LOCATION.--Lat 35°17'48", long 85°52'12", Grundy County, Hydrologic Unit 06030003, on right bank at downstream side of bridge on U.S. Highway 41, 1.1 mi southeast of Pelham, 1.8 mi upstream from Caldwell Creek, and at mile 194.2.

DRAINAGE AREA.--65.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1951 to November 1987, November 2000 to September 2001.

REVISED RECORDS.--WRD TN 1973: 1963(P), 1965(M), 1966(P), 1969(M), 1970-71(P).

GAGE.--Data collection platform. Datum of gage is 980.99 ft above sea level (levels by U.S. Army Corps of Engineers). Gage at datum 0.63 ft higher prior to Nov. 30, 1987.

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, 15,800 ft<sup>3</sup>/s, Mar. 16, 1973, gage height, 14.08 ft; minimum, 1.0 ft<sup>3</sup>/s, Sept. 27, 28, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	2300	*2,920	*10.82	Feb 17	0600	2,270	10.33
Jan 19	2130	2,200	10.27	Apr 13	2145	1,590	9.71

Minimum discharge, 3.5 ft<sup>3</sup>/s, Nov. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR NOVEMBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e3.1	33	50	197	216	88	50	14	12	89	134
2	---	e2.8	29	46	159	178	75	96	18	15	50	240
3	---	e2.6	26	41	131	152	72	70	20	23	37	164
4	---	e2.3	23	41	113	152	88	49	25	68	37	115
5	---	e2.5	22	41	98	241	81	38	30	159	34	101
6	---	e5.0	21	41	84	196	74	30	23	92	66	68
7	---	9.0	20	40	72	164	69	25	27	56	57	48
8	---	25	18	40	63	141	63	22	134	37	38	36
9	---	610	17	37	63	124	58	24	131	27	29	28
10	---	302	16	33	313	106	54	23	68	22	478	26
11	---	139	16	33	247	92	50	21	40	19	1130	25
12	---	81	16	e37	206	128	58	20	27	16	432	21
13	---	55	38	e40	187	314	1020	31	20	15	973	18
14	---	43	271	e36	354	228	1040	22	16	14	758	15
15	---	34	238	e34	773	384	464	17	13	12	279	13
16	---	41	1260	e31	1410	431	387	14	23	11	160	12
17	---	147	1830	e56	1890	289	272	12	29	10	117	11
18	---	112	623	76	885	216	200	10	18	8.9	89	9.8
19	---	76	324	1200	426	177	162	8.9	13	8.1	70	200
20	---	55	218	1470	297	683	133	8.3	9.7	7.7	57	280
21	---	42	171	559	244	840	112	7.7	7.7	7.6	42	121
22	---	34	135	311	576	419	93	8.8	7.5	7.1	32	74
23	---	30	109	230	502	290	79	18	7.4	6.9	26	52
24	---	30	95	186	327	224	69	14	8.8	7.0	22	51
25	---	101	84	151	783	182	62	11	7.6	35	19	76
26	---	109	74	125	779	150	52	9.4	27	594	16	59
27	---	78	72	111	383	127	45	8.2	19	146	15	44
28	---	59	80	92	278	109	40	8.9	13	70	13	36
29	---	48	72	86	---	99	35	23	13	193	13	29
30	---	40	62	331	---	97	30	26	11	357	14	25
31	---	---	54	271	---	96	---	17	---	161	15	---
TOTAL	---	2318.3	6067	5876	11840	7245	5125	743.2	820.7	2217.3	5207	2131.8
MEAN	---	77.3	196	190	423	234	171	24.0	27.4	71.5	168	71.1
MAX	---	610	1830	1470	1890	840	1040	96	134	594	1130	280
MIN	---	2.3	16	31	63	92	30	7.7	7.4	6.9	13	9.8
CFSM	---	1.18	2.98	2.89	6.45	3.56	2.60	.37	.42	1.09	2.56	1.08
IN.	---	1.31	3.44	3.33	6.71	4.11	2.91	.42	.47	1.26	2.95	1.21

e--Estimated



TENNESSEE RIVER BASIN

189

03578000 ELK RIVER NEAR PELHAM, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	42.8	116	205	243	266	281	223	138	44.1	35.3	29.9	25.9
MAX	341	562	475	679	601	707	522	362	178	118	168	174
(WY)	1976	1958	1973	1974	1956	1973	1977	1984	1961	1972	2001	1979
MIN	1.92	2.24	4.56	31.5	67.3	103	50.2	18.8	7.24	3.66	2.39	1.69
(WY)	1979	1957	1988	1981	1968	1985	1986	1987	1982	1954	1980	1954

SUMMARY STATISTICS

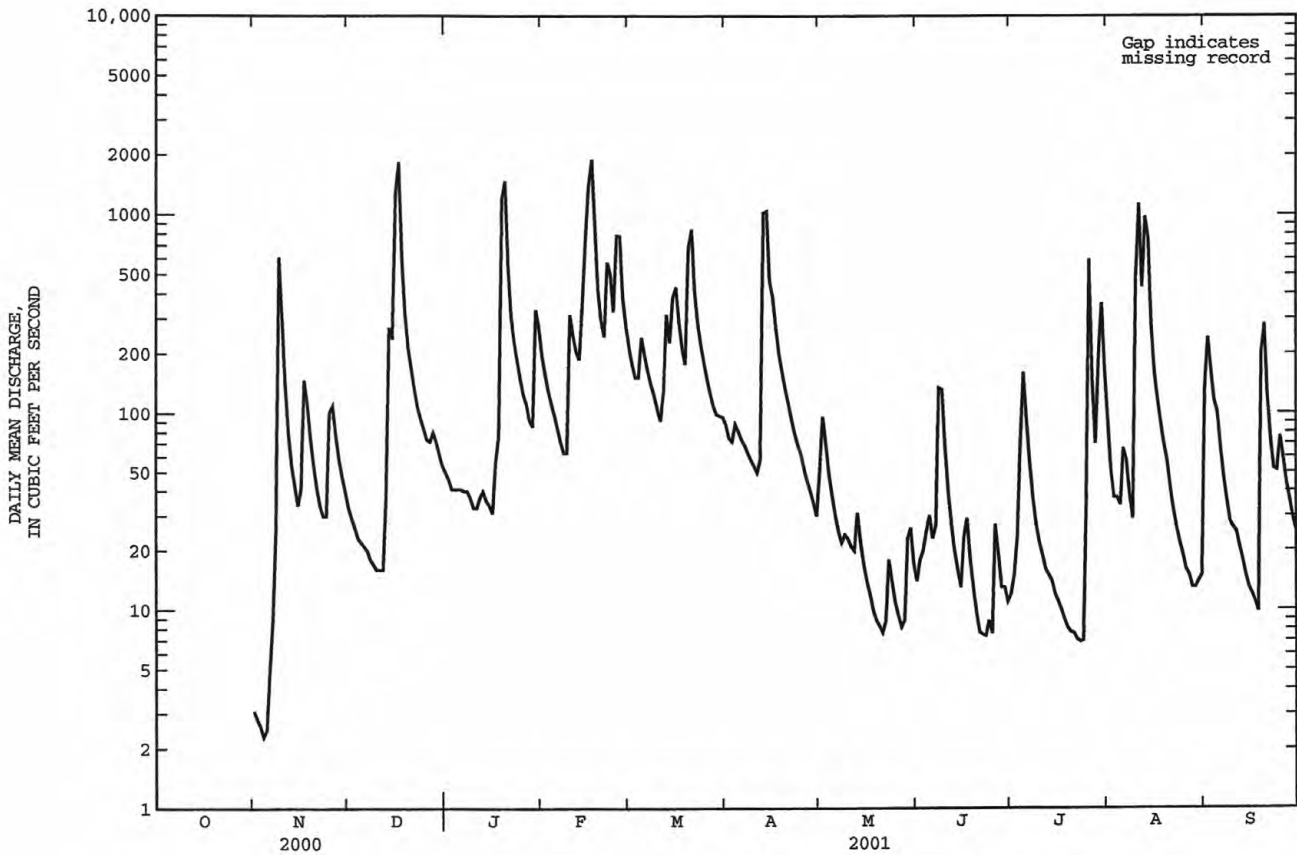
FOR 2001 WATER YEAR

WATER YEARS 1952 - 2001

ANNUAL TOTAL	49591.3		
ANNUAL MEAN	148	137	
HIGHEST ANNUAL MEAN		235	1973
LOWEST ANNUAL MEAN		5.47	1988
HIGHEST DAILY MEAN	1890	Feb 17	8800
LOWEST DAILY MEAN	2.3	Nov 4	1.0
ANNUAL SEVEN-DAY MINIMUM	3.9	Nov 1	1.2
MAXIMUM PEAK FLOW	2920	Dec 16	15800
MAXIMUM PEAK STAGE	10.82	Dec 16	a14.08
INSTANTANEOUS LOW FLOW	3.5	Nov 6	b1.0
ANNUAL RUNOFF (CFSM)	2.26		2.09
ANNUAL RUNOFF (INCHES)	28.12		28.41
10 PERCENT EXCEEDS	356		307
50 PERCENT EXCEEDS	55		53
90 PERCENT EXCEEDS	11		4.2

a Previous datum.

b Also occurred Sept. 28.



## TENNESSEE RIVER BASIN

035825882 CANE CREEK NEAR HOWELL, TN

LOCATION.--Lat 35°13'22", long 86°37'23", Lincoln County, Hydrologic Unit 06030003, on upstream left bank at bridge, on Brown Teal, Sawyer Road, 1 mi southeast of Howell.

DRAINAGE AREA.--106 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1998 to September 2001 (discontinued).

GAGE.--Data logger. Datum of gage is 680.00 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	2030	4,310	16.07	Feb 17	0030	*5,640	*17.31
Jan 19	1145	4,070	15.74	Mar 20	1545	3,460	14.64
Feb 15	0630	3,120	13.78	Apr 13	0945	2,920	13.23
Feb 15	2200	2,710	12.62	Aug 10	1645	2,640	12.42

No flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	.35	28	23	146	127	48	21	105	8.2	.70	51
2	.67	.35	24	20	108	106	42	20	93	6.8	.73	86
3	.51	.37	20	19	84	89	40	18	63	5.2	.96	107
4	.47	1.1	18	18	71	90	86	15	50	4.3	1.1	65
5	.44	1.2	16	18	61	103	134	14	37	8.7	.89	41
6	.46	1.1	14	18	53	88	82	12	29	15	.66	28
7	.33	1.1	13	16	47	75	65	12	147	10	.57	21
8	.21	14	12	16	42	67	56	104	225	6.2	1.2	17
9	.18	798	11	14	43	61	51	61	122	6.7	2.0	42
10	.20	155	10	13	214	54	46	47	77	37	859	56
11	.18	68	9.9	13	125	50	42	51	52	19	241	36
12	.19	44	9.0	24	122	56	69	91	39	9.6	156	23
13	.16	33	83	32	139	84	1410	56	29	5.9	333	283
14	.12	26	580	30	781	72	506	34	23	4.0	222	94
15	.10	20	193	29	2100	369	419	26	35	2.8	86	43
16	.14	23	2380	26	2540	284	282	21	65	2.2	46	28
17	.11	67	979	24	2320	176	180	17	31	1.9	29	20
18	.02	52	291	246	531	132	131	14	21	1.7	21	15
19	.00	39	170	3110	299	109	105	13	16	1.4	18	182
20	.00	31	112	802	197	1690	86	13	13	1.3	15	508
21	.10	24	87	340	147	759	71	21	11	1.3	12	157
22	.26	20	66	201	648	360	59	78	10	1.1	9.1	91
23	.28	18	54	141	307	226	50	37	10	1.1	7.6	59
24	.30	19	48	110	208	163	49	26	8.8	1.3	6.4	833
25	.28	195	41	84	861	124	41	19	7.2	2.0	5.5	276
26	.40	125	36	69	366	99	35	15	6.2	1.5	4.7	144
27	.41	74	36	61	230	82	32	12	5.9	1.1	32	95
28	.37	53	34	52	165	70	29	346	8.0	1.2	51	67
29	.35	41	30	105	---	65	26	223	7.1	1.3	17	48
30	.30	32	27	685	---	60	23	97	7.4	1.2	12	37
31	.32	---	24	239	---	54	---	101	---	.83	11	---
TOTAL	8.75	1976.57	5455.9	6598	12955	5944	4295	1635	1353.6	171.83	2203.11	3553
MEAN	.28	65.9	176	213	463	192	143	52.7	45.1	5.54	71.1	118
MAX	.89	798	2380	3110	2540	1690	1410	346	225	37	859	833
MIN	.00	.35	9.0	13	42	50	23	12	5.9	.83	.57	15
CFSM	.00	.84	2.23	2.70	5.87	2.43	1.82	.67	.57	.07	.90	1.50
IN.	.00	.93	2.58	3.11	6.12	2.81	2.03	.77	.64	.08	1.04	1.68

035825882 CANE CREEK NEAR HOWELL, TN--Continued

191

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.41	23.1	139	363	255	240	193	88.1	47.3	6.52	24.1	40.9
MAX	3.95	65.9	206	807	463	277	371	172	84.0	7.56	71.1	118
(WY)	1999	2001	1999	1999	2001	1999	2000	1999	2000	1999	2001	2001
MIN	.000	1.25	35.8	69.1	97.9	192	65.1	39.8	12.7	5.54	.11	.000
(WY)	2000	2000	2000	2000	2000	2001	1999	2000	1999	2001	1999	1999

SUMMARY STATISTICS

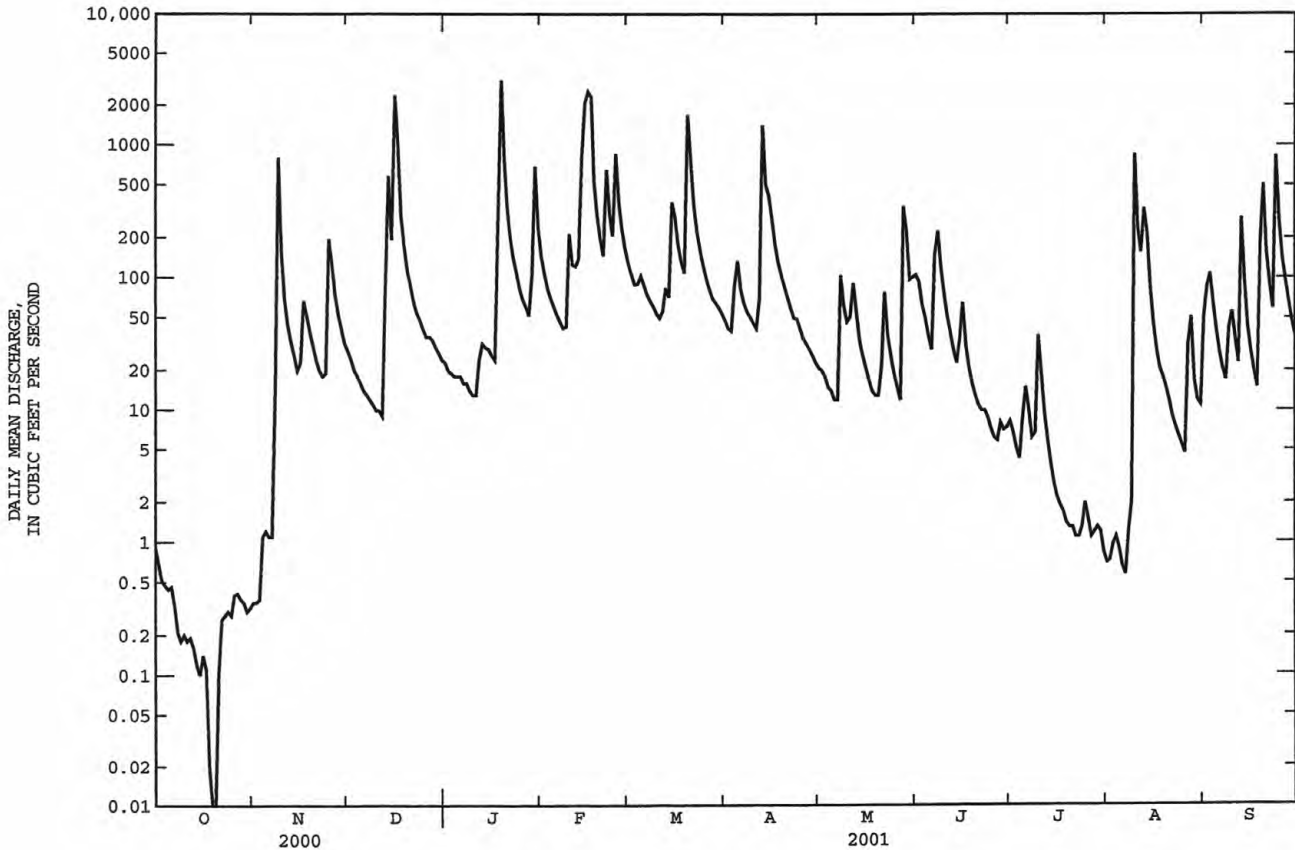
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1999 - 2001

ANNUAL TOTAL	35429.21	46149.76	
ANNUAL MEAN	96.8	126	118
HIGHEST ANNUAL MEAN			148
LOWEST ANNUAL MEAN			79.6
HIGHEST DAILY MEAN	2710	Apr 3	3110
LOWEST DAILY MEAN	.00	Oct 19	.00
ANNUAL SEVEN-DAY MINIMUM	.07	Oct 15	.07
MAXIMUM PEAK FLOW			5640
MAXIMUM PEAK STAGE			17.31
INSTANTANEOUS LOW FLOW			a.00
ANNUAL RUNOFF (CFSM)	1.23		1.60
ANNUAL RUNOFF (INCHES)	16.73		21.79
10 PERCENT EXCEEDS	193		243
50 PERCENT EXCEEDS	24		35
90 PERCENT EXCEEDS	.28		.72

a No flow many days most years.



## TENNESSEE RIVER BASIN

035825882 CANE CREEK NEAR HOWELL, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 18...	1030	1.98	321	7.6	17.0	752	3.4	6.6	70	--	180	13	59.8
NOV 07...	1330	1.1	408	7.8	18.5	755	4.5	5.0	54	K160	190	9	63.9
09...	1100	1420	245	7.7	18.0	746	140	7.2	78	7300	110	12	36.9
DEC 13...	1145	8.4	418	8.0	4.0	751	2.4	11.8	91	K90	210	20	71.7
JAN 11...	0945	13	394	8.2	1.5	748	2.9	12.6	92	K42	200	20	67.6
FEB 13...	1000	121	371	8.2	9.0	752	6.6	10.5	92	K480	180	18	62.5
16...	1145	1640	246	8.0	12.5	742	51	9.3	90	3800	120	13	41.8
MAR 14...	0945	73	340	8.2	11.5	742	7.1	10.4	98	K230	170	14	59.5
APR 10...	1015	46	314	8.2	19.5	743	6.5	9.5	106	--	180	22	61.4
MAY 17...	0900	17	397	8.0	20.0	742	8.3	5.8	66	500	200	28	67.2
JUN 05...	1200	38	--	--	--	--	--	--	--	--	--	--	--
JUL 10...	0915	54	375	7.9	25.0	740	27	5.3	66	24000	190	19	62.8
AUG 07...	0945	.55	354	7.9	26.0	748	6.8	4.2	52	<3	170	20	57.5
SEP 12...	1200	23	418	8.0	22.0	750	6.3	7.0	82	180	210	31	71.6

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
OCT 18...	7.52	2.5	3	.1	2.95	204	167	15.3	7.7	<.2	1.9	211	199
NOV 07...	8.44	2.9	3	.1	4.25	226	185	12.1	9.0	.2	5.1	234	218
09...	4.37	1.4	3	.1	5.04	120	100	10.5	3.6	.2	5.5	155	136
DEC 13...	8.14	2.6	3	.1	1.47	235	195	17.4	7.2	<.2	1.4	240	230
JAN 11...	7.52	2.6	3	.1	1.33	219	180	16.5	6.1	<.1	2.3	228	218
FEB 13...	6.52	2.0	2	.1	1.03	201	165	14.4	5.5	<.1	2.6	212	199
16...	4.06	1.3	2	.0	1.55	132	108	8.8	2.9	<.1	5.6	150	137
MAR 14...	6.33	1.9	2	.1	.99	196	161	13.9	4.8	<.2	1.2	209	187
APR 10...	6.79	2.2	3	.1	1.01	194	159	13.9	4.4	<.1	.9	202	188
MAY 17...	7.21	2.2	2	.1	1.40	207	170	13.8	5.6	.2	3.0	230	207
JUN 05...	--	--	--	--	--	--	--	12.6	5.6	<.1	--	235	--
JUL 10...	7.36	2.6	3	.1	2.44	205	168	10.8	7.5	.2	4.9	213	203
AUG 07...	7.09	2.3	3	.1	2.39	186	153	8.8	6.8	<.2	5.7	209	183
SEP 12...	8.33	2.6	3	.1	2.30	222	182	12.3	5.7	<.1	5.7	244	222

K--Results based on non-ideal colony count.

## TENNESSEE RIVER BASIN

193

035825882 CANE CREEK NEAR HOWELL, TN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 18...	.29	--	<.006	.070	<.041	.32	.41	.48	.173	.203	.183	<10	20.8
NOV 07...	.32	--	E.003	E.046	<.041	.32	.40	--	.330	.286	.254	20	56.0
NOV 09...	.21	1.65	.022	1.67	.049	.65	1.9	3.5	1.53	.677	.608	30	5.6
DEC 13...	.33	--	E.003	.890	<.041	.14	.19	1.1	.187	.177	.154	10	22.1
JAN 11...	.31	--	E.005	1.27	<.041	.12	.14	1.4	.171	.174	.156	<10	16.0
FEB 13...	.29	--	<.006	1.09	<.041	.15	.28	1.4	.168	.155	.146	<10	10.1
FEB 16...	.20	--	E.004	1.15	.048	.34	.57	1.7	.613	.284	.256	<10	8.5
MAR 14...	.28	--	E.003	.445	<.041	.19	.58	1.0	.158	.132	.116	<10	10.2
APR 10...	.27	--	E.005	.398	<.041	.13	.28	.68	.156	.133	.116	<10	10.5
MAY 17...	.31	.914	.015	.929	E.032	.21	.29	1.2	.226	.190	.189	<10	19.8
JUN 05...	--	1.17	.007	1.18	<.040	.17	.36	1.5	.250	.204	.189	--	--
JUL 10...	.29	.592	.025	.617	.041	.31	.58	1.2	.386	.251	.251	<10	32.9
AUG 07...	.28	--	E.005	.116	.042	.33	.42	.54	.284	.256	.214	<10	33.4
SEP 12...	.33	--	E.005	.819	E.022	.23	.30	1.1	.304	.276	.250	<10	18.8

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 18...	3.3	.4	4	75
NOV 07...	--	--	4	88
NOV 09...	--	--	201	94
DEC 13...	--	--	4	60
JAN 11...	--	--	2	85
FEB 13...	--	--	8	89
FEB 16...	--	--	71	88
MAR 14...	--	--	8	93
APR 10...	--	--	10	87
MAY 17...	--	--	12	80
JUN 05...	--	--	11	96
JUL 10...	--	--	30	98
AUG 07...	--	--	16	55
SEP 12...	--	--	--	94

E--Estimated



## TENNESSEE RIVER BASIN

03584020 RICHLAND CREEK AT HWY 64 NEAR PULASKI, TN

LOCATION.--Lat 35°12'39", long 87°06'01", Giles County, Hydrologic Unit 06030004, bridge on Highway 64, 4.1 miles west of Pulaski.

DRAINAGE AREA.--366 mi<sup>2</sup>.

PERIOD OF RECORD.--April 27, 1934 to September 30, 1975 published as "near Pulaski", February to September 2001.

GAGE.--Data collection platform and pressure sensor. Datum of gage is 637.29 ft above sea level. April 27, 1934 to September 30, 1975, recording at gage at site 1,200 ft upstream at datum 5.25 ft higher.

REMARKS.--Records good, except for estimated discharges, which are fair. 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 4,630 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 17	0400	*20,200	*24.13	Apr 13	2015	4,820	15.74
Mar 21	0815	8,650	19.34				

Minimum discharge, 81 ft<sup>3</sup>/s, Sept. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR FEBRUARY 2001 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	e830	1320	598	271	700	260	95	137
2	---	---	---	---	e680	1140	537	255	572	189	87	144
3	---	---	---	---	e590	1000	507	228	476	160	174	145
4	---	---	---	---	e520	1040	607	205	524	137	141	143
5	---	---	---	---	e485	1000	1020	190	649	745	112	128
6	---	---	---	---	e450	920	830	179	496	995	104	112
7	---	---	---	---	e415	859	730	174	783	560	95	103
8	---	---	---	---	391	806	653	215	1230	364	103	98
9	---	---	---	---	367	752	597	200	932	256	1310	105
10	---	---	---	---	611	686	554	184	689	314	2010	135
11	---	---	---	---	608	633	512	244	540	364	1630	111
12	---	---	---	---	619	643	522	395	434	229	992	100
13	---	---	---	---	790	702	3180	266	341	198	1950	100
14	---	---	---	---	4790	640	3340	200	278	142	1230	100
15	---	---	---	---	7770	796	2180	171	301	121	780	97
16	---	---	---	---	12600	1030	1710	153	519	111	547	89
17	---	---	---	---	15400	926	1330	140	340	106	392	86
18	---	---	---	---	5850	823	1090	129	238	100	289	83
19	---	---	---	---	2850	757	939	131	187	95	240	308
20	---	---	---	---	2030	3140	825	152	157	97	192	1010
21	---	---	---	---	1590	7460	731	141	140	106	155	538
22	---	---	---	---	1800	3300	644	214	137	101	135	307
23	---	---	---	---	1640	2160	576	206	135	94	122	207
24	---	---	---	---	1420	1640	602	168	123	89	113	220
25	---	---	---	---	3660	1320	525	150	114	99	106	361
26	---	---	---	---	2920	1100	452	133	124	290	100	216
27	---	---	---	---	2040	942	404	121	123	147	99	159
28	---	---	---	---	1610	834	365	258	111	111	107	133
29	---	---	---	---	---	774	326	652	174	100	99	118
30	---	---	---	---	---	724	295	401	202	111	96	109
31	---	---	---	---	---	664	---	371	---	111	105	---
TOTAL	---	---	---	---	75326	40531	27181	6897	11769	6902	13710	5702
MEAN	---	---	---	---	2690	1307	906	222	392	223	442	190
MAX	---	---	---	---	15400	7460	3340	652	1230	995	2010	1010
MIN	---	---	---	---	367	633	295	121	111	89	87	83
CFSM	---	---	---	---	7.35	3.57	2.48	.61	1.07	.61	1.21	.52
IN.	---	---	---	---	7.66	4.12	2.76	.70	1.20	.70	1.39	.58

e Estimated

03584020 RICHLAND CREEK AT HWY 64 NEAR PULASKI, TN--Continued

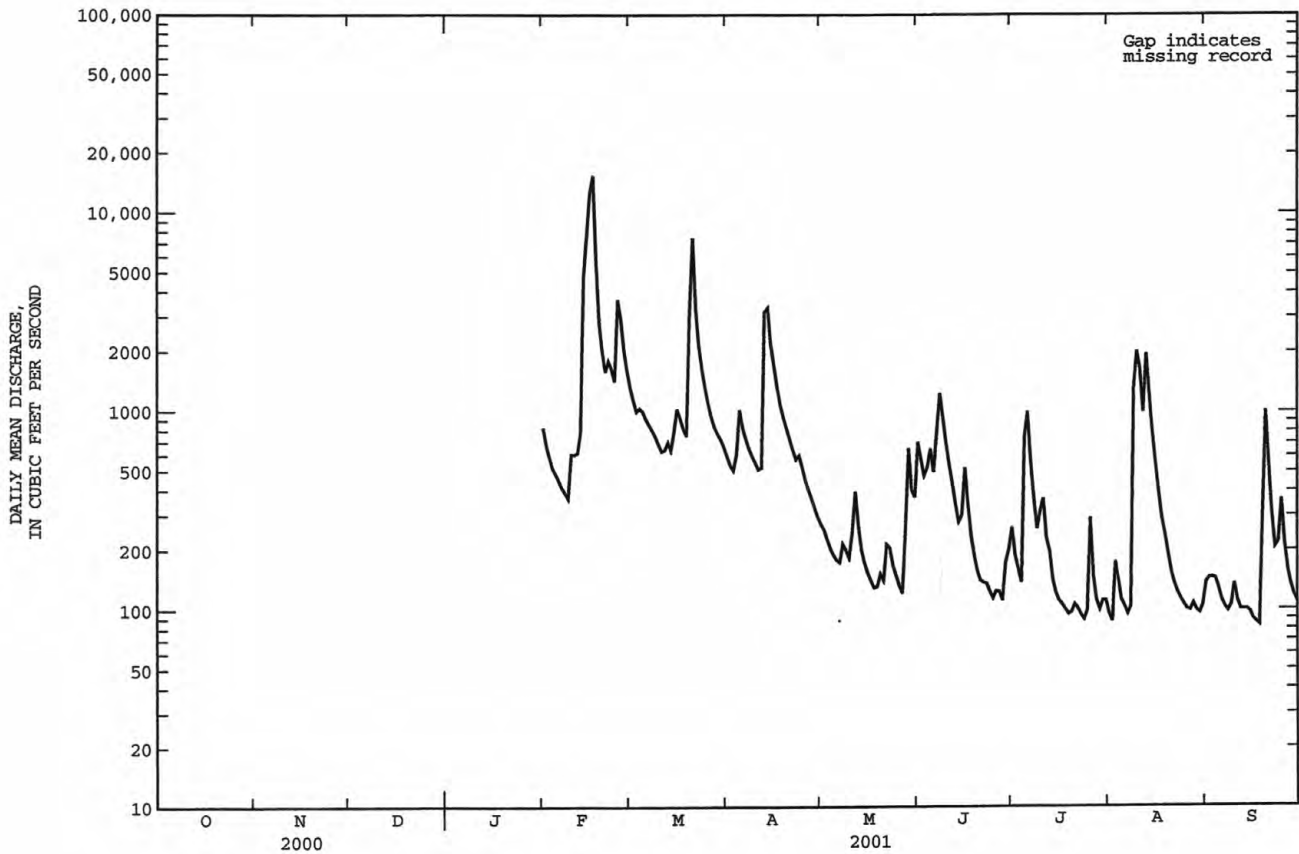
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	---	---	---	---	2690	1307	906	222	392	223	442	190
MAX	---	---	---	---	2690	1307	906	222	392	223	442	190
(WY)	---	---	---	---	2001	2001	2001	2001	2001	2001	2001	2001
MIN	---	---	---	---	2690	1307	906	222	392	223	442	190
(WY)	---	---	---	---	2001	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS

FOR 2001 WATER YEAR

HIGHEST DAILY MEAN	15400	Feb 17
LOWEST DAILY MEAN	83	Sep 18
ANNUAL SEVEN-DAY MINIMUM	94	Sep 12
MAXIMUM PEAK FLOW	20200	Feb 17
MAXIMUM PEAK STAGE	24.13	Feb 17
INSTANTANEOUS LOW FLOW	81	Sep 19
10 PERCENT EXCEEDS	1620	
50 PERCENT EXCEEDS	351	
90 PERCENT EXCEEDS	103	



03584600 ELK RIVER AT PROSPECT, TN

## WATER-QUALITY RECORDS

LOCATION.--Lat 35°00'51", long 86°59'41", Giles County, Hydrologic Unit 06030004, on right bank 25 ft upstream from county road bridge, 800 ft above abandoned L and N Railroad bridge, 0.4 mi above Ford Creek, 0.8 mi south of Prospect, 2.98 mi upstream from Tennessee-Alabama State line, and at mile 36.5.

DRAINAGE AREA.--1,805 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--January 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM HG) (00025)	TURBIDITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PERCENT SATURATION) (00301)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	HARDNESS NONCARBONATE DISSOLVED (MG/L AS CaCO3) (00904)	CALCIUM DISSOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DISSOLVED (MG/L AS Mg) (00925)	
OCT 17...	0930	238	7.8	16.0	762	8.1	8.3	84.1	E10	107	7	36.2	4.13	
NOV 07...	1030	232	7.9	16.5	758	8.1	8.0	82.4	68	106	4	35.5	4.12	
DEC 13...	0930	252	8.5	7.0	753	3.3	11.0	91.7	E20	122	11	41.5	4.45	
DATE		SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DISSOLVED FIELD (MG/L AS HCO3) (00453)	ALKALINITY WATER TOTAL FIELD (MG/L AS CaCO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C (070300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	
OCT 17...	3.2	6.00	.135	1.71	122	100	9.2	5.5	E.1	2.8	132	125	.2	
NOV 07...	3.3	6.27	.140	1.62	124	102	8.0	5.9	E.1	3.4	130	124	.2	
DEC 13...	2.5	4.18	.098	1.34	135	110	10.9	5.2	E.1	2.1	146	137	.2	
DATE		NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. TOTAL (MG/L AS N) (00623)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTICULATE TOTAL (MG/L AS C) (00689)
OCT 17...	E.003	.375	<.041	.19	.28	.654	.103	.075	.067	<10	19.9	1.7	.3	
NOV 07...	E.003	.246	<.041	.15	.51	.758	.076	.079	.060	30	24.3	--	--	
DEC 13...	<.006	.536	<.041	.16	.17	.710	.094	.077	.063	<10	22.5	--	--	
DATE							SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (80154)							
OCT 17...							10	89						
NOV 07...							8	96						
DEC 13...							4	89						

E--Estimated

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## TENNESSEE RIVER BASIN

03588500 SHOAL CREEK AT IRON CITY, TN

LOCATION.--Lat 35°01'27", long 87°34'44", Lawrence County, Hydrologic Unit 06030005, on right downstream bank at bridge, on county road, 400 ft downstream from Holly Creek, 1,350 ft upstream from Louisville and Nashville Railroad bridge, 1,350 ft northeast of Iron City Post Office, and at mile 22.3.

DRAINAGE AREA.--348 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1925 to September 1994, October 2000 to September 2001.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1113: 1927(M). WSP 1436: 1926(M), 1927-29, 1930(M), 1932, 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 534.22 ft above sea level. Prior to Feb. 25, 1931, nonrecording gage at railroad bridge, 1350 ft downstream at datum 0.85 ft. lower. Feb. 25, 1931, to Sept. 30, 1933, nonrecording gage at site 825 ft downstream and Oct. 1, 1933, to Sept. 30, 1957, water-stage recorder at site 750 ft downstream at datum 0.69 ft higher.

REMARKS.--No estimated daily discharges. Records good. Maximum gage height at present site and datum, 24.4 ft, from high water profile. Prior to January 1951, diurnal fluctuation at low flow caused by powerplant near Lawrenceburg. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREME OUTSIDE PERIOD OF RECORD.--Flood in March 1902 reached a stage about 3 ft higher than that of Mar. 21, 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 17	0130	10,200	12.52	Feb 17	0245	*25,200	*18.49
Jan 19	2030	8,390	11.42	Jul 6	0100	6,800	10.26

Minimum discharge, 101 ft<sup>3</sup>/s, Oct. 6, 7, 8, 9, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	115	194	224	700	885	452	322	477	453	292	409
2	116	114	185	214	575	759	422	315	397	315	236	854
3	113	114	177	204	496	681	409	304	350	873	209	1300
4	110	135	171	208	445	737	459	291	434	924	235	760
5	107	158	165	205	408	706	675	285	822	1420	206	525
6	104	146	160	204	372	633	546	279	526	2820	202	402
7	104	150	158	200	347	593	496	273	562	957	179	350
8	104	174	156	196	324	562	459	286	858	586	183	345
9	105	1310	154	188	320	537	436	285	609	435	261	331
10	108	533	151	182	512	506	416	274	465	377	396	302
11	110	279	152	188	462	482	398	273	394	348	653	255
12	111	217	158	242	478	494	415	480	356	341	541	233
13	111	194	188	224	558	522	2120	361	323	281	638	226
14	110	180	1050	216	3810	481	2000	288	301	252	551	238
15	109	165	542	218	4870	534	1330	268	306	255	367	215
16	109	175	3890	209	10300	580	1060	258	378	249	308	226
17	108	251	5150	210	13500	538	799	249	308	218	246	215
18	104	211	1470	447	3090	503	664	248	275	218	235	191
19	104	185	891	5170	1870	483	587	252	259	227	234	296
20	107	171	627	3860	1350	1330	537	296	250	236	226	927
21	110	155	509	1680	1050	2850	491	281	243	258	197	538
22	114	154	424	1070	1080	1590	449	337	251	227	187	388
23	113	154	363	785	936	1160	422	328	256	206	181	336
24	112	172	332	631	803	906	506	287	241	200	177	381
25	111	549	301	529	3540	745	439	273	233	228	172	331
26	114	443	279	458	2160	640	398	256	230	325	168	271
27	135	309	278	415	1410	570	378	247	319	258	242	252
28	140	254	271	374	1090	527	363	299	264	214	363	225
29	139	230	254	388	---	505	356	393	337	211	223	211
30	127	209	241	1240	---	493	336	309	354	853	210	194
31	117	---	229	931	---	474	---	328	---	532	252	---
TOTAL	3505	7606	19270	21510	56856	23006	18818	9225	11378	15297	8770	11727
MEAN	113	254	622	694	2031	742	627	298	379	493	283	391
MAX	140	1310	5150	5170	13500	2850	2120	480	858	2820	653	1300
MIN	104	114	151	182	320	474	336	247	230	200	168	191
CFSM	.32	.73	1.79	1.99	5.83	2.13	1.80	.86	1.09	1.42	.81	1.12
IN.	.37	.81	2.06	2.30	6.08	2.46	2.01	.99	1.22	1.64	.94	1.25



## 03588500 SHOAL CREEK AT IRON CITY, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	228	433	764	1034	1222	1309	991	728	380	298	223	223
MAX	1290	1894	2968	3604	3562	3626	2227	3425	1876	1131	615	1296
(WY)	1933	1978	1927	1974	1948	1975	1964	1991	1928	1932	1926	1979
MIN	69.4	123	165	170	273	373	222	169	118	105	94.8	64.8
(WY)	1932	1955	1964	1981	1941	1966	1986	1936	1988	1943	1988	1925

## SUMMARY STATISTICS

FOR 2001 WATER YEAR

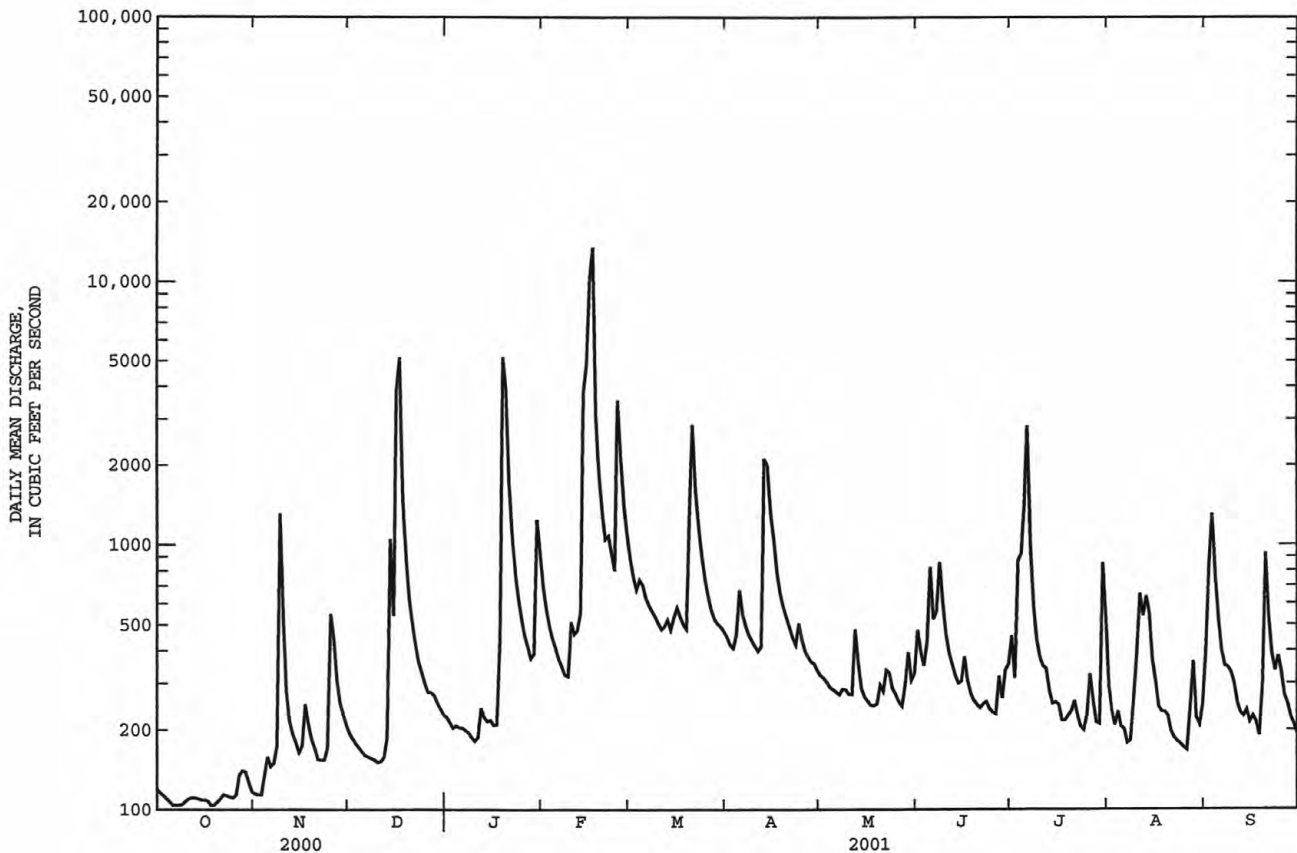
WATER YEARS 1925 - 2001

ANNUAL TOTAL	206968	
ANNUAL MEAN	567	651
HIGHEST ANNUAL MEAN		1178
LOWEST ANNUAL MEAN		281
HIGHEST DAILY MEAN		44000
LOWEST DAILY MEAN	13500	Feb 17
ANNUAL SEVEN-DAY MINIMUM	104	Oct 6
MAXIMUM PEAK FLOW	25200	Feb 17
MAXIMUM PEAK STAGE	18.49	Feb 17
INSTANTANEOUS LOW FLOW	c101	Oct 6
ANNUAL RUNOFF (CFSM)	1.63	1.87
ANNUAL RUNOFF (INCHES)	22.12	25.40
10 PERCENT EXCEEDS	933	1290
50 PERCENT EXCEEDS	308	313
90 PERCENT EXCEEDS	148	129

a From rating curve extended above 50,000 ft<sup>3</sup>/s on basis of slope-area measurement.

b Site and datum then in use (see REMARKS).

c Also occurred Oct. 7, 8, 9, 18.



## TENNESSEE RIVER BASIN

03589500 TENNESSEE RIVER AT FLORENCE, AL

LOCATION.--Lat 34°47'13", long 87°40'12", Lauderdale County, Hydrologic Unit 06030005, on right bank at lower end of Patton Island, 137 ft upstream from Southern Railway bridge, 700 ft upstream from O'Neal Bridge on U.S. Highway 72, 1.1 mi south of Florence Post Office, 1.7 mi upstream from Cypress Creek, 2.7 mi downstream from Wilson Dam, and at mile 256.7.

DRAINAGE AREA.--30,810 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--November 1871 to September 1894 (gage height only), October 1894 to September 1997. October 1997 to September 1999 (gage height only), October 1999 to current year (discharge).

REVISED RECORDS.--WSP 473: 1897(M). WSP 1306: 1914(M), 1936 (monthly runoff). WSP 1436: 1897, 1899, 1916.

GAGE.--Water-stage recorder. Datum of gage is 401.12 ft above sea level. Prior to Apr. 1, 1926, several National Weather Service staff gages at or near Southern Railway bridge 137 ft downstream at same datum. Apr. 1, 1926, to Mar. 11, 1958, water-stage recorder on left bank at lower end of old lock and dam, 1,400 ft upstream at same datum. Since Oct. 1, 1938, auxiliary water-stage recorder 15.2 mi downstream.

REMARKS.--Records fair, except for estimated discharges, which are poor. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other reservoirs have been built above station. Flow now almost completely regulated.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 530,000 ft<sup>3</sup>/s, Mar. 17, 1973; maximum gage height, 32.50 ft, Mar. 19, 1897; maximum gage height (since October 1997), 21.15 ft, Apr. 23, 1998; minimum gage height (since October 1997), 8.09 ft, Dec. 6, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 206,000 ft<sup>3</sup>/s, Feb. 17, gage height 19.79 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27200	30700	44900	17400	33700	e105000	20400	40200	34300	25000	54400	25600
2	46700	34000	16800	58500	61700	e100000	42200	32900	22700	44100	54300	26900
3	55800	33600	17400	24400	39500	e34900	22700	22800	40100	37900	46800	31600
4	65100	23100	43900	15900	19700	e48000	15100	26000	56500	27000	28400	67800
5	56200	19500	20800	16200	50000	e65000	15000	15900	41000	28300	32500	65000
6	25100	20900	22500	14200	47400	73400	16900	16900	31200	67200	56400	71700
7	20300	27800	23800	12700	35800	71900	18900	21100	57200	40200	50200	44500
8	19300	32400	17300	15400	18800	57800	21800	18600	73600	32000	55700	46700
9	47200	35400	15700	14700	30300	41500	30600	27200	60700	46700	48200	44000
10	54500	59000	17400	34200	14400	17200	e34000	27100	61800	31900	35500	41300
11	26600	54700	18500	22000	21900	17000	e16000	34600	49000	34900	70500	38900
12	29600	24200	23300	16500	63700	31800	e14000	18500	43400	34200	69400	48500
13	33800	58500	16300	14300	32300	28200	e32000	15100	39100	37900	62400	48700
14	16900	e54000	19500	12400	29800	48900	51000	29400	37700	18100	65000	36200
15	19800	e53000	13200	16600	48500	63200	57500	26600	29000	16400	60900	12900
16	56900	e47000	e13500	16300	75200	74200	44400	46600	23300	31700	71400	16200
17	47100	e45000	43100	12900	151000	45400	59300	24500	29400	30400	75000	45000
18	47300	e42000	50100	18000	134000	49500	55100	20200	26600	28300	36500	55800
19	31600	e21000	82700	75700	148000	64300	55400	20200	33700	24500	37200	33500
20	39400	e53700	81000	100000	e115000	77400	43400	17600	32100	22700	33900	39100
21	20200	59700	81900	145000	e116000	98500	18700	23300	32700	17800	34500	57900
22	18500	37100	78200	139000	e117000	94100	14000	22100	27300	14500	55200	40800
23	47100	18600	45700	99100	e116000	92700	38600	18400	17700	20900	50200	31100
24	40800	14700	24100	103000	e115000	56600	23300	22600	16100	30400	63200	44300
25	56500	18400	24400	93800	e118000	56600	18000	18100	18100	29300	36300	38200
26	36700	18400	46400	88600	e118000	71200	17500	15800	29300	25000	36500	42800
27	45100	30500	63600	55900	e116000	66100	16600	17000	32200	26600	45300	31900
28	22200	33700	62600	42400	e117000	72800	16100	14400	27800	18300	45800	39800
29	17000	23800	43500	52800	---	47300	13500	49100	44500	22900	55100	15100
30	26500	55900	19000	61300	---	53900	33600	59300	23800	46300	48700	17400
31	41200	---	17900	60300	---	17700	---	45100	---	60100	40000	---
TOTAL	1138200	1080300	1109000	1469500	2103700	1842100	875600	807200	1091900	971500	1555400	1199200
MEAN	36720	36010	35770	47400	75130	59420	29190	26040	36400	31340	50170	39970
MAX	65100	59700	82700	145000	151000	105000	59300	59300	73600	67200	75000	71700
MIN	16900	14700	13200	12400	14400	17000	13500	14400	16100	14500	28400	12900

e Estimated

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## TENNESSEE RIVER BASIN

03593500 TENNESSEE RIVER AT SAVANNAH, TN

LOCATION.--Lat 35°13'29", long 88°15'26", Hardin County, Hydrologic Unit 06040001, on right bank at upstream side of bridge on U.S. Highway 64, at Savannah, 16.8 mi downstream from Pickwick Landing Dam, and at mile 189.9.

DRAINAGE AREA.--33,140 mi<sup>2</sup> approximately.

PERIOD OF RECORD.--September 1930 to current year. Gage-height records collected in this vicinity since June 1905, are in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 853: Drainage area. WSP 1306: 1936 (monthly runoff). WSP 2110: 1966. WRD TN-73-1: 1973-96. WRD TN- 74-1: 1973. WRD TN-85-1: 1985. WRD TN-90-1: 1989.

GAGE.--Data collection platform. Datum of gage is 350.06 ft above sea level (Levels by Tennessee Valley Authority). Prior to Oct. 1, 1992, at datum 50.06 ft lower, prior to Apr. 7, 1945, at datum 8.45 ft lower. Oct. 1, 1948 to Apr. 13, 1978 and Oct. 1, 1989 to present, auxiliary water-stage recorder on downstream end of lockwall in lower pool at Pickwick Landing Dam Apr. 13, 1978 to Sept. 30, 1989, auxiliary water-stage recorder over tailwater elevation well adjacent to the powerhouse which is an integral part of Pickwick Landing Dam, both sites 16.8 mi. upstream from base gage at same datum. Apr. 5, 1937, to Jan. 31, 1939, auxiliary nonrecording gage 4.0 mi downstream and Feb. 1, 1939, to Sept. 30, 1948, water-stage recorder 4.3 mi downstream from base gage at same datum.

REMARKS.--Records good, except for estimated discharges, which are fair. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other reservoirs have been built above station ((see p. 237) and Water Resources Data for adjoining states). Periodic observations of specific conductance and water temperature are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1867, 101.2 ft, Mar. 21, 1897, datum then in use, from floodmarks, discharge, 450,000 ft<sup>3</sup>/s, from rating curve extended above 320,000 ft<sup>3</sup>/s. Flood of Jan. 2, 1927, reached a stage of 92.7 ft datum then in use, discharge, 349,000 ft<sup>3</sup>/s. Minimum stage since 1905, 38.8 ft datum then in use, Sept. 8, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 170,000 ft<sup>3</sup>/s, Feb. 21; maximum gage height, 23.99 ft, Feb. 21; minimum daily discharge, 7,360 ft<sup>3</sup>/s, Apr. 26, minimum gage height, 3.99 ft, Dec. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15100	33300	49300	9730	51100	113000	20300	33800	36400	30100	52900	20200
2	32100	22100	13300	25000	61400	80000	37300	35800	35900	48300	56100	20500
3	48800	23800	10600	28000	50400	75900	8700	23500	36400	32400	48100	39200
4	55500	13100	29200	11900	14000	43500	13200	20000	54400	14600	28000	63500
5	46000	13200	26500	10700	41300	69700	21500	10200	30800	16700	28900	74200
6	24200	26400	18500	9380	51400	75500	38400	10600	30200	45500	40900	80400
7	9600	22400	15000	9660	35900	74200	17100	10100	40500	49400	43600	70200
8	10900	28300	12000	9890	16500	47900	17000	10200	79200	47400	41500	49200
9	38900	30000	12000	9850	24600	20900	29800	9630	51100	70400	46500	37400
10	45000	60500	12300	20200	16300	16700	30500	11400	57300	22900	61300	41000
11	17600	29500	14300	16000	19900	17500	19800	18400	76700	22300	32600	41800
12	16200	19000	23700	9610	54000	19900	15000	10700	79100	29200	61000	35400
13	29300	51600	15000	9310	32300	25200	30400	9630	51800	18800	71600	46300
14	11900	63100	12400	10100	30000	54100	35400	27900	43800	19500	65000	31500
15	13200	56700	11200	9720	44500	62700	43400	24000	27800	13400	74200	16200
16	42100	46000	11500	10500	66500	65100	61200	35100	18300	33600	79900	16000
17	45300	40400	12800	10200	124000	33700	64300	29900	23200	19600	81900	28800
18	38800	38700	62300	23100	159000	52100	64100	25800	29900	20100	49400	38100
19	23400	22100	82700	57800	160000	62900	64200	10300	23700	13700	35200	39800
20	27600	52100	83100	100000	165000	62400	63900	10300	19800	12800	36500	37200
21	10500	49400	76000	118000	170000	78700	8720	10700	25300	18700	39700	41800
22	10400	49200	81500	123000	166000	79600	9410	10700	18900	13100	60100	21600
23	40300	14200	54100	124000	153000	79300	38300	10500	13100	26300	45900	19300
24	47400	13300	21300	122000	142000	71900	23800	10900	12400	16500	48200	38200
25	44600	25800	23900	107000	141000	66200	9190	9660	30400	16900	42800	60800
26	44100	12000	57000	84600	140000	74900	7360	9900	19700	18800	27600	15200
27	23100	20200	60000	82500	137000	77000	8960	10800	19400	10800	41800	41300
28	12600	16200	62500	76300	134000	78400	9790	11200	16900	20400	44100	33300
29	12000	30100	46300	55600	---	47300	11300	27100	14200	22800	46100	10100
30	31200	45400	12100	65400	---	56500	26700	51400	27000	50300	42400	13700
31	35300	---	e10000	48000	---	23600	---	47200	---	44400	45600	---
TOTAL	903000	968100	1032400	1407050	2401100	1806300	849030	587320	1043600	839700	1519400	1122200
MEAN	29130	32270	33300	45390	85750	58270	28300	18950	34790	27090	49010	37410
MAX	55500	63100	83100	124000	170000	113000	64300	51400	79200	70400	81900	80400
MIN	9600	12000	10000	9310	14000	16700	7360	9630	12400	10800	27600	10100

e Estimated

03593500 TENNESSEE RIVER AT SAVANNAH, TN--Continued

203

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36250	46930	71310	88230	93010	85610	55500	47350	40540	38340	37460	34610
MAX	97010	147000	160100	223100	228100	185600	172300	140400	112900	84810	64740	71700
(WY)	1990	1958	1992	1974	1957	1973	1994	1984	1997	1989	1967	1950
MIN	18820	20510	26850	23710	30610	19840	11150	8977	10490	12910	15910	15800
(WY)	1955	1954	1981	1986	2000	1988	1986	1988	1988	1988	1988	1968

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

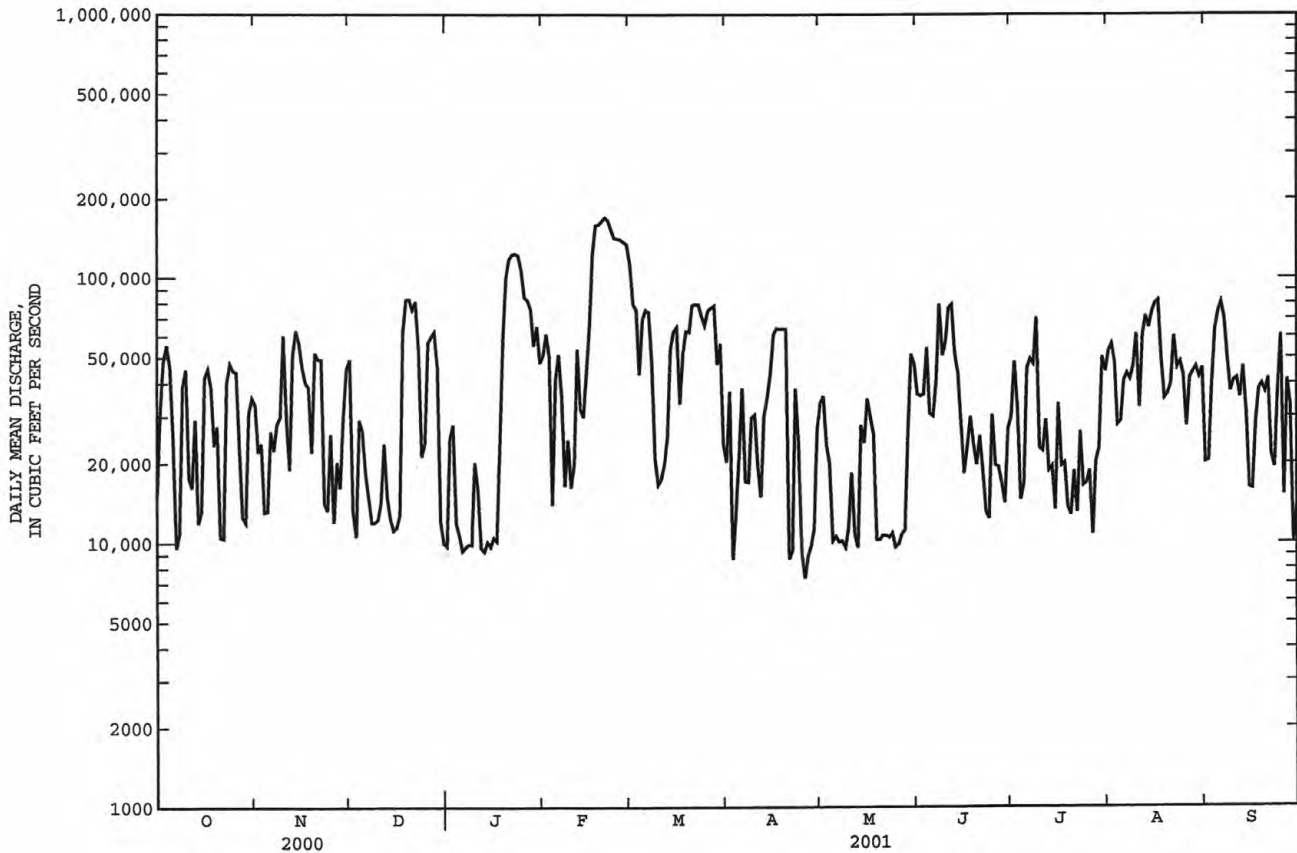
FOR 2001 WATER YEAR

\*WATER YEARS 1946 - 2001

ANNUAL TOTAL	11550360	14479200	
ANNUAL MEAN	31560	39670	56120
HIGHEST ANNUAL MEAN			86550
LOWEST ANNUAL MEAN			23090
HIGHEST DAILY MEAN	211000	Apr 5	170000
LOWEST DAILY MEAN	1400	Sep 17	7360
ANNUAL SEVEN-DAY MINIMUM	9140	May 15	10400
MAXIMUM PEAK FLOW			170000
MAXIMUM PEAK STAGE			23.99
INSTANTANEOUS LOW FLOW			7360
10 PERCENT EXCEEDS	58100		76500
50 PERCENT EXCEEDS	25400		30800
90 PERCENT EXCEEDS	9410		10700

\* Regulated period only.

a Datum then in use, see GAGE paragraph.





## TENNESSEE RIVER BASIN

03597210 GARRISON FORK ABOVE L&amp;N RAILROAD AT WARTRACE, TN

LOCATION.--Lat 35°30'42", long 86°19'26", Bedford County, Hydrologic Unit 06040002, on right bank 0.3 mi above L&N Railroad bridge, 0.6 mi below Knob Creek, 1.2 mi southeast of Wartrace, and at mile 3.2.

DRAINAGE AREA.--85.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Data collection platform and crest-stage gage. Datum of gage is 769.30 ft above sea level.

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 3,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	2000	6,320	13.83	Feb 16	2200	*6,930	*14.33
Jan 19	1100	3,910	11.56	Mar 20	1245	3,190	10.72
Feb 15	2100	4,940	12.61				

Minimum daily discharge, 3.5 ft<sup>3</sup>/s, Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	7.2	20	26	128	152	62	32	54	14	9.4	20
2	6.3	7.0	19	24	99	126	56	33	57	12	8.1	22
3	5.7	6.7	18	22	82	109	53	30	39	11	8.4	22
4	5.1	5.8	17	24	73	121	51	27	34	11	16	21
5	4.5	5.7	16	23	65	188	48	25	48	56	15	19
6	4.0	5.8	16	23	58	146	45	24	40	36	13	14
7	3.5	6.1	15	22	52	124	43	23	116	20	10	12
8	3.6	9.8	15	22	48	109	41	61	190	15	9.2	11
9	3.8	172	14	20	53	96	39	45	99	63	109	9.9
10	4.0	89	14	18	210	83	38	36	63	107	146	10
11	4.4	38	14	19	133	74	36	32	46	58	67	10
12	4.8	25	14	30	125	77	42	45	37	68	123	9.8
13	4.8	20	49	32	485	91	536	35	30	34	367	9.9
14	4.5	17	281	31	1240	79	314	28	28	23	189	9.9
15	4.2	15	131	30	2630	241	257	24	31	17	83	9.2
16	4.1	17	2860	28	3520	244	199	22	49	14	49	8.4
17	4.1	38	1200	27	2190	182	145	20	33	13	34	8.0
18	4.8	31	332	164	623	143	115	18	24	11	26	7.9
19	5.2	24	170	2730	359	122	97	17	20	10	23	13
20	4.6	21	111	879	240	1260	85	17	17	9.5	19	20
21	5.1	18	86	366	254	678	75	18	16	9.2	16	16
22	6.1	17	67	214	875	370	65	34	15	8.8	14	12
23	7.3	16	55	145	393	251	59	30	16	7.9	12	10
24	7.1	18	50	113	269	189	64	23	15	6.8	11	18
25	7.4	74	44	89	600	143	54	21	13	6.8	11	24
26	9.2	64	39	75	360	116	47	17	12	7.6	10	17
27	11	42	38	67	260	97	44	15	12	9.4	9.1	13
28	8.5	31	36	59	198	86	40	29	12	8.9	9.1	10
29	7.0	26	33	81	---	81	36	46	12	11	9.3	8.7
30	5.6	23	31	341	---	77	33	28	13	18	9.8	7.0
31	6.2	---	28	191	---	70	---	27	---	12	14	---
TOTAL	173.6	890.1	5833	5935	15622	5925	2819	882	1191	708.9	1449.4	402.7
MEAN	5.60	29.7	188	191	558	191	94.0	28.5	39.7	22.9	46.8	13.4
MAX	11	172	2860	2730	3520	1260	536	61	190	107	367	24
MIN	3.5	5.7	14	18	48	70	33	15	12	6.8	8.1	7.0
CF5M	.07	.35	2.20	2.24	6.53	2.24	1.10	.33	.46	.27	.55	.16
IN.	.08	.39	2.54	2.58	6.80	2.58	1.23	.38	.52	.31	.63	.18

## 03597210 GARRISON FORK ABOVE L&amp;N RAILROAD AT WARTRACE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	60.5	107	281	283	315	331	206	112	76.5	47.8	34.2	38.4
MAX	285	296	825	633	793	726	503	261	294	127	92.1	240
(WY)	1996	1997	1991	1999	1991	1994	1994	1997	1997	1999	1996	1992
MIN	5.09	10.6	22.1	28.4	91.4	191	60.2	28.5	19.4	9.06	7.33	3.90
(WY)	2000	2000	2000	2000	2000	2001	1999	2001	2000	2000	1999	1999

## SUMMARY STATISTICS

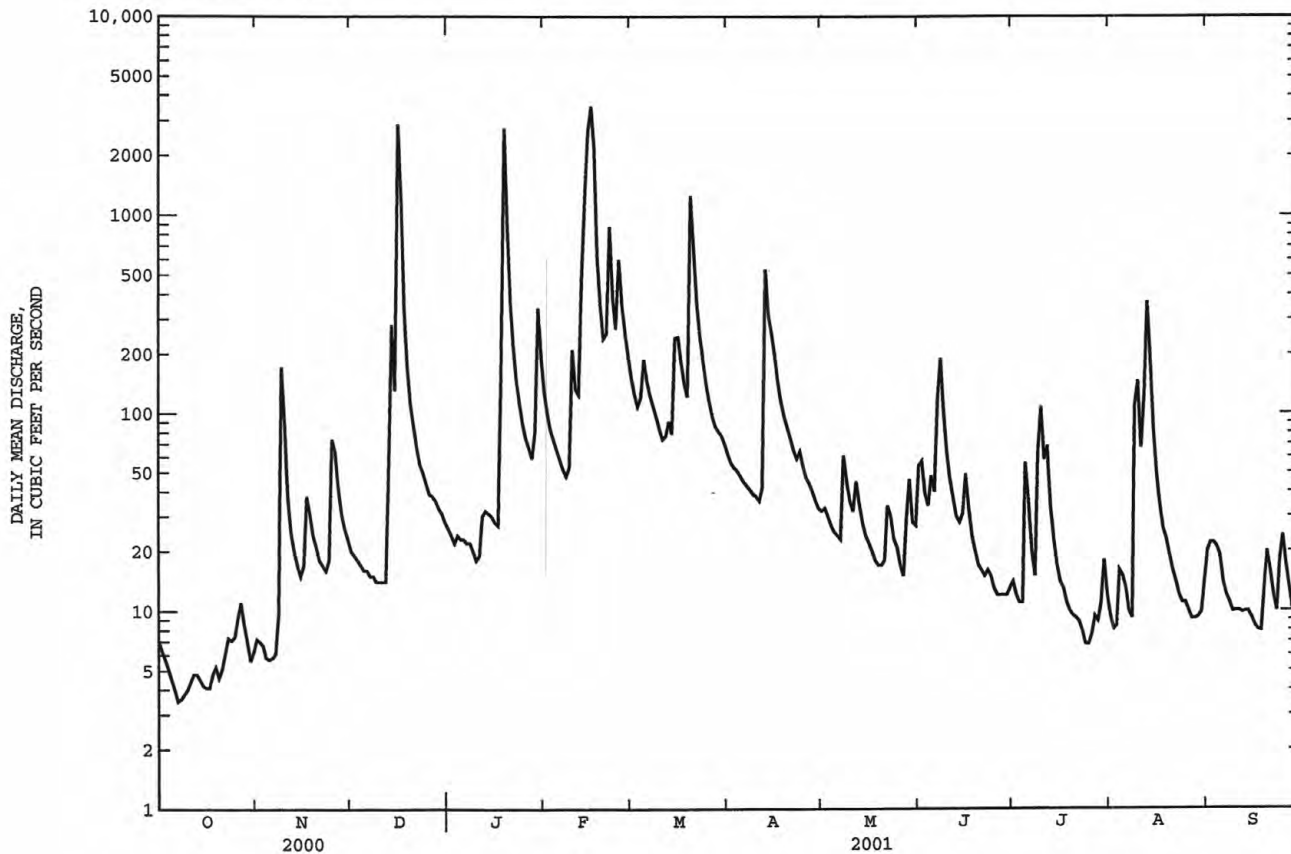
## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1990 - 2001

ANNUAL TOTAL	34921.7	41831.7	
ANNUAL MEAN	95.4	115	157
HIGHEST ANNUAL MEAN			233
LOWEST ANNUAL MEAN			79.7
HIGHEST DAILY MEAN	3460	Apr 3	7390
LOWEST DAILY MEAN	2.5	Jul 27	2.0
ANNUAL SEVEN-DAY MINIMUM	2.8	Sep 5	2.1
MAXIMUM PEAK FLOW			12900
MAXIMUM PEAK STAGE			18.02
INSTANTANEOUS LOW FLOW			1.7
ANNUAL RUNOFF (CFSM)	1.12		1.84
ANNUAL RUNOFF (INCHES)	15.19		24.96
10 PERCENT EXCEEDS	180		306
50 PERCENT EXCEEDS	21		53
90 PERCENT EXCEEDS	4.1		8.8

a Also occurred Oct. 8, 9.



## TENNESSEE RIVER BASIN

03597590 WARTRACE CREEK BELOW COUNTY ROAD AT WARTRACE, TN

LOCATION.--Lat 35°31'38", long 86°20'25", Bedford County, Hydrologic Unit 06040002, on right bank 300 ft below county road bridge, 0.4 mi upstream from Louisville and Nashville Railroad bridge, 0.4 mi west of Wartrace, and at mile 2.3.

DRAINAGE AREA.--35.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Data collection platform and crest-stage gage. Datum of gage is 781.66 ft above sea level.

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 2,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 16	1915	2,930	10.50	Feb 16	2115	*4,000	*11.79
Feb 15	2100	2,800	10.32	Aug 13	1830	3,050	10.66

Minimum discharge, 0.16 ft<sup>3</sup>/s, Oct. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.41	9.3	7.9	49	45	16	5.2	29	14	1.6	4.4
2	.31	.40	8.4	7.3	36	37	14	4.9	17	6.4	1.3	4.3
3	.29	.40	7.7	6.7	28	32	13	4.4	10	6.4	1.8	3.9
4	.23	.45	7.0	6.8	24	51	13	3.8	8.8	164	5.7	3.4
5	.21	.44	6.4	7.0	20	88	12	3.4	7.8	424	3.9	2.8
6	.19	.44	6.0	6.7	17	55	11	3.6	6.2	98	2.7	2.0
7	.25	.50	5.6	6.3	15	43	9.8	3.4	43	36	2.2	1.5
8	.27	.74	5.3	6.2	13	35	8.9	12	51	20	1.8	1.3
9	.29	172	4.9	5.6	22	29	8.3	7.7	21	40	41	1.1
10	.26	48	4.6	5.2	115	25	7.8	6.1	12	55	67	1.2
11	.25	23	4.5	5.6	53	22	7.1	5.8	8.3	121	38	.98
12	.26	14	4.1	12	53	26	9.7	6.7	6.3	84	342	.84
13	.25	11	84	14	423	35	399	5.4	4.7	29	1030	.98
14	.22	8.5	228	13	572	29	110	4.1	5.5	16	173	1.0
15	.23	6.9	101	12	1390	118	125	3.4	9.6	11	60	.87
16	.20	9.3	1610	11	1840	90	77	2.9	23	13	33	.84
17	.17	25	332	10	749	58	48	2.4	9.9	17	21	.62
18	.24	17	116	188	206	45	34	2.2	6.3	8.6	15	.57
19	.20	13	71	1450	115	36	27	1.9	4.5	6.6	13	1.3
20	.21	10	45	287	76	837	22	1.9	3.4	5.4	9.6	2.4
21	.29	8.4	35	121	123	243	19	2.4	2.7	4.9	7.3	2.3
22	.46	7.2	26	73	442	121	16	8.5	2.3	4.2	5.8	1.4
23	.53	6.7	20	52	133	76	13	6.8	2.3	3.6	4.9	1.0
24	.51	7.7	18	41	84	55	16	5.2	2.1	3.0	4.0	2.0
25	.52	53	15	31	379	42	12	4.9	1.6	2.9	3.8	2.7
26	.50	35	13	25	127	33	9.8	3.4	12	3.4	3.1	2.0
27	.46	23	13	22	80	27	8.6	2.6	18	2.6	2.6	1.4
28	.43	16	12	18	59	23	7.6	5.0	5.9	2.2	2.4	1.1
29	.40	13	10	52	---	21	6.6	11	4.0	2.3	2.3	.84
30	.39	11	9.4	246	---	20	5.8	6.5	17	2.6	2.3	.72
31	.42	---	8.4	81	---	18	---	6.3	---	2.1	2.9	---
TOTAL	9.79	542.48	2840.6	2830.3	7243	2415	1087.0	153.8	355.2	1209.2	1905.0	51.76
MEAN	.32	18.1	91.6	91.3	259	77.9	36.2	4.96	11.8	39.0	61.5	1.73
MAX	.53	172	1610	1450	1840	837	399	12	51	424	1030	4.4
MIN	.17	.40	4.1	5.2	13	18	5.8	1.9	1.6	2.1	1.3	.57
CFSM	.01	.51	2.57	2.56	7.25	2.18	1.01	.14	.33	1.09	1.72	.05
IN.	.01	.57	2.96	2.95	7.55	2.52	1.13	.16	.37	1.26	1.99	.05

TENNESSEE RIVER BASIN

207

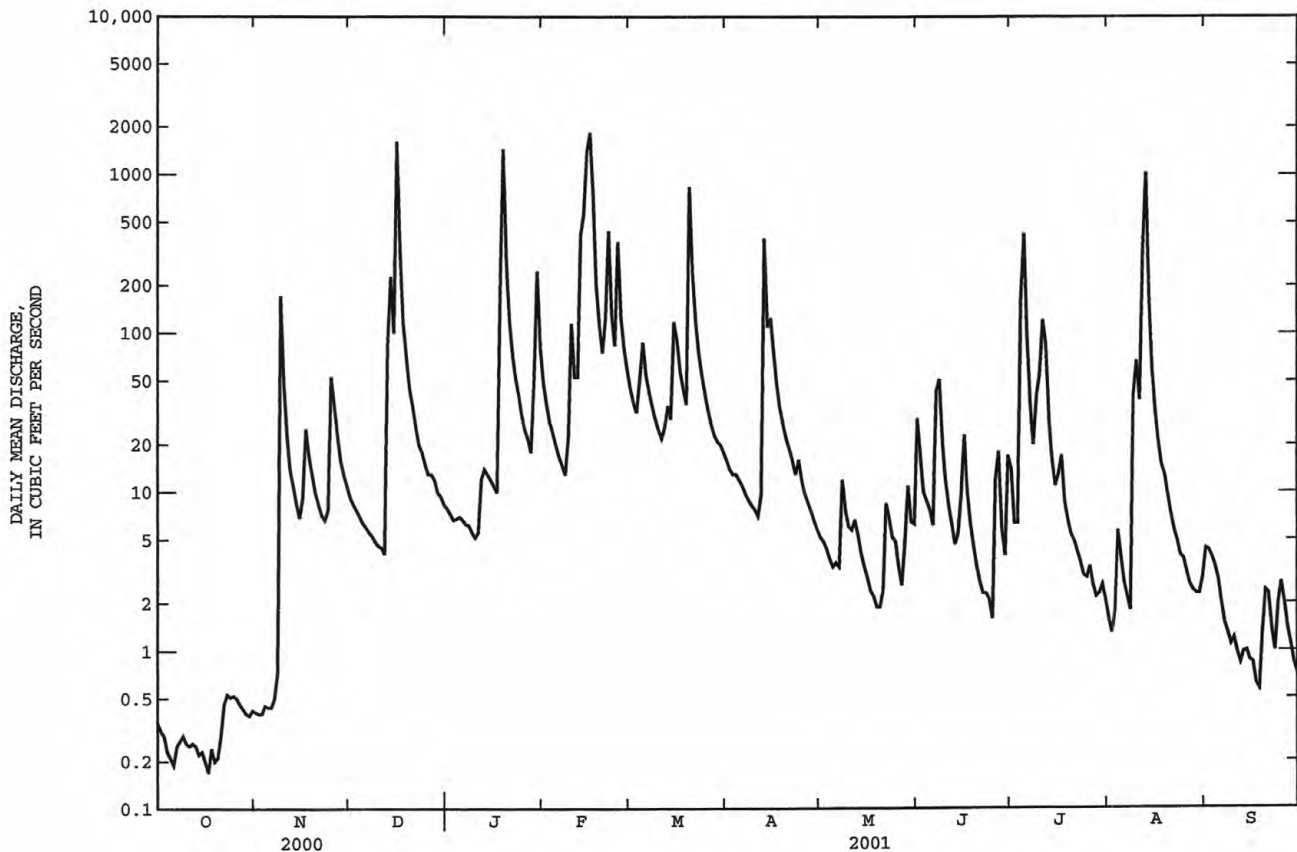
03597590 WARTRACE CREEK BELOW COUNTY ROAD AT WARTRACE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.5	52.4	127	128	135	136	82.7	37.6	25.1	17.1	22.3	21.8
MAX	109	172	350	289	326	311	215	114	143	40.7	79.5	167
(WY)	1996	1997	1991	1999	1991	1994	2000	1997	1997	1999	1992	1992
MIN	.014	.46	7.46	10.3	43.3	77.9	11.9	2.23	1.57	.24	.012	.000
(WY)	2000	2000	2000	2000	1995	2001	1999	1992	1990	2000	1991	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1989 - 2001
ANNUAL TOTAL	16398.96	20643.13	
ANNUAL MEAN	44.8	56.6	67.2
HIGHEST ANNUAL MEAN			97.2
LOWEST ANNUAL MEAN			36.2
HIGHEST DAILY MEAN	2140 Apr 3	1840 Feb 16	4000 Sep 22 1992
LOWEST DAILY MEAN	.00 Jul 28	.17 Oct 17	.00 Aug 24 1990
ANNUAL SEVEN-DAY MINIMUM	.02 Jul 23	.21 Oct 14	.00 Aug 24 1990
MAXIMUM PEAK FLOW		4000 Feb 16	10900 Jan 23 1999
MAXIMUM PEAK STAGE		11.79 Feb 16	16.02 Jan 23 1999
INSTANTANEOUS LOW FLOW		.16 Oct 6	a.00 Aug 24 1990
ANNUAL RUNOFF (CFSM)	1.26	1.58	1.88
ANNUAL RUNOFF (INCHES)	17.09	21.51	25.56
10 PERCENT EXCEEDS	83	105	122
50 PERCENT EXCEEDS	5.2	8.5	14
90 PERCENT EXCEEDS	.20	.52	.20

a No flow many days most years.



