

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 mi².

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 NGVD of 1929. 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 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 14	1630	5,350	13.75	May 7	0430	4,010	12.15
Feb 16	0500	3,110	10.95	May 7	1115	6,520	15.02
Feb 22	0345	4,830	13.15	Sep 22	0715	7,370	15.90
May 5	2345	*7,730	*16.25				

Minimum discharge, 3.5 ft³/s, Aug. 26, 27.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	13	14	134	48	105	59	29	8.2	23	86	18
2	31	12	13	101	41	93	46	59	7.6	18	28	102
3	25	12	12	85	72	69	36	33	19	13	142	212
4	36	15	305	69	309	59	32	27	10	11	49	99
5	33	427	639	59	141	53	147	947	8.2	8.1	28	47
6	24	236	210	48	100	52	555	1,240	80	11	18	26
7	20	107	117	41	84	45	836	2,820	68	12	14	17
8	16	68	78	37	61	37	323	733	26	7.7	11	13
9	14	44	59	34	53	33	199	364	14	8.8	9.0	12
10	715	68	59	32	57	32	162	209	34	16	7.6	8.7
11	470	114	141	30	55	31	121	433	280	19	28	7.6
12	190	62	90	29	62	31	91	205	168	12	26	6.3
13	104	44	224	28	56	31	67	132	85	103	14	5.9
14	64	34	199	28	2,160	28	52	96	56	49	18	37
15	45	295	127	26	1,810	26	39	72	41	18	13	14
16	36	262	88	26	1,610	24	31	60	100	13	8.6	9.4
17	29	138	68	26	514	23	62	72	93	9.9	6.9	6.9
18	24	82	57	22	267	23	38	59	54	7.8	6.6	6.0
19	21	58	341	22	289	94	30	45	37	7.1	6.4	5.4
20	27	44	370	23	350	55	28	36	26	6.1	5.3	5.0
21	22	36	188	32	311	46	94	34	19	5.7	4.7	9.5
22	18	31	121	31	1,620	38	39	28	15	7.1	4.3	2,180
23	14	27	83	30	722	33	30	23	13	7.1	3.9	264
24	13	25	126	31	417	29	29	19	12	5.9	4.0	130
25	12	22	107	27	265	28	29	17	11	5.4	3.9	75
26	12	22	78	26	203	71	27	18	9.7	4.6	3.7	46
27	11	20	64	25	160	50	25	13	18	4.1	5.8	32
28	11	18	54	22	123	36	24	11	11	5.5	7.6	21
29	19	16	47	94	---	158	21	11	8.6	18	7.7	18
30	20	15	42	76	---	108	18	11	25	11	91	14
31	16	---	47	58	---	78	---	8.9	---	115	68	---
TOTAL	2,125	2,367	4,168	1,352	11,960	1,619	3,290	7,864.9	1,357.3	562.9	730.0	3,447.7
MEAN	68.5	78.9	134	43.6	427	52.2	110	254	45.2	18.2	23.5	115
MAX	715	427	639	134	2,160	158	836	2,820	280	115	142	2,180
MIN	11	12	12	22	41	23	18	8.9	7.6	4.1	3.7	5.0
CFSM	1.34	1.54	2.62	0.85	8.33	1.02	2.14	4.95	0.88	0.35	0.46	2.24
IN.	1.54	1.72	3.02	0.98	8.67	1.17	2.39	5.70	0.98	0.41	0.53	2.50

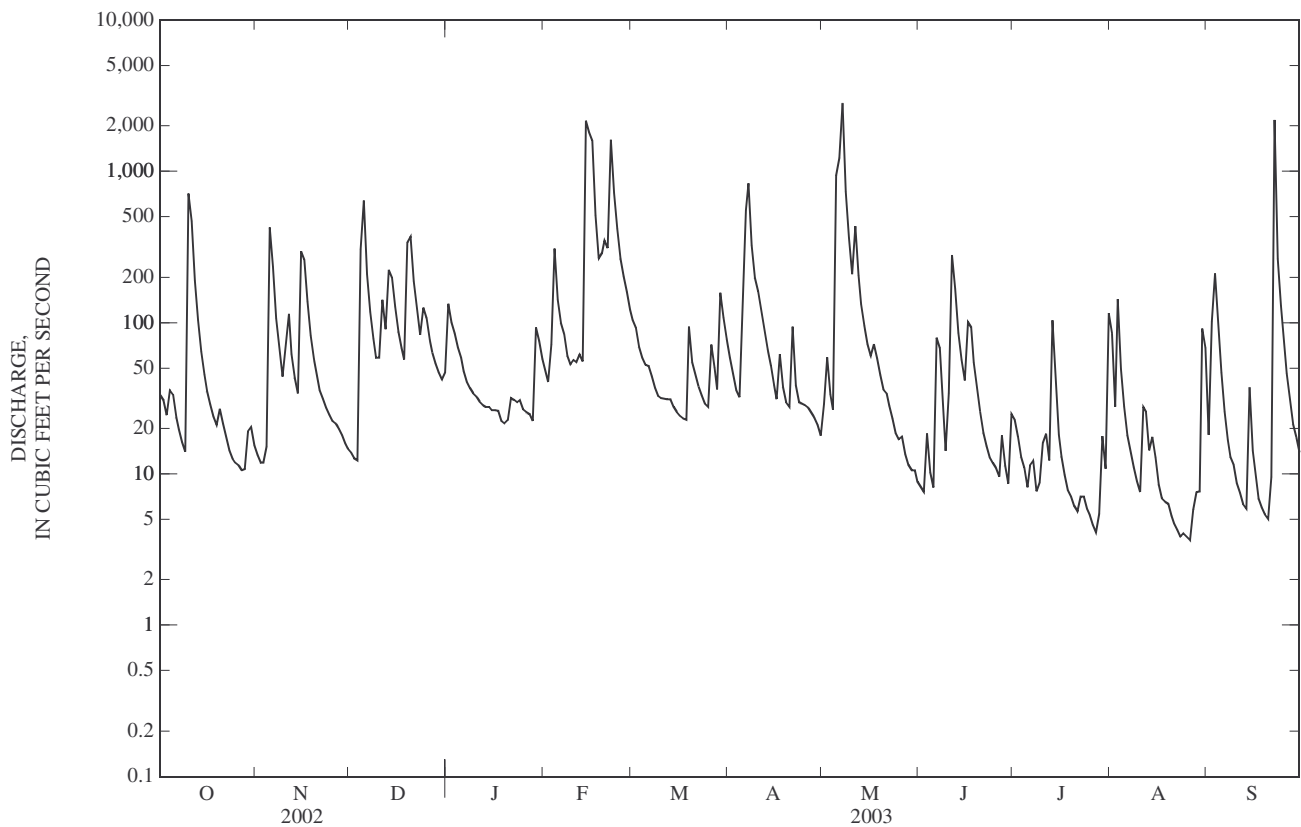
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	17.5	58.8	108	129	161	184	129	95.8	48.9	16.8	15.9	24.1
MAX	68.5	151	286	288	427	530	286	277	264	48.3	87.2	122
(WY)	(2003)	(2002)	(1973)	(1999)	(2003)	(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	0.98
(WY)	(1970)	(1999)	(1966)	(1966)	(1968)	(1966)	(1967)	(2001)	(1966)	(1966)	(1999)	(1999)

03431599 WHITES CREEK NEAR BORDEAUX, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	41,457.7		40,843.8		79.5	
ANNUAL MEAN	114		112		35.2	
HIGHEST ANNUAL MEAN					129	1994
LOWEST ANNUAL MEAN					35.2	1966
HIGHEST DAILY MEAN	3,180	Mar 17	2,820	May 7	5,100	Feb 23, 1975
LOWEST DAILY MEAN	1.8	Sep 3	3.7	Aug 26	0.19	Sep 12, 1999
ANNUAL SEVEN-DAY MINIMUM	2.0	Aug 30	4.3	Aug 20	0.30	Sep 7, 1999
MAXIMUM PEAK FLOW			7,730	May 5	a12,200	Feb 23, 1975
MAXIMUM PEAK STAGE			16.25	May 5	b19.18	Mar 17, 2002
INSTANTANEOUS LOW FLOW			c3.5	Aug 26	d0.07	Sep 10, 1999
ANNUAL RUNOFF (CFSM)	2.21		2.18		1.55	
ANNUAL RUNOFF (INCHES)	30.06		29.62		21.06	
10 PERCENT EXCEEDS	249		217		171	
50 PERCENT EXCEEDS	28		32		21	
90 PERCENT EXCEEDS	3.2		8.2		2.6	

- a From rating curve extended above 6,900 ft³/s on basis of contracted opening measurement of peak flow, see REMARKS.
- b Current site and datum.
- c Also occurred Aug. 27.
- d Also occurred Sept. 11, 1999.



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 mi².

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 NGVD of 1929.