## TENNESSEE RIVER BASIN

03597860 DUCK RIVER AT SHELBYVILLE, TN

LOCATION.--Lat 35°28'51", long 86°27'45", Bedford County, Hydrologic Unit 06040002, on right bank 125 ft upstream from U.S. Highway 231 bridge, one block west of the southwest corner of the public square, and at mile 221.4.

DRAINAGE AREA.--425 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1991 to current year, discharge for gage height of 12.00 ft and below only. Continuous stage records were collected by Tennessee Valley Authority from December 1981 to September 1991.

GAGE.--Data collection platform. Datum of gage is 680.00 ft above sea level. Prior to Oct. 10, 1991 at datum 10.00 ft higher.

REMARKS.--Records good. Flow regulated by Normandy Reservoir (station 03596460) since January 1976.

EXTREME FOR PERIOD OF RECORD.--Maximum discharge, not determined; maximum gage height, 33.13 ft, Mar. 28, 1994; minimum discharge, 129 ft<sup>3</sup>/s, May 20, 1992; minimum daily discharge, 131 ft<sup>3</sup>/s, May 20, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, not determined, maximum gage height, 17.95 ft, Feb. 25; minimum, 125 ft<sup>3</sup>/s, July 15; minimum daily discharge, 134 ft<sup>3</sup>/s, Dec. 11-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	247	178	216	339	---	---	224	145	226	187	162	200
2	185	181	212	320	450	---	203	154	280	340	160	195
3	182	179	210	196	384	---	194	151	219	162	171	195
4	182	184	203	184	352	---	190	150	206	293	183	180
5	178	184	201	181	328	---	182	169	246	---	198	178
6	177	179	201	183	308	567	173	172	200	---	187	166
7	177	181	196	181	292	553	166	168	242	218	150	166
8	176	202	145	177	246	505	161	283	526	160	150	180
9	174	---	136	170	249	460	156	243	344	167	173	178
10	173	477	136	163	---	342	154	e190	255	331	---	177
11	171	282	134	148	648	276	150	e218	210	220	---	173
12	179	234	134	168	615	251	159	e243	188	318	328	170
13	183	215	170	182	---	303	---	e220	174	180	---	176
14	183	283	---	179	---	279	---	e187	168	136	---	173
15	175	277	556	174	---	---	---	e170	223	154	347	172
16	172	297	---	169	---	---	---	166	320	175	222	173
17	169	341	---	167	---	552	485	158	228	175	167	167
18	169	329	---	---	---	441	385	150	184	167	180	170
19	168	305	---	---	---	377	329	142	164	161	173	221
20	170	290	---	---	---	---	288	142	154	165	162	239
21	184	279	---	---	---	---	264	143	158	175	158	187
22	180	273	---	---	---	---	239	174	160	177	159	186
23	176	271	---	---	---	---	215	183	164	173	166	180
24	172	278	---	---	---	---	223	161	160	171	164	362
25	172	406	---	---	---	---	209	151	153	217	164	292
26	171	452	749	---	---	---	185	148	157	209	165	226
27	171	381	715	709	---	382	175	142	197	166	162	202
28	174	348	680	648	---	288	168	185	181	164	167	188
29	174	324	639	---	---	264	160	239	162	167	167	182
30	174	232	603	---	---	253	151	190	166	169	167	179
31	177	---	547	---	---	243	---	181	---	169	179	---
TOTAL	5515	8042	6783	4638	3872	6336	5588	5518	6415	5666	4931	5833
MEAN	178	277	339	244	387	373	215	178	214	195	183	194
MAX	247	477	749	709	648	567	485	283	526	340	347	362
MIN	168	178	134	148	246	243	150	142	153	136	150	166

e Estimated



## TENNESSEE RIVER BASIN

209

03597860 DUCK RIVER AT SHELBYVILLE, TN--Continued

## WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1991 to current year.

DISSOLVED OXYGEN: October 1991 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1991.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 30.1°C, July 30, 31, 1999; minimum, 0.1°C, Feb. 4, 5, 6, 1996.

DISSOLVED OXYGEN: Maximum, 15.5 mg/L, Feb. 7, 2000; minimum, 5.7 mg/L, June 12, 1999.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 28.6°C, July 31; minimum, 2.0°C, Jan. 5.

DISSOLVED OXYGEN: Maximum, 14.1 mg/L, Jan. 26, 27; minimum, 7.0 mg/L, Aug. 27.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	19.0	9.5	4.0	8.0	9.5	11.5	21.0	21.5	24.5	27.5	24.5
2	20.6	19.0	8.5	3.5	7.0	10.0	12.5	21.5	21.0	25.0	27.5	23.5
3	21.5	19.0	7.5	3.0	6.0	10.0	13.5	21.5	20.0	25.0	27.0	23.5
4	21.5	19.0	7.5	2.5	5.0	10.0	15.0	21.5	20.5	25.0	26.5	23.5
5	22.0	18.0	7.0	2.5	5.5	9.0	15.5	22.0	21.0	23.5	25.5	24.5
6	21.5	17.0	7.0	3.0	6.0	9.0	17.0	22.5	22.0	21.5	25.5	25.5
7	20.0	17.0	6.5	3.5	6.5	8.5	18.0	22.5	22.5	23.5	26.0	26.0
8	17.0	17.5	6.5	4.0	8.0	8.5	19.5	22.0	22.0	24.5	27.0	26.0
9	14.5	18.5	7.0	4.0	9.5	9.0	21.0	20.5	22.0	26.0	26.5	26.0
10	13.5	16.5	7.5	3.5	10.0	9.5	21.5	19.5	22.5	26.5	25.0	25.5
11	13.5	14.0	8.0	3.0	7.5	9.5	22.0	---	23.0	26.5	23.0	24.5
12	14.0	12.5	8.0	3.0	7.0	10.5	22.0	---	23.5	26.0	24.0	24.0
13	14.5	12.5	8.0	3.5	8.0	11.5	19.0	---	24.5	25.5	24.5	24.0
14	15.5	12.0	6.5	5.0	10.5	12.5	17.0	20.0	25.0	25.5	23.5	24.0
15	16.0	11.5	7.5	6.0	12.0	13.0	16.5	20.5	25.5	25.5	24.0	24.0
16	16.5	11.5	10.0	6.5	12.0	12.5	16.5	21.0	25.0	25.5	25.0	23.0
17	18.0	11.5	10.0	6.0	9.5	11.0	16.0	22.5	24.5	25.5	25.0	22.5
18	18.5	10.5	7.0	5.5	9.0	9.5	14.0	23.5	25.0	26.0	25.5	22.5
19	19.0	9.5	7.5	7.0	8.0	10.0	13.5	23.5	25.5	26.0	25.5	22.5
20	18.5	10.0	6.0	7.5	8.5	9.5	14.0	23.5	26.0	26.5	25.0	22.5
21	18.0	9.5	6.5	6.0	9.0	9.5	15.0	23.5	26.5	26.5	24.5	22.5
22	19.0	8.5	6.0	5.5	9.0	10.0	17.0	23.0	25.5	26.5	25.0	22.5
23	19.5	8.5	5.5	5.0	8.5	11.0	18.5	22.0	24.5	26.0	25.5	23.0
24	19.5	10.0	6.5	5.5	9.5	11.0	19.5	21.0	23.5	26.5	26.0	22.5
25	20.0	11.5	5.5	5.0	11.5	10.0	19.0	20.5	23.0	26.5	26.5	20.0
26	20.0	11.5	6.0	4.0	10.5	10.0	18.0	20.0	23.5	26.0	27.0	18.5
27	19.5	11.0	6.5	4.5	9.5	10.0	18.0	20.5	23.5	26.0	26.5	17.5
28	19.5	10.5	6.0	4.5	9.5	10.0	18.0	20.5	23.5	26.5	26.0	17.5
29	19.5	11.0	5.0	6.0	---	10.0	19.5	20.5	23.5	27.0	25.5	18.0
30	19.0	11.0	4.0	8.0	---	10.0	20.5	20.5	24.0	27.5	25.5	18.5
31	19.0	---	4.0	8.5	---	10.5	---	21.5	---	27.5	25.5	---

## TENNESSEE RIVER BASIN

03597860 DUCK RIVER AT SHELBYVILLE, TN--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	9.6	11.6	---	12.6	13.0	11.7	8.5	8.3	8.3	8.4	7.6
2	8.5	9.5	12.2	---	12.9	12.6	11.4	8.4	8.4	8.4	8.4	7.7
3	8.4	9.5	12.6	12.6	13.4	12.6	11.0	8.5	8.6	8.4	8.4	7.9
4	8.5	9.4	12.7	12.6	13.8	12.4	10.7	8.4	8.6	9.6	8.5	7.9
5	8.5	9.3	12.7	12.8	13.7	13.0	10.4	8.4	8.7	9.5	8.6	7.8
6	8.7	9.0	12.5	12.8	13.6	13.1	10.1	8.5	8.5	9.5	8.8	7.6
7	9.0	9.0	12.6	12.5	13.6	13.1	9.8	8.5	8.4	8.9	9.1	7.5
8	9.7	8.8	12.6	12.5	13.2	13.1	9.4	8.7	8.6	8.6	9.5	7.7
9	10.4	8.6	12.3	12.7	12.6	12.9	8.8	9.0	8.8	8.2	9.4	8.0
10	10.8	9.1	12.0	13.0	12.2	12.8	8.5	9.1	8.7	8.2	9.3	8.2
11	10.8	9.9	11.7	13.3	13.2	12.7	8.4	---	8.5	8.0	10.0	8.1
12	10.6	10.4	11.6	13.5	13.6	12.2	8.3	---	8.5	7.8	10.0	7.8
13	10.4	10.6	11.5	13.3	13.3	11.5	8.5	---	8.4	8.0	9.7	---
14	10.2	10.7	11.8	13.0	11.7	10.9	9.5	---	8.3	7.9	9.7	---
15	10.0	11.0	11.4	12.8	11.0	10.8	9.9	9.8	8.4	8.1	10.0	---
16	9.8	11.1	10.0	12.7	10.9	10.7	9.8	9.6	8.4	8.2	9.7	---
17	9.4	10.9	9.7	12.8	11.5	11.2	10.1	9.3	8.4	8.0	9.4	---
18	9.4	11.4	11.3	13.0	12.4	11.8	10.7	9.0	8.3	7.9	9.1	8.2
19	9.3	11.9	11.3	11.7	13.3	11.9	10.9	8.7	8.0	7.9	9.0	8.4
20	9.4	11.9	11.9	12.1	13.1	11.7	10.7	8.6	7.9	8.4	8.9	8.4
21	9.4	12.1	11.7	12.9	12.9	11.5	10.5	8.5	7.7	8.5	---	8.4
22	9.3	12.5	12.0	13.3	12.6	11.7	10.1	8.5	7.6	8.5	---	8.3
23	9.2	12.4	12.2	13.5	13.0	11.7	9.6	8.6	7.7	8.6	---	8.3
24	9.2	11.6	11.7	13.6	12.8	11.7	9.3	8.8	8.0	8.6	---	8.4
25	9.2	11.0	11.9	13.8	11.7	12.2	9.3	9.0	8.0	8.5	---	8.9
26	9.2	10.9	11.9	14.0	12.5	12.4	9.3	9.0	7.9	8.4	---	9.5
27	9.3	11.2	11.5	14.0	12.7	12.4	9.3	8.8	8.5	8.3	---	9.9
28	9.5	11.5	---	14.0	12.9	12.2	9.3	8.7	8.4	8.4	7.7	9.9
29	9.5	11.3	---	13.4	---	12.1	9.0	8.7	8.4	8.5	7.6	9.7
30	9.5	11.1	---	11.9	---	11.9	8.7	8.6	8.4	8.4	7.6	9.7
31	9.5	---	---	12.0	---	11.8	---	8.4	---	8.4	7.6	---

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## TENNESSEE RIVER BASIN

03598000 DUCK RIVER NEAR SHELBYVILLE, TN

LOCATION.--Lat 35°28'49", long 86°29'57", Bedford County, Hydrologic Unit 06040002, on right bank 150 ft downstream from Sims Bridge, 2.1 mi upstream from Sugar Creek, 2.2 mi west of Shelbyville, 2.9 mi downstream from Flat Creek, and at mile 216.2.

DRAINAGE AREA.--481 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1933 to current year. Prior to April 1934, monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1934. WSP 853: Drainage area.

GAGE.--Data collection platform. Datum of gage is 683.51 ft above sea level. Prior to Sept. 2, 1966, at datum 2.0 ft higher.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge prior to regulation, 62,900 ft<sup>3</sup>/s, Feb. 13, 1948, gage height, 38.40 ft, present datum, from floodmarks, from rating curve extended above 35,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Prior to 1948, diurnal fluctuation caused by powerplant upstream. Flow regulated by Normandy Reservoir (station 03596460) since January 1976. 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 March 1929 reached a stage of 39.6 ft present datum, discharge, about 70,000 ft<sup>3</sup>/s, from high-water profile by Tennessee Valley Authority. Flood in March 1902 reached a stage about 2.0 ft higher than that in March 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,600 ft<sup>3</sup>/s, at 0630 hours Feb. 17, gage height 22.07 ft; minimum, 133 ft<sup>3</sup>/s, Dec. 13; minimum daily, 140 ft<sup>3</sup>/s, Dec. 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	198	258	414	1020	2410	290	178	292	186	190	227
2	211	200	251	388	608	2250	265	186	346	361	185	236
3	206	196	247	253	518	2140	253	180	273	182	205	251
4	204	201	237	228	472	2100	249	173	257	328	231	225
5	203	203	233	224	438	1990	241	185	288	698	228	213
6	201	205	232	226	409	632	226	186	243	876	254	198
7	199	206	227	221	386	590	218	181	306	306	193	190
8	198	231	167	217	325	542	211	325	624	220	184	204
9	194	1020	145	208	326	504	205	295	433	205	209	201
10	195	680	144	187	830	396	200	227	318	351	1880	200
11	195	371	140	167	813	334	193	265	258	299	1170	196
12	202	291	140	193	770	307	206	298	225	376	638	192
13	207	257	183	207	896	364	2280	269	203	249	1470	194
14	206	329	1350	204	3870	344	1570	228	193	181	1910	194
15	200	328	749	196	6470	714	1030	208	250	175	519	190
16	196	355	4660	190	9370	1040	889	197	402	217	320	192
17	193	426	6060	188	10700	667	616	186	281	216	236	188
18	193	411	1870	394	2920	532	483	176	218	212	226	184
19	191	371	1610	7650	3200	461	412	165	190	202	219	240
20	191	348	1320	4870	2560	3280	365	165	175	203	202	340
21	214	329	1170	2260	2230	3640	332	168	174	217	192	252
22	203	317	1060	1720	3950	2130	302	212	177	218	189	226
23	196	313	980	1950	3090	1640	274	218	181	214	194	215
24	191	325	927	1770	2590	1410	283	191	176	209	193	645
25	190	540	874	1550	4130	1250	263	174	167	231	190	511
26	186	591	829	890	3380	1030	232	167	171	293	187	344
27	184	485	792	817	2900	474	217	159	217	207	183	284
28	187	433	759	749	2620	372	208	233	203	197	198	250
29	191	400	717	753	---	342	198	339	179	198	193	232
30	187	288	677	1940	---	328	188	252	175	199	190	220
31	192	---	633	1300	---	313	---	231	---	200	198	---
TOTAL	6189	10848	29641	32524	71791	34526	12899	6617	7595	8426	12776	7434
MEAN	200	362	956	1049	2564	1114	430	213	253	272	412	248
MAX	283	1020	6060	7650	10700	3640	2280	339	624	876	1910	645
MIN	184	196	140	167	325	307	188	159	167	175	183	184
(†)	-3700	-3800	-700	-600	+7000	-400	+7200	+1000	0	-1400	-100	-1600
MEAN(†)	80.3	235	933	1030	2810	1100	670	246	253	227	409	194
CFSM(†)	.17	.49	1.94	2.14	5.84	2.29	1.39	.51	.53	.47	.85	.40
IN.(†)	.19	.54	2.24	2.47	6.09	2.64	1.55	.59	.59	.54	.98	.45
CAL YR 2000	MEAN(†)	669	CFSM(†)	1.39	IN.(†)	18.88						
WTR YR 2001	MEAN(†)	603	CFSM(†)	1.25	IN.(†)	17.01						

(†) Change in contents, in cfs-days in Normandy Lake.

(‡) Adjusted for change in content.

NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.

TENNESSEE RIVER BASIN

213

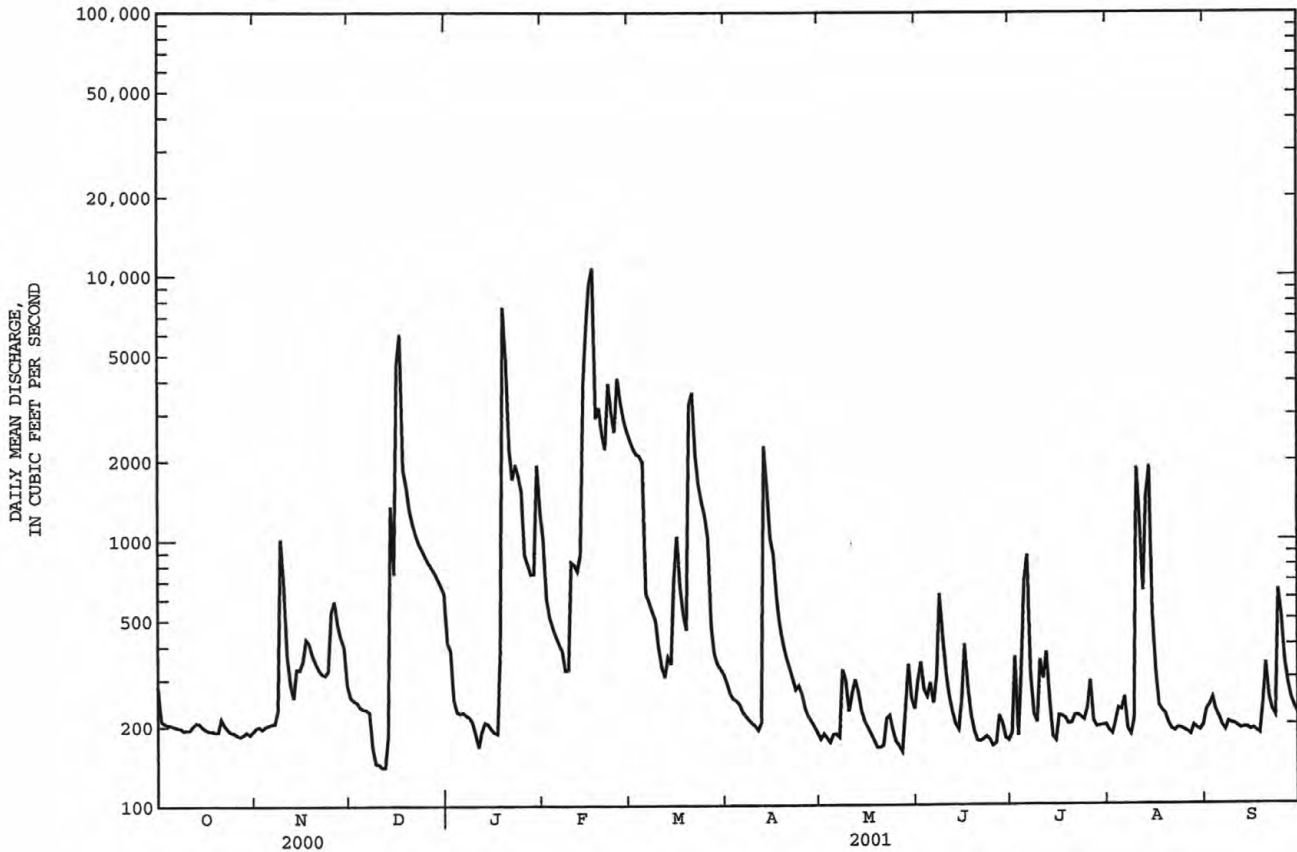
03598000 DUCK RIVER NEAR SHELBYVILLE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	353	921	1330	1364	1316	1475	936	701	533	345	291	305
MAX	1314	2277	4132	2873	3730	3649	2992	2753	2151	1670	749	1036
(WY)	1990	1987	1992	1979	1994	1980	1994	1983	1989	1989	1998	1992
MIN	157	170	289	175	339	308	165	137	166	166	154	163
(WY)	1988	1988	2000	1986	1978	1988	1986	1988	1988	1987	1983	1980

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	*WATER YEARS 1977 - 2001
ANNUAL TOTAL	219050	241266	
ANNUAL MEAN	598	661	818
HIGHEST ANNUAL MEAN			1253
LOWEST ANNUAL MEAN			257
HIGHEST DAILY MEAN	10800	Apr 4	21700
LOWEST DAILY MEAN	140	Dec 11	72
ANNUAL SEVEN-DAY MINIMUM	164	Dec 7	88
MAXIMUM PEAK FLOW		13600	26100
MAXIMUM PEAK STAGE		22.07	29.88
INSTANTANEOUS LOW FLOW		133	71
10 PERCENT EXCEEDS	1210	1670	2040
50 PERCENT EXCEEDS	257	247	311
90 PERCENT EXCEEDS	191	186	172

\* Regulated period only.





## TENNESSEE RIVER BASIN

03598250 NORTH FORK CREEK NEAR POPLINS CROSSROADS, TN

LOCATION.--Lat 35°35'06", long 86°35'45", Bedford County, Hydrologic Unit 06040002, on left bank 25 ft downstream from State Highway 270 bridge, 1.2 mi downstream from Weakly Creek, 0.8 mi northwest of Poplins Crossroads, and at mile 3.4.

DRAINAGE AREA.--71.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1994 to April 1995, October 1998 to current year.

GAGE.--Data logger. Elevation of gage is 662 ft above sea level from topographic map.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 17	0100	2,940	11.17	Feb 17	0115	*4,340	*12.78
Jan 19	1530	2,680	10.84	Mar 20	2100	2,950	11.18
Feb 14	0315	1,540	8.91	Aug 14	0315	2,200	10.13
Feb 15	2300	2,630	10.76				

Minimum discharge, no flow, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.13	18	24	103	98	32	7.6	20	.29	.62	3.1
2	.23	.14	11	21	81	83	27	6.6	16	.24	.56	4.2
3	.12	.15	9.5	19	66	73	28	5.5	11	.20	105	4.5
4	.08	.19	8.0	19	58	103	26	4.4	11	.44	146	3.9
5	.05	.21	6.8	19	51	149	26	3.7	10	26	40	3.0
6	.03	.25	6.1	18	45	96	22	3.1	9.1	79	21	2.2
7	.02	.33	5.4	17	39	77	19	2.6	61	21	12	1.5
8	.01	.60	5.1	16	35	66	16	7.6	101	11	8.5	1.1
9	.00	111	4.5	14	36	57	14	8.6	50	7.9	15	1.3
10	.00	68	3.8	12	137	50	13	6.2	27	15	174	1.7
11	.01	33	3.4	12	86	45	12	6.1	15	13	118	1.2
12	.02	21	3.1	45	93	47	14	7.2	10	7.1	141	.98
13	.02	15	57	50	262	61	488	6.1	6.9	4.5	805	.95
14	.01	11	453	43	1060	48	168	4.2	4.9	3.0	857	.75
15	.01	7.9	153	40	2140	104	177	3.2	4.1	2.0	151	.57
16	.01	9.7	1790	35	2630	118	127	2.4	6.1	1.5	92	.51
17	.01	29	1370	32	2070	82	77	1.8	7.0	1.2	63	.45
18	.01	23	259	185	380	66	58	1.3	3.9	.87	44	.40
19	.00	17	181	2040	236	56	48	1.1	2.4	.68	34	.71
20	.00	13	116	769	164	1400	40	.96	1.6	.60	24	3.7
21	.05	10	94	272	178	826	34	.86	1.1	.71	17	4.2
22	.07	7.5	77	183	425	233	29	1.3	.89	.61	13	2.4
23	.11	5.8	62	138	214	147	25	1.1	.75	.51	9.4	1.8
24	.13	6.3	56	114	150	108	28	1.4	.58	.50	6.8	7.5
25	.10	58	49	90	854	83	24	1.5	.47	.62	5.2	17
26	.09	62	42	76	253	67	19	1.1	.38	.78	3.8	11
27	.09	43	41	67	156	56	15	.83	.36	.58	3.1	7.8
28	.10	31	39	58	122	48	13	3.1	.36	.45	2.8	5.8
29	.10	24	34	68	---	44	10	7.7	.32	.48	2.3	4.1
30	.10	21	29	366	---	41	8.8	5.1	.31	.79	1.8	3.0
31	.12	---	26	153	---	37	---	6.2	---	.65	1.9	---
TOTAL	2.17	629.20	5012.7	5015	12124	4569	1637.8	120.45	383.52	202.20	2918.78	101.32
MEAN	.070	21.0	162	162	433	147	54.6	3.89	12.8	6.52	94.2	3.38
MAX	.47	111	1790	2040	2630	1400	488	8.6	101	79	857	17
MIN	.00	.13	3.1	12	35	37	8.8	.83	.31	.20	.56	.40
CFSM	.00	.29	2.25	2.25	6.02	2.05	.76	.05	.18	.09	1.31	.05
IN.	.00	.33	2.59	2.59	6.27	2.36	.85	.06	.20	.10	1.51	.05

TENNESSEE RIVER BASIN

215

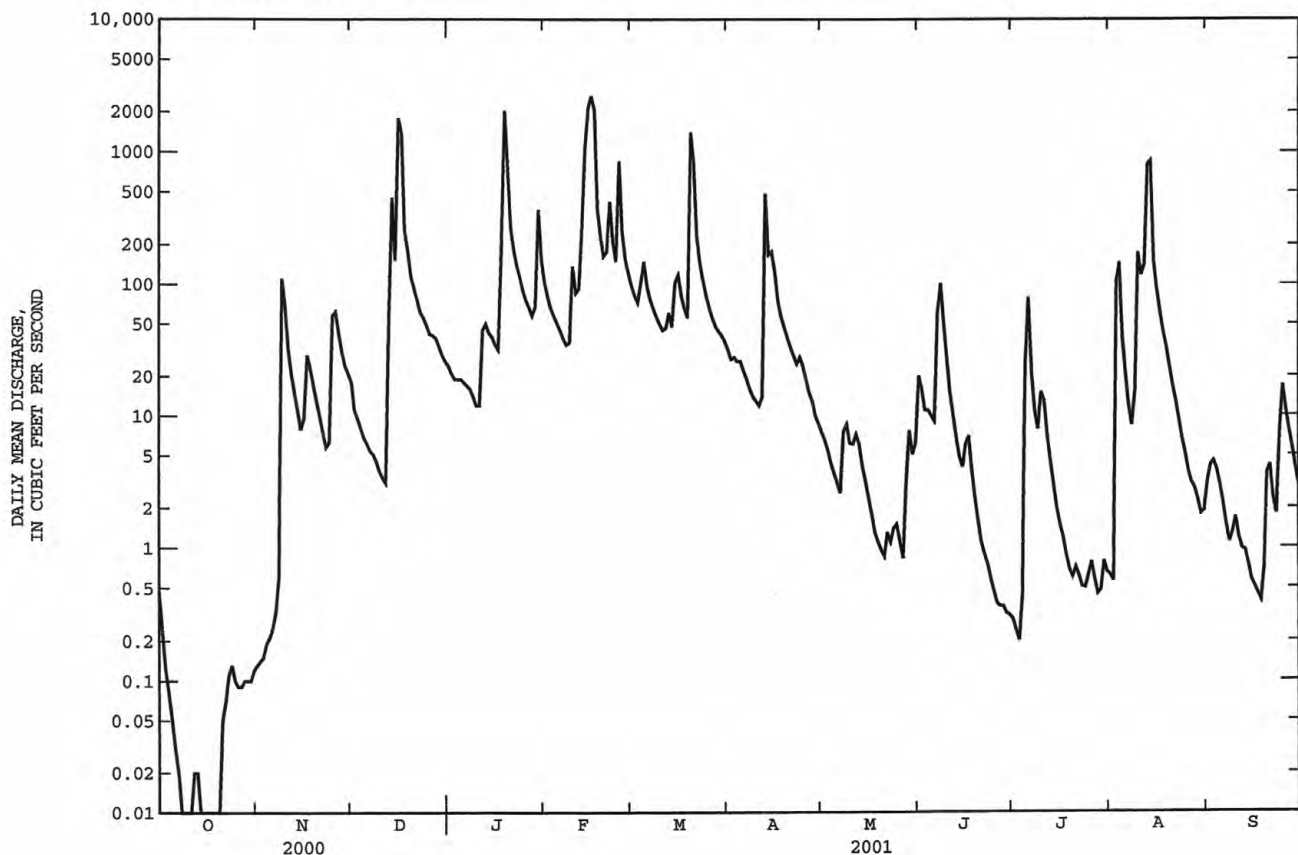
03598250 NORTH FORK CREEK NEAR POPLINS CROSSROADS, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.0	31.7	141	210	197	208	168	42.8	6.79	7.91	31.3	6.21
MAX	51.4	104	226	472	433	258	369	114	12.8	18.6	94.2	24.9
(WY)	1995	1995	1999	1999	2001	1995	1994	1999	2001	1994	2001	1994
MIN	.002	.50	25.6	38.3	90.9	147	29.7	3.89	2.72	.61	.016	.000
(WY)	2000	1999	2000	2000	1995	2001	1999	2001	1994	2000	1999	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1994 - 2001
ANNUAL TOTAL	27397.04	32716.14	
ANNUAL MEAN	74.9	89.6	83.7
HIGHEST ANNUAL MEAN			99.7
LOWEST ANNUAL MEAN			61.7
HIGHEST DAILY MEAN	1790	Dec 16	4700
LOWEST DAILY MEAN	.00	Jul 28	.00
ANNUAL SEVEN-DAY MINIMUM	.01	Jul 26	.00
MAXIMUM PEAK FLOW		4390	Feb 17
MAXIMUM PEAK STAGE		12.78	Feb 17
INSTANTANEOUS LOW FLOW		a.00	Oct 19
ANNUAL RUNOFF (CFSM)	1.04	1.25	1.16
ANNUAL RUNOFF (INCHES)	14.17	16.93	15.81
10 PERCENT EXCEEDS	154	152	169
50 PERCENT EXCEEDS	11	12	12
90 PERCENT EXCEEDS	.03	.24	.06

a No flow many days, most years.



## TENNESSEE RIVER BASIN

03598250 NORTH FORK CREEK NEAR POPLINS CROSSROADS, TN--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 09...	1400	31	381	7.5	18.0	746	23	5.4	58.4	12000	179	18	64.4
DEC 13...	1400	2.9	444	8.0	4.5	746	1.4	12.1	95.7	K31	224	38	81.1
JAN 11...	1200	11	408	8.1	3.0	747	3.0	13.2	100	K42	198	34	72.3
FEB 13...	1230	89	357	8.1	9.0	751	10	11.3	99.3	280	172	18	63.1
FEB 16...	1000	1580	174	7.9	12.0	748	75	9.0	84	2500	83.1	9	29.9
MAR 14...	1245	48	331	8.3	12.0	742	6.9	12.6	120	K67	167	17	61.0
APR 10...	1315	13	300	8.1	22.0	742	4.5	10.1	119	--	144	24	51.5
MAY 17...	1200	1.9	351	8.0	21.5	742	4.3	7.5	87.5	57	169	17	60.3
JUN 05...	1500	10	--	--	--	--	--	--	--	--	196	--	70.9
JUL 10...	1145	12	332	7.7	24.5	740	10	5.4	67.1	--	163	16	58.9
AUG 07...	1215	12	364	8.0	25.0	749	10	6.0	74.3	K200	175	17	63.0
SEP 12...	1445	1.0	385	8.0	23.5	748	4.1	6.4	76.8	56	195	21	69.4
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LILITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
NOV 09...	4.32	2.6	2.95	.084	4.29	196	163	11.6	6.9	<.2	7.6	226	206
DEC 13...	5.30	3.6	3.36	.105	1.70	227	188	21.2	9.0	<.2	1.9	251	241
JAN 11...	4.36	3.1	3.27	.096	1.05	201	167	18.8	8.1	<.2	3.1	236	216
FEB 13...	3.46	2.5	3.02	.082	1.09	188	154	15.7	7.6	<.2	3.8	212	196
FEB 16...	2.02	1.2	3.01	.058	2.10	90	73	6.5	3.3	<.2	4.9	112	98.7
MAR 14...	3.59	2.3	2.92	.078	.95	183	150	14.2	6.6	<.2	1.9	202	184
APR 10...	3.72	2.6	3.74	.094	.97	146	120	12.4	6.4	<.2	.5	182	151
MAY 17...	4.36	2.8	3.50	.095	1.51	185	152	11.7	6.7	<.2	3.4	202	183
JUN 05...	4.66	3.1	3.32	.097	1.72	--	--	12.9	7.1	<.2	4.9	222	--
JUL 10...	3.83	2.8	3.48	.094	2.64	179	146	9.6	6.2	<.2	7.5	199	182
AUG 07...	4.28	2.8	3.34	.093	2.99	193	158	10.2	6.7	<.2	8.3	224	197
SEP 12...	5.24	3.3	3.49	.102	2.28	212	173	10.6	7.2	<.2	7.3	216	211

K--Results based on non-ideal colony count.

TENNESSEE RIVER BASIN

217

03598250 NORTH FORK CREEK NEAR POPLINS CROSSROADS, TN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV 09...	.3	1.63	.020	1.65	<.041	.60	1.3	2.97	.131	.056	.028	50	63.3
DEC 13...	.3	1.36	.007	1.36	<.041	.20	.27	1.63	.015	.007	<.018	<10	11.1
JAN 11...	.3	1.53	.006	1.53	<.041	.14	.15	1.68	.017	.010	<.018	<10	6.6
FEB 13...	.3	--	<.006	1.49	<.041	.20	.38	1.87	.029	.018	<.018	<10	6.6
16...	.2	.882	.007	.889	.053	.50	.74	1.63	.151	.146	.131	60	4.5
MAR 14...	.3	.861	.006	.867	<.041	.21	.35	1.22	.020	.007	<.018	<10	5.4
APR 10...	.2	--	<.006	.261	<.041	.22	.40	.659	.018	.006	<.018	<10	9.9
MAY 17...	.3	.220	.007	.227	.049	.33	.40	.627	.028	.017	<.020	<10	22.1
JUN 05...	--	.417	.008	.425	<.041	.31	.39	.818	.028	.015	<.020	<10	17.9
JUL 10...	.3	.509	.024	.533	.043	.40	.56	1.09	.050	.034	.019	<10	24.8
AUG 07...	.3	.745	.016	.761	.047	.46	.52	1.28	.051	.046	.026	10	21.2
SEP 12...	.3	--	<.006	.241	<.040	.26	.33	.568	.036	.024	<.018	<10	25.0

DATE	SEDI- MENT, SUS- PENDEED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 09...	32	96
DEC 13...	4	79
JAN 11...	4	81
FEB 13...	18	61
16...	91	97
MAR 14...	26	41
APR 10...	23	51
MAY 17...	--	--
JUN 05...	--	--
JUL 10...	9	97
AUG 07...	--	--
SEP 12...	8	94

## TENNESSEE RIVER BASIN

03599500 DUCK RIVER AT COLUMBIA, TN

LOCATION.--Lat 35°37'05", long 87°01'56", Maury County, Hydrologic Unit 06040003, on right bank 4 ft downstream from bridge on former U.S. Highway 31, 2 blocks north of public square in Columbia, 2.4 mi upstream from Rutherford Creek, and at mile 132.8.

DRAINAGE AREA.--1,208 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1904 to December 1908, April 1920 to current year. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at same site, 1887-95, 1911 (fragmentary), 1947-71, published in reports of U.S. Weather Bureau. Discharge records furnished by Tennessee Valley Authority, 1983-1991.

REVISED RECORD.--WSP 783: 1929(M). WSP 853: Drainage area. WSP 1306: 1905-9, 1920-22, 1923(M).

GAGE.--Data collection platform. Datum of gage is 535.33 ft above sea level, supplementary adjustment of 1955. Prior to Jan. 9, 1925, nonrecording gages near this site; all gages at datum 2.37 ft higher prior to Oct. 1, 1933.

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. Maximum discharge prior to regulation, 61,500 ft<sup>3</sup>/s, Mar. 17, 1973; maximum gage height, 51.75 ft Feb. 14, 1948; no flow Oct. 22, 1922, caused by regulation by power plant .75 mi upstream. Flow regulated by Normandy Lake (station 03596460) since January 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 30, 1902, reached a stage of 48.0 ft, present datum, discharge, 50,700 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,000 ft<sup>3</sup>/s, Feb. 17, gage height, 39.50 ft; minimum discharge, 161 ft<sup>3</sup>/s, Oct. 20-21, 28-30, gage height, 1.61 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236	168	619	886	3130	4440	822	391	949	386	223	265
2	219	164	500	764	2230	3860	748	364	966	280	206	272
3	246	164	433	606	1670	3450	684	338	947	264	206	305
4	216	168	398	560	1330	3290	660	323	755	381	649	319
5	187	170	376	448	1140	3560	700	309	603	355	1040	324
6	177	177	356	404	1020	3640	668	292	537	1080	504	303
7	173	183	339	390	907	2220	627	289	678	1570	370	277
8	169	258	329	383	819	1650	573	299	980	796	354	256
9	167	3410	319	369	764	1490	522	320	1430	496	349	238
10	166	3120	288	352	993	1300	500	437	1130	392	1120	245
11	164	1920	252	342	1830	1110	469	688	784	585	4590	256
12	163	961	243	367	1880	973	479	996	609	555	3450	258
13	165	665	404	445	2010	889	2510	712	492	445	4530	293
14	168	521	3230	558	8230	922	7290	571	415	457	6580	312
15	173	433	4270	554	17200	968	4970	468	381	339	4450	346
16	174	465	8970	519	24500	1540	3920	382	360	247	1730	280
17	173	546	18500	491	35000	2310	2940	332	627	208	1050	251
18	168	683	15400	615	32100	1730	2000	299	654	221	736	235
19	165	715	5920	8390	18600	1370	1570	279	468	217	569	243
20	162	625	3600	18000	7240	4170	1280	275	353	224	483	359
21	165	545	2660	14500	5410	14100	1070	258	297	207	420	523
22	170	489	2170	6160	5740	10800	910	323	274	202	363	602
23	180	447	1850	3950	7910	5690	793	325	255	216	320	423
24	187	442	1640	3410	6180	3980	744	324	247	216	294	380
25	175	794	1490	2960	8160	3090	669	333	241	208	280	555
26	168	1490	1350	2510	10200	2540	642	293	237	220	265	1120
27	166	1450	1250	1850	7000	2150	575	265	233	463	255	711
28	163	1060	1170	1530	5310	1530	512	344	214	386	253	528
29	161	829	1110	1420	---	1170	465	724	235	292	246	416
30	163	708	1040	2640	---	998	425	800	325	237	257	348
31	165	---	946	4700	---	912	---	773	---	228	260	---
TOTAL	5494	23770	81422	81073	218503	91842	40737	13126	16676	12373	36402	11243
MEAN	177	792	2627	2615	7804	2963	1358	423	556	399	1174	375
MAX	246	3410	18500	18000	35000	14100	7290	996	1430	1570	6580	1120
MIN	161	164	243	342	764	889	425	258	214	202	206	235
(+)	-3700	-3800	-700	-600	+7000	-400	+7200	+1000	0	-1400	-100	-1600
MEAN(+)	57.9	666	2604	2596	8054	2950	1598	456	556	354	1171	321
CFSM(+)	.05	.55	2.16	2.15	6.67	2.44	1.32	.38	.46	.29	.97	.27
IN. (+)	.06	.61	2.49	2.48	6.94	2.82	1.48	.43	.51	.34	1.12	.30
CAL YR 2000	MEAN(+)	1411	CFSM(+)	1.17	IN. (+)	15.86						
WTR YR 2001	MEAN(+)	1741	CFSM(+)	1.44	IN. (+)	19.57						

(+) Change in contents, in cfs-days in Normandy Lake.

(+) Adjusted for change in content.

NOTE.--Contents (cfs-days) for adjustments furnished by Tennessee Valley Authority.



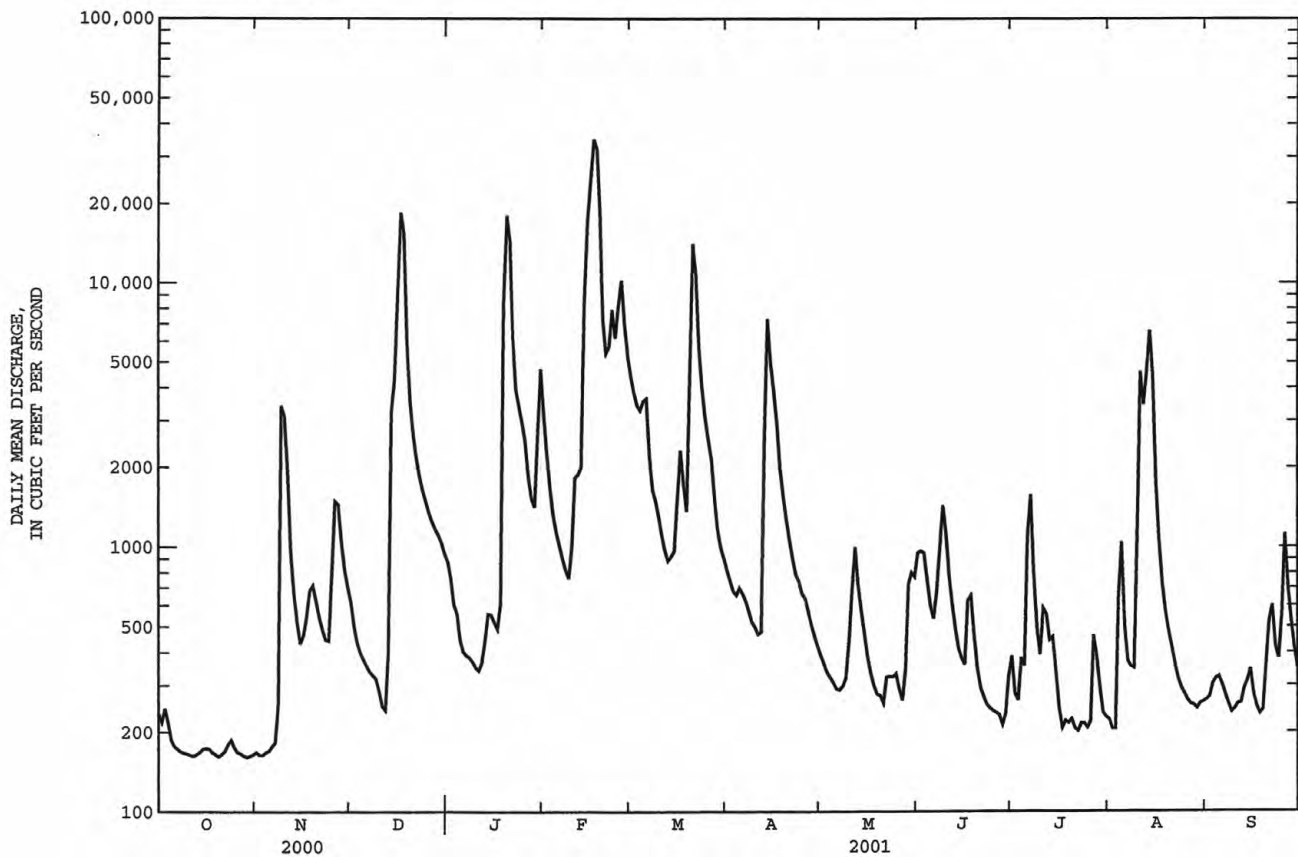
## 03599500 DUCK RIVER AT COLUMBIA, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	705	2049	3498	3636	3650	4168	2643	1939	1062	665	478	609
MAX	3642	5925	10360	8513	9901	10090	7464	9106	5081	4740	1365	3832
(WY)	1990	1987	1991	1979	1991	1980	1994	1983	1997	1989	1998	1979
MIN	160	236	418	273	953	1104	325	244	167	220	172	150
(WY)	2000	1981	1981	1986	1978	1985	1986	1988	1988	1988	1999	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	*WATER YEARS 1977 - 2001
ANNUAL TOTAL	514144	632661	
ANNUAL MEAN	1405	1733	2089
HIGHEST ANNUAL MEAN			3282
LOWEST ANNUAL MEAN			553
HIGHEST DAILY MEAN	20500	Apr 5	52300
LOWEST DAILY MEAN	161	Oct 29	86
ANNUAL SEVEN-DAY MINIMUM	164	Oct 28	100
MAXIMUM PEAK FLOW			52300
MAXIMUM PEAK STAGE			45.82
10 PERCENT EXCEEDS	3520	4060	4900
50 PERCENT EXCEEDS	462	521	761
90 PERCENT EXCEEDS	178	206	190

\* Regulated period only.



## TENNESSEE RIVER BASIN

03600085 CARTERS CREEK AT PETTY LANE NEAR CARTERS CREEK, TN

LOCATION.--Lat 35°43'39", long 86°59'19", Maury County, Hydrologic Unit 06040003, at bridge on Petty Lane, 0.8 mile north of Carters Creek, and at mile 4.7.

DRAINAGE AREA.--16.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1986 to current year

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	
NOV 08...	0930	80020	.42	499	16.0	7.4	745	3.1	32	K3300	5000	2	29.9	
FEB 13...	0930	80020	29	323	9.5	7.8	755	11.8	104	380	--	<2	14.3	
MAY 30...	0845	80020	8.1	352	18.0	7.6	750	7.1	76	370	220	<2	17.7	
AUG 07...	0830	80020	1.8	375	23.5	7.5	755	5.4	65	380	2400	<2	18.7	
DATE		CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CYANIDE TOTAL GRAVI- METRIC (MG/L AS CN) (00720)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 08...	<.11	1	<1.8	<1	<.14	<2	<2.6	<.43	<31	<.01	<1	5	.01	
FEB 13...	<.11	1	<1.8	<1	<.14	<2	<2.6	<.43	<31	<.01	<1	4	.31	
MAY 30...	<.10	<1	<1.8	<1	<.01	<2	<3.0	<.40	<31	<.01	<1	8	.17	
AUG 07...	<.10	<1	<1.8	<1	<.01	<2	<3.0	<.40	<31	<.01	1	7	.03	
DATE							SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)							
NOV 08...							73							
FEB 13...							91							
MAY 30...							78							
AUG 07...							74							

K--Results based on non-ideal colony count.

## 03600086 CARTERS CREEK TRIBUTARY NEAR CARTERS CREEK, TN

LOCATION.--Lat 35°43'34", long 86°59'19", Maury County, Hydrologic Unit 06040003, at culvert on Carters Creek Road, 0.7 mile north of Carters Creek.

DRAINAGE AREA.--2.94 mi<sup>2</sup>.

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF WATER (COLS./ 100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	
NOV 08...	1015	80020	2.4	529	17.0	7.4	745	6.2	66	1700	3000	<2	15.1	
FEB 13...	1015	80020	5.6	704	9.5	7.8	755	11.5	102	130	--	<2	15.5	
MAY 30...	0930	80020	2.4	488	19.5	7.5	750	6.5	72	96	230	2	13.8	
AUG 07...	0915	80020	2.5	511	25.5	7.5	755	6.1	75	240	2400	3	13.7	
DATE		CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CYANIDE TOTAL RECOV- ERABLE (MG/L AS CN) (00720)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
NOV 08...	<.11	<1	<1.8	<1	<.14	<2	<2.6	<.43	<31	<.01	<1	5	.03	
FEB 13...	.12	<1	<1.8	<1	<.14	<2	<2.6	<.43	<31	<.01	<1	4	.06	
MAY 30...	<.11	<1	<1.8	<1	<.01	<2	<3.0	<.40	<31	<.01	<1	4	.03	
AUG 07...	<.10	<1	1.4	<1	<.01	<2	<3.0	<.40	<31	<.01	2	12	.08	
DATE							SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)							
NOV 08...							79							
FEB 13...							82							
MAY 30...							67							
AUG 07...							67							

## TENNESSEE RIVER BASIN

03600088 CARTERS CREEK AT BUTLER ROAD AT CARTERS CREEK, TN

LOCATION.--Lat 35°43'02", long 86°59'45", Maury County, Hydrologic Unit 06040003, on left bank at end of Butler Road bridge, 0.1 mi west of Carters Creek, 0.3 mi upstream from Terrell Branch, 3.7 mi upstream from Rutherford Creek, and at mile 3.7.

DRAINAGE AREA.--20.1 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1986 to current year. Occasional low-flow measurements, water year 1986.

REVISED RECORD.--WDR TN-97-1: 1992-96 (M): 1992-96(P).

GAGE.--Data collection platform, crest-stage gage and concrete weir. Datum of gage is 605.94 ft above sea level.

REMARKS.--Records good. Diurnal fluctuation caused by industrial development upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov 9	0200	977	7.85	Feb 16	1830	*2,300	*12.32
Dec 16	1430	1,820	10.73	Feb 25	0315	1,600	10.00
Feb 14	2345	983	7.87	Aug 13	1230	1,440	9.46

Minimum discharge, 0.25 ft<sup>3</sup>/s, Oct. 18, 19, 20, 21, 22, 23, 24, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.27	5.2	9.0	41	53	20	8.9	98	3.8	2.0	6.9
2	.39	.27	4.4	8.2	35	45	17	21	57	70	4.1	4.7
3	.37	.27	3.8	7.8	30	39	17	11	39	35	9.7	4.2
4	.34	.27	3.5	7.7	26	45	18	8.2	33	18	6.5	4.3
5	.33	.29	3.2	7.7	23	51	20	6.8	27	100	4.3	3.9
6	.30	.57	2.9	7.2	20	43	18	5.8	23	46	4.7	2.5
7	.29	1.1	2.6	6.7	18	38	16	5.2	25	30	3.4	1.9
8	.29	12	2.4	6.2	16	35	15	8.5	24	22	3.7	1.7
9	.29	185	2.2	5.5	29	32	14	7.0	19	18	5.2	1.6
10	.29	31	2.0	5.0	69	27	13	5.3	15	17	8.3	2.6
11	.29	16	2.0	5.8	46	24	12	122	13	12	6.3	2.0
12	.29	9.4	2.3	9.5	39	24	15	59	10	9.7	16	1.4
13	.29	6.3	31	8.2	49	25	120	35	8.7	7.6	171	6.3
14	.29	4.3	61	8.0	146	23	65	25	9.8	5.9	53	4.3
15	.29	3.3	35	7.6	527	23	55	19	21	4.8	29	3.1
16	.29	3.8	419	6.9	1030	24	43	16	43	4.1	20	2.1
17	.28	4.6	133	7.0	358	21	35	12	25	3.6	15	2.5
18	.27	3.6	77	26	164	19	30	9.5	17	3.3	11	4.1
19	.26	3.1	55	363	114	19	26	9.6	13	4.2	8.7	5.8
20	.25	2.6	41	136	87	154	23	9.4	11	4.1	6.5	2.2
21	.25	2.1	34	85	70	137	20	12	9.8	3.6	5.1	2.5
22	.25	2.1	27	64	89	85	17	118	11	2.7	4.3	1.5
23	.26	2.0	23	51	74	65	15	50	9.0	2.2	3.7	1.2
24	.26	2.8	20	42	64	52	18	32	7.1	3.2	3.2	5.8
25	.27	25	17	35	324	41	15	23	5.6	5.4	2.9	2.3
26	.28	22	15	31	114	35	14	18	4.8	5.7	2.4	1.7
27	.28	14	14	27	82	31	12	14	4.3	3.3	2.8	1.5
28	.28	9.8	13	24	64	28	10	14	4.2	2.5	3.4	1.3
29	.27	8.1	12	39	---	26	8.4	14	4.1	4.2	2.7	1.1
30	.26	6.2	11	86	---	24	7.5	11	3.7	4.7	3.5	1.1
31	.27	---	9.4	53	---	22	---	52	---	2.8	5.4	---
TOTAL	9.09	382.14	1083.9	1186.0	3748	1310	728.9	762.2	595.1	459.4	427.8	88.1
MEAN	.29	12.7	35.0	38.3	134	42.3	24.3	24.6	19.8	14.8	13.8	2.94
MAX	.47	185	419	363	1030	154	120	122	98	100	171	6.9
MIN	.25	.27	2.0	5.0	16	19	7.5	5.2	3.7	2.2	2.0	1.1
CFSM	.01	.63	1.74	1.90	6.66	2.10	1.21	1.22	.99	.74	.69	.15
IN.	.02	.71	2.01	2.19	6.94	2.42	1.35	1.41	1.10	.85	.79	.16

## 03600088 CARTERS CREEK AT BUTLER ROAD AT CARTERS CREEK, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.09	26.7	53.8	59.2	73.6	65.7	37.7	28.0	16.9	9.90	4.24	5.91
MAX	44.8	64.7	126	119	146	138	98.7	93.4	54.2	45.5	13.8	20.3
(WY)	1990	1989	1991	1999	1990	1994	1994	1991	1998	1989	2001	1989
MIN	.29	1.35	9.79	19.6	20.8	20.5	13.9	3.11	.51	.54	.47	.64
(WY)	2001	1999	2000	2000	1995	1988	1992	1988	1988	1988	1987	1999

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

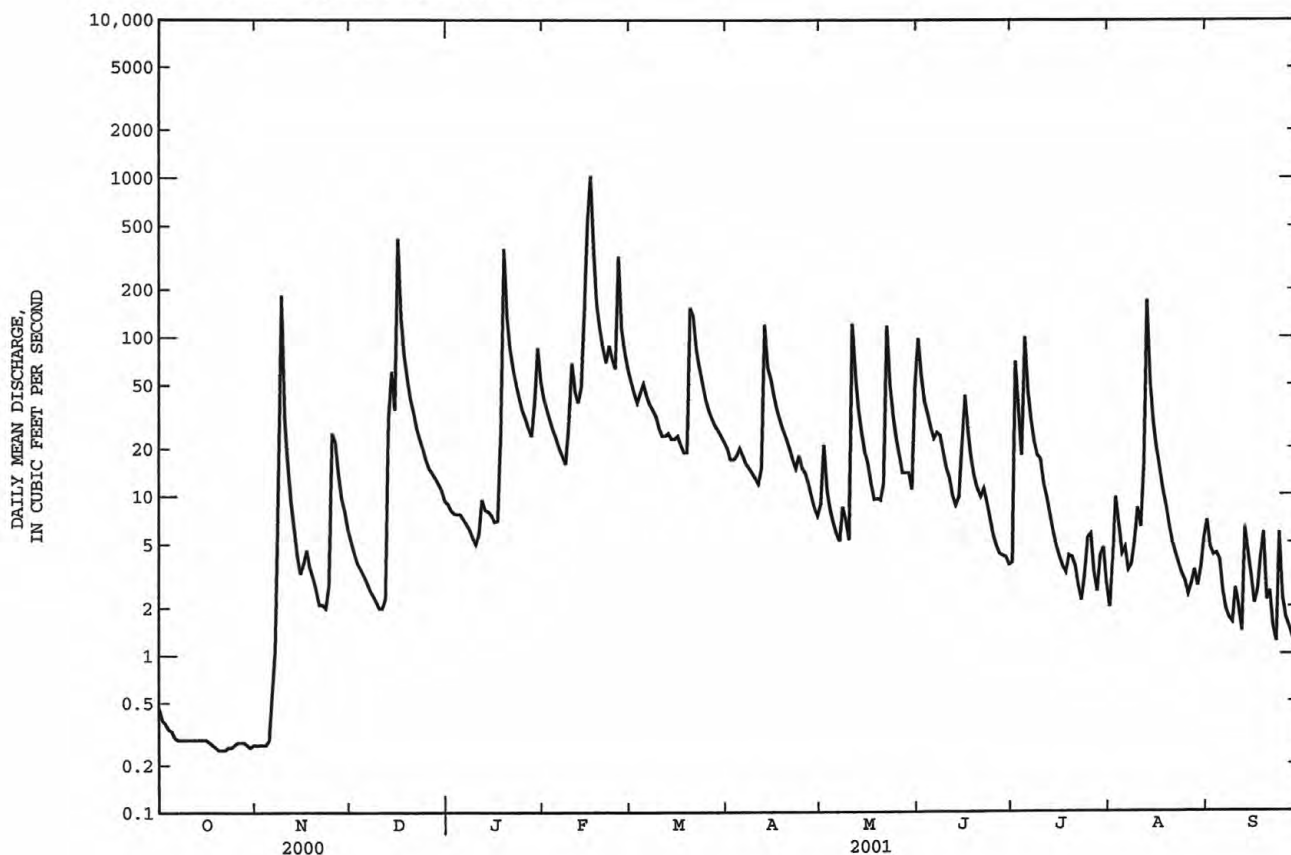
## FOR 2001 WATER YEAR

## WATER YEARS 1987 - 2001

ANNUAL TOTAL	7446.30	10780.63	
ANNUAL MEAN	20.3	29.5	32.2
HIGHEST ANNUAL MEAN			50.0
LOWEST ANNUAL MEAN			17.4
HIGHEST DAILY MEAN	419	Dec 16	1030
LOWEST DAILY MEAN	.15	Sep 21	.25
ANNUAL SEVEN-DAY MINIMUM	.20	Sep 16	.26
MAXIMUM PEAK FLOW			2300
MAXIMUM PEAK STAGE			12.32
INSTANTANEOUS LOW FLOW			a.25
ANNUAL RUNOFF (CFSM)	1.01	1.47	1.60
ANNUAL RUNOFF (INCHES)	13.78	19.95	21.76
10 PERCENT EXCEEDS	50	64	68
50 PERCENT EXCEEDS	4.4	9.8	12
90 PERCENT EXCEEDS	.28	.53	.75

a Also occurred Oct. 19, 20, 21, 22, 23, 24, 30.

b Also occurred Aug. 16, 1987, June 26, 1988.





## TENNESSEE RIVER BASIN

03600088 CARTERS CREEK AT BUTLER ROAD AT CARTERS CREEK, TN--Continued

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT OF SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT OF SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)
NOV 08...	1100	80020	1.2	520	16.5	7.4	745	4.8	51	1000	2300	<2	20.9
FEB 13...	1115	80020	34	384	9.5	8.2	755	13.1	116	200	--	<2	14.4
MAY 30...	1015	80020	12	382	18.5	7.8	750	--	--	200	580	<2	16.8
AUG 07...	1015	80020	3.3	441	24.5	7.7	755	6.3	76	120	1000	2	17.7

DATE	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CYANIDE TOTAL (MG/L AS CN) (00720)	OIL AND GREASE, TOTAL RECOV- ERABLE (MG/L GRAVI- METRIC) (00556)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 08...	<.11	1	<1.0	<1	<.14	<2	<2.6	<.43	<31	<.01	<1	1	.00
FEB 13...	<.11	<1	<1.0	<1	<.14	<2	<2.6	<.43	<31	<.01	<1	4	.37
MAY 30...	<.10	<1	<1.0	<1	<.01	<2	<3.0	<.40	<31	<.01	<1	8	.25
AUG 07...	<.10	<1	<1.0	<1	<.01	<2	<3.0	<.40	<31	<.01	1	10	.09

SED.  
SUSP.  
SIEVE  
DIAM.  
% FINER  
THAN  
.062 MM  
(70331)

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 08...	75
FEB 13...	83
MAY 30...	90
AUG 07...	77

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## TENNESSEE RIVER BASIN

03601990 DUCK RIVER AT HIGHWAY 100 AT CENTERVILLE, TN

LOCATION.--Lat 35°47'03", long 87°27'36", Hickman County, Hydrologic Unit 06040003, on downstream right bank side of bridge on US Highway 48/100, at Defeated Creek, 0.43 mi northeast of public square in Centerville, 3.5 mi downstream from Swan Creek and at mile 72.6.

DRAINAGE AREA.--2,048 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1919 to September 1955, published as "at Centerville." May 2001 to September 2001.

GAGE.--Data collection platform. Datum of gage is 447.76 ft above sea level.

REMARKS.--Records good, excepted 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 Feb. 14, 1948, (from graph through bi-hourly gage readings) at site downstream, 03602000 Duck River at Centerville, TN, 37.58 ft (discharge 97,700 ft<sup>3</sup>/s).

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, 10,500 ft<sup>3</sup>/s, Aug 15, gage height, 12.17 ft; minimum discharge, 434 ft<sup>3</sup>/s, Jul 18, 19, gage height, 3.45 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR MAY 2001 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	936	3340	e1010	596	606
2	---	---	---	---	---	---	---	905	3160	e970	534	637
3	---	---	---	---	---	---	---	867	2500	e1060	533	640
4	---	---	---	---	---	---	---	805	2180	e930	764	661
5	---	---	---	---	---	---	---	757	1780	e965	1030	663
6	---	---	---	---	---	---	---	732	1470	e1220	1500	643
7	---	---	---	---	---	---	---	707	1480	e1640	981	619
8	---	---	---	---	---	---	---	727	1790	e2110	777	574
9	---	---	---	---	---	---	---	937	2000	e2000	1050	575
10	---	---	---	---	---	---	---	863	2240	e1480	1760	624
11	---	---	---	---	---	---	---	880	1910	e1250	2490	558
12	---	---	---	---	---	---	---	1810	1520	e1080	6330	523
13	---	---	---	---	---	---	---	1910	1250	e980	6140	674
14	---	---	---	---	---	---	---	1380	1080	759	8180	1030
15	---	---	---	---	---	---	---	1130	1030	698	8880	748
16	---	---	---	---	---	---	---	962	1220	632	5110	690
17	---	---	---	---	---	---	---	829	1170	518	2610	608
18	---	---	---	---	---	---	---	733	1180	456	2030	543
19	---	---	---	---	---	---	---	678	1220	444	1260	542
20	---	---	---	---	---	---	---	696	992	481	1120	621
21	---	---	---	---	---	---	---	782	842	553	1060	674
22	---	---	---	---	---	---	---	1910	805	523	960	744
23	---	---	---	---	---	---	---	2180	765	466	659	945
24	---	---	---	---	---	---	---	1480	739	448	619	937
25	---	---	---	---	---	---	---	1210	738	507	573	924
26	---	---	---	---	---	---	---	1050	733	547	538	865
27	---	---	---	---	---	---	---	918	768	505	815	1470
28	---	---	---	---	---	---	---	827	e800	635	859	1130
29	---	---	---	---	---	---	---	921	e940	759	633	895
30	---	---	---	---	---	---	---	1360	e1160	1040	564	749
31	---	---	---	---	---	---	---	1500	---	767	560	---
TOTAL	---	---	---	---	---	---	---	33382	42802	27433	61515	22112
MEAN	---	---	---	---	---	---	---	1077	1427	885	1984	737
MAX	---	---	---	---	---	---	---	2180	3340	2110	8880	1470
MIN	---	---	---	---	---	---	---	678	733	444	533	523

e Estimated

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## TENNESSEE RIVER BASIN

## 03602219 PINEY RIVER AT CEDAR HILL, TN

LOCATION.--Lat 35°59'43", long 87°26'22", Dickson County, Hydrologic Unit 06040003, on right bank 300 ft upstream of Interstate Highway 40 bridge, 0.2 mi southeast of Cedar Hill, 0.5 mi upstream from Double Branch, and at mile 22.

DRAINAGE AREA.--46.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year, discharge for stage of 7.00 ft and below only.

GAGE.--Data collection platform. Datum of gage is 552.20 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. The City of Dickson diverts water for municipal water supply at confluence of West Piney River, 1.6 mi upstream from gage. 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, not determined; maximum gage height, 19.78 ft, May 27, 1991; minimum discharge, 7.6 ft<sup>3</sup>/s, Sept. 4, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 513 ft<sup>3</sup>/s; maximum gage height, 6.72 ft, Feb. 14; minimum discharge, 7.0 ft<sup>3</sup>/s, Oct. 5, 6, Sept. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	8.3	13	12	29	88	34	29	37	17	11	16
2	7.8	8.2	13	11	26	79	31	29	28	17	11	16
3	7.4	8.3	13	11	25	71	31	27	27	16	12	14
4	7.4	8.4	13	11	22	94	33	25	26	15	17	12
5	7.3	9.0	12	11	21	103	35	24	24	50	12	12
6	7.9	9.3	12	11	21	94	32	23	23	27	12	11
7	8.1	11	11	11	19	83	31	26	29	20	11	11
8	8.2	10	10	11	18	75	30	41	25	18	15	11
9	7.7	39	10	11	23	68	30	30	23	16	16	11
10	7.9	17	11	10	39	62	29	28	22	16	14	11
11	8.1	13	11	11	31	57	29	28	20	15	13	10
12	7.8	12	10	12	30	56	30	27	20	15	12	9.7
13	7.7	12	13	11	30	53	60	25	20	14	13	9.5
14	7.9	11	22	11	126	49	50	23	21	13	12	9.2
15	7.7	11	15	11	381	49	62	23	22	13	12	9.3
16	7.8	13	97	11	382	50	58	22	22	12	11	9.1
17	8.3	14	54	11	389	45	54	21	19	13	11	8.8
18	7.7	12	33	15	304	43	49	20	18	13	11	8.5
19	8.1	11	25	70	195	41	47	21	17	13	11	8.7
20	8.5	11	21	53	142	45	43	22	17	13	10	8.9
21	8.9	10	18	40	112	46	41	28	16	14	9.9	8.6
22	9.0	11	16	33	116	45	38	38	17	12	9.7	8.5
23	8.9	11	15	29	97	43	37	27	17	12	9.3	9.1
24	8.4	12	15	25	86	41	54	25	17	37	9.4	8.9
25	8.7	25	14	23	234	40	40	23	15	18	9.4	8.5
26	8.2	17	13	21	148	38	37	22	15	14	9.5	8.0
27	8.5	14	13	20	118	37	35	21	24	13	26	7.8
28	8.7	13	12	19	100	37	33	22	28	12	14	7.6
29	9.5	16	12	23	---	35	31	22	22	13	12	7.4
30	8.9	14	12	38	---	35	30	20	20	12	12	7.3
31	8.3	---	12	33	---	34	---	23	---	11	13	---
TOTAL	253.1	391.5	571	630	3264	1736	1174	785	651	514	381.2	298.4
MEAN	8.16	13.1	18.4	20.3	117	56.0	39.1	25.3	21.7	16.6	12.3	9.95
MAX	9.5	39	97	70	389	103	62	41	37	50	26	16
MIN	7.3	8.2	10	10	18	34	29	20	15	11	9.3	7.3
CFSM	.18	.28	.40	.44	2.50	1.20	.84	.54	.47	.36	.26	.21
IN.	.20	.31	.46	.50	2.61	1.39	.94	.63	.52	.41	.30	.24



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## TENNESSEE RIVER BASIN

## 03602500 PINEY RIVER AT VERNON, TN

LOCATION.--Lat 35°52'17", long 87°30'00", Hickman County, Hydrologic Unit 06040003, on left bank upstream from county highway bridge, 375 ft upstream from Pretty Creek, 0.2 mi northwest of Vernon, 2.3 mi downstream from Mill Creek, 6.5 mi north of Centerville, and at mile 8.3.

DRAINAGE AREA.--193 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1925 to December 1993. January 1994 to October 2000, crest-stage partial record station. November 2000 to September 2001.

REVISED RECORDS.--WSP 758: 1927(M). WSP 823: Drainage area. WSP 1306: Drainage area at site used Feb. 9, 1931, to May 10, 1934. WSP 1436: 1926(M), 1927, 1929, 1930-31(M), 1932, 1934(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 461.72 ft above sea level. Prior to May 11, 1934, nonrecording gage; July 3, 1925, to Feb. 8, 1931, at site 350 ft upstream at datum 3.17 ft higher; Feb. 9, 1931, to May 10, 1934, at site 0.4 mi downstream at datum 0.40 ft higher. May 11, 1934, to Sept. 30, 1970, water-stage recorder at site 350 ft upstream; prior to June 29, 1965, at datum 3.17 ft higher, and 2.17 ft higher thereafter.

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

EXTREMES FOR PERIOD OF RECORD.--Flood of March 1897 reached a stage of 20.7 ft, present site and datum, discharge, 37,000 ft<sup>3</sup>/s, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 15	1945	6,360	11.04	Feb 16	2145	*11,400	*13.63

Minimum discharge, 59 ft<sup>3</sup>/s, Sept. 28, 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR NOVEMBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	65	79	77	154	410	147	155	140	104	73	85
2	---	63	77	75	141	360	141	175	142	96	72	83
3	---	64	77	74	130	323	140	148	130	91	77	79
4	---	65	75	74	123	343	147	144	127	88	110	75
5	---	65	75	74	117	372	155	141	118	136	86	72
6	---	68	74	74	111	345	147	133	113	200	78	70
7	---	73	73	73	107	321	145	129	144	127	76	69
8	---	78	72	72	101	296	142	160	142	108	75	68
9	---	159	71	71	108	275	140	137	127	99	95	70
10	---	119	70	70	177	253	140	135	117	95	84	70
11	---	89	71	71	175	235	137	142	110	91	83	66
12	---	81	72	76	168	226	142	147	105	87	125	65
13	---	79	75	73	163	218	235	131	102	84	100	64
14	---	76	103	73	216	202	270	125	101	81	94	64
15	---	74	95	73	2960	198	291	122	120	79	81	63
16	---	77	298	71	5000	196	289	117	121	77	82	64
17	---	81	391	71	3550	184	262	112	105	77	82	63
18	---	76	216	82	1210	174	242	109	98	79	76	62
19	---	73	168	199	776	168	226	110	94	80	74	68
20	---	72	140	289	585	179	214	111	91	79	72	68
21	---	70	124	225	461	187	200	134	89	80	70	63
22	---	70	111	186	423	188	187	171	90	77	69	62
23	---	72	101	164	365	187	178	156	89	75	69	62
24	---	76	97	148	323	184	214	138	86	75	68	64
25	---	112	91	133	1090	176	187	127	85	114	67	62
26	---	106	88	122	762	169	173	119	82	99	67	62
27	---	89	86	115	590	163	165	113	90	83	255	61
28	---	83	83	108	485	158	158	113	161	79	126	60
29	---	83	81	110	---	156	150	113	119	79	85	60
30	---	85	80	159	---	157	143	106	128	79	75	59
31	---	---	78	166	---	153	---	115	---	75	78	---
TOTAL	---	2443	3392	3448	20571	7156	5507	4088	3366	2873	2724	2003
MEAN	---	81.4	109	111	735	231	184	132	112	92.7	87.9	66.8
MAX	---	159	391	289	5000	410	291	175	161	200	255	85
MIN	---	63	70	70	101	153	137	106	82	75	67	59
CFSM	---	.42	.57	.58	3.81	1.20	.95	.68	.58	.48	.46	.35
IN.	---	.47	.65	.66	3.96	1.38	1.06	.79	.65	.55	.53	.39

TENNESSEE RIVER BASIN

231

03602500 PINEY RIVER AT VERNON, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	101	170	355	492	569	611	500	395	214	140	114	106
MAX	265	749	2535	1930	1704	2091	1393	1715	1041	340	258	685
(WY)	1978	1958	1927	1937	1932	1975	1927	1983	1974	1972	1938	1979
MIN	52.5	64.9	66.2	84.4	115	109	137	84.9	59.8	61.4	49.3	47.0
(WY)	1932	1957	1936	1940	1941	1941	1967	1941	1941	1942	1936	1936

SUMMARY STATISTICS

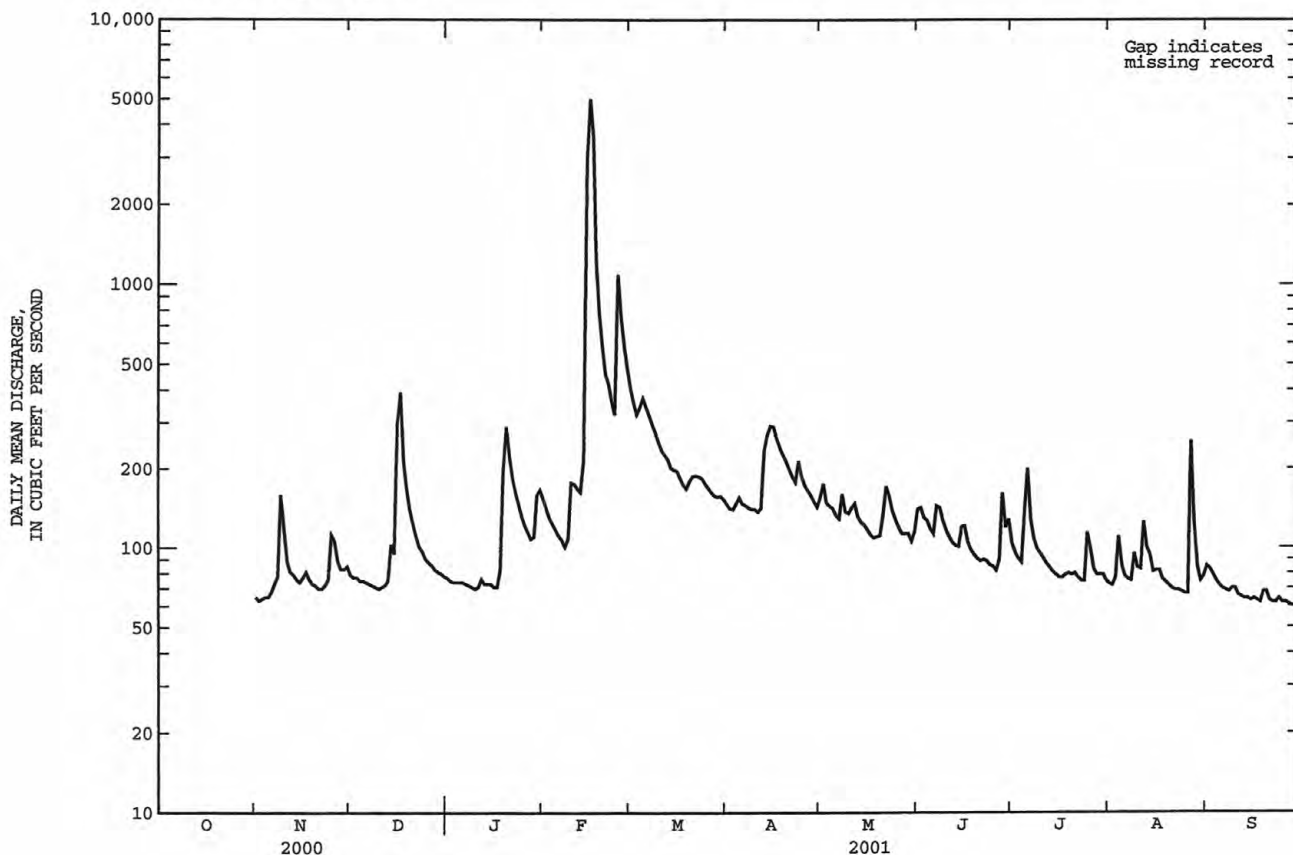
FOR 2001 WATER YEAR

WATER YEARS 1925 - 2001

ANNUAL MEAN			315
HIGHEST ANNUAL MEAN			684
LOWEST ANNUAL MEAN			102
HIGHEST DAILY MEAN			31200
LOWEST DAILY MEAN	5000	Feb 16	38
ANNUAL SEVEN-DAY MINIMUM	59	Sep 30	38
MAXIMUM PEAK FLOW	61	Sep 24	49400
MAXIMUM PEAK STAGE	11400	Feb 16	24.42
INSTANTANEOUS LOW FLOW	13.63	Feb 16	b35
ANNUAL RUNOFF (CFSM)	a59	Sep 28	1.63
ANNUAL RUNOFF (INCHES)			22.18
10 PERCENT EXCEEDS	238		610
50 PERCENT EXCEEDS	106		148
90 PERCENT EXCEEDS	70		72

a Also occurred Sept. 29, 30.

b Also occurred on Sept. 20, 1936.



## TENNESSEE RIVER BASIN

03603000 DUCK RIVER ABOVE HURRICANE MILLS, TN

## WATER-QUALITY RECORDS

LOCATION.--Lat 35°55'48", long 87°44'35", Humphreys County, Hydrologic Unit 06040003, on left bank 0.4 mi downstream from Tumbling Creek, 1.3 mi upstream from bridge on State Highway 13, 3.6 mi southeast of Hurricane Mills, and at mile 26.0.

Drainage.--2,557 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1966 to September 1967, October 1973 to September 1979, October 1998 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 16...	1045	225	8.0	17.0	768	4.8	6.4	65.7	--	100	7	34.2	3.62
NOV 06...	1000	215	8.0	17.0	759	--	5.3	55.1	--	95.1	3	32.2	3.54
DEC 14...	1030	269	8.1	6.0	760	5.2	10.5	84.6	160	131	15	45.3	4.24

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT MG/L AS CAC03 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
OCT 16...	4.2	8.13	.181	1.53	114	93	9.7	5.0	<.2	6.5	127	123	.2
NOV 06...	4.2	8.64	.188	1.54	112	92	9.1	5.0	.2	6.5	126	119	.2
DEC 14...	3.7	5.72	.141	1.49	141	116	15.4	5.6	<.1	5.1	163	154	.2

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)
OCT 16...	<.006	.330	<.041	.13	.18	.508	.134	.121	.110	<10	24.2	1.2	<.2
NOV 06...	<.006	.195	<.041	<.1	.12	.317	.141	.138	.113	<10	19.5	--	--
DEC 14...	<.006	.732	<.041	.10	.17	.902	.137	.124	.102	<10	18.3	--	--

DATE	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 16...	9	94
NOV 06...	11	84
DEC 14...	42	94

E--Estimated

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## TENNESSEE RIVER BASIN

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN

LOCATION.--Lat 35°29'45", long 87°49'58", Perry County, Hydrologic Unit 06040004, on right bank 0.4 mi downstream from Little Opossum Creek, 0.5 mi downstream from bridge on State Highway 13, 1.3 mi north of Flat Woods, 3.9 mi upstream from Sinking Creek, and at mile 58.7.

DRAINAGE AREA.--447 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1920 to current year.

REVISED RECORDS.--WSP 758: 1933. WSP 803: 1935. WSP 823: Drainage area. WSP 1436: 1921(M), 1922-24, 1925(M), 1927(M), 1934(M), WRD TN-71: 1970.

GAGE.--Data collection platform. Datum of gage is 513.58 ft above sea level determined by levels run by Army Engineers December 1926 and July 1927, from EM-39, datum of 1929. Prior to May 27, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except of estimated daily discharges, which are poor. 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 1897, that of May 27, 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 17	0530	7,040	11.64	Feb 17	0830	*22,600	*22.17
Jan 20	0800	4,840	9.44				

Minimum discharge, 160 ft<sup>3</sup>/s, Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	184	296	386	769	1050	564	434	3380	444	549	302
2	179	185	276	377	673	919	538	422	2260	428	404	351
3	175	186	260	368	614	834	521	409	1460	389	360	395
4	170	183	247	348	573	822	527	396	1350	347	407	408
5	167	178	238	344	535	875	763	385	1140	388	392	373
6	163	171	231	341	503	820	782	373	924	726	355	339
7	162	167	226	333	482	759	683	365	845	768	333	312
8	163	163	221	324	460	699	639	373	1010	558	307	294
9	163	901	218	319	441	661	610	505	924	446	339	283
10	166	1770	218	306	508	624	584	452	774	389	563	385
11	170	1300	218	297	588	589	560	408	644	361	902	478
12	170	1080	219	308	577	570	545	415	565	365	793	399
13	172	961	228	332	623	574	1020	401	505	340	636	367
14	171	870	356	328	3960	559	2430	363	458	308	663	352
15	170	805	634	322	9950	546	1570	342	424	284	547	330
16	170	e690	1780	315	11200	555	1310	326	432	268	441	304
17	170	e560	6330	310	19700	539	1070	311	439	258	391	286
18	171	e450	2360	319	5580	515	903	298	404	250	355	272
19	168	e370	1420	1170	2400	499	793	292	365	241	325	268
20	168	e315	1030	4040	1690	514	717	327	339	244	305	358
21	170	309	853	2020	1290	1470	662	367	321	299	287	513
22	172	294	748	1240	1290	e2900	610	810	309	296	272	503
23	176	286	667	945	1240	e2700	562	1140	303	267	262	436
24	176	268	611	792	1030	e1800	569	755	298	250	252	404
25	178	298	572	689	2320	e1200	590	626	285	285	244	394
26	178	443	538	614	2940	e810	530	543	272	346	237	358
27	e179	456	506	563	1650	e670	495	475	266	315	239	325
28	e181	405	474	522	1250	644	476	476	290	284	288	298
29	e183	363	444	498	---	618	464	995	435	296	328	279
30	183	328	418	686	---	600	451	904	493	654	297	264
31	183	---	399	900	---	587	---	811	---	1060	279	---
TOTAL	5351	14939	23236	20656	74836	27522	22538	15499	21914	12154	12352	10630
MEAN	173	498	750	666	2673	888	751	500	730	392	398	354
MAX	184	1770	6330	4040	19700	2900	2430	1140	3380	1060	902	513
MIN	162	163	218	297	441	499	451	292	266	241	237	264
MED	171	346	418	368	1140	661	600	409	448	340	339	352
CFSM	.39	1.11	1.68	1.49	5.98	1.99	1.68	1.12	1.63	.88	.89	.79
IN.	.45	1.24	1.93	1.72	6.23	2.29	1.88	1.29	1.82	1.01	1.03	.88

e Estimated

## 03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	281	518	923	1203	1368	1468	1175	877	466	370	289	273
MAX	1418	2554	3568	3854	4901	4405	3034	5227	1642	1824	1008	1286
(WY)	1933	1958	1927	1937	1948	1973	1964	1991	1974	1932	1923	1979
MIN	112	174	213	234	316	458	303	210	146	121	117	94.2
(WY)	1932	1925	1964	1940	1926	1966	1986	1942	1941	1943	1925	1925

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

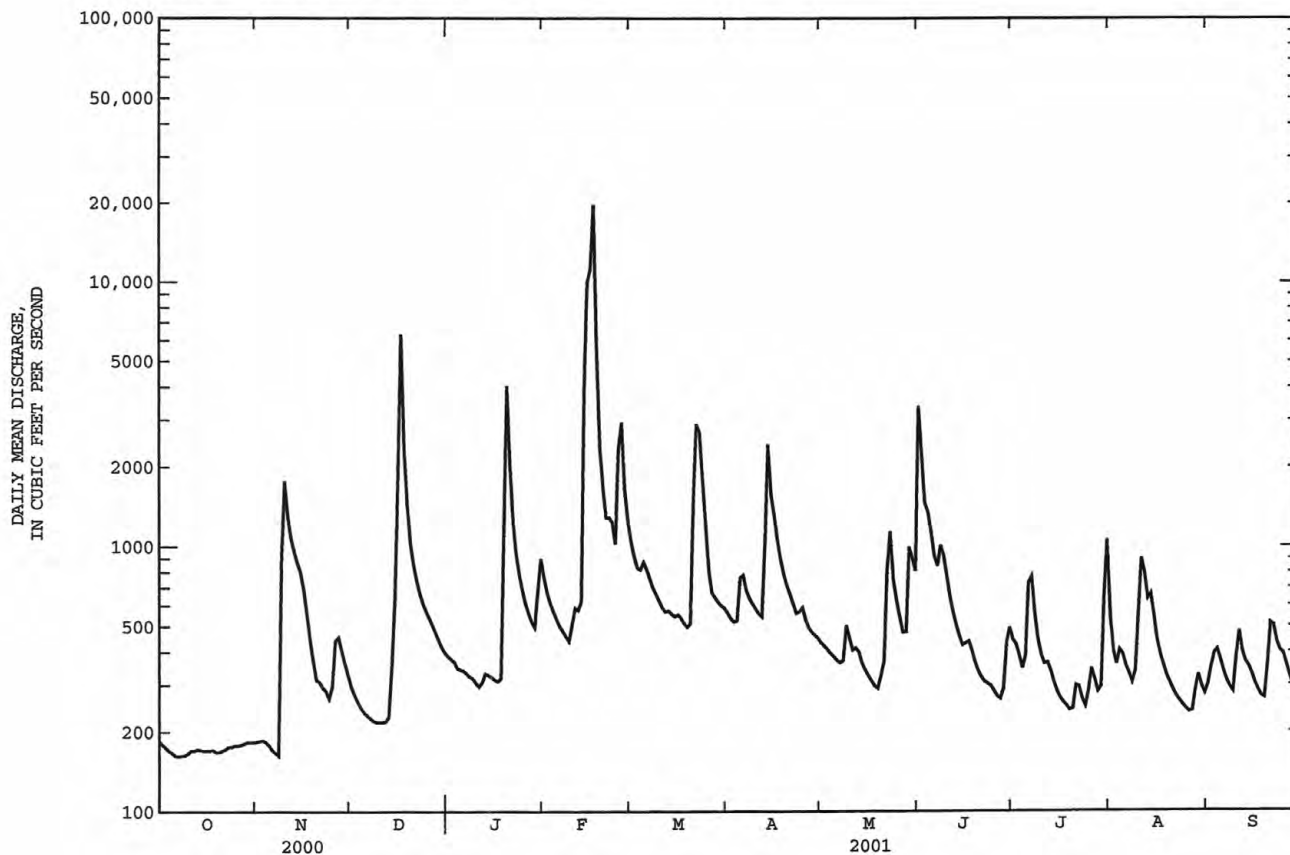
## FOR 2001 WATER YEAR

## WATER YEARS 1920 - 2001

ANNUAL TOTAL	172865	261627	764
ANNUAL MEAN	472	717	1583
HIGHEST ANNUAL MEAN			323
LOWEST ANNUAL MEAN			75800
HIGHEST DAILY MEAN	6330	Dec 17	19700
LOWEST DAILY MEAN	149	Aug 24	162
ANNUAL SEVEN-DAY MINIMUM	153	Aug 19	165
MAXIMUM PEAK FLOW			22600
MAXIMUM PEAK STAGE			22.17
INSTANTANEOUS LOW FLOW			160
ANNUAL RUNOFF (CFSM)	1.06	1.60	1.71
ANNUAL RUNOFF (INCHES)	14.39	21.77	23.23
10 PERCENT EXCEEDS	894	1150	1440
50 PERCENT EXCEEDS	292	418	394
90 PERCENT EXCEEDS	168	184	179

a From rating curve extended above 50,000 ft<sup>3</sup>/s on basis of slope-area and contracted opening measurements and rainfall-runoff study.

b From high-water mark in gage house.



## TENNESSEE RIVER BASIN

03605078 CYPRESS CREEK AT CAMDEN, TN

LOCATION.--Lat 36°02'49", long 88°04'33", Benton County, Hydrologic Unit 06040005, on left bank, adjacent to southwest corner of third sewage lagoon at Camden Sewage Treatment Plant, 1.5 mi southeast of Camden, and 1.4 mi upstream from Kentucky Lake.

DRAINAGE AREA.--27.3 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1992 to current year, discharge for stage of 4.30 ft and below only.

GAGE.--Water-stage recorder. Datum of gage is 360.00 ft above sea level, determined by the city of Camden, Tennessee.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, not determined; maximum gage height, 10.96 ft, Jan. 22, 1999; minimum discharge, 0.0 ft<sup>3</sup>/s, Sept. 2-19, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, not determined; maximum gage height, 9.30 ft, Feb. 15; minimum discharge, 0.62 ft<sup>3</sup>/s, Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.5	5.6	7.4	22	44	22	6.3	---	11	3.3	3.0
2	1.1	3.8	5.1	7.3	17	37	20	6.1	32	4.3	2.7	2.5
3	1.1	3.0	4.9	6.4	15	33	20	5.5	18	3.6	6.2	3.1
4	.97	4.6	4.7	6.3	14	---	---	5.0	17	2.9	---	2.7
5	4.3	3.5	6.4	6.6	14	---	50	4.9	11	---	5.0	2.2
6	3.7	15	6.8	6.6	13	50	37	4.9	9.4	30	11	2.3
7	2.1	9.6	6.8	6.4	14	39	31	5.4	---	7.0	4.1	3.0
8	1.4	---	5.0	6.4	13	34	23	6.0	51	5.0	8.5	1.9
9	2.2	---	5.9	8.2	---	30	17	4.8	20	4.5	5.5	2.3
10	1.6	12	6.4	6.1	---	27	15	4.3	13	7.5	8.3	2.1
11	1.7	6.0	5.7	6.5	25	26	14	5.2	9.3	4.4	31	1.8
12	1.7	5.1	4.6	11	23	37	14	4.2	7.3	3.7	12	1.5
13	1.7	5.2	9.7	9.0	25	67	49	4.0	6.5	3.3	6.3	1.4
14	1.7	4.8	19	8.5	---	37	25	4.0	5.7	2.8	5.3	1.4
15	1.6	4.6	---	8.7	---	55	56	3.7	5.4	2.5	4.6	1.3
16	1.7	5.1	---	8.3	---	52	30	3.2	5.0	2.4	4.1	1.3
17	1.7	5.1	---	9.0	---	35	19	3.0	4.6	2.4	4.0	1.3
18	2.0	4.6	38	---	---	29	15	2.7	4.4	2.5	3.7	1.3
19	1.5	4.4	29	---	76	26	14	4.9	4.0	4.3	4.9	2.8
20	1.5	4.1	21	67	58	31	12	4.6	3.6	5.2	3.0	2.6
21	1.5	4.3	16	28	44	40	12	---	3.8	5.9	2.5	1.7
22	1.6	4.4	12	21	---	30	10	---	3.9	3.2	2.3	1.5
23	2.1	4.3	10	18	74	29	26	11	3.2	2.2	2.1	1.5
24	1.7	---	10	16	---	26	47	6.4	3.1	1.9	1.9	2.0
25	1.6	---	9.2	12	---	22	16	5.4	2.5	1.9	1.8	1.1
26	1.6	14	8.7	11	---	20	13	4.9	2.3	1.9	3.4	.77
27	2.0	8.4	9.1	11	72	19	11	4.6	2.2	1.9	6.8	.71
28	1.8	6.4	9.6	9.3	55	18	8.2	6.7	2.1	4.2	3.2	.76
29	1.7	6.2	8.7	---	---	19	7.0	6.1	4.5	17	2.5	1.4
30	2.2	5.7	7.7	---	---	31	6.6	4.6	---	7.0	2.2	1.2
31	2.8	---	7.1	35	---	30	---	---	---	4.8	2.2	---
TOTAL	56.97	156.7	292.7	357.0	574	973	639.8	142.4	254.8	161.2	164.4	54.44
MEAN	1.84	6.03	10.5	13.2	33.8	33.6	22.1	5.09	9.44	5.37	5.48	1.81
MAX	4.3	15	38	67	76	67	56	11	51	30	31	3.1
MIN	.97	2.5	4.6	6.1	13	18	6.6	2.7	2.1	1.9	1.8	.71
CFSM	.07	.22	.38	.48	1.24	1.23	.81	.19	.35	.20	.20	.07
IN.	.08	.21	.40	.49	.78	1.33	.87	.19	.35	.22	.22	.07

## RESERVOIRS IN TENNESSEE RIVER BASIN

- 03468500 DOUGLAS LAKE.--Lat 35°57'40", long 83°32'20", Sevier County, Hydrologic Unit 06010107, at Douglas Dam on French Broad River, 6.5 mi north of Sevierville, and at mile 32.3. DRAINAGE AREA, 4,541 mi<sup>2</sup>. PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage is sea level.  
REMARKS.--Reservoir formed by concrete main dam and 10 saddle dams. Spillway equipped with 11 radial gates, each 32 ft high by 40 ft wide and 8 sluice gates 10 ft high by 5.67 ft wide. Closure of dam was made Feb. 19, 1943; water in reservoir first reached minimum pool elevation Feb. 25, 1943. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,002.00 ft, top of gates, is 743,600 cfs-days, of which 631,200 cfs-days is controlled storage above elevation 940.00 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.  
COOPERATION.--Records furnished by Tennessee Valley Authority.  
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 760,000 cfs-days, July 25, 1949, elevation, 1,001.79 ft; minimum after first filling, 1,000 cfs-days, Jan. 16, 1956, elevation, 883.7 ft, estimated.  
EXTREMES FOR CURRENT YEAR.--Maximum contents, 644,400 cfs-days, Aug. 6, elevation, 995.90 ft; minimum, 109,800 cfs-days, Dec. 21, elevation, 940.81 ft.
- 03476000 SOUTH HOLSTON LAKE.--Lat 36°31'15", long 82°05'11", Sullivan County, Hydrologic Unit 06010102, 470 ft upstream from South Holston Dam on South Fork Holston River, 7.0 mi southeast of Bristol, Virginia-Tennessee, and at mile 49.8. DRAINAGE AREA, 703 mi<sup>2</sup>. PERIOD OF RECORD, November 1950 to current year. GAGE, water-stage recorder. Datum of gage is sea level. Prior to May 11, 1951, non-recording gage at same site and datum.  
REMARKS.--Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft in diameter with six piers, each 3 ft wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft in diameter. Closure of dam was made Nov. 20, 1950; water in reservoir first reached minimum pool elevation Jan. 25, 1951. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,742.00 ft, spillway crest, is 385,200 cfs-days, of which 220,800 cfs-days is controlled storage above elevation 1,675.00 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.  
COOPERATION.--Records furnished by Tennessee Valley Authority.  
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 363,800 cfs-days, May 10, 1984, elevation, 1,736.86 ft; minimum after first filling, 57,700 cfs-days, Jan. 13, 1956, elevation, 1,614.15 ft.  
EXTREMES FOR CURRENT YEAR.--Maximum contents, 335,400 cfs-days, June 11, elevation 1,729.95 ft; minimum, 229,000 cfs-days, Jan. 13, elevation, 1,698.75 ft.
- 03483500 WATAUGA LAKE.--Lat 36°19'20", long 82°07'16", Carter County, Hydrologic Unit 06010103, at Watauga Dam on Watauga River, 5 mi east of Elizabethton, and at mile 36.7. DRAINAGE AREA, 468 mi<sup>2</sup>. PERIOD OF RECORD, December 1948 to current year. GAGE, water-stage recorder. Datum of gage is sea level.  
REMARKS.--Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft in diameter with six piers, each 3 ft wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft in diameter. Closure of dam was made Dec. 1, 1948; water in reservoir first reached minimum pool elevation Dec. 31, 1948. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,975.00 ft, spillway crest, is 341,300 cfs-days, of which 178,500 cfs-days is controlled storage above elevation 1,915.00 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.  
COOPERATION.--Records furnished by Tennessee Valley Authority.  
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 300,800 cfs-days, Apr. 19, 1987, elevation, 1,963.28 ft; minimum after first filling, 25,100 cfs-days, Jan. 13, 1956, elevation, 1,813.47 ft.  
EXTREMES FOR CURRENT YEAR.--Maximum contents, 277,800 cfs-days, Aug. 14, elevation, 1,956.28 ft; minimum, 222,500 cfs-days, Jan. 18, elevation, 1,937.74 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
03468500 DOUGLAS LAKE				03476000 SOUTH HOLSTON LAKE			03483500 WATAUGA LAKE		
Sept. 30...	970.48	334,500	-	1,707.25	255,400	-	1,942.22	235,200	-
Oct. 31...	953.00	183,900	-150,600	1,701.15	236,300	-19,100	1,939.14	226,400	-8,800
Nov. 30...	946.37	140,400	-43,500	1,700.78	235,100	-1,200	1,938.53	224,700	-1,700
Dec. 31...	942.57	118,900	-21,500	1,700.65	234,700	-400	1,938.61	225,000	+300
CAL YR 2000	-	-	+1,100	-	-	+14,200	-	-	+12,800
Jan. 31...	946.98	144,100	+25,200	1,702.43	240,200	+5,500	1,939.59	227,700	+2,700
Feb. 28...	954.25	193,000	+48,900	1,709.89	263,900	+23,700	1,942.76	236,800	+9,100
Mar. 31...	969.85	328,200	+135,200	1,718.18	292,000	+28,100	1,951.02	261,200	+24,400
Apr. 30...	982.37	464,400	+136,200	1,724.62	315,200	+23,200	1,955.26	274,500	+13,300
May 31...	986.82	519,300	+54,900	1,728.10	328,300	+13,100	1,953.87	270,100	-4,400
June 30...	989.57	555,400	+36,100	1,727.27	325,100	-3,200	1,953.75	269,700	-400
July 31...	993.52	610,000	+54,600	1,729.70	334,400	+9,300	1,955.42	275,000	+5,300
Aug. 31...	987.47	527,700	-82,300	1,723.26	310,200	-24,200	1,950.06	258,300	-16,700
Sept. 30...	976.24	394,600	-133,100	1,715.14	281,500	-28,700	1,944.28	241,200	-17,100
WTR YR 2001	-	-	+60,100	-	-	+26,100	-	-	+6,000



## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03486800 BOONE LAKE.--Lat 36°26'26", long 82°26'16", Sullivan County, Hydrologic Unit 06010102, at Boone Dam on South Fork Holston River, 0.7 mi northeast of Spurgeon, 1.3 mi downstream from Watauga River, and at mile 18.6. DRAINAGE AREA, 1,840 mi<sup>2</sup>. PERIOD OF RECORD, December 1952 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by gravity nonover-flow type concrete dam. Spillway is equipped with five radial gates, each 35 ft high by 35 ft wide. Storage began Dec. 16, 1952; water in reservoir first reached minimum pool elevation Jan. 5, 1953. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,385.0 ft, top of gates, is 97,500 cfs-days, of which 74,800 cfs-days is controlled storage above elevation 1,330 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 99,100 cfs-days, May 19, 1964, elevation 1,384.99 ft; minimum after first filling, 21,300 cfs-days, Jan. 23, 1956, elevation, 1,327.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 95,600 cfs-days, July 29, elevation, 1,384.12 ft; minimum, 46,600 cfs-days, Jan. 4, elevation, 1,354.54 ft.

03487000 FORT PATRICK HENRY LAKE.--Lat 36°29'53", long 82°30'32", Sullivan County, Hydrologic Unit 06010102, at Fort Patrick Henry Dam on South Fork Holston River, 0.2 mi upstream from bridge on U. S. Highway 23, 4.5 mi southeast of Kingsport, and at mile 8.2. DRAINAGE AREA, 1,903 mi<sup>2</sup>. PERIOD OF RECORD, October 1953 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by gravity nonover-flow type concrete dam. Spillway is equipped with five radial gates, each 35 ft high by 35 ft wide. Storage began Oct. 27, 1953; water in reservoir first reached minimum pool elevation Dec. 8, 1953. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,263 ft, top of gates, is 13,600 cfs-days, of which 2,200 cfs-days is controlled storage above elevation 1,258 ft, normal minimum pool. Reservoir is used for navigation, flood control and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 14,000 cfs-days, Feb. 11, 1954, elevation, 1,263.80 ft, minimum after first filling, 2,690 cfs-days, Sept. 19, 1986, elevation, 1,226.33 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 13,600 cfs-days, July 27, elevation, 1,263.04 ft; minimum, 11,400 cfs-days, Aug. 30, elevation, 1,257.99 ft.

03493500 CHEROKEE LAKE.--Lat 36°10'00", long 83°29'55", Jefferson County, Hydrologic Unit 06010104, at Cherokee Dam on Holston River, 0.3 mi upstream from bridge on State Highway 92, 2.7 mi upstream from Mill Spring Creek, 2.8 mi north of Jefferson City, and at mile 52.3. DRAINAGE AREA, 3,429 mi<sup>2</sup>. PERIOD OF RECORD, December 1941 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with nine radial gates, each 32 ft high by 40 ft wide. Storage began Dec. 5, 1941; water in reservoir first reached minimum pool elevation Jan. 6, 1942. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,075.0 ft, top of gates, is 778,400 cfs-days, of which 580,300 cfs-days is controlled storage above elevation 1,020.0 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 779,400 cfs-days, May 11, 1944, maximum elevation, 1,074.47 ft May 30, 1973; minimum after first filling, 48,400 cfs-days, Jan. 7, 1954, elevation, 980.77 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 626,000 cfs-days, Aug. 1, elevation, 1,064.43 ft; minimum, 240,400 cfs-days, Dec. 21, elevation, 1,026.41 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03486800 BOONE LAKE			03487000 FORT PATRICK HENRY LAKE			03493500 CHEROKEE LAKE		
Sept. 30...	1,376.28	79,700	-	1,260.90	12,600	-	1,048.51	435,400	-
Oct. 31...	1,373.35	74,400	-5,300	1,262.14	13,200	+600	1,034.49	302,600	-132,800
Nov. 30...	1,366.13	62,500	-11,900	1,261.44	12,900	-300	1,031.81	280,800	-21,800
Dec. 31...	1,355.91	48,300	-14,200	1,261.10	12,700	-200	1,027.49	248,200	-32,600
CAL YR 2000	-	-	+3,900	-	-	+600	-	-	+300
Jan. 31...	1,357.33	50,100	+1,800	1,260.48	12,500	-200	1,032.44	285,800	+37,600
Feb. 28...	1,366.66	63,300	+13,200	1,261.10	12,700	+200	1,040.93	359,500	+73,700
Mar. 31...	1,374.38	76,200	+12,900	1,259.44	12,000	-700	1,048.29	433,100	+73,600
Apr. 30...	1,377.79	82,500	+6,300	1,261.64	13,000	+1,000	1,055.00	508,000	+74,900
May 31...	1,382.36	91,800	+9,300	1,261.60	13,000	0	1,059.38	560,900	+52,900
June 30...	1,383.04	93,200	+1,400	1,261.19	12,800	-200	1,060.92	580,300	+19,400
July 31...	1,382.24	91,500	-1,700	1,261.95	13,100	+300	1,064.21	623,100	+42,800
Aug. 31...	1,382.49	92,000	+500	1,261.48	12,900	-200	1,058.55	550,700	-72,400
Sept. 30...	1,378.60	84,100	-7,900	1,261.01	12,700	-200	1,055.00	505,000	-45,700
WTR YR 2001	-	-	+4,400	-	-	+100	-	-	+69,600



## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

- 03499500 FORT LOUDOUN LAKE.--Lat 35°47'30", long 84°14'35", Loudoun County, Hydrologic Unit 06010201, at Fort Loudoun Dam on Tennessee River, 1 mi northeast of Lenoir City, and at mile 602.3. DRAINAGE AREA, 9,550 mi<sup>2</sup>. PERIOD OF RECORD, July 1943 to current year. GAGE, water-stage recorder. Datum of gage is sea level.
- REMARKS.--Reservoir formed by concrete dam with earth embankment. Spillway equipped with 14 radial gates, each 32 ft high by 40 ft wide. Closure of dam was made Aug. 2, 1943; water in reservoir first reached ordinary minimum pool elevation Sept. 4, 1943. Revised capacity table put into use Jan. 19, 1980. Total level pool capacity at elevation 815.00 ft, top of gates, is 424,000 cfs-days, of which 120,000 cfs-days is controlled flood storage above elevation 807.00 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power. Tellico-Fort Loudoun canal was opened Jan. 19, 1980. Canal is 1,000 ft long, and interconnects Tellico and Fort Loudoun Lakes at the dam. Spillway gates of Tellico Dam were closed Feb. 7, 1980, diverting all flow from Little Tennessee River.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 815.14 ft, May 8, 1984; minimum after first filling, 805.54 ft, Jan. 18, 1954.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 184,400 cfs-days, July 29; maximum elevation, 813.31 ft, July 29; minimum contents, 150,100 cfs-days, Dec. 12, minimum elevation, 808.22 ft, Dec. 12. Contents based on backwater profile.
- 03519800 TELLICO LAKE.--Lat 35°46'53", long 84°15'10", Loudoun County, Hydrologic Unit 06010201, at Tellico Dam on Little Tennessee River, 1.1 mi south of Lenoir City, and at mile 0.4. DRAINAGE AREA, 2,627 mi<sup>2</sup>. PERIOD OF RECORD, December 1979 to current year. GAGE, water-stage recorder. Datum of gage is sea level.
- REMARKS.--Reservoir formed by concrete dam with earth embankment. Spillway equipped with 3 radial gates, each 42 ft high by 40 ft wide. Closure of dam was made Nov. 29, 1979; water in reservoir first reached ordinary minimum pool elevation Dec. 24, 1979. Total capacity at elevation 815.00 ft, top of gates, is 225,500 cfs-days, of which 63,800 cfs-days is controlled storage above elevation 807.00 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and indirectly, power. Tellico-Fort Loudoun canal was opened Jan. 19, 1980. Canal is 1,000 ft long, and interconnects Tellico and Fort Loudoun Lakes at the dam. Spillway gates of Tellico Dam were closed Feb. 7, 1980, diverting all flow from Little Tennessee River.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 228,700 cfs-days, May 8, 1984, elevation, 815.37 ft; minimum after first filling, 155,300 cfs-days, Feb. 17, 1997, elevation, 807.30 ft; minimum elevation, 806.96 ft, Jan. 14, 1980.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 200,600 cfs-days, Oct. 19, elevation, 813.38 ft; minimum, 163,000 cfs-days, Dec. 12, elevation, 808.39 ft.
- 03532500 NORRIS LAKE.--Lat 36°13'29", long 84°05'29", Anderson County, Hydrologic Unit 06010205, at Norris Dam on Clinch River, 2.5 mi northwest of Norris, and at mile 79.8. DRAINAGE AREA, 2,912 mi<sup>2</sup>. PERIOD OF RECORD, June 1935 to current year. GAGE, water-stage recorder. Datum of stage is 0.11 ft above sea level. Gage readings have been reduced to sea level.
- REMARKS.--Reservoir is formed by concrete gravity dam with three drum gates, each 100 ft wide by 14 ft high. Some storage began in June 1935; dam was completely closed and placed in operation Mar. 4, 1936; water in reservoir first reached minimum pool elevation Mar. 24, 1936. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,034.11 ft, top of gates, is 1,286,600 cfs-days, of which 969,000 cfs-days is controlled storage above elevation 960.11 ft normal minimum pool. Reservoir is used for navigation, flood control, and power.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,236,700 cfs-days, Feb. 11, 1937, elevation, 1,031.21 ft; minimum after first filling, 75,500 cfs-days, Jan. 24, 1956, elevation, 909.46 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 955,700 cfs-days, Aug 6, elevation, 1015.73 ft; minimum, 515,100 cfs-days, Jan. 5, elevation, 982.40 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	*03499500 FORT LOUDOUN LAKE			03519800 TELLICO LAKE			03532500 NORRIS LAKE		
Sept. 30...	812.04	176,400	-	812.39	192,900	-	998.14	699,500	-
Oct. 31...	812.03	176,400	0	812.27	191,900	-1,000	988.49	581,700	-117,800
Nov. 30...	809.20	156,300	-20,100	809.28	169,400	-22,500	985.74	550,900	-30,800
Dec. 31...	808.98	154,800	-1,500	809.10	168,100	-1,300	983.20	523,500	-27,400
CAL YR 2000	-	-	+1,900	-	-	+1,900	-	-	+55,400
Jan. 31...	809.11	155,700	+900	809.34	169,900	+1,800	986.53	559,700	+36,200
Feb. 28...	808.89	154,600	-1,100	809.24	169,100	-800	996.55	679,100	+119,400
Mar. 31...	808.98	154,900	+300	808.98	167,200	-1,900	1,003.93	777,700	+98,600
Apr. 30...	813.01	183,100	+28,200	813.04	197,900	+30,700	1,010.18	868,700	+91,000
May 31...	812.56	179,800	-3,300	812.66	195,000	-2,900	1,013.52	920,300	+51,600
June 30...	812.58	180,000	+200	812.73	195,500	+500	1,013.38	918,100	-2,200
July 31...	812.92	182,900	+2,900	813.01	197,700	+2,200	1,015.02	944,200	+26,100
Aug. 31...	812.46	180,300	-2,600	812.62	194,700	-3,000	1,010.30	870,500	-73,700
Sept. 30...	812.85	181,900	+1,600	813.01	197,700	+3,000	1,007.01	821,700	-48,800
WTR YR 2001	-	-	+5,500	-	-	+4,800	-	-	+122,200

\* Contents based on backwater profile.

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03535900 MELTON HILL LAKE.--Lat 35°53'04", long 84°18'01", Loudon-Roane County line, Hydrologic Unit 06010207, 9 mi southwest of Oak Ridge, 19 mi west of Knoxville, 57 mi downstream from Norris Dam on Clinch River, and at mile 23.1. DRAINAGE AREA, 3,343 mi<sup>2</sup>. PERIOD OF RECORD, August 1962 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with three radial gates, each 42 ft high by 40 ft wide. Dam completed and storage began May 1, 1963; water in reservoir first reached minimum pool elevation May 23, 1963. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 796 ft, top of gates, is 63,500 cfs-days, of which 16,100 cfs-days is controlled storage above elevation 790.0 ft, normal minimum pool. Reservoir is used for navigation, power, and recreation.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 64,900 cfs-days, Mar. 16, 1973, elevation, 796.45 ft; minimum after first filling, 35,100 cfs-days, Feb. 9, 1966, elevation, 784.10 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 60,500 cfs-days, Feb. 17, elevation, 795.00 ft; minimum, 47,600 cfs-days, Apr. 2, elevation, 790.05 ft.

03543000 WATTS BAR LAKE.--Lat 35°37'13", long 84°47'00", Rhea County, Hydrologic Unit 06010201, at Watts Bar Dam on Tennessee River, 6.5 mi southeast of Spring City, 72.4 mi downstream from Fort Loudoun Dam, and at mile 529.9. DRAINAGE AREA, 17,310 mi<sup>2</sup>, approximately. PERIOD OF RECORD, October 1941 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with 20 radial gates, each 32 ft high by 40 ft wide, also one 2-section leaf trashway gate 16.3 ft high by 24 ft wide. Storage began with partial closure Dec. 12, 1941, and final closure Jan. 1, 1942; water in reservoir first reached minimum navigation pool elevation Feb. 17, 1942. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 745.0 ft, top of gates, is 592,400 cfs-days, of which 191,000 cfs-days is controlled flood storage above elevation 735.0 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 745.40 ft, Mar. 17, 1973; minimum after first filling, 733.44 ft, Mar. 20, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 527,400 cfs-days, July 30; maximum elevation, 741.97 ft, July 31; minimum midnight contents, 412,200 cfs-days, Mar. 16; minimum elevation, 735.30 ft, Jan. 3. Contents based on backwater profile.

03564000 LAKE OCOEE.--Lat 35°05'40", long 84°38'53", Polk County, Hydrologic Unit 06020003, at Lake Ocoee Dam on Ocoee River at Parksville, 13.8 mi east of Cleveland, and at mile 11.9. DRAINAGE AREA, 595 mi<sup>2</sup>. PERIOD OF RECORD, June 1914 to current year. Prior to October 1953, published as "Parksville (Ocoee No. 1) Reservoir," and October 1953 to September 1968, as "Parksville Lake." GAGE, nonrecording gage. Datum of gage is 6.89 ft above sea level. Gage readings have been reduced to sea level.

REMARKS.--Reservoir is formed by concrete dam with 347 ft of spillway. Spillway is equipped with four floodgates, each 6 ft high by 20 ft wide and 265 ft of flashboards about 5.7 ft high. Crest of spillway under gates is at elevation 830.82 ft; remainder of spillway is 1.0 ft higher. Dam completed and storage began in 1911. Capacity of reservoir has been considerably reduced by silting. Revised capacity table put into use Jan. 1, 1979. Total capacity at elevation 837.55 ft, about top of flashboards, is 42,300 cfs-days, of which 15,600 cfs-days is controlled storage above elevation 817.9 ft, normal minimum pool. Reservoir is used for power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum midnight contents observed, 53,300 cfs-days, July 9, 1916; maximum midnight elevation observed, 840.2 ft, Feb. 10, 1946; minimum contents observed, 27,300 cfs-days, Jan. 27, 1956, elevation, 817.7 ft; minimum midnight elevation observed, 814.8 ft, Dec. 14, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 45,500 cfs-days, Mar. 21, elevation, 841.09 ft; minimum 32,300 cfs-days, Mar. 2, elevation, 826.79 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03535900 MELTON HILL LAKE			*03543000 WATTS BAR LAKE			03564000 LAKE OCOEE		
Sept. 30...	792.86	54,500	-	740.11	492,500	-	834.49	38,900	-
Oct. 31...	793.84	57,200	+2,700	740.06	490,900	-1,600	833.79	38,300	-600
Nov. 30...	793.89	57,300	+100	736.69	430,100	-60,800	831.89	36,500	-1,800
Dec. 31...	793.60	56,500	-800	735.84	415,200	-14,900	827.39	32,800	-3,700
CAL YR 2000	-	-	+300	-	-	-900	-	-	+200
Jan. 31...	792.13	52,600	-3,900	736.65	429,000	+13,800	828.79	33,900	+1,100
Feb. 28...	793.54	56,400	+3,800	738.33	460,200	+31,200	828.29	33,500	-400
Mar. 31...	790.26	48,000	-8,400	736.89	433,100	-27,100	830.49	35,300	+1,800
Apr. 30...	793.54	56,400	+8,400	740.16	492,900	+59,800	833.79	38,300	+3,000
May 31...	793.83	57,200	+800	740.70	503,400	+10,500	833.89	38,400	+100
June 30...	794.16	58,100	+900	740.18	493,200	-10,200	835.69	40,100	+1,700
July 31...	791.25	50,400	-7,700	741.75	524,500	+31,300	835.19	39,600	-500
Aug. 31...	792.68	54,000	+3,600	740.10	492,900	-31,600	834.59	39,000	-600
Sept. 30...	793.99	57,600	+3,600	740.04	490,600	-2,300	835.49	39,900	+900
WTR YR 2001	-	-	+3,100	-	-	-1,900	-	-	+1,000

\* Contents based on backwater profile.

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

- 03566500 CHICKAMAUGA LAKE.--Lat 35°06'07", long 85°13'42", Hamilton County, Hydrologic Unit 06020001, at Chickamauga Dam on Tennessee River, 5.8 mi northeast of Chattanooga, 58.9 mi downstream from Watts Bar Dam, and at mile 471.0. DRAINAGE AREA, 20,790 mi<sup>2</sup>, approximately. PERIOD OF RECORD, October 1939 to current year. GAGE, water-stage recorder. Datum of gage is sea level.
- REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with eighteen 2-section lift gates, each 40.44 ft high by 40 ft wide. Storage began Feb. 6, 1940; water in reservoir first reached minimum navigation pool elevation Mar. 10, 1940. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 685.44 ft, top of gates, is 372,600 cfs-days, of which 175,000 cfs-days is controlled flood storage above elevation 675.0 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 686.19 ft, Mar. 29, 1994; minimum after first filling, 673.27 ft, Jan. 21, 1942.
- EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 322,200 cfs-days, Apr. 15; maximum elevation, 683.16 ft, Aug. 16; minimum midnight contents, 207,400 cfs-days, Nov. 30; minimum elevation, 675.08 ft, Nov. 30. Contents based on backwater profile.
- 03570520 NICKAJACK LAKE.--Lat 35°00'07", long 85°37'14", Marion County, Hydrologic Unit 06020001, at Nickajack Dam on Tennessee River, 2 mi upstream from Sequatchie River, 5 mi south of Jasper, 46.3 mi downstream from Chickamauga Dam, and at mile 424.7. DRAINAGE AREA, 21,870 mi<sup>2</sup>, approximately. PERIOD OF RECORD, December 1967 to current year. GAGE, water-stage recorder. Datum of gage is sea level.
- REMARKS.--Reservoir is formed by concrete dam with earth embankments on each side. The spillway, with crest at elevation 595.0 ft, is equipped with 10 radial gates, each 40 ft high by 40 ft wide. A trash gate, 5.5 ft high by 15 ft wide, is located between the spillway and powerhouse. Dam was completed and storage began on Dec. 14, 1967. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 635.0 ft, top of gates, is 127,200 cfs-days, of which 16,200 cfs-days is controlled storage above elevation 632.0 ft, ordinary minimum. Reservoir is used for navigation and power.
- COOPERATION.--Records furnished by Tennessee Valley Authority.
- EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 634.99 ft, Apr. 19, 1969; minimum after first filling, 630.82 ft, Feb. 20, 1968.
- EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 126,900 cfs-days, Jan. 20; maximum elevation, 634.61 ft, Mar. 16; minimum midnight contents, 115,800 cfs-days, Dec. 13; minimum elevation, 632.03 ft, Feb. 21. Contents based on backwater profile.
- 03579000 WOODS RESERVOIR.--Lat 35°17'54", long 86°05'48", Franklin County, Hydrologic Unit 06030003, at Elk River Dam on Elk River, 1.2 mi upstream from Spring Creek, 2.5 mi northeast of Estill Springs, 6.8 mi upstream from bridge on U.S. Highway 41-A, and at mile 170.0. DRAINAGE AREA, 263 mi<sup>2</sup>. PERIOD OF RECORD, May 1952 to current year. GAGE, water-stage recorder. Datum of gage is sea level.
- REMARKS.--Reservoir is formed by concrete gravity and earthfill-type dam with riprapped embankments. Spillway equipped with three radial gates, each 25 ft high by 50 ft wide, and two sluice gates, each 6 ft high by 4 ft wide. Closure of dam was made May 1, 1952; water in reservoir first reached minimum pool elevation Feb. 6, 1953. Total capacity at elevation 962.0 ft, surcharge pool, is 44,400 cfs-days, of which 9,900 cfs-days is controlled storage above elevation 957.0 ft, normal minimum pool. Reservoir is used for cooling water, flood control, and recreational purposes.
- COOPERATION.--Twice-daily gage readings (0600 and 2400 hours) furnished by U.S. Air Force.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 42,300 cfs-days, April 21 and 22, 1956, elevation, 960.98 ft; minimum after first filling, 26,300 cfs-days, Nov. 8-11, 1953, elevation, 951.93 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 39,900 cfs-days, Apr. 16, elevation, 959.81 ft; minimum midnight contents, 35,700 cfs-days, Feb. 20; elevation, 957.64 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
*03566500 CHICKAMAUGA LAKE				*03570520 NICKAJACK LAKE			03579000 WOODS RESERVOIR		
Sept. 30...	680.78	283,700	-	633.73	123,100	-	959.50	39,300	-
Oct. 31...	678.12	241,200	-42,500	633.84	120,600	-2,500	958.55	37,400	-1,900
Nov. 30...	675.74	207,400	-33,800	633.49	118,700	-1,900	958.04	36,500	-900
Dec. 31...	676.33	215,400	+8,000	633.60	119,300	+600	957.98	36,400	-100
CAL YR 2000	-	-	+7,600	-	-	+900	-	-	-200
Jan. 31...	677.58	233,200	+17,800	633.55	119,000	-300	958.00	36,400	0
Feb. 28...	677.27	235,100	+1,900	632.28	119,000	0	958.24	36,800	+400
Mar. 31...	679.19	257,700	+22,600	633.96	121,400	+2,400	959.50	39,300	+2,500
Apr. 30...	682.66	317,000	+59,300	633.28	117,600	-3,800	959.54	39,400	+100
May 31...	682.22	308,800	-8,200	633.81	120,400	+2,800	959.50	39,300	-100
June 30...	681.69	299,300	-9,500	633.33	117,800	-2,600	959.51	39,300	0
July 31...	682.87	320,600	+21,300	633.02	119,400	+1,600	959.39	39,100	-200
Aug. 31...	682.25	311,700	-8,900	633.54	121,800	+2,400	959.56	39,400	+300
Sept. 30...	681.15	290,000	-21,700	633.77	120,200	-1,600	959.53	39,300	-100
WTR YR 2001	-	-	+6,300	-	-	-2,900	-	-	0

\* Contents based on backwater profile.



## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03580740 TIMS FORD LAKE.--Lat 35°11'51", long 86°16'41", Franklin County, Hydrologic Unit 06030003, in intake tower near left bank at Tims Ford Dam on Elk River, 0.4 mi upstream from bridge on State Highway 50, 9.5 mi west of Winchester, and at mile 133.4. DRAINAGE AREA, 529 mi<sup>2</sup>. PERIOD OF RECORD, December 1970 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by concrete dam with compacted rockfill impervious earth core embankments. Spillway equipped with three radial gates, each 42 ft high by 40 ft wide. Storage began Dec. 1, 1970; water in reservoir first reached minimum pool elevation Feb. 23, 1971, and first filling was completed June 3, 1971. Total capacity at elevation 895 ft, top of gates, is 306,500 cfs-days, of which 142,400 cfs-days is controlled storage above elevation 865 ft, normal minimum pool. Reservoir is used for flood control, power, and recreation.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 298,600 cfs-days, Dec. 23, 1990, elevation, 893.62 ft; minimum after first filling 130,600 cfs-days, Dec. 1, 1997, elevation, 855.25 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 270,900 cfs-days, July 9, elevation, 888.69 ft; minimum, 188,600 cfs-days, Jan. 4, elevation, 871.26 ft.

03593000 PICKWICK LAKE.--Lat 35°04'16", long 88°15'04", Hardin County, Hydrologic Unit 06040001, at Pickwick Landing Dam on Tennessee River, 1.5 mi north of town of Pickwick Dam, 6.1 mi upstream from Lick Creek, 52.7 mi downstream from Wilson Dam, and at mile 206.7. DRAINAGE AREA, 38,820 mi<sup>2</sup>, approximately. PERIOD OF RECORD, October 1937 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with twenty-two 2-section lift gates, each 40 ft high by 40 ft wide, one of which is used as a trash gate. Dam completed and storage began Feb. 8, 1938; water in reservoir first reached minimum pool elevation Feb. 18, 1938. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 418.0 ft, top of gates, is 557,100 cfs-days, of which 210,200 cfs-days is controlled flood storage above elevation 408.0 ft, minimum navigation pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 419.49 ft, Mar. 30, 1944; minimum after first filling, 407.12 ft, Dec. 18, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 639,300 cfs-days, June 10; maximum elevation, 416.87 ft; June 11, minimum midnight contents, 435,600 cfs-days, Mar. 7, minimum elevation, 408.02 ft, Mar. 6. Contents based on backwater profile.

03596460 NORMANDY LAKE.--Lat 35°27'55", long 86°14'55", Coffee County, Hydrologic Unit 06040002, at Normandy Dam on Duck River, 1.5 mi northeast of Normandy, 2.6 mi downstream from Riley Creek, 8 mi north of Tullahoma, and at mile 248.6. DRAINAGE AREA, 195 mi<sup>2</sup>. PERIOD OF RECORD, January 1976 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by concrete gravity dam with riprapped and rolled earthfill embankment on left side. Spillway is equipped with two radial gates, each 40 ft high by 36 ft wide. Storage began Jan. 5, 1976; water in reservoir first reached minimum pool elevation Mar. 22, 1976. Revised capacity table put into use Jan. 1, 1977. Total capacity at elevation 880 ft, top of gates, is 64,000 cfs-days, of which 30,400 cfs-days is controlled storage above elevation 859 ft, normal minimum pool. Reservoir is used for flood control, water supply, water-quality control, recreation, and shoreline development.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 63,800 cfs-days, Feb. 20, 1991, elevation, 880.12 ft; minimum after first filling, 26,800 cfs-days, Nov. 27, 1981, elevation, 853.12 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 55,800 cfs-days, Feb. 18, elevation, 875.30 ft; minimum 39,800 cfs-days, Jan. 29, elevation, 864.31 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
03580740 TIMS FORD LAKE				*03593000 PICKWICK LAKE			03596460 NORMANDY LAKE		
Sept. 30...	884.20	247,400	-	410.45	476,400	-	870.71	48,700	-
Oct. 31...	880.54	229,400	-18,000	409.26	449,500	-26,900	868.12	45,000	-3,700
Nov. 30...	876.12	209,200	-20,200	409.22	452,300	+2,800	865.41	41,200	-3,800
Dec. 31...	872.82	195,100	-14,100	409.13	447,600	-4,700	864.88	40,500	-700
CAL YR 2000	-	-	+7,500	-	-	-6,700	-	-	+1,000
Jan. 31...	875.70	207,400	+12,300	410.56	479,700	+32,100	864.43	39,900	-600
Feb. 28...	882.69	239,800	+32,400	409.08	457,300	-22,400	869.48	46,900	+7,000
Mar. 31...	881.27	232,900	-6,900	413.35	547,000	+89,700	869.17	46,500	-400
Apr. 30...	886.77	260,600	+27,700	413.96	560,800	+13,800	873.99	53,700	+7,200
May 31...	887.18	262,800	+2,200	414.72	581,600	+20,800	874.60	54,700	+1,000
June 30...	888.49	269,800	+7,000	414.57	574,400	-7,200	874.61	54,700	0
July 31...	887.77	266,000	-3,800	413.77	555,900	-18,500	873.71	53,300	-1,400
Aug. 31...	885.50	254,000	-12,000	412.59	529,100	-26,800	873.67	53,200	-100
Sept. 30...	885.28	252,900	-1,100	411.80	508,900	-20,200	872.59	51,600	-1,600
WTR YR 2001	-	-	+5,500	-	-	+32,500	-	-	+2,900

\* Contents based on backwater profile.

## RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

03609000 KENTUCKY LAKE.--Lat 37°00'49", long 88°16'06", Marshall County, KY, Hydrologic Unit 06040006, at Kentucky Dam on Tennessee River at Gilbertsville, KY, and at mile 22.4. DRAINAGE AREA, 40,200 mi<sup>2</sup>, approximately. PERIOD OF RECORD, July 1944 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by concrete dam with 24 lift gates 50 ft high by 40 ft wide. Storage began Aug. 16, 1944, and final closure was Aug. 30, 1944. Water in reservoir reached minimum pool elevation Apr. 7, 1945. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 375.0 ft, top of gates, is 3,090,000 cfs-days, of which 2,020,700 cfs-days is controlled storage above 354.0 ft, ordinary minimum pool. Reservoir is used for navigation, flood control, and power. Barkley-Kentucky Canal opened July 13, 1966, for navigation and power use. Canal is 1.75 miles long and interconnects Lake Barkley and Kentucky Lake at a point 2.2 mi upstream from Barkley Dam. For daily discharges through the canal, see Kentucky reports.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 369.87 ft, May 24, 1983; minimum after first filling, 348.02 ft, Mar. 11, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum midnight contents, 1,597,100 cfs-days Feb. 19; maximum elevation, 361.14 ft, June 14; minimum midnight contents, 1,094,900 cfs-days, Feb. 8, minimum elevation, 353.64 ft, Mar. 4.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Elevation (feet)	Content (cfs-days)	Change contents (cfs-days)
*03609000 KENTUCKY LAKE			
Sept. 30...	355.12	1,146,700	--
Oct. 31...	355.12	1,147,900	+1,200
Nov. 30...	354.64	1,122,800	-25,100
Dec. 31...	355.45	1,168,400	+45,600
CAL YR 2000	-	-	+75,500
Jan. 31...	354.48	1,133,800	-34,600
Feb. 28...	354.59	1,264,700	+130,900
Mar. 31...	355.83	1,199,200	-65,500
Apr. 30...	359.35	1,454,600	+255,400
May 31...	359.58	1,476,900	+22,300
June 30...	359.52	1,464,000	-12,900
July 31...	358.08	1,373,300	-90,700
Aug. 31...	357.30	1,312,600	-60,700
Sept. 30...	355.47	1,172,700	-139,900
WTR YR 2001	-	-	+26,000

\* Contents based on backwater profile.

OTHER RESERVOIRS.--The following small reservoirs in the Tennessee River basin are described below, but records of contents are not published herein.

03466400 DAVY CROCKETT LAKE on Nolichucky River at Nolichucky Dam, with a total capacity of 1,300 cfs-days, none of which is controlled storage.

03517900 CALDERWOOD LAKE on Little Tennessee River at Calderwood, with a total capacity of 20,800 cfs-days of which 840 cfs-days is controlled storage.

03518200 CHILHOWEE LAKE on Little Tennessee River at Chilhowee Dam, with a total capacity of 24,800 cfs-days of which 3,400 cfs-days is controlled storage.

03562500 OCOEE NO. 3 LAKE on Ocoee River at Ocoee No. 3 Dam, 5.0 miles west of Ducktown, with a total capacity of 1,660 cfs-days, of which 1,550 cfs-days is controlled storage. Records of contents previous to 1971 water year published as Ocoee No. 3 Lake near Ducktown, TN.



## OBION RIVER BASIN

07024305 BEAVER CREEK AT HIGHWAY 22 BYPASS NEAR HUNTINGDON, TN

LOCATION.--Lat 36°00'47", long 88°26'42", Carroll County, Hydrologic Unit 08010203, on the upstream side of the main channel bridge on Highway 22 Bypass, 0.8 mi northwest of Huntingdon, 3 mi upstream of Crooked Creek, and at mile 4.5.

DRAINAGE AREA.--58.6 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1994 to April 1996, December 2000 to September 2001 at present location. Prior to June 1994, occasional low-flow measurements, water years 1946, 1948, 1952-54, 1956-61 and annual maximum, water years 1954-62, 1989-91. October 1962 to February 1988, July 1988 to September 1989. October 1991 to April 14, 1994 continuous stage at bridge 1.0 mi upstream of present location.

REVISED RECORDS.--WSP 1920: 1956(M).

GAGE.--Data collection platform. Datum of gage is 350 ft above sea level, from topographic map. Prior to June 1994 water-stage recorder at site 1.0 mi upstream at datum 14.2 higher.

REMARKS.--Records fair. Periodic observation of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR CURRENT PERIOD.--December 2000 to September 2001: Maximum discharge 1,440 ft<sup>3</sup>/s, Feb. 16, gage height 18.66 ft; minimum daily discharge, 24 ft<sup>3</sup>/s, Sept. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR DECEMBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	e35	35	73	82	53	33	410	98	52	40
2	---	---	e34	32	60	75	44	31	269	86	49	37
3	---	---	e32	31	52	71	44	31	102	90	46	42
4	---	---	e31	34	52	218	212	30	101	98	45	40
5	---	---	e37	38	52	190	288	29	67	208	48	36
6	---	---	e40	39	49	96	119	29	62	202	68	32
7	---	---	e36	38	47	74	72	32	83	118	52	34
8	---	---	e31	37	47	65	54	40	65	97	42	32
9	---	---	e38	34	74	59	47	36	50	85	40	33
10	---	---	e40	33	137	54	41	37	43	75	87	30
11	---	---	e41	37	73	51	37	39	40	67	63	28
12	---	---	43	53	71	78	72	37	38	58	61	30
13	---	---	50	43	83	120	185	36	36	52	65	29
14	---	---	103	44	227	78	91	34	34	42	46	28
15	---	---	61	43	698	143	150	31	31	37	40	28
16	---	---	334	38	1320	128	98	29	29	30	36	28
17	---	---	401	37	1150	80	52	32	28	26	35	30
18	---	---	168	73	651	66	42	27	27	25	33	29
19	---	---	69	263	184	61	39	25	25	36	33	41
20	---	---	50	176	101	61	38	33	25	36	31	32
21	---	---	49	82	84	75	38	360	26	44	30	28
22	---	---	43	65	179	61	38	422	30	32	30	26
23	---	---	37	58	129	62	50	168	31	28	30	25
24	---	---	38	55	103	55	117	65	35	135	33	25
25	---	---	36	50	494	48	51	51	41	134	31	25
26	---	---	37	48	553	43	39	45	35	57	31	24
27	---	---	41	48	217	40	37	42	33	49	78	25
28	---	---	43	45	99	38	36	65	37	48	46	27
29	---	---	41	101	---	43	35	66	64	72	36	25
30	---	---	37	268	---	69	33	49	135	84	36	25
31	---	---	35	119	---	70	---	203	---	61	41	---
TOTAL	---	---	2111	2097	7059	2454	2252	2187	2032	2310	1394	914
MEAN	---	---	68.1	67.6	252	79.2	75.1	70.5	67.7	74.5	45.0	30.5
MAX	---	---	401	268	1320	218	288	422	410	208	87	42
MIN	---	---	31	31	47	38	33	25	25	25	30	24
CFSM	---	---	1.16	1.15	4.30	1.35	1.28	1.20	1.16	1.27	.77	.52
IN.	---	---	1.34	1.33	4.48	1.56	1.43	1.39	1.29	1.47	.88	.58

e Estimated

## 07024305 BEAVER CREEK AT HIGHWAY 22 BYPASS NEAR HUNTINGDON, TN--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.5	89.1	94.2	159	210	187	97.9	79.2	74.0	80.0	69.6	35.4
MAX	50.1	110	124	264	376	381	254	87.9	96.8	86.9	120	38.2
(WY)	1996	1996	1994	1994	1994	1994	1994	1995	1994	1994	1995	1995
MIN	43.1	77.8	68.1	67.6	92.0	79.2	61.4	70.5	57.3	74.5	44.2	30.5
(WY)	1994	1994	2001	2001	1995	2001	1995	2001	1995	2001	1994	2001

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

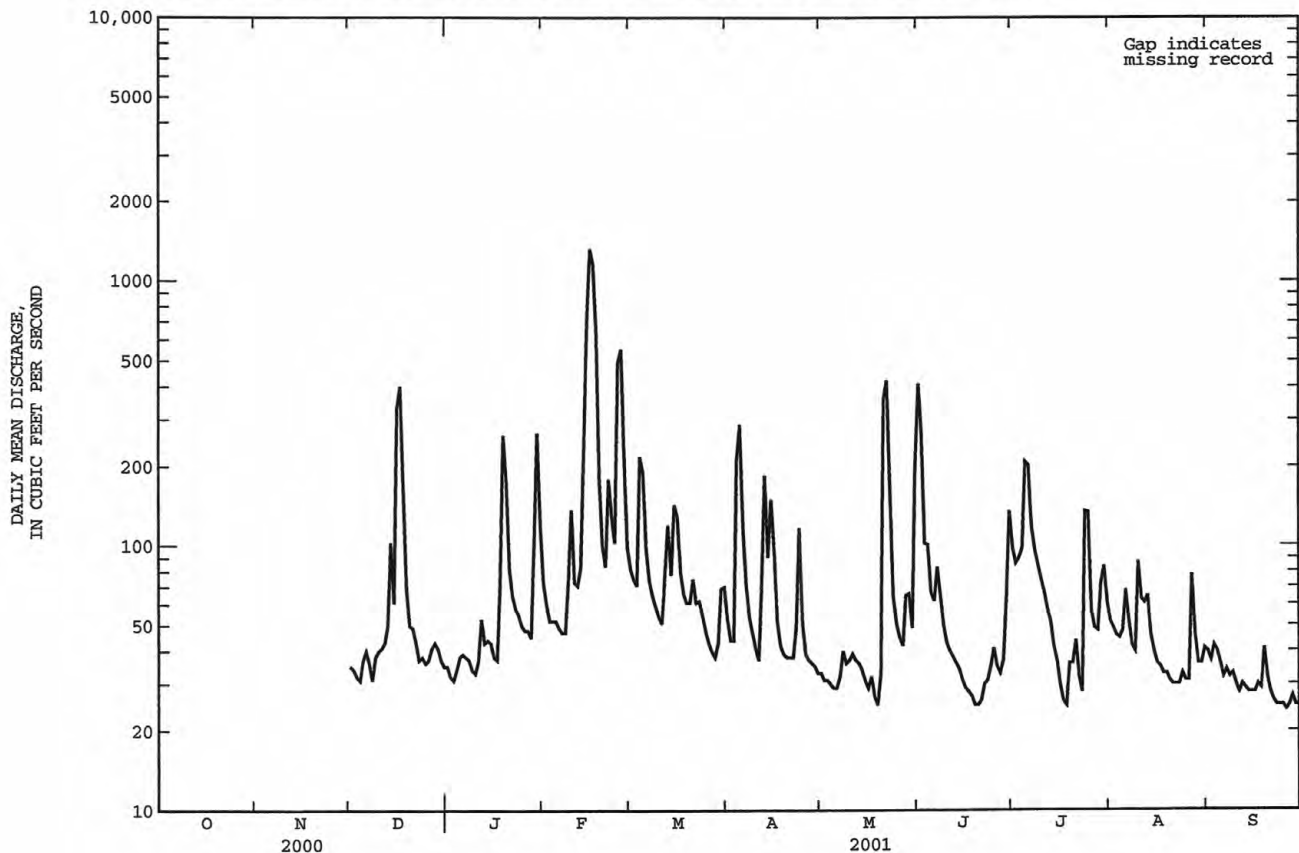
## FOR 2001 WATER YEAR

## WATER YEARS 1994 - 2001

ANNUAL TOTAL	2111		24810									
ANNUAL MEAN	68.1		81.6							108		
HIGHEST ANNUAL MEAN										156		1994
LOWEST ANNUAL MEAN										81.6		2001
HIGHEST DAILY MEAN	401	Dec 17		1320	Feb 16				2190		Jan 28	1994
LOWEST DAILY MEAN	31	Dec 4		24	Sep 26				24		Sep 26	2001
ANNUAL SEVEN-DAY MINIMUM	34	Dec 2		25	Sep 23				25		Sep 23	2001
MAXIMUM PEAK FLOW				1440	Feb 16				a8350		Sep 9	1970
MAXIMUM PEAK STAGE				18.66	Feb 16				b15.20		Sep 13	1982
INSTANTANEOUS LOW FLOW				23	May 20				18		Jul 9	1993
ANNUAL RUNOFF (CFSM)	1.16			1.39					1.84			
ANNUAL RUNOFF (INCHES)	1.34			15.75					25.05			
10 PERCENT EXCEEDS	155			146					227			
50 PERCENT EXCEEDS	40			44					57			
90 PERCENT EXCEEDS	32			30					34			

a From rating curve extended above 3,600 ft<sup>3</sup>/s, on basis of contracted opening measurement of peak flow, at site 1 mile upstream of present location.

b At site 1 mile upstream of present location and at datum 14.2 ft higher than present datum.



## OBION RIVER BASIN

07027000 REELFOOT LAKE NEAR TIPTONVILLE, TN

LOCATION.--Lat 36°21'09", long 89°25'07", Lake County, Hydrologic Unit 08010202, at Middle Landing in Reelfoot Lake State Park, 0.4 mi east of Blue Bank, 0.8 mi west of the spillway, and 3.3 mi southeast of Tiptonville.

DRAINAGE AREA.--240 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Data collection platform. Datum of gage is 270.22 ft above sea level based on Benchmark E-13, supplementary adjustment of 1958.

REMARKS.--Records good except for the period Dec. 20 to Mar. 20, which are poor. Estimated record is based on once daily observer readings from U.S. Fish and Wildlife Service.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.65 ft, from recorded range in stage, about Apr. 26, 1973; minimum, 9.59 ft, July 6, 7, 8, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1937 reached a stage of about 17.0 ft, at spillway, present datum, from information by local resident. Minimum stage at spillway, 9.30 ft, Nov. 20, 21, 1953 at a datum of 270.29 ft above sea level.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 13.07 ft, Feb. 16; but may have been exceeded during period of missing record, minimum, 10.96 ft, Nov. 6.

## GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	11.32	11.26	11.30	11.03	11.00	11.02	11.31	11.25	11.27	---	---	e12.03
2	11.30	11.22	11.27	11.03	10.98	11.00	11.42	11.26	11.32	---	---	---
3	11.29	11.24	11.27	11.07	11.01	11.02	11.39	11.26	11.29	---	---	e12.01
4	11.27	11.23	11.26	11.06	11.00	11.02	11.26	11.20	11.23	---	---	---
5	11.34	11.18	11.23	11.03	10.99	11.01	11.30	11.23	11.26	---	---	---
6	11.41	11.24	11.32	11.13	10.96	11.03	11.29	11.23	11.25	---	---	---
7	11.38	11.18	11.28	11.19	11.10	11.14	11.23	11.15	11.20	---	---	---
8	11.34	11.19	11.25	11.23	11.14	11.19	11.31	11.19	11.24	---	---	e11.85
9	11.25	11.19	11.21	11.24	11.04	11.14	11.31	11.22	11.25	---	---	---
10	11.19	11.18	11.19	11.24	11.12	11.18	11.25	11.23	11.24	---	---	---
11	11.18	11.18	11.18	11.22	11.17	11.19	11.26	11.12	11.20	---	---	e12.03
12	11.18	11.16	11.17	11.19	11.14	11.16	11.31	11.19	11.27	---	---	e12.07
13	11.17	11.12	11.15	11.23	11.15	11.18	11.39	11.26	11.32	---	---	---
14	11.15	11.11	11.13	11.18	11.15	11.17	11.39	11.32	11.36	---	---	---
15	11.15	11.12	11.13	11.18	11.15	11.17	11.42	11.35	11.37	---	---	---
16	11.15	11.11	11.13	11.17	11.12	11.15	11.77	11.37	11.60	---	---	e12.09
17	11.17	11.11	11.13	11.26	11.11	11.17	11.79	11.62	11.70	---	---	---
18	11.14	11.12	11.13	11.16	11.12	11.14	11.90	11.73	11.80	---	---	e12.13
19	11.12	11.11	11.12	11.14	11.08	11.12	---	---	---	---	---	e12.17
20	11.12	11.09	11.10	11.15	11.02	11.10	---	---	e11.97	---	---	---
21	11.10	11.05	11.09	11.15	11.07	11.12	---	---	---	---	---	---
22	11.10	11.08	11.09	11.12	11.08	11.10	---	---	---	---	---	---
23	11.09	11.06	11.08	11.12	11.10	11.11	---	---	---	---	---	e12.15
24	11.08	11.04	11.07	11.36	11.11	11.17	---	---	---	---	---	---
25	11.07	11.06	11.06	11.29	11.20	11.24	---	---	---	---	---	---
26	11.06	11.02	11.05	11.27	11.24	11.25	---	---	---	---	---	---
27	11.05	11.02	11.04	11.27	11.23	11.26	---	---	---	---	---	---
28	11.11	11.03	11.05	11.29	11.27	11.28	---	---	---	---	---	---
29	11.09	11.02	11.05	11.29	11.20	11.26	---	---	---	---	---	---
30	11.05	11.02	11.03	11.30	11.26	11.27	---	---	---	---	---	---
31	11.04	11.02	11.03	---	---	---	---	---	---	---	---	---
MONTH	11.41	11.02	11.15	11.36	10.96	11.15	11.90	11.12	11.38	---	---	12.06

e Estimated.