REMARKS.--Records good, except for estimated daily discharges and discharges below 5 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 22	0300	1,850	6.81	May 7	1015	1,600	6.32
May 5	0515	3,170	8.95	May 11	0515	2,610	8.09
May 5	2215	*4,780	*11.09	Sep 22	0700	2,470	7.87

Minimum discharge, 3.9 ft³/s, Aug. 27.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	9.3	10	54	30	58	26	28	8.9	37	12	8.3
2	36	8.8	9.8	42	26	50	23	23	13	24	12	36
3	24	9.3	9.3	40	44	42	21	16	26	18	12	87
4	44	10	e113	34	74	37	19	13	12	15	20	25
5	31	82	168	31	44	34	151	1,110	9.9	12	20	15
6	22	54	72	27	43	30	176	545	62	15	12	12
7	19	33	50	24	41	26	249	703	43	11	11	10
8	16	25	38	22	35	23	123	239	24	9.6	9.2	9.2
9	15	20	31	21	32	21	87	143	17	12	8.8	8.3
10	265	31	47	18	37	19	78	97	27	10	8.2	7.7
11	150	37	72	17	34	18	62	364	80	9.6	9.3	7.3
12	79	24	48	15	32	17	50	108	35	8.5	9.7	6.7
13	51	19	94	15	28	17	40	76	22	9.2	16	6.4
14	37	17	72	14	452	16	34	57	21	7.8	12	50
15	30	90	54	13	562	15	28	45	38	7.3	8.8	10
16	25	71	44	14	441	14	24	38	53	6.8	7.3	8.4
17	20	47	39	13	190	14	81	52	38	8.0	6.8	7.6
18	17	35	32	13	127	14	35	36	24	7.5	18	6.8
19	17	30	125	13	122	60	27	28	20	6.0	7.6	6.4
20	19	25	89	14	123	26	24	23	15	5.8	6.1	6.3
21	15	21	61	23	107	22	50	22	13	e6.1	6.1	21
22	13	19	47	18	512	19	27	19	11	e8.1	5.7	951
23	12	17	38	16	234	17	23	17	10	17	7.5	111
24	12	15	91	14	149	16	23	15	e8.5	7.0	5.4	54
25	11	14	63	14	109	16	25	17	e8.8	6.6	4.9	35
26	11	15	48	14	92	36	23	15	17	5.7	4.8	26
27	10	13	40	13	81	21	18	13	37	5.4	8.0	20
28	9.8	12	34	14	68	19	16	12	13	10	6.5	17
29	15	11	32	65	---	71	14	13	11	20	5.2	14
30	12	11	27	43	---	37	13	11	53	9.8	42	12
31	10	---	30	34	---	30	---	9.8	---	28	13	---
TOTAL	1,098.8	825.4	1,728.1	722	3,869	855	1,590	3,907.8	771.1	363.8	335.9	1,595.4
MEAN	35.4	27.5	55.7	23.3	138	27.6	53.0	126	25.7	11.7	10.8	53.2
MAX	265	90	168	65	562	71	249	1,110	80	37	42	951
MIN	9.8	8.8	9.3	13	26	14	13	9.8	8.5	5.4	4.8	6.3
CFSM	1.46	1.13	2.29	0.96	5.69	1.14	2.18	5.19	1.06	0.48	0.45	2.19
IN.	1.68	1.26	2.65	1.11	5.92	1.31	2.43	5.98	1.18	0.56	0.51	2.44

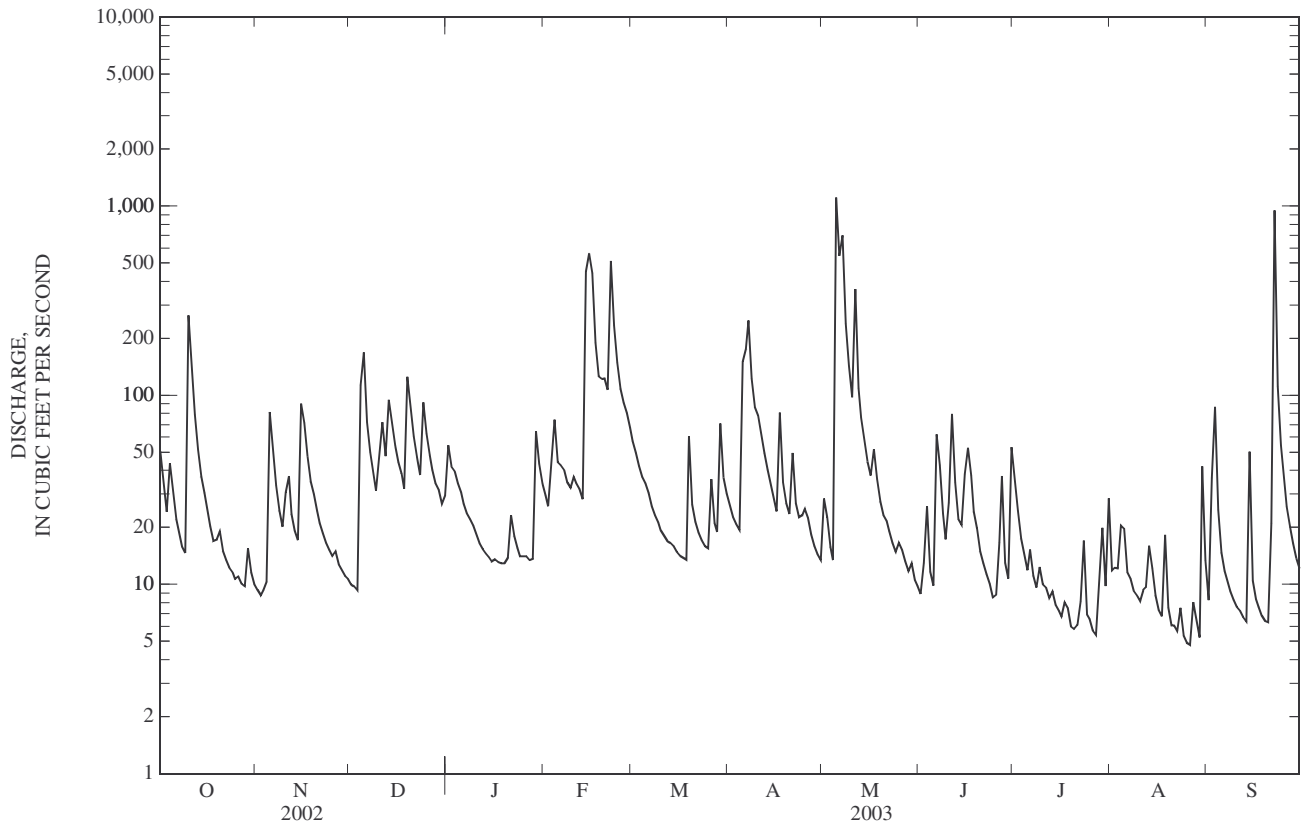
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

MEAN	11.9	31.8	53.9	50.9	58.0	63.3	43.9	39.7	21.9	11.3	8.02	13.8
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	0.41	1.79	2.57	3.96	10.3	18.2	5.76	5.06	1.33	1.34	1.18	0.92
(WY)	(1966)	(1972)	(1966)	(1986)	(1968)	(1966)	(1986)	(1977)	(1988)	(1966)	(1980)	(1980)

03431700 RICHLAND CREEK AT CHARLOTTE AVENUE AT NASHVILLE, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	14,641.6		17,662.3			
ANNUAL MEAN	40.1		48.4		34.0	
HIGHEST ANNUAL MEAN					71.3	1979
LOWEST ANNUAL MEAN					13.6	1966
HIGHEST DAILY MEAN	930	Mar 17	1,110	May 5	7,020	Nov 2, 1990
LOWEST DAILY MEAN	2.6	Sep 12	4.8	Aug 26	0.05	Oct 8, 1980
ANNUAL SEVEN-DAY MINIMUM	3.2	Aug 7	5.8	Aug 20	0.23	Oct 8, 1965
MAXIMUM PEAK FLOW			4,780	May 5	9,470	Sep 13, 1979
MAXIMUM PEAK STAGE			11.09	May 5	15.13	Sep 13, 1979
INSTANTANEOUS LOW FLOW			3.9	Aug 27	0.05	Oct 7, 1980
ANNUAL RUNOFF (CFSM)	1.65		1.99		1.40	
ANNUAL RUNOFF (INCHES)	22.41		27.04		19.00	
10 PERCENT EXCEEDS	80		88		74	
50 PERCENT EXCEEDS	19		21		12	
90 PERCENT EXCEEDS	5.1		8.3		1.7	