## 07027000 REELFOOT LAKE NEAR TIPTONVILLE, TN--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	---	---	e12.81	12.67	12.65	12.66	12.41	12.37	12.39
2	---	---	---	12.81	12.79	12.79	12.65	12.62	12.64	12.39	12.37	12.38
3	---	---	---	12.84	12.79	12.80	12.68	12.64	12.65	12.38	12.36	12.37
4	---	---	---	---	---	---	12.78	12.65	12.72	12.37	12.35	12.36
5	---	---	---	---	---	e12.83	12.79	12.76	12.77	12.35	12.33	12.34
6	---	---	---	---	---	e12.85	12.80	12.75	12.78	12.33	12.26	12.30
7	---	---	e12.26	---	---	e12.85	12.79	12.63	12.72	12.34	12.29	12.31
8	12.28	12.25	12.27	---	---	---	12.75	12.70	12.73	12.34	12.32	12.34
9	12.33	12.13	12.23	---	---	---	12.75	12.69	12.73	12.33	12.31	12.32
10	---	---	---	---	---	---	12.77	12.71	12.74	12.31	12.28	12.29
11	---	---	---	---	---	---	12.75	12.63	12.70	12.29	12.22	12.26
12	---	---	---	---	---	---	12.73	12.66	12.69	12.34	12.28	12.31
13	12.31	12.26	12.28	---	---	e12.77	12.74	12.71	12.72	12.31	12.27	12.29
14	12.43	12.30	12.34	13.06	12.82	12.94	12.71	12.69	12.70	12.27	12.20	12.24
15	12.77	12.43	12.63	13.06	12.78	12.96	12.77	12.70	12.73	12.21	12.13	12.18
16	---	---	e12.97	---	---	e12.84	12.80	12.67	12.74	12.17	12.13	12.16
17	---	---	e12.92	---	---	---	12.81	12.63	12.71	12.15	12.11	12.14
18	12.93	12.91	12.92	---	---	---	12.68	12.64	12.66	12.13	12.05	12.09
19	12.91	12.80	12.87	---	---	e12.81	12.64	12.54	12.60	12.17	12.05	12.14
20	12.91	12.85	12.86	---	---	e12.82	12.56	12.52	12.54	12.18	12.02	12.15
21	12.99	12.86	12.92	12.79	12.78	12.79	12.54	12.43	12.50	12.32	12.16	12.24
22	12.89	12.78	12.83	12.79	12.79	12.79	12.53	12.50	12.51	12.29	12.26	12.28
23	12.95	12.75	12.82	12.79	12.79	12.79	12.59	12.48	12.51	12.30	12.19	12.27
24	12.92	12.65	12.82	12.82	12.79	12.79	12.61	12.55	12.58	12.29	12.23	12.27
25	12.89	12.79	12.84	12.79	12.78	12.78	12.56	12.54	12.55	12.26	12.20	12.23
26	12.90	12.85	12.87	---	---	e12.79	12.54	12.52	12.53	12.23	12.14	12.20
27	12.93	12.84	12.86	---	---	e12.69	12.52	12.50	12.51	12.22	12.19	12.21
28	---	---	e12.92	12.70	12.65	12.67	12.51	12.49	12.50	12.27	12.22	12.23
29	---	---	---	12.68	12.66	12.67	12.50	12.48	12.49	12.23	12.22	12.23
30	---	---	---	12.73	12.67	12.69	12.48	12.39	12.44	12.22	12.20	12.21
31	---	---	---	12.69	12.56	12.67	---	---	---	12.24	12.14	12.19
MONTH	12.99	12.13	12.71	13.06	12.56	12.79	12.81	12.39	12.63	12.41	12.02	12.26
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	12.29	12.22	12.26	11.85	11.81	11.82	11.43	11.41	11.42	11.20	11.18	11.19
2	12.27	12.22	12.25	11.85	11.80	11.82	11.41	11.39	11.40	11.20	11.19	11.19
3	12.30	12.25	12.27	11.81	11.75	11.78	11.39	11.37	11.39	11.20	11.19	11.19
4	12.28	12.19	12.24	11.75	11.72	11.74	11.39	11.37	11.38	11.20	11.19	11.19
5	12.22	12.20	12.22	11.74	11.70	11.72	11.37	11.35	11.36	11.19	11.16	11.18
6	12.25	12.19	12.23	11.75	11.70	11.72	11.35	11.33	11.34	11.17	11.15	11.16
7	12.24	12.23	12.23	11.70	11.66	11.68	11.34	11.31	11.32	11.24	11.14	11.19
8	12.28	12.24	12.25	11.67	11.66	11.66	11.31	11.29	11.30	11.26	11.24	11.25
9	12.24	12.22	12.23	11.69	11.62	11.66	11.29	11.24	11.28	11.43	11.26	11.32
10	12.22	12.19	12.21	11.66	11.65	11.66	11.28	11.24	11.26	11.44	11.41	11.43
11	12.19	12.17	12.18	11.67	11.65	11.66	11.28	11.25	11.26	11.44	11.43	11.43
12	12.17	12.15	12.16	11.66	11.59	11.62	11.41	11.26	11.31	11.43	11.42	11.43
13	12.16	12.07	12.11	11.65	11.57	11.61	11.41	11.41	11.41	11.44	11.41	11.43
14	12.08	12.05	12.07	11.57	11.55	11.56	11.45	11.41	11.43	11.45	11.41	11.43
15	12.16	12.07	12.11	11.55	11.52	11.53	11.43	11.41	11.42	11.43	11.39	11.41
16	12.11	12.10	12.11	11.52	11.45	11.48	11.41	11.36	11.38	11.39	11.36	11.37
17	12.10	12.08	12.09	11.45	11.40	11.42	11.37	11.36	11.37	11.36	11.34	11.35
18	12.08	12.07	12.07	11.49	11.38	11.41	11.36	11.32	11.34	11.35	11.34	11.35
19	12.07	12.03	12.04	11.44	11.43	11.44	11.36	11.33	11.34	11.38	11.25	11.33
20	12.03	12.02	12.03	11.44	11.43	11.44	11.33	11.32	11.33	11.37	11.36	11.37
21	12.05	11.94	12.00	11.44	11.44	11.44	11.32	11.31	11.31	11.37	11.35	11.36
22	12.04	12.00	12.01	11.44	11.39	11.41	11.31	11.24	11.27	11.37	11.35	11.36
23	12.00	11.97	11.99	11.39	11.39	11.39	11.24	11.22	11.23	11.37	11.29	11.35
24	11.98	11.94	11.96	11.39	11.39	11.39	11.22	11.21	11.22	11.44	11.34	11.39
25	11.94	11.93	11.93	11.39	11.36	11.37	11.21	11.17	11.19	11.36	11.31	11.33
26	11.93	11.90	11.91	11.37	11.36	11.37	11.23	11.15	11.17	11.31	11.30	11.31
27	11.91	11.86	11.89	11.37	11.37	11.37	11.23	11.23	11.23	11.31	11.29	11.30
28	11.87	11.85	11.86	11.37	11.35	11.36	11.23	11.23	11.23	11.34	11.30	11.31
29	11.85	11.84	11.85	11.43	11.36	11.42	11.23	11.23	11.23	11.31	11.26	11.28
30	11.85	11.81	11.83	11.43	11.43	11.43	11.23	11.19	11.21	11.26	11.24	11.25
31	---	---	---	11.43	11.43	11.43	11.19	11.17	11.18	---	---	---
MONTH	12.30	11.81	12.09	11.85	11.35	11.54	11.45	11.15	11.31	11.45	11.14	11.31

e Estimated

## OBION RIVER BASIN

07027720 SOUTH FORK FORKED DEER RIVER NEAR OWL CITY, TN

LOCATION.--Lat 35°43'08", long 89°12'43", Haywood County, Hydrologic Unit 08010205, on left bank downstream side of the State Highway 54 bridge, 9.2 mi north of Brownsville, and 1.2 miles southwest of Owl City, Tennessee.

DRAINAGE AREA.--718 mi<sup>2</sup>.

PERIOD OF RECORD.--February 2001 to September 2001.

GAGE.--Data collection platform. Datum of gage is 297 ft above sea level, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR CURRENT PERIOD.--February 2001 to September 2001. Maximum discharge, unknown ft<sup>3</sup>/s, Feb. 20; maximum gage height unknown, Feb. 20; minimum daily discharge, 120 ft<sup>3</sup>/s, July 16.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,160 ft<sup>3</sup>/s, Feb 22, gage height, 19.04 ft; minimum discharge, 118 ft<sup>3</sup>/s, Jul 15, gage height, 7.28 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR FEBRUARY 2001 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	2470	e520	291	e5100	244	366	487
2	---	---	---	---	---	1720	e530	281	e5300	217	304	397
3	---	---	---	---	---	1140	e600	270	e5100	200	272	352
4	---	---	---	---	---	1560	e2000	257	e4200	183	252	308
5	---	---	---	---	---	1700	e1900	245	e3400	187	239	277
6	---	---	---	---	---	1240	e1750	235	2890	e220	239	272
7	---	---	---	---	---	943	626	232	2320	e270	224	308
8	---	---	---	---	---	822	550	231	1960	e220	243	398
9	---	---	---	---	---	752	510	231	1630	e175	292	258
10	---	---	---	---	---	661	481	228	1030	e145	291	232
11	---	---	---	---	---	617	441	246	720	185	411	219
12	---	---	---	---	---	741	640	316	580	280	481	206
13	---	---	---	---	---	1000	1670	299	485	176	888	199
14	---	---	---	---	e900	806	1760	229	416	139	610	200
15	---	---	---	---	e4200	984	1550	209	368	124	339	195
16	---	---	---	---	e4100	1280	1120	204	337	120	270	193
17	---	---	---	---	e4000	979	764	198	316	122	244	191
18	---	---	---	---	e4800	760	573	190	297	130	224	213
19	---	---	---	---	e5900	675	493	188	273	142	212	399
20	---	---	---	---	e6400	634	455	e200	255	142	203	1200
21	---	---	---	---	e6200	639	433	e3900	e285	157	203	814
22	---	---	---	---	e5900	656	415	2060	e300	138	197	467
23	---	---	---	---	5350	615	419	1060	e280	132	196	346
24	---	---	---	---	4270	560	650	550	e255	271	193	285
25	---	---	---	---	3880	554	785	416	e220	456	189	274
26	---	---	---	---	3090	e500	534	368	e200	247	184	241
27	---	---	---	---	2830	e480	430	305	190	170	675	231
28	---	---	---	---	2720	e435	381	283	185	166	556	221
29	---	---	---	---	---	e500	349	297	204	1560	342	214
30	---	---	---	---	---	e600	321	e320	327	1480	288	210
31	---	---	---	---	---	e600	---	e1450	---	568	390	---
MEAN	---	---	---	---	4303	891	788	509	1314	289	323	327
MAX	---	---	---	---	6400	2470	2000	3900	5300	1560	888	1200
MIN	---	---	---	---	900	435	321	188	185	120	184	191

e Estimated



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## OBION RIVER BASIN

07028960 MIDDLE FORK FORKED DEER RIVER NEAR FAIRVIEW, TN

LOCATION.--Lat 35°44'39", long 88°50'47", Madison County, Hydrologic Unit 08010204, at upstream side of bridge on Highway 45 bypass, 5 mi north of Jackson, and at mile 30.5.

DRAINAGE AREA.--211 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1967 and April 1989 (discharge measurements only), October 1997 to current year.

GAGE.--Data collection platform. Datum of gage is 327 ft above sea level, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,960 ft<sup>3</sup>/s, May 31, gage height, 13.02 ft; minimum discharge, 40 ft<sup>3</sup>/s, gage height, 4.36 ft July 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	66	81	81	242	318	156	85	1130	63	61	90
2	57	66	77	76	167	239	142	83	629	61	57	85
3	e56	66	76	74	125	199	138	79	748	58	58	75
4	e56	67	75	79	113	292	493	76	503	57	55	74
5	e55	70	75	85	105	264	368	74	285	56	53	71
6	62	76	74	90	97	263	425	74	235	68	50	67
7	63	95	74	91	92	218	399	73	221	103	49	63
8	60	102	74	90	88	182	282	75	207	83	50	56
9	59	161	74	83	107	160	206	76	177	62	50	54
10	58	132	74	78	128	148	164	73	138	55	51	55
11	59	134	76	82	125	140	141	72	119	54	72	53
12	59	108	81	101	124	168	197	81	103	50	247	52
13	59	93	91	103	134	221	390	91	93	47	129	51
14	59	85	e152	103	219	206	252	83	85	44	80	50
15	60	79	e218	98	2000	267	285	75	81	41	65	49
16	60	80	e295	93	2240	245	229	71	76	41	58	50
17	59	83	331	89	2400	258	190	68	70	46	54	50
18	59	78	365	113	2150	215	154	66	69	47	51	50
19	58	78	299	232	1190	179	131	66	64	48	51	70
20	59	77	193	240	609	163	119	97	61	48	48	76
21	59	73	164	271	366	157	114	1200	62	48	47	71
22	59	73	118	207	283	152	110	635	73	46	55	66
23	60	71	100	150	232	146	110	353	66	45	68	61
24	61	102	98	122	215	138	135	206	65	155	67	59
25	62	204	94	103	746	132	133	120	62	85	66	58
26	63	154	91	95	551	127	117	93	59	64	68	58
27	64	153	95	91	644	119	103	81	58	61	426	57
28	64	116	97	87	502	115	94	79	59	57	141	56
29	64	97	95	121	---	121	93	82	60	281	89	57
30	65	86	87	175	---	145	90	82	60	78	71	57
31	66	---	81	240	---	152	---	1210	---	68	74	---
TOTAL	1862	2925	3975	3743	15994	5849	5960	5679	5718	2120	2561	1841
MEAN	60.1	97.5	128	121	571	189	199	183	191	68.4	82.6	61.4
MAX	66	204	365	271	2400	318	493	1210	1130	281	426	90
MIN	55	66	74	74	88	115	90	66	58	41	47	49
CFSM	.28	.46	.61	.57	2.71	.89	.94	.87	.90	.32	.39	.29
IN.	.33	.52	.70	.66	2.82	1.03	1.05	1.00	1.01	.37	.45	.32

e Estimated

## 07028960 MIDDLE FORK FORKED DEER RIVER NEAR FAIRVIEW, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	97.3	154	286	536	411	356	319	498	185	164	155	65.3
MAX	132	266	370	1099	574	590	458	1431	290	430	418	72.2
(WY)	1998	1998	1998	1999	1998	1998	1998	1998	1998	1998	1998	1998
MIN	60.1	97.5	128	121	201	189	199	120	93.7	63.4	58.6	56.6
(WY)	2001	2001	2001	2001	2000	2001	2001	2000	2000	2000	1999	1999

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

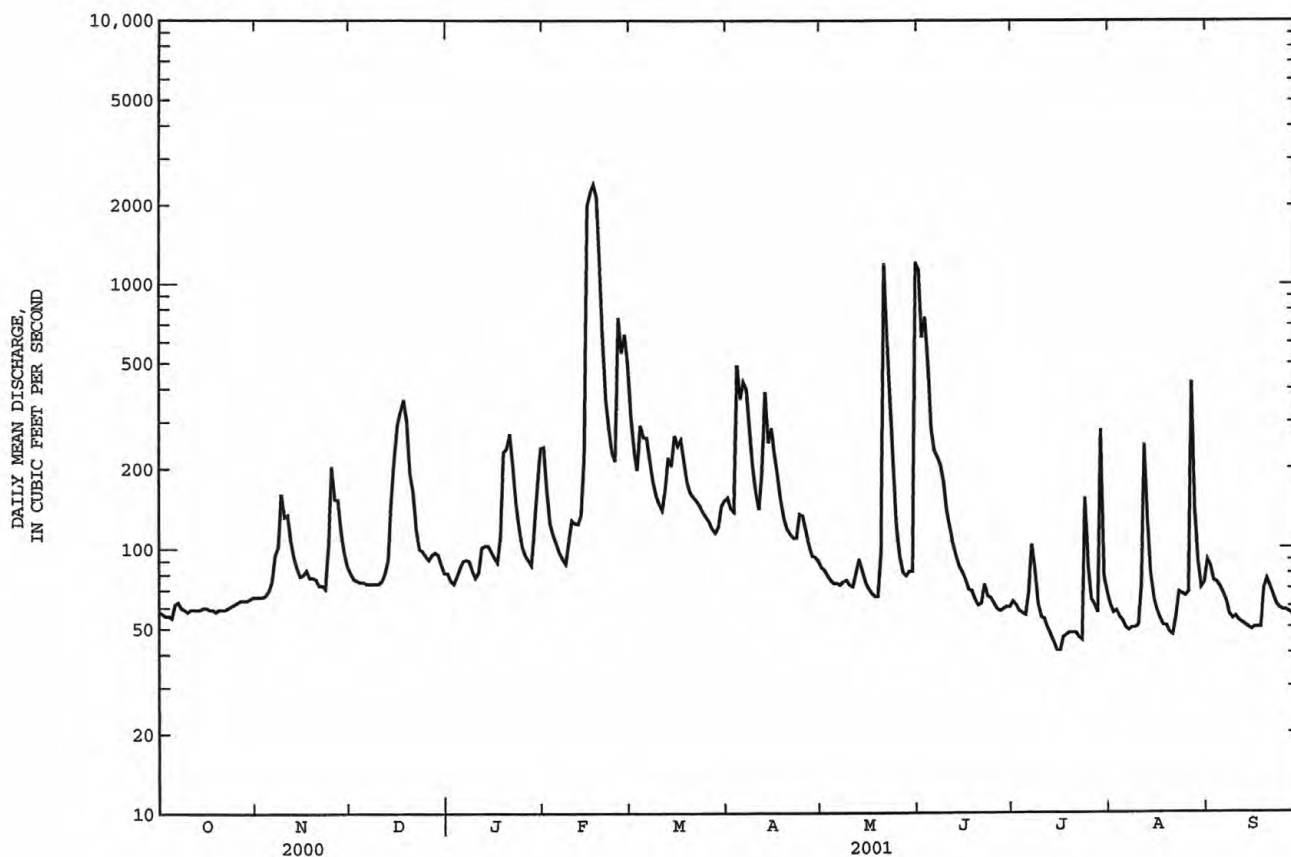
## FOR 2001 WATER YEAR

## WATER YEARS 1997 - 2001

ANNUAL TOTAL	46507	58227	
ANNUAL MEAN	127	160	269
HIGHEST ANNUAL MEAN			488
LOWEST ANNUAL MEAN			145
HIGHEST DAILY MEAN	1130	Mar 19	2400
LOWEST DAILY MEAN	47	Aug 17	a41
ANNUAL SEVEN-DAY MINIMUM	49	Aug 17	45
MAXIMUM PEAK FLOW			3960
MAXIMUM PEAK STAGE			13.02
INSTANTANEOUS LOW FLOW			b40
ANNUAL RUNOFF (CFSM)	.60	.76	1.27
ANNUAL RUNOFF (INCHES)	8.20	10.27	17.31
10 PERCENT EXCEEDS	253	275	482
50 PERCENT EXCEEDS	97	83	127
90 PERCENT EXCEEDS	56	55	58

a Also occurred on July 16.

b Also occurred on July 16.



## HATCHIE RIVER BASIN

07029500 HATCHIE RIVER AT BOLIVAR, TN

LOCATION.--Lat 35°16'31", long 88°58'36", Hardeman County, Hydrologic Unit 08010208, on left bank 25 ft upstream from bridge on State Highway 18, 250 ft upstream from Illinois Central Gulf Railroad bridge, 0.6 mi downstream from Spring Creek, 1.5 mi northeast of Bolivar, and at mile 135.1.

DRAINAGE AREA.--1,480 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1929 to current year.

GAGE.--Data collection platform. Datum of gage is 323.49 ft above sea level, determined using benchmark Q-64, April 14, 1966.

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 CURRENT YEAR.--Peak discharges greater than base discharge of 8,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 18	1500	*36,200	*19.49				

Minimum discharge, 142 ft<sup>3</sup>/s, Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	176	746	525	2740	7170	1130	1070	1260	529	242	521
2	161	175	639	455	2690	6810	1200	941	1480	497	238	747
3	158	174	563	435	2630	6410	1250	839	1470	526	210	893
4	155	176	518	427	2490	6030	1210	767	1440	514	185	1210
5	153	189	488	436	2150	5520	1380	699	1400	465	168	1460
6	150	219	448	435	1620	4980	1800	648	1400	460	160	1510
7	146	302	431	437	1130	4540	2060	606	1350	398	159	1430
8	144	351	418	430	888	4090	2050	575	1480	344	167	1350
9	144	462	403	414	761	3600	1890	556	1910	315	173	1270
10	147	589	391	393	759	2970	1600	543	2170	304	263	1120
11	150	849	387	384	854	2290	1330	561	2240	416	759	921
12	155	779	380	402	1070	1820	1200	554	2110	503	1350	733
13	158	598	405	426	1430	1610	2030	556	1670	537	1680	610
14	161	505	535	462	3420	1640	3770	557	1130	500	1800	629
15	165	453	754	477	8900	1830	4630	535	795	420	1720	803
16	164	442	1480	480	12900	2090	4720	500	593	350	1390	794
17	162	463	2060	469	25600	2330	4750	469	500	309	1040	611
18	160	488	2420	492	35000	2470	4840	445	439	279	787	487
19	159	494	2670	1130	33300	2400	4850	426	396	258	624	593
20	158	457	2770	2220	27200	2200	4740	419	360	241	532	995
21	158	407	3070	e2960	20800	1980	4440	430	332	226	483	1420
22	158	375	3380	e3390	15900	1890	3930	509	312	211	445	1500
23	160	354	3610	e3590	12400	1980	3060	620	302	198	405	1300
24	161	374	3740	3820	10200	2030	2510	728	293	190	374	874
25	162	564	3620	4080	9540	1950	2850	693	280	185	350	603
26	163	932	3160	4340	8540	1750	3240	612	275	195	336	505
27	164	1300	2180	4410	8060	1470	2920	563	252	180	359	451
28	165	1330	1210	4240	7630	1270	2390	535	234	174	410	417
29	168	1100	854	3810	---	1140	1840	547	247	187	375	400
30	171	891	695	3330	---	1090	1350	559	361	199	378	388
31	175	---	573	2900	---	1110	---	718	---	210	384	---
TOTAL	4921	15968	44998	52199	260602	90460	80960	18780	28481	10320	17946	26545
MEAN	159	532	1452	1684	9307	2918	2699	606	949	333	579	885
MAX	175	1330	3740	4410	35000	7170	4850	1070	2240	537	1800	1510
MIN	144	174	380	384	759	1090	1130	419	234	174	159	388
CFSM	.11	.36	.98	1.14	6.29	1.97	1.82	.41	.64	.22	.39	.60
IN.	.12	.40	1.13	1.31	6.55	2.27	2.03	.47	.72	.26	.45	.67

e Estimated

## HATCHIE RIVER BASIN

253

07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	709	1656	3190	4477	4721	4593	3936	2693	1451	928	624	718
MAX	4447	7457	12490	13420	14060	12110	10960	13540	8181	5933	2678	4651
(WY)	1933	1958	1983	1974	1948	1973	1979	1991	1997	1932	1931	1979
MIN	150	233	422	555	829	1053	711	444	209	189	193	127
(WY)	1957	1957	1955	1955	1934	1941	1986	1942	1941	1943	1954	1956

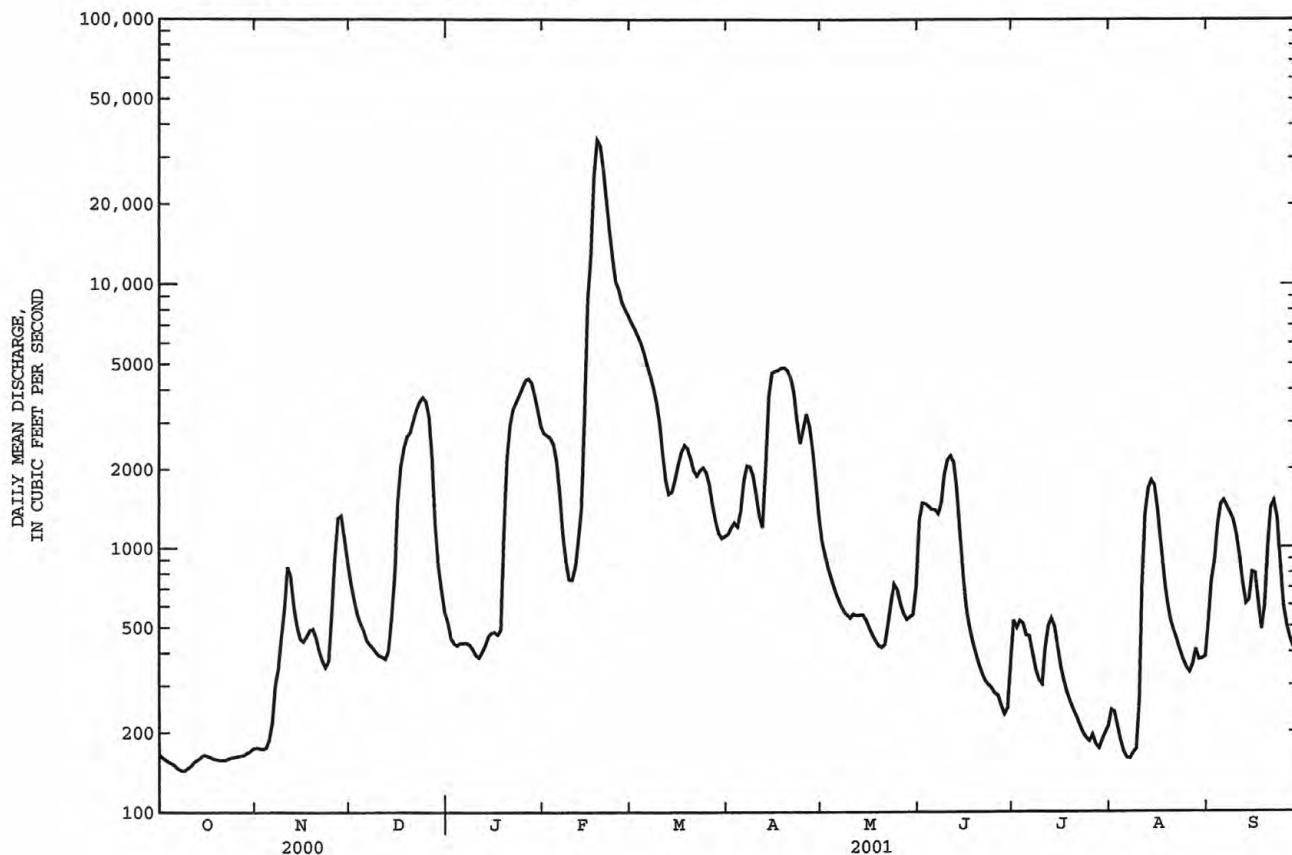
## SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1929 - 2001

ANNUAL TOTAL	383300	652180	
ANNUAL MEAN	1047	1787	2463
HIGHEST ANNUAL MEAN			5003
LOWEST ANNUAL MEAN			971
HIGHEST DAILY MEAN	9130	Apr 9	35000
LOWEST DAILY MEAN	126	Sep 5	144
ANNUAL SEVEN-DAY MINIMUM	131	Sep 2	148
MAXIMUM PEAK FLOW			36200
MAXIMUM PEAK STAGE			19.49
INSTANTANEOUS LOW FLOW			142
ANNUAL RUNOFF (CFSM)	.71	1.21	1.66
ANNUAL RUNOFF (INCHES)	9.63	16.39	22.61
10 PERCENT EXCEEDS	2930	3790	6050
50 PERCENT EXCEEDS	472	610	1100
90 PERCENT EXCEEDS	158	174	271

a From rating curve extended above 37,000 ft<sup>3</sup>/s.



## LOOSAHATCHIE RIVER BASIN

07030240 LOOSAHATCHIE RIVER NEAR ARLINGTON, TN

LOCATION.--Lat 35°18'37", long 89°38'23", Shelby County, Hydrologic Unit 08010209, on left bank 20 ft downstream from bridge on U.S. Highways 70 and 79, 1.5 mi upstream from Beaver Creek, 1.5 mi northeast of Arlington, and at mile 30.4.

DRAINAGE AREA.--262 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Data collection platform. Datum of the gage is 246.43 ft above sea level, from reference mark, provided by FEMA.

REMARKS.--No estimated daily discharge. 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 5,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 15	0345	*8,150	*18.57	Jun 3	1615	5,890	15.72
May 31	2100	6,030	15.96				

Minimum daily discharge, 84 ft<sup>3</sup>/s, Jan. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	90	101	92	133	187	204	104	3110	95	89	562
2	90	90	98	90	120	170	141	102	400	94	88	264
3	89	91	96	91	115	161	126	100	2790	93	88	128
4	88	93	95	92	112	1070	118	99	1050	94	88	117
5	88	94	95	90	108	490	114	99	600	93	86	114
6	92	99	94	89	107	238	109	98	692	93	86	113
7	89	106	93	88	103	182	104	99	798	91	90	120
8	89	115	91	86	101	161	100	98	273	91	90	116
9	90	600	90	85	109	149	99	97	175	92	87	125
10	91	157	88	85	152	136	98	97	141	94	89	101
11	92	125	87	89	117	132	98	99	124	125	190	98
12	91	117	86	94	117	450	684	120	121	120	446	98
13	90	115	99	87	827	312	2430	96	120	103	208	97
14	90	109	270	89	2250	181	538	93	121	97	111	96
15	90	105	126	87	7230	413	316	94	127	96	103	95
16	90	111	1370	84	4030	393	235	93	119	95	99	93
17	90	113	403	85	2340	200	176	94	112	96	96	92
18	90	99	171	136	667	153	154	92	111	95	94	93
19	90	97	138	905	345	138	146	92	110	95	93	889
20	92	94	124	363	257	134	138	100	109	95	91	260
21	91	92	119	179	212	131	132	1860	107	94	90	149
22	91	92	113	147	228	123	128	1000	105	93	90	133
23	91	90	109	133	190	119	137	188	103	93	90	125
24	91	291	106	126	192	117	350	183	101	138	89	158
25	92	653	102	118	2340	111	147	122	98	186	88	121
26	91	157	102	115	471	109	122	110	97	98	88	117
27	91	121	104	112	271	108	115	105	96	92	88	115
28	90	111	103	107	224	108	111	226	97	91	96	113
29	90	108	98	195	---	114	107	163	101	91	88	110
30	90	103	95	450	---	147	104	108	98	91	88	107
31	90	---	93	179	---	173	---	2850	---	90	89	---
TOTAL	2798	4438	4959	4768	23468	6810	7581	8881	12206	3104	3396	4919
MEAN	90.3	148	160	154	838	220	253	286	407	100	110	164
MAX	92	653	1370	905	7230	1070	2430	2850	3110	186	446	889
MIN	88	90	86	84	101	108	98	92	96	90	86	92
MED	90	107	101	92	202	153	130	100	120	94	90	116
CFSM	.34	.56	.61	.59	3.20	.84	.96	1.09	1.55	.38	.42	.63
IN.	.40	.63	.70	.68	3.33	.97	1.08	1.26	1.73	.44	.48	.70

LOOSAHATCHIE RIVER BASIN

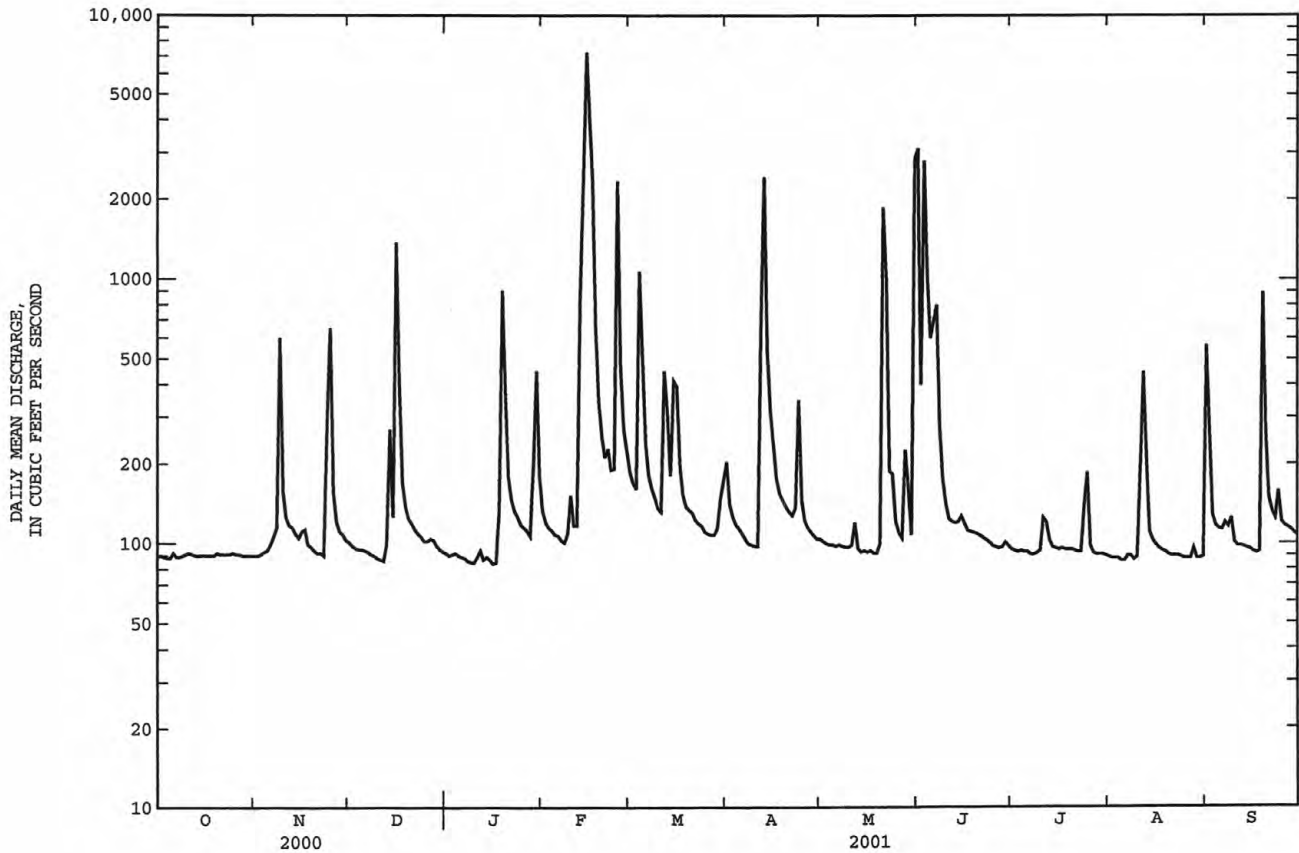
255

07030240 LOOSAHATCHIE RIVER NEAR ARLINGTON, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	139	315	579	506	640	635	576	364	281	199	158	151
MAX	531	1344	1962	1479	2064	2038	2306	1497	1609	1155	521	502
(WY)	1997	1989	1988	1974	1990	1997	1991	1983	1974	1989	1974	1997
MIN	73.4	75.6	106	94.5	128	141	107	93.8	86.7	87.5	80.5	73.3
(WY)	1970	1972	1977	1981	1995	1986	1978	1988	1972	1970	1999	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1970 - 2001	
ANNUAL TOTAL	62333		87328			
ANNUAL MEAN	170		239		377	
HIGHEST ANNUAL MEAN					769	
LOWEST ANNUAL MEAN					154	
HIGHEST DAILY MEAN	3310		7230		19900	
LOWEST DAILY MEAN	79		84		66	
ANNUAL SEVEN-DAY MINIMUM	82		87		68	
MAXIMUM PEAK FLOW			8150		27400	
MAXIMUM PEAK STAGE			18.57		25.27	
INSTANTANEOUS LOW FLOW			82		66	
ANNUAL RUNOFF (CFSM)	.65		.91		1.44	
ANNUAL RUNOFF (INCHES)	8.85		12.40		19.57	
10 PERCENT EXCEEDS	259		355		588	
50 PERCENT EXCEEDS	108		106		118	
90 PERCENT EXCEEDS	86		90		85	



## WOLF RIVER BASIN

07030392 WOLF RIVER AT LAGRANGE, TN

LOCATION.--Lat 35°01'57", long 89°14'48", Fayette County, Hydrologic Unit 08010210, on right bank upstream side of bridge on Yager Road, 0.95 mi south of LaGrange, and at mile 72.6.

DRAINAGE AREA.--210 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1995 to current year.

GAGE.--Data collection platform. Datum of gage is 350 ft above sea level, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,000 ft<sup>3</sup>/s, Feb. 17, gage height, 13.66; minimum, 60 ft<sup>3</sup>/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	80	125	110	310	353	281	139	266	79	90	109
2	63	80	120	102	228	300	293	133	178	78	79	110
3	64	80	116	102	170	270	285	127	145	78	75	106
4	64	87	114	105	151	293	e240	126	132	83	73	105
5	62	95	112	110	137	321	e300	123	131	80	71	100
6	62	105	111	112	130	314	e320	121	e125	86	74	94
7	62	131	110	114	126	269	e265	118	e160	83	78	89
8	63	129	110	114	124	228	e227	119	e170	78	85	91
9	64	186	110	110	127	205	e180	116	e154	75	84	89
10	67	196	110	105	144	190	e160	116	e144	76	111	80
11	68	171	111	110	149	182	139	113	e134	83	e140	74
12	70	138	115	128	166	191	169	113	117	100	167	72
13	70	123	125	127	370	e300	e1300	e110	106	92	171	176
14	71	117	181	134	1390	e236	e1120	e105	113	82	132	227
15	70	e110	200	138	1930	e400	e1150	e105	106	76	104	91
16	69	e200	526	130	3240	e380	e669	e100	107	73	90	74
17	68	e180	634	129	10100	e320	e433	97	97	74	83	71
18	69	e126	448	161	3100	e285	e322	94	92	75	80	71
19	70	e120	345	376	1280	e265	e247	93	87	74	82	174
20	71	e111	209	506	778	e250	e197	93	85	76	78	301
21	72	107	166	577	519	e235	180	105	83	74	73	175
22	73	104	140	450	412	e230	167	126	90	71	71	152
23	74	104	125	259	355	e225	169	121	92	69	70	118
24	75	153	125	189	323	e220	e245	115	85	e69	69	98
25	76	338	122	160	598	e220	e217	111	81	e69	67	88
26	77	311	120	146	799	e220	e202	101	79	e70	65	83
27	77	281	128	137	858	e220	e189	97	77	e71	70	81
28	77	218	133	131	499	e220	183	120	82	e71	88	79
29	78	161	131	150	---	220	159	141	84	e87	81	77
30	78	137	121	290	---	234	146	122	82	e110	93	74
31	79	---	111	303	---	253	---	175	---	e110	94	---
TOTAL	2166	4479	5454	5815	28513	8049	10154	3595	3484	2472	2788	3329
MEAN	69.9	149	176	188	1018	260	338	116	116	79.7	89.9	111
MAX	79	338	634	577	10100	400	1300	175	266	110	171	301
MIN	62	80	110	102	124	182	139	93	77	69	65	71
CFSM	.33	.71	.84	.89	4.85	1.24	1.61	.55	.55	.38	.43	.53
IN.	.38	.79	.97	1.03	5.05	1.43	1.80	.64	.62	.44	.49	.59

e Estimated

## WOLF RIVER BASIN

257

07030392 WOLF RIVER AT LAGRANGE, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	149	201	290	426	492	477	345	260	236	142	142	147
MAX	274	331	564	745	1018	956	492	455	628	207	278	288
(WY)	1997	1997	1997	1999	2001	1997	1998	1999	1997	1997	1998	1996
MIN	69.9	149	176	173	233	227	261	116	112	79.7	80.5	68.4
(WY)	2001	2001	2001	2000	1996	2000	1996	2001	2000	2001	2000	2000

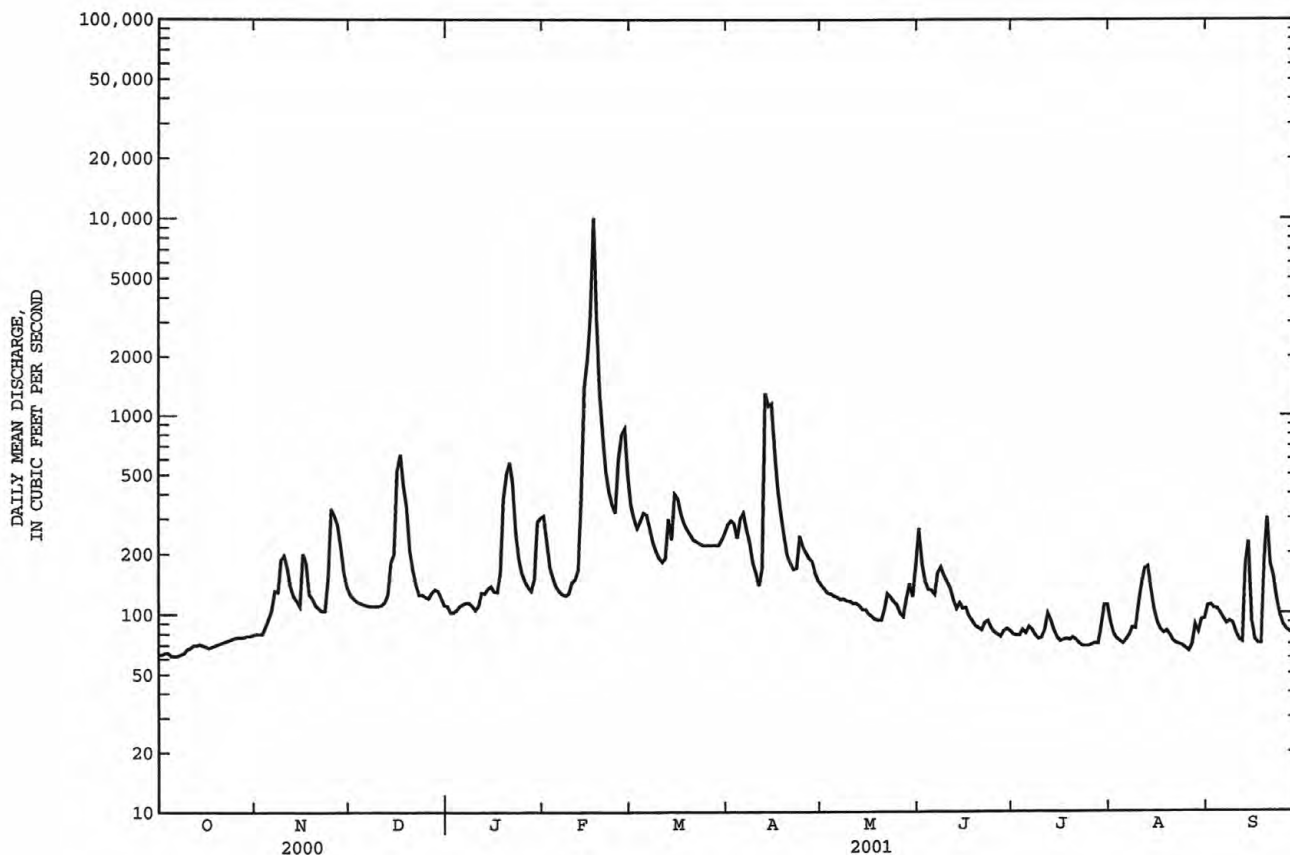
## SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1995 - 2001

ANNUAL TOTAL	55562	80298	
ANNUAL MEAN	152	220	275
HIGHEST ANNUAL MEAN			412
LOWEST ANNUAL MEAN			159
HIGHEST DAILY MEAN	1100	Feb 20	10100
LOWEST DAILY MEAN	59	Sep 1	62
ANNUAL SEVEN-DAY MINIMUM	60	Aug 31	63
MAXIMUM PEAK FLOW			11000
MAXIMUM PEAK STAGE			13.66
INSTANTANEOUS LOW FLOW			60
ANNUAL RUNOFF (CFSM)	.72	1.05	1.31
ANNUAL RUNOFF (INCHES)	9.84	14.22	17.82
10 PERCENT EXCEEDS	256	320	509
50 PERCENT EXCEEDS	120	118	174
90 PERCENT EXCEEDS	68	72	83



## WOLF RIVER BASIN

07030392 WOLF RIVER AT LAGRANGE, TN--Continued

## WATER-QUALITY DATA

PERIOD OF RECORD.--October 1995 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 03...	1000	287	35	6.1	16.0	752	9.1	93	10	0	2.37	1.02	2.4
MAY 02...	1700	132	44	6.3	20.5	762	7.8	87	14	--	3.30	1.45	2.6
JUN 08...	0800	223	45	6.5	21.0	755	6.2	70	15	--	3.42	1.48	2.5
JUL 10...	1235	74	44	6.6	24.5	763	6.9	83	13	--	3.16	1.27	2.8
AUG 07...	0800	77	40	5.8	23.0	758	6.6	77	12	--	2.84	1.16	2.7
SEP 06...	0900	96	40	6.8	22.5	758	6.6	77	12	--	2.81	1.26	2.8
DATE	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
APR 03...	31	.3	1.14	12	11	1.8	2.6	<.2	6.0	31	24	.04	<.006
MAY 02...	27	.3	1.18	18	15	.9	2.4	<.2	8.9	40	31	.05	<.006
JUN 08...	25	.3	1.30	19	15	1.0	2.5	<.2	10	40	33	.05	<.006
JUL 10...	30	.3	.97	18	15	.5	2.6	<.2	11.1	23	33	.03	<.006
AUG 07...	31	.3	1.14	16	13	.6	2.7	<.2	10.7	32	31	.04	<.006
SEP 06...	31	.4	.96	15	12	.7	2.6	<.2	11.3	38	30	.05	<.006
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ACETO- CHLOR, WATER, FLTRD REC (UG/L) (49260)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)
APR 03...	.176	<.041	.23	.32	.50	.042	.015	<.018	340	73	<.002	<.004	.010
MAY 02...	.286	<.041	.23	.36	.65	.072	.016	<.018	390	168	<.002	.025	.463
JUN 08...	.209	<.041	.24	.45	.66	.129	.021	<.020	270	213	<.002	.013	.168
JUL 10...	.315	<.040	.12	.17	.49	.042	.010	<.020	60	200	<.002	<.004	.023
AUG 07...	.252	<.040	.12	.20	.45	.051	.012	<.020	130	161	<.002	<.004	.016
SEP 06...	.250	<.040	.16	.22	--	.042	.015	<.020	190	110	<.002	<.004	.014



## 07030392 WOLF RIVER AT LAGRANGE, TN--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ALPHA BHC DIS- SOLVED (UG/L) (34253)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	MALA- THON, DIS- SOLVED (UG/L) (39532)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	P, P' DDE DISSOLV (UG/L) (34653)
APR 03...	<.005	<.002	<.005	<.018	E.005	<.005	<.005	<.003	<.004	<.027	<.006	E.001	<.003
MAY 02...	<.005	<.002	<.005	<.018	E.019	<.005	<.005	<.003	<.004	<.027	<.006	.026	<.003
JUN 08...	<.005	<.002	<.005	<.018	E.040	<.005	<.005	<.003	<.004	<.027	<.006	.029	<.003
JUL 10...	<.005	<.002	<.005	<.018	E.010	<.005	<.005	<.003	<.004	<.027	<.006	E.005	<.003
AUG 07...	<.005	<.002	<.005	<.018	E.007	<.005	<.005	<.003	<.004	<.027	<.006	E.003	<.003
SEP 06...	<.005	<.002	<.005	<.018	E.007	<.005	<.005	<.003	<.004	<.027	<.006	E.004	<.003
DATE	PARA- THON, DIS- SOLVED (UG/L) (39542)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	BEN- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82673)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)
APR 03...	<.007	<.010	<.015	E.008	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002
MAY 02...	<.007	<.010	<.015	.019	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.025
JUN 08...	<.007	<.010	<.015	E.005	<.010	E.011	<.020	<.003	<.002	<.021	<.009	<.005	<.002
JUL 10...	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002
AUG 07...	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002
SEP 06...	<.007	<.010	<.015	<.011	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (82666)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (82686)	METHYL PARA- THON WAT FLT 0.7 U GF, REC (82667)	MOL- INATE WATER FLTRD 0.7 U GF, REC (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (82684)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (82664)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (82685)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (82670)
APR 03...	<.035	<.050	<.006	<.002	<.007	<.010	<.010	<.006	<.011	<.004	<.011	<.023	<.016
MAY 02...	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023	<.016
JUN 08...	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023	<.016
JUL 10...	<.035	<.050	<.006	<.002	<.007	<.004	<.010	<.006	<.011	<.004	<.011	<.023	<.016
AUG 07...	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023	<.016
SEP 06...	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023	<.016

E--Estimated

## WOLF RIVER BASIN

07030392 WOLF RIVER AT LAGRANGE, TN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
APR						
03...	<.034	<.017	<.002	<.009	<.005	34
MAY						
02...	<.034	<.017	<.002	<.009	<.005	52
JUN						
08...	<.034	<.017	<.002	<.009	<.005	154
JUL						
10...	<.034	<.017	<.002	<.009	<.005	29
AUG						
07...	<.034	<.017	<.002	<.009	<.005	46
SEP						
06...	<.034	<.017	<.002	<.009	<.005	68

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## WOLF RIVER BASIN

07030500 WOLF RIVER AT ROSSVILLE, TN

LOCATION.--Lat 35°03'15", long 89°32'28", Fayette County, Hydrologic Unit 08010210, on left bank 85 ft downstream from county highway bridge, 0.3 mi upstram from Hurricane Creek, 0.4 mi north of Rossville, 5.0 miles downstream from Grissum Creek, and at mile 43.7.

DRAINAGE AREA.--503 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1929 to January 1972, May 2001 to September 2001.

REVISED RECORDS.--WSP 807: 1935. WSP 1117: 1930. WSP 1177: 1932. WSP 1281: 1935, 1946(M), drainage area. WSP 1391: 1937-38.

GAGE.--Data collection platform. Datum of gage is 300.74 ft above sea level determined from Tennessee Highway Department reference tablet. Prior to June 13, 1939, nonrecording gage at same site and datum.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 40,000 ft<sup>3</sup>/s, Jan. 20, 1935, maximum stage 13.75 ft, Jan. 20, 1935, minimum discharge 100 ft<sup>3</sup>/s, Sept. 16, 17, 1942.

EXTREMES FOR CURRENT PERIOD.--May 2001 to September 2001. Maximum discharge 462 ft<sup>3</sup>/s, May 31, gage height 3.85 ft; minimum daily discharge, 181 ft<sup>3</sup>/s, Aug. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR MAY 2001 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	387	240	251	218
2	---	---	---	---	---	---	---	---	384	225	241	231
3	---	---	---	---	---	---	---	---	366	217	231	233
4	---	---	---	---	---	---	---	---	361	214	223	224
5	---	---	---	---	---	---	---	---	354	213	218	220
6	---	---	---	---	---	---	---	---	329	214	213	216
7	---	---	---	---	---	---	---	---	341	211	215	213
8	---	---	---	---	---	---	---	---	348	211	224	235
9	---	---	---	---	---	---	---	---	312	211	225	262
10	---	---	---	---	---	---	---	---	300	211	234	226
11	---	---	---	---	---	---	---	---	e290	226	256	209
12	---	---	---	---	---	---	---	---	e280	240	298	199
13	---	---	---	---	---	---	---	---	e275	250	358	197
14	---	---	---	---	---	---	---	---	e270	237	308	196
15	---	---	---	---	---	---	---	---	e260	223	279	216
16	---	---	---	---	---	---	---	---	e255	216	261	237
17	---	---	---	---	---	---	---	---	e250	214	247	226
18	---	---	---	---	---	---	---	---	e245	216	230	211
19	---	---	---	---	---	---	---	---	e240	212	224	355
20	---	---	---	---	---	---	---	---	e235	210	215	421
21	---	---	---	---	---	---	---	---	e230	209	209	371
22	---	---	---	---	---	---	---	---	e225	208	203	329
23	---	---	---	---	---	---	---	---	e220	206	194	298
24	---	---	---	---	---	---	---	---	e218	204	189	279
25	---	---	---	---	---	---	---	242	e216	205	185	265
26	---	---	---	---	---	---	---	238	e215	204	182	246
27	---	---	---	---	---	---	---	233	e215	206	181	231
28	---	---	---	---	---	---	---	234	214	212	183	220
29	---	---	---	---	---	---	---	266	279	216	191	212
30	---	---	---	---	---	---	---	263	276	261	192	206
31	---	---	---	---	---	---	---	315	---	256	197	---
TOTAL	---	---	---	---	---	---	---	1791	8390	6798	7057	7402
MEAN	---	---	---	---	---	---	---	256	280	219	228	247
MAX	---	---	---	---	---	---	---	315	387	261	358	421
MIN	---	---	---	---	---	---	---	233	214	204	181	196
CFSM	---	---	---	---	---	---	---	.51	.56	.44	.45	.49
IN.	---	---	---	---	---	---	---	.13	.62	.50	.52	.55

e Estimated

## 07030500 WOLF RIVER AT ROSSVILLE, TN--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	251	515	736	1179	1280	1073	895	616	419	350	248	286
MAX	644	2452	2246	4403	3704	1974	2144	3771	1963	2245	608	975
(WY)	1937	1946	1934	1937	1948	1946	1955	1953	1949	1932	1950	1958
MIN	132	181	226	245	288	286	237	181	144	129	121	121
(WY)	1932	1957	1966	1940	1941	1941	1930	1942	1941	1942	1943	1942

## SUMMARY STATISTICS

## FOR 2001 WATER YEAR

## WATER YEARS 1929 - 2001

ANNUAL MEAN			654	
HIGHEST ANNUAL MEAN			1179	1932
LOWEST ANNUAL MEAN			277	1941
HIGHEST DAILY MEAN	421	Sep 20	31000	Jan 21 1935
LOWEST DAILY MEAN	181	Aug 27	100	Sep 16 1942
ANNUAL SEVEN-DAY MINIMUM	186	Aug 24	105	Aug 27 1943
MAXIMUM PEAK FLOW	462	May 31	40000	Jan 20 1935
MAXIMUM PEAK STAGE	3.85	May 31	13.75	Jan 20 1935
INSTANTANEOUS LOW FLOW	180	Aug 27	a100	Sep 16 1942
ANNUAL RUNOFF (CFSM)			1.30	
ANNUAL RUNOFF (INCHES)			17.66	
10 PERCENT EXCEEDS	329		1310	
50 PERCENT EXCEEDS	226		286	
90 PERCENT EXCEEDS	203		165	

a Also occurred on Sept. 17, 1942.



## WOLF RIVER BASIN

07031650 WOLF RIVER AT GERMANTOWN, TN

LOCATION.--Lat 35°06'59", long 89°48'05", Shelby County, Hydrologic Unit 08010210, on left bank, 30 ft downstream of bridge on Germantown Road, 1.7 mi north of U.S. Hwy 72, 3.6 mi downstream of Grays Creek, 4.0 mi northeast of I-240 and U.S. Highway 72 interchange, and at mile 18.9.

DRAINAGE AREA.--699 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1969 to September 1986, October 1990 to current year. Prior to September 1977 published as "near Germantown".

GAGE.--Water-stage recorder. Datum of gage is 235.76 ft above sea level, determined from Tennessee Department of Transportation brass disc, and from BM-79-4-19. Apr. 21, 1986, to Dec. 30, 1990, water-stage recorder at site 2.1 mi downstream at datum 9.94 ft lower.

REMARKS.--Records fair, except for periods of estimated daily discharges, which are poor. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data. National Weather Service rain gage and telemeter at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 16	1845	*12,700	*18.33				

Minimum daily discharge, 199 ft<sup>3</sup>/s, June 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	228	419	317	618	1080	439	399	1250	304	279	380
2	222	230	387	313	573	954	378	377	782	257	257	281
3	219	228	357	301	555	823	333	363	1060	236	239	280
4	214	240	332	288	543	1480	315	335	777	223	270	276
5	210	247	e314	292	509	1050	465	322	724	245	215	265
6	249	454	e305	296	481	855	488	312	862	221	206	305
7	213	345	e300	303	448	718	407	309	772	214	226	276
8	201	677	296	301	403	652	330	320	538	211	212	307
9	200	657	292	295	411	610	284	308	489	212	264	311
10	206	481	287	289	422	573	249	302	406	311	238	304
11	215	434	287	328	385	548	219	295	384	268	290	267
12	227	401	283	337	413	944	709	287	372	229	400	245
13	222	410	518	337	2010	798	2210	282	356	251	393	234
14	226	384	545	372	3190	729	1540	279	332	255	395	230
15	232	e360	491	344	6120	982	1510	270	316	231	344	228
16	234	e580	1250	340	9790	1020	1320	264	291	215	316	255
17	233	e480	854	344	11800	801	1270	257	284	330	294	277
18	229	391	673	719	11300	661	1230	251	268	227	281	262
19	226	354	628	1680	8200	598	943	243	250	214	263	903
20	228	338	613	1320	5800	549	650	395	239	209	250	590
21	233	328	573	1030	3850	490	508	831	226	255	242	557
22	232	311	521	789	2710	439	424	696	218	256	234	487
23	233	306	445	720	1810	395	518	330	215	226	229	435
24	229	1510	402	699	1160	362	564	301	210	220	224	412
25	231	1270	373	639	2010	346	496	284	209	224	218	377
26	234	655	353	566	1990	328	464	269	205	218	214	359
27	235	526	351	496	1880	312	480	262	199	213	e210	325
28	237	471	347	455	1410	298	475	283	231	213	e201	304
29	241	465	339	743	---	314	460	280	461	220	e210	303
30	244	451	331	844	---	393	428	323	337	447	e211	277
31	237	---	321	733	---	396	---	1940	---	424	231	---
TOTAL	7018	14212	13787	16830	80791	20498	20106	11969	13263	7779	8056	10312
MEAN	226	474	445	543	2885	661	670	386	442	251	260	344
MAX	249	1510	1250	1680	11800	1480	2210	1940	1250	447	400	903
MIN	200	228	283	288	385	298	219	243	199	209	201	228
CFSM	.32	.68	.64	.78	4.13	.95	.96	.55	.63	.36	.37	.49
IN.	.37	.76	.73	.90	4.30	1.09	1.07	.64	.71	.41	.43	.55

e Estimated

## WOLF RIVER BASIN

265

07031650 WOLF RIVER AT GERMANTOWN, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	435	734	1429	1370	1363	1701	1538	1227	786	459	434	450
MAX	1223	1991	4939	3504	3256	4854	4805	4542	1986	985	1199	1345
(WY)	1997	1980	1983	1974	1991	1980	1991	1991	1974	1994	1998	1979
MIN	213	239	439	372	532	569	448	364	271	251	240	244
(WY)	1970	1972	1981	1981	1995	1986	1986	1992	1972	2001	1986	1986

## SUMMARY STATISTICS

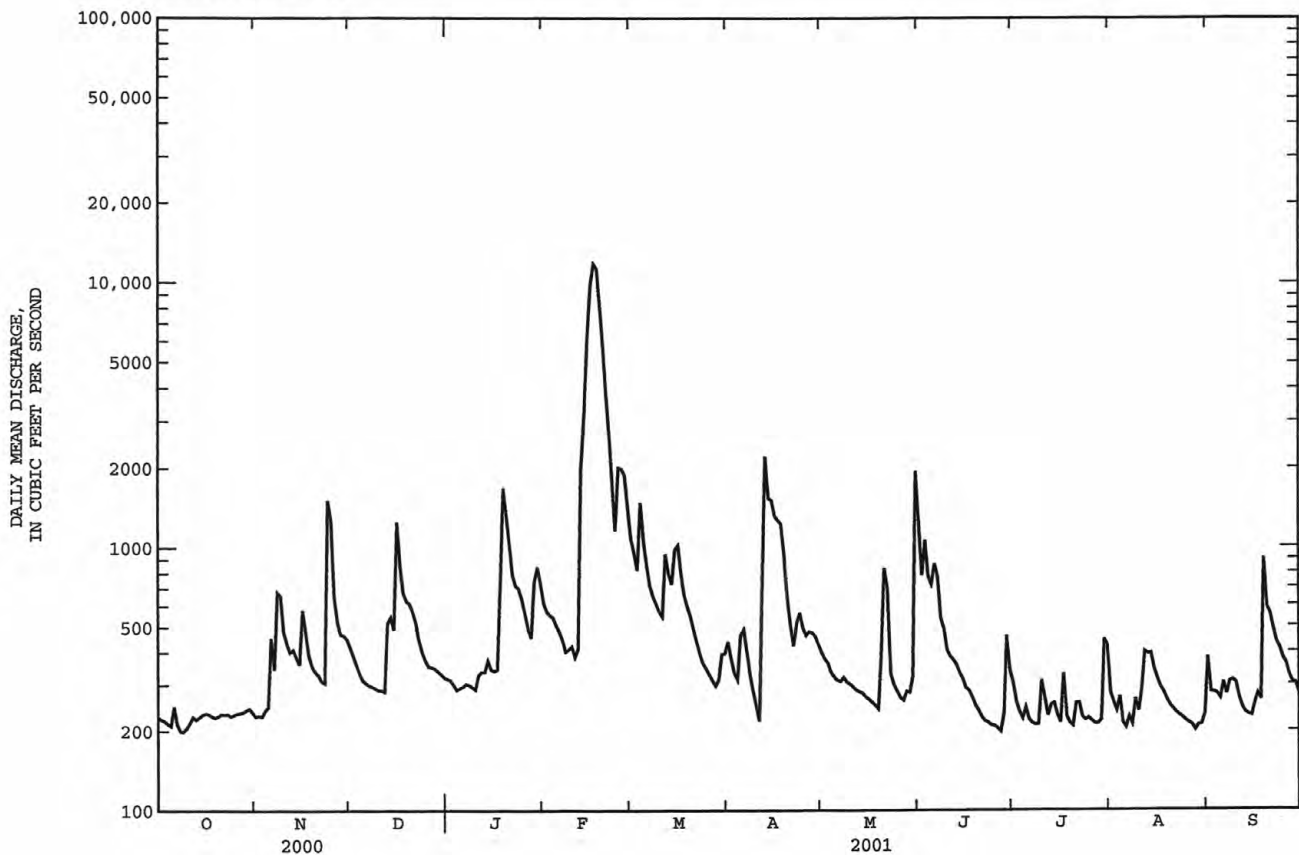
FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1970 - 2001

ANNUAL TOTAL	182823	224621	
ANNUAL MEAN	500	615	
HIGHEST ANNUAL MEAN			992
LOWEST ANNUAL MEAN			1807
HIGHEST DAILY MEAN	2950	Mar 19	11800
LOWEST DAILY MEAN	196	Sep 7	199
ANNUAL SEVEN-DAY MINIMUM	211	Jul 22	212
MAXIMUM PEAK FLOW			12700
MAXIMUM PEAK STAGE			18.33
INSTANTANEOUS LOW FLOW			a192
ANNUAL RUNOFF (CFSM)	.71	.88	
ANNUAL RUNOFF (INCHES)	9.73	11.95	
10 PERCENT EXCEEDS	881	965	2120
50 PERCENT EXCEEDS	352	331	523
90 PERCENT EXCEEDS	228	222	276

a Also occurred on Oct. 10.



## WOLF RIVER BASIN

07031692 FLETCHER CREEK AT SYCAMORE VIEW ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°10'09", long 89°51'58", Shelby County, Hydrologic Unit 08010210, on Sycamore View Road, 0.4 miles northwest of Interstate 40.

DRAINAGE AREA.--30.5 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 229.00 ft above sea level provided by Tennessee Department of Transportation.

REMARKS.--Records poor. 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, unknown, maximum gage height 16.84 ft, Mar. 2, 1997; minimum discharge, 0 ft<sup>3</sup>/s, most years.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, unknown, May 31, gage height, 10.80 ft; minimum discharge, 0.00 ft<sup>3</sup>/s, Oct. 1-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.10	1.2	.35	1.9	2.8	35	.60	76	1.6	5.1	306
2	.00	.10	.80	.37	1.0	1.9	4.7	.39	12	.94	3.2	28
3	.00	.13	.64	.44	.73	9.7	7.4	.30	---	.81	2.3	7.3
4	.00	31	.69	.44	.61	262	4.4	.33	43	.58	41	4.5
5	.00	8.7	.63	.46	.50	22	2.7	.49	11	3.0	4.5	3.5
6	111	229	.36	.69	.47	5.7	1.8	.37	---	4.6	2.3	---
7	3.1	23	.33	.67	.42	3.2	1.4	34	85	1.6	56	50
8	.64	178	.50	.50	.44	2.2	1.0	9.8	15	1.0	17	29
9	.20	49	.60	.35	46	1.5	.99	1.9	5.3	.88	17	6.4
10	.09	3.6	.54	.22	17	1.3	.76	1.2	2.8	9.5	21	3.0
11	.09	.83	.32	47	2.5	1.0	6.1	10	1.8	5.1	26	1.8
12	.09	.41	.22	16	31	169	---	19	1.3	1.6	121	.88
13	.10	8.4	205	2.4	---	13	---	1.7	1.5	.90	37	1.0
14	.10	1.7	33	37	---	3.6	23	.78	2.6	.72	6.2	1.2
15	.10	.50	119	4.8	---	166	69	.54	2.9	.60	3.2	1.2
16	.10	116	457	1.4	---	49	10	.56	2.9	.55	2.3	.98
17	.10	7.3	36	41	e68.0	6.2	3.5	.81	1.2	206	1.6	.77
18	.10	1.7	5.2	373	e13.0	2.9	2.2	.30	.68	17	1.6	.71
19	.17	.85	2.8	253	e4.0	1.9	1.5	.29	.45	93	1.2	---
20	.21	.50	1.4	21	e3.0	1.5	1.1	132	.36	18	1.1	14
21	.10	.24	1.2	5.0	e2.0	1.4	.84	---	.33	73	1.1	7.2
22	.10	.11	1.3	2.4	31	1.4	.84	177	.34	44	.65	5.3
23	.10	.19	.73	1.6	4.0	1.0	102	8.8	.54	5.6	.47	21
24	.10	---	.75	1.1	---	.86	30	3.8	.51	2.8	2.5	25
25	.10	125	.57	.67	---	.64	2.1	2.0	.37	2.1	3.7	3.1
26	.10	8.0	1.6	.61	17	1.3	1.0	1.2	.33	1.8	1.1	2.1
27	.10	2.8	9.1	.97	5.7	.73	.76	.78	.46	1.1	.59	1.7
28	.10	1.5	2.3	.54	3.9	.89	.65	60	59	.79	.36	1.6
29	.10	1.8	.99	289	---	34	.31	9.2	73	.83	.18	1.4
30	.10	1.2	.56	37	---	112	.29	34	3.9	---	.15	1.1
31	.10	---	.42	4.6	---	54	---	---	---	51	10	---
TOTAL	117.29	801.66	885.75	1144.58	254.17	934.62	315.34	512.14	404.57	551.00	391.40	529.74
MEAN	3.78	27.6	28.6	36.9	11.6	30.1	11.3	17.7	14.4	18.4	12.6	18.9
MAX	111	229	457	373	68	262	102	177	85	206	121	306
MIN	.00	.10	.22	.22	.42	.64	.29	.29	.33	.55	.15	.71
CFSM	.12	.91	.94	1.21	.38	.99	.37	.58	.47	.60	.41	.62
IN.	.14	.98	1.08	1.40	.31	1.14	.38	.62	.49	.67	.48	.65

e Estimated

## WOLF RIVER BASIN

267

07031692 FLETCHER CREEK AT SYCAMORE VIEW ROAD AT MEMPHIS, TN--Continued

## WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) UNITS (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
APR 02...	1700	3.5	126	7.2	14.5	755	9.8	97	46	8	14.8	2.28	4.4
MAY 03...	0730	.32	130	7.7	21.5	760	6.6	75	49	6	15.3	2.53	4.7
JUN 07...	1610	53	88	7.0	23.5	752	6.4	76	33	4	9.85	1.99	2.4
JUL 10...	1420	2.3	151	7.5	29.5	760	3.2	42	53	3	16.7	2.75	5.4
AUG 06...	1800	2.1	131	7.5	30.5	759	6.5	87	50	2	15.7	2.56	4.8
SEP 05...	1830	3.0	101	7.5	26.5	758	4.7	59	38	4	12.0	1.97	3.1
DATE	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
APR 02...	16	.3	2.72	47	38	8.7	4.0	<.2	5.0	88	71	.12	1.11
MAY 03...	16	.3	3.71	52	43	7.1	4.2	.2	4.2	87	71	.12	.602
JUN 07...	12	.2	3.39	35	29	4.2	2.5	<.2	6.9	77	51	.10	.323
JUL 10...	17	.3	4.23	61	50	6.5	5.0	.3	5.9	102	78	.14	.133
AUG 06...	16	.3	3.57	58	48	7.7	3.8	.2	6.4	78	76	.11	.365
SEP 05...	14	.2	3.13	41	34	3.9	3.0	<.2	5.9	71	53	.10	--
DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	ALA-CHLOR, WATER, DISS, REC. (UG/L) (46342)	ACETO-CHLOR, WATER, FLTRD REC (UG/L) (49260)
APR 02...	.039	1.15	.125	.88	1.3	2.4	.329	.141	.118	40	26	<.002	<.004
MAY 03...	.069	.671	<.041	.70	1.3	2.0	.240	.069	.044	20	57	<.002	<.004
JUN 07...	.028	.351	.184	1.0	1.6	2.0	.475	.189	.155	70	9.4	<.002	<.004
JUL 10...	.029	.162	.260	1.0	1.2	1.4	.150	.048	.026	20	178	<.002	<.004
AUG 06...	.071	.436	.046	.60	.78	1.2	.172	.061	.049	<10	36	<.002	<.004
SEP 05...	.018	.259	<.040	.49	.84	--	.228	.106	.084	20	21	<.002	<.004

## WOLF RIVER BASIN

07031692 FLETCHER CREEK AT SYCAMORE VIEW ROAD AT MEMPHIS, TN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)
APR 02...	3.12	<.005	<.002	<.005	<.018	E.211	.208	<.005	<.003	<.004	E.016	.009	.352
MAY 03...	.695	<.005	<.002	<.005	E.011	E.182	.258	<.005	<.003	<.004	<.027	.007	.124
JUN 07...	.089	<.005	<.002	<.005	<.018	E.032	.220	<.005	<.003	<.004	E.018	<.006	.043
JUL 10...	.068	<.005	<.002	<.005	.036	<.020	.391	<.005	<.003	<.004	.193	.011	.044
AUG 06...	.050	<.005	<.002	<.005	<.018	E.006	.495	<.005	<.003	<.004	.049	.019	.152
SEP 05...	.020	<.005	<.002	<.005	<.018	E.006	.123	<.005	<.003	<.004	<.040	<.006	.057
DATE	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	BEN- FLUR- ALIN WAT FLTD 0.7 U GF, REC (UG/L) (82673)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	2, 6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
APR 02...	<.003	<.007	<.010	E.014	7.96	<.010	E.039	<.020	<.003	<.002	<.021	<.009	<.005
MAY 03...	<.003	<.007	<.010	.023	2.28	<.010	E.009	<.020	<.003	<.002	<.021	<.009	<.005
JUN 07...	<.003	<.007	<.010	.019	.500	<.010	E.042	<.020	<.003	<.002	<.021	<.009	<.005
JUL 10...	<.003	<.007	<.010	.068	.284	<.010	E.009	<.020	<.003	<.002	<.021	<.009	<.005
AUG 06...	<.003	<.007	<.010	.080	.195	<.010	E.033	<.020	<.003	<.002	<.021	<.009	<.005
SEP 05...	<.003	<.007	<.010	.046	.428	<.010	E.032	<.020	<.003	<.002	<.021	<.009	<.005
DATE	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	FRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
APR 02...	<.030	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	.082	<.011	<.023
MAY 03...	<.022	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	.055	<.011	<.023
JUN 07...	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	.029	<.011	<.023
JUL 10...	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023
AUG 06...	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023
SEP 05...	<.002	<.035	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.030	<.011	<.023

E--Estimated



## WOLF RIVER BASIN

269

07031692 FLETCHER CREEK AT SYCAMORE VIEW ROAD AT MEMPHIS, TN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
APR							
02...	<.016	<.034	E.010	<.002	<.009	<.005	75
MAY							
03...	.086	<.034	<.017	<.002	<.009	<.005	49
JUN							
07...	.019	<.034	<.017	<.002	<.009	<.005	129
JUL							
10...	E.008	<.034	<.017	<.002	<.009	<.005	37
AUG							
06...	.066	<.034	<.017	<.002	<.009	<.005	54
SEP							
05...	<.016	<.034	<.017	<.002	<.009	<.005	37

E--Estimated

## WOLF RIVER BASIN

07031740 WOLF RIVER AT HOLLYWOOD STREET AT MEMPHIS, TN

LOCATION.--Lat 35°11'16", long 89°58'32", Shelby County, Hydrologic Unit 08010210, at bridge on Hollywood Street, 0.2 mi south of Interstate 240, 6.1 mi upstream of Mississippi River, and at mile 5.2.

DRAINAGE AREA.--788 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2000 to September 2001. October 1985 to May 1989, continuous stage only, February 1995 to September 2000, unpublished stage and discharge.

GAGE.--Water-stage recorder. Datum of gage is 191.2 ft above sea level from reference mark provided by the City of Memphis.

REMARKS.--Records poor. During medium to high stages on the Mississippi River the stages are affected by backwater. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,600 ft<sup>3</sup>/s, Feb. 16, gage height, 26.15; minimum daily discharge, 215 ft<sup>3</sup>/s, estimated, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e244	293	515	e420	662	e1290	799	439	3430	e365	441	806
2	e240	280	485	e405	576	e1030	653	401	1520	e325	401	414
3	e235	288	455	e400	544	e945	596	371	1610	e295	378	291
4	e230	330	428	e390	534	e2450	556	342	1370	e283	448	285
5	e225	366	405	e380	515	e1980	589	324	1010	e310	369	277
6	e270	695	389	e410	488	e1620	773	311	1460	e285	333	340
7	e228	797	383	e395	458	e1400	775	368	1440	e270	408	503
8	e220	609	376	e385	433	e1220	652	444	775	e270	446	453
9	e215	1190	369	e387	494	1060	577	313	e670	e315	350	353
10	e230	538	365	e380	603	902	526	297	e600	e375	454	317
11	e235	501	359	e420	465	789	494	300	e560	e315	423	290
12	e239	434	353	e435	513	1250	1660	332	e530	e319	1990	267
13	e240	454	591	e445	1820	1100	4130	280	e510	342	942	257
14	e244	425	978	e465	4340	911	2150	272	e485	357	443	250
15	e250	401	600	e433	7800	1280	2150	265	e470	348	375	248
16	e252	670	e1480	e425	10300	1280	1810	260	e465	333	332	253
17	e251	554	e1060	e430	12900	977	1650	257	e455	799	311	280
18	e248	425	e850	e1300	13100	811	1640	252	e450	588	294	285
19	e245	399	e800	e2250	11300	729	1520	248	e440	391	279	2010
20	e248	376	e780	1590	8770	697	1330	419	414	478	260	694
21	e252	365	e725	1220	6240	670	1150	3050	358	375	247	562
22	e250	358	e670	901	5200	688	856	1550	345	562	240	491
23	e252	349	e590	769	e3700	850	728	625	336	339	236	448
24	e248	2070	e530	735	e2580	947	993	e450	329	319	238	492
25	e251	3240	e495	693	e2700	894	616	e420	324	315	275	372
26	e245	886	e470	616	e2650	779	567	e410	319	313	231	336
27	e240	663	e468	544	e2350	695	547	e420	312	308	225	313
28	275	567	e460	496	e1740	653	543	e470	e310	303	222	295
29	283	545	e450	895	---	713	517	e460	e640	304	220	282
30	291	534	e440	1230	---	833	480	e570	e460	415	225	271
31	301	---	e430	807	---	743	---	4020	---	1200	248	---
TOTAL	7677	19602	17749	21051	103775	32186	32027	18940	22397	12116	12284	12735
MEAN	248	653	573	679	3706	1038	1068	611	747	391	396	424
MAX	301	3240	1480	2250	13100	2450	4130	4020	3430	1200	1990	2010
MIN	215	280	353	380	433	653	480	248	310	270	220	248
CFSM	.31	.83	.73	.86	4.70	1.32	1.35	.78	.95	.50	.50	.54
IN.	.36	.93	.84	.99	4.90	1.52	1.51	.89	1.06	.57	.58	.60

e Estimated

07031740 WOLF RIVER AT HOLLYWOOD STREET AT MEMPHIS, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	621	748	1036	1458	1967	2421	1251	1179	905	647	704	590
MAX	1449	1755	2508	2375	3706	4847	1994	2142	2211	858	1468	1656
(WY)	1997	1997	1997	1999	2001	1997	1999	1999	1997	1997	1998	1997
MIN	248	348	573	452	554	1038	733	589	463	391	334	268
(WY)	2001	2000	2001	2000	1995	2001	1995	2000	2000	2001	2000	2000

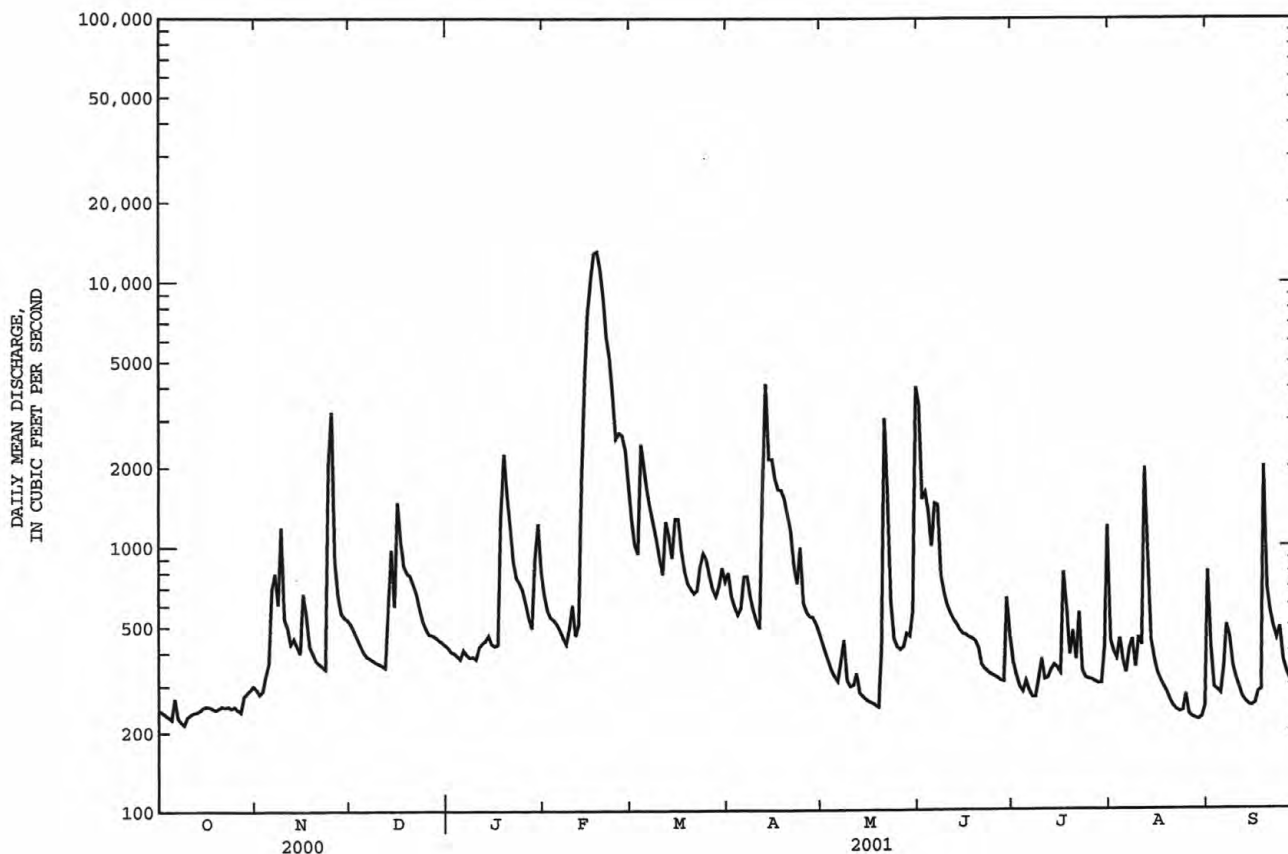
## SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1995 - 2001

ANNUAL TOTAL	226211	312539	
ANNUAL MEAN	618	856	1152
HIGHEST ANNUAL MEAN			1861
LOWEST ANNUAL MEAN			616
HIGHEST DAILY MEAN	4050	Mar 20	20500
LOWEST DAILY MEAN	215	Oct 9	215
ANNUAL SEVEN-DAY MINIMUM	228	Sep 1	228
MAXIMUM PEAK FLOW			13600
MAXIMUM PEAK STAGE			26.15
INSTANTANEOUS LOW FLOW			215
ANNUAL RUNOFF (CFSM)	.78	1.09	1.46
ANNUAL RUNOFF (INCHES)	10.68	14.75	19.87
10 PERCENT EXCEEDS	1240	1570	2420
50 PERCENT EXCEEDS	430	450	589
90 PERCENT EXCEEDS	247	252	310



## NONCONNAH CREEK BASIN

07032200 NONCONNAH CREEK NEAR GERMANTOWN, TN

LOCATION.--Lat 35°02'59", long 89°49'08", Shelby County, Hydrologic Unit 08010211, on right bank, 100 ft upstream from bridge on Winchester Road, 2.6 mi south of Germantown, and at mile 17.3.

DRAINAGE AREA.--68.2 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, 1959-1964 and 1969; October 1969 to May 1985, October 1985 to January 1995, June 1996 to current year.

REVISED RECORDS.--WRD TN-74-1: Drainage area, WRD TN-87-1 (P).

GAGE.--Water-stage recorder. Datum of gage is 262.92 ft above sea level, (from levels by National Resources Conservation Service).

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 3,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb 13	1615	4,840	15.04	Aug 12	1715	*7,240	*17.48
Feb 16	1415	5,400	15.64				

Minimum daily discharge, 0.02 ft<sup>3</sup>/s, Oct. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.64	4.4	.32	48	19	67	1.5	195	2.4	8.9	57
2	.38	1.0	3.2	.28	32	14	17	1.6	17	.98	2.8	9.9
3	.10	1.2	2.7	.41	27	17	11	1.4	18	.55	1.4	6.5
4	.10	19	1.7	.58	25	483	8.6	1.9	27	.60	16	2.4
5	.04	24	1.7	2.1	6.2	156	6.7	1.3	18	61	2.7	1.6
6	4.8	164	2.1	1.7	7.1	52	5.3	1.6	135	11	1.2	89
7	.96	38	1.9	1.2	8.3	22	3.9	13	90	2.1	8.8	9.9
8	.54	410	2.6	1.1	8.0	14	3.8	12	34	.67	5.8	103
9	.21	166	2.2	.81	87	11	4.4	2.9	9.7	.61	1.4	28
10	.09	10	3.0	.78	63	6.8	4.6	2.5	3.1	139	1.3	5.7
11	.03	2.3	7.3	42	28	4.4	5.2	3.2	1.7	29	9.2	2.6
12	.45	.69	9.8	27	89	305	417	8.6	1.4	5.8	1080	3.7
13	.55	24	379	6.8	2180	181	1250	4.0	1.9	2.2	131	1.7
14	.15	4.1	140	59	1920	61	161	2.3	6.8	1.3	15	1.5
15	.15	1.1	72	13	1780	332	276	1.5	27	.83	4.6	2.3
16	.14	156	897	4.8	3120	112	109	2.1	4.1	.31	2.8	1.4
17	.23	20	145	40	899	35	30	2.1	1.6	48	2.0	1.6
18	.22	3.2	29	582	154	14	13	1.5	1.2	9.4	6.4	2.3
19	.11	1.6	11	999	81	9.4	8.2	1.2	1.1	2.7	3.3	362
20	.09	.95	4.9	182	50	10	13	71	.61	2.2	1.6	22
21	.12	.78	3.2	49	24	5.4	12	154	.93	49	1.1	5.2
22	.19	1.1	2.0	25	23	5.0	5.2	84	1.2	32	.74	2.8
23	.08	3.6	1.3	15	12	3.7	144	7.9	.94	2.1	.90	1.9
24	.05	1230	.94	10	95	2.9	56	2.9	1.2	1.1	.96	3.5
25	.02	453	.81	6.0	788	2.0	8.0	1.4	1.7	6.6	.86	1.8
26	.10	35	.64	5.0	120	1.6	4.4	.79	1.5	1.2	.86	2.0
27	.21	11	7.2	5.4	55	1.6	3.2	.49	1.3	.49	1.1	1.4
28	.11	6.9	4.1	5.0	34	1.8	2.2	18	3.3	.44	31	2.1
29	.19	6.4	1.6	380	---	15	1.9	9.5	257	.35	2.5	4.3
30	.15	6.2	.78	260	---	51	2.1	26	9.6	332	16	2.3
31	.27	---	.45	76	---	89	---	798	---	163	22	---
TOTAL	10.87	2801.76	1743.52	2801.28	11763.6	2037.6	2653.7	1240.18	872.88	908.93	1384.22	741.4
MEAN	.35	93.4	56.2	90.4	420	65.7	88.5	40.0	29.1	29.3	44.7	24.7
MAX	4.8	1230	897	999	3120	483	1250	798	257	332	1080	362
MIN	.02	.64	.45	.28	6.2	1.6	1.9	.49	.61	.31	.74	1.4
CFSM	.01	1.37	.82	1.32	6.16	.96	1.30	.59	.43	.43	.65	.36
IN.	.01	1.53	.95	1.53	6.42	1.11	1.45	.68	.48	.50	.76	.40

07032200 NONCONNAH CREEK NEAR GERMANTOWN, TN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.8	92.7	165	156	192	202	184	109	63.0	43.1	16.8	23.4
MAX	69.4	323	616	531	604	659	834	407	300	354	77.4	164
(WY)	1990	1989	1983	1974	1989	1980	1991	1979	1974	1989	1978	1977
MIN	.000	.21	2.24	.41	14.6	15.2	9.44	3.74	3.09	.70	.37	.087
(WY)	1970	1972	1977	1986	1978	1986	1978	1988	1988	1976	1980	1984

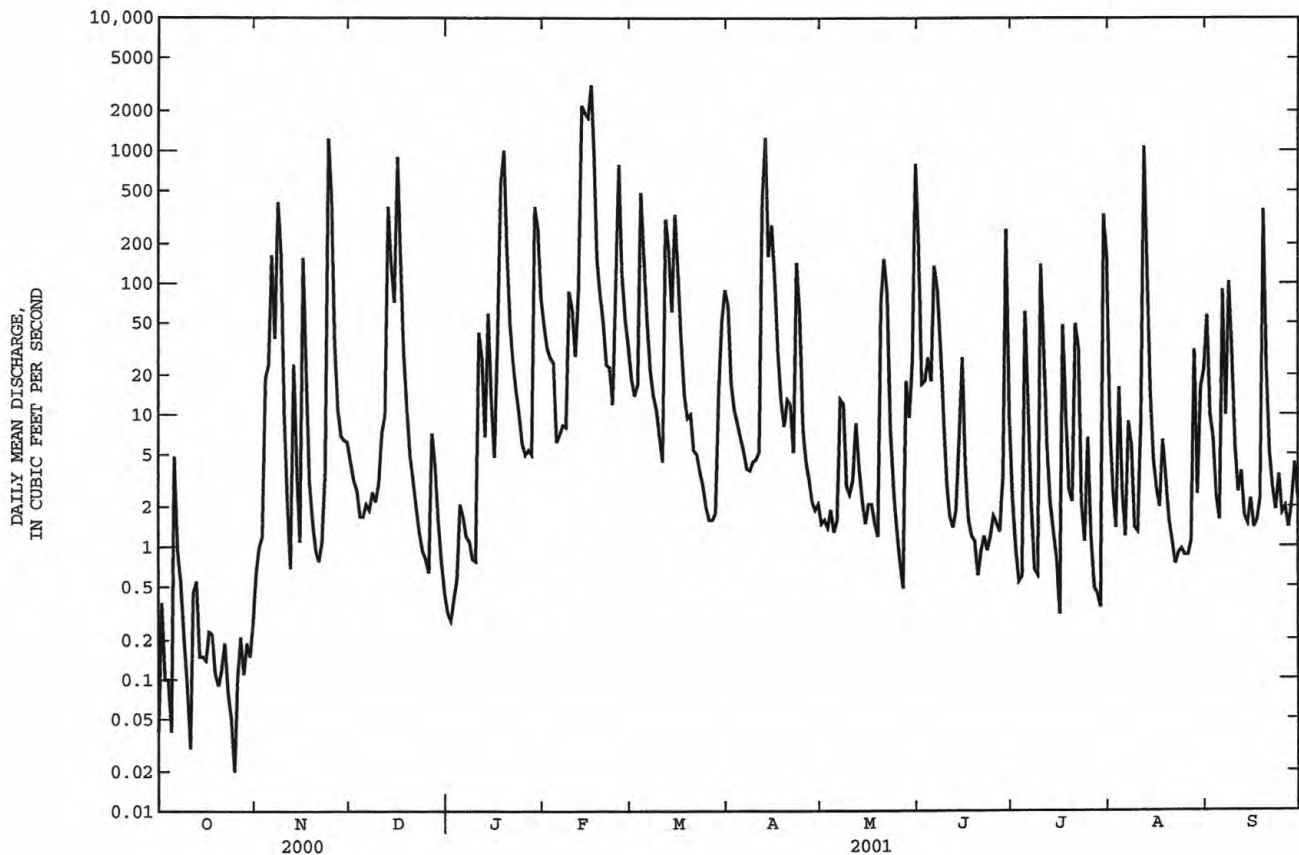
## SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1970 - 2001

ANNUAL TOTAL	17025.35	28959.94	
ANNUAL MEAN	46.5	79.3	105
HIGHEST ANNUAL MEAN			215
LOWEST ANNUAL MEAN			22.4
HIGHEST DAILY MEAN	1230	Nov 24	3120
LOWEST DAILY MEAN	.00	Jul 15	.02
ANNUAL SEVEN-DAY MINIMUM	.03	Jul 10	.09
MAXIMUM PEAK FLOW			7240
MAXIMUM PEAK STAGE			17.48
INSTANTANEOUS LOW FLOW			.01
ANNUAL RUNOFF (CFSM)	.68		1.16
ANNUAL RUNOFF (INCHES)	9.29		15.80
10 PERCENT EXCEEDS	104		154
50 PERCENT EXCEEDS	2.1		4.6
90 PERCENT EXCEEDS	.10		.52





As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for hydrologic studies reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at low-flow partial-record sites and at miscellaneous sites and for special studies are given in separate tables.

#### Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device that will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from current meter or indirect measurements of peak flow. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

#### Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
CUMBERLAND RIVER BASIN								
Whiteoak Creek at Sunbright, TN (03409000)	Lat 36°14'38", long 84°40'14", Morgan County, Hydrologic Unit 05130104, at bridge on U.S. Highway 27 in Sunbright. Datum of gage is 1,294.05 ft above sea level. Drainage area is 13.5 mi <sup>2</sup> .	1934, 1955-82, 1985-99 2000-01	2-17-01	7.03	-	5-27-73	17.24a	5,560
Wolf River near Byrdstown, TN (03416000)	Lat 36°33'37", long 85°04'23", Pickett County, Hydrologic Unit 05130105, on right bank 0.3 mi upstream from bridge on county road, 0.5 mi upstream from Widow Creek, 3.2 mi east of Byrdstown, 5.4 mi upstream from Lick Creek, and at mi 26.2. Datum of gage is 707.54 ft, Sandy Hook Datum. Drainage area is 106 mi <sup>2</sup> .	1942-91†, 1992-99 2000-01	2-16-01	7.70	6,370	9-2-82	17.14	23,500
Doe Creek at Gainesboro, TN (03418201)	Lat 36°21'23", long 85°39'20", Jackson County, Hydrologic Unit 2000-01 05130106, at bridge on Highway 56, at Gainesboro. Datum of gage is 519.37 ft above sea level. Drainage area is 5.72 mi <sup>2</sup> .	1978-99 2000-01	2-16-01	3.15	-	8-31-82	7.28	-

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
CUMBERLAND RIVER BASIN--Continued								
Cane Creek near Spencer, TN (03419200)	Lat 35°44'36", long 85°23'33", Van Buren County, Hydrologic Unit 05130108, at bridge on State Highway 30, 4.0 mi east of Spencer. Drainage area is 134 mi <sup>2</sup> .	1997-99 2000-01	2-16-01	8.27	-	1- 7-98	11.48	-
Charles Creek near McMinn- ville, TN (03421200)	Lat 35°43'00", long 85°46'05", Warren County, Hydrologic Unit 05130107, at bridge on county road at Faulkner Springs, 2.7 mi north of McMinnville. Drainage area is 31.1 mi <sup>2</sup> .	1955-99 2000-01	2-16-01	8.38	2,520	6-22-89	17.03	24,800
Mulherrin Creek near Gordons- ville, TN (03424900)	Lat 36°11'28", long 85°57'11", Smith County, Hydrologic Unit 05130108, at bridge on State Highway 53, 1.3 mi upstream from mouth, 1.5 mi northwest of Gordonsville. Drainage area is 26.9 mi <sup>2</sup> .	1982, 1986-99 2000-01	2-16-01	15.64	-	2-14-89	23.85	-
Peyton Creek near Monoville, TN (03425040)	Lat 36°18'37", long 85°59'21", Smith County, Hydrologic Unit 05130201, at county road bridge 1.3, mi north of Monoville. Drainage area is 40.0 mi <sup>2</sup> .	1986-99 2000-01	2-16-01	15.65	-	2-16-01	15.65	-
Second Creek near Walnut Grove, TN (03425365)	Lat 36°24'01", long 86°12'48", Trousdale County, Hydrologic Unit 05130201, at culvert on State Highways 10 and 25, 2.6 mi west of Hartsville. Drainage area is 3.47 mi <sup>2</sup> .	1986-99 2000-01	2-14-01	23.91	-	6-10-98	29.48	-
Station Camp Creek at Cottontown, TN (03425637)	Lat 36°27'06", long 86°32'16", Sumner County, Hydrologic Unit 05130201, at State Highway 25 bridge in Cottontown.	1995-99 2000-01	2-14-01	14.00	-	6- 9-98	16.74	-
East Fork Stones River at Wood- bury, TN (03426800)	Lat 35°49'41", long 86°04'36", Cannon County, Hydrologic Unit 05130203, at bridge on U.S. Highway 70S at Woodbury. Datum of gage is 676.23 ft above sea level. Drainage area is 39.1 mi <sup>2</sup> .	1962-89† 1990-99 2000-01	2-16-01	10.65	2,850	3-15-73	16.75	13,200
Brawleys Fork below Bradyville, TN (03426874)	Lat 35°44'44", long 86°10'14", Cannon County, Hydrologic Unit 05130203, at bridge on Bradyville Pike, 0.5 mi northwest of Bradyville. Drainage area is 15.4 mi <sup>2</sup> .	1983-99 2000-01	2-16-01	24.40	1,960	10- 1-89	27.94	2,850

See footnotes at the end of the table.

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
CUMBERLAND RIVER BASIN--Continued								
Reed Creek near Bradyville, TN (034269424)	Lat 35°44'44", long 86°12'31", Rutherford County, Hydrologic Unit 05130203, at bridge on Bradyville Pike, 2.4 mi northwest of Bradyville. Drainage area is 3.52 mi <sup>2</sup> .	1983-99 2000-01	--	<2.20	-	4-20-95	5.86	-
East Fork Stones River near Lascassas, TN (03427500)	Lat 35°55'06", long 86°20'02", Rutherford County, Hydrologic Unit 05130203, on left bank 50 ft upstream from highway bridge, 2.5 mi southwest of Lascassas, 3.7 mi downstream of Bradley Creek, 6.0 mi northeast of the courthouse in Murfreesboro, and at mi 15.4. Datum of gage is 507.88 ft, Sandy Hook Datum. Drainage area is 262 mi <sup>2</sup> .	1950-58†, 1963-91†, 1992-99 2000-01	2-17-01	25.45	14,200	3-13-75	39.48	41,200
Bushman Creek at Pitts Lane Ford near Compton, TN (03427690)	Lat 35°53'08", long 86°20'47", Rutherford County, Hydrologic Unit 05130203, on right bank 75 ft upstream of bridge on De Jarnett Lane, 0.1 mi west of intersection of De Jarnett Lane and State Highway 96, 1.6 mi southwest of Compton. Datum of gage is 569.74 ft above sea level. Drainage area is 9.67 mi <sup>2</sup> .	1989-92†, 1993-99 2000-01	2-16-01	5.10	1,080	7-21-96	7.24	2,020
Lytle Creek at Sanbyrne Drive at Murfreesboro, TN (03428043)	Lat 35°49'38", long 86°23'28", Rutherford County, Hydrologic Unit 05130203, at bridge on Sanbyrne Drive, 1 mi south of intersection of Highways 41 and 231 in Murfreesboro. Datum of gage is 591.91 ft above sea level. Drainage area is 17.6 mi <sup>2</sup> .	1978-90, 1991-92†, 1993-99 2000-01	2-16-01	1.02	-	1-23-99	3.36	-
Unnamed Sink near Almadillo, TN (03428270)	Lat 35°51'21", Long 86°32'21" Rutherford Count, Hydrologic Unit 05130203, on left downstream wingwall of culvert on Shored Road, 2.4 miles southeast of Almadillo. Datum of gage is sea level.	1994-99 2000-01	2-16-01	604.23	-	3-27-94	607.36	-
West Fork Stones River near Smyrna, TN (03428500)	Lat 35°56'25", long 86°27'54", Rutherford County, Hydrologic Unit 05130203, near left bank at county bridge on Sulphur Springs Road, 400 ft upstream from Nice's Mill dam, 1.6 mi downstream from Overall Creek, 4.2 mi southeast of Smyrna, and at mi 6.4. Datum of gage is 500 ft, above sea level. Drainage area is 237 mi <sup>2</sup> , includes 43 mi <sup>2</sup> without surface drainage.	1965-91†, 1992-99 2000-01	2-17-01	12.92	13,100	3-13-75	19.18	63,800

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
CUMBERLAND RIVER BASIN--Continued								
Unnamed Sink on I-840 at Leanna, TN (03428513)	Lat 35°56'13", long 86°26'14", Rutherford County, Hydrologic Unit 05130203, 100 ft above culvert on I-840, 0.4 mile southwest of Leanna. Datum of gage is sea level.	1994-99 2000-01	2-16-01	532.30	-	1-23-99	532.56	-
Unnamed Sink at Leanna, TN (03428515)	Lat 35°56'19", long 86°26'49", Rutherford County, Hydrologic Unit 05130203, 100 ft south of intersection of E. Buckeye Bottom Road and Sulphur Springs Road 0.9 mi west of Leanna. Datum of gage is sea level.	1994-99 2000-01	2-16-01	512.90	-	1-23-99	515.41	-
McCrory Creek at Ironwood Drive at Donelson, TN (03430118)	Lat 36°09'07", long 86°39'02", Davidson County, Hydrologic Unit 05130203, at bridge under Ironwood Drive, 1.3 mi southeast of intersection of U.S. Highway 70 (Lebanon Road) and Donelson Pike in Donelson. Datum of gage is 430.63 ft above sea level. Drainage area is 7.31 mi <sup>2</sup> .	1977-99b 2000-01	2-25-01	5.58	755	5-6-84	9.87	2,850
Mill Creek at Nolensville, TN (03430400)	Lat 35°57'32", long 86°40'31", Williamson County, Hydrologic Unit 05130202, at bridge on Sunset Road, 0.6 mi northwest of Nolensville. Datum of gage is 586.18 ft above sea level. Drainage area is 12.0 mi <sup>2</sup> .	1965-99 2000-01	12-16-00	8.21	6,600	5-7-84	9.82	11,400
Mill Creek near Antioch, TN (03431000)	Lat 36°04'54", long 86°40'50", Davidson County, Hydrologic Unit 05130202, at bridge on Franklin-Limestone Road, 1.6 miles north of Antioch. Datum of gage is 472.93 ft above sea level. Drainage area is 64.0 mi <sup>2</sup> .	1954-61†, 1962-63, 1964-75†, 1976-92, 1993-96† 1997-99 2000-01	2-16-01	13.20	5,350	5-4-79	23.78	30,100
Sevenmile Creek at Blackman Road, near Nashville, TN (03431040)	Lat 36°04'21", long 86°44'00", Davidson County, Hydrologic Unit 05130202, at bridge on Blackman Road, 7.0 mi southeast of State capitol in Nashville. Datum of gage is 499.08 ft above sea level. Drainage area is 12.2 mi <sup>2</sup> .	1965-99 2000-01	4-15-01	5.01	1,480	6-4-98	10.57	10,500
Mill Creek tributary at Glenrose Avenue, at Woodbine, TN (03431062)	Lat 36°07'02", long 86°43'37", Davidson County, Hydrologic Unit 05130202, at culvert under Glenrose Avenue, 1.1 mi northeast of intersection of Nolensville Road and Thompson Lane in Woodbine, and 750 ft upstream from mouth. Datum of gage is 443.52 ft above sea level. Drainage area is 1.17 mi <sup>2</sup> .	1977-99b 2000-01	8-3-01	5.28	353	5-6-84	9.12	833

See footnotes at the end of the table.

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
CUMBERLAND RIVER BASIN--Continued								
West Fork Browns Creek at General Bates Drive, at Nashville, TN (03431120)	Lat 36°06'29", long 86°47'07", Davidson County, Hydrologic Unit 05130202, at bridge on General Bates Drive, 4.0 mi south of State capitol in Nashville. Datum of gage is 499.94 ft above sea level. Drainage area is 3.30 mi <sup>2</sup> .	1965-99 2000-01	8- 3-01	5.11	835	3-29-75	7.00	2,110
East Fork Browns Creek at 100 Oaks Mall, at Nashville, TN (03431242)	Lat 36°06'36", long 86°46'03", Davidson County, Hydrologic Unit 05130202, at culvert on access road to CarMax, 300 ft west of 100-Oaks Shopping Center, and 4.0 mi southeast and of State capitol in Nashville. Datum of gage is 496.69 ft above sea level. Drainage area is 1.58 mi <sup>2</sup> .	2000-01	8- 3-01	501.80	-	8- 3-01	501.80	-
Browns Creek at Factory Street, at Nashville, TN (03431340)	Lat 36°08'26", long 86°45'31", Davidson County, Hydrologic Unit 05130202, at bridge on Factory Street, 800 ft downstream from Louisville and Nashville Railroad bridge, and 2.3 mi southeast of State capitol in Nashville. Datum of gage is 420.66 ft above sea level. Drainage area is 13.2 mi <sup>2</sup> .	1965-99 2000-01	2-25-01	5.36	690	9-13-79	10.89	7,800
Pages Branch at Avondale, TN (03431490)	Lat 36°12'22", long 86°46'24", Davidson County, Hydrologic Unit 05130202, at culvert under Trinity Lane, 900 ft east of intersection of Interstate 65 and Trinity Lane at Avondale, 0.9 mi upstream from mouth. Drainage area is 2.01 mi <sup>2</sup> .	1977-99b 2000-01	12-16-00	5.70	914	6- 5-98	6.32	1,430
Earthman Fork at Whites Creek, TN (03431550)	Lat 36°15'55", long 86°49'51", Davidson County, Hydrologic Unit 05130202, at bridge on Whites Creek Pike in town of Whites Creek, 1,800 ft upstream from mouth. Drainage area is 6.29 mi <sup>2</sup> .	1965-99 2000-01	2-13-00 2-25-01	c5.03 6.16	502 972	5- 3-93	9.43	2,510
Ewing Creek below Knight Road, near Bordeaux, TN (03431581)	Lat 36°13'55", long 86°48'14", Davidson County, Hydrologic Unit 05130202, at downstream side of bridge on Knight Road, 3.0 mi northeast of Bordeaux. Datum of gage is sea level. Drainage area is 13.3 mi <sup>2</sup> .	1976-99 2000-01	12-16-00	447.23	-	6-9-86	449.80	-
Sugartree Creek at YMCA Access Road, at Green Hills, TN (03431677)	Lat 36°06'13", long 86°49'12", Davidson County, Hydrologic Unit 05130202, at bridge on YMCA Access Road, 0.5 mi southwest of Hillsboro High School, at Green Hills. Datum of gage is sea level. Drainage area is 1.51 mi <sup>2</sup> .	1976-99 2000-01	2-25-01	543.08	-	9-13-79	545.23	-



## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
CUMBERLAND RIVER BASIN--Continued								
Sugartree Creek at Abbott Martin Road, at Green Hills, TN (03431679)	Lat 36°06'23", long 86°49'17", Davidson County, Hydrologic Unit 05130202, at bridge on Abbott Martin Road, at intersection of Bedford Avenue and Abbott Martin Road, at Green Hills. Datum of gage is sea level. Drainage area is 2.19 mi <sup>2</sup> .	1976-99 2000-01	2-25-01	529.74	-	11-27-94	531.54	-
Sycamore Creek near Ashland City, TN (03431800)	Lat 36°19'12", long 87°03'04", Cheatham County, Hydrologic Unit 05130202, near right bank on downstream end of pier of bridge on State Highway 49, at Sycamore, 3.2 mi north of Ashland City, 4.4 mi upstream from Spring Creek, and at mi 8.6. Elevation of gage is 400 ft above sea level, from topographic map. Drainage area is 97.2 mi <sup>2</sup> .	1961-87†, 1988-91†, 1992-99 2000-01	2-16-01	9.21	4,340	2-21-89	13.50	18,500
Murfrees Fork above Burwood, TN (03432470)	Lat 35°48'58", long 86°57'20", Williamson County, Hydrologic Unit 05130204, at county road bridge, just downstream from Cayce Branch, 1.6 mi east of Burwood. Drainage area is 7.43 mi <sup>2</sup> .	1986-99 2000-01	2-16-01	19.46	-	4-86	26.85	-
Little Harpeth River at Granny White Pike, at Brentwood, TN (03432925)	Lat 36°01'30", long 86°49'09", Williamson County, Hydrologic Unit 05130204, at bridge on Granny White Pike, 2.0 mi southwest of Brentwood. Datum of gage is 618.29 ft above sea level. Drainage area is 22.0 mi <sup>2</sup> .	1978-99 2000-01	2-16-01	10.74	2,110	5-4-79	17.55	9,260
Jones Creek near Burns, TN (03434590)	Lat 36°06'15", long 87°19'05", Dickson County, Hydrologic Unit 05130204, at bridge on Rock Church Road, 3.5 mi north of Burns and at mi 21.9. Drainage area is 13.3 mi <sup>2</sup> .	1984-99 2000-01	2-16-01	6.41	1,310	5-6-84	9.87	3,750
Bartons Creek near Cumberland Furnace, TN (034350021)	Lat 36°15'02", long 87°20'00", Dickson County, Hydrologic Unit 05130205, at bridge on Stayton road, 1.9 mi southeast of Cumberland Furnace. Drainage area is 22.3 mi <sup>2</sup> .	1984-99 2000-01	2-16-01	10.26	-	4-16-98	15.88	-
Louise Creek near Grays Chapel, TN (034350035)	Lat 36°21'52", long 87°20'30", Montgomery County, Hydrologic Unit 05130206, at bridge on old State Highway 48, 2.8 mi south of Liverworth. Drainage area is 12.7 mi <sup>2</sup> .	1995-99 2000-01	-	<7.28	-	3-3-97	10.96	-

See footnotes at the end of table.

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
CUMBERLAND RIVER BASIN--Continued								
Honey Run Creek near Cross Plains, TN (034351105)	Lat 36°31'52", long 87°40'10" Robertson County, Hydrologic Unit 05130206, at county road bridge, 1.2 mi north-northwest of Calistia. Drainage area is 17.0 mi <sup>2</sup> .	1995-99 2000-01	12-16-00	12.27	-	6- 9-98	16.66	-
Honey Run Creek below Cross Plains, TN (034351113)	Lat 36°32'31", long 86°42'14", Robertson County, Hydrologic Unit 05130206, at Empson Bridge on county road, 0.4 mi above mouth of Empson branch, 0.6 mi southwest of Cross Plains. Drainage area is 20.0 mi <sup>2</sup> .	1986-99 2000-01	12-16-00	20.99	-	2- 3-90	23.11	-
Beaver Dam Creek above Springfield (03435739)	Lat 36°31'40", long 86°49'29" Robertson County, Hydrologic Unit 05130206, at county road bridge, 3.6 miles north- east of Springfield, and at mile 1.6. Drainage area is 12.9 mi <sup>2</sup> .	1995-99 2000-01	-	<10.04	-	6- 9-98	15.17	-
Sulphur Fork Red River above Springfield, TN (03435770)	Lat 36°30'47", long 86°51'44", Robertson County, Hydrologic Unit 05130206, on left bank 150 ft downstream from new bridge on State Highway 49, 1.2 mi downstream from Beaver Dam Creek, 1.3 mi northeast of Springfield. Datum of gage is 538.17 ft above sea level. Drainage area is 65.6 mi <sup>2</sup> .	1975-88†, 1988-99 2000-01	2-16-01	9.95	2,670	3- 3-97	14.52	12,100
Spring Creek tributary near Cedar Hill, TN (03435930)	Lat 36°32'08", long 86°59'26", Robertson County, Hydrologic Unit 05130206, at culvert on Kinney Road, 1.2 mi southeast of Cedar Hill. Drainage area is 1.40 mi <sup>2</sup> .	1986-99 2000-01	-	<18.33	34.1	5-17-90	22.23	141
Sulphur Fork Red River above Port Royal, TN (03436082)	Lat 36°32'23", long 87°06'51", Robertson County, Hydrologic Unit 05130206, at bridge on State Highway 76 1.7 miles southeast of Port Royal. Drainage area is 214 mi <sup>2</sup> .	1995-99 2000-01	-	<26.86	-	3- 3-97	42.06	-
Passenger Creek near Sango, TN (03436130)	Lat 36°32'07", long 87°11'50", Montgomery County, Hydrologic Unit 05130206 at county road bridge 2.0 mi northeast of Sango. Datum of gage is sea level. Drainage area is 20.5 mi <sup>2</sup> .	1995-99 2000-01	-	<394.17	-	3- 3-97	405.76	-
Cummings Creek near Dotson- ville, TN (03436505)	Lat 36°29'18", long 87°28'06", Montgomery County, Hydrologic Unit 05130205, at bridge on Dotsonville Road, 1.1 mi northeast of Dotsonville. Drainage area is 2.65 mi <sup>2</sup> .	1984-99 2000-01	2-16-01	6.00	-	12-25-87	9.45	-

See footnotes at the end of the table.

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN								
Yellow Creek near Shiloh, TN (03436700)	Lat 36°20'55", long 87°32'20", Montgomery County, Hydrologic Unit 05130205, at bridge on State Highway 13, 2.6 mi west of Shiloh, 3.0 mi downstream from Leatherwood Creek, 9.0 mi east of Erin. Datum of gage is 390.13 ft above sea level. Drainage area is 124 mi <sup>2</sup> .	1957-80† 1982-98 2000-01c	-	<9.99	--	5- 6-84	17.75	16,200
Caney Creek near Cosby, TN (03461230)	Lat 35°47'03", long 83°12'11", Cocke County, Hydrologic Unit 06010106, at culvert under State Highway 32, 3.3 mi southeast of Cosby. Drainage area is 1.62 mi <sup>2</sup> .	1967-99 2000-01	-	<3.65	-	1-26-96	6.45	275
Cherokee Creek near Embree- ville, TN (03465607)	Lat 36°12'24", long 82°29'23", Washington County, Hydrologic Unit 06010108, at culvert on county road, 0.5 mi southeast of Mayday, 1.4 mi northwest of Kansas City, and at mi 1.3. Drainage area is 22.9 mi <sup>2</sup> .	1984-99 2000-01	8-13-01	14.79	-	5- 7-84	18.37	-
Clear Fork near Fairview, TN (03465780)	Lat 36°19'33", long 82°33'47", Washington County, Hydrologic Unit 06010108, at culvert on State Highway 81, 2.0 mi southwest of Sulfur Springs, and at mi 3.8. Drainage area is 10.5 mi <sup>2</sup> .	1983-99 2000-01	2-17-01	3.44	-	5-29-96	7.46	-
Lick Creek near Albany, TN (03466890)	Lat 36°14'54", long 82°55'34", Greene County, Hydrologic Unit 06010108, at State Highway 70 bridge, 0.3 mi downstream from Puncheon Camp Creek, 1.0 mi northwest of Albany, and at mi 33.7. Drainage area is 172 mi <sup>2</sup> .	1984-99 2000-01	2-17-01	12.29	2,290	3-27-94	17.41	10,800
Bent Creek at Taylor Gap, TN (03467480)	Lat 36°14'08", long 83°06'41", Hamblen County, Hydrologic Unit 06010108, at bridge on county road (Mountain Valley Road), 2.1 mi southwest of Bulls Gap, 5.0 mi southeast of Russelville. Drainage area is 2.18 mi <sup>2</sup> .	1986-99 2000-01	7-29-01	13.02	1,620	3-27-94	15.56	2,550
Carter Branch near White Pine, TN (03467992)	Lat 36°07'05", long 83°18'55", Jefferson County, Hydrologic Unit 06010108, at bridge on county road, 1.6 mi north- east of Kimbrough Crossroad, 1.8 mi northwest of White Pine. Drainage area is 4.25 mi <sup>2</sup> .	1986-99 2000-01	-	<4.83	-	4-29-97	9.14	-
Cedar Creek near Valley Home, TN (03467993)	Lat 36°08'03", long 83°18'47", Jefferson County, Hydrologic Unit 06010108, at culvert on county road, 1.7 mi southeast of Valley Home, 1.9 mi south- east of Witt, 2.2 mi northwest of White Pine. Drainage area is 2.01 mi <sup>2</sup> .	1986-99 2000-01	2-17-01	12.03	107	4-29-97	13.38	210

See footnotes at the end of the table.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN--Continued								
Sinking Fork at White Pine, TN (03467998)	Lat 36°07'21", long 83°17'44", Jefferson County, Hydrologic Unit 06010108, at culvert on county road, 0.9 mi north- west of White Pine, 2.7 mi northeast of Kimbrough Cross- road. Drainage area is 6.38 mi <sup>2</sup> .	1986-99 2000-01	2-17-01	6.41	1,010	7-13-00	7.42	1,740
Dumplin Creek at Mt. Hareb, TN (03470215)	Lat 36°04'59", long 83°25'51", Jefferson County, Hydrologic Unit 06010107, at culvert on county road, 0.8 mi southeast of Mt. Hareb, 4.3 mi south- east of Jefferson City, 4.6 mi north of Dandridge. Drainage area is 3.65 mi <sup>2</sup> .	1986-99 2000-01	2-17-01	9.50	44	5-28-90	10.92	211
Indian Creek at Childress, TN (03476960)	Lat 36°25'38", long 82°15'54", Sullivan County, Hydrologic Unit 06010102, at bridge on U.S. Highway 19, 3.3 mi south of Bluff City, and at mi 4.6. Drainage area is 6.79 mi <sup>2</sup> .	1983-99 2000-01	2-17-01	7.32	-	5- 7-84	10.73	-
Reedy Creek at Orebank, TN (03487550)	Lat 36°33'42", long 82°27'36", Sullivan County, Hydrologic Unit 06010102, 80 ft upstream from culvert, 0.3 mi north of Orebank, 1.0 mi upstream from Gaines Branch, and at mi 9.8. Drainage area is 36.3 mi <sup>2</sup> .	1963-89†, 1990-99 2000-01	2-17-01	4.29	398	10- 2-77	11.61	4,940d
Forgey Creek at Zion Hill, TN (03490522)	Lat 36°29'12", long 82°53'08", Hawkins County, Hydrologic Unit 06010104, at culvert on county road (Carter Valley Road), 0.9 mi north of Zion Hill, 7.8 mi northeast of Rogersville. Drainage area is 0.86 mi <sup>2</sup> .	1986-99 2000-01	-	<17.93	<56	7-21-99	21.93	321
Robertson Creek near Persia, TN (03491540)	Lat 36°20'24", long 83°02'27", Hawkins County, Hydrologic Unit 06010104, at bridge on State Highway 113, 0.25 mi below Mooney Branch, and at mi 3.0. Drainage area is 14.6 mi <sup>2</sup> .	1986-99 2000-01	2-17-01	10.49	619	8-13-93 3-27-94	12.50 12.50	1,120 1,120

See footnotes at the end of the table.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

283

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN--Continued								
Dry Land Creek tributary near New Market, TN (03494714)	Lat 36°03'33", long 83°34'13", Jefferson County, Hydrologic Unit 06010104, at culvert on county road (Rocky Valley Road), 3.0 mi south of New Market, 3.3 mi northwest of Piedmont. Drainage area is 0.20 mi <sup>2</sup> .	1986-99 2000-01	2-17-01	11.04	35.5	4-17-98	13.22	82
Flat Creek at Luttrell, TN (03494990)	Lat 36°11'45", long 83°44'44", Union County, Hydrologic Unit 06010104, at bridge on State Highway 61, 0.3 mi southwest of Luttrell, 3.5 mi northwest of Blaine. Drainage area is 22.4 mi <sup>2</sup> .	1986-99 2000-01	2-17-01	10.88	-	7-1-97	13.85	-
Little Ellejoy Creek at Prospect, TN (03498010)	Lat 35°48'23", long 83°47'57" Blount County, Hydrologic Unit 06010201, at bridge on county road, 0.4 mi south of Prospect, at mile 1.93. Drainage area is 5.48 mi.	1995-99 2000-01	7-29-01	6.13	-	5-19-95	6.98	-
Stock Creek at Pickins Gap Road near High Bluff, TN (034991105)	Lat 35°53'03", long 83°50'18" Knox County, Hydrologic Unit 06010201, at bridge on Pickins road, near High Bluff, TN.	2000-01	7-29-01	9.53	-	-	-	-
Ten Mile Creek at Robinson Road near Knoxville, TN (03499175)	Lat 35°56'42", long 84°03'24" Knox County, Hydrologic Unit 06010201, at bridge on Robinson Creek road, near Cedar Bluff, TN.	2000-01	7-29-01	7.31	-	-	-	-
Baker Creek tributary near Binfield, TN (03519610)	Lat 35°41'56", long 84°02'46", Blount County, Hydrologic Unit 06010204, at culvert under county road, 1.5 mi east of Binfield. Drainage area is 2.10 mi <sup>2</sup> .	1966-77, 1979-99 2000-01	-	<3.29	-	6-23-81	8.29	-
Big War Creek at Luther, TN (03527800)	Lat 36°27'18", long 83°14'29", Hancock County, Hydrologic Unit 06010205, at bridge on county road, 0.4 mi south of Luther 0.8 mi northwest of Yount Town, 6.0 mi southwest of Sneedville. Drainage area is 22.3 mi <sup>2</sup> .	1986-99 2000-01	2-17-01	7.83	1,530	4-17-98	10.61	4,100
Crooked Creek near Maynard- ville, TN (03528390)	Lat 36°15'56", long 83°50'25", Union County, Hydrologic Unit 06010205, at culvert on State Highway 170, 2.5 mi northwest of Maynardville, 5.5 mi north- east of Paulette. Drainage area is 2.23 mi <sup>2</sup> .	1986-99 2000-01	7-30-01	3.31	260	4-17-98	9.76	1,400

See footnotes at the end of the table



## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN--Continued								
Coal Creek at Lake City, TN (03534000)	Lat 36°13'14", long 84°09'27" Anderson County, Hydrologic Unit 06010207, at bridge on U.S. Highway 25-W, at Lake City. Datum of gage is 842.76 ft above sea level. Drainage area is 24.5 mi <sup>2</sup> .	1932-34†, 1955-99 2000-01	2-17-01	5.68	2,490	4-17-98	10.65	8,080
Willow Fork near Halls Cross- roads, TN (03535180)	Lat 36°05'59", long 83°54'27", Knox County, Hydrologic Unit 06010207, at culvert under Quarry Road, 1.7 mi northeast of Halls Crossroads. Datum of gage is 1,027.82 ft above sea level. Drainage area is 3.23 mi <sup>2</sup> .	1967-99 2000-01	2-17-01	5.97	161	4-17-98	8.40	990
Beaver Creek near Willow Fork at Halls Cross- roads, TN (035351830)	Lat 36°04'57", long 83°55'34", Knox County, Hydrologic Unit 06010207, at bridge on Old Andersonville Pike.	1998-99 2000-01	2-17-01	12.28	-	6-28-99	15.13	-
Beaver Creek at Brickyard Road near Powell, TN (03535195)	Lat 36°01'36", long 84°01'39", Knox County, Hydrologic Unit 06010207, at bridge on Brickyard Road, near Powell High School. Drainage area is 52.5 mi <sup>2</sup> .	1998-99 2000-01	2-17-01	10.53	-	6-28-99	10.94	-
Conner Creek at Steele Road near Solway, TN (03535617)	Lat 35°56'05", long 84°11'18" Knox County, Hydrologic Unit 06010201, at bridge on Steele road near Solway	2000-01	7-22-01	8.29	-	-	-	-
Coker Creek near Ironsburg, TN (03555900)	Lat 35°13'05", long 84°20'28", Monroe County, Hydrologic Unit 06020002, at bridge on State Highway 68, 4.2 mi southwest of Coker Creek. Drainage area is 22.4 mi <sup>2</sup> .	1983-93e 1997-99 2000-01	1-19-01	9.43	-	4-17-98	13.38	-
Wolftever Creek near Ooltewah, TN (03566420)	Lat 35°03'43", long 85°03'59", Hamilton County, Hydrologic Unit 06020001, on right downstream wingwall of county road bridge, 0.6 mi downstream from Southern Railway bridge, 0.9 mi south of Ooltewah, 1.6 mi upstream from Little Wolftever Creek, and at mi 16.1. Drainage area is 18.8 mi <sup>2</sup> .	1964-89†, 1992-99 2000-01	-	<5.17	-	3-16-73	9.75	7,300
North Chickamauga Creek at Greens Mill, near Hixson, TN (03566599)	Lat 35°10'30", long 85°13'40", Hamilton County, Hydrologic Unit 06020001, at bridge on Boy Scout Road, 2.3 mi north of Hixson. Drainage area is 99.5 mi <sup>2</sup> .	1925,1944, 1953-56, 1980-99 2000-01	1-19-01	31.73	-	10-5-95	36.19	-

See footnotes at the end of table.

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN--Continued								
Stringers Branch at Leawood Drive, at Red Bank, TN (03569168)	Lat 35°07'00", long 85°17'28", Hamilton County, Hydrologic Unit 06020001, at bridge on Leawood Drive at Red Bank. Drainage area is 1.54 mi <sup>2</sup> .	1980-99 2000-01	6-28-01	23.77	-	8-11-96	28.24	-
Little Sequatchie River at Sequatchie, TN (03571500)	Lat 35°07'47", long 85°35'10", Marion County, Hydrologic Unit 06020004, at Highway 27 bridge, 1.0 mi northeast of Sequatchie. Drainage area is 116 mi <sup>2</sup> .	1925,1929, 1930, 1932-34†, 1944, 1951-54, 1965,1979-99 2000-01	1-19-01	7.91	5,490	12-22-90	11.78	10,600
Standifer Branch at Jasper, TN (03571730)	Lat 35°04'22", long 85°36'56", Marion County, Hydrologic Unit 06020004, at bridge on U.S. Highways 41, 64, and 72, 0.6 mi east of courthouse, 0.8 mi above Town Creek, at Jasper. Drainage area is 15.3 mi <sup>2</sup> .	1982-99 2000-01	1-19-01	16.33	-	12-22-90	19.59	-
Battle Creek near Mont- eagle, TN (03571800)	Lat 35°08'03", long 85°46'15", Marion County, Hydrologic Unit 06030001, at bridge on former U.S. Highways 41 and 64, 9.2 mi southeast of Monteagle. Datum of gage is 621.51 ft above sea level. Drainage area is 50.4 mi <sup>2</sup> .	1955-99 2000-01	-	<7.62	-	3-12-63	12.20	10,200
Richland Creek near Corners- ville, TN (03583300)	Lat 35°19'10", long 86°52'20", Marshall County, Hydrologic Unit 06030004, at bridge on U.S. Highway 31-A, 3.4 mi southwest of Corners- ville. Datum of gage is 754.28 ft above sea level. Drainage area is 47.5 mi <sup>2</sup> .	1962-68†, 1969-99 2000-01	2-16-01	12.79	5,420	7-11-89	16.58	11,400
Indian Creek near Olivehill, TN (03594153)	Lat 35°16'33", long 88°01'12", Hardin County, Hydrologic Unit 06040001, on State High- way 64, 14 mi east of Savannah. Datum of gage is 440.00 ft above sea level. Drainage area is 158 mi <sup>2</sup> .	1997-99 2000-01	2-16-01	14.38	-	1-22-99	17.06	-
Owl Creek at Lexington, TN (035944242)	Lat 35°38'26", long 88°22'13", Henderson County, Hydrologic Unit 06040001, on State High- way 20, 1.37 mi east of Lexington, and at mi 1.3. Datum of gage is 400.00 ft above sea level, prior to March 15, 1990 unknown. Drainage area is 2.50 mi <sup>2</sup> .	1984-99 2000-01	6-01-01	22.35	-	3-2-97	26.64	-
Wartrace Creek above Bell Buckle, TN (03597300)	Lat 35°37'45", long 86°21'22", Bedford County, Hydrologic Unit 06040002, at culvert under county road, 2.7 mi north of Bell Buckle. Drain- age area is 4.99 mi <sup>2</sup> .	1966-99 2000-01	2-16-01	4.38	268	3-15-73	12.64	3,220

See footnotes at the end of the table.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN--Continued								
Fountain Creek near Culleoka, TN (03599430)	Lat 35°28'18", long 86°57'23", Maury County, Hydrologic Unit 0604002, on upstream side of bridge on State High- way 50-A, 1.6 mi southeast of Culleoka. 2.7 mi upstream from Globe Creek, and 9.7 mi west of courthouse in Lewisburg. Drainage area is 26.9 mi <sup>2</sup> .	1966-68†, 1997-99 2000-01	2-16-01	10.39	3,950	5-13-67	14.16	9,280
West Piney River at Hwy 70 near Dickson, TN (03602170)	Lat 36°05'21", long 87°28'12", Dickson County, Hydrologic Unit 06040003, at U.S. Highway 70 bridge, 4.0 mi west of Dickson. Drainage area is 2.16 mi <sup>2</sup>	1984-99 2000-01	2-14-01	23.94	-	5- 6-84	28.17	1,230
Coon Creek above Chop Hollow, near Hohen- wald, TN (03604090)	Lat 35°35'19", long 87°41'09", Perry County, Hydrologic Unit 06040004, at bridge on State Highway 20, 9.0 mi northwest of Hohenwald. Drainage area is 6.02 mi <sup>2</sup> .	1967-99 2000-01	2-16-01	3.89	384	12- 9-72	6.80	3,150
Blue Creek near New Hope, TN (03604580)	Lat 36°03'52", long 87°38'58", Humphreys County, Hydrologic Unit 06040003, at county road bridge, 1.8 mi north- west of New Hope, 3.1 mi southeast of McEwen, and at mi 3.9. Drainage area is 13.2 mi <sup>2</sup> .	1984-99 2000-01	-	<17.04	-	6-13-89	18.82	-
Trace Creek above Denver, TN (03605555)	Lat 36°03'08", long 87°54'27", Humphreys County, Hydrologic Unit 06040005, on left bank at bridge on U.S. Highway 70, 1.0 mi northeast of New Johnson- ville. Datum of gage is 377.05 ft above sea level. Drainage area is 31.9 mi <sup>2</sup> .	1963-88†, 1989-99 2000-01	-	<7.28	-	5- 6-84	13.61	11,700
Cane Creek at Stewart, TN (03605880)	Lat 36°19'09", long 87°50'21", Houston County, Hydrologic Unit 06040005, at bridge on county road, 200 ft north of intersection of county road and State Highway 147, and at mi 7.0. Drainage area is 4.12 mi <sup>2</sup> .	1984-99 2000-01	2-14-01	17.02	-	2- 4-97	19.62	-

See footnotes at the end of table.

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
OBION RIVER BASIN								
Neil Ditch near Henry, TN (07024225)	Lat 36°10'19", long 88°23'33", Henry County, Hydrologic Unit 08010203, located on county road, 2.7 mi southeast of Henry, 1.6 mi north of Henry-Carroll county line. Drainage area is 4.07 mi <sup>2</sup> .	1984-99 2000-01	-	<7.63	-	12-21-90	14.48	-
Little Reedy Creek near Huntingdon, TN (07024370)	Lat 35°55'44", long 88°29'50", Carroll County, Hydrologic Unit 08010203, located on U.S. Highway 70, 0.6 mi southwest of Leach, 5.6 mi northeast of Cedar Grove. Drainage area is 0.91 mi <sup>2</sup> .	1984-99 2000-01	-	<13.30	-	3- 2-97	16.88	-
South Fork Obion River near Greenfield, TN (07024500)	Lat 36°07'05", long 88°48'39", Weakley County, Hydrologic unit 08010203, located on U.S. Highway 45E, 2.5 mi south of Greenfield. Datum of gage is 300.36 ft above sea level. Drainage area is 383 mi <sup>2</sup> .	1929-89†, 1990-93, 1997-99 2000-01	2-16-01	12.43	3,330	1-22-37	17.82	25,600
Spring Creek near Greenfield, TN (07024760)	Lat 36°11'24", long 88°45'53", Weakley County, Hydrologic Unit 08010203, on State Highway 54, 3.2 mi northeast of Greenfield. Datum of gage is 300.00 ft above sea level. Drainage area is 93.4 mi <sup>2</sup> .	1997-99 2000-01	2-16-01	25.19	-	3- 2-97	28.03	-
North Fork Obion River near Martin, TN (07025400)	Lat 36°24'20", long 88°51'20", Weakley County, Hydrologic Unit 08010203, located on U.S. Highway 45E, 4.0 mi north of Martin. Datum of gage is 303.46 ft above sea level. Drainage area 372 mi <sup>2</sup> .	1939-67f 1997-99 2000-01	2-16-01	19.17	10,600	11-19-57	23.05	30,300
North Fork Obion River near Union City, TN (07025500)	Lat 36°23'59", long 88°59'43", Obion County, Hydrologic Unit 08010202, at bridge on State Highway 22, 3.9 miles southeast of Union City. Datum of gage is 285.80 ft above sea level. Drainage area is 480 mi <sup>2</sup> .	1929-66†, 1967-71†, 1989-93†, 1994-99 2000-01	2-16-01	18.47	10,700	1-22-37	23.08	49,200
North Fork Forked Deer River at U.S. Highway 45W Bypass at Trenton, TN (07028505)	Lat 35°58'58", long 88°55'49", Gibson County, Hydrologic Unit 08010204, at bridge on U.S. Highway 45W Bypass, 0.25 mi north of intersection of U.S. Highway 45W Bypass and State Highways 77 and 104 in Trenton. Datum of gage is 306.85 ft above sea level. Drainage area is 73.9 mi <sup>2</sup> .	1987-99 2000-01	12-16-01	6.01	-	12-21-90	12.00	-
Lewis Creek near Dyersburg, TN (07029090)	Lat 36°03'14", long 89°21'42", Dyer County, Hydrologic Unit 08010204, at bridge on U.S. Highway 51 (Business Route), 2.1 mi northeast of square in Dyersburg. Datum of gage is 276.52 ft above sea level. Drainage area is 25.5 mi <sup>2</sup> .	1955-78, 1980-83, 1985-99 2000-01	2-16-01	15.40	1,350	3- 9-64	19.31	5,450

See footnotes at the end of table.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2001 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
OBION RIVER BASIN--Continued								
Hatchie River at Sunnyhill, TN (07029900)	Lat 35°31'23", long 89°15'12", Haywood County, Hydrologic Unit 08010208, at bridge on State Highway 76, 0.6 mi south of Sunnyhill, 4.9 mi south of Brownsville. Drainage area is 1,858 mi <sup>2</sup> .	1997-99 2000-01	2-18-01	30.87	-	3-5-97	34.21	-
Cane Creek at Ripley, TN (07030100)	Lat 35°45'25", long 89°33'05", Lauderdale County, Hydrologic Unit 08010208, at bridge on State Highway 19, 1.3 mi upstream from Hyde Creek, 1.5 mi northwest of Ripley. Datum of gage is 295.93 ft above sea level. Drainage area is 33.9 mi <sup>2</sup> .	1957-62†, 1963-70, 1986-88†, 1989-99 2000-01	2-16-01	14.99	1,920	7- 1-89	23.16	6,360

† Operated as a continuous-record gaging station.

a A gage height of 17.45 ft occurred on 3-23-29.

b Operated as a flood hydrograph station.

c Revised.

d Gage destroyed.

e A peak discharge of 11,000 ft<sup>3</sup>/s occurred on 5-30-27, from reports of Tennessee Valley Authority.

f Datum of gage prior to 1995 water year unknown due to bridge replacement.

g Data provided by U.S. Army Corps of Engineers.



## Miscellaneous Sites

Measurements of streamflow at points other than gaging stations are given in the following table. Measurements of base flow are designated by an asterisk (\*); measurements of peak flow by a dagger(†).

Discharge measurements made at miscellaneous sites during water year 2001

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN						
03600085 Carters Creek	Duck River to Tennessee River	Lat 35°43'39", long 86°59'19", Maury County, Hydrologic Unit 06040003, at bridge on Petty Lane, 0.8 mi north of Carters Creek, and at mile 4.7.	16.6	1986-99 2000	2-13-01 5-30-01 8- 7-01	28.6 8.08 1.77
03600086 Carters Creek Tributary	Carters Creek to Duck River to Tennessee River	Lat 35°43'34", long 86°59'19", Maury County, Hydrologic Unit 06040003, at culvert on Carters Creek Road, 0.7 mi north of Carters Creek.	2.94	1986-99 2000	2-13-01 2- 7-00 7- 6-00 8-15-00	5.62 1.24 1.70 .10
03594153 Indian Creek	Tennessee River	Lat 35°16'33", long 88°01'12", Hardin County, Hydrologic Unit 06040001, at bridge on U.S. Hwy 64, .75 mi east of Olivehill, 14 mi east of Savannah.	158		5- 9-01 6-12-01 7-24-01	*152 *182 *62.8
LOWER MISSISSIPPI RIVER BASIN						
07027780 Nixon Creek	South Fork Forked Deer to Mississippi River	Lat 35°16'33", long 88°01'12", Haywood County, Hydrologic Unit 08010205, at bridge on Rudolf Road 2.2 mi from confluence with South Fork Forked Deer River.			4-24-01 8- 7-01	51.5 *0.98
07027900 Black Creek	South Fork Forked Deer to Mississippi River	Lat 35°48'57", long 89°19'15", Crockett County, Hydrologic Unit 08010205, at bridge on State Hwy 88, 3.2 mi south of Chestnut Bluff.	27.3	1958-61 1963	4-24-01	*6.41
07028000 South Fork Forked Deer River	Mississippi River	Lat 35°51'43", long 89°20'52", Lauderdale County, Hydrologic Unit 08010205, at bridge on Espy Park Rd., 3 mi southeast of Halls and 1 mi downstream of confluence of Black Creek at South Fork Forked Deer River.	1003	1930-57	4-24-01 8- 7-01 7-24-01	562 *227 *62.8

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Miscellaneous Sites--Continued

Discharge measurements made at miscellaneous sites during water year 2001

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
WOLF RIVER BASIN						
07031660 Wolf River	Mississippi River	Lat 35°07'58", long 89°51'18", Shelby County, Hydrologic Unit 08010210, at bridge on Walnt Grove Road at Memphis.	709	1986-90†	8-29-01	*209
07031675 Wolf River	Mississippi River	Lat 35°10'22", long 89°53'54", Shelby County, Hydrologic Unit 08010210, at bridge on Covington Pike at Memphis.			8-29-01	*203
07031718 Wolf River	Mississippi River	Lat 35°11'14", long 89°56'37", Shelby County, Hydrologic Unit 08010210, at bridge on North Highland Street at Memphis.			8-29-01	*199

† Operated as continuous record station.

## TENNESSEE RIVER BASIN

Hamilton county, TN special study

A series of low-flow discharge measurements were made October 12, 2000 and April 26, 2001, in the vicinity of Chattanooga, TN (Hamilton county), to define areas of potential ground-water supplies, low-flow hydrology and quality of water. The measurements were made during a period of constant base flow.

Stream	Tributary to	Location	Date	Drainage area (mi <sup>2</sup> )	Measured discharge (ft <sup>3</sup> /2 sec.)	Water temp. (C°)	Specific cond. (us/cm)
TENNESSEE RIVER BASIN							
03566511 North Chickamauga Creek	Tennessee River	Lat 35°15'11", long 85°16'53", Hamilton County, Hydrologic Unit 0602001, 0.1 mi above 0.1 mi above Cain Creek, 0.7 mi northwest of Boston Branch Lake, and at river mile 24.2.	10-12-00 4-26-01	19.89	0.67 11.9	8.8 12.0	65 41
035665115 Cain Creek	North Chickamauga River to Tennessee River	Lat 35°15'24", long 85°17'05", Hamilton County, Hydrologic Unit 0602001, 3.0 mi southeast of Steward Camp, 1.0 mi northwest of Bost Branch Lake.	10-12-00 4-26-01	21.80	0.26 13.2	9.2 12.0	19 15
03566512 North Chickamauga Creek	Tennessee River	Lat 35°16'02", long 85°15'54", Hamilton County, Hydrologic Unit 06020001, 3.4 mi southeast of Steward Camp, 2.7 mi west of Mowbray, and at river mile 22.6.	10-12-00 4-26-01	43.14	0.75 24.5	9.3 -	49 39
035665125 Cooper Creek	North Chickamauga River to Tennessee River	Lat 35°16'06", long 85°15'53" Hamilton County, Hydrologic Unit 06020001, 3.4 mi southeast of Steward Camp, 2.6 mi west of Mowbray.	10-12-00 4-26-01	8.47	0.02 4.39	10.9 -	28 30
03566513 Stevenson Branch	North Chickamauga River to Tennessee River	Lat 35°16'03", long 85°15'49", Hamilton County, Hydrologic Unit 06020001, 3.5 mi southeast of Steward Camp, 2.6 mi west of Mowbray.	10-12-00 4-26-01	1.28	0.02 0.5	9.7 -	46 44
03566514 North Chickamauga Creek	Tennessee River	Lat 35°15'48", long 85°15'14", Hamilton County, Hydrologic Unit 06020001, 2.4 mi southwest of Mowbray, and at river mile 21.9.	10-12-00 4-26-01	53.16	0.77 32.3	8.9 -	47 38
03566515 Boston Branch	North Chickamauga River to Tennessee River	Lat 35°14'54", long 85°15'25", Hamilton County, Hydrologic Unit 06020001, 1.1 mi east of Boston Branch Lake, 2.8 mi southwest of Mowbray.	10-12-00 4-26-01	1.37	-- 1.48	-- -	-- -
03566516 North Chickamauga Creek	Tennessee River	Lat 35°14'54", long 85°15'24", Hamilton County, Hydrologic Unit 06020001, 1.1 mi east of Boston Branch Lake, and at river mile 20.7.	10-12-00 4-26-01	58.43	1.09 33.3	10.0 12.0	42 26

TENNESSEE RIVER BASIN  
Hamilton county, TN special study--continued

Stream	Tributary to	Location	Date	Drainage area (mi <sup>2</sup> )	Measured discharge (ft <sup>3</sup> /2 sec.)	Water temp. (C°)	Specific cond. (us/ cm)
TENNESSEE RIVER BASIN--continued							
03566518 Unnamed Tributary	North Chickamauga River to Tennessee River	Lat 35°14'50", long 85°14'59" Hamilton County, Hydrologic Unit 06020001, 1.4 mi west of Moutlake, 1.6 mi northwest of Mile Straight.	10-12-00 4-26-01	0.25	0 0.1	-- -	-- -
03566520 North Chickamauga Creek	Tennessee River	Lat 35°14'49", long 85°14'55", Hamilton County, Hydrologic Unit 06020001, 1.4 mi west of Montlake, 2.6 mi northwest of Mile Straight, and at river mile 20.2.	10-12-00 4-26-01	58.96	1.83 30.7	8.5 12.0	40 25
03566522 North Chickamauga Creek	Tennessee River	Lat 35°14'54", long 85°14'21" Hamilton County, Hydrologic Unit 06020001, 0.9 mi north- west of Montlake, 2.4 mi north of Mile Straight, and at river mile 19.6.	10-12-00 4-26-01	59.59	1.2 35.6	9.5 12.0	43 26
03566524 North Chickamauga Creek	Tennessee River	Lat 35°14'33, long 85°14'12", Hamilton County, Hydrologic Unit 06020001, 0.6 mi west of Montlake, 2.0 mi north of Mile Straight, and at river mile 19.1.	10-12-00 4-26-01	60.21	2.02 45.8	9.0 12.8	67 35
03566525 North Chickamauga Creek	Tennessee River	Lat 35°14'18", long 85°14'05", Hamilton County, Hydrologic Unit 06020001, 0.6 mi west of Montlake, 1.7 mi north of Mile Straight, and at river mile 18.8.	10-12-00 4-26-01	60.55	- 56.3	- 12.3	- 34
03566528 North Chickamauga Creek	Tennessee River	Lat 35°14'10", long 85°14'03", Hamilton County, Hydrologic Unit 06020001, 0.6 mi south- west of Montlake, 1.6 mi north of Mile Straight, and at river mile 18.6.	10-12-00 4-26-01	60.99	1.19 40.8	10.0 12.1	65 29
03566530 North Chickamauga Creek	Tennessee River	Lat 35°13'20", long 85°13'16", Hamilton County, Hydrologic Unit, 06020001, between Mile Straight and Daisy at Dayton Pike bridge crossing.	10-12-00 4-26-01	62.63a	0 34.4	- 11.7	- 32
0356653019 North Chickamauga Creek	Tennessee River	Lat 35°12'52", long 85°12'58", Hamilton County, Hydrologic Unit 06020001, at U.S. Highway 27 bridge crossing, 2.6 mi southwest of Daisy.	10-12-00 4-26-01	63.61	0 17.1	- 14.5	- 31

TENNESSEE RIVER BASIN  
Hamilton county, TN special study--continued

Stream	Tributary to	Location	Date	Drainage area (mi <sup>2</sup> )	Measured discharge (ft <sup>3</sup> /2 sec.)	Water temp. (C°)	Specific cond. (us/ cm)
TENNESSEE RIVER BASIN--continued							
035665348 Poe Branch	North Chickamauga Creek to Tennessee River	Lat 35°12'48", long 85°12'52", Hamilton County, Hydrologic Unit 06020001, 0.8 mi east of Mile Straight, 2.4 mi northwest of Middle Valley.	10-12-00 4-26-01	9.81a	0 1.26	- 14.7	- 127
03566535 North Chickamauga Creek	Tennessee River	Lat 35°12'40", long 85°12'55", Hamilton County, Hydrologic Unit 06020001, at Thrasher Pike, 2 mi upstream from Falling Water Creek, and 3 mi southwest of Daisy.	10-12-00 4-26-01	74.0	0 20.3	- 11.8	- 38
03566543 Falling Water Creek	North Chickamauga Creek to Tennessee River	Lat 35°11'39", long, 85°14'36", Hamilton County, Hydrologic Unit 06020001, at bridge on Dayton Pike, at Falling Water.	10-12-00 4-26-01	13.3	- 14.8	- 11.1	- 103

a Revised



## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

Miscellaneous synoptic sampling sites are short-term sites at which water-quality data are collected during a selected seasonal or hydrologic period. These data are used to assess the spatial distribution of water-quality conditions as a result of factors, such as land use, for the period and conditions sampled. The sites shown on the following pages are synoptic sampling sites for the National Water-Quality Assessment (NAWQA) Program.

## TENNESSEE RIVER BASIN

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

## 03585263 -- EAST FORK SUGAR CREEK AT PEACH, TN

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY 02...	1330	58	98	8.2	19.0	750	1.6	10.2	112	30	45.6	3	14.4
AUG 21...	1230	40	125	8.1	22.5	752	1.7	7.3	85.5	28	59.4	5	19.0
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAY 02...	2.36	.9	4.07	.058	.72	52	42	2.5	1.8	<.2	5.9	58	56.0
AUG 21...	2.89	.9	3.05	.049	.74	66	54	2.0	1.6	<.2	7.1	73	68.0
DATE		SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	
MAY 02...	.1	<.006	.397	<.041	<.1	<.1	.033	.030	.025	10	5.8		
AUG 21...	.1	<.006	.265	<.040	<.10	<.1	.043	.036	.028	<10	5.6		

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

295

## TENNESSEE RIVER BASIN--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

## 03588260 -- KNOB CREEK NEAR WESTPOINT, TN

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	E COLI, MTEC MF (COL/ 100 ML) (31633)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY 02...	1000	47	114	7.9	18.0	752	1.9	8.5	91.0	30	53.0	4	17.6
AUG 21...	1515	23	142	8.0	25.5	752	1.7	7.9	97.9	150	69.4	7	23.3
DATE	TIME	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAY 02...	2.21	1.1	4.23	.066	1.04	60	49	2.9	2.3	<.2	5.2	76	63.9
AUG 21...	2.74	1.0	2.98	.052	1.32	76	62	2.3	2.1	<.2	6.8	84	78.3
DATE	TIME	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA + ORGANIC DIS. TOTAL (MG/L AS N) (00623)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, PHOS-PHORUS TOTAL (MG/L AS P) (00600)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAY 02...		.1	<.006	.457	<.041	<.1	.09	.542	.017	.013	<.018	<10	14.6
AUG 21...		.1	<.006	.307	<.040	<.1	<.1	--	.028	.024	.018	<10	9.3

## 035941395 -- INDIAN CREEK AT THREE CHURCHES, TN

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	E COLI, MTEC MF (COL/ 100 ML) (31633)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY 01...	1130	43	94	7.9	17.0	753	.6	10.8	113	K15	42.6	6	13.8
AUG 22...	1030	16	126	7.6	22.5	753	.7	7.6	88.9	K20	61.0	9	20.0
DATE	TIME	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAY 01...	1.97	1.2	5.48	.077	.70	44	36	5.3	1.9	<.2	5.9	59	53.5
AUG 22...	2.69	1.3	4.37	.072	.80	63	53	4.2	1.7	<.2	8.2	78	70.6

K--Results based on non-ideal colony count.

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

## TENNESSEE RIVER BASIN--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

## 035941395 -- INDIAN CREEK AT THREE CHURCHES, TN--Continued

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAY 01...	.1	<.006	.217	<.041	<.10	.08	.301	.022	.020	<.02	<10	<3.2
AUG 22...	.1	<.006	.172	<.040	<.10	<.1	--	.026	.025	.021	<10	<3.2

## 03594180 -- HARDIN CREEK AT CLIFTON JUNCTION, TN

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00301)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
MAY 01...	1630	31	155	8.1	20.0	753	.6	10.0	111	K9	72.8	9	25.2
AUG 22...	1300	16	183	7.9	25.5	755	.8	8.0	98.8	57	90.8	12	31.6

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (MG/L AS K) (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CAC03 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	
MAY 01...	2.38	1.4	3.95	.071	1.01	78	64	8.9	2.6	<.2	6.3	91	87.1
AUG 22...	2.89	1.3	3.02	.060	1.09	96	80	6.6	2.3	<.2	8.0	110	102

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAY 01...	.1	<.006	.243	<.041	<.10	.12	.358	.024	.024	.019	<10	4.1
AUG 22...	.1	<.006	.234	<.040	<.10	.16	.394	.028	.025	.023	<10	3.6

## 03594263 -- BEECH CREEK NEAR TURNBO HOLLOW NEAR CLIFTON, TN

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00301)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
MAY 01...	1430	23	194	8.0	19.0	756	1.8	9.5	103	K6	94.7	4	34.1
AUG 22...	1600	13	219	7.8	24.0	757	.8	7.9	94.6	76	110	15	39.8

K--Results based on non-ideal colony count.

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

297

## TENNESSEE RIVER BASIN--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

## 03594263 -- BEECH CREEK NEAR TURNBO HOLLOW NEAR CLIFTON, TN--Continued

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	
MAY 01...	2.31	1.4	3.13	.064	.78	110	90	8.9	2.3	<.2	6.7	114	111
AUG 22...	2.57	1.5	2.91	.064	.97	116	95	6.8	1.8	<.2	8.6	131	120

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTH, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAY 01...	.2	<.006	.092	<.041	<.10	<.1	--	.028	.030	.019	<10	7.0
AUG 22...	.2	<.006	.156	<.040	<.10	.08	.240	.041	.039	.032	<10	4.2

## 03601684 -- LICK CREEK ABOVE LITTLELOT, TN

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- DITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT WATER SATUR- ATION) (00301)	E COLI, MTEC MF (COL/ 100 ML) (31633)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
MAY 03...	1130	40	208	8.2	18.6	756	1.4	9.1	98.2	45	104	3	32.1
AUG 20...	1330	23	232	8.1	24.5	752	1.4	7.8	95.3	K52	117	10	36.0

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00932) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	
MAY 03...	5.82	1.3	2.67	.057	.82	123	101	5.8	2.4	<.2	4.7	120	114
AUG 20...	6.63	1.2	2.21	.049	1.00	131	107	4.6	1.9	<.2	8.1	131	124

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTH, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAY 03...	.2	<.006	.206	<.041	<.10	.14	.343	.035	.029	.021	<10	9.9
AUG 20...	.2	<.006	.115	<.040	<.1	.11	.228	.050	.038	.028	<10	11.8

K--Results based on non-ideal colony count.



## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

## TENNESSEE RIVER BASIN--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

## 03603693 -- LITTLE BUFFALO RIVER NEAR HOHENWALD, TN

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY 02...	1700	74	65	8.0	22.0	747	2.7	7.6	88.8	20	28.4	1	8.82
AUG 21...	0900	48	79	7.5	21.5	750	2.4	6.7	76.9	K35	35.5	3	11.1

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAY 02...	1.55	.9	6.24	.073	.68	33	27	2.3	1.5	<.2	4.8	37	37.7
AUG 21...	1.91	.8	4.59	.059	.88	39	32	1.8	1.5	<.2	6.4	53	44.8

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAY 02...	.1	<.006	.185	<.041	<.1	.17	.359	.013	.007	<.018	40	13.4
AUG 21...	.1	<.006	.226	<.040	.10	.15	.372	.020	.007	<.020	110	24.8

## 03604200 -- CANE CREEK AT FARMERS EXCHANGE, TN

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY 03...	0800	37	109	7.8	16.0	756	1.8	8.7	88.9	41	50.3	4	16.9
AUG 20...	1630	27	122	8.0	23.5	752	1.2	6.7	80.5	K6	56.6	4	19.1

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAY 03...	1.98	1.5	5.92	.091	.68	56	46	4.1	1.9	<.2	6.3	69	61.7
AUG 20...	2.14	1.3	4.65	.075	.82	64	53	3.2	1.7	<.2	7.4	73	67.7

K--Results based on non-ideal colony count.