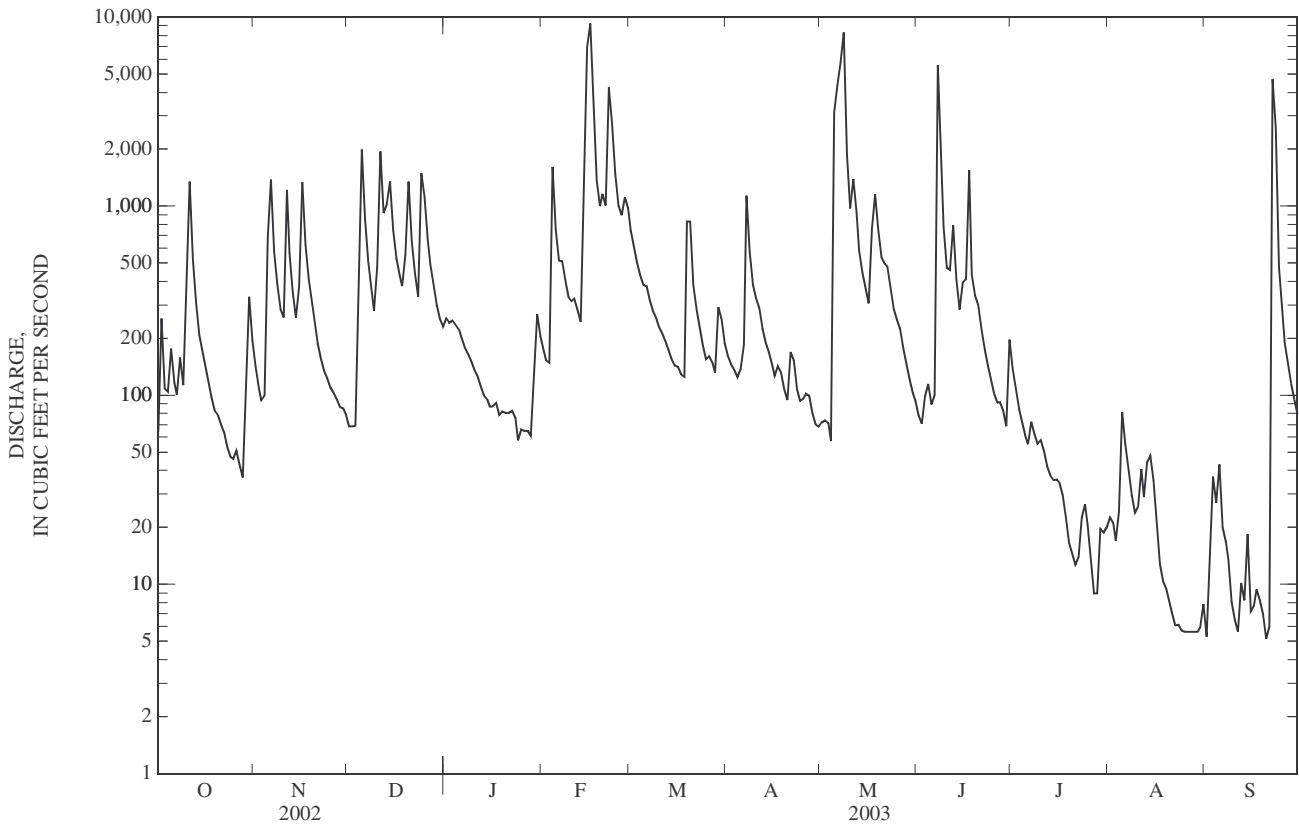
e Estimated



03432350 HARPETH RIVER AT FRANKLIN, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1975 - 2003	
ANNUAL TOTAL	120,741.2		162,382.2		296	
ANNUAL MEAN	331		445		68.7	
HIGHEST ANNUAL MEAN					522	1979
LOWEST ANNUAL MEAN					68.7	1981
HIGHEST DAILY MEAN	7,500	Jan 24	9,280	Feb 16	18,500	Mar 13, 1975
LOWEST DAILY MEAN	2.6	Sep 13	5.2	Sep 20	0.30	Oct 14, 1980
ANNUAL SEVEN-DAY MINIMUM	3.1	Sep 8	5.7	Aug 24	0.32	Oct 20, 1980
MAXIMUM PEAK FLOW			10,700	Feb 16	20,200	Mar 13, 1975
MAXIMUM PEAK STAGE			27.49	Feb 16	33.65	Mar 13, 1975
INSTANTANEOUS LOW FLOW			a5.1	Sep 1	0.30	Oct 14, 1980
ANNUAL RUNOFF (CFSM)	1.73		2.33		1.55	
ANNUAL RUNOFF (INCHES)	23.52		31.63		21.05	
10 PERCENT EXCEEDS	739		1,010		650	
50 PERCENT EXCEEDS	103		146		92	
90 PERCENT EXCEEDS	3.7		16		3.0	

a Also occurred Sept. 2, 19, 20, 21.



034323531 HARPETH RIVER TRIBUTARY AT MACK HATCHER PARKWAY NEAR FRANKLIN, TN

LOCATION.--Lat 35°55'20", long 86°51'18", Williamson County, Hydrologic Unit 05130204, on downstream left abutment on highway bridge on Mack Hatcher Parkway 0.5 north of Hwy 96 and Mack Hatcher intersection.

DRAINAGE AREA.--0.91 mi².

PERIOD OF RECORD.--October 1999 to current year.

GAGE.--Data logger.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 5	0340	*265	*5.34	Sep 22	0540	169	4.63
Jun 7	0155	173	4.66				

Minimum discharge, 0.00 ft³/s, on many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	0.00	0.27	3.4	1.1	1.2	0.02	0.61	0.01	6.3	0.12	0.05
2	0.92	0.00	0.27	3.0	0.87	0.86	0.02	0.12	0.01	3.4	0.28	2.1
3	0.40	0.01	0.19	2.7	2.7	0.51	0.01	0.00	0.21	2.2	0.23	5.1
4	9.5	0.01	12	2.4	3.3	0.37	0.01	0.00	0.01	1.5	1.2	0.38
5	6.3	8.9	12	2.1	2.3	0.29	0.85	38	0.00	1.00	3.3	0.23
6	4.5	4.9	6.4	1.8	2.5	0.35	2.0	14	2.9	0.72	2.8	0.20
7	6.4	3.5	4.7	1.6	2.4	0.16	1.9	37	29	0.51	0.79	0.17
8	3.4	2.5	3.5	1.4	2.0	0.11	0.91	16	5.0	0.40	0.25	0.14
9	3.5	2.1	2.8	1.2	1.7	0.07	1.2	9.5	3.1	0.33	0.19	0.12
10	22	5.3	6.7	0.96	1.8	0.05	1.6	5.8	2.1	0.84	0.18	0.10
11	8.0	3.9	7.2	0.70	1.6	0.03	1.2	8.5	2.5	0.33	0.83	0.09
12	4.5	2.5	5.4	0.50	1.2	0.02	0.89	3.9	1.2	0.19	1.5	0.08
13	2.9	2.4	11	0.38	0.99	0.01	0.65	2.8	0.70	1.7	5.0	0.07
14	2.2	2.2	7.6	0.28	30	0.00	0.44	2.1	0.43	0.28	4.4	5.7
15	2.2	8.2	6.2	0.18	54	0.00	0.28	1.6	0.79	0.15	4.6	0.16
16	1.4	5.4	4.8	0.21	27	0.00	0.20	1.1	0.37	0.10	1.5	0.12
17	0.78	4.3	4.4	0.13	13	0.00	3.6	2.4	0.20	0.09	0.64	0.11
18	0.28	3.5	3.1	0.12	6.9	0.00	1.2	1.5	0.07	0.08	0.42	0.09
19	0.12	2.9	14	0.07	4.0	2.0	0.66	0.89	0.03	0.08	0.34	0.08
20	1.1	2.4	8.4	0.07	3.1	0.05	0.56	0.96	0.01	0.08	0.25	0.07
21	0.19	1.8	6.9	0.09	2.6	0.02	3.8	0.84	0.00	0.10	0.21	2.8
22	0.04	1.4	5.3	0.06	21	0.01	1.1	0.57	0.00	0.34	0.70	51
23	0.00	1.2	4.2	0.07	9.0	0.00	0.72	0.39	0.00	0.74	0.68	9.3
24	0.00	1.1	16	0.05	5.1	0.00	0.64	0.23	0.00	0.12	0.10	5.3
25	0.00	1.0	8.2	0.04	3.1	0.00	0.53	0.72	0.00	0.10	0.07	3.2
26	0.00	1.0	6.4	0.03	2.4	0.07	0.16	0.32	0.00	0.08	0.06	2.1
27	0.00	0.83	5.3	0.02	2.1	0.00	0.07	0.17	0.04	0.06	0.05	2.1
28	0.00	0.64	4.3	0.03	1.5	0.00	0.01	0.11	0.00	0.06	0.06	1.2
29	0.05	0.53	3.5	3.3	---	1.2	0.00	0.08	0.00	2.4	0.06	0.98
30	0.00	0.37	2.9	1.7	---	0.08	0.00	0.06	14	0.19	0.08	0.62
31	0.00	---	2.7	1.3	---	0.04	---	0.03	---	0.15	0.05	---
TOTAL	82.58	74.79	186.63	29.89	209.26	7.50	25.23	150.30	62.68	24.62	30.94	93.76
MEAN	2.66	2.49	6.02	0.96	7.47	0.24	0.84	4.85	2.09	0.79	1.00	3.13
MAX	22	8.9	16	3.4	54	2.0	3.8	38	29	6.3	5.0	51
MIN	0.00	0.00	0.19	0.02	0.87	0.00	0.00	0.00	0.00	0.06	0.05	0.05
CFM	2.93	2.74	6.62	1.06	8.21	0.27	0.92	5.33	2.30	0.87	1.10	3.43
IN.	3.38	3.06	7.63	1.22	8.55	0.31	1.03	6.14	2.56	1.01	1.26	3.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

MEAN	0.88	1.52	3.14	2.79	2.98	2.76	2.62	2.75	1.38	0.82	0.65	1.16
MAX	2.66	3.25	7.01	7.34	7.47	10.2	6.00	4.85	3.34	1.96	1.19	3.13
(WY)	(2003)	(2002)	(2002)	(2002)	(2003)	(2002)	(2000)	(2003)	(1998)	(1999)	(1998)	(2003)
MIN	0.028	0.38	0.58	0.62	0.57	0.24	0.45	0.50	0.21	0.055	0.17	0.40
(WY)	(2001)	(2000)	(1998)	(1997)	(1997)	(2003)	(1997)	(2001)	(2002)	(2000)	(2000)	(2001)

034323531 HARPETH RIVER TRIBUTARY AT MACK HATCHER PARKWAY NEAR FRANKLIN, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	1,259.35		978.18			
ANNUAL MEAN	3.45		2.68		2.03	
HIGHEST ANNUAL MEAN					3.50	2002
LOWEST ANNUAL MEAN					1.26	2001
HIGHEST DAILY MEAN	120	Jan 24	54	Feb 15	120	Jan 24, 2002
LOWEST DAILY MEAN	0.00	Aug 2	0.00	Oct 23	0.00	Oct 1, 1999
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 2	0.00	Jun 20	0.00	Oct 1, 1999
MAXIMUM PEAK FLOW			265	May 5	454	May 25, 2000
MAXIMUM PEAK STAGE			5.34	May 5	6.47	May 25, 2000
INSTANTANEOUS LOW FLOW			a0.00	Oct 23	a0.00	Oct 1, 2000
ANNUAL RUNOFF (CFSM)	3.79		2.94		2.23	
ANNUAL RUNOFF (INCHES)	51.48		39.99		30.28	
10 PERCENT EXCEEDS	9.1		6.3		4.6	
50 PERCENT EXCEEDS	0.86		0.72		0.56	
90 PERCENT EXCEEDS	0.00		0.01		0.00	

a Many days most years.