## TENNESSEE RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

03604200 -- CANE CREEK AT FARMERS EXCHANGE, TN--Continued

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAY 03...	.1	<.006	.180	<.041	<.10	.08	.261	.014	.015	<.020	<10	6.4
AUG 20...	.1	<.006	.117	<.040	<.1	<.1	--	.021	.016	<.020	<10	<3.2

03605710 -- BIG RICHLAND CREEK NEAR WAVERLY, TN

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM HG) (00025)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT WATER SATUR- ATION) (00301)	E COLI, MTEC MF (COL/ 100 ML) (31633)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
MAY 03...	1500	20	209	8.2	20.5	757	.9	10.5	118	K8	102	3	33.9
AUG 23...	0800	7.2	269	7.9	23.0	755	.9	6.2	73.1	39	136	6	45.5

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
MAY 03...	4.13	2.2	4.49	.096	.88	120	98	4.1	3.7	<.2	6.6	123	116
AUG 23...	5.47	2.1	3.22	.078	.92	159	130	2.8	3.0	<.2	8.7	147	148

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAY 03...	.2	<.006	.331	<.041	<.10	<.1	.012	.010	<.020	<10	4.7
AUG 23...	.2	<.006	.251	<.040	<.10	<.1	.012	.009	<.020	<10	<3.2

K--Results based on non-ideal colony count.

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
CUMBERLAND RIVER BASIN									
03408500 NEW RIVER AT NEW RIVER, TN									
OCT 2000					JUL 2001				
10...	1400	.82	393	16.5	31...	1535	631	55	22.5
12...	1220	.57	387	15.5	SEP				
APR 2001					27...	1420	70	325	17.0
11...	1415	359	204	19.0					
JUN									
11...	1410	166	352	24.0					
03409500 CLEAR FORK NEAR ROBBINS, TN									
OCT 2000					JUL 2001				
10...	1130	3.9	78	13.5	31...	1300	205	101	24.0
APR 2001					SEP				
11...	1200	196	57	18.0	27...	1310	28	80	18.0
JUN									
11...	1125	62	73	22.5					
03410210 SOUTH FORK CUMBERLAND RIVER AT LEATHERWOOD FORD, TN									
MAY 2001					SEP 2001				
30...	1155	255	195	21.0	11...	0940	68	244	24.5
03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, TN									
OCT 2000					MAY 2001				
18...	0820	8.4	360	15.5	15...	1320	74	180	18.5
DEC					JUL				
06...	1155	19	212	5.0	24...	1145	14	316	25.5
JAN 2001					AUG				
10...	1600	50	206	4.5	20...	1435	46	296	27.5
MAR									
15...	1100	268	148	9.0					
03421000 COLLINS RIVER NEAR MCMINNVILLE, TN									
OCT 2000					MAY 2001				
16...	1545	105	299	16.5	14...	1600	470	217	18.5
DEC					JUL				
06...	1550	241	126	5.0	23...	1600	126	279	28.0
JAN 2001					SEP				
11...	1230	329	235	3.5	05...	1420	261	258	22.0
MAR									
14...	1205	1340	181	12.0					
03424730 SMITH FORK AT TEMPERANCE HALL, TN									
OCT 2000					MAY 2001				
18...	1630	12	277	19.0	14...	1100	53	314	20.5
DEC					JUL				
04...	1140	32	275	5.0	23...	1330	17	278	31.5
JAN 2001					SEP				
17...	1605	46	300	5.5	05...	0830	27	273	24.5
MAR									
14...	1515	137	295	13.0					

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001--Continued

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
CUMBERLAND RIVER BASIN--Continued									
03426385 MANSKER CREEK ABOVE GOODLETTSVILLE, TN									
OCT 2000					MAY 2001				
17...	1015	1.2	493	17.0	15...	1130	7.3	391	22.0
NOV					JUL				
27...	1130	16	518	9.0	16...	1200	3.1	500	24.0
JAN 2001					AUG				
11...	1000	4.7	508	<.5	27...	1430	3.3	448	27.5
FEB									
26...	1300	108	318	11.0					
03426470 DRY CREEK NEAR EDENWOLD, TN									
OCT 2000					MAR 2001				
17...	1145	.15	647	18.0	15...	1415	1.0	568	22.0
NOV					JUL				
27...	1330	2.7	635	12.0	16...	1120	.26	580	23.0
JAN 2001					AUG				
11...	1230	1.1	569	3.0	27...	1245	.43	615	24.0
FEB									
15...	1230	173	325	12.0					
03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN									
OCT 2000					MAY 2001				
31...	1300	9.1	390	19.0	07...	1355	45	309	23.0
DEC					JUL				
07...	1245	29	428	5.0	24...	1530	12	275	30.5
JAN 2001					AUG				
16...	1215	82	394	6.5	27...	1143	13	373	26.5
MAR									
07...	1230	372	370	9.0					
03430147 STONERS CREEK NEAR HERMITAGE, TN									
NOV 2000					MAY 2001				
27...	1600	11	557	10.5	09...	1215	12	390	19.0
JAN 2001					JUL				
11...	1510	3.2	487	4.0	24...	0730	.56	530	25.0
FEB					AUG				
26...	1520	90	361	13.5	29...	1430	.54	534	27.0
03430550 MILL CREEK NEAR NOLENSVILLE, TN									
OCT 2000					FEB 2001				
10...	0950	.36	709	11.0	27...	1000	146	405	8.5
NOV					28...	0830	106	417	9.0
30...	1230	12	562	8.0	JUL				
JAN 2001					13...	0855	1.7	557	23.5
11...	1400	7.4	350	2.5	31...	0730	3.1	575	25.5
					AUG				
					28...	1410	1.6	398	24.5

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001--Continued

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
CUMBERLAND RIVER BASIN--Continued									
03431060 MILL CREEK AT THOMPSON LANE NEAR WOODBINE, TN									
OCT 2000					JUL 2001				
18...	1045	1.2	450	17.5	17...	1335	13	449	25.0
NOV					AUG				
30...	1030	28	606	7.5	29...	1235	2.7	470	25.5
JAN 2001					SEP				
17...	0930	28	541	5.0	05...	1300	3.8	450	29.0
FEB					18...	1135	1.7	460	21.5
28...	1000	215	453	10.0					
MAY									
09...	0850	51	371	18.5					
03431300 BROWNS CREEK AT STATE FAIRGROUNDS AT NASHVILLE, TN									
FEB 2001					JUL 2001				
15...	1515	488	293	13.5	19...	1033	1.5	592	25.0
15...	1610	357	331	13.5	AUG				
16...	1515	808	267	10.0	27...	0945	2.8	515	22.5
16...	1610	648	281	11.0					
MAY									
09...	1430	7.3	450	20.5					
034315005 CUMBERLAND RIVER AT WOODLAND STREET AT NASHVILLE, TN									
NOV 2000									
22...	1036	11700	220	10.5					
03431599 WHITES CREEK NEAR BORDEAUX, TN									
OCT 2000					MAY 2001				
25...	1100	1.6	563	18.5	10...	1025	15	468	18.5
NOV					JUL				
27...	0925	23	546	8.0	16...	0930	.77	498	21.0
JAN 2001					AUG				
17...	1145	11	532	5.0	29...	1010	1.7	267	23.5
FEB									
26...	1020	225	335	9.5					
03431700 RICHLAND CREEK AT CHARLOTTE AVENUE AT NASHVILLE, TN									
OCT 2000					MAY 2001				
25...	1330	1.6	478	19.0	09...	1035	41	250	18.5
DEC					JUL				
07...	1050	5.7	528	5.5	17...	1420	1.9	470	24.5
JAN 2001					AUG				
16...	1430	7.0	530	8.0	30...	0755	2.6	475	23.0
MAR									
01...	1225	46	500	11.5					
03432350 HARPETH RIVER AT FRANKLIN, TN									
OCT 2000					APR 2001				
02...	1109	2.4	428	19.0	30...	0939	46	396	18.5
31...	1030	2.2	280	18.0	JUN				
NOV					27...	1335	28	442	21.5
06...	0645	3.6	454	15.5	JUL				
28...	1600	97	468	9.0	27...	0844	6.3	638	25.5
JAN 2001					AUG				
17...	1135	59	418	5.5	28...	1032	17	365	28.0
MAR									
06...	1305	430	302	8.0					

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001--Continued

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
CUMBERLAND RIVER BASIN--Continued									
034323531 HARPETH RIVER TRIBUTARY AT MACK HATCHER PARKWAY									
DEC 2000					JUL 2001				
28...	1035	.44	621	11.5	02...	0850	.46	521	20.5
JAN 2001					27...	1315	.09	812	24.0
17...	1104	.11	649	7.5	AUG				
FEB					27...	1556	1.5	429	23.0
15...	1540	46	322	13.5					
MAY									
07...	1252	.09	565	19.5					
03432387 SOUTH PRONG SPENCER CREEK NEAR FRANKLIN, TN									
OCT 2000					MAY 2001				
02...	1046	.12	754	19.0	07...	1411	.36	695	19.5
NOV					JUL				
28...	0905	.85	724	10.0	02...	1235	.81	530	20.5
JAN 2001					27...	0840	.31	563	23.0
17...	0933	.54	607	7.0	AUG				
FEB					28...	0858	2.1	592	21.5
15...	1005	32	352	12.0					
03432390 SPENCER CREEK NEAR FRANKLIN, TN									
OCT 2000					APR 2001				
02...	1500	2.7	742	20.5	30...	1405	4.0	604	19.0
NOV					JUL				
02...	1340	1.4	708	19.0	02...	1015	4.1	671	21.5
28...	1235	7.6	562	11.0	AUG				
JAN 2001					28...	1520	8.5	623	23.0
17...	1515	2.8	743	7.5					
FEB									
26...	1427	56	662	13.5					
03432400 HARPETH RIVER BELOW FRANKLIN, TN									
OCT 2000					APR 2001				
02...	1415	12	600	21.5	30...	1211	61	447	19.0
NOV					JUN				
28...	1430	127	509	10.5	27...	1335	48	520	22.0
JAN 2001					JUL				
17...	1418	81	471	7.0	27...	1033	28	766	25.0
MAR					AUG				
06...	1435	488	356	9.0	28...	1302	44	510	24.0
03433500 HARPETH RIVER AT BELLEVUE, TN									
OCT 2000					MAY 2001				
16...	1200	14	408	16.0	10...	1230	128	370	21.0
DEC					JUL				
04...	1355	98	517	5.0	13...	1100	52	277	26.5
JAN 2001					AUG				
16...	1240	140	426	5.0	30...	0925	51	295	25.0
MAR									
15...	1120	401	370	12.5					



MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001--Continued

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
CUMBERLAND RIVER BASIN--Continued									
03434500 HARPETH RIVER NEAR KINGSTON SPRINGS, TN									
OCT 2000					MAY 2001				
16...	0930	56	335	16.0	16...	1215	164	362	25.5
DEC					JUL				
04...	1130	179	434	4.5	13...	1345	115	321	27.5
JAN 2001					AUG				
16...	1030	245	401	4.5	30...	0810	123	285	25.0
03435305 RED RIVER BELOW HIGHWAY 161 NEAR BARREN PLAIN, TN									
DEC 2000					MAY 2001				
06...	1015	54	508	2.5	10...	0935	482	376	18.5
JAN 2001					JUL				
10...	1145	96	486	2.0	17...	1300	95	461	24.0
FEB					AUG				
27...	1200	1700	352	11.5	29...	1445	48	471	27.0
03435970 MILLERS CREEK AT TURNERSVILLE, TN									
DEC 2000					JUL 2001				
06...	0850	1.8	456	2.5	19...	1620	2.3	424	24.5
JAN 2001					AUG				
10...	1635	2.3	425	4.0	29...	1025	1.2	447	23.5
FEB									
28...	0925	4.5	318	9.5					
MAY									
09...	1010	7.4	390	17.0					
03436100 RED RIVER AT PORT ROYAL, TN									
DEC 2000					MAY 2001				
05...	1510	111	478	4.0	09...	1805	621	361	23.0
JAN 2001					JUL				
10...	1410	190	482	1.5	17...	1530	170	457	27.0
FEB					AUG				
27...	1610	2990	344	11.5	29...	1350	118	432	27.0
TENNESSEE RIVER BASIN									
03455000 FRENCH BROAD RIVER NEAR NEWPORT, TN									
MAY 2001									
29...	1605	1480	70	20.5					
03461500 PIGEON RIVER AT NEWPORT, TN									
OCT 2000									
31...	1100	175	547	9.5					
03465500 NOLICHUCKY RIVER AT EMBREEVILLE, TN									
OCT 2000					JUN 2001				
17...	1230	298	104	15.0	21...	1610	335	102	27.5
23...	1345	268	112	17.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001--Continued

305

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
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TENNESSEE RIVER BASIN--Continued

03466208 BIG LIMESTONE CREEK NEAR LIMESTONE, TN

OCT 2000					APR 2001				
16...	1231	22	480	12.5	18...	1245	68	487	10.5
30...	1430	19	482	14.0	MAY				
NOV					08...	1130	40	480	16.5
21...	1400	13	470	4.5	31...	1400	34	480	18.0
DEC					JUL				
14...	1425	16	474	6.0	12...	1120	44	510	22.0
20...	1500	18	533	1.0	25...	1415	25	492	23.5
FEB 2001					AUG				
22...	1500	186	419	8.0	27...	1515	98	418	21.5
MAR					SEP				
06...	1322	96	511	5.5	11...	1515	83	467	19.5
27...	1400	86	486	9.5					

03469175 LITTLE PIGEON RIVER ABOVE SEVIERVILLE, TN

OCT 2000					AUG 2001				
11...	1110	41	135	7.5	24...	1055	96	100	23.0
11...	1409	23	359	11.5					
MAY 2001									
15...	0845	70	124	17.5					

03491000 BIG CREEK NEAR ROGERSVILLE, TN

OCT 2000					JUL 2001				
02...	1400	2.5	370	18.0	31...	1140	44	326	21.5
10...	1157	2.3	404	10.0					
MAY 2001									
24...	1000	41	229	15.0					

03491544 CROCKETT CREEK BELOW ROGERSVILLE, TN

OCT 2000					MAY 2001				
02...	1215	.54	533	15.5	10...	1125	1.2	519	16.5
DEC					JUL				
18...	1045	2.5	524	4.0	05...	1135	2.6	487	19.5

03497300 LITTLE RIVER ABOVE TOWNSEND, TN

OCT 2000					MAY 2001				
06...	1045	59	20	16.5	02...	1130	136	18	15.0
31...	1600	37	24	12.5	AUG				
MAR 2001					22...	1110	96	19	18.5
22...	1240	294	15	7.5					
APR									
25...	1210	106	18	18.0					

03498500 LITTLE RIVER NEAR MARYVILLE, TN

NOV 2000					AUG 2001				
01...	1155	60	158	15.0	23...	1040	1.6	111	22.0
FEB 2001					SEP				
08...	1450	261	118	7.5	18...	1020	120	125	18.0
APR									
10...	1155	413	94	18.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001--Continued

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
TENNESSEE RIVER BASIN--Continued									
03498850 LITTLE RIVER NEAR ALCOA, TN									
NOV 2000					AUG 2001				
01...	0900	53	186	13.0	23...	1315	144	134	23.5
FEB 2001					SEP				
08...	1155	251	136	6.5	18...	1245	122	158	19.0
MAR					28...	--	202	133	14.5
28...	1225	385	120	8.5					
JUN									
08...	1115	284	123	20.7					
03528000 CLINCH RIVER ABOVE TAZEWELL, TN									
OCT 2000					DEC 2000				
11...	1315	187	366	14.0	18...	1510	2120	390	5.0
03535400 BEAVER CREEK AT SOLWAY, TN									
OCT 2000					AUG 2001				
16...	1455	22	485	14.5	02...	1405	71	423	22.0
03538235 EAST FORK POPLAR CREEK AT BEAR CREEK ROAD AT OAK RIDGE, TN									
OCT 2000					FEB 2001				
02...	1645	4.7	394	23.0	05...	0950	11	332	11.0
JAN 2001					APR				
05...	1325	9.7	320	11.5	06...	1138	11	370	16.0
03538270 BEAR CREEK AT STATE HIGHWAY 95 NEAR OAK RIDGE, TN									
OCT 2000									
02...	1010	.92	416	15.0					
03539600 DADDYS CREEK NEAR HEBBERTSBURG, TN									
OCT 2000					MAY 2001				
23...	1200	1.2	175	17.0	14...	1140	35	91	17.0
JAN 2001					JUL				
11...	1205	41	99	<0.5	25...	1050	6.4	160	26.0
MAR					SEP				
19...	1245	259	64	7.5	10...	0945	5.0	142	24.0
03539778 CLEAR CREEK AT LILLY BRIDGE NEAR LANCING, TN									
DEC 2000					JUL 2001				
18...	1245	151	47	4.0	26...	1130	5.4	71	26.0
FEB 2001					AUG				
23...	1130	1010	39	6.5	21...	1215	22	83	24.0
MAR					23...	1130	17	58	24.0
28...	1230	171	42	7.0	SEP				
APR					12...	1100	4.7	68	23.0
17...	1215	441	38	12.5	13...	1130	4.6	70	23.5
JUN									
01...	1130	41	53	20.0					
03539800 OBED RIVER NEAR LANCING, TN									
NOV 2000									
03...	1126	6.2	158	16.0					
03540500 EMORY RIVER AT OAKDALE, TN									
OCT 2000					AUG 2001				
23...	1515	4.5	151	21.5	23...	1330	112	5	26.5
MAR 2001									
23...	1350	2300	75	7.5					

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001--Continued

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
TENNESSEE RIVER BASIN--Continued									
03566000 HIWASSEE RIVER AT CHARLESTON, TN									
FEB 2001 20...	1550	6830	107	9.0					
035661285 NORTH MOUSE CREEK NEAR ROCKY MT HOLLOW NEAR ATHENS, TN									
DEC 2000 11...	1015	31	350	9.5	JUN 2001 14...	1358	29	343	20.5
APR 2001 09...	1110	57	300	17.5	JUL 30...	1140	56	234	22.0
26...	1230	64	303	14.0					
26...	1230	64	303	14.0					
03578000 ELK RIVER NEAR PELHAM, TN									
FEB 2001 15...	0910	674	140	11.0					
03584020 RICHLAND CREEK AT HWY 64 NEAR PULASKI, TN									
FEB 2001 07...	1425	458	263	9.5	JUL 2001 23...	1345	94	482	25.0
14...	0845	4890	174	10.5	AUG 21...	1132	160	303	21.5
19...	1030	2910	201	9.5					
21...	0900	1610	225	10.0					
MAY 10...	1445	179	252	20.0					
03588500 SHOAL CREEK AT IRON CITY, TN									
OCT 2000 23...	1015	112	146	18.0	MAY 2001 10...	0904	272	192	19.0
DEC 05...	0901	167	145	5.0	JUL 23...	1021	197	235	26.0
JAN 2001 08...	1115	204	142	4.5	AUG 21...	0845	195	146	23.5
FEB 28...	0910	1120	96	10.0					
03593500 TENNESSEE RIVER AT SAVANNAH, TN									
NOV 2000 27...	1231	32000	204	12.5	FEB 2001 22...	0835	167000	211	10.0
03597210 GARRISON FORK ABOVE L&N RAILROAD AT WARTRACE, TN									
OCT 2000 18...	1058	5.2	331	16.5	MAY 2001 08...	1410	77	268	19.5
NOV 02...	0925	6.5	352	17.0	JUL 16...	1141	14	652	24.0
13...	1137	20	375	11.0	AUG 20...	1230	19	368	23.5
JAN 2001 09...	1155	20	323	2.0					
FEB 15...	0805	1860	202	12.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS  
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001--Continued

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
TENNESSEE RIVER BASIN--Continued									
03597590 WARTRACE CREEK BELOW COUNTY ROAD AT WARTRACE, TN									
OCT 2000					FEB 2001				
18...	1315	.23	404	18.5	15...	1320	628	234	12.5
NOV					16...	0800	700	256	12.0
13...	1309	10	435	11.0	MAY				
JAN 2001					08...	1145	15	339	19.5
09...	0820	6.1	407	1.0	JUL				
					16...	1344	8.1	635	22.5
03598000 DUCK RIVER NEAR SHELBYVILLE, TN									
OCT 2000					MAY 2001				
17...	1245	198	140	17.5	08...	1330	356	260	21.5
DEC					JUL				
08...	0900	157	205	6.0	16...	1025	212	210	25.0
MAR 2001					AUG				
13...	1402	394	260	13.0	23...	1015	190	246	25.0
03599500 DUCK RIVER AT COLUMBIA, TN									
OCT 2000					MAY 2001				
10...	1351	166	250	18.0	07...	1030	282	320	22.5
JAN 2001					JUL				
12...	0953	369	318	2.5	24...	1240	203	591	29.0
MAR					AUG				
13...	1055	907	317	11.5	24...	0910	297	374	27.0
03601990 DUCK RIVER AT HWY 100 AT CENTERVILLE, TN									
FEB 2001					JUL 2001				
19...	1545	42600	188	11.5	13...	1515	826	449	29.0
21...	1100	10700	259	10.3	AUG				
MAY					24...	1409	603	321	29.0
02...	1105	889	300	21.2					
03602219 PINEY RIVER AT CEDAR HILL, TN									
OCT 2000					MAY 2001				
24...	1030	8.1	287	16.5	08...	0945	40	251	17.0
DEC					JUL				
06...	1545	12	282	6.5	16...	1350	12	280	21.0
JAN 2001					AUG				
09...	0930	11	278	4.0	28...	1145	14	284	22.5
MAR									
01...	1130	87	224	9.5					
03602500 PINEY RIVER AT VERNON, TN									
OCT 2000					MAY 2001				
31...	1315	65	252	19.5	02...	1300	166	201	18.0
DEC					JUL				
06...	1400	73	255	6.0	16...	0945	76	241	23.0
JAN 2001					AUG				
09...	1115	73	250	4.0	28...	0930	126	237	22.5
MAR									
01...	0900	415	194	9.5					
03604000 BUFFALO RIVER NEAR FLAT WOODS, TN									
OCT 2000					JUL 2001				
18...	0945	172	101	18.0	25...	1015	379	110	27.0
JAN 2001					AUG				
10...	1015	306	102	32.0	22...	1750	269	112	27.0
JUN									
13...	1150	479	97	24.0					
03605078 CYPRESS CREEK AT CAMDEN, TN									
OCT 2000					APR 2001				
13...	1515	1.8	150	13.5	25...	1515	16	109	16.0
DEC					JUN				
21...	1045	14	--	2.0	06...	1040	8.3	124	21.5
MAR 2001					AUG				
15...	0930	54	112	11.0	21...	1305	2.4	68	25.0



## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001--Continued

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
OBION RIVER BASIN									
07024305 BEAVER CREEK AT HWY 22 BYPASS NEAR HUNTINGDON, TN									
DEC 2000					MAY 2001				
07...	1445	37	71	5.5	21...	1500	424	87	20.4
JAN 2001					JUN				
12...	1320	53	47	4.5	07...	1000	87	89	20.5
MAR					AUG				
14...	1500	71	89	12.0	27...	1445	101	54	23.0
APR									
25...	1215	54	96	15.5					
07028960 MIDDLE FORK FORKED DEER RIVER NEAR FAIRVIEW, TN									
OCT 2000					APR 2001				
10...	1130	62	36	12.0	26...	1005	121	55	16.0
JAN 2001					JUN				
10...	1230	78	48	5.0	13...	1730	92	53	24.5
HATCHIE RIVER BASIN									
07029500 HATCHIE RIVER AT BOLIVAR, TN									
NOV 2000					JUN 2001				
07...	1100	311	54	18.0	12...	1120	2360	77	24.5
JAN 2001					JUL				
18...	1000	467	40	5.0	24...	1015	198	72	29.5
MAR					AUG				
21...	1400	1960	72	11.5	20...	1130	591	55	27.0
MAY									
08...	1120	588	86	22.0					
LOOAHATCHIE RIVER BASIN									
07030240 LOOAHATCHIE RIVER NEAR ARLINGTON, TN									
OCT 2000					JUN 2001				
16...	1435	86	45	18.0	11...	0955	125	62	21.5
JAN 2001					JUL				
04...	0920	93	50	5.0	16...	1000	96	47	22.0
FEB					AUG				
07...	1030	102	75	14.0	15...	1120	103	65	21.5
APR									
27...	1320	115	62	21.5					
WOLF RIVER BASIN									
07030392 WOLF RIVER AT LAGRANGE, TN									
DEC 2000					JUL 2001				
07...	1040	110	40	7.0	10...	1235	74	44	24.5
MAR 2001					26...	1050	80	45	24.5
06...	1145	300	38	8.5	AUG				
APR					07...	0800	77	40	23.0
03...	1000	287	35	16.0	17...	1135	83	42	22.0
MAY					SEP				
02...	1700	132	44	20.5	06...	0900	96	40	22.5
JUN									
08...	0800	223	45	21.0					
07031650 WOLF RIVER AT GERMANTOWN, TN									
OCT 2000					MAY 2001				
31...	1345	238	51	21.0	04...	1500	343	59	24.0
JAN 2001					JUN				
08...	1415	286	60	6.5	07...	1515	681	59	23.5
FEB					JUL				
08...	1500	379	69	15.0	23...	1420	221	105	32.5
MAR									
16...	1500	939	56	13.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001--Continued

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
WOLF RIVER BASIN--Continued									
07031692 FLETCHER CREEK AT SYCAMORE VIEW ROAD AT MEMPHIS, TN									
MAR 2001					JUL 2001				
05...	1150	18	115	8.5	10...	1420	2.3	151	29.5
APR					AUG				
02...	1700	3.5	126	14.5	06...	1800	2.1	131	30.5
26...	1050	1.1	121	20.0	31...	1000	3.3	123	26.0
MAY					SEP				
03...	0730	.32	130	21.5	05...	1830	3.0	101	26.5
JUN					20...	1000	16	45	23.5
07...	1610	53	88	23.5					
11...	1400	1.8	128	27.5					
07031740 WOLF RIVER AT HOLLYWOOD STREET AT MEMPHIS, TN									
JAN 2001					JUN 2001				
19...	1410	2590	71	4.5	06...	1245	1630	52	23.5
MAR					JUL				
13...	1250	1030	85	14.0	31...	1115	1240	80	28.5
NONCONNAH RIVER BASIN									
07032200 NONCONNAH CREEK NEAR GERMANTOWN, TN									
OCT 2000					APR 2001				
12...	0945	.26	--	14.0	25...	1230	8.2	157	18.5
JAN 2001					JUN				
05...	1050	2.7	473	6.5	07...	1215	69	144	23.5
FEB					JUL				
08...	1050	3.7	168	12.5	17...	1520	49	79	26.0
MAR									
02...	1035	16	128	9.5					

In 1993, the U.S. Geological Survey (USGS), in cooperation with the Tennessee Department of Transportation (TDOT), began monitoring a degraded wetland area near Millington, Shelby County, Tennessee. The monitoring effort was designed to define land-surface inundation and saturation conditions prior to the implementation of a plan to restore the wetland area to a more natural condition. Restoring and preserving wetlands have become an important initiative in recent years as indicated by the no net loss of wetlands objective of Section 404 of the Clean Water Act (U.S. Congress, 1977). In certain instances, the construction of buildings, roads, and other manmade structures have disrupted natural wetlands and their functions. The Millington site is located along a channelized reach of Big Creek, east of State Route 240, and near the southeastern boundary of the Naval Support Activity Midsouth, Millington (fig. 7). As part of the monitoring effort, 13 wells were augered approximately 2 feet into poorly drained soils, which include the Calloway silt loam, Falaga silt loam, Waverly silt loam, and Henry silt loam.

Additional information on this study area may be obtained from the USGS at 640 Grassmere Park, Suite 100, Nashville, TN 37211 or by telephone (615) 837-4700.

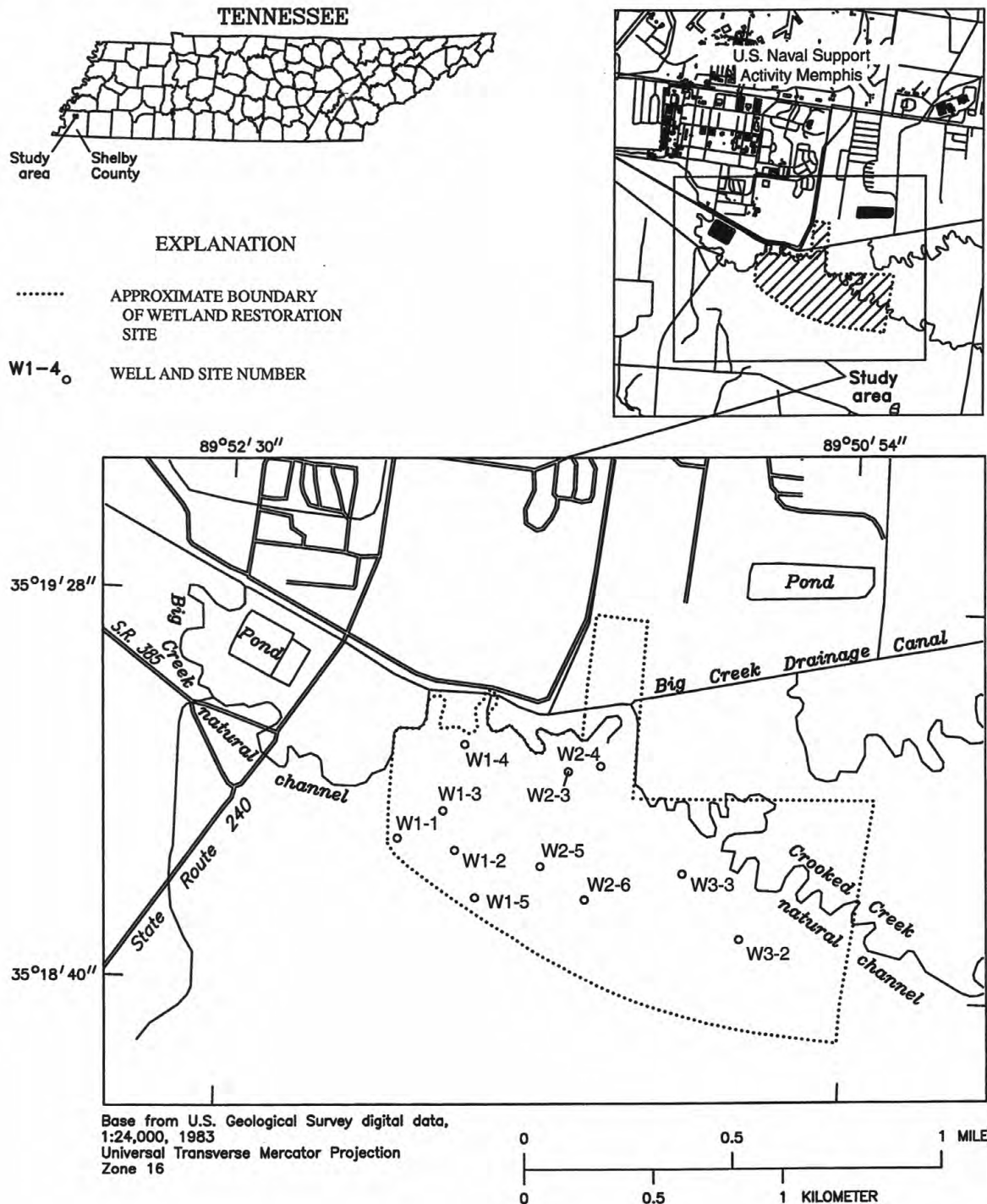


Figure 7. Location of study area and data-collection sites.

## GROUND-WATER LEVELS

## MILLINGTON WETLAND

351859089520101. Local number, Sh:V-60 (W1-1).

LOCATION.--Lat 35°18'59", long 89°52'01", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
Owner: Tennessee Department of Transportation (TDOT) and USGS.

INSTRUMENTATION.--Water-level recorder--60-minute punch

DATUM.--Elevation of land-surface datum is 265 ft above sea level, from topographic map. Measuring point: Top of casing approximately 3.60 ft above land-surface datum.

REMARKS.--No missing record. Bottom of well, 2.22 ft below land surface.

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

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.22	2.22	2.22	2.22	2.03	.60	.51	2.22	.68	2.22	2.22	2.22
2	2.22	2.22	2.22	2.22	2.22	.62	.56	2.22	1.04	2.22	2.22	2.22
3	2.22	2.22	2.22	2.22	2.22	.63	.61	2.22	1.02	2.22	2.22	2.22
4	2.22	2.22	2.22	2.22	2.22	.49	.69	2.22	.76	2.22	2.22	2.22
5	2.22	2.22	2.22	2.22	2.22	.48	.73	2.22	1.01	2.22	2.22	2.22
6	2.22	2.22	2.22	2.22	2.22	.56	.82	2.22	.98	2.22	2.22	2.22
7	2.22	2.22	2.22	2.22	2.22	.60	1.04	2.22	.50	2.22	2.22	2.22
8	2.22	2.22	2.22	2.22	2.22	.62	1.27	2.22	.90	2.22	2.22	2.22
9	2.22	2.22	2.22	2.22	2.22	.70	1.52	2.22	1.31	2.22	2.22	2.22
10	2.22	2.22	2.22	2.22	2.22	.76	1.76	2.22	1.74	2.22	2.22	2.22
11	2.22	2.22	2.22	2.22	1.40	.85	1.93	2.22	2.03	2.22	2.22	2.22
12	2.22	2.22	2.22	2.22	1.40	.84	1.76	2.22	2.22	2.22	2.22	2.22
13	2.22	2.22	2.22	2.22	1.10	.52	.54	2.22	2.22	2.22	2.22	2.22
14	2.22	2.22	2.22	2.22	.38	.54	.58	2.22	2.22	2.22	2.22	2.22
15	2.22	2.22	2.22	2.22	.38	.53	.54	2.22	2.22	2.22	2.22	2.22
16	2.22	2.22	2.22	2.22	.33	.59	.78	2.22	2.22	2.22	2.22	2.22
17	2.22	2.22	2.22	2.22	.45	.67	1.08	2.22	2.22	2.22	2.22	2.22
18	2.22	2.22	2.22	2.22	.52	.70	1.25	2.22	2.22	2.22	2.22	2.22
19	2.22	2.22	2.22	1.89	.53	.75	1.49	2.22	2.22	2.22	2.22	2.22
20	2.22	2.22	2.22	2.22	.57	.78	1.72	2.22	2.22	2.22	2.22	2.22
21	2.22	2.22	2.22	2.22	.64	.93	1.97	2.22	2.22	2.22	2.22	2.22
22	2.22	2.22	2.22	2.22	.60	1.09	2.18	1.31	2.22	2.22	2.22	2.22
23	2.22	2.22	2.22	2.22	.62	1.20	2.22	1.75	2.22	2.22	2.22	2.22
24	2.22	2.22	2.22	2.22	.57	1.41	.91	1.21	2.22	2.22	2.22	2.22
25	2.22	2.22	2.22	2.22	.51	1.52	1.25	1.67	2.22	2.22	2.22	2.22
26	2.22	2.22	2.22	2.22	.54	1.68	1.61	1.98	2.22	2.22	2.22	2.22
27	2.22	2.22	2.22	2.22	.58	1.77	1.93	2.22	2.22	2.22	2.22	2.22
28	2.22	2.22	2.22	2.22	.60	1.77	2.20	2.22	2.22	2.22	2.22	2.22
29	2.22	2.22	2.22	2.22	---	1.62	2.22	2.22	2.22	2.22	2.22	2.22
30	2.22	2.22	2.22	2.22	---	1.03	2.22	2.22	2.22	2.22	2.22	2.22
31	2.22	---	2.22	1.77	---	.49	---	2.18	---	2.22	2.22	---
TOTAL	68.82	66.60	68.82	68.04	33.73	27.34	39.89	65.60	54.15	68.82	68.82	66.60
MEAN	2.22	2.22	2.22	2.19	1.20	.88	1.33	2.12	1.81	2.22	2.22	2.22
MAX	2.22	2.22	2.22	2.22	2.22	1.77	2.22	2.22	2.22	2.22	2.22	2.22
MIN	2.22	2.22	2.22	1.77	.33	.48	.51	1.21	.50	2.22	2.22	2.22

WTR YR 2001      HIGHEST 0.10 FEB 15, JUNE 03, 2001      LOWEST 2.22 MANY DAYS

## GROUND-WATER LEVELS

313

## MILLINGTON WETLAND--Continued

351859089515501. Local number, Sh:V-61 (W1-2).

LOCATION.--Lat 35°18'59", long 89°51'55", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
 Owner: Tennessee Department of Transportation (TDOT) and USGS.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 265 ft above sea level, from topographic map. Measuring point: Top of casing 3.00 ft above land-surface datum.

REMARKS.--Missing record January 18 through January 23, April 12 through April 21 and May 20 through May 21. Bottom of well, 2.24 ft below land surface. Negative values indicate water levels above land surface.

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

 DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
 DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.24	2.24	2.24	2.24	.07	-.04	-.05	2.24	-.03	2.24	2.24	2.24
2	2.24	2.24	2.24	2.24	.13	-.03	-.03	2.24	.04	2.24	2.24	2.24
3	2.24	2.24	2.24	2.24	.16	-.03	-.02	2.24	.05	2.24	2.24	2.24
4	2.24	2.24	2.24	2.24	.22	-.14	-.01	2.24	-.03	2.24	2.24	2.24
5	2.24	2.24	2.24	2.24	.29	-.09	.00	2.24	.02	2.24	2.24	2.24
6	2.24	2.24	2.24	2.24	.38	-.07	.02	2.24	.03	2.24	2.24	2.24
7	2.24	2.24	2.24	2.24	.47	-.05	.04	2.24	-.05	2.24	2.24	2.24
8	2.24	2.24	2.24	2.24	.55	-.04	.07	2.24	.01	2.24	2.24	2.24
9	2.24	2.24	2.24	2.24	.54	-.02	.11	2.24	.12	2.24	2.24	2.24
10	2.24	2.24	2.24	2.24	.03	.01	.18	2.24	.39	2.24	2.24	2.24
11	2.24	2.24	2.24	2.24	.04	.02	.26	2.24	1.26	2.24	2.24	2.24
12	2.24	2.24	2.24	2.24	.03	.02	---	2.24	1.84	2.24	2.24	2.24
13	2.24	2.24	2.24	2.24	-.01	-.07	---	2.24	2.24	2.24	2.24	2.24
14	2.24	2.24	2.24	2.24	-.15	-.05	---	2.24	2.24	2.24	2.24	2.24
15	2.24	2.24	2.24	2.24	-.17	-.06	---	2.24	2.24	2.24	2.24	2.24
16	2.24	2.24	2.24	2.24	-.17	-.06	---	2.24	2.24	2.24	2.24	2.24
17	2.24	2.24	.66	2.24	-.11	-.04	---	2.24	2.24	2.24	2.24	2.24
18	2.24	2.24	1.22	---	-.08	-.03	---	2.24	2.24	2.24	2.24	2.24
19	2.24	2.24	1.67	---	-.05	-.02	---	2.24	2.24	2.24	2.24	2.24
20	2.24	2.24	1.99	---	-.04	-.01	---	---	2.24	2.24	2.24	.27
21	2.24	2.24	2.23	---	-.02	.00	---	---	2.24	2.24	2.24	1.53
22	2.24	2.24	2.24	---	-.03	.01	.90	-.03	2.24	2.24	2.24	2.17
23	2.24	2.24	2.24	---	-.02	.02	1.14	.08	2.24	2.24	2.24	2.24
24	2.24	2.24	2.24	1.90	-.02	.04	.94	.02	2.24	2.24	2.24	2.24
25	2.24	1.94	2.24	2.05	-.13	.03	.49	.05	2.24	2.24	2.24	2.24
26	2.24	2.24	2.24	2.06	-.08	.02	.73	.25	2.24	2.24	2.24	2.24
27	2.24	2.24	2.24	2.20	-.06	.02	1.28	1.23	2.24	2.24	2.24	2.24
28	2.24	2.24	2.24	2.23	-.05	.02	1.82	1.35	2.24	2.24	2.24	2.24
29	2.24	2.24	2.24	2.24	---	.02	2.15	.04	2.24	2.24	2.24	2.24
30	2.24	2.24	2.24	.30	---	.01	2.24	.06	2.24	2.24	2.24	2.24
31	2.24	---	2.24	.03	---	-.05	---	-.06	---	2.24	2.24	---
TOTAL	69.44	66.90	66.01	51.09	1.72	-0.66	12.26	45.55	43.97	69.44	69.44	64.45
MEAN	2.24	2.23	2.13	2.04	.06	-.02	.61	1.57	1.47	2.24	2.24	2.15
MAX	2.24	2.24	2.24	2.24	.55	.04	2.24	2.24	2.24	2.24	2.24	2.24
MIN	2.24	1.94	.66	.03	-.17	-.14	-.05	-.06	-.05	2.24	2.24	.27

WTR YR 2001 HIGHEST -.57 FEB 14, 2001 LOWEST 2.24 MANY DAYS



## GROUND-WATER LEVELS

## MILLINGTON WETLAND--Continued

351906089515601. Local number, Sh:V-62 (W1-3).

LOCATION.--Lat 35°19'06", long 89°51'56", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
 Owner: Tennessee Department of Transportation (TDOT) and USGS.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 265 ft above sea level, from topographic map. Measuring point: Top of casing, 3.80 ft above land-surface datum.

REMARKS.--No missing record. Bottom of well, 2.10 ft below land surface.

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

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
 DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.10	2.10	2.10	2.10	1.56	.78	.24	2.02	.44	2.10	2.10	2.10
2	2.10	2.10	2.10	2.10	1.76	.86	.32	2.08	.89	2.10	2.10	2.10
3	2.10	2.10	2.10	2.10	1.87	.92	.32	2.10	1.13	2.10	2.10	2.10
4	2.10	2.10	2.10	2.10	1.94	.38	.42	2.10	.48	2.10	2.10	2.10
5	2.10	2.10	2.10	2.10	1.99	.31	.51	2.10	.79	2.10	2.10	2.10
6	2.10	2.10	2.10	2.10	2.03	.44	.69	2.10	.99	2.10	2.10	2.10
7	2.10	2.10	2.10	2.10	2.07	.54	.93	2.10	.30	2.10	2.10	2.10
8	2.10	2.10	2.10	2.10	2.10	.65	1.16	2.10	.59	2.10	2.10	2.10
9	2.10	2.10	2.10	2.10	2.10	.81	1.35	2.10	1.06	2.10	2.10	2.10
10	2.10	2.10	2.10	2.10	1.76	.94	1.51	2.10	1.40	2.10	2.10	2.10
11	2.10	2.10	2.10	2.10	1.80	1.06	1.61	2.10	1.63	2.10	2.10	2.10
12	2.10	2.10	2.10	2.10	1.83	1.06	1.56	2.10	1.79	2.10	2.10	2.10
13	2.10	2.10	2.10	2.10	1.83	.31	.27	2.10	1.91	2.10	2.10	2.10
14	2.10	2.10	1.99	2.10	.37	.40	.31	2.10	2.01	2.10	2.10	2.10
15	2.10	2.10	2.01	1.96	.19	.40	.23	2.10	2.08	2.10	2.10	2.10
16	2.10	2.10	1.32	1.97	.19	.32	.49	2.10	2.10	2.10	2.10	2.10
17	2.10	2.10	1.06	1.97	.36	.48	.86	2.10	2.10	2.10	2.10	2.10
18	2.10	2.10	1.31	1.95	.54	.60	1.15	2.10	2.10	2.10	2.10	2.10
19	2.10	2.10	1.48	.51	.69	.70	1.37	2.10	2.10	2.10	2.10	2.10
20	2.10	2.10	1.61	1.00	.83	.77	1.53	2.10	2.10	2.10	2.10	2.10
21	2.10	2.10	1.71	1.27	.97	.93	1.62	2.10	2.10	2.10	2.10	2.10
22	2.10	2.10	1.80	1.45	.94	1.08	1.70	1.38	2.10	2.10	2.10	2.10
23	2.10	2.10	1.87	1.58	1.02	1.21	1.76	1.61	2.10	2.10	2.10	2.10
24	2.10	2.10	1.92	1.68	1.10	1.30	.65	1.69	2.10	2.10	2.10	2.10
25	2.10	1.39	1.98	1.77	.30	1.40	1.07	1.80	2.10	2.10	2.10	2.10
26	2.10	1.64	2.01	1.83	.48	1.50	1.42	1.90	2.10	2.10	2.10	2.10
27	2.10	1.81	2.03	1.89	.58	1.58	1.65	2.01	2.10	2.10	2.10	2.10
28	2.10	1.92	2.05	1.93	.68	1.63	1.81	2.08	2.10	2.10	2.10	2.10
29	2.10	2.00	2.08	1.94	---	1.62	1.88	2.10	2.10	2.10	2.10	2.10
30	2.10	2.07	2.10	.90	---	1.20	1.95	2.10	2.10	2.10	2.10	2.10
31	2.10	---	2.10	1.29	---	.23	---	1.98	---	2.10	2.10	---
TOTAL	65.10	61.23	59.73	56.29	33.88	26.41	32.34	62.65	48.99	65.10	65.10	63.00
MEAN	2.10	2.04	1.93	1.82	1.21	.85	1.08	2.02	1.63	2.10	2.10	2.10
MAX	2.10	2.10	2.10	2.10	2.10	1.63	1.95	2.10	2.10	2.10	2.10	2.10
MIN	2.10	1.39	1.06	.51	.19	.23	.23	1.38	.30	2.10	2.10	2.10

WIR YR 2001      HIGHEST 0.10 DEC 16, 2000      LOWEST 2.10 MANY DAYS

## GROUND-WATER LEVELS

315

## MILLINGTON WETLAND--Continued

351912089515301. Local number, Sh:V-63 (W1-4).

LOCATION.--Lat 35°19'12", long 89°51'53", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
 Owner: Tennessee Department of Transportation (TDOT) and USGS.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 265 ft above sea level, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

REMARKS.--No missing record. Bottom of well, 2.27 below land surface.

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

 DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
 DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.27	2.27	2.27	2.27	1.16	.90	.41	1.90	.34	2.27	2.27	2.27
2	2.27	2.27	2.27	2.27	1.36	1.03	.36	1.96	.62	2.27	2.27	2.27
3	2.27	2.27	2.27	2.27	1.49	1.12	.38	2.03	.76	2.27	2.27	2.27
4	2.27	2.27	2.27	2.27	1.60	1.11	.45	2.09	.25	2.27	2.27	2.27
5	2.27	2.27	2.27	2.27	1.69	.36	.56	2.14	.39	2.27	2.27	2.27
6	2.27	2.27	2.27	2.27	1.77	.53	.68	2.19	.46	2.27	2.27	2.27
7	2.27	2.27	2.27	2.27	1.84	.68	.87	2.22	.22	2.27	2.27	2.27
8	2.27	2.27	2.27	2.27	1.89	.83	1.11	2.25	.41	2.27	2.27	2.27
9	2.27	2.27	2.27	2.27	1.91	1.02	1.31	2.26	.75	2.27	2.27	2.27
10	2.27	2.27	2.27	2.27	1.74	1.17	1.45	2.27	1.16	2.27	2.27	2.27
11	2.27	2.27	2.27	2.27	1.23	1.29	1.58	2.27	1.41	2.27	2.27	2.27
12	2.27	2.27	2.27	2.27	1.25	1.30	1.60	2.27	1.57	2.27	2.27	2.27
13	2.27	2.27	2.27	2.27	1.17	.39	1.25	2.27	1.70	2.27	2.27	2.27
14	2.27	2.27	2.27	2.27	.22	.57	.28	2.27	1.82	2.27	2.27	2.27
15	2.27	2.27	2.27	2.22	.19	.58	.27	2.27	1.90	2.27	2.27	2.27
16	2.27	2.27	2.27	2.25	.18	.38	.38	2.27	1.99	2.27	2.27	2.27
17	2.27	2.27	1.80	2.25	.28	.54	.57	2.27	2.08	2.27	2.27	2.27
18	2.27	2.27	2.05	2.21	.44	.68	.80	2.27	2.16	2.27	2.27	2.27
19	2.27	2.27	2.18	1.16	.57	.82	1.03	2.27	2.22	2.27	2.27	2.27
20	2.27	2.27	2.26	1.21	.71	.94	1.27	2.27	2.27	2.27	2.27	1.92
21	2.27	2.27	2.27	1.36	.88	1.09	1.44	2.27	2.27	2.27	2.27	2.11
22	2.27	2.27	2.27	1.49	.90	1.25	1.57	1.53	2.27	2.27	2.27	2.23
23	2.27	2.27	2.27	1.59	1.00	1.37	1.66	1.69	2.27	2.27	2.27	2.27
24	2.27	2.27	2.27	1.64	1.07	1.46	1.17	1.79	2.27	2.27	2.27	2.27
25	2.27	2.27	2.27	1.72	.50	1.56	.96	1.90	2.27	2.27	2.27	2.27
26	2.27	2.27	2.27	1.78	.46	1.64	1.26	1.99	2.27	2.27	2.27	2.27
27	2.27	2.27	2.27	1.84	.61	1.72	1.46	2.08	2.27	2.27	2.27	2.27
28	2.27	2.27	2.27	1.89	.76	1.77	1.63	2.14	2.27	2.27	2.27	2.27
29	2.27	2.27	2.27	1.92	---	1.77	1.75	2.19	2.27	2.27	2.27	2.27
30	2.27	2.27	2.27	.87	---	1.74	1.83	2.23	2.27	2.27	2.27	2.27
31	2.27	---	2.27	.91	---	.61	---	2.24	---	2.27	2.27	---
TOTAL	70.37	68.10	69.58	60.09	28.87	32.22	31.34	66.06	47.18	70.37	70.37	67.55
MEAN	2.27	2.27	2.24	1.94	1.03	1.04	1.04	2.13	1.57	2.27	2.27	2.25
MAX	2.27	2.27	2.27	2.27	1.91	1.77	1.83	2.27	2.27	2.27	2.27	2.27
MIN	2.27	2.27	1.80	.87	.18	.36	.27	1.53	.22	2.27	2.27	1.92

WTR YR 2001      HIGHEST .06 FEB 15, JUN 03, 2001

LOWEST 2.27 MANY DAYS

## GROUND-WATER LEVELS

## MILLINGTON WETLAND--Continued

351853089515101. Local number, Sh:V-64 (W1-5).

LOCATION.--Lat 35°18'53", long 89°51'51", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
 Owner: Tennessee Department of Transportation (TDOT) and USGS.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 265 ft above sea level, from topographic map. Measuring point: Top of casing, 3.00 ft above land-surface datum.

REMARKS.--No missing record. Bottom of well, 2.25 ft below land surface. Negative values indicate water levels above land surface.

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

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
 DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.25	2.25	2.25	2.25	.20	.16	.16	2.25	.15	2.25	2.25	2.25
2	2.25	2.25	2.25	2.25	.23	.16	.20	2.25	.27	2.25	2.25	2.25
3	2.25	2.25	2.25	2.25	.25	.17	.23	2.25	.30	2.25	2.25	2.25
4	2.25	2.25	2.25	2.25	.28	.10	.26	2.25	.17	2.25	2.25	2.25
5	2.25	2.25	2.25	2.25	.32	.12	.30	2.25	.29	2.25	2.25	2.25
6	2.25	2.25	2.25	2.25	.36	.14	.35	2.25	.31	2.25	2.25	2.25
7	2.25	2.25	2.25	2.25	.40	.15	.44	2.25	.23	2.25	2.25	2.25
8	2.25	2.25	2.25	2.25	.44	.17	.54	2.25	.41	2.25	2.25	2.25
9	2.25	2.25	2.25	2.25	.44	.19	.72	2.25	.81	2.25	2.25	2.25
10	2.25	2.25	2.25	2.25	.14	.20	1.00	2.25	1.70	2.25	2.25	2.25
11	2.25	2.25	2.25	2.25	.17	.22	1.34	2.25	2.23	2.25	2.25	2.25
12	2.25	2.25	2.25	2.25	.16	.21	1.17	2.25	2.25	2.25	2.25	2.25
13	2.25	2.25	2.25	2.25	.13	.13	.45	2.25	2.25	2.25	2.25	2.25
14	2.25	2.25	2.25	2.25	.08	.14	.49	2.25	2.25	2.25	2.25	2.25
15	2.25	2.25	2.25	2.25	.04	.13	.50	2.25	2.25	2.25	2.25	2.25
16	2.25	2.25	2.25	2.25	.04	.13	.58	2.25	2.25	2.25	2.25	2.25
17	2.25	2.25	.25	2.25	.11	.16	.69	2.25	2.25	2.25	2.25	2.25
18	2.25	2.25	.35	1.54	.13	.17	.84	2.25	2.25	2.25	2.25	2.25
19	2.25	2.25	.57	.10	.14	.19	1.10	2.25	2.25	2.25	2.25	2.25
20	2.25	2.25	.82	.16	.15	.20	1.45	2.25	2.25	2.25	2.25	2.25
21	2.25	2.25	1.10	.19	.17	.22	1.92	2.25	2.25	2.25	2.25	2.25
22	2.25	2.25	1.50	.23	.15	.25	2.25	.35	2.25	2.25	2.25	2.25
23	2.25	2.25	1.86	.24	.16	.28	2.25	.71	2.25	2.25	2.25	2.25
24	2.25	2.25	2.15	.28	.16	.33	.30	.50	2.25	2.25	2.25	2.25
25	2.25	2.25	2.25	.35	.11	.39	.54	.81	2.25	2.25	2.25	2.25
26	2.25	1.08	2.25	.36	.14	.47	1.01	1.60	2.25	2.25	2.25	2.25
27	2.25	2.16	2.25	.45	.14	.56	1.76	2.25	2.25	2.25	2.25	2.25
28	2.25	2.25	2.25	.49	.15	.58	2.20	2.25	2.25	2.25	2.25	2.25
29	2.25	2.25	2.25	.47	---	.38	2.25	1.54	2.25	2.25	2.25	2.25
30	2.25	2.25	2.25	.13	---	.24	2.25	1.57	2.25	2.25	2.25	2.25
31	2.25	---	2.25	.17	---	.13	---	1.16	---	2.25	2.25	---
TOTAL	69.75	66.24	60.35	43.41	5.39	7.07	29.54	59.99	49.62	69.75	69.75	67.50
MEAN	2.25	2.21	1.95	1.40	.19	.23	.98	1.94	1.65	2.25	2.25	2.25
MAX	2.25	2.25	2.25	2.25	.44	.58	2.25	2.25	2.25	2.25	2.25	2.25
MIN	2.25	1.08	.25	.10	.04	.10	.16	.35	.15	2.25	2.25	2.25
WTR YR 2001	HIGHEST	-.42	DEC 16, 2000	LOWEST	2.25	MANY DAYS						

## GROUND-WATER LEVELS

317

## MILLINGTON WETLAND--Continued

351909089513301. Local number, Sh:V-68 (W2-4).

LOCATION.--Lat 35°19'09", long 89°51'33", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
 Owner: Tennessee Department of Transportation (TDOT) and USGS.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 265 ft above sea level, from topographic map. Measuring point: Top of casing, 3.40 ft above land-surface datum.

REMARKS.--No missing records. Bottom of well, 2.21 ft below land surface.

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

 DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
 DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.21	2.21	2.21	2.21	.83	.43	.22	2.21	.32	2.21	2.21	2.21
2	2.21	2.21	2.21	2.21	1.08	.49	.27	2.21	.68	2.21	2.21	2.21
3	2.21	2.21	2.21	2.21	1.22	.53	.29	2.21	.78	2.21	2.21	2.21
4	2.21	2.21	2.21	2.21	1.36	.17	.37	2.21	.31	2.21	2.21	2.21
5	2.21	2.21	2.21	2.21	1.49	.24	.43	2.21	.50	2.21	2.21	2.21
6	2.21	2.21	2.21	2.21	1.61	.33	.56	2.21	.55	2.21	2.21	2.21
7	2.21	2.21	2.21	2.21	1.70	.41	.79	2.21	.19	2.21	2.21	2.21
8	2.21	2.21	2.21	2.21	1.77	.50	1.03	2.21	.40	2.21	2.21	2.21
9	2.21	2.21	2.21	2.21	1.79	.62	1.27	2.21	.90	2.21	2.21	2.21
10	2.21	2.21	2.21	2.21	.44	.72	1.49	2.21	1.52	2.21	2.21	2.21
11	2.21	2.21	2.21	2.21	.53	.83	1.66	2.21	1.93	2.21	2.21	2.21
12	2.21	2.21	2.21	2.21	.50	.83	1.23	2.21	2.18	2.21	2.21	2.21
13	2.21	2.21	2.21	2.21	.31	.27	.22	2.21	2.21	2.21	2.21	2.21
14	2.21	2.21	2.21	2.21	.17	.32	.24	2.21	2.21	2.21	2.21	2.21
15	2.21	2.21	2.21	2.21	.14	.32	.21	2.21	2.21	2.21	2.21	2.21
16	2.21	2.21	2.21	2.21	.14	.27	.34	2.21	2.21	2.21	2.21	2.21
17	2.21	2.21	1.95	2.21	.21	.36	.61	2.21	2.21	2.21	2.21	2.21
18	2.21	2.21	2.18	2.21	.27	.46	.87	2.21	2.21	2.21	2.21	2.21
19	2.21	2.21	2.21	2.04	.35	.54	1.21	2.21	2.21	2.21	2.21	2.21
20	2.21	2.21	2.21	.92	.41	.61	1.46	2.21	2.21	2.21	2.21	2.21
21	2.21	2.21	2.21	1.13	.47	.74	1.68	2.21	2.21	2.21	2.21	2.21
22	2.21	2.21	2.21	1.31	.36	.88	1.87	.81	2.21	2.21	2.21	2.21
23	2.21	2.21	2.21	1.45	.43	1.01	1.97	1.20	2.21	2.21	2.21	2.21
24	2.21	2.21	2.21	1.58	.46	1.15	.41	1.08	2.21	2.21	2.21	2.21
25	2.21	2.21	2.21	1.73	.21	1.31	.78	1.47	2.21	2.21	2.21	2.21
26	2.21	2.21	2.21	1.81	.29	1.46	1.26	1.90	2.21	2.21	2.21	2.21
27	2.21	2.21	2.21	1.93	.33	1.59	1.68	2.21	2.21	2.21	2.21	2.21
28	2.21	2.21	2.21	2.00	.38	1.63	2.00	2.21	2.21	2.21	2.21	2.21
29	2.21	2.21	2.21	2.02	---	1.60	2.19	2.21	2.21	2.21	2.21	2.21
30	2.21	2.21	2.21	.35	---	.79	2.21	2.21	2.21	2.21	2.21	2.21
31	2.21	---	2.21	.60	---	.20	---	2.20	---	2.21	2.21	---
TOTAL	68.51	66.30	68.22	58.65	19.25	21.61	30.82	63.91	50.04	68.51	68.51	66.30
MEAN	2.21	2.21	2.20	1.89	.69	.70	1.03	2.06	1.67	2.21	2.21	2.21
MAX	2.21	2.21	2.21	2.21	1.79	1.63	2.21	2.21	2.21	2.21	2.21	2.21
MIN	2.21	2.21	1.95	.35	.14	.17	.21	.81	.19	2.21	2.21	2.21

WTR YR 2001      HIGHEST 0.03 FEB 14, 2001      LOWEST 2.21 MANY DAYS

## GROUND-WATER LEVELS

## MILLINGTON WETLAND--Continued

351848089511001. Local number, Sh:V-70 (W3-2).

LOCATION.--Lat 35°18'48", long 89°51'10", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
Owner: Tennessee Department of Transportation (TDOT) and USGS.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 265 ft above sea level, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

REMARKS.--Missing records, December 18, 2000 to January 22, 2001. Bottom of well, 2.24 ft below land surface. Negative values indicate water levels above land surface.

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

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.24	2.24	1.62	---	1.14	1.02	1.11	2.24	.89	2.24	2.24	2.24
2	2.24	2.24	1.61	---	1.17	1.06	1.17	2.24	1.02	2.24	2.24	2.24
3	2.24	2.24	1.62	---	1.17	1.08	1.19	2.24	1.02	2.24	2.24	2.24
4	2.24	2.24	1.58	---	1.17	.87	1.24	2.24	.81	2.24	2.24	2.24
5	2.24	2.24	1.57	---	1.20	.97	1.25	2.24	.90	2.24	2.24	2.24
6	2.24	2.24	1.57	---	1.19	1.03	1.29	2.24	.91	2.24	2.24	2.24
7	2.24	2.24	1.57	---	1.21	1.06	1.39	2.24	.87	2.24	2.24	2.24
8	2.24	2.24	1.64	---	1.21	1.09	1.44	2.24	1.00	2.24	2.24	2.24
9	2.24	2.24	1.67	---	1.18	1.15	1.51	2.24	1.08	2.24	2.24	2.24
10	2.24	2.24	1.67	---	1.07	1.17	1.61	2.24	1.16	2.24	2.24	2.24
11	2.24	2.24	1.67	---	1.12	1.19	1.73	2.24	1.22	2.24	2.24	2.18
12	2.24	2.24	1.86	---	1.10	1.17	1.49	2.24	1.26	2.24	2.24	2.13
13	2.24	2.24	1.87	---	1.04	1.09	1.07	2.24	1.32	2.24	2.24	2.13
14	2.24	2.24	1.13	---	.82	1.12	1.14	2.24	1.36	2.24	2.24	2.16
15	2.24	2.24	1.16	---	.49	1.11	1.12	2.24	1.36	2.24	2.24	2.24
16	2.24	2.24	.74	---	.49	1.12	1.29	2.24	1.35	2.24	2.24	2.24
17	2.24	2.24	---	---	.66	1.17	1.40	2.24	1.44	2.24	2.24	2.24
18	2.24	2.24	---	---	.76	1.18	1.40	2.24	1.52	2.24	2.24	2.24
19	2.24	2.24	---	---	.84	1.19	1.45	2.24	1.63	2.24	2.24	2.24
20	2.24	2.24	---	---	.90	1.20	1.53	2.24	1.74	2.24	2.24	1.18
21	2.24	2.24	---	---	.97	1.23	1.63	2.24	1.84	2.24	2.24	1.21
22	2.24	2.24	---	---	.99	1.25	1.76	1.12	2.00	2.24	2.24	1.26
23	2.24	2.24	---	---	1.03	1.26	1.85	1.18	2.22	2.24	2.24	1.30
24	2.24	2.24	---	1.13	1.03	1.30	1.26	1.13	2.24	2.24	2.24	1.30
25	2.24	2.24	---	1.18	.83	1.32	1.41	1.21	2.24	2.24	2.24	1.34
26	2.24	2.24	---	1.13	.90	1.36	1.54	1.27	2.24	2.24	2.24	1.38
27	2.24	2.24	---	1.20	.96	1.38	1.70	1.33	2.24	2.24	2.24	1.41
28	2.24	2.14	---	1.18	.99	1.37	1.90	1.33	2.24	2.24	2.24	1.46
29	2.24	1.87	---	1.14	---	1.29	2.11	1.25	2.24	2.24	2.24	1.50
30	2.24	1.71	---	.98	---	1.10	2.24	1.25	2.24	2.24	2.24	1.55
31	2.24	---	---	1.10	---	1.07	---	.88	---	2.24	2.24	---
TOTAL	69.44	66.20	24.55	9.04	27.63	35.97	44.22	58.99	45.60	69.44	69.44	57.09
MEAN	2.24	2.21	1.53	1.13	.99	1.16	1.47	1.90	1.52	2.24	2.24	1.90
MAX	2.24	2.24	1.87	1.20	1.21	1.38	2.24	2.24	2.24	2.24	2.24	2.24
MIN	2.24	1.71	.74	.98	.49	.87	1.07	.88	.81	2.24	2.24	1.18

WTR YR 2001      HIGHEST -.03 FEB 14, 2001      LOWEST 2.24 MANY DAYS



## MILLINGTON WETLAND--Continued

351856089511901. Local number, Sh:V-71 (W3-3).

LOCATION.--Lat 35°18'56", long 89°51'19", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
Owner: Tennessee Department of Transportation (TDOT) and USGS.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 265 ft above sea level, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

REMARKS.--No missing record. Bottom of well, 2.37 ft below land surface. Negative values indicate water levels above land surface.

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

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.37	2.37	-.58	-.41	-.69	-.87	-.70	-.16	-1.12	.73	2.37	2.37
2	2.37	2.37	-.50	-.34	-.64	-.83	-.66	-.03	-1.05	1.20	2.37	2.00
3	2.37	2.37	-.42	-.31	-.58	-.80	-.63	.16	-1.02	1.71	2.37	2.21
4	2.37	2.37	-.36	-.29	-.56	-.80	-.59	.38	-1.23	2.19	2.37	2.37
5	2.37	2.37	-.33	-.33	-.52	-.93	-.56	.55	-1.14	2.37	2.37	2.37
6	2.37	2.37	-.32	-.39	-.48	-.87	-.52	.82	-1.12	2.37	2.37	2.37
7	2.37	2.31	-.29	-.43	-.45	-.83	-.48	.93	-1.12	2.37	2.37	2.37
8	2.37	2.35	-.27	-.46	-.42	-.78	-.44	.39	-1.07	2.37	2.37	2.37
9	2.37	2.36	-.24	-.45	-.41	-.73	-.40	.65	-1.01	2.37	2.37	1.87
10	2.37	2.37	-.22	-.40	-.59	-.69	-.37	.96	-.96	2.37	2.37	2.10
11	2.37	2.37	-.20	-.41	-.58	-.66	-.33	1.07	-.92	2.37	2.37	2.33
12	2.37	2.37	-.13	-.58	-.59	-.65	-.38	1.19	-.88	2.37	2.37	2.37
13	2.37	2.37	-.12	-.60	-.63	-.74	-.47	1.46	-.84	2.37	2.37	2.37
14	2.37	2.37	-.33	-.59	-.86	-.70	-.76	1.80	-.79	2.37	2.37	2.37
15	2.37	2.37	-.37	-.60	-.99	-.70	-.75	2.10	-.79	2.37	2.37	2.37
16	2.37	2.37	-.39	-.54	-1.30	-.77	-.66	2.35	-.74	2.37	2.37	2.37
17	2.37	2.37	-1.00	-.53	-1.27	-.73	-.58	2.37	-.69	2.37	2.37	2.37
18	2.37	2.37	-.93	-.60	-1.16	-.69	-.52	2.37	-.63	2.37	2.37	2.37
19	2.37	2.37	-.86	-.79	-1.08	-.66	-.47	2.37	-.57	2.37	2.37	2.37
20	2.37	2.37	-.80	-.79	-1.00	-.64	-.44	2.37	-.52	2.37	2.37	-.83
21	2.37	2.37	-.78	-.76	-.93	-.60	-.41	2.37	-.47	2.37	2.37	-.87
22	2.37	2.37	-.72	-.72	-.90	-.57	-.37	-1.00	-.42	2.37	2.37	-.84
23	2.37	2.37	-.65	-.69	-.86	-.55	-.35	-.94	-.37	2.37	2.37	-.81
24	2.37	2.37	-.60	-.65	-.85	-.53	-.51	-.93	-.32	2.37	2.37	-.78
25	2.37	1.69	-.53	-.59	-.86	-.50	-.47	-.87	-.27	2.37	2.37	-.76
26	2.37	-.75	-.49	-.55	-1.01	-.47	-.43	-.82	-.19	2.37	2.37	-.72
27	2.37	-.79	-.53	-.52	-.96	-.45	-.38	-.77	-.08	2.37	2.37	-.67
28	2.37	-.76	-.65	-.48	-.91	-.43	-.34	-.76	.07	2.37	2.37	-.61
29	2.37	-.72	-.63	-.47	---	-.46	-.30	-.78	.10	2.37	2.37	-.54
30	2.37	-.65	-.51	-.73	---	-.47	-.24	-.77	.33	2.37	2.37	-.49
31	2.37	---	-.42	-.75	---	-.66	---	-.84	---	2.37	2.37	---
TOTAL	73.47	54.81	-15.17	-16.75	-22.08	-20.76	-14.51	17.99	-19.83	69.82	73.47	35.77
MEAN	2.37	1.83	-.49	-.54	-.79	-.67	-.48	.58	-.66	2.25	2.37	1.19
MAX	2.37	2.37	-.12	-.29	-.41	-.43	-.24	2.37	.33	2.37	2.37	2.37
MIN	2.37	-.79	-1.00	-.79	-1.30	-.93	-.76	-1.00	-1.23	.73	2.37	-.87
WTR YR 2001		HIGHEST	-1.46	FEB 16, 2001		LOWEST	2.37	MANY DAYS				

## GROUND-WATER LEVELS

## MILLINGTON WETLAND--Continued

351855089515301. Local number, Sh:V-74 (W2-5).

LOCATION.--Lat 35°18'55", long 89°51'53", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
 Owner: Tennessee Department of Transportation (TDOT) and USGS.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 265 ft above sea level, from topographic map. Measuring point: Top of casing, 3.00 ft above land-surface datum.

REMARKS.--No missing record. Bottom of well, 2.12 ft below land surface. Negative values indicate water levels above land surface.

PERIOD OF RECORD.--January 1997 to current year.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
 DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.12	2.12	2.12	2.12	2.12	2.12	.52	2.12	2.12	2.12	2.12	2.12
2	2.12	2.12	2.12	2.12	2.12	2.12	.65	2.12	2.12	2.12	2.12	2.12
3	2.12	2.12	2.12	2.12	2.12	2.12	.80	2.12	2.12	2.12	2.12	2.12
4	2.12	2.12	2.12	2.12	2.12	2.12	1.00	2.12	1.99	2.12	2.12	2.12
5	2.12	2.12	2.12	2.12	2.12	1.66	1.18	2.12	2.12	2.12	2.12	2.12
6	2.12	2.12	2.12	2.12	2.12	1.86	1.34	2.12	2.12	2.12	2.12	2.12
7	2.12	2.12	2.12	2.12	2.12	2.00	1.49	2.12	2.01	2.12	2.12	2.12
8	2.12	2.12	2.12	2.12	2.12	2.10	1.65	2.12	2.12	2.12	2.12	2.12
9	2.12	2.12	2.12	2.12	2.12	2.12	1.78	2.12	2.12	2.12	2.12	2.12
10	2.12	2.12	2.12	2.12	2.12	2.12	1.91	2.12	2.12	2.12	2.12	2.12
11	2.12	2.12	2.12	2.12	2.12	2.12	2.01	2.12	2.12	2.12	2.12	2.12
12	2.12	2.12	2.12	2.09	2.12	2.12	2.05	2.12	2.12	2.12	2.12	2.12
13	2.12	2.12	2.12	2.11	2.12	1.85	2.05	2.12	2.12	2.12	2.12	2.12
14	2.12	2.12	2.12	2.11	1.39	1.81	.96	2.12	2.12	2.12	2.12	2.12
15	2.12	2.12	2.05	1.95	1.37	1.82	.98	2.12	2.12	2.12	2.12	2.12
16	2.12	2.12	2.03	2.03	.97	1.02	1.07	2.12	2.12	2.12	2.12	2.12
17	2.12	2.12	2.13	2.06	1.68	1.19	1.36	2.12	2.12	2.12	2.12	2.12
18	2.12	2.12	2.12	1.99	2.12	1.34	1.59	2.12	2.12	2.12	2.12	2.12
19	2.12	2.12	2.12	1.51	2.12	1.46	1.75	2.12	2.12	2.12	2.12	2.12
20	2.12	2.12	2.12	2.12	2.12	1.56	1.89	2.12	2.12	2.12	2.12	2.12
21	2.12	2.12	2.12	2.12	2.12	1.67	2.03	2.12	2.12	2.12	2.12	2.12
22	2.12	2.12	2.12	2.12	2.12	1.79	2.12	2.12	2.12	2.12	2.12	2.12
23	2.12	2.12	2.12	2.12	2.12	1.90	2.12	2.12	2.12	2.12	2.12	2.12
24	2.12	2.12	2.12	2.12	2.12	2.02	1.98	2.12	2.12	2.12	2.12	2.12
25	2.12	2.12	2.12	2.12	2.12	2.12	2.08	2.12	2.12	2.12	2.12	2.12
26	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
27	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
28	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
29	2.12	2.12	2.12	2.12	---	2.12	2.12	2.12	2.12	2.12	2.12	2.12
30	2.12	2.12	2.12	1.68	---	2.12	2.12	2.12	2.12	2.12	2.12	2.12
31	2.12	---	2.12	2.12	---	1.65	---	2.12	---	2.12	2.12	---
TOTAL	65.72	63.60	65.57	64.17	56.29	58.38	48.96	65.72	63.36	65.72	65.72	63.60
MEAN	2.12	2.12	2.12	2.07	2.01	1.88	1.63	2.12	2.11	2.12	2.12	2.12
MAX	2.12	2.12	2.13	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
MIN	2.12	2.12	2.03	1.51	.97	1.02	.52	2.12	1.99	2.12	2.12	2.12

WTR YR 2001 HIGHEST .06 FEB 15, JUN 03, 2001

LOWEST 2.12 MANY DAYS

## MILLINGTON WETLAND--Continued

351852089512501. Local number, Sh:V-75 (W2-6).

LOCATION.--Lat 35°18'52", long 89°51'25", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
Owner: Tennessee Department of Transportation (TDOT) and USGS.

INSTRUMENTATION.--Water-level recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 265 ft above sea level, from topographic map. Measuring point: Top of casing, 3.70 ft above land-surface datum.

REMARKS.--Missing records., February 12 to March 28, 2001. Bottom of well, 2.10 ft below land surface. Negative values indicate water levels above land surface.