03432376 HARPETH RIVER TRIB AT MT. HOPE ROAD AT FRANKLIN, TN

LOCATION.--Lat 35°55'39", long 86°52'30", Williamson County, Hydrologic Unit 05130204, on downstream side of culvert on Mt. Hope Road.

DRAINAGE AREA.--2.50 mi².

PERIOD OF RECORD.--August 2002 to September 2003.

GAGE.--Data logger.

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

EXTREMES FOR CURRENT PERIOD.--August 2002 to September 2003: Maximum daily discharge, 69 ft³/s, Feb. 15, maximum gage height, 15.10 ft, Feb. 16, (due to backwater from Harpeth River).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	e0.30	0.16
2	---	---	---	---	---	---	---	---	---	---	e0.31	0.15
3	---	---	---	---	---	---	---	---	---	---	e0.28	0.15
4	---	---	---	---	---	---	---	---	---	---	e0.27	0.15
5	---	---	---	---	---	---	---	---	---	---	e0.27	0.14
6	---	---	---	---	---	---	---	---	---	---	e0.26	0.14
7	---	---	---	---	---	---	---	---	---	---	e0.26	0.13
8	---	---	---	---	---	---	---	---	---	---	e0.25	0.13
9	---	---	---	---	---	---	---	---	---	---	0.22	0.13
10	---	---	---	---	---	---	---	---	---	---	0.22	0.13
11	---	---	---	---	---	---	---	---	---	---	0.22	0.13
12	---	---	---	---	---	---	---	---	---	---	0.22	0.12
13	---	---	---	---	---	---	---	---	---	---	0.21	0.12
14	---	---	---	---	---	---	---	---	---	---	0.78	0.13
15	---	---	---	---	---	---	---	---	---	---	1.2	1.8
16	---	---	---	---	---	---	---	---	---	---	2.1	0.33
17	---	---	---	---	---	---	---	---	---	---	0.30	0.24
18	---	---	---	---	---	---	---	---	---	---	0.24	1.3
19	---	---	---	---	---	---	---	---	---	---	0.22	0.25
20	---	---	---	---	---	---	---	---	---	---	0.20	7.9
21	---	---	---	---	---	---	---	---	---	---	0.19	1.1
22	---	---	---	---	---	---	---	---	---	---	0.18	0.43
23	---	---	---	---	---	---	---	---	---	---	0.56	0.42
24	---	---	---	---	---	---	---	---	---	---	0.25	0.42
25	---	---	---	---	---	---	---	---	---	---	0.22	0.89
26	---	---	---	---	---	---	---	---	---	---	0.28	26
27	---	---	---	---	---	---	---	---	---	---	0.21	21
28	---	---	---	---	---	---	---	---	---	---	0.19	7.4
29	---	---	---	---	---	---	---	---	---	---	0.19	4.7
30	---	---	---	---	---	---	---	---	---	---	0.18	3.9
31	---	---	---	---	---	---	---	---	---	---	0.17	---
MEAN	---	---	---	---	---	---	---	---	---	---	0.35	2.67
MAX	---	---	---	---	---	---	---	---	---	---	2.1	26
MIN	---	---	---	---	---	---	---	---	---	---	0.17	0.12

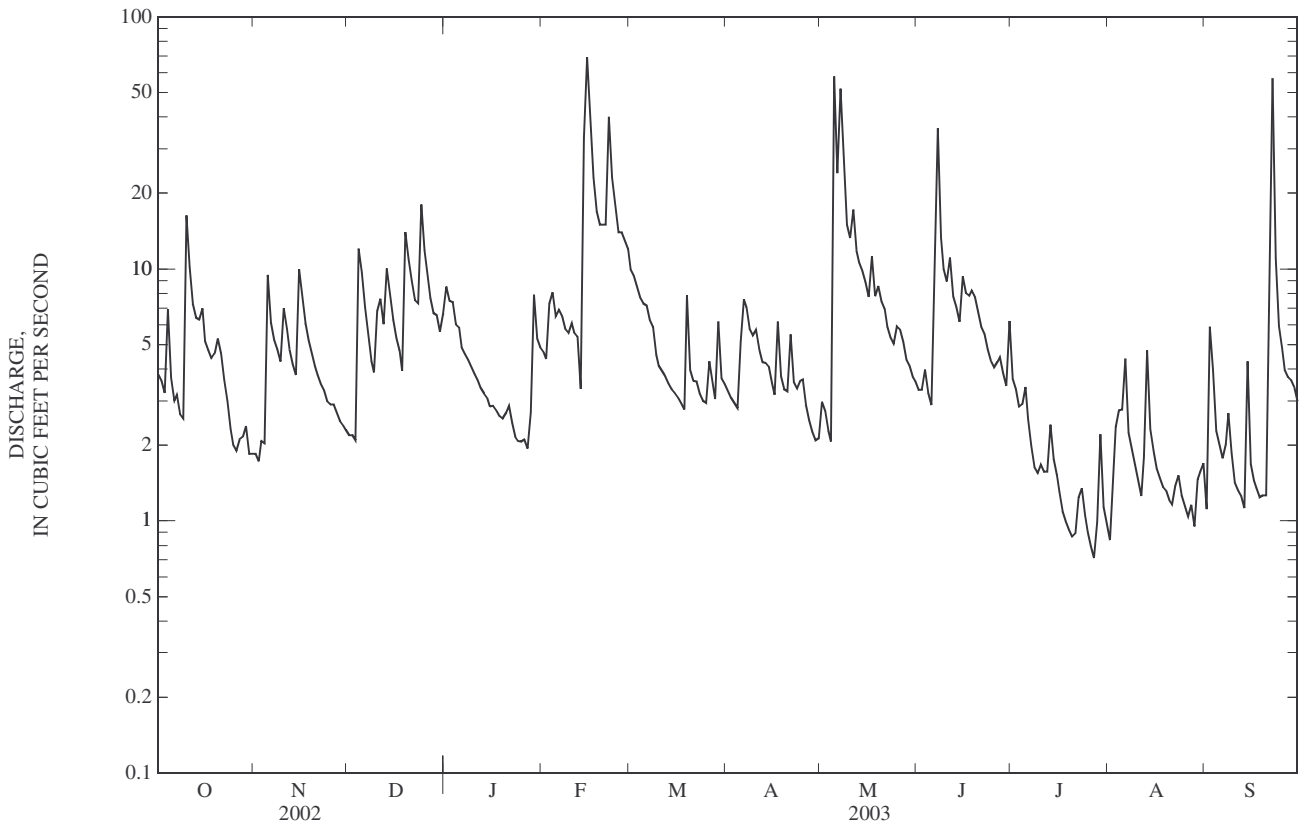
e Estimated

03432376 HARPETH RIVER TRIB AT MT. HOPE ROAD AT FRANKLIN, TN—Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	e1.9	e2.2	8.5	e4.7	e10	3.3	3.0	3.3	3.7	0.84	1.1
2	3.6	1.7	e2.2	7.5	e4.4	e9.4	3.1	2.7	3.3	3.3	1.5	5.9
3	3.2	2.1	e2.1	7.4	e7.3	e8.5	2.9	2.3	4.0	2.8	2.4	4.0
4	6.9	2.0	e12	6.0	e8.1	e7.7	2.8	2.1	3.2	2.9	2.8	2.3
5	3.7	9.5	9.7	5.9	e6.5	e7.3	5.1	e58	2.9	3.4	2.8	2.0
6	3.0	6.2	7.0	4.9	e6.9	e7.2	7.6	e24	11	2.5	4.4	1.8
7	3.2	e5.3	5.5	4.6	e6.5	e6.3	7.1	e52	e36	2.0	2.2	2.0
8	2.7	e4.8	4.3	4.4	e5.8	e5.9	5.8	e25	e13	1.6	2.0	2.7
9	2.6	e4.3	3.9	4.1	e5.6	4.6	5.5	e15	10	1.6	1.7	1.9
10	16	e7.0	6.8	3.8	e6.1	4.1	5.7	13	8.9	1.7	1.5	1.4
11	10	e5.8	7.6	3.6	e5.6	3.9	4.8	17	11	1.6	1.3	1.3
12	7.3	e4.8	6.0	3.4	e5.4	3.8	4.3	12	7.8	1.6	1.8	1.3
13	6.4	e4.2	10	3.2	3.4	3.5	4.3	11	7.1	2.4	4.7	1.1
14	6.3	e3.8	8.1	3.1	e33	3.3	4.1	9.9	6.2	1.8	2.3	4.3
15	7.0	e10	6.3	2.9	e69	3.2	3.5	8.9	9.4	1.5	1.9	1.7
16	5.2	e7.7	5.3	2.9	e40	3.1	3.2	7.7	8.0	1.3	1.6	1.4
17	4.8	e6.1	4.7	2.8	e23	2.9	6.2	11	7.8	1.1	1.5	1.3
18	4.4	e5.2	3.9	2.6	e17	2.8	3.8	7.8	8.2	1.00	1.4	1.2
19	4.6	e4.6	14	2.6	e15	7.8	3.3	8.6	7.7	0.92	1.3	1.3
20	5.3	e4.1	11	2.7	e15	4.0	3.3	7.5	6.8	0.87	1.2	1.3
21	4.6	e3.8	9.0	2.9	e15	3.6	5.5	6.9	5.9	0.89	1.2	5.8
22	3.6	e3.5	7.5	2.5	e40	3.6	3.6	5.9	5.5	1.2	1.4	e57
23	3.0	e3.3	7.3	2.2	e23	3.2	3.4	5.4	4.8	1.3	1.5	e11
24	2.3	e3.0	18	2.1	e18	3.0	3.6	5.1	4.3	1.1	1.3	5.9
25	2.0	e2.9	12	2.1	e14	2.9	3.7	5.9	4.1	0.91	1.1	4.8
26	1.9	e2.9	9.4	2.1	e14	4.3	2.9	5.7	4.3	0.80	1.0	4.0
27	2.1	e2.7	7.7	1.9	e13	3.5	2.5	5.1	4.5	0.71	1.2	3.7
28	2.2	e2.5	6.7	e2.7	e12	3.0	2.3	4.4	3.9	0.99	0.95	3.6
29	2.4	e2.4	6.6	e7.9	---	6.2	2.1	4.1	3.4	2.2	1.5	3.4
30	1.9	e2.3	5.7	e5.3	---	3.7	2.1	3.7	6.2	1.1	1.6	3.0
31	1.9	---	6.7	e4.9	---	3.5	---	3.6	---	0.98	1.7	---
MEAN	4.45	4.35	7.39	3.98	15.6	4.83	4.05	11.4	7.42	1.67	1.79	4.78
MAX	16	10	18	8.5	69	10	7.6	58	36	3.7	4.7	57
MIN	1.9	1.7	2.1	1.9	3.4	2.8	2.1	2.1	2.9	0.71	0.84	1.1

e Estimated



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 mi².

PERIOD OF RECORD.--June 2000 to current year.

GAGE.--Data logger.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 315 ft³/s, May 5, gage height, 10.19 ft; minimum daily discharge, 0.33 ft³/s, Sept. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.1	1.0	4.8	3.0	9.6	2.5	3.0	2.2	3.5	0.52	0.33
2	1.4	1.0	0.98	4.6	2.7	8.1	2.4	2.1	2.4	2.5	0.61	1.0
3	1.2	1.3	0.94	4.3	5.1	7.0	2.3	2.0	3.0	2.1	0.63	2.0
4	4.3	1.2	11	4.0	6.0	5.8	2.2	1.9	2.2	1.9	0.69	0.88
5	1.8	10	13	3.7	4.8	5.4	6.4	89	2.1	1.6	0.80	0.68
6	1.5	5.6	6.2	3.4	5.1	5.1	9.7	32	8.9	1.5	1.8	0.59
7	1.9	3.8	4.3	3.2	4.7	4.3	12	100	63	1.4	0.88	0.52
8	1.2	2.9	3.3	3.0	4.1	3.9	7.4	33	14	1.2	0.66	0.47
9	1.4	2.4	2.7	2.8	3.8	3.6	5.8	19	8.9	1.3	0.56	0.42
10	20	4.8	6.4	2.6	4.0	3.4	5.6	12	6.8	1.2	0.48	0.40
11	11	3.7	8.7	2.4	3.7	3.2	4.7	26	7.9	1.1	0.71	0.38
12	5.6	3.0	5.7	2.2	3.5	3.0	4.1	10	6.1	1.0	1.6	0.38
13	3.7	2.4	11	2.1	3.4	2.8	3.6	7.8	5.0	1.9	2.8	0.34
14	2.9	2.2	9.0	2.0	46	2.7	3.3	6.6	4.5	1.0	1.2	2.9
15	2.6	8.1	6.4	1.9	135	2.5	3.1	5.6	5.7	0.94	0.78	0.75
16	2.2	5.7	4.8	1.9	62	2.4	2.9	4.8	4.2	0.81	0.66	0.57
17	1.8	4.1	4.4	1.9	30	2.4	6.6	7.2	3.7	0.73	0.56	0.48
18	1.6	3.2	3.3	1.8	20	2.3	3.3	6.1	3.5	0.70	0.51	0.44
19	1.6	2.7	18	1.7	17	6.6	2.9	4.7	3.1	0.60	0.47	0.42
20	2.6	2.3	13	1.7	16	3.1	3.0	4.5	2.9	0.59	0.43	0.40
21	1.6	2.1	8.3	1.8	16	2.8	6.5	4.5	2.8	0.62	0.42	2.6
22	1.5	1.8	5.6	1.7	60	2.5	3.3	3.9	2.6	0.95	0.90	112
23	1.3	1.7	4.3	1.6	30	2.4	2.9	3.5	2.4	1.3	0.63	12
24	1.2	1.5	22	1.5	21	2.3	2.9	3.2	2.2	0.70	0.47	5.5
25	1.2	1.4	13	1.5	15	2.2	2.8	4.1	2.1	0.60	0.42	3.5
26	1.2	1.4	9.8	1.4	14	3.0	2.5	3.1	2.2	0.53	0.38	2.7
27	1.1	1.3	7.4	1.4	14	2.3	2.3	2.9	2.3	0.43	0.37	2.8
28	1.2	1.2	5.8	1.4	12	2.2	2.2	2.7	1.9	0.59	0.38	2.0
29	1.6	1.1	4.8	5.2	---	6.4	2.1	2.6	1.7	1.3	0.37	1.8
30	1.1	1.1	4.2	3.3	---	3.1	2.1	2.4	6.5	0.67	0.38	1.6
31	1.1	---	4.1	3.1	---	2.8	---	2.3	---	0.58	0.35	---
TOTAL	86.2	86.1	223.42	79.9	561.9	119.2	123.4	412.5	186.8	35.84	22.42	160.85
MEAN	2.78	2.87	7.21	2.58	20.1	3.85	4.11	13.3	6.23	1.16	0.72	5.36
MAX	20	10	22	5.2	135	9.6	12	100	63	3.5	2.8	112
MIN	1.1	1.0	0.94	1.4	2.7	2.2	2.1	1.9	1.7	0.43	0.35	0.33
CFSM	1.05	1.08	2.71	0.97	7.54	1.45	1.55	5.00	2.34	0.43	0.27	2.02
IN.	1.21	1.20	3.12	1.12	7.86	1.67	1.73	5.77	2.61	0.50	0.31	2.25

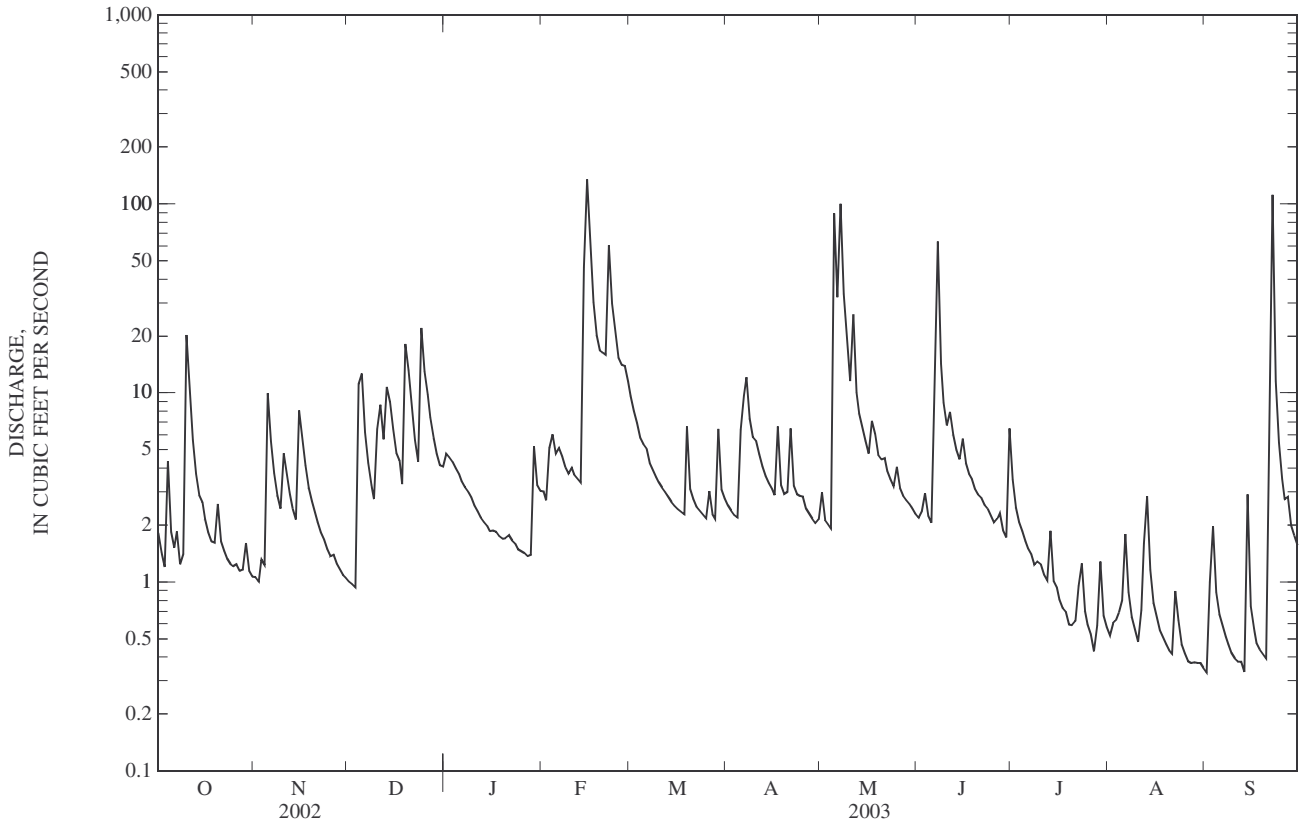
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