PERIOD OF RECORD.--January 1997 to current year.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.10	2.10	2.10	2.10	2.10	---	.00	2.10	.15	2.10	2.10	2.10
2	2.10	2.10	2.10	2.10	2.10	---	.05	2.10	.68	2.10	2.10	2.10
3	2.10	2.10	2.10	2.10	2.10	---	.12	2.10	.76	2.10	2.10	2.10
4	2.10	2.10	2.10	2.10	2.10	---	.27	2.10	.14	2.10	2.10	2.10
5	2.10	2.10	2.10	2.10	2.10	---	.35	2.10	.35	2.10	2.10	2.10
6	2.10	2.10	2.10	2.10	2.10	---	.56	2.10	.45	2.10	2.10	2.10
7	2.10	2.10	2.10	2.10	2.10	---	1.01	2.10	-.02	2.10	2.10	2.10
8	2.10	2.10	2.10	2.10	2.10	---	1.27	2.10	.25	2.10	2.10	2.10
9	2.10	2.10	2.10	2.10	2.10	---	1.47	2.10	.85	2.10	2.10	2.10
10	2.10	2.10	2.10	2.10	2.07	---	1.64	2.10	1.31	2.10	2.10	2.10
11	2.10	2.10	2.10	2.10	2.10	---	1.75	2.10	1.54	2.10	2.10	2.10
12	2.10	2.10	2.10	2.10	2.10	---	1.68	2.10	1.73	2.10	2.10	2.10
13	2.10	2.10	2.10	2.10	2.10	---	.01	2.10	1.90	2.10	2.10	2.10
14	2.10	2.10	2.10	2.10	---	---	.07	2.10	2.00	2.10	2.10	2.10
15	2.10	2.10	2.03	2.10	---	---	.05	2.10	2.08	2.10	2.10	2.10
16	2.10	2.10	2.03	2.10	---	---	.39	2.10	2.10	2.10	2.10	2.10
17	2.10	2.10	1.92	2.10	---	---	.97	2.10	2.10	2.10	2.10	2.10
18	2.10	2.10	2.05	2.10	---	---	1.21	2.10	2.10	2.10	2.10	2.10
19	2.10	2.10	2.10	1.89	---	---	1.43	2.10	2.10	2.10	2.10	2.10
20	2.10	2.10	2.10	2.09	---	---	1.62	2.10	2.10	2.10	2.10	2.10
21	2.10	2.10	2.10	2.10	---	---	1.78	2.10	2.10	2.10	2.10	2.10
22	2.10	2.10	2.10	2.10	---	---	1.90	2.02	2.10	2.10	2.10	2.10
23	2.10	2.10	2.10	2.10	---	---	1.96	2.02	2.10	2.10	2.10	2.10
24	2.10	2.10	2.10	2.10	---	---	.81	1.97	2.10	2.10	2.10	2.10
25	2.10	2.10	2.10	2.10	---	---	1.24	1.78	2.10	2.10	2.10	2.10
26	2.10	2.06	2.10	2.10	---	---	1.50	1.89	2.10	2.10	2.10	2.10
27	2.10	2.10	2.10	2.10	---	---	1.71	2.00	2.10	2.10	2.10	2.10
28	2.10	2.10	2.10	2.10	---	---	1.91	2.09	2.10	2.10	2.10	2.10
29	2.10	2.10	2.10	2.10	---	---	2.05	2.09	2.10	2.10	2.10	2.10
30	2.10	2.10	2.10	1.97	---	.68	2.10	2.10	2.10	2.10	2.10	2.10
31	2.10	---	2.10	2.09	---	-.01	---	2.08	---	2.10	2.10	---
TOTAL	65.10	62.96	64.73	64.74	27.27	0.67	32.88	64.14	45.67	65.10	65.10	63.00
MEAN	2.10	2.10	2.09	2.09	2.10	.34	1.10	2.07	1.52	2.10	2.10	2.10
MAX	2.10	2.10	2.10	2.10	2.10	.68	2.10	2.10	2.10	2.10	2.10	2.10
MIN	2.10	2.06	1.92	1.89	2.07	-.01	.00	1.78	-.02	2.10	2.10	2.10
WTR YR 2001	HIGHEST	-0.18	JUN 03, 2001	LOWEST	2.10	MANY DAYS						

## GROUND-WATER LEVELS

## MILLINGTON WETLAND--Continued

351900089511100. Local number, Beaver Pond.

LOCATION.--Lat 35°19'00", long 89°51'11", Hydrologic Unit 08010209, 0.5 mi east of intersection of State Route 385 and Singleton Parkway, near the southeastern boundary of the Naval Support Activity Midsouth.  
 Owner: Tennessee Department of Transportation (TDOT) and USGS.

DRAINAGE AREA.--88 mi<sup>2</sup>.

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

GAGE.--Water-level recorders--15-minute interval

REMARKS.--No missing record. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 3.91 ft. from recorded range in stage, Mar. 2, 1997; minimum .43 ft. Nov. 14, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.52 ft. June 3; minimum, .52 ft. Oct. 20, 21, 23-31, Nov. 1, 3, 12-13.

## GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	.54	.53	.54	.53	.52	.53	.76	.75	.75	1.60	1.59	1.60
2	.54	.53	.54	.53	.53	.53	.75	.72	.74	1.60	1.59	1.60
3	.54	.53	.54	.53	.52	.53	.72	.70	.71	1.60	1.59	1.59
4	.54	.53	.54	.53	.53	.53	.70	.69	.69	1.59	1.57	1.58
5	.54	.53	.53	.53	.53	.53	.69	.67	.68	1.59	1.57	1.58
6	.54	.53	.54	.53	.53	.53	.67	.66	.66	1.60	1.59	1.59
7	.54	.54	.54	.53	.53	.53	.66	.64	.65	1.60	1.59	1.60
8	.54	.53	.54	.53	.53	.53	.64	.61	.63	1.60	1.59	1.60
9	.54	.53	.54	.53	.53	.53	.61	.59	.60	1.59	1.58	1.59
10	.54	.53	.54	.53	.53	.53	.59	.57	.58	1.59	1.57	1.58
11	.54	.53	.54	.53	.53	.53	.57	.57	.57	1.66	1.58	1.62
12	.54	.53	.54	.53	.52	.53	.57	.56	.56	1.67	1.66	1.66
13	.54	.53	.53	.53	.52	.53	.80	.56	.66	1.68	1.67	1.67
14	.54	.53	.53	.53	.53	.53	.82	.80	.81	1.73	1.68	1.72
15	.53	.53	.53	.53	.53	.53	.96	.82	.85	1.74	1.73	1.74
16	.53	.53	.53	.54	.53	.53	1.45	.96	1.33	1.74	1.74	1.74
17	.53	.53	.53	.54	.54	.54	1.47	1.45	1.46	1.79	1.74	1.77
18	.53	.53	.53	.54	.54	.54	1.49	1.47	1.48	1.95	1.79	1.85
19	.53	.53	.53	.54	.53	.54	1.50	1.49	1.49	2.00	1.95	1.98
20	.53	.52	.53	.54	.53	.54	1.52	1.50	1.51	2.00	2.00	2.00
21	.53	.52	.53	.54	.54	.54	1.53	1.52	1.52	2.01	2.00	2.00
22	.53	.53	.53	.54	.53	.54	1.53	1.52	1.53	2.01	2.00	2.01
23	.53	.52	.53	.54	.54	.54	1.54	1.53	1.53	2.01	2.01	2.01
24	.53	.52	.53	.76	.54	.60	1.55	1.54	1.54	2.01	2.01	2.01
25	.53	.52	.53	.71	.65	.66	1.55	1.54	1.55	2.01	2.00	2.01
26	.53	.52	.53	.66	.65	.66	1.58	1.54	1.55	2.01	2.01	2.01
27	.53	.52	.53	.78	.66	.72	1.59	1.58	1.59	2.01	2.00	2.00
28	.53	.52	.53	.78	.78	.78	1.60	1.59	1.60	2.00	2.00	2.00
29	.53	.52	.53	.78	.77	.77	1.61	1.60	1.61	2.16	2.00	2.07
30	.53	.52	.53	.77	.76	.76	1.61	1.60	1.61	2.16	2.16	2.16
31	.53	.52	.53	---	---	---	1.61	1.60	1.60	2.16	2.15	2.15
MONTH	.54	.52	.53	.78	.52	.57	1.61	.56	1.12	2.16	1.57	1.81

## GROUND-WATER LEVELS

323

## MILLINGTON WETLAND--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	2.15	2.14	2.14	3.24	3.23	3.23	3.19	3.18	3.19	2.90	2.86	2.88
2	2.14	2.13	2.13	3.23	3.22	3.23	3.18	3.17	3.18	2.86	2.82	2.84
3	2.13	2.12	2.12	3.28	3.22	3.22	3.18	3.18	3.18	2.82	2.79	2.81
4	2.12	2.12	2.12	3.28	3.26	3.26	3.18	3.17	3.17	2.79	2.75	2.77
5	2.12	2.11	2.11	3.26	3.26	3.26	3.17	3.16	3.16	2.75	2.73	2.74
6	2.11	2.10	2.10	3.26	3.25	3.26	3.16	3.14	3.15	2.73	2.70	2.72
7	2.10	2.09	2.09	3.25	3.25	3.25	3.14	3.12	3.13	2.77	2.69	2.73
8	2.09	2.08	2.08	3.25	3.24	3.25	3.12	3.11	3.12	2.77	2.75	2.76
9	2.18	2.08	2.12	3.24	3.23	3.23	3.11	3.09	3.10	2.75	2.72	2.73
10	2.18	2.18	2.18	3.23	3.21	3.22	3.09	3.08	3.09	2.72	2.69	2.70
11	2.18	2.17	2.18	3.21	3.20	3.20	3.11	3.06	3.07	2.70	2.68	2.69
12	2.21	2.18	2.20	3.26	3.20	3.24	3.19	3.09	3.11	2.69	2.66	2.68
13	2.37	2.21	2.29	3.24	3.23	3.23	3.20	3.17	3.18	2.66	2.61	2.63
14	2.72	2.37	2.45	3.23	3.22	3.22	3.18	3.17	3.17	2.61	2.57	2.59
15	3.20	2.72	3.03	3.27	3.22	3.26	3.20	3.17	3.19	2.57	2.53	2.55
16	3.37	3.20	3.29	3.25	3.24	3.25	3.18	3.15	3.17	2.53	2.48	2.51
17	3.34	3.24	3.29	3.24	3.24	3.24	3.15	3.12	3.14	2.48	2.44	2.46
18	3.26	3.24	3.25	3.24	3.23	3.24	3.12	3.10	3.11	2.44	2.40	2.42
19	3.24	3.21	3.22	3.23	3.23	3.23	3.10	3.08	3.09	2.40	2.37	2.38
20	3.21	3.19	3.20	3.23	3.22	3.22	3.08	3.06	3.07	2.37	2.35	2.36
21	3.19	3.17	3.18	3.22	3.20	3.21	3.06	3.04	3.05	2.79	2.37	2.71
22	3.18	3.16	3.17	3.20	3.19	3.20	3.04	3.02	3.03	2.79	2.77	2.78
23	3.16	3.15	3.15	3.19	3.17	3.18	3.11	3.01	3.05	2.80	2.75	2.77
24	3.25	3.13	3.15	3.17	3.16	3.17	3.11	3.08	3.10	2.80	2.79	2.80
25	3.26	3.23	3.25	3.16	3.13	3.15	3.08	3.05	3.07	2.79	2.77	2.78
26	3.26	3.25	3.25	3.13	3.11	3.12	3.05	3.03	3.04	2.77	2.75	2.76
27	3.25	3.24	3.25	3.11	3.09	3.10	3.03	3.01	3.02	2.75	2.73	2.74
28	3.25	3.24	3.24	3.10	3.08	3.09	3.01	2.97	2.99	2.79	2.73	2.77
29	---	---	---	3.12	3.10	3.11	2.97	2.94	2.96	2.79	2.78	2.79
30	---	---	---	3.17	3.12	3.16	2.94	2.90	2.92	2.85	2.77	2.79
31	---	---	---	3.19	3.16	3.17	---	---	---	3.14	2.85	3.01
MONTH	3.37	2.08	2.69	3.28	3.08	3.21	3.20	2.90	3.10	3.14	2.35	2.70
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	3.21	3.14	3.19	2.59	2.55	2.57	1.84	1.80	1.82	1.51	1.19	1.33
2	3.21	3.19	3.20	2.55	2.52	2.54	1.80	1.76	1.78	1.52	1.51	1.52
3	3.52	3.19	3.35	2.52	2.48	2.50	1.76	1.73	1.74	1.52	1.50	1.51
4	3.39	3.30	3.34	2.48	2.44	2.46	1.75	1.71	1.73	1.50	1.47	1.49
5	3.30	3.28	3.29	2.44	2.42	2.43	1.71	1.67	1.70	1.47	1.44	1.46
6	3.32	3.28	3.30	2.42	2.38	2.40	1.67	1.63	1.65	1.47	1.42	1.45
7	3.31	3.30	3.30	2.38	2.34	2.36	1.78	1.63	1.69	1.47	1.46	1.47
8	3.30	3.28	3.29	2.34	2.30	2.32	1.78	1.77	1.78	1.69	1.46	1.59
9	3.28	3.25	3.26	2.30	2.26	2.28	1.77	1.75	1.76	1.69	1.68	1.69
10	3.25	3.22	3.23	2.28	2.24	2.27	1.77	1.75	1.77	1.68	1.65	1.67
11	3.22	3.19	3.20	2.28	2.24	2.26	1.75	1.73	1.74	1.65	1.62	1.63
12	3.19	3.15	3.18	2.27	2.23	2.25	1.75	1.71	1.73	1.62	1.58	1.60
13	3.16	3.13	3.14	2.26	2.22	2.24	1.80	1.74	1.77	1.58	1.55	1.57
14	3.13	3.10	3.11	2.22	2.18	2.20	1.80	1.78	1.79	1.55	1.52	1.54
15	3.14	3.10	3.12	2.18	2.14	2.16	1.78	1.75	1.76	1.52	1.48	1.50
16	3.11	3.07	3.10	2.14	2.11	2.13	1.75	1.71	1.73	1.48	1.45	1.47
17	3.07	3.04	3.06	2.16	2.11	2.14	1.71	1.67	1.70	1.45	1.41	1.43
18	3.04	3.00	3.02	2.15	2.12	2.14	1.67	1.64	1.66	1.41	1.39	1.40
19	3.00	2.95	2.98	2.15	2.10	2.12	1.64	1.60	1.62	1.72	1.39	1.65
20	2.95	2.91	2.93	2.15	2.13	2.14	1.60	1.55	1.58	1.72	1.69	1.71
21	2.91	2.88	2.90	2.16	2.11	2.13	1.55	1.51	1.54	1.69	1.67	1.68
22	2.88	2.84	2.86	2.16	2.13	2.15	1.51	1.47	1.50	1.67	1.65	1.66
23	2.84	2.80	2.82	2.13	2.10	2.12	1.47	1.43	1.45	1.65	1.63	1.64
24	2.80	2.75	2.78	2.10	2.07	2.09	1.43	1.39	1.41	1.63	1.60	1.62
25	2.75	2.71	2.73	2.07	2.03	2.05	1.39	1.34	1.37	1.60	1.57	1.58
26	2.71	2.67	2.69	2.03	2.01	2.02	1.34	1.30	1.32	1.57	1.54	1.55
27	2.67	2.63	2.65	2.01	1.98	1.99	1.30	1.27	1.29	1.54	1.51	1.52
28	2.63	2.61	2.62	1.98	1.94	1.96	1.28	1.24	1.26	1.51	1.47	1.49
29	2.63	2.61	2.62	1.94	1.91	1.93	1.24	1.21	1.23	1.47	1.44	1.46
30	2.61	2.59	2.60	1.91	1.88	1.90	1.21	1.17	1.19	1.44	1.41	1.42
31	---	---	---	1.88	1.84	1.86	1.19	1.16	1.18	---	---	---
MONTH	3.52	2.59	3.03	2.59	1.84	2.20	1.84	1.16	1.59	1.72	1.19	1.54



## GROUND-WATER LEVELS

## HAMILTON COUNTY

351428085003600. Local number, Hm:0-15.

LOCATION.--Lat 35°14'28", long 85°00'36", Hydrologic Unit 06020001, at Smith Road and State Highway 58, near Snow Hill.  
Owner: Savannah Valley Utility District.

AQUIFER.--Knox Dolomite of Cambrian and Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 10 in., depth 262 ft, cased to 50 ft, open end.

INSTRUMENTATION.--Water-level recorder -- 60-minute interval.

DATUM.--Elevation of land-surface datum is 735 ft above sea level, from topographic map. Measuring point: Instrument shelf, 5.66 ft above land-surface datum.

REMARKS.--Records good. Well previously published as "at Savannah Valley". Water level affected by pumping from municipal supply well 300 ft south. Negative values indicate water levels above land-surface.

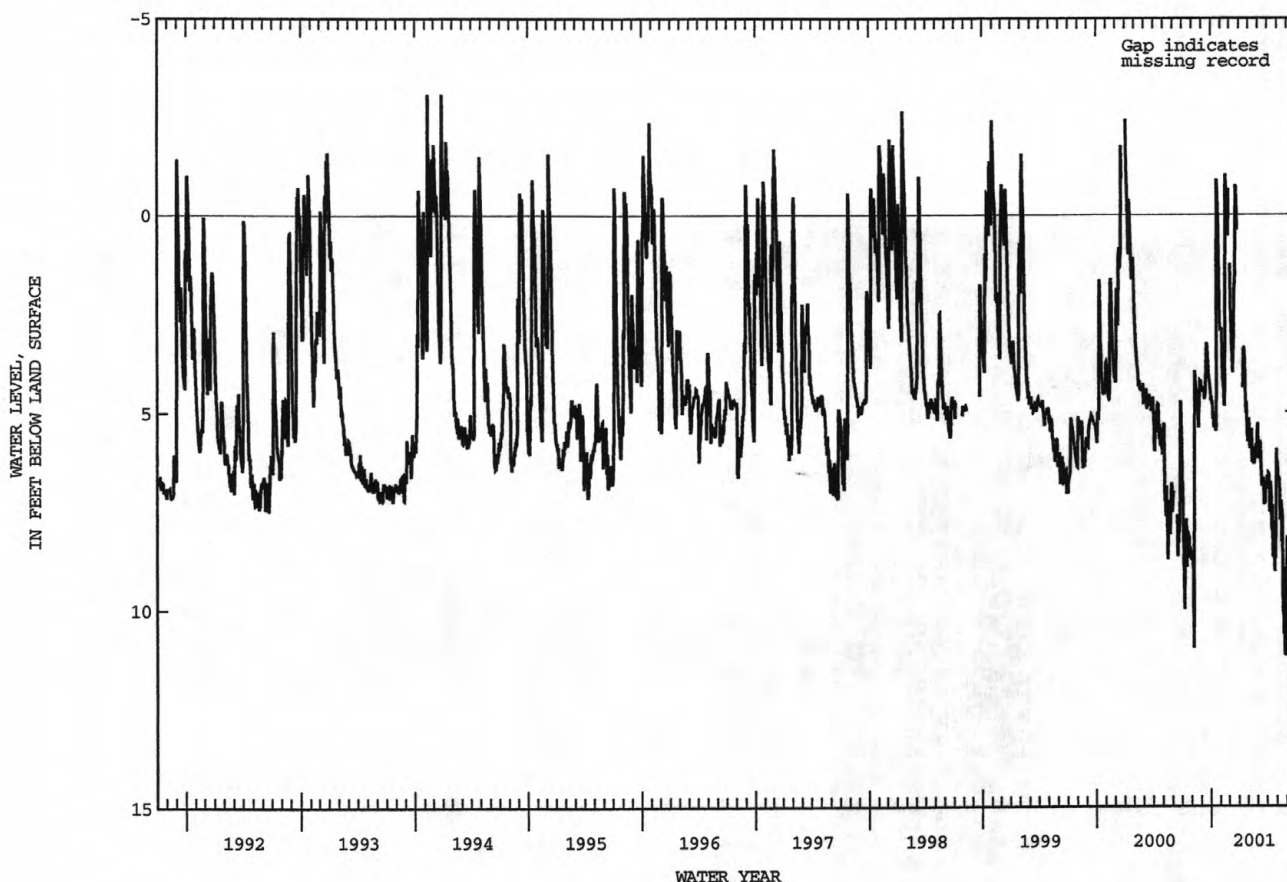
PERIOD OF RECORD.--May 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.33 ft above land-surface datum, Feb. 11, 1994; lowest, 22.45 ft below land-surface datum, Sept. 3, 1988.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.49	8.94	4.54	4.97	2.90	2.54	---	6.03	5.93	6.77	6.93	10.30
10	9.47	4.09	4.76	5.60	4.57	3.95	---	5.60	6.46	7.03	7.71	10.53
15	8.96	4.71	4.29	5.50	4.03	3.38	3.78	6.07	7.13	8.15	8.10	14.00
20	8.62	5.19	3.61	-73	-20	1.67	4.20	6.48	7.35	9.52	10.70	9.99
25	8.86	4.84	4.29	.89	1.01	.40	5.09	6.11	7.68	10.09	11.78	8.46
ECM	8.83	4.51	4.85	3.21	---	---	5.85	5.42	6.75	6.50	10.18	10.46
MAX	10.52	11.68	4.87	5.72	5.04	4.29	5.90	6.56	7.68	10.09	12.28	14.00

LOWEST MONTHLY WATER LEVEL



## GROUND-WATER LEVELS

325

## LAUDERDALE COUNTY

353839089493500. Local number, Ld:F-4.

LOCATION.--Lat 35°38'39", long 89°49'35", Hydrologic Unit 08010208, 1.1 mi north of State Highway 87 off Crutcher Lake Rd, at Fort Pillow State Park.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 to 6 to 3 in., depth 879 ft, cased to 869 ft, screened 869 to 879 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute interval.

DATUM.--Elevation of land-surface datum is 437.05 ft above sea level. Measuring point: Top of casing, 2.80 ft above land-surface datum.

REMARKS.--Missing records Oct. 13 to Dec. 19, Dec. 24 to Jan. 2, and Jan. 28 to Feb. 8.

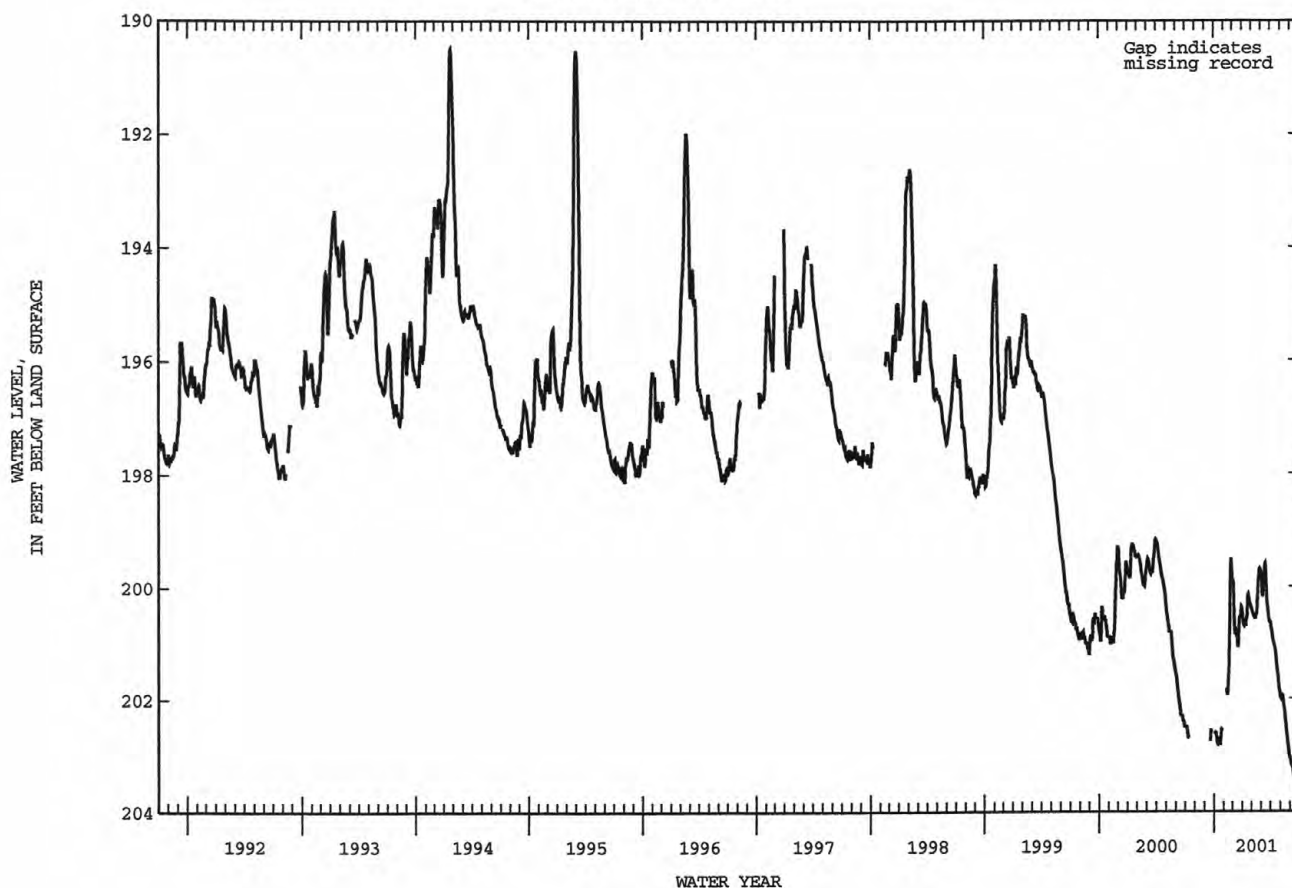
PERIOD OF RECORD.--April 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 187.76 ft below land-surface datum, Apr. 7, 1975; lowest, 200.50 ft below land-surface datum, Sept. 30, 1999.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	202.50	---	---	202.61	---	200.18	200.66	200.46	200.13	200.79	201.93	203.18
10	202.70	---	---	202.80	201.86	200.85	200.66	200.54	200.03	200.97	202.02	203.30
15	---	---	---	202.79	201.84	200.85	200.60	200.58	199.60	201.10	202.25	203.43
20	---	---	202.77	202.75	200.94	201.08	200.18	200.46	200.23	201.36	202.52	203.48
25	---	---	---	202.59	199.53	200.56	200.29	199.86	200.51	201.61	202.82	203.62
DOM	---	---	---	---	199.87	200.38	200.38	199.77	200.63	201.93	203.05	203.66
MAX	202.70	---	202.77	202.83	201.95	201.09	200.70	200.58	200.63	201.93	203.05	203.66

LOWEST MONTHLY WATER LEVEL



## LINCOLN COUNTY

350034086422800. Local number, Li:G-1.

LOCATION.--Lat 35°00'34", long 86°42'28", Hydrologic Unit 06030002, on west side of Pepper Road at Taft well field, 0.8 mi south of State Highway 110, at Taft.  
Owner: Lincoln Count Board of Public Utilities.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 106.5 ft, cased to 106.5 ft, slotted from 53 to 87 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute interval.

DATUM.--Altitude of land-surface datum is 904.00. Measuring point: Top of casing 2.10 ft above land-surface datum.

REMARKS.--Records good. Water levels affected by pumpage from Taft Well field for municipal water supply.

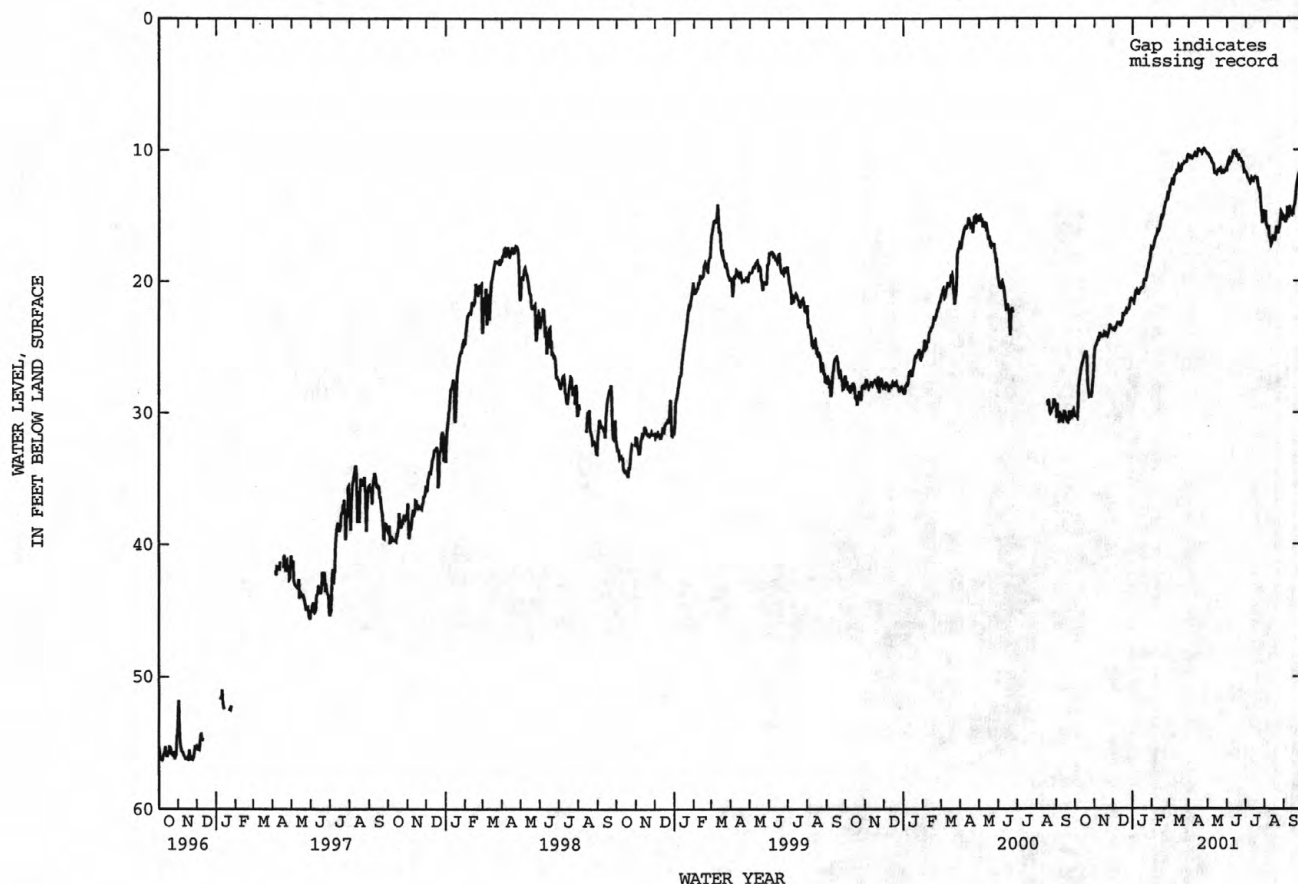
PERIOD OF RECORD.--April 1992 to Sept. 1992, Oct. 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.72 ft below land-surface datum, June 12, 2000; lowest, 56.53 ft below land-surface datum, Sept. 7, 8, 1996.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.02	24.63	23.55	20.93	16.85	13.60	10.71	10.86	11.11	12.58	17.13	15.50
10	26.72	24.31	23.28	21.05	16.29	11.92	10.63	11.83	10.52	12.61	17.50	15.55
15	25.70	24.34	23.22	20.57	15.32	11.44	10.01	11.89	10.55	12.24	17.15	15.43
20	28.59	24.11	22.56	20.03	14.51	11.35	10.60	11.66	11.12	13.57	17.01	13.81
25	29.32	23.42	22.20	19.17	13.51	10.98	10.74	11.97	11.31	15.72	16.15	12.22
EOB	25.79	23.75	21.55	17.58	13.99	10.45	10.40	11.62	12.03	17.11	15.77	12.60
MAX	31.02	25.23	23.77	21.69	17.64	13.81	10.95	12.03	12.03	17.11	17.97	16.15

LOWEST MONTHLY WATER LEVEL



## GROUND-WATER LEVELS

327

## SEVIER COUNTY

353922083345600. Local number, Sv:E-2.

LOCATION.--Lat 35°39'22", long 83°34'56", Hydrologic Unit 06010201, 3.3 mi southwest of Great Smoky Mountains National Park Headquarters, near Gatlinburg.

AQUIFER.--Elkmont Sandstone of Precambrian age.

WELL CHARACTERISTICS.--Drilled unused water-table well in phyllite, sandstone, diameter 6 in., depth 220 ft, cased to 27 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute interval.

DATUM.--Elevation of land-surface is 2,150 ft above sea level, from topographic map. Measuring point: Floor of recorder shelter 1.5 ft above land-surface datum.

REMARKS.--Highest water level readings may be influenced for short periods by surface inflow. Records good.

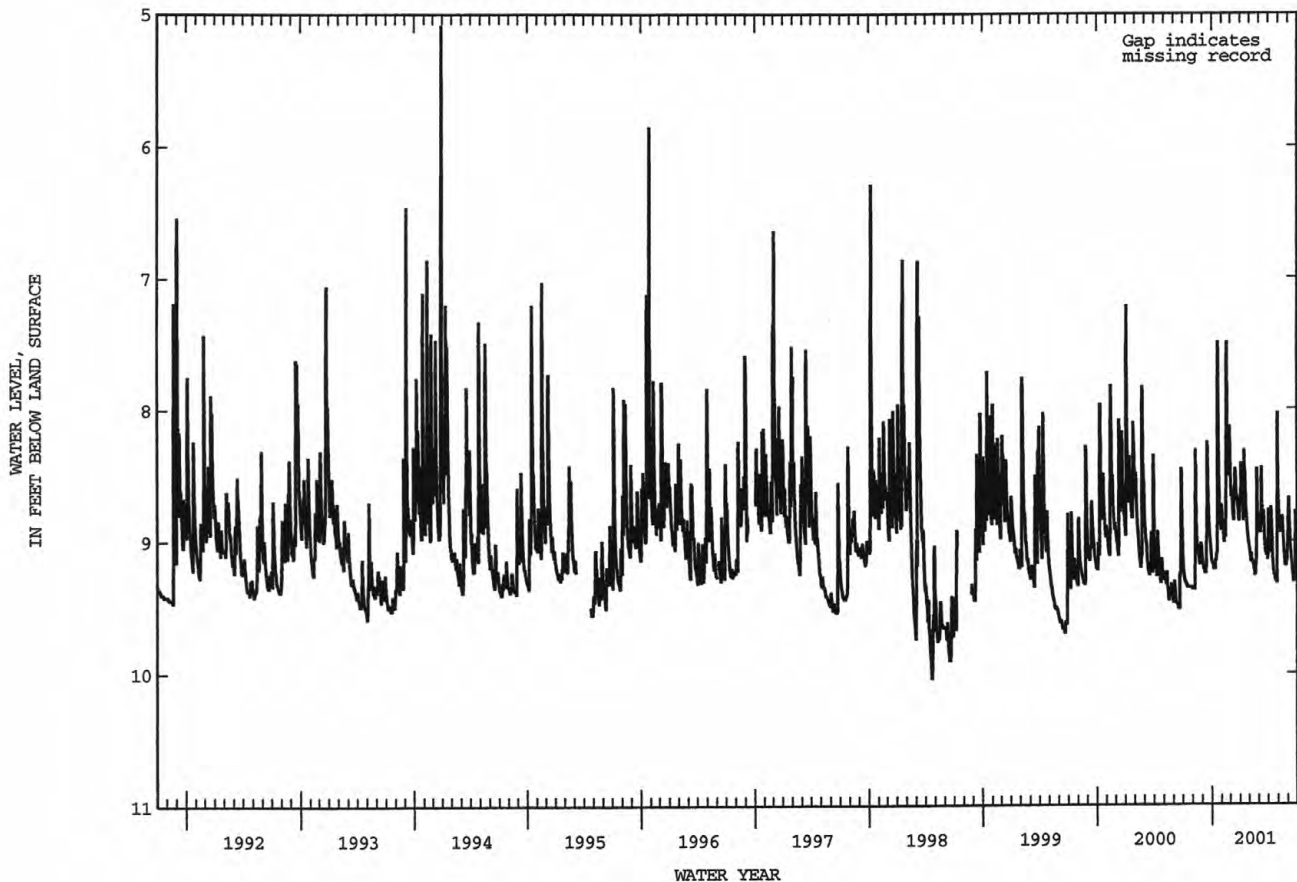
PERIOD OF RECORD.--May 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.48 ft below land-surface datum, Mar. 27, 1994; lowest, 11.66 ft below land-surface datum, Oct. 18, 19, 20, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.28	9.36	9.20	9.19	8.92	8.66	8.48	9.16	8.92	8.94	8.86	8.83
10	9.32	8.53	9.25	9.21	9.02	8.83	8.80	9.16	8.73	8.85	8.84	9.09
15	9.34	9.10	8.98	9.13	8.71	8.61	8.48	9.21	8.80	9.15	8.89	9.22
20	9.35	9.13	8.75	7.80	8.48	8.71	8.79	9.26	9.05	9.26	9.10	9.29
25	9.35	9.19	8.99	8.78	8.47	8.78	8.95	9.10	9.14	9.31	9.19	8.82
EOB	9.36	9.12	9.15	8.74	8.47	8.81	9.05	8.95	9.14	8.55	9.02	9.13
MAX	9.36	9.36	9.25	9.22	9.02	8.86	9.05	9.26	9.15	9.32	9.21	9.32

LOWEST MONTHLY WATER LEVEL



## GROUND-WATER LEVELS

## SHELBY COUNTY

350857089591401. Local number, Sh: P-99.

LOCATION.--Lat 35°08'57", long 89°59'14", Hydrologic Unit 08010210, access road off North Parkway, 0.2 mi south of North Parkway, in Overton Park.

Owner: USGS and Memphis Park Commission.

AQUIFER.--Fluvial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth 59 ft, cased to 53 ft, screened 53 to 59 ft.

INSTRUMENTATION.--Water level recorder--60 minute interval.

DATUM.--Elevation of land-surface datum is 271.06 ft above sea level. Measuring point: Top of casing, 2.50 ft above land-surface datum.

REMARKS.--No missing record.

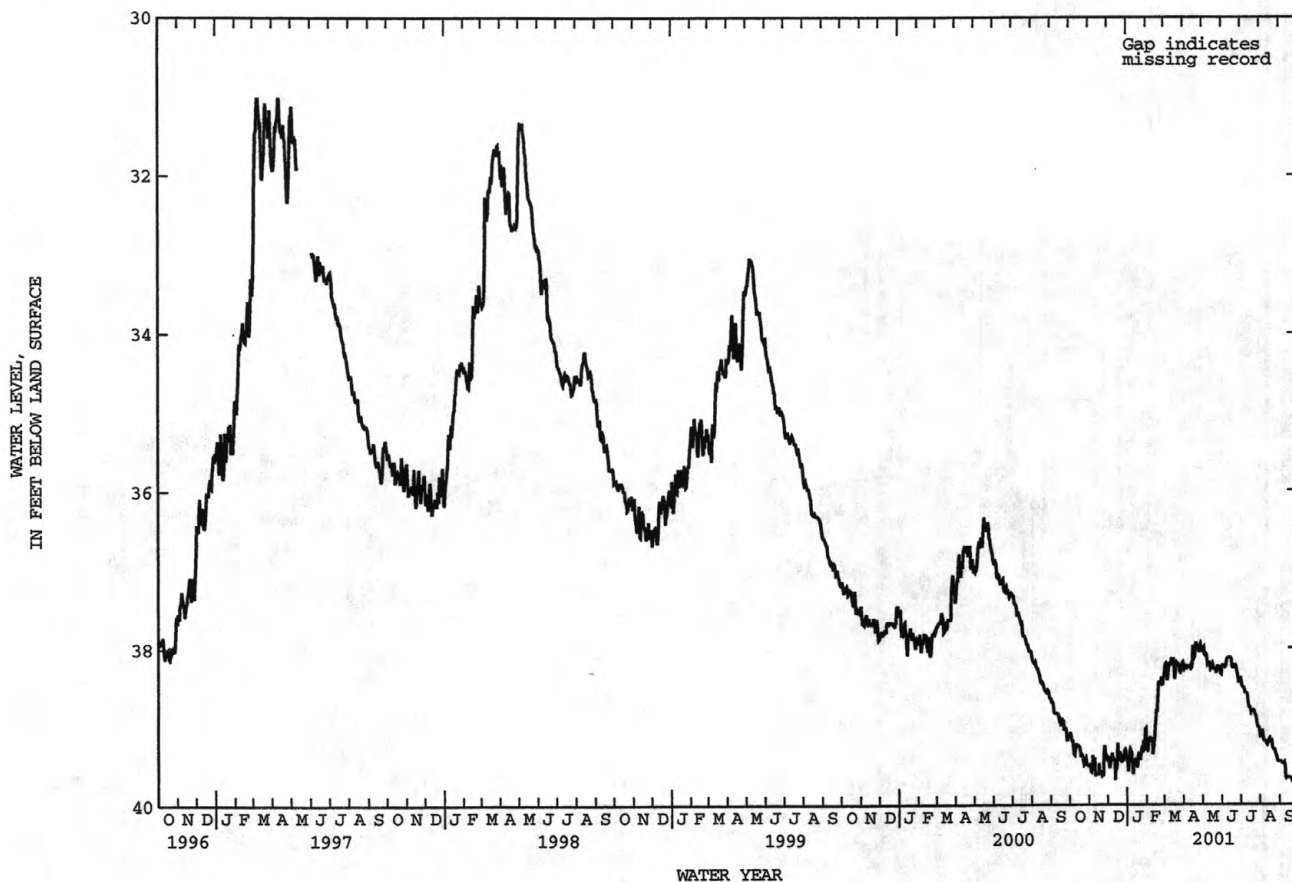
PERIOD OF RECORD.--July 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 29.27 ft below land-surface datum, April 30, 1991; lowest 42.58 ft below land-surface datum, November 15, 1971.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
LOWEST WATER LEVELS FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.18	39.58	39.45	39.30	39.20	38.42	38.27	38.07	38.25	38.53	39.13	39.47
10	39.25	39.63	39.42	39.61	39.37	38.21	38.24	38.18	38.13	38.59	39.22	39.66
15	39.27	39.61	39.59	39.51	38.92	38.17	38.12	38.24	38.19	38.75	39.16	39.65
20	39.37	39.63	39.39	39.43	38.43	38.21	37.93	38.28	38.25	38.81	39.28	39.71
25	39.45	39.31	39.45	39.38	38.50	38.33	38.06	38.28	38.35	38.88	39.35	39.75
DOM	39.51	39.45	39.44	39.26	38.37	38.23	38.06	38.28	38.39	39.09	39.45	39.80
MAX	39.51	39.64	39.70	39.61	39.37	38.42	38.29	38.38	38.44	39.09	39.45	39.80

LOWEST MONTHLY WATER LEVEL





## GROUND-WATER LEVELS

329

## SHELBY COUNTY--Continued

350900089482300. Local number, Sh:Q-1.

LOCATION.--Lat 35°09'00", long 89°48'23", Hydrologic Unit 08010210, south of Macon Road, 0.6 mi west of Germantown Road, near Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 384 ft, cased to 375 ft, screened 375 to 384 ft.

INSTRUMENTATION.--Water-level recorder -- 60-minute interval.

DATUM.--Elevation of land-surface datum is 330.40 ft above sea level. Measuring point: Top of casing, 2.40 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for municipal and industrial water supply in the Memphis area. No missing record. Records good.

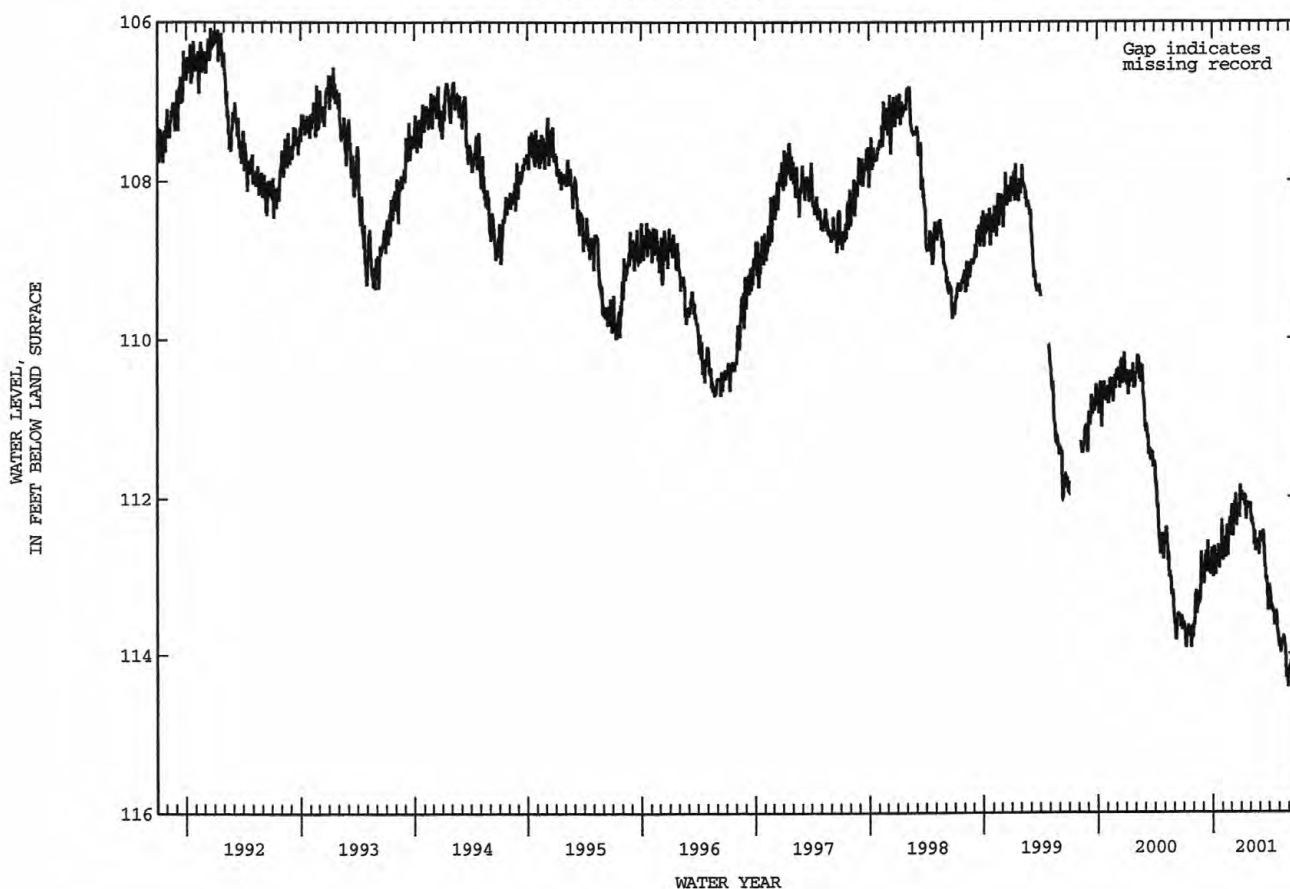
PERIOD OF RECORD.--October 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 74.08 ft below land-surface datum, Dec. 27, 1940; lowest 112.01 ft below land-surface datum, Sept. 10, 1999.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	113.81	113.51	113.00	112.69	112.62	112.48	112.07	112.36	112.60	113.28	113.90	114.25
10	113.78	113.52	112.78	113.03	112.78	112.31	112.08	112.39	112.49	113.43	113.85	114.27
15	113.68	113.41	112.96	112.83	112.38	112.08	112.05	112.52	112.68	113.46	113.81	114.32
20	113.68	113.30	112.88	112.88	112.48	112.21	112.09	112.63	113.11	113.56	113.92	114.26
25	113.91	112.78	113.00	112.84	112.39	112.24	112.17	112.63	113.28	113.66	114.24	114.33
ECM	113.71	113.10	112.89	112.66	112.40	111.91	112.18	112.67	113.19	113.87	114.31	114.44
MAX	113.95	113.66	113.13	113.04	112.84	112.52	112.31	112.78	113.49	113.87	114.45	114.44

LOWEST MONTHLY WATER LEVEL



## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

## FAYETTE COUNTY

352226089330101. Local number, Fa:R-1.

LOCATION.--Lat 35°22'26", long 89°33'01", Hydrologic Unit 08010209, 80 ft south of State Highway 59, 1.2 mi southeast of U.S. Highway 70, near Braden.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Fort Pillow Sand of Wilcox Group of early Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in., depth 1,025 ft, cased to 1,008 ft, screened 1,008 to 1,025 ft.

INSTRUMENTATION.--Periodic measurements by USGS personnel.

DATUM.--Elevation of land-surface datum is 317.50 ft above sea level. Measuring point: Top of casing, 3.70 ft above land-surface datum.

PERIOD OF RECORD.--August 1949 to current year. Analog record August 1949 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 64.89 ft below land-surface datum, Aug. 31, 1949; lowest recorded, 76.26 ft below land-surface datum, Dec. 5, 1970; highest water level measured, 73.61 ft below land-surface datum, Apr. 28, 1976; lowest measured, 97.52 ft below land-surface datum, Aug. 1, 2001.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	94.13	NOV 29	94.14	DEC 27	94.19	JAN 31	94.16	FEB 27	94.17	APR 02	94.07
MAY 03	94.23	JUN 04	94.09	JUN 29	94.47	AUG 01	97.52	AUG 28	93.45	OCT 01	95.74*

352226089330102. Local number, Fa:R-2.

LOCATION.--Lat 35°22'26", long 89°33'01", Hydrologic Unit 08010209, 80 ft south of State Highway 59, 1.1 mi southeast of U.S. Highway 70, near Braden.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in., depth 365 ft, cased to 345 ft, screened 345 to 365 ft.

INSTRUMENTATION.--Periodic measurements by USGS personnel.

DATUM.--Elevation of land-surface datum is 317.20 ft above sea level. Measuring point: Top of casing, 4.20 ft above land-surface datum.

PERIOD OF RECORD.--October 1949 to current year. Analog record October 1949 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 37.25 ft below land-surface datum, Mar. 10, 1952; lowest recorded, 42.12 ft below land-surface datum, Nov. 30, 1967; highest water level measured, 39.00 ft below land-surface datum, March 3, 1998; lowest measured, 42.57 ft below land-surface datum, Oct. 1, 2001.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	42.03	NOV 29	42.10	DEC 27	42.11	JAN 31	42.06	FEB 27	41.91	APR 02	41.76
MAY 03	41.84	JUN 04	41.73	JUN 29	42.01	AUG 01	42.29	AUG 28	42.50	OCT 01	42.57*

## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

331

## SHELBY COUNTY

350514089553700. Local number, Sh:K-75.

LOCATION.--Lat 35°05'14", long 89°55'37", Hydrologic Unit 08010211, at Willowview Avenue and Getwell Road, at Memphis.  
Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Fluvial sand and gravel of Pleistocene age and possibly sand of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth 91 ft, cased to 81 ft, screened 81 to 91 ft.

INSTRUMENTATION.--Periodic measurements by USGS personnel.

DATUM.--Elevation of land-surface datum is 260 ft above sea level, from topographic map. Measuring point: Top of casing, 1.20 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--August 1948 to September 1994 water-level recorder, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 21.28 ft below land-surface datum, Apr. 2, 1950; lowest recorded, 52.03 ft below land-surface datum, Jan. 13, 1988; highest water level measured, 45.73 ft below land surface-datum, Jul 6, 1998; lowest measured, 50.83 ft below land-surface datum, Oct. 3, 2001.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	49.52	DEC 01	49.82	DEC 27	49.91	JAN 31	50.20	MAR 01	50.17	APR 04	50.40
MAY 03	20.41	MAY 30	50.47	JUL 02	50.54	AUG 01	50.68	AUG 29	50.73	OCT 03	50.83*

351435090005200. Local number, Sh:O-1.

LOCATION.--Lat 35°14'35", long 90°00'52", Hydrologic Unit 08010209, west side of O.K. Robertson Road, 0.4 mi north of U.S. Highway 51, at Memphis.  
Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 434 ft, cased to 424 ft, screened 424 to 434 ft.

INSTRUMENTATION.--Periodic measurements by USGS personnel.

DATUM.--Elevation of land-surface datum is 228.70 ft above sea level. Measuring point: Top of casing, 4.30 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for municipal and industrial water supply in the Memphis area.

PERIOD OF RECORD.--September 1940 to current year. Analog record September 1940 to January 1992, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 12.65 ft below land-surface datum, Sept. 3, 1940; lowest recorded, 68.82 ft below land-surface datum, Aug. 24, 1988; highest water level measured, 50.16 ft below land-surface datum, Mar. 29, 1994; lowest measured, 65.75 ft below land-surface datum, Sept. 7, 2000.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	63.95	NOV 01	63.14	NOV 30	62.05	DEC 28	61.24	JAN 30	61.73	FEB 28	59.07	APR 03	58.67
MAY 02	58.03	MAY 29	58.50	JUN 29	58.59	JUL 31	62.05	AUG 29	62.15	OCT 02	61.70*		

## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

## SHELBY COUNTY--Continued

50735089593300. Local number, Sh: P-76.

LOCATION.--Lat. 35°07'35", long 89°59'33", Hydrologic Unit 08010210, at Central Avenue and Tanglewood Street, at Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

INSTRUMENTATION.--Periodic measurements by USGS personnel.

DATUM.--Elevation of land-surface datum is 286.70 ft above sea level. Measuring point: Top of casing, 1.30 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for municipal and industrial water supply in the Memphis area.

PERIOD OF RECORD.--October 1928 to current year. Analog record October 1928 to September 1997, periodic measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.65 ft below land-surface datum, Apr. 3, 1933; lowest, 147.31 ft below land-surface datum, June 30, 1988.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	102.01	DEC 01	91.15	JAN 03	91.17	FEB 02	117.20	FEB 28	117.00	APR 04	116.48
MAY 04	118.18	MAY 30	119.40	JUN 02	118.34	AUG 02	123.70	AUG 30	127.59	OCT 03	121.11*

352112089571200. Local number, Sh:U-1.

LOCATION.--Lat 35°21'12", long 89°57'12", Hydrologic Unit 08010209, 3 mi west of Millington at Shelby Road and Shake Rag Road, Sloanville.

Owner: Mrs. T.S. Welch

AQUIFER.--Fort Pillow Sand of Wilcox Group of early Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 24 to 16 in., depth 1,558 ft, cased to 1,497 ft, screened 1,497 to 1,558 ft.

INSTRUMENTATION.--Periodic measurements by USGS personnel.

DATUM.--Elevation of land-surface datum is 264.20 ft above sea level. Measuring point: Top of casing, 0.60 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for municipal and industrial water supply at Millington and Memphis.

PERIOD OF RECORD.--August 1946 to current year. Analog record March 1948 to January 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 35.5 ft below land-surface datum, Apr. 11, 1948; lowest recorded, 60.42 ft below land-surface datum, Dec. 20, 1970; highest water level measured, 33.20 ft, Apr. 21, 1947; lowest measured, 90.00 ft below land-surface datum, Aug. 29, 2001.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	89.45	NOV 01	89.27	NOV 30	88.73	DEC 28	87.77	JAN 30	87.33	FEB 28	86.73	APR 03	86.42
MAY 02	86.58	MAY 29	87.34	JUN 29	88.23	JUL 31	89.46	AUG 29	90.00	OCT 02	89.99*		



## PERIODIC MEASUREMENTS OF GROUND-WATER LEVELS

333

## SHELBY COUNTY--Continued

352112089571300. Local number, Sh:U-2.

LOCATION.--Lat 35°21'12", long 89°57'13", Hydrologic Unit 08010209, 3 mi west of Millington at Shelby Road and Shake Rag Road, Sloanville.

Owner: Mrs. F.E. Byrd

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 18 to 12 in., depth 440 ft, cased to 360 ft, screened 360 to 440 ft.

INSTRUMENTATION.--Periodic measurements by USGS personnel.

DATUM.--Elevation of land-surface datum is 268.76 ft above sea level. Measuring point: Top of casing, 1.60 ft above land-surface datum.

REMARKS.--Water levels affected by pumpage for municipal and industrial water supply at Millington and Memphis.

PERIOD OF RECORD.--June 1953 to current year. Analog record June 1953 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.59 ft below land-surface datum, June 29, 1953; lowest, 64.88 ft below land-surface datum, Sept. 7, 2000.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	64.76	NOV 01	64.33	NOV 30	63.92	DEC 28	63.38	JAN 30	63.36	FEB 28	62.45	APR 03	62.13
MAY 02	61.88	MAY 29	62.00	JUN 29	61.62	JUL 31	63.32	AUG 29	63.65	OCT 02	63.78*		

## CRITTENDEN COUNTY, AR

350344090130000. Local number, Ar:H-2.

LOCATION.--Lat 35°03'44", long 90°13'00", Hydrologic Unit 08020203, 0.7 mi east of Millers.

Owner: Memphis Light, Gas, and Water Division, City of Memphis, and U.S. Geological Survey.

AQUIFER.--Memphis Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in., depth 502 ft, cased to 482 ft, screened 482 to 502 ft.

INSTRUMENTATION.--Periodic measurements by USGS personnel.

DATUM.--Elevation of land-surface datum is 211 ft above sea level, from topographic map. Measuring point: Inside top of shelter base plate, 3.30 ft above land-surface datum.

REMARKS.--Well affected by pumpage in the Memphis, Tennessee area. Records good.

PERIOD OF RECORD.--May 1983 to current year. Analog record from May 1983 to October 1995, periodic measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.28 ft below land-surface datum, May 30, 31, 1983; lowest, 33.39 ft below land-surface datum, Oct. 31, 2000.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	33.39	NOV 30	31.81	DEC 28	31.33	FEB 02	32.02	FEB 28	29.00	APR 04	28.42	MAY 04	28.42
MAY 30	27.73	JUL 02	29.12	AUG 01	30.99	AUG 29	32.50	SEP 29	32.50	OCT 03	33.36*		



## QUALITY OF GROUND WATER

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

The following wells and springs locating in the Lower Tennessee River basin were sampled as part of the U.S. Geological Survey's National Water Quality Assessment Program to characterize water quality of major aquifers and to assess the occurrence and distribution of nutrients, pesticides, and volatile organic compounds in ground water.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- IFIER	STATION NUMBER	DATE	TIME	ELEV. OF LAND SURFACE DATUM (PT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)
BEDFORD COUNTY										
Bd:E-09	352751086310501	09-28-00	1100	755	122	526	7.7	16.9	763	4.3
Bd:E-10	352334086304601	09-28-00	1030	805	70	425	7.0	16.8	760	1.5
Bd:L-41	353211086271201	10-02-00	1100	775	83	693	6.7	18.0	757	.5
Bd:M-21	353423086170801	10-02-00	1115	905	235	568	7.2	15.5	753	.7
Bd:L-40	353517086251101	10-02-00	1500	805	198	588	7.5	15.8	754	1.0
Bd:K-03	353704086323901	09-28-00	1415	745	106	528	7.3	16.9	761	1.4
Bd:P-03	353855086342901	09-28-00	1500	745	33	305	7.4	16.8	760	11
FRANKLIN COUNTY										
Fr:R-12	351636086141301	09-18-00	1230	1045	98	9	4.6	16.3	750	1.1
GILES COUNTY										
Gi:H-02	350112086512301	09-20-00	0930	908	100	30	5.0	17.5	751	26
Gi:G-02	350333086583101	09-21-00	1000	650	108	584	7.2	16.0	760	5.3
Gi:F-03	350603087005501	09-21-00	0930	622	22	503	6.8	17.2	759	13
Gi:L-02	351011086562001	10-03-00	1030	707	75	546	6.8	17.4	760	2.1
Gi:K-23	351449087061301	09-21-00	1315	724	200	436	6.9	15.8	759	10
Gi:L-01	351450086562001	09-21-00	1500	1010	100	16	4.7	16.5	751	1.8
Gi:O-02	351800087070301	09-27-00	1100	1022	78	46	4.9	16.0	755	2.7
LINCOLN COUNTY										
Li:O-07	351402086253501	09-18-00	1530	810	149	2900	7.1	16.2	755	51
Li:M-13	350941086395801	09-19-00	0930	720	150	748	6.7	17.0	760	.7
MARSHALL COUNTY										
Ms:C-03	351601086442101	09-19-00	1215	775	140	581	7.0	15.8	756	.5
Ms:C-02	351837086412801	09-20-00	0945	780	80	497	7.1	17.2	753	.6
Ms:G-07	352259086413101	09-26-00	1100	880	100	1360	6.5	16.3	757	.4
Ms:F-07	352338086475801	09-27-00	1500	900	250	291	7.0	16.0	757	1.5
Ms:G-08	352807086435601	09-25-00	1400	725	150	643	6.4	15.2	752	1.5
Ms:K-12	353034086494401	09-25-00	1030	758	150	614	6.7	17.3	749	2.1
Ms:L-05	353411086444001	09-26-00	1530	665	165	234	7.8	16.5	763	50
Ms:N-11	353734086423301	10-12-00	1200	705	203	619	6.8	16.6	767	.6
MAURY COUNTY										
My:D-04	352808086572801	09-27-00	1600	720	275	698	6.9	15.7	761	2.3
My:F-15	353217087144901	09-27-00	1115	685	125	580	6.9	16.1	765	41
My:L-12	353829087122501	10-03-00	1430	590	175	605	6.5	16.8	760	7.1
My:N-36	354152086531901	09-25-00	1100	715	125	592	6.9	15.5	750	.3
My:M-11	354206087013401	09-26-00	1230	680	300	538	7.0	16.4	762	2.8
My:N-37	354334086541601	09-25-00	1345	668	62	558	7.0	15.8	753	1.0

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- IFIER	DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	E COLI, MTEC MP WATER (COL/ 100 ML) (31633)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)
BEDFORD COUNTY											
Bd:E-09	09-28-00	.1	1.5	440	146	--	27.9	18.7	59.3	45.6	2.13
Bd:E-10	09-28-00	.2	1.7	<1	221	27	58.7	18.2	2.6	2.50	.077
Bd:L-41	10-02-00	.2	2.5	<1	322	34	96.0	20.0	19.7	11.6	.477
Bd:M-21	10-02-00	.1	.7	<1	171	--	33.8	20.9	54.8	40.2	1.82
Bd:L-40	10-02-00	.1	.6	<1	89.5	--	26.2	5.87	97.1	69.4	4.47
Bd:K-03	09-28-00	.1	1.6	220	284	61	91.8	13.2	4.6	3.40	.119
Bd:P-03	09-28-00	.8	8.3	<1	137	37	43.9	6.53	8.8	12.2	.329
FRANKLIN COUNTY											
Fr:R-12	09-18-00	8.2	84.9	--	2.34	--	.54	.244	.6	--	.184
GILES COUNTY											
Gi:H-02	09-20-00	6.7	71.1	<1	8.33	6	1.73	.974	1.1	21.5	.169
Gi:G-02	09-21-00	2.3	23.4	21	136	--	41.0	8.06	84.7	57.0	3.17
Gi:F-03	09-21-00	.4	4.2	<1	270	51	97.0	6.66	14.1	10.2	.374
Gi:L-02	10-03-00	.1	1.2	<1	278	43	78.7	19.7	9.1	6.58	.237
Gi:K-23	09-21-00	6.1	61.9	<1	225	15	81.3	5.45	2.4	2.29	.071
Gi:L-01	09-21-00	8.7	90.5	<1	4.59	1	1.13	.426	1.0	--	.197
Gi:O-02	09-27-00	7.8	80.2	<1	14.1	11	2.30	2.02	1.7	19.3	.193
LINCOLN COUNTY											
Li:O-07	09-18-00	.2	2.1	<1	424	--	122	29.0	552	73.4	11.7
Li:M-13	09-19-00	.7	7.6	<1	365	9	91.7	33.0	24.4	12.5	.557
MARSHALL COUNTY											
Ms:C-03	09-19-00	.1	1.4	K1	288	18	74.9	24.5	11.9	8.16	.304
Ms:C-02	09-20-00	2.7	28.4	<1	260	8	53.0	31.0	11.3	8.49	.304
Ms:G-07	09-26-00	.2	2.0	<1	794	530	215	62.1	19.2	4.96	.297
Ms:F-07	09-27-00	3.7	37.4	<1	162	8	54.3	6.47	1.1	1.44	.037
Ms:G-08	09-25-00	.4	4.0	190	357	33	126	10.4	6.9	3.97	.158
Ms:K-12	09-25-00	.1	1.1	<1	326	20	104	16.1	3.0	1.96	.073
Ms:L-05	09-26-00	.1	.5	K13	204	--	57.3	14.7	2.7	2.82	.084
Ms:N-11	10-12-00	4.5	45.9	<1	304	29	109	8.04	10.4	6.86	.259
MAURY COUNTY											
My:D-04	09-27-00	6.1	61.6	K9	402	58	130	18.8	9.7	4.98	.211
My:F-15	09-27-00	7.3	73.9	<1	294	52	88.0	18.0	16.7	11.0	.425
My:L-12	10-03-00	.1	1.2	K2	304	33	109	7.76	5.8	3.96	.145
My:N-36	09-25-00	.1	1.0	<1	324	19	90.8	23.5	5.3	3.41	.128
My:M-11	09-26-00	1.5	15.3	200	296	26	84.4	20.7	3.9	2.77	.099
My:N-37	09-25-00	.1	1.0	<1	298	50	72.1	28.6	7.0	4.77	.175

K--Results based on non-ideal colony count.