MEAN	1.47	3.40	6.05	5.01	13.2	7.66	3.77	7.91	3.30	0.74	0.64	2.14
MAX	2.78	3.69	7.21	8.63	20.1	14.8	5.68	13.3	6.23	1.16	1.07	5.36
(WY)	(2003)	(2002)	(2003)	(2002)	(2003)	(2002)	(2002)	(2003)	(2003)	(2003)	(2001)	(2003)
MIN	0.063	2.87	4.14	2.58	4.41	3.85	1.51	2.18	0.95	0.16	0.27	0.30
(WY)	(2001)	(2003)	(2001)	(2003)	(2002)	(2003)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)

03432387 SOUTH PRONG SPENCER CREEK NEAR FRANKLIN, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	1,877.26		2,098.53			
ANNUAL MEAN	5.14		5.75		4.69	
HIGHEST ANNUAL MEAN					5.75	2003
LOWEST ANNUAL MEAN					3.25	2001
HIGHEST DAILY MEAN	90	Mar 17	135	Feb 15	135	Feb 15, 2003
LOWEST DAILY MEAN	0.09	Aug 12	0.33	Sep 1	a.01	Aug 23, 2000
ANNUAL SEVEN-DAY MINIMUM	0.11	Aug 7	0.37	Aug 26	0.01	Oct 28, 2000
MAXIMUM PEAK FLOW			315	May 5	315	May 5, 2003
MAXIMUM PEAK STAGE			10.19	May 5	10.19	May 5, 2003
ANNUAL RUNOFF (CF5M)	1.93		2.16		1.76	
ANNUAL RUNOFF (INCHES)	26.25		29.35		23.95	
10 PERCENT EXCEEDS	11		10		9.7	
50 PERCENT EXCEEDS	2.6		2.6		2.0	
90 PERCENT EXCEEDS	0.37		0.60		0.29	

a Many days, in 2000, and 2001 water year.



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 mi².

PERIOD OF RECORD.--April 1999 to current year. Occasional low-flow measurements, water year 1959, 1975.

GAGE.--Data collection platform and crest-stage gage.

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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 19	1730	544	8.41	May 5	0430	*3,910	*12.04
Feb 14	1445	615	8.64	May 7	1115	1,160	9.92
Feb 15	1230	2,140	11.05	Jun 7	0300	1,080	9.76
Feb 16	0445	541	8.40	Sep 22	0800	1,630	10.58
Feb 22	0345	1,160	9.92				

Minimum discharge, 2.3 ft³/s, July 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	5.0	4.4	23	13	40	13	15	5.5	18	4.1	4.7
2	9.8	4.7	4.4	21	12	35	11	9.7	5.8	11	5.0	13
3	7.8	e5.1	e3.7	21	27	31	10	7.5	10	9.4	7.4	26
4	34	e4.8	e55	18	32	28	9.8	6.5	7.0	7.9	4.6	12
5	12	e55	70	15	21	25	51	675	5.6	6.3	8.2	9.1
6	8.6	e32	30	14	23	27	65	133	34	5.6	31	7.8
7	e13	e21	22	13	22	21	78	385	214	5.1	11	6.6
8	6.9	14	17	12	18	19	40	142	33	4.4	8.3	5.9
9	7.0	12	14	11	17	17	31	51	22	8.0	6.5	5.6
10	123	27	38	9.3	21	15	30	e44	18	7.0	5.1	5.5
11	64	20	40	8.2	18	14	25	e85	28	6.1	9.8	6.1
12	30	13	26	7.5	16	13	20	36	17	4.7	12	6.7
13	20	11	60	7.2	15	13	18	26	14	25	30	7.0
14	16	9.6	40	6.9	245	12	15	21	21	7.5	14	31
15	15	51	30	6.5	685	11	14	18	26	5.5	9.4	9.3
16	12	28	24	6.6	318	10	12	16	17	4.6	7.4	8.2
17	9.3	20	23	6.7	117	10	41	29	14	4.0	5.8	7.2
18	7.9	16	18	6.2	74	10	16	20	13	3.6	4.7	6.6
19	7.8	14	85	6.0	71	42	13	15	11	3.4	4.1	6.4
20	16	12	53	6.9	70	17	13	16	10	3.0	3.9	6.3
21	8.7	10	32	7.6	69	13	42	16	9.5	e2.7	4.0	15
22	7.1	9.2	25	6.6	317	12	15	13	9.3	e6.4	7.8	471
23	6.2	8.0	20	5.9	134	10	12	12	8.2	12	8.2	39
24	5.5	7.4	95	5.5	84	9.8	12	11	7.1	4.6	4.5	25
25	5.6	6.8	39	5.6	61	9.4	14	14	5.9	4.0	3.6	20
26	6.1	7.2	30	5.5	59	17	11	11	5.8	3.5	3.2	17
27	5.3	6.1	24	5.2	57	11	9.6	9.5	10	3.1	3.6	17
28	5.4	5.5	21	5.4	46	9.7	8.5	8.5	6.5	3.2	4.1	15
29	10	5.2	18	35	---	39	7.7	8.1	5.2	17	4.4	13
30	6.7	4.9	16	17	---	16	7.6	6.8	37	6.3	5.0	12
31	5.9	---	16	15	---	14	---	6.2	---	5.1	4.5	---
MEAN	16.3	14.8	32.0	11.0	95.1	18.4	22.2	60.2	21.0	7.03	7.91	27.8
MAX	123	55	95	35	685	42	78	675	214	25	31	471
MIN	5.3	4.7	3.7	5.2	12	9.4	7.6	6.2	5.2	2.7	3.2	4.7

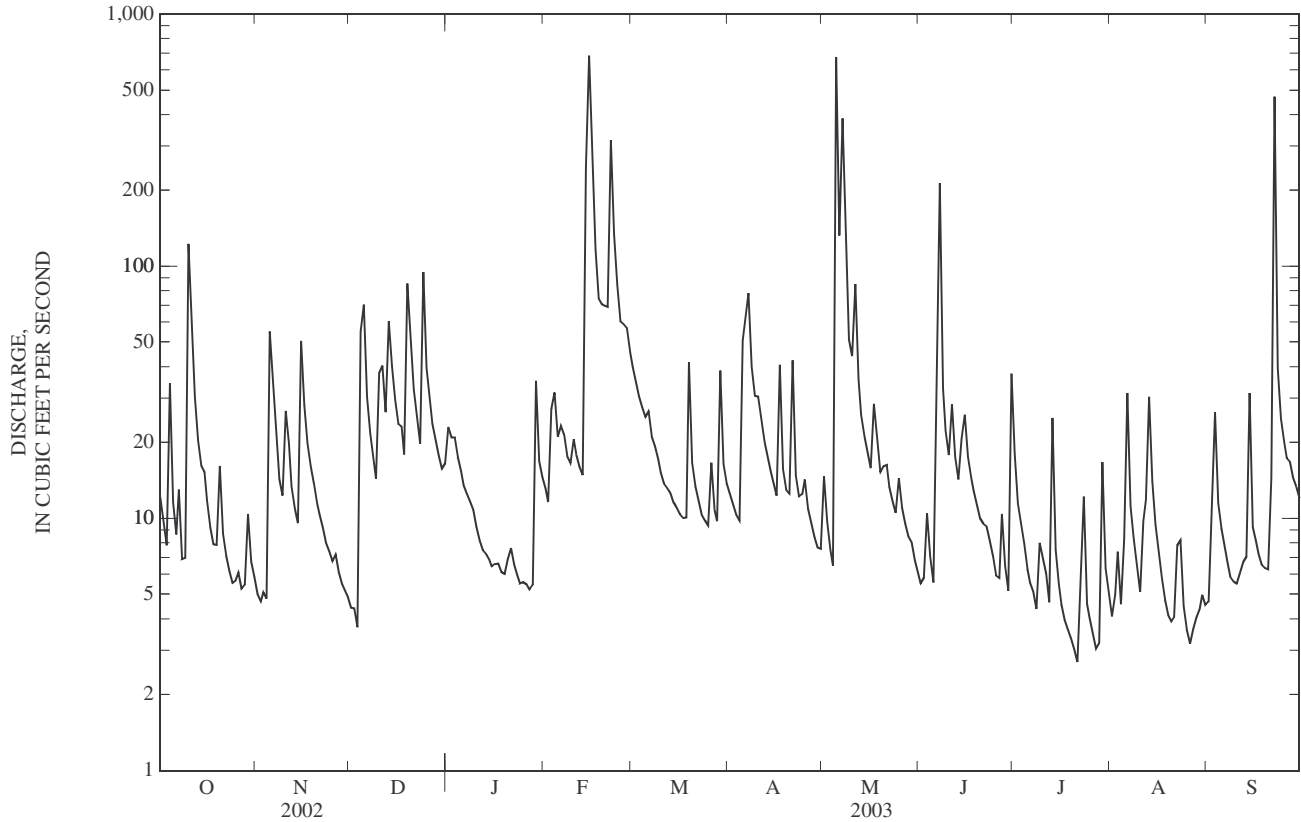
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	8.90	16.2	23.1	19.9	49.2	28.4	17.7	29.9	10.0	5.91	5.86	11.1
MAX	16.3	22.4	32.0	35.1	95.1	54.9	29.9	60.2	21.0	7.32	8.75	27.8
(WY)	(2003)	(2001)	(2003)	(2002)	(2003)	(2002)	(2000)	(2003)	(2003)	(2002)	(2001)	(2003)
MIN	1.80	7.77	9.54	11.0	15.0	18.4	9.83	13.1	3.53	3.42	2.73	2.44
(WY)	(2001)	(2000)	(2000)	(2003)	(2002)	(2003)	(2001)	(1999)	(2002)	(2000)	(1999)	(1999)