## QUALITY OF GROUND WATER

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- IFIER	DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
BEDFORD COUNTY											
Bd:E-09	09-28-00	5.90	273	224	47.9	11.8	.6	.05	8.6	307	316
Bd:E-10	09-28-00	1.34	237	194	28.6	3.5	.2	.02	8.1	249	238
Bd:L-41	10-02-00	2.63	351	288	63.6	19.2	.3	<.01	8.9	415	404
Bd:M-21	10-02-00	5.08	349	286	27.9	9.2	.7	.05	9.3	323	334
Bd:L-40	10-02-00	3.04	334	274	14.4	26.1	.5	.10	8.8	346	347
Bd:K-03	09-28-00	2.21	271	223	48.2	13.7	.2	.02	6.9	317	314
Bd:P-03	09-28-00	1.45	122	100	34.4	14.5	<.1	.01	7.6	182	178
FRANKLIN COUNTY											
Fr:R-12	09-18-00	<.24	3	3	E.3	.9	<.1	<.01	8.0	14	--
GILES COUNTY											
Gi:H-02	09-20-00	.47	3	2	.7	2.9	<.1	<.01	7.6	27	23.7
Gi:G-02	09-21-00	2.73	348	286	28.7	9.7	1.4	.05	7.9	358	357
Gi:F-03	09-21-00	1.57	267	219	24.9	8.0	.1	<.01	7.4	305	309
Gi:L-02	10-03-00	1.70	286	235	50.3	6.4	.2	.02	8.6	322	317
Gi:K-23	09-21-00	1.27	256	209	13.8	4.4	.2	.03	7.8	252	255
Gi:L-01	09-21-00	E.14	4	3	<.3	1.8	<.1	<.01	8.0	18	--
Gi:O-02	09-27-00	.79	4	4	.7	3.6	<.1	.02	7.7	37	36.3
LINCOLN COUNTY											
Li:O-07	09-18-00	9.79	551	452	485	572	.6	2.28	8.0	2030	2050
Li:M-13	09-19-00	4.83	434	356	69.6	5.8	.5	.03	8.3	476	453
MARSHALL COUNTY											
Ms:C-03	09-19-00	2.00	329	270	42.7	9.9	.3	.04	7.8	345	336
Ms:C-02	09-20-00	3.31	307	252	16.0	8.4	.6	.03	12.6	300	288
Ms:G-07	09-26-00	6.81	321	263	534	16.4	.2	.02	8.0	1080	1030
Ms:F-07	09-27-00	.53	188	154	8.1	3.6	.3	.01	10.1	182	181
Ms:G-08	09-25-00	3.00	395	324	17.6	12.6	.1	.01	7.7	401	391
Ms:K-12	09-25-00	1.95	373	306	26.2	2.4	.2	.02	7.3	351	347
Ms:L-05	09-26-00	1.55	293	237	5.2	6.3	.2	.03	4.8	212	241
Ms:N-11	10-12-00	2.17	335	275	23.7	7.3	E.1	.03	8.6	364	361
MAURY COUNTY											
My:D-04	09-27-00	1.53	419	344	66.3	4.1	.2	.05	7.7	443	451
My:F-15	09-27-00	1.03	295	242	50.3	14.2	.6	.10	10.3	349	352
My:L-12	10-03-00	2.95	330	271	38.2	11.4	.3	<.01	7.7	358	350
My:N-36	09-25-00	1.82	372	305	31.7	5.0	.3	.03	8.1	363	350
My:M-11	09-26-00	1.82	329	270	31.9	4.0	.7	.02	9.6	329	324
My:N-37	09-25-00	3.45	302	248	55.2	5.7	.4	.03	8.2	340	330

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)
BEDFORD COUNTY											
Bd:E-09	09-28-00	.4	--	<.010	<.050	.982	1.1	<.006	<.010	<1	<.05
Bd:E-10	09-28-00	.3	--	<.010	<.050	<.020	E.07	.015	.015	1	.05
Bd:L-41	10-02-00	.6	--	<.006	<.047	.283	.32	E.005	<.018	<1	<.05
Bd:M-21	10-02-00	.4	--	<.006	<.047	.667	.73	.015	E.015	1	<.05
Bd:L-40	10-02-00	.5	--	<.006	<.047	.419	.48	.007	E.009	2	<.05
Bd:K-03	09-28-00	.4	--	<.010	<.050	.113	.17	E.004	<.010	<1	<.05
Bd:P-03	09-28-00	.2	--	<.010	.105	<.020	E.07	.007	<.010	<1	<.05
FRANKLIN COUNTY											
Fr:R-12	09-18-00	--	--	<.010	<.050	<.020	<.10	E.003	<.010	3	<1.00
GILES COUNTY											
Gi:H-02	09-20-00	.0	--	<.010	1.53	<.020	<.10	E.005	<.010	28	<1.00
Gi:G-02	09-21-00	.5	--	<.010	.178	.196	.25	.174	.165	2	<1.00
Gi:F-03	09-21-00	.4	3.86	.014	3.87	<.020	.34	.281	.257	2	<1.00
Gi:L-02	10-03-00	.4	--	<.010	.306	.094	.18	.014	<.010	<1	.06
Gi:K-23	09-21-00	.3	--	<.010	2.65	<.020	<.10	.195	.186	<1	<1.00
Gi:L-01	09-21-00	--	--	<.010	.468	<.020	<.10	<.006	<.010	5	<1.00
Gi:O-02	09-27-00	.1	--	<.010	3.39	.022	<.10	<.006	<.010	19	<.05
LINCOLN COUNTY											
Li:O-07	09-18-00	2.8	--	.011	<.050	1.44	1.7	.029	.034	2	.17
Li:M-13	09-19-00	.6	--	<.010	.210	.238	.26	.017	.015	<1	<1.00
MARSHALL COUNTY											
Ms:C-03	09-19-00	.5	--	<.010	<.050	.065	E.07	.042	.041	<1	<1.00
Ms:C-02	09-20-00	.4	--	<.010	.052	.508	.56	.006	<.010	<1	<1.00
Ms:G-07	09-26-00	1.5	1.98	1.05	3.02	.322	.46	E.003	<.010	<1	.23
Ms:F-07	09-27-00	.2	--	<.010	.919	<.020	<.10	.054	.045	6	E.03
Ms:G-08	09-25-00	.5	--	<.010	2.73	.445	.70	.109	.095	<1	.05
Ms:K-12	09-25-00	.5	--	<.010	<.050	.469	.55	.052	.045	<1	<.05
Ms:L-05	09-26-00	.3	--	<.010	<.050	<.020	<.10	<.006	<.010	<1	<.05
Ms:N-11	10-12-00	.5	6.16	.007	6.16	.073	<.10	.036	.039	<1	E.04
MAURY COUNTY											
My:D-04	09-27-00	.6	--	<.010	1.57	.021	E.09	.014	.010	<1	E.03
My:F-15	09-27-00	.5	--	<.010	1.59	.032	E.08	.103	.092	3	<.05
My:L-12	10-03-00	.5	.748	.056	.804	<.020	.14	.209	.204	<1	.08
My:N-36	09-25-00	.5	--	<.010	<.050	.075	.11	.039	.032	2	<.05
My:M-11	09-26-00	.4	1.09	.028	1.12	.049	.12	.123	.112	<1	.07
My:N-37	09-25-00	.5	--	<.010	.141	.057	E.10	.022	.020	2	<.05

E--Estimated

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- IFIER	DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
BEDFORD COUNTY											
Bd:E-09	09-28-00	<2.0	14.0	<.06	<.04	<.8	.07	.4	10	<.08	4.9
Bd:E-10	09-28-00	<2.0	33.2	<.06	<.04	E.8	.30	.9	10	E.05	4.0
Bd:L-41	10-02-00	<2.0	20.7	<.06	<.04	<.8	.16	.6	400	<.08	30.4
Bd:M-21	10-02-00	<2.0	55.0	<.06	<.04	<.8	.11	.4	<10	<.08	.5
Bd:L-40	10-02-00	<2.0	24.2	<.06	<.04	<.8	.05	.3	10	<.08	1.5
Bd:K-03	09-28-00	<2.0	62.4	<.06	<.04	<.8	.32	.6	60	E.06	3.3
Bd:P-03	09-28-00	<2.0	7.2	<.06	<.04	E.8	.14	1.6	<10	.33	.3
FRANKLIN COUNTY											
Fr:R-12	09-18-00	<2.0	1.9	<1.00	<1.00	E.7	<1.00	9.4	<10	1.38	9.9
GILES COUNTY											
Gi:H-02	09-20-00	<2.0	27.1	<1.00	<1.00	.9	<1.00	1.0	10	<1.00	15.3
Gi:G-02	09-21-00	<2.0	67.7	<1.00	<1.00	1.0	<1.00	<1.0	<10	<1.00	8.2
Gi:F-03	09-21-00	<2.0	25.4	<1.00	<1.00	E.7	1.58	2.8	190	<1.00	40.9
Gi:L-02	10-03-00	<2.0	25.4	<.06	E.02	<.8	.28	4.9	<10	.28	37.2
Gi:K-23	09-21-00	<2.0	10.6	<1.00	<1.00	E.7	<1.00	<1.0	<10	<1.00	<1.0
Gi:L-01	09-21-00	<2.0	2.2	<1.00	<1.00	E.7	<1.00	11.1	10	6.28	9.1
Gi:O-02	09-27-00	3.0	21.3	E.05	E.03	<.8	.43	3.3	250	1.13	30.1
LINCOLN COUNTY											
Li:O-07	09-18-00	<2.0	25.1	<.06	.42	E.6	.27	1.6	<30	E.05	6.4
Li:M-13	09-19-00	<2.0	6.3	<1.00	<1.00	<.8	<1.00	3.1	30	<1.00	2.7
MARSHALL COUNTY											
Ms:C-03	09-19-00	<2.0	54.9	<1.00	<1.00	E.4	<1.00	<1.0	130	<1.00	22.8
Ms:C-02	09-20-00	<2.0	66.6	<1.00	<1.00	E.7	<1.00	<1.0	<10	<1.00	10.2
Ms:G-07	09-26-00	<2.0	53.1	<.06	E.02	<.8	4.96	23.0	<10	E.07	88.1
Ms:F-07	09-27-00	<2.0	54.8	E.04	<.04	E.7	.13	1.3	<10	<.08	1.3
Ms:G-08	09-25-00	<2.0	31.3	E.03	<.04	E.7	.54	1.7	<10	E.06	7.9
Ms:K-12	09-25-00	<2.0	51.4	<.06	<.04	E.6	.26	.6	1690	E.05	121
Ms:L-05	09-26-00	<2.0	69.9	<.06	<.04	E.5	.19	E.2	4000	<.08	158
Ms:N-11	10-12-00	<2.0	41.8	<.06	<.04	E.4	.47	.6	<10	<.08	89.3
MAURY COUNTY											
My:D-04	09-27-00	<2.0	12.4	<.06	<.04	<.8	.35	4.4	<10	E.05	4.2
My:F-15	09-27-00	<2.0	17.2	<.06	<.04	<.8	.24	.8	<10	<.08	4.3
My:L-12	10-03-00	<2.0	27.3	<.06	<.04	<.8	.29	2.0	<10	<.08	231
My:N-36	09-25-00	<2.0	96.7	<.06	<.04	<.8	.20	.6	380	E.07	5.1
My:M-11	09-26-00	<2.0	20.4	<.06	<.04	E.7	.59	.7	<10	.09	5.7
My:N-37	09-25-00	<2.0	21.4	<.06	<.04	E.4	.17	.5	90	<.08	23.8

E--Estimated



## QUALITY OF GROUND WATER

339

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	RADON 222 TOTAL (PCI/L) (82303)	RN-222 2 SIGMA WATER, 222 WHOLE, TOTAL, (PCI/L) (76002)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)
BEDFORD COUNTY											
Bd:E-09	09-28-00	<.2	.37	<2.4	<1.0	<1	64	16	.46	<.10	<.12
Bd:E-10	09-28-00	E.2	1.72	<2.4	<1.0	4	148	18	.71	<.05	<.06
Bd:L-41	10-02-00	<.2	.36	<2.4	<1.0	<1	180	18	1.7	<.05	<.06
Bd:M-21	10-02-00	<.2	.48	<2.4	<1.0	<1	112	16	.81	<.05	<.06
Bd:L-40	10-02-00	<.2	.08	<2.4	<1.0	2	154	17	.99	<.05	<.06
Bd:K-03	09-28-00	.7	.99	<2.4	<1.0	2	58.0	15	.97	<.05	<.06
Bd:P-03	09-28-00	.2	.37	<2.4	<1.0	262	600	26	.60	.16	<.06
FRANKLIN COUNTY											
Fr:R-12	09-18-00	<1.0	1.12	<2.4	<1.0	149	794	28	.42	<.05	<.06
GILES COUNTY											
Gi:H-02	09-20-00	<1.0	3.00	<2.4	<1.0	2	611	25	.39	<.05	<.06
Gi:G-02	09-21-00	<1.0	1.04	<2.4	<1.0	3	161	27	.87	<.24	<.30
Gi:F-03	09-21-00	<1.0	4.18	<2.4	<1.0	4	691	29	4.3	<.05	<.06
Gi:L-02	10-03-00	1.2	1.61	<2.4	<1.0	643	368	22	.94	<.05	<.06
Gi:K-23	09-21-00	<1.0	1.43	<2.4	<1.0	5	522	25	.62	<.05	<.06
Gi:L-01	09-21-00	<1.0	1.06	<2.4	<1.0	7	537	34	.35	<.05	<.06
Gi:O-02	09-27-00	<.2	2.50	11.3	<1.0	824	316	21	.47	<.05	<.06
LINCOLN COUNTY											
Li:O-07	09-18-00	.2	1.81	<2.4	<1.0	1	78.0	15	5.5	<.24	<.30
Li:M-13	09-19-00	<1.0	1.56	<2.4	<1.0	7	152	17	.93	<.05	<.06
MARSHALL COUNTY											
Ms:C-03	09-19-00	<1.0	1.84	<2.4	<1.0	1	228	18	.90	<.05	<.06
Ms:C-02	09-20-00	<1.0	<1.00	<2.4	<1.0	<1	161	18	.83	<.05	<.06
Ms:G-07	09-26-00	5.5	9.74	<2.4	<1.0	10	101	16	1.6	<.05	<.06
Ms:F-07	09-27-00	.2	.81	<2.4	<1.0	<1	139	17	.53	<.05	<.06
Ms:G-08	09-25-00	E.2	2.06	<2.4	<1.0	7	355	21	2.5	<.05	<.06
Ms:K-12	09-25-00	.2	.78	<2.4	<1.0	7	125	16	1.8	<.05	<.06
Ms:L-05	09-26-00	.2	<.06	<2.4	<1.0	<1	112	16	.78	<.05	<.06
Ms:N-11	10-12-00	E.2	1.95	<2.4	<1.0	1	416	32	.84	E.04	<.06
MAURY COUNTY											
My:D-04	09-27-00	.3	2.37	<2.4	<1.0	13	222	18	1.4	<.05	<.06
My:F-15	09-27-00	<.2	1.71	<2.4	<1.0	2	251	19	.97	<.05	<.06
My:L-12	10-03-00	.3	2.14	<2.4	<1.0	5	87.0	16	2.0	<.05	<.06
My:N-36	09-25-00	E.1	1.05	<2.4	<1.0	8	115	17	1.1	<.05	<.06
My:M-11	09-26-00	.5	2.40	<2.4	<1.0	826	465	23	.93	E.02	E.01
My:N-37	09-25-00	E.1	.89	<2.4	<1.0	2	115	16	.82	<.05	<.06

E--Estimated

## QUALITY OF GROUND WATER

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- PIER	DATE	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	BROMO- FORM TOTAL (UG/L) (32104)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- FORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- ETHANE TOTAL (UG/L) (34311)	ETHYL- BENZENE TOTAL (UG/L) (34371)	METHYL- BROMIDE TOTAL (UG/L) (34413)
BEDFORD COUNTY											
Bd:E-09	09-28-00	<.3	<.12	<.4	<.05	<.10	<.07	<.06	<.2	<.06	<.5
Bd:E-10	09-28-00	<.1	<.06	<.2	<.02	<.05	<.04	<.03	<.1	<.03	<.3
Bd:L-41	10-02-00	<.1	<.06	<.2	<.02	<.05	E.01	<.03	<.1	<.03	<.3
Bd:M-21	10-02-00	<.1	<.06	<.2	<.02	<.05	<.04	<.03	<.1	<.03	<.3
Bd:L-40	10-02-00	<.1	<.06	<.2	<.02	<.05	E.06	<.03	<.1	<.03	<.3
Bd:K-03	09-28-00	<.1	<.06	<.2	<.02	<.05	E.05	<.03	<.1	<.03	<.3
Bd:P-03	09-28-00	<.1	<.06	<.2	8.35	<.05	<.04	<.03	<.1	<.03	<.3
FRANKLIN COUNTY											
Fr:R-12	09-18-00	<.1	<.06	<.2	E.02	E.02	<.04	<.03	<.1	<.03	<.3
GILES COUNTY											
Gi:H-02	09-20-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
Gi:G-02	09-21-00	<.7	<.30	<.9	<.26	<.25	<.17	<.14	<.6	<.15	<1.3
Gi:F-03	09-21-00	<.1	<.06	<.2	E.08	<.05	<.04	<.03	<.1	<.03	<.3
Gi:L-02	10-03-00	<.1	<.06	<.2	.10	<.05	<.04	<.03	<.1	<.03	<.3
Gi:K-23	09-21-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
Gi:L-01	09-21-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
Gi:O-02	09-27-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
LINCOLN COUNTY											
Li:O-07	09-18-00	<.7	<.30	<.9	<.26	4.61	1.25	<.14	<.6	8.71	<1.3
Li:M-13	09-19-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
MARSHALL COUNTY											
Ms:C-03	09-19-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
Ms:C-02	09-20-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
Ms:G-07	09-26-00	<.1	<.06	<.2	<.05	<.05	E.02	<.03	<.1	<.03	<.3
Ms:F-07	09-27-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
Ms:G-08	09-25-00	<.1	<.06	<.2	E.03	<.05	<.04	<.03	<.1	<.03	<.3
Ms:K-12	09-25-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
Ms:L-05	09-26-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
Ms:N-11	10-12-00	<.1	<.06	<.2	.52	.11	<.04	<.03	<.1	<.03	<.3
MAURY COUNTY											
My:D-04	09-27-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
My:F-15	09-27-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
My:L-12	10-03-00	<.1	<.06	<.2	E.03	<.05	<.04	<.03	<.1	<.03	<.3
My:N-36	09-25-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3
My:M-11	09-26-00	<.1	<.06	<.2	3.53	<.05	<.04	<.03	<.1	<.03	<.3
My:N-37	09-25-00	<.1	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3

E--Estimated

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- PIER	DATE	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)	METHYL ENE CHLO- RIDE TOTAL (UG/L) (34423)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (34516)	BENZENE O-DI- CHLORO- WATER UNPLTRD REC (34536)
BEDFORD COUNTY											
Bd:E-09	09-28-00	<.5	<.3	<.2	<.18	<.07	<.08	<.06	<.12	<.18	<.06
Bd:E-10	09-28-00	<.2	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03
Bd:L-41	10-02-00	<.2	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03
Bd:M-21	10-02-00	<.2	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03
Bd:L-40	10-02-00	<.2	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03
Bd:K-03	09-28-00	<.2	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03
Bd:P-03	09-28-00	<.2	.3	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03
FRANKLIN COUNTY											
Fr:R-12	09-18-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
GILES COUNTY											
Gi:H-02	09-20-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Gi:G-02	09-21-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Gi:F-03	09-21-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Gi:L-02	10-03-00	<.2	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03
Gi:K-23	09-21-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Gi:L-01	09-21-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Gi:O-02	09-27-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
LINCOLN COUNTY											
Li:O-07	09-18-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Li:M-13	09-19-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
MARSHALL COUNTY											
Ms:C-03	09-19-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Ms:C-02	09-20-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Ms:G-07	09-26-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Ms:F-07	09-27-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Ms:G-08	09-25-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Ms:K-12	09-25-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Ms:L-05	09-26-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
Ms:N-11	10-12-00	<.5	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03
MAURY COUNTY											
My:D-04	09-27-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
My:F-15	09-27-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
My:L-12	10-03-00	<.2	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03
My:N-36	09-25-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05
My:M-11	09-26-00	<.5	<.4	<.1	<.09	E.01	<.04	<.03	<.06	<.09	<.05
My:N-37	09-25-00	<.5	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	STYRENE TOTAL (UG/L) (77128)
BEDFORD COUNTY											
Bd:E-09	09-28-00	<.06	<.06	<.06	<.10	<.5	<.18	<.18	<.2	<.08	<.08
Bd:E-10	09-28-00	<.03	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Bd:L-41	10-02-00	<.03	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Bd:M-21	10-02-00	<.03	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Bd:L-40	10-02-00	<.03	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Bd:K-03	09-28-00	<.03	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Bd:P-03	09-28-00	<.03	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04
FRANKLIN COUNTY											
Fr:R-12	09-18-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
GILES COUNTY											
Gi:H-02	09-20-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Gi:G-02	09-21-00	<.34	<.16	<.27	<.25	<1.4	<.45	<.45	<.6	<.19	<.21
Gi:F-03	09-21-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Gi:L-02	10-03-00	<.03	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Gi:K-23	09-21-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Gi:L-01	09-21-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Gi:O-02	09-27-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
LINCOLN COUNTY											
Li:O-07	09-18-00	<.34	<.16	<.27	<.25	<1.4	<.45	<.45	<.6	<.19	<.21
Li:M-13	09-19-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
MARSHALL COUNTY											
Ms:C-03	09-19-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Ms:C-02	09-20-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Ms:G-07	09-26-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Ms:F-07	09-27-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Ms:G-08	09-25-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	E.01	<.04
Ms:K-12	09-25-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
Ms:L-05	09-26-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	E.02
Ms:N-11	10-12-00	<.03	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04
MAURY COUNTY											
My:D-04	09-27-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
My:F-15	09-27-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
My:L-12	10-03-00	<.03	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04
My:N-36	09-25-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
My:M-11	09-26-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
My:N-37	09-25-00	<.07	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04
E--Estimated											

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ACETO- CHLOR, WATER, FLTRD REC (UG/L) (49260)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)
BEDFORD COUNTY											
Bd:E-09	09-28-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
Bd:E-10	09-28-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
Bd:L-41	10-02-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
Bd:M-21	10-02-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
Bd:L-40	10-02-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
Bd:K-03	09-28-00	<.002	<.004	.615	<.005	<.002	<.005	<.018	E.199	<.005	<.005
Bd:P-03	09-28-00	<.002	<.004	.016	<.005	<.002	<.005	<.018	E.005	<.005	<.005
FRANKLIN COUNTY											
Fr:R-12	09-18-00	<.002	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001
GILES COUNTY											
Gi:H-02	09-20-00	<.002	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001
Gi:G-02	09-21-00	<.002	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001
Gi:F-03	09-21-00	<.002	<.002	.032	<.002	<.002	<.004	<.004	E.028	<.002	<.001
Gi:L-02	10-03-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
Gi:K-23	09-21-00	<.002	<.002	.006	<.002	<.002	<.004	<.004	E.004	<.002	<.001
Gi:L-01	09-21-00	<.002	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001
Gi:O-02	09-27-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
LINCOLN COUNTY											
Li:O-07	09-18-00	<.002	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001
Li:M-13	09-19-00	<.002	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001
MARSHALL COUNTY											
Ms:C-03	09-19-00	<.002	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001
Ms:C-02	09-20-00	<.002	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001
Ms:G-07	09-26-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
Ms:F-07	09-27-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
Ms:G-08	09-25-00	<.002	<.004	.114	<.005	<.002	<.005	<.018	E.057	<.005	<.005
Ms:K-12	09-25-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
Ms:L-05	09-26-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
Ms:N-11	10-12-00	.039	.114	.068	<.005	<.002	<.005	<.018	E.024	<.005	<.005
MAURY COUNTY											
My:D-04	09-27-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
My:F-15	09-27-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
My:L-12	10-03-00	<.002	<.004	.012	<.005	<.002	<.005	<.018	E.014	<.005	<.005
My:N-36	09-25-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
My:M-11	09-26-00	<.002	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005
My:N-37	09-25-00	<.002	<.004	.036	<.005	<.002	<.005	<.018	E.028	<.005	<.005

E--Estimated



## QUALITY OF GROUND WATER

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- IFIER	DATE	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)
BEDFORD COUNTY											
Bd:E-09	09-28-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
Bd:E-10	09-28-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
Bd:L-41	10-02-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	.105	<.011
Bd:M-21	10-02-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
Bd:L-40	10-02-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
Bd:K-03	09-28-00	<.003	<.004	<.027	<.006	.014	<.003	<.007	<.010	<.015	<.011
Bd:P-03	09-28-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
FRANKLIN COUNTY											
Fr:R-12	09-18-00	<.003	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005
GILES COUNTY											
Gi:H-02	09-20-00	<.003	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005
Gi:G-02	09-21-00	<.003	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005
Gi:F-03	09-21-00	<.003	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005
Gi:L-02	10-03-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
Gi:K-23	09-21-00	<.003	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005
Gi:L-01	09-21-00	<.003	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005
Gi:O-02	09-27-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
LINCOLN COUNTY											
Li:O-07	09-18-00	<.003	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005
Li:M-13	09-19-00	<.003	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005
MARSHALL COUNTY											
Ms:C-03	09-19-00	<.003	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005
Ms:C-02	09-20-00	<.003	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005
Ms:G-07	09-26-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	.051	<.011
Ms:F-07	09-27-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
Ms:G-08	09-25-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
Ms:K-12	09-25-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
Ms:L-05	09-26-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
Ms:N-11	10-12-00	<.003	<.004	<.027	<.006	.344	<.003	<.007	<.010	E.010	<.011
MAURY COUNTY											
My:D-04	09-27-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	E.008	<.011
My:F-15	09-27-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
My:L-12	10-03-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	E.012	<.011
My:N-36	09-25-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
My:M-11	09-26-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011
My:N-37	09-25-00	<.003	<.004	<.027	<.006	<.013	<.003	<.007	<.010	E.007	<.011

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)
BEDFORD COUNTY											
Bd:E-09	09-28-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Bd:E-10	09-28-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Bd:L-41	10-02-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Bd:M-21	10-02-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Bd:L-40	10-02-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Bd:K-03	09-28-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Bd:P-03	09-28-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
FRANKLIN COUNTY											
Fr:R-12	09-18-00	<.002	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002
GILES COUNTY											
Gi:H-02	09-20-00	<.002	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002
Gi:G-02	09-21-00	<.002	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002
Gi:F-03	09-21-00	<.002	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002
Gi:L-02	10-03-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Gi:K-23	09-21-00	<.002	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002
Gi:L-01	09-21-00	<.002	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002
Gi:O-02	09-27-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
LINCOLN COUNTY											
Li:O-07	09-18-00	<.002	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002
Li:M-13	09-19-00	<.002	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002
MARSHALL COUNTY											
Ms:C-03	09-19-00	<.002	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002
Ms:C-02	09-20-00	<.002	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002
Ms:G-07	09-26-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Ms:F-07	09-27-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Ms:G-08	09-25-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Ms:K-12	09-25-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Ms:L-05	09-26-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
Ms:N-11	10-12-00	<.010	<.041	E.013	<.003	<.002	<.021	<.009	<.005	<.002	<.035
MAURY COUNTY											
My:D-04	09-27-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
My:F-15	09-27-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
My:L-12	10-03-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
My:N-36	09-25-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
My:M-11	09-26-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035
My:N-37	09-25-00	<.010	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035

## QUALITY OF GROUND WATER

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)
BEDFORD COUNTY											
Bd:E-09	09-28-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Bd:E-10	09-28-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Bd:L-41	10-02-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Bd:M-21	10-02-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Bd:L-40	10-02-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Bd:K-03	09-28-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Bd:P-03	09-28-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
FRANKLIN COUNTY											
Fr:R-12	09-18-00	<.001	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004
GILES COUNTY											
Gi:H-02	09-20-00	<.001	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004
Gi:G-02	09-21-00	<.001	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004
Gi:F-03	09-21-00	<.001	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004
Gi:L-02	10-03-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Gi:K-23	09-21-00	<.001	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004
Gi:L-01	09-21-00	<.001	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004
Gi:O-02	09-27-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
LINCOLN COUNTY											
Li:O-07	09-18-00	<.001	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004
Li:M-13	09-19-00	<.001	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004
MARSHALL COUNTY											
Ms:C-03	09-19-00	<.001	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004
Ms:C-02	09-20-00	<.001	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004
Ms:G-07	09-26-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Ms:F-07	09-27-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Ms:G-08	09-25-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Ms:K-12	09-25-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Ms:L-05	09-26-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
Ms:N-11	10-12-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
MAURY COUNTY											
My:D-04	09-27-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
My:F-15	09-27-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
My:L-12	10-03-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
My:N-36	09-25-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
My:M-11	09-26-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011
My:N-37	09-25-00	<.050	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)
BEDFORD COUNTY								
Bd:E-09	09-28-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
Bd:E-10	09-28-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
Bd:L-41	10-02-00	<.023	E.015	<.034	<.017	<.002	<.009	<.005
Bd:M-21	10-02-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
Bd:L-40	10-02-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
Bd:K-03	09-28-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
Bd:P-03	09-28-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
FRANKLIN COUNTY								
Fr:R-12	09-18-00	<.013	<.010	<.007	<.013	<.001	<.002	<.002
GILES COUNTY								
Gi:H-02	09-20-00	<.013	<.010	<.007	<.013	<.001	<.002	<.002
Gi:G-02	09-21-00	<.013	<.010	<.007	<.013	<.001	<.002	<.002
Gi:F-03	09-21-00	<.013	.012	<.007	<.013	<.001	<.002	<.002
Gi:L-02	10-03-00	<.023	.063	<.034	<.017	<.002	<.009	<.005
Gi:K-23	09-21-00	<.013	<.010	<.007	<.013	<.001	<.002	<.002
Gi:L-01	09-21-00	<.013	<.010	<.007	<.013	<.001	<.002	<.002
Gi:O-02	09-27-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
LINCOLN COUNTY								
Li:O-07	09-18-00	<.013	<.010	<.007	<.013	<.001	<.002	<.002
Li:M-13	09-19-00	<.013	<.010	<.007	<.013	<.001	<.002	<.002
MARSHALL COUNTY								
Ms:C-03	09-19-00	<.013	<.010	<.007	<.013	<.001	<.002	<.002
Ms:C-02	09-20-00	<.013	<.010	<.007	<.013	<.001	<.002	<.002
Ms:G-07	09-26-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
Ms:F-07	09-27-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
Ms:G-08	09-25-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
Ms:K-12	09-25-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
Ms:L-05	09-26-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
Ms:N-11	10-12-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
MAURY COUNTY								
My:D-04	09-27-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
My:F-15	09-27-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
My:L-12	10-03-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
My:N-36	09-25-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005
My:M-11	09-26-00	<.023	.069	<.034	<.017	<.002	<.009	<.005
My:N-37	09-25-00	<.023	<.016	<.034	<.017	<.002	<.009	<.005

E--Estimated

## QUALITY OF GROUND WATER

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE	TIME	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)
BEDFORD COUNTY											
WARD CAVE SPRING NEAR MT H	03597875		09-18-00	1600	920	.10	297	6.9	14.6	751	.7
NEAL CAVE SPRING NEAR PISG	350932086545201		09-20-00	1315	890	<.01	172	7.1	14.5	754	1.7
EOFF CAVE SPRING NEAR BAUC	353208086152501		10-02-00	1430	1000	.08	222	7.0	13.8	750	.7
COFFEE COUNTY											
CASCADE SPRING NEAR NORMAN	03596485		10-10-00	1030	990	.49	95	6.4	15.1	762	.7
FRANKLIN COUNTY											
TIMS FORD SPRING NEAR LOIS	351500086155901		09-19-00	1530	900	.01	52	6.4	16.9	751	1.3
GILES COUNTY											
WEST FORK SHOAL CREEK SPRI	350223087074201		09-20-00	1745	780	1.6	200	7.1	18.0	754	2.0
WYNNE SPRING AT BUNKER HIL	350842086515701		09-20-00	1430	810	.01	395	7.1	18.7	755	5.5
LINCOLN COUNTY											
TEAL HOLLOW SPRING AT FAYE	350655086281301		10-03-00	1400	768	--	112	6.7	16.7	756	1.8
MAURY COUNTY											
RIVER RATS SPRING NEAR POT	353730086491301		09-26-00	1500	610	5.0	476	7.0	15.3	764	4.0
CARTERS CREEK SPR NR CARTE	354140087003801		09-26-00	0900	600	.01	354	7.0	14.5	763	.6

LOCAL IDENT- I- FIER	DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	9.3	92.8	45	155	16	54.0	4.98	1.6	2.12	.054
NEAL CAVE SPRING N	09-20-00	9.6	95.2	37	86.3	11	30.9	2.20	1.4	3.29	.064
EOFF CAVE SPRING N	10-02-00	9.3	91.3	K15	103	18	34.9	3.97	2.2	4.39	.094
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	7.5	74.1	<1	43.7	6	12.7	2.92	1.1	--	.075
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	6.8	71.3	<1	21.7	--	6.93	1.05	.6	--	.060
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	5.5	58.8	K19	104	8	34.2	4.63	1.4	2.75	.058
WYNNE SPRING AT BU	09-20-00	6.9	74.4	270	191	9	67.2	5.53	2.2	2.47	.071
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	8.3	86.0	K1	53.0	5	18.0	1.94	.9	3.40	.052
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	8.0	79.7	>32000	262	40	95.0	5.98	3.3	2.62	.088
CARTERS CREEK SPR	09-26-00	9.8	96.1	K3	208	22	74.9	5.17	1.0	1.01	.029

K--Results based on non-ideal colony count.



## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	.82	170	140	3.6	3.2	<.1	.01	8.4	171	169
NEAL CAVE SPRING N	09-20-00	.86	92	75	6.6	2.0	<.1	<.01	9.4	106	107
EOFF CAVE SPRING N	10-02-00	.72	104	85	22.2	2.8	<.2	.02	8.8	132	130
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	E.17	46	38	.7	2.8	<.2	.02	8.0	57	--
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	E.14	29	24	.5	.9	<.1	<.01	7.8	28	--
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	.77	118	96	5.1	2.2	<.1	<.01	7.8	115	115
WYNNE SPRING AT BU	09-20-00	1.49	222	183	14.6	3.4	<.1	.01	9.9	227	220
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	.49	59	48	3.1	1.6	<.2	.02	7.8	65	64.7
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	1.86	271	222	27.8	5.5	E.1	<.01	6.4	294	287
CARTERS CREEK SPR	09-26-00	.34	227	186	6.3	1.5	.2	.01	10.4	214	218
LOCAL IDENT- I- FIER	DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	.2	<.010	2.06	<.020	<.10	.032	.027	<1	<1.00	<2.0
NEAL CAVE SPRING N	09-20-00	.1	<.010	1.79	<.020	<.10	.041	.037	2	<1.00	<2.0
EOFF CAVE SPRING N	10-02-00	.2	<.006	.609	<.041	<.10	.010	E.012	10	<.05	<2.0
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	--	<.006	1.18	<.041	<.10	.009	E.013	<1	<.05	<2.0
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	--	<.010	.216	<.020	<.10	E.003	<.010	<1	<1.00	<2.0
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	.2	<.010	.235	<.020	<.10	.083	.078	1	<1.00	<2.0
WYNNE SPRING AT BU	09-20-00	.3	<.010	1.31	<.020	<.10	.089	.082	1	<1.00	<2.0
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	.1	<.010	.415	<.020	<.10	.012	.010	1	E.03	<2.0
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	.4	<.010	1.72	<.020	.21	.047	.041	2	.06	<2.0
CARTERS CREEK SPR	09-26-00	.3	<.010	1.04	<.020	<.10	.676	.628	1	<.05	<2.0

E--Estimated

## QUALITY OF GROUND WATER

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	16.2	<1.00	<1.00	E.6	<1.00	<1.0	<10	<1.00	<1.0	<1.0
NEAL CAVE SPRING N	09-20-00	9.9	<1.00	<1.00	E.7	<1.00	<1.0	<10	<1.00	<1.0	<1.0
BOFF CAVE SPRING N	10-02-00	19.7	<.06	E.02	E.5	.11	.3	<10	<.08	1.7	.3
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	4.5	E.05	.04	E.5	.02	<.2	<10	E.07	.1	<.2
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	3.7	<1.00	<1.00	E.6	<1.00	<1.0	<10	<1.00	10.6	<1.0
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	17.1	<1.00	<1.00	E.5	<1.00	<1.0	<10	<1.00	1.5	<1.0
WYNNE SPRING AT BU	09-20-00	17.7	<1.00	<1.00	E.4	<1.00	<1.0	<10	<1.00	1.4	<1.0
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	10	<.06	<.04	<.8	.06	.3	<10	<.08	1.3	.3
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	31.1	<.06	<.04	E.7	.24	.8	<10	<.08	2.0	E.2
CARTERS CREEK SPR	09-26-00	3.1	<.06	<.04	1.2	.16	.5	<10	<.08	<1.0	<.2
LOCAL IDENT- I- FIER	DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	RADON TOTAL (PCI/L) (82303)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	<1.00	<2.4	<1.0	<1	122	16	.43	<.05	<.06	<.1
NEAL CAVE SPRING N	09-20-00	3.03	<2.4	<1.0	2	2240	43	.42	<.05	<.06	<.1
BOFF CAVE SPRING N	10-02-00	1.22	<2.4	<1.0	2	3100	50	.62	<.05	<.06	<.1
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	1.38	<2.4	<1.0	3	410	22	.31	<.05	E.04	<.1
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	1.60	<2.4	<1.0	1	--	--	.28	<.05	<.06	<.1
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	<1.00	<2.4	<1.0	<1	--	--	.74	<.05	<.06	<.1
WYNNE SPRING AT BU	09-20-00	1.07	<2.4	<1.0	<1	1640	37	.79	.11	<.06	<.1
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	.30	<2.4	<1.0	2	796	27	.58	<.05	<.06	<.1
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	1.00	<2.4	<1.0	2	127	16	2.8	<.05	<.06	<.1
CARTERS CREEK SPR	09-26-00	1.22	<2.4	<1.0	<1	249	20	.51	<.05	<.06	<.1

E--Estimated

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	BROMO- FORM TOTAL (UG/L) (32104)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- FORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- ETHANE TOTAL (UG/L) (34311)	ETHYL- BENZENE TOTAL (UG/L) (34371)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	<.06	<.2	E.08	<.05	<.04	<.03	<.1	<.03	<.3	<.5
NEAL CAVE SPRING N	09-20-00	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3	<.5
EOFF CAVE SPRING N	10-02-00	<.06	<.2	<.02	<.05	<.04	<.03	<.1	<.03	<.3	<.5
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	<.06	<.2	.18	<.05	<.04	<.03	<.1	<.03	<.3	<.2
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3	<.5
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3	<.5
WYNNE SPRING AT BU	09-20-00	<.06	<.2	1.16	<.05	<.04	<.03	<.1	<.03	<.3	<.5
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	<.06	<.2	<.02	<.05	<.04	<.03	<.1	<.03	<.3	<.5
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	<.06	<.2	<.05	<.05	<.04	<.03	<.1	<.03	<.3	<.5
CARTERS CREEK SPR	09-26-00	<.06	<.2	E.02	<.05	<.04	<.03	<.1	<.03	<.3	<.5
LOCAL IDENT- I- FIER	DATE	METHYL- ENE CHLO- RIDE TOTAL (UG/L) (34423)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC TOTAL (UG/L) (34516)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC TOTAL (UG/L) (34536)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05	<.07
NEAL CAVE SPRING N	09-20-00	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05	<.07
BOFF CAVE SPRING N	10-02-00	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03	<.03
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	<.2	.4	E.04	<.04	<.04	<.03	<.06	<.09	<.03	<.03
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05	<.07
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05	<.07
WYNNE SPRING AT BU	09-20-00	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05	<.07
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03	<.03
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05	<.07
CARTERS CREEK SPR	09-26-00	<.4	<.1	<.09	<.07	<.04	<.03	<.06	<.09	<.05	<.07

E--Estimated

## QUALITY OF GROUND WATER

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	STYRENE TOTAL (UG/L) (77128)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04	<.002
NEAL CAVE SPRING N	09-20-00	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04	<.002
BOFF CAVE SPRING N	10-02-00	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04	<.002
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	<.03	<.03	<.05	<.3	<.09	<.09	<.1	.21	<.04	<.002
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04	<.002
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04	<.002
WYNNE SPRING AT BU	09-20-00	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	E.04	<.002
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	<.03	<.03	<.05	<.3	<.09	<.09	<.1	<.04	<.04	<.002
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04	<.002
CARTERS CREEK SPR	09-26-00	<.03	<.05	<.05	<.3	<.09	<.09	<.1	<.04	<.04	<.002
LOCAL IDENT- I- FIER	DATE	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	FCNOFOS WATER DISS REC (UG/L) (04095)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	<.002	<.001	<.002	<.002	<.004	<.004	E.007	<.002	<.001	<.003
NEAL CAVE SPRING N	09-20-00	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001	<.003
BOFF CAVE SPRING N	10-02-00	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005	<.003
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005	<.003
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001	<.003
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	<.002	.005	<.002	<.002	<.004	<.004	E.005	<.002	<.001	<.003
WYNNE SPRING AT BU	09-20-00	<.002	<.001	<.002	<.002	<.004	<.004	<.002	<.002	<.001	<.003
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	<.004	<.007	<.005	<.002	<.005	<.018	E.005	<.005	<.005	<.003
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	<.004	E.007	<.005	<.002	<.005	<.018	E.008	<.005	<.005	<.003
CARTERS CREEK SPR	09-26-00	<.004	<.007	<.005	<.002	<.005	<.018	<.006	<.005	<.005	<.003

E--Estimated

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	LINDANE DIS- SOLVED (UG/L) (39341)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005	<.002
NEAL CAVE SPRING N	09-20-00	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005	<.002
EOFF CAVE SPRING N	10-02-00	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011	<.010
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011	<.010
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005	<.002
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005	<.002
WYNNE SPRING AT BU	09-20-00	<.004	<.005	<.004	<.002	<.006	<.004	<.007	<.018	<.005	<.002
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011	<.010
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011	<.010
CARTERS CREEK SPR	09-26-00	<.004	<.027	<.006	<.013	<.003	<.007	<.010	<.015	<.011	<.010
LOCAL IDENT- I- FIER	DATE	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002	<.001
NEAL CAVE SPRING N	09-20-00	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002	<.001
EOFF CAVE SPRING N	10-02-00	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035	<.050
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035	<.050
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002	<.001
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002	<.001
WYNNE SPRING AT BU	09-20-00	<.003	<.003	<.002	<.003	<.017	<.004	<.003	<.002	<.002	<.001
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035	<.050
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035	<.050
CARTERS CREEK SPR	09-26-00	<.041	<.020	<.003	<.002	<.021	<.009	<.005	<.002	<.035	<.050



## QUALITY OF GROUND WATER

## WATER-QUALITY DATA, LOWER TENNESSEE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	METHYL- PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004	<.013
NEAL CAVE SPRING N	09-20-00	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004	<.013
BOFF CAVE SPRING N	10-02-00	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004	<.013
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004	<.013
WYNNE SPRING AT BU	09-20-00	<.006	<.004	<.003	<.004	<.004	<.005	<.002	<.003	<.004	<.013
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023
CARTERS CREEK SPR	09-26-00	<.006	<.002	<.007	<.002	<.010	<.006	<.011	<.004	<.011	<.023
LOCAL IDENT- I- FIER	DATE	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)				
BEDFORD COUNTY											
WARD CAVE SPRING N	09-18-00	<.010	<.007	<.013	<.001	<.002	<.002				
NEAL CAVE SPRING N	09-20-00	1.92	<.007	<.013	<.001	<.002	<.002				
BOFF CAVE SPRING N	10-02-00	<.016	<.034	<.017	<.002	<.009	<.005				
COFFEE COUNTY											
CASCADE SPRING NEA	10-10-00	<.016	<.034	<.017	<.002	<.009	<.005				
FRANKLIN COUNTY											
TIMS FORD SPRING N	09-19-00	<.010	<.007	<.013	<.001	<.002	<.002				
GILES COUNTY											
WEST FORK SHOAL CR	09-20-00	<.010	<.007	<.013	<.001	<.002	<.002				
WYNNE SPRING AT BU	09-20-00	<.030	<.007	<.013	<.001	<.002	<.002				
LINCOLN COUNTY											
TEAL HOLLOW SPRING	10-03-00	<.016	<.034	<.017	<.002	<.009	<.005				
MAURY COUNTY											
RIVER RATS SPRING	09-26-00	<.016	<.034	<.017	<.002	<.009	<.005				
CARTERS CREEK SPR	09-26-00	<.016	<.034	<.017	<.002	<.009	<.005				

## QUALITY OF GROUND WATER

355

## SHELBY COUNTY

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

350100090070301 -- SH:J-139

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)		
													SODIUM PERCENT (00932)	
SEP 06...	1430	466	137	6.2	18.5	4.7	51.1	11.9	5.18	8.0	24.9	.486	1.01	
DATE		CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
		SEP 06...	70.6	3.0	3.2	<.2	12.3	84	84.1	.1	<15	56.2	<13.0	540
DATE				MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)				
				SEP 06...			9.5	<50.0	<2.00	<2.0	<.2	45.7	<8.0	

350446090013500 -- SH:J-154 MLGW-ALLEN

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	
SEP 06...	1545	370	135	6.4	17.0	.2	48.6	11.2	5.00	8.6	27.4	.539	1.07	
DATE		CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
SEP 06...	45.4	2.2	3.4	<.2	13.1	81	87.1	.1	<15	65.2	<13.0	860	<4.0	
			DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)				
	SEP 06...			13.5	<50.0	<2.00	<2.0	<.2	51.9	<8.0				

## QUALITY OF GROUND WATER

## SHELBY COUNTY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

350642089555000 -- SH:K-142 MLGW 99 SHEAHAN WELL FIELD

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	
SEP 07...	1100	116	6.1	17.5	1.5	35.6	7.97	3.82	9.5	36.2	.693	.66	63.6	
DATE		SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)
SEP 07...	6.2	5.1	<.2	14.9	76	76.9	.1	<15	<13.0	860	<4.0	27.1	<50.0	
				DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)					
				SEP 07...	<2.00	<2.0	<.2	21.9	<8.0					

350230089512301 -- SH:L- 37 MLGW-LICHTERMAN

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	
				WATER WHOLE FIELD (STAND- ARD UNITS) (00400)										
SEP 06...	1715	382	94	6.1	17.0	5.5	24.3	5.83	2.36	9.6	45.5	.845	.53	
DATE		CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
SEP 06...	54.8	3.4	5.6	<.2	13.3	61	63.4	.1	<15	15.7	<13.0	30	<4.0	
DATE					MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)			
SEP 06...					<3.0	<50.0	<2.00	<2.0	<.2	15.9	<8.0			

## SHELBY COUNTY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

350507089482401 -- SH:L-090 GERMANTOWN 7

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	
SEP 04...	1330	304	90	6.0	17.5	3.4	24.8	5.90	2.43	8.5	42.1	.743	.57	
DATE		CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
SEP 04...	58.8	3.0	5.8	<.2	12.7	58	59.1	.1	<.006	E.129	<.040	E.09	<.006	
DATE		PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
SEP 04...	<.020	<15	19.8	<13.0	<10	<4.0	<3.0	<50.0	<2.00	<2.0	<.2	17.5	<8.0	
DATE		BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	BROMO- FORM TOTAL (UG/L) (32104)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- FORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- ETHANE TOTAL (UG/L) (34311)	ETHYL- BENZENE TOTAL (UG/L) (34371)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)
SEP 04...	<.05	<.06	<.1	<.06	<.2	E.03	<.05	<.04	<.03	<.1	<.03	<.3	<.2	
DATE		METHYL ENE CHLO- RIDE TOTAL (UG/L) (34423)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)
SEP 04...	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03	<.03	<.03	<.03	<.05	
DATE				DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	STYRENE TOTAL (UG/L) (77128)					
SEP 04...				<.3	<.09	<.09	<.1	<.04	<.04					

E--Estimated

## QUALITY OF GROUND WATER

## SHELBY COUNTY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

350449089480501 -- SH:L-092 GERMANTOWN 9

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	
SEP 04...	1530	309	65	6.2	17.0	5.6	17.9	4.28	1.74	6.3	42.7	.648	.43	
DATE		CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
SEP 04...	33.8	1.7	3.5	<.2	12.5	45	46.0	.1	<.006	E.118	<.040	<.10	<.006	
DATE		PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
SEP 04...	<.020	<15	14.1	<13.0	<10	<4.0	<3.0	<50.0	<2.00	<2.0	<.2	12.6	<8.0	
DATE		BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	BROMO- FORM TOTAL (UG/L) (32104)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- FORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- ETHANE TOTAL (UG/L) (34311)	ETHYL- BENZENE TOTAL (UG/L) (34371)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)
SEP 04...	<.05	<.06	<.1	<.06	<.2	E.06	<.05	<.04	<.03	<.1	<.03	<.3	<.2	
DATE		METHYL ENE CHLO- RIDE TOTAL (UG/L) (34423)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)
SEP 04...	<.2	<.1	<.09	<.04	<.04	<.03	<.06	<.09	<.03	<.03	<.03	<.03	<.05	
DATE				DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	STYRENE TOTAL (UG/L) (77128)					
SEP 04...				<.3	<.09	<.09	<.1	<.04	<.04					

E--Estimated



## QUALITY OF GROUND WATER

359

## SHELBY COUNTY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

350913090100801 -- SH:O-207 MLGW #12C

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	
SEP 06...	1245	758	132	6.3	20.5	53.5	12.6	5.30	8.5	25.4	.503	.58	67.6	
DATE		SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
SEP 06...	2.5	2.8	<.2	12.9	81	87.9	.1	<15	44.7	<13.0	140	E2.2	35.4	

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
SEP 06...	<50.0	E1.62	<2.0	<.2	57.7	<8.0

351420089570900 -- SH:P-131 MLGW MORTON 621

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	
		(US/CM) (00095)	(00400)	(00010)	(00300)	(00900)	(00915)	(00925)	(00930)	(00932)	(00931)	(00935)	(00405)	
SEP 07...	0930	115	6.7	18.0	.6	42.1	10.0	4.12	6.6	25.1	.446	.98	21.1	
DATE	TIME	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
		(00945)	(00940)	(00950)	(00955)	(70300)	(70301)	(70303)	(01106)	(01005)	(01035)	(01046)	(01130)	(01056)
SEP 07...	6.0	2.5	<.2	10.5	68	72.3	.1	<15	52.5	<13.0	70	<4.0	12.3	
DATE	TIME	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)							
								(01060)	(01065)	(01145)	(01075)	(01080)	(01085)	
SEP 07...		<50.0	<2.00	<2.0	<.2	49.9	<8.0							

## QUALITY OF GROUND WATER

## SHELBY COUNTY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

351054089515301 -- Sh:Q-33

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L) AS CAC03 (00900)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)	
SEP 06...	1100	275.	113	6.0	17.0	.7	33.0	7.68	3.34	9.6	38.1	.730	.81	
DATE		CARBON DIOXIDE DIS- SOLVED (MG/L) AS CO2 (00405)	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2 (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS) PER AC-FT (70303)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL (01106)	BARIUM, DIS- SOLVED (UG/L) AS BA (01005)	COBALT, DIS- SOLVED (UG/L) AS CO (01035)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	LITHIUM DIS- SOLVED (UG/L) AS LI (01130)
SEP 06...	74.9	6.9	5.2	<.2	11.3	70	71.4	.1	<15	34.6	<13.0	840	<4.0	
DATE				MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L) AS MO (01060)	NICKEL, DIS- SOLVED (UG/L) AS NI (01065)	SELE- NIUM, DIS- SOLVED (UG/L) AS SE (01145)	SILVER, DIS- SOLVED (UG/L) AS AG (01075)	STRON- TIUM, DIS- SOLVED (UG/L) AS SR (01080)	VANA- DIUM, DIS- SOLVED (UG/L) AS V (01085)				
SEP 06...				11.7	<50.0	<2.00	<2.0	<.2	30.7	<8.0				

350835089434100 -- SH:R- 29 MLGW #710

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L) AS CAC03 (00900)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)	
SEP 06...	0915	589	51	6.2	18.0	5.0	14.9	3.72	1.37	3.9	35.4	.438	.39	
DATE		CARBON DIOXIDE DIS- SOLVED (MG/L) AS CO2 (00405)	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2 (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS) PER AC-FT (70303)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL (01106)	BARIUM, DIS- SOLVED (UG/L) AS BA (01005)	COBALT, DIS- SOLVED (UG/L) AS CO (01035)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	LITHIUM DIS- SOLVED (UG/L) AS LI (01130)
SEP 06...	27.7	1.7	2.1	<.2	9.9	36	36.7	.0	<15	6.9	<13.0	170	<4.0	
DATE				MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L) AS MO (01060)	NICKEL, DIS- SOLVED (UG/L) AS NI (01065)	SELE- NIUM, DIS- SOLVED (UG/L) AS SE (01145)	SILVER, DIS- SOLVED (UG/L) AS AG (01075)	STRON- TIUM, DIS- SOLVED (UG/L) AS SR (01080)	VANA- DIUM, DIS- SOLVED (UG/L) AS V (01085)				
SEP 06...				6.7	<50.0	<2.00	<2.0	<.2	8.58	<8.0				

## CHEMICAL QUALITY OF PRECIPITATION

361

00441400 HATCHIE NATIONAL WILDLIFE REFUGE RAIN GAGE AT HILLVILLE, TN

(NATIONAL TRENDS NETWORK)

LOCATION.--Lat 35°28'08", long 89°10'14", Haywood County, Hydrologic Unit 08010208, 0.9 mi north of Hillville, 12 mi southeast of Brownsville.

PERIOD OF RECORD.--October 1984 to current year.

INSTRUMENTATION.--An automatic wet-dry precipitation collector is used to collect 7-day accumulations. The collector is equipped with a precipitation sensor which activates a motor to operate the sample bucket cover. The sample bucket remains uncovered for the duration of each precipitation event and covered during dry periods. Dryfall samples are not collected. A standard 8.0-inch recording rain gage is used to obtain on-site precipitation records.

REMARKS.--These data are part of the data for this site verified by the National Atmospheric Deposition Program/National Trends Network (NADP/NTN) Coordinator. Additional data are available from the NADP/NTN Coordinator, Natural Resource Ecology Laboratory, Fort Collins, Co. 80523. Finalized, quality assured data from all 200 NADP/NTN sites are available on-line via the internet at <http://btdqs.usgs.gov/acidrain>

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## INDEX

<b>A</b>		Big Limestone Creek near Limestone .....	134
Access to WATSTORE data .....	19	Big War Creek at Luther.....	283
Accuracy of stage and		Binfield, Baker Creek tributary near.....	283
water-discharge records.....	12	Biochemical oxygen demand, definition of.....	21
Acid neutralizing capacity, definition of.....	20	Biomass pigment ratio, definition of .....	21
Acre-foot, definition of.....	20	Biomass, definition of.....	21
Adenosine triphosphate, definition of .....	20	Blue Creek near New Hope .....	286
Albany, Lick Creek near.....	281	Blue-green algae, definition of .....	21
Alcoa, Little River near .....	154	Bolivar, Hatchie River at .....	252
<b>Algae</b>		Bordeaux, White Creek near.....	94
Blue-green, definition of .....	21	Bordeaux, Ewing Creek below Knight Rd near ....	278
Fire, definition of.....	23	Bottom material (see "Bed material").....	21
Green, definition of .....	23	Bradyville, Brawleys Fork below .....	275
Algal growth potential, definition of.....	20	Bradyville, Reed Creek near.....	276
Alkalinity, definition of.....	20	Brawleys Fork below Bradyville .....	275
Almaville, Unnamed Sink near .....	276	Brentwood, Little Harpeth River at	
Annual 7-day minimum, definition of.....	20	Granny White Pike at.....	279
Annual runoff, definition of .....	20	Browns Creek at Factory Street at Nashville.....	278
Antioch, Mill Creek near .....	277	Browns Creek at State Fairground at Nashville....	86
Aquifer, water table, definition of .....	31	Buffalo River near Flat Woods.....	234
<b>Arlington</b>		Burns, Jones Creek near.....	279
Loosahatchie River near.....	254	Burwood, Murfrees Fork above.....	279
Aroclor, definition of.....	20	Bushman Creek at Pitts Lane	
<b>Arthur</b>		Ford near Compton.....	276
Powell River near .....	158	Byrdstown, Wolf River near .....	274
Artificial substrate, definition of .....	20	<b>C</b>	
Ash mass, definition of.....	20	Camden	
Ashland City, Sycamore Creek near .....	279	Cypress Creek at.....	236
Athens, North Mouse Creek near Rocky		Cane Creek at Ripley .....	288
Mount Hollow near .....	178	Cane Creek at Stewart.....	286
Avondale, Pages Branch at.....	278	Cane Creek near Howell .....	190
<b>B</b>		Cane Creek near Spencer .....	275
<b>Bacteria</b>		Caney Creek near Cosby.....	281
Fecal coliform, definition of.....	23	Carter Branch near White Pine .....	281
Fecal streptococcal, definition of .....	23	<b>Carters Creek</b>	
Total coliform, definition of.....	30	Carters Creek at Butler Road.....	222
Baker Creek tributary near Binfield .....	283	Carters Creek at Butler Road at Carters Creek .....	222
<b>Barren Plains</b>		Cedar Creek near Valley Home .....	281
Red River below Highway 161 .....	116	Cedar Hill, Piney River at.....	228
Bartons Creek near Cumberland Furnace.....	279	Cedar Hill, Spring Creek tributary near .....	280
Base discharge (for peak discharge), definition of.	20	Cells volume .....	21
Base flow, definition of .....	20	Cells/volume, definition of .....	21
Battle Creek near Monteagle.....	285	Centerville, Duck River at Hwy 100 at.....	226
Beaver Creek at Brickyard Road		Cfs-day (see "Cubic foot per second-day") .....	21
near Powell .....	284	Charles Creek near McMinnville.....	275
Beaver Creek at Hwy 22 Bypass near Huntingdon	244	Charleston, Hiwassee River at.....	176
Beaver Creek at Solway .....	160	Chattanooga, Tennessee River at.....	180
Beaver Creek near Willow Fork at		Chemical oxygen demand, definition of.....	21
Halls Crossroads.....	284	Cherokee Creek near Embreeville .....	281
Beaver Dam Creek above Springfield.....	280	Childress, Indian Creek at.....	282
Bed material, definition of.....	21	Clear Creek at Lilly Bridge near Lancing.....	166
Bedload discharge, definition of.....	20	Clear Fork near Fairview .....	281
Bedload, definition of.....	20	Clear Fork near Robbins .....	44
Bell Buckle, Wartrace Creek above .....	285	Clinch River above Tazewell.....	156
<b>Bellevue</b>		Clostridium perfringens .....	21
Harpeth River at .....	108	Coal Creek at Lake City.....	284
Bent Creek at Taylor Gap.....	281	Coker Creek near Ironsburg.....	284
Benthic organisms, definition of .....	21	Coliphages, definition of.....	21
Big Creek near Rogersville .....	146	Collins River near McMinnville .....	54



Color unit, definition of.....	21	Duck River at Columbia .....	218
Columbia, Duck River at.....	218	Duck River at Hwy 100 at Centerville.....	226
Compton, Bushman Creek at Pitts		Duck River at Shelbyville.....	208
Lane Ford near.....	276	Duck River near Shelbyville.....	212
Confined aquifer, definition of.....	21	Dumplin Creek at Mt. Hareb .....	282
Conner Creek at Steele Road near Solway .....	284	Dyersburg, Lewis Creek near .....	287
Contents, definition of.....	21	E	
Continuous-record station, definition of.....	21	Earthman Fork at Whites Creek.....	278
Control structure, definition of.....	21	East Fork Browns Creek at	
Control, definition of.....	21	100 Oaks Mall, at Nashville .....	278
Coon Creek above Chop Hollow		East Fork Obey River near Jamestown.....	46
near Hohenwald.....	286	East Fork Poplar Creek at Bear Creek	
Cooperation .....	2	Road at Oak Ridge.....	162
Cornersville, Richland Creek near .....	285	East Fork Stones River at Woodbury .....	275
Cosby, Caney Creek near .....	281	East Fork Stones River near Lascassas.....	68, 276
Cottontown, Station Camp Creek at.....	275	Edenwold, Dry Creek near.....	66
Crest-stage partial record stations .....	274-288	Elk River near Pelham .....	188
Crockett Creek below Rogersville.....	148	Ellis Mills, Yellow Creek at .....	122
Crooked Creek near Maynardville .....	283	Embreeville, Nolichucky River at .....	132
Cross Plains, Honey Run Creek below.....	280	Embreeville, Cherokee Creek near .....	281
Cross Plains, Honey Run Creek near .....	280	Emory River at Oakdale .....	174
Cubic foot per second per square mile, definition of .....	22	Enterococcus bacteria, definition of .....	23
Cubic foot per second, definition of.....	21	EPT Index, definition of .....	23
Cubic foot per second-day, definition of.....	21	Escherichia coli (E. coli), definition of.....	23
Culleoka, Fountain Creek near .....	286	Estimated (E) value, definition of.....	23
Cumberland Furnace, Bartons Creek near.....	279	Euglenoids, definition of.....	23
Cumberland River at Old Hickory		Ewing Creek below Knight Rd near Bordeaux .....	278
Dam (Tailwater) .....	58	Explanation of ground-water-level records .....	17
Cumberland River at Woodland Street		Explanation of ground-water-quality records .....	19
at Nashville.....	88	Explanation of precipitation-quality records .....	19
Cummings Creek near Dotsonville .....	280	Explanation of records .....	7
Cypress Creek at Camden .....	236	Explanation of stage and water discharge.....	8
D		Explanation of surface-water quality.....	13
Daddys Creek near Hebbertsburg.....	164	Extractable organic halides, definition of.....	23
Daily mean suspended-sediment concentration,		F	
definition of .....	22	Fairview, Middle Fork Forked Deer River near ....	250
Daily-record station, definition of .....	22	Fairview, Clear Fork near .....	281
Data Collection Platform, definition of.....	22	Fecal coliform bacteria, definition of .....	23
Data logger, definition of .....	22	Fecal streptococcal bacteria, definition of .....	23
Datum, definition of .....	22	Fire algae, definition of.....	23
Denver, Trace Creek above .....	286	Flat Creek at Luttrell.....	283
Diatom, definition of .....	22	Flat Woods, Buffalo River near .....	234
Dickson, West Piney River at Hwy 70 near .....	286	Fletcher Creek at Sycamore View Road at Memphis	266
Diel, definition of .....	22	Florence, Tennessee River at.....	200
Discharge, definition of .....	22	Flow-duration percentiles, definition of .....	23
Dissolved oxygen, definition of .....	22	Forgey Creek at Zion Hill.....	282
Dissolved, definition of .....	22	Fountain Creek near Culleoka .....	286
Dissolved-solids concentration, definition of.....	22	Franklin	
Diversity index, definition of .....	22	Harpeth River at.....	98
Doe Creek at Gainesboro.....	274	Harpeth River below.....	106
Donelson, McCrory Creek at Ironwood Dr at.....	277	South Prong Spencer Creek near .....	100
Dotsonville, Cummings Creek near .....	280	Spencer Creek near .....	104
Downstream order system, explanation of .....	7	French Broad River near Newport.....	128
Drainage area, definition of.....	22	G	
Drainage basin, definition of.....	22	Gage datum, definition of .....	23
Dry Creek near Edenwold .....	66	Gage height, definition of .....	23
Dry Land Creek tributary near New Market .....	283	Gage values, definition of.....	23
Dry mass, definition of.....	22	Gaging station, definition of .....	23
Dry weight, definition of .....	22	Gainesboro, Doe Creek at.....	274

Garrison Fork above L&D Railroad at Wartrace .....	204	Hydrologic index station, definition of .....	24
Gas chromatography/flame ionization detector, definition of .....	23	Hydrologic unit, definition of .....	24
Germantown		I	
Nonconnah Creek near .....	272	Identifying estimated daily discharge .....	12
Wolf River at .....	264	Inch, definition of .....	24
Goodlettsville, Mansker Creek above .....	64	Indian Creek at Childress .....	282
Gordonsville, Mulherrin Creek near .....	275	Indian Creek near Olivehill .....	285
Grays Chapel, Louise Creek near .....	279	Instantaneous discharge, definition of .....	24
Green algae, definition of .....	23	Iron City, Shoal Creek at .....	198
Green Hills, Sugartree Creek at		Ironsburg, Coker Creek near .....	284
Abbott Martin Rd at .....	279	J	
Green Hills, Sugartree Creek at		Jamestown, East Fork Obey River near .....	46
YMCA Access Rd at .....	278	Jasper, Standifer Branch at .....	285
Greenfield, South Fork Obion River near .....	287	Jones Creek near Burns .....	279
Greenfield, Spring Creek near .....	287	K	
Ground-water levels, by county		Kingston Springs, Harpeth River near .....	110
Hamilton .....	324	L	
Lauderdale .....	325	Laboratory Reporting Level, definition of .....	24
Lincoln .....	326	LaGrange, Wolf River at .....	256
Shelby .....	328, 329	Lake City, Coal Creek at .....	284
Ground-water-level records, Explanation of .....	17	Lakes and reservoirs	
Ground-water-quality records, Explanation of .....	19	Boone Lake .....	238
H		Calderwood Lake .....	243
Habitat quality index, definition of .....	24	Center Hill Lake .....	125
Halls Crossroads, Willow Fork near .....	284	Cheatham Lake .....	126
Hamilton County .....	324	Cherokee Lake .....	238
Hardness, definition of .....	24	Chickamauga Lake .....	241
Harpeth River at Bellevue .....	108	Chilhowee Lake .....	243
Harpeth River at Franklin .....	98	Cordell Hull Reservoir .....	124
Harpeth River below Franklin .....	106	Dale Hollow Lake .....	124
Harpeth River near Kingston Springs .....	110	Davy Crockett Lake .....	243
Hatchie National Wildlife Refuge rain		Douglas Lake .....	237
gage at Hillville .....	361	Fort Loudoun Lake .....	239
Hatchie River at Bolivar .....	252	Fort Patrick Henry Lake .....	238
Hatchie River at Sunnyhill .....	288	Great Falls Lake .....	125
Hebbertsburg, Daddys Creek near .....	164	J. Percy Priest Reservoir .....	126
Henry, Neil Ditch near .....	287	Kentucky Lake .....	243
Hermitage		Lake Barkley .....	126
Stoners Creek near .....	76	Lake Cumberland .....	124
High tide, definition of .....	24	Lake Ocoee .....	240
Hillville, Hatchie National Wildlife Refuge		Melton Hill Lake .....	240
rain gage at .....	361	Nickajack Lake .....	241
Hilsenhoff's Biotic Index, definition of .....	24	Normandy Lake .....	242
Hiwassee River at Charleston .....	176	Norris Lake .....	239
Hixson, North Chickamauga Creek		Ocoee No. 3 Lake .....	243
at Greens Mill near .....	284	Old Hickory Lake .....	125
Hohenwald, Coon Creek above		Pickwick Lake .....	242
Chop Hollow near .....	286	South Holston Lake .....	237
Honey Run Creek below Cross Plains .....	280	Tellico Lake .....	239
Honey Run Creek near Cross Plains .....	280	Tims Ford Lake .....	242
Horizontal datum (See "Datum") .....	24	Watauga Lake .....	237
Howell, Cane Creek near .....	190	Watts Bar Lake .....	240
Huntingdon		Woods Reservoir .....	241
Beaver Creek at Hwy 22 Bypass near .....	244	Lancing	
Huntingdon, Little Reedy Creek near .....	287	Clear Creek at Lilly Bridge near .....	166
Hydrologic Bench-Mark Network, definition of ...	6	Obed River near .....	172
Hydrologic benchmark station, definition of .....	24	Land-surface datum, definition of .....	24
		Lascassas, East Fork Stones River near .....	68, 276
		Lauderdale County .....	325

Leanna, Unnamed Sink at.....	277	Mill Creek tributary at Glenrose Ave	
Leanna, Unnamed Sink on I-840 at.....	277	at Woodbine.....	277
Lewis Creek near Dyersburg.....	287	Millers Creek at Turnersville.....	118
Lexington, Owl Creek at.....	285	Milligrams per liter, definition of.....	25
Lick Creek near Albany.....	281	Minimum Reporting Level, definition of.....	25
Light-attenuation coefficient, definition of.....	24	Miscellaneous site, definition of.....	25
Limestone, Big Limestone Creek near.....	134	Monoville, Peyton Creek near.....	275
Lincoln County.....	326	Monteagle, Battle Creek near.....	285
Lipid, definition of.....	24	Most probable number (MPN), definition of.....	25
Little Ellejoy Creek at Prospect.....	283	Mt. Hareb, Dumplin Creek at.....	282
Little Harpeth River at Granny White		Mulherrin Creek near Gordonsville.....	275
Pike at Brentwood.....	279	Multiple-plate samplers, definition of.....	25
Little Pigeon River above Sevierville.....	144	Murfrees Fork above Burwood.....	279
Little Reedy Creek near Huntingdon.....	287	Murfreesboro, West Fork Stones River at.....	70
Little River above Townsend.....	150	Murfreesboro, Lytle Creek at Sanbyrne Drive at ..	276
Little River near Alcoa.....	154	N	
Little River near Maryville.....	152	Nanograms per liter, definition of.....	25
Little Sequatchie River at Sequatchie.....	285	Nashville	
Long-Term Method Detection Level,		Browns Creek at State Fairground at.....	86
definition of.....	24	Cumberland River at Woodland Street.....	88
Loosahatchie River near Arlington.....	254	Richland Creek at Charlotte Avenue at.....	96
Louise Creek near Grays Chapel.....	279	Nashville, Browns Creek at Factory Street at.....	278
Low flow, 7-day 10-year, definition of.....	28	Nashville, East Fork Browns Creek at	
Low tide, definition of.....	24	100 Oaks Mall, at.....	278
Luther, Big War Creek at.....	283	Nashville, Sevenmile Creek at	
Luttrell, Flat Creek at.....	283	Blackman Rd near.....	277
Lytle Creek at Sanbyrne Drive at Murfreesboro ....	276	Nashville, West Fork Browns Creek at	
M		General Bates Drive at.....	278
Macrophytes, definition of.....	24	National Atmospheric Deposition	
Mansker Creek above Goodlettsville.....	64	Program/National Trends Network, The.....	6
Martin, North Fork Obion River near.....	287	National Geodetic Vertical Datum of 1929,	
Maryville, Little River near.....	152	definition of.....	25
Maynardville, Crooked Creek near.....	283	National Stream-Quality Accounting Network.....	6
McCrary Creek at Ironwood Dr at Donelson.....	277	National Water-Quality Assessment	
McMinnville, Collins River near.....	54	Program (NAWQA).....	6
McMinnville, Charles Creek near.....	275	Natural substrate, definition of.....	25
McVile, Scarham Creek near.....	184	Neil Ditch near Henry.....	287
Mean concentration of suspended sediment,		Nekton, definition of.....	25
definition of.....	24	Nephelometric turbidity unit, definition of.....	25
Mean discharge, definition of.....	25	New Hope, Blue Creek near.....	286
Mean high tide, definition of.....	25	New Market, Dry Land Creek tributary near.....	283
Mean low tide, definition of.....	25	New River at New River.....	42
Mean sea level, definition of.....	25	Newport	
Measuring point, definition of.....	25	French Broad River near.....	128
Membrane filter, definition of.....	25	Pigeon River at.....	130
Memphis		NGVD of 1929 (see "National Geodetic	
Fletcher Creek at Sycamore View Road at.....	266	Vertical Datum of 1929").....	25
Wolf River at Hollywood Street at.....	270	Nolensville, Mill Creek at.....	277
Metamorphic stage, definition of.....	25	Nolichucky River at Embreeville.....	132
Method Detection Limit, definition of.....	25	Nonconnah Creek near Germantown.....	272
Methylene blue active substances, definition of.....	25	North American Vertical Datum of 1988 .	
Micrograms per gram, definition of.....	25	(NAVD 1988), definition of.....	26
Micrograms per kilogram, definition of.....	25	North Chickamauga Creek at	
Micrograms per liter, definition of.....	25	Greens Mill near Hixson.....	284
Microsiemens per centimeter, definition of.....	25	North Fork Creek near Poplins Crossroad.....	214
Middle Fork Forked Deer River near Fairview.....	250	North Fork Forked Deer River at U.S.	
Mill Creek at Nolensville.....	277	Hwy 45W Bypass at Trenton.....	287
Mill Creek at Thompson Lane near Woodbine.....	80	North Fork Obion River near Martin.....	287
Mill Creek near Antioch.....	277	North Fork Obion River near Union City.....	287



North Mouse Creek near Rocky Mount Hollow near Athens.....	178	Prospect, Little Ellejoy Creek at.....	283
Numbering system for wells, explanation of.....	7	Pulaski, Richland Creek at Hwy 64 near.....	194
O		R	
Oak Ridge		Radioisotopes, definition of.....	27
East for Poplar Creek at Bear Creek Road at..	162	Records, Explanation of.....	7
Oakdale, Emory River at.....	174	Recoverable, bed (bottom) material, definition of.	27
Obed River near Lancing.....	172	Recurrence interval, definition of.....	27
Old Hickory Dam (Tailwater)		Red Bank, Stringers Branch at Leawood Dr at.....	285
Cumberland River at.....	58	Red River at Port Royal.....	120
Olivehill, Indian Creek near.....	285	Red River below Highway 161 near	
Ooltewah, Wolftever Creek near.....	284	Barren Plains.....	116
Open or screened interval, definition of.....	26	Reed Creek near Bradyville.....	276
Orebank, Reedy Creek at.....	282	Reedy Creek at Orebank.....	282
Organic carbon, definition of.....	26	Reelfoot Lake near Tiptonville.....	246
Organic mass, definition of.....	26	Replicate samples, definition of.....	28
Organism count, definition of		Return period (see "Recurrence interval").....	28
Area, definition of.....	26	Richland Creek at Charlotte Avenue	
Total, definition.....	30	at Nashville.....	96
Volume, definition of.....	26	Richland Creek at Hwy 64 near Pulaski.....	194
Organochlorine compounds, definition of.....	26	Richland Creek near Cornersville.....	285
Other data available.....	12	Ripley, Cane Creek at.....	288
Owl City		River mileage, definition of.....	28
South Fork Forked Deer River near.....	248	Roaring River above Gainesboro.....	274
Owl Creek at Lexington.....	285	Robbins, Clear Fork near.....	44
P		Robertson Creek near Persia.....	282
Pages Branch at Avondale.....	278	Rogersville	
Parameter Code, definition of.....	26	Big Creek near.....	146
Partial-record station, definition of.....	26	Crockett Creek below.....	148
Particle size, definition of.....	26	Rossville, Wolf Creek at.....	262
Particle-size classification, definition of.....	26	Runoff, definition of.....	28
Passenger Creek near Sango.....	280	S	
Peak flow (peak stage), definition of.....	26	Sango, Passenger Creek near.....	280
Pelham, Elk River near.....	188	Savannah, Tennessee River at.....	202
Percent composition (percent of total),		Scarham Creek near McVile.....	184
definition of.....	26	Sea level, definition of.....	28
Percent shading, definition of.....	26	Second Creek near Walnut Grove.....	275
Periodic-record station, definition of.....	26	Sediment, definition of.....	28
Periphyton, definition of.....	26	Total load, definition of.....	30
Persia, Robertson Creek near.....	282	Sediment, explanation of.....	14
Pesticides, definition of.....	26	Sequatchie, Little Sequatchie River at.....	285
Peyton Creek near Monoville.....	275	Seven-day 10-year low flow, definition of.....	28
pH, definition of.....	26	Sevenmile Creek at Blackman Rd	
Phytoplankton, definition of.....	27	near Nashville.....	277
Picocurie, definition of.....	27	Sevierville, Little Pigeon River above.....	144
Pigeon River at Newport.....	130	Shelby County.....	328, 329
Piney River at Cedar Hill.....	228	Shelbyville	
Piney River at Vernon.....	230	Duck River at.....	208
Plankton, definition of.....	27	Duck River near.....	212
Polychlorinated biphenyls (PCB' s), definition of.	27	Shiloh, Yellow Creek near.....	281
Polychlorinated naphthalenes, definition of.....	27	Shoal Creek at Iron City.....	198
Poplins Crossroad, North Fork Creek near.....	214	Sinking Fork at White Pine.....	282
Port Royal, Red River at.....	120	Smith Fork at Temperance Hall.....	56
Port Royal, Sulphur Fork Red River above.....	280	Smyrna, West Fork Stones River near.....	276
Powell River near Arthur.....	158	Sodium adsorption ratio, definition of.....	28
Precipitation-quality records, Explanation of.....	19	Solway, Beaver Creek at.....	160
Primary productivity, definition of.....	27	South Fork Forked Deer River near Owl City.....	248
Carbon method, definition of.....	27	South Fork Obion River near Greenfield.....	287
Oxygen method, definition of.....	27	South Prong Spencer Creek near Franklin.....	100
		Special networks and programs.....	6

Specific electrical conductance (conductivity), definition of .....	28	Temperance Hall, Smith Fork at.....	56
Spencer Creek near Franklin .....	104	Temperature preferences	
Spencer, Cane Creek near.....	275	Cold, definition of.....	29
Spring Creek near Greenfield.....	287	Cool, definition of.....	29
Spring Creek tributary near Cedar Hill .....	280	Warm, definition of .....	29
Springfield, Beaver Dam Creek above.....	280	Ten Mile Creek at Robinson Road	
Springfield, Sulphur Fork Red River above .....	280	near Knoxville .....	283
Stable isotope ratio, definition of .....	28	Tennessee River at Chattanooga.....	180
Stage (see Gage height) .....	28	Tennessee River at Florence .....	200
Stage and water discharge, Explanation of.....	8	Tennessee River at Savannah .....	202
Stage-discharge relation, definition of .....	28	Tennessee River at Whitesburg .....	186
Standifer Branch at Jasper .....	285	Thermograph, definition of.....	29
Station Camp Creek at Cottontown.....	275	Time-weighted average, definition of.....	29
Station identification numbers, explanation of.....	7	Tiptonville, Reelfoot Lake near .....	246
Stewart, Cane Creek at .....	286	Tons per acre-foot, definition of .....	29
Stock Creek at Pickins Gap Road near		Tons per day, definition of.....	29
High Bluff.....	283	Total coliform bacteria, definition of.....	30
Stoners Creek near Hermitage.....	76	Total discharge, definition of.....	30
Streamflow, definition of.....	28	Total in bottom material, definition of.....	30
Stringers Branch at Leawood Dr at Red Bank .....	285	Total length, definition of .....	30
Substrate, artificial, definition of.....	20	Total load, definition of .....	30
Substrate, definition of .....	28	Total organism count, definition of .....	30
Artificial, definition of .....	20	Total recoverable, definition of .....	30
Embeddedness Class, definition of .....	28	Total sediment discharge, definition of .....	30
Natural, definition of .....	25	Total sediment load, definition of.....	30
Sugartree Creek at Abbott Martin Rd		Total, definition of .....	29
at Green Hills.....	279	Bottom material .....	30
Sugartree Creek at YMCA Access Rd		Coliform bacteria .....	30
at Green Hills.....	278	Townsend, Little River above.....	150
Sulphur Fork Red River above Port Royal.....	280	Trace Creek above Denver .....	286
Sulphur Fork Red River above Springfield.....	280	Trenton, North Fork Forked Deer River	
Summary of hydrologic conditions .....	3	at U.S. Hwy 45W Bypass at .....	287
Sunbright, Whiteoak Creek at .....	274	Trophic group, definition of	
Sunnyhill, Hatchie River at .....	288	Filter feeder.....	30
Surface area of a lake, definition of.....	28	Herbivore .....	30
Surface-water quality, Explanation of.....	13	Invertivore .....	30
Surficial bed material, definition of.....	28	Omnivore .....	30
Suspended sediment, definition of .....	29	Piscivore .....	30
Mean concentration of, definition of.....	24	Turbidity, definition of .....	30
Suspended solids, total residue, definition of.....	29	Turnersville, Milliers Creek at.....	118
Suspended, definition of.....	28	U	
Recoverable, definition of.....	28	Ultraviolet (UV) absorbance (absorption),	
Total, definition of.....	29	definition of .....	30
Suspended-sediment, definition of		Union City, North Fork Obion River near .....	287
Concentration .....	29	Unnamed Sink at Leanna .....	277
Concentration, definition of .....	29	Unnamed Sink near Almarville.....	276
Discharge, definition of.....	29	Unnamed Sink on I-840 at Leanna .....	277
Load, definition of.....	29	V	
Sycamore Creek near Ashland City .....	279	Valley Home, Cedar Creek near .....	281
Synoptic studies, definition of.....	29	Vernon, Piney River at.....	230
T		Vertical datum (see "Datum") .....	30
Taxa richness, definition of.....	29	Volatile organic compounds, definition of .....	30
Taxonomy, definition of.....	29	W	
Taylor Gap, Bent Creek at.....	281	Walnut Grove, Second Creek near .....	275
Tazewell		Wartrace	
Clinch River above.....	156	Garrison Fork above L&N Railroad at .....	204
Techniques of water-resources		Wartrace Creek below County Road at .....	206
investigations.....	32-35	Wartrace Creek above Bell Buckle.....	285
		Wartrace Creek below County Road at Wartrace..	206



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**INDEX**


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Water table, definition of.....	31
Water temperature, explanation of .....	14
Water year, definition of.....	31
Water-table aquifer, definition of .....	31
WDR, definition of.....	31
Weighted average, definition of .....	31
West Fork Browns Creek at	
General Bates Drive at Nashville .....	278
West Fork Stones River at Murfreesboro .....	70
West Fork Stones River near Smyrna .....	276
West Piney River at Hwy 70 near Dickson.....	286
Wet mass, definition of.....	31
Wet weight, definition of.....	31
White Pine, Carter Branch near .....	281
White Pine, Sinking Fork at .....	282
Whiteoak Creek at Sunbright .....	274
Whites Creek near Bordeaux .....	94
Whites Creek, Earthman Fork at .....	278
Whitesburg, Tennessee River at.....	186
Willow Fork near Halls Crossroads .....	284
Wolf Creek at Rossville.....	262
Wolf River at Germantown .....	264
Wolf River at Hollywood Street at Memphis.....	270
Wolf River at LaGrange .....	256
Wolf River near Byrdstown.....	274
Wolftever Creek near Ooltewah.....	284
Woodbine	
Mill Creek at Thompson Lane near.....	80
Woodbine, Mill Creek tributary at	
Glenrose Ave at .....	277
Woodbury, East Fork Stones River at .....	275
WSP, definition of.....	31
Y	
Yellow Creek at Ellis Mills .....	122
Yellow Creek near Shiloh .....	281
Z	
Zion Hill, Forgey Creek at.....	282
Zooplankton, definition of.....	31



## CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<b>Length</b>		
inch (in.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<b>Area</b>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<b>Volume</b>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<b>Flow</b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<b>Mass</b>		
ton (short)	$9.072 \times 10^{-1}$	megagram or metric ton

*Sea level:* In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.





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