03432390 SPENCER CREEK NEAR FRANKLIN, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL MEAN	19.6		27.3		19.5	
HIGHEST ANNUAL MEAN					27.3	2003
LOWEST ANNUAL MEAN					14.5	2000
HIGHEST DAILY MEAN	384	Mar 17	685	Feb 15	685	Feb 15, 2003
LOWEST DAILY MEAN	1.8	Jun 21	2.7	Jul 21	0.78	Sep 18, 1999
ANNUAL SEVEN-DAY MINIMUM	2.0	Jun 17	3.8	Jul 15	0.99	Sep 6, 1999
MAXIMUM PEAK FLOW			3,910	May 5	3,910	May 5, 2003
MAXIMUM PEAK STAGE			12.04	May 5	12.04	May 5, 2003
INSTANTANEOUS LOW FLOW			2.3	Jul 21	0.77	Jun 30, 2000
10 PERCENT EXCEEDS	39		45		37	
50 PERCENT EXCEEDS	7.9		12		7.5	
90 PERCENT EXCEEDS	2.9		5.1		2.5	

e Estimated



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 mi², includes 15 mi² 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 except for estimated daily discharges Nov. 1-9, May 10, 11, which are fair. 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 ft³/s, Aug. 19, 1988, Sept. 12, 18, 1999; minimum daily, 4.1 ft³/s, Aug. 18, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 16	0715	*10,800	*26.81	May 8	0815	10,000	26.17
Feb 22	1600	6,020	19.99	Jun 7	1615	7,130	21.91
May 5	0915	5,430	18.78	Sep 23	0130	7,580	22.64

Minimum discharge, 13 ft³/s, Aug. 27, Sept. 1-2.

Minimum daily discharge, 18 ft³/s, Aug. 26, 27, Sept. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	e194	88	356	239	887	214	93	117	174	36	18
2	266	e129	86	344	209	757	188	94	103	122	35	36
3	154	e120	87	348	209	637	173	88	123	91	40	94
4	174	e115	345	331	1,610	548	159	73	139	77	34	52
5	239	e700	2,100	311	812	491	234	3,750	111	67	100	58
6	167	e1,900	990	283	565	483	317	4,780	138	59	105	39
7	141	e706	607	249	560	412	1,250	6,150	5,880	70	64	33
8	197	e450	458	227	467	362	725	9,030	2,220	63	49	32
9	150	e353	361	208	392	334	497	2,340	882	59	42	24
10	532	310	477	188	375	304	417	e1,100	547	61	38	21
11	1,570	2,180	2,060	174	383	282	368	e1,500	527	56	56	19
12	655	665	1,040	156	345	258	291	1,050	888	51	46	22
13	399	418	1,080	139	303	232	244	664	481	73	93	24
14	280	308	1,500	132	2,170	205	216	523	351	47	72	70
15	226	421	858	123	7,590	189	184	446	444	44	76	28
16	184	2,120	631	121	9,930	182	160	381	452	45	44	23
17	152	723	529	128	3,990	168	219	728	1,610	42	32	25
18	126	503	472	109	1,550	159	176	1,220	485	36	27	23
19	105	403	652	114	1,120	862	141	784	381	29	26	22
20	112	322	1,510	112	1,260	979	122	573	333	27	23	19
21	92	268	779	114	1,130	475	251	530	261	26	23	22
22	80	224	551	113	4,710	357	212	526	204	30	21	5,140
23	68	190	431	106	3,200	282	144	422	164	44	31	3,370
24	61	169	1,590	82	1,690	231	124	350	136	40	21	603
25	58	148	1,270	96	1,170	189	126	319	113	35	19	371
26	65	137	769	89	1,030	205	127	291	100	29	18	263
27	56	125	586	89	1,250	185	126	241	110	22	18	205
28	50	111	488	89	1,130	162	101	202	96	22	19	159
29	101	107	408	180	---	395	89	170	80	49	19	131
30	384	101	350	348	---	369	86	147	250	35	19	110
31	234	---	324	284	---	256	---	133	---	34	21	---
TOTAL	7,171	14,620	23,477	5,743	49,389	11,837	7,681	38,698	17,726	1,659	1,267	11,056
MEAN	231	487	757	185	1,764	382	256	1,248	591	53.5	40.9	369
MAX	1,570	2,180	2,100	356	9,930	979	1,250	9,030	5,880	174	105	5,140
MIN	50	101	86	82	209	159	86	73	80	22	18	18

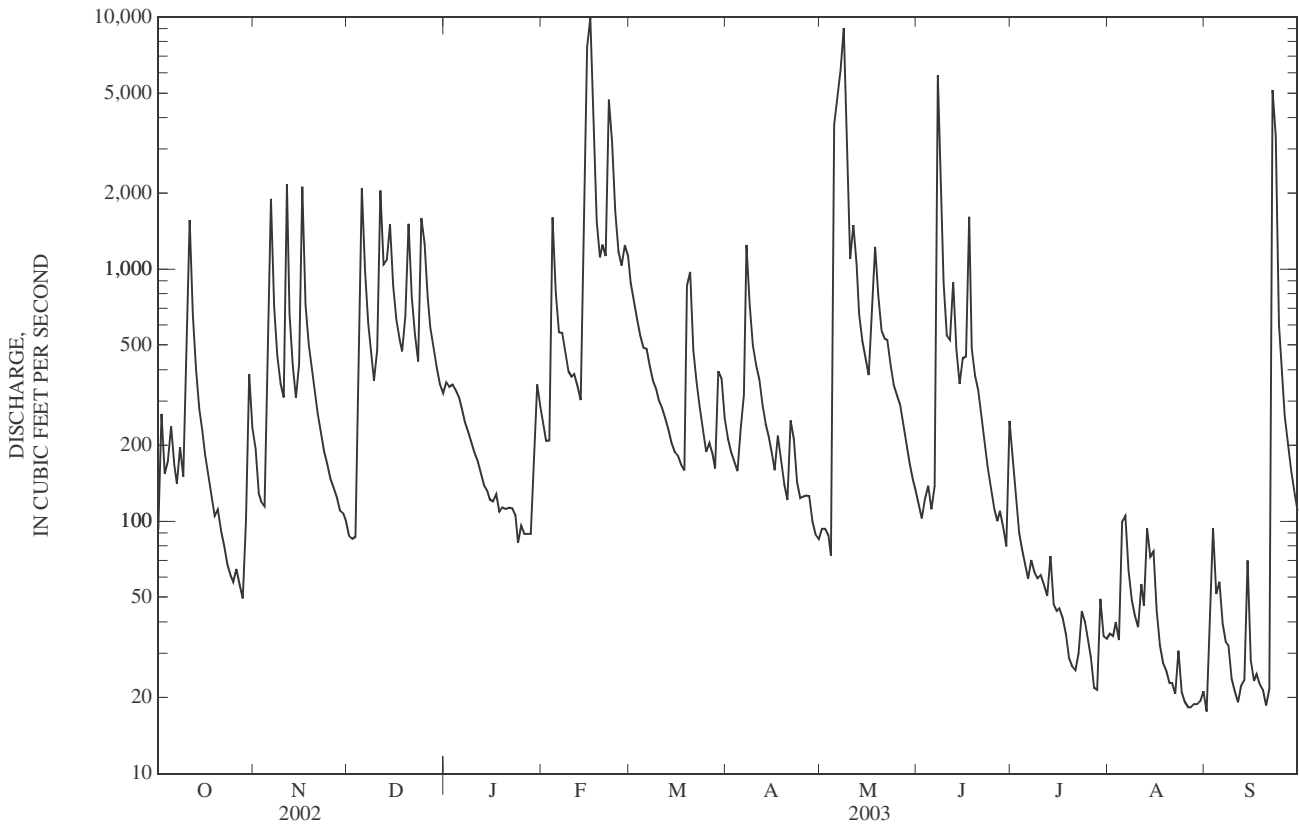
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

MEAN	58.2	167	487	418	960	591	302	429	122	35.6	32.7	60.2
MAX	231	487	757	923	1,764	1,017	748	1,248	591	53.5	131	369
(WY)	(2003)	(2003)	(2003)	(2002)	(2003)	(2002)	(2000)	(2003)	(2003)	(2003)	(2001)	(2003)
MIN	7.68	16.7	115	173	306	382	110	66.8	32.0	17.8	8.22	10.0
(WY)	(1994)	(1999)	(2000)	(2000)	(2002)	(2003)	(1999)	(2001)	(2002)	(2000)	(1988)	(1993)

03432400 HARPETH RIVER BELOW FRANKLIN, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	141,558.2		190,324		337	
ANNUAL MEAN	388		521		207	
HIGHEST ANNUAL MEAN					521	2003
LOWEST ANNUAL MEAN					207	2000
HIGHEST DAILY MEAN	7,850	Jan 24	9,930	Feb 16	9,930	Feb 16, 2003
LOWEST DAILY MEAN	9.5	Sep 13	a18	Aug 26	4.1	Aug 18, 1988
ANNUAL SEVEN-DAY MINIMUM	10	Sep 7	19	Aug 26	4.4	Aug 12, 1988
MAXIMUM PEAK FLOW			10,800	Feb 16		
MAXIMUM PEAK STAGE			26.81	Feb 16	28.97	Feb 4, 1990
INSTANTANEOUS LOW FLOW			b13	Aug 27	3.0	Aug 19, 1988
10 PERCENT EXCEEDS	836		1,130		699	
50 PERCENT EXCEEDS	131		190		105	
90 PERCENT EXCEEDS	15		33		13	

a Also occurred Aug. 27, Sept. 1.
 b Also occurred Sept. 1, 2.
 c Estimated



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 mi², includes 15 mi² 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 NGVD of 1929 (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.--Records good, except for estimated daily discharges, which are fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 13, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 16	0930	*18,700	*19.53	May 8	1730	14,300	17.64
Feb 23	0030	11,000	15.48	Jun 8	0030	9,400	14.10
May 5	1330	13,300	17.09	Sep 23	0530	11,000	15.47

Minimum discharge, 35 ft³/s, Sept. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	247	297	170	680	496	1,470	435	195	229	510	87	42
2	328	245	154	686	434	1,250	385	222	207	367	89	44
3	331	209	155	680	417	1,060	354	196	235	276	98	182
4	288	212	381	649	1,910	922	336	169	263	231	104	232
5	428	401	3,050	624	1,540	832	485	9,740	223	213	129	148
6	371	2,220	1,850	570	1,050	789	606	9,400	231	201	592	123
7	288	1,140	1,100	488	991	708	2,090	10,000	5,810	211	888	87
8	289	795	840	446	884	623	1,480	13,300	4,930	222	290	73
9	292	617	668	415	755	566	992	7,040	1,430	174	204	68
10	790	506	603	374	702	514	836	2,020	930	148	152	53
11	2,820	1,310	1,270	330	697	473	748	2,920	779	147	131	45
12	1,360	1,070	1,180	300	671	444	620	2,150	1,060	129	135	40
13	858	715	1,280	274	604	411	517	1,310	763	127	144	40
14	620	543	e2,400	263	3,370	382	454	1,050	574	145	238	80
15	493	615	e1,800	248	12,600	349	403	906	893	110	187	124
16	443	1,810	e1,400	239	17,600	338	354	788	1,090	100	134	64
17	359	1,260	e1,150	243	10,800	324	502	790	1,800	93	102	49
18	302	879	841	227	3,160	308	435	1,630	875	86	82	47
19	264	701	987	217	2,180	591	353	1,160	717	78	72	43
20	259	575	2,650	222	2,410	1,480	306	933	609	67	65	40
21	245	476	1,480	246	2,240	758	430	832	511	65	63	39
22	218	398	1,070	233	7,950	583	441	838	406	68	57	7,270
23	192	337	833	218	7,420	475	336	720	339	83	68	7,600
24	170	302	2,000	193	3,370	417	294	580	294	94	66	1,260
25	158	273	2,280	190	2,200	359	316	521	256	81	50	805
26	154	255	1,380	181	1,750	366	314	503	236	71	45	592
27	155	237	1,080	195	1,890	368	287	416	235	63	44	459
28	139	215	900	173	1,880	331	250	363	213	52	43	369
29	136	197	767	352	---	540	221	308	189	74	44	304
30	375	190	660	674	---	688	201	270	185	138	44	261
31	395	---	602	590	---	514	---	249	---	101	46	---
TOTAL	13,767	19,000	36,981	11,420	91,971	19,233	15,781	71,519	26,512	4,525	4,493	20,583
MEAN	444	633	1,193	368	3,285	620	526	2,307	884	146	145	686
MAX	2,820	2,220	3,050	686	17,600	1,480	2,090	13,300	5,810	510	888	7,600
MIN	136	190	154	173	417	308	201	169	185	52	43	39
CFSM	1.09	1.55	2.92	0.90	8.05	1.52	1.29	5.65	2.17	0.36	0.36	1.68
IN.	1.26	1.73	3.37	1.04	8.39	1.75	1.44	6.52	2.42	0.41	0.41	1.88

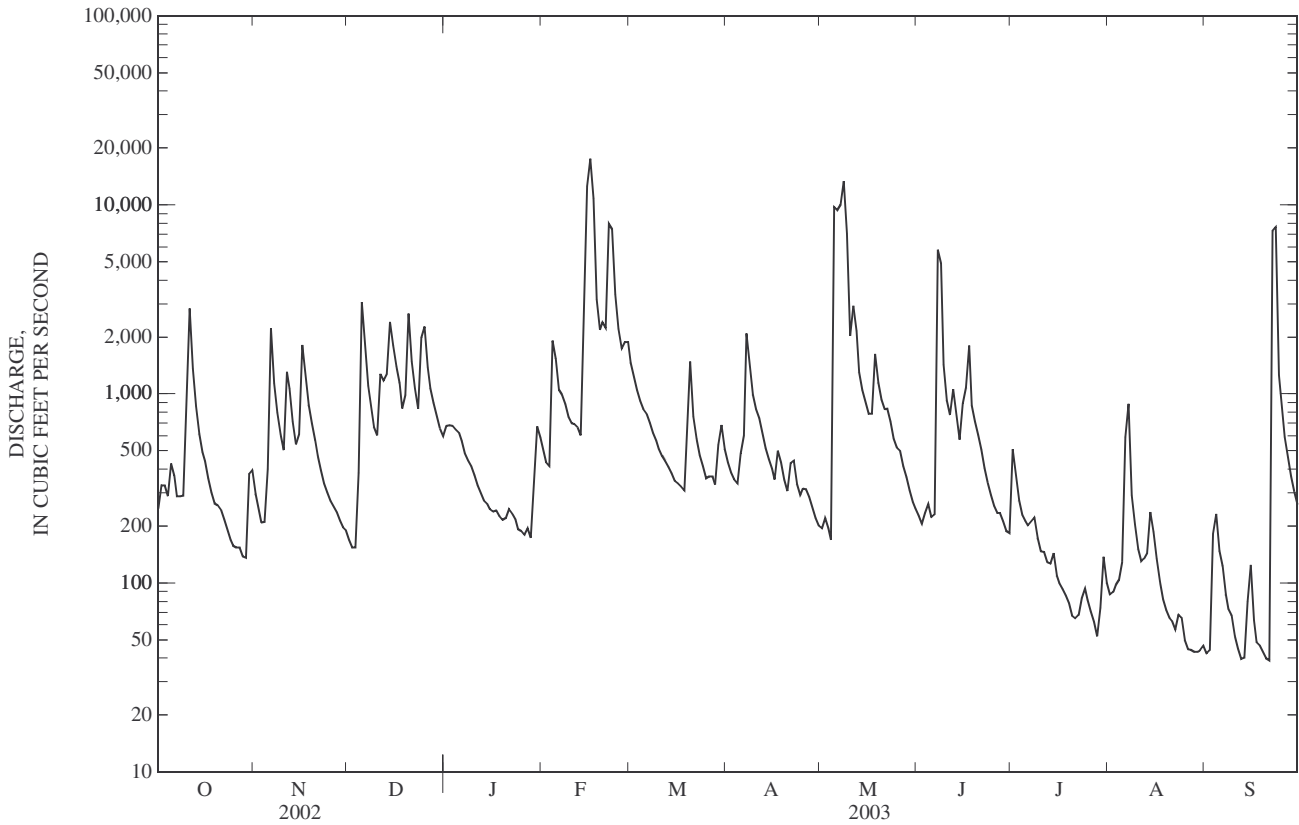
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2003, BY WATER YEAR (WY)

MEAN	117	369	837	1,155	1,305	1,331	868	588	288	143	113	124
MAX	953	1,678	3,952	4,305	3,606	4,263	2,579	3,232	1,834	827	663	1,685
(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)

03433500 HARPETH RIVER AT BELLEVUE, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1920 - 2003	
ANNUAL TOTAL	249,872		335,785		600	
ANNUAL MEAN	685		920		137	
HIGHEST ANNUAL MEAN					1,157	1973
LOWEST ANNUAL MEAN					137	1941
HIGHEST DAILY MEAN	13,500	Jan 25	17,600	Feb 16	32,400	Mar 13, 1975
LOWEST DAILY MEAN	12	Aug 10	39	Sep 21	0.00	Oct 5, 1922
ANNUAL SEVEN-DAY MINIMUM	13	Sep 8	44	Aug 27	0.07	Oct 4, 1922
MAXIMUM PEAK FLOW			18,700	Feb 16	40,000	Feb 13, 1948
MAXIMUM PEAK STAGE			19.53	Feb 16	a24.34	Feb 13, 1948
INSTANTANEOUS LOW FLOW			35	Sep 21	b0.00	Oct 5, 1922
ANNUAL RUNOFF (CFSM)	1.68		2.25		1.47	
ANNUAL RUNOFF (INCHES)	22.78		30.62		19.97	
10 PERCENT EXCEEDS	1,440		1,830		1,380	
50 PERCENT EXCEEDS	273		375		193	
90 PERCENT EXCEEDS	30		81		17	

a From floodmarks.
 b Also occurred Oct. 6-10, 1922.
 c Estimated



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 mi², includes 15 mi² without surface drainage.

WATER-DISCHARGE RECORDS

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 NGVD of 1929. 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 except for estimated daily discharges, which are fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 16	1300	*31,000	*26.04	May 7	1930	23,000	23.08
Feb 22	1130	12,700	16.29	Sep 23	1630	10,400	13.76
May 5	1500	20,900	22.05				

Minimum discharge, 110 ft³/s, Aug. 28, Sept. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	462	461	305	1,220	975	2,420	942	378	325	549	322	147
2	498	375	283	1,280	840	2,090	830	465	293	557	225	156
3	547	328	272	1,250	768	1,800	751	420	326	436	228	827
4	466	315	550	1,170	2,060	1,570	715	369	304	352	219	755
5	658	950	2,410	1,080	2,640	1,410	1,710	12,700	292	307	229	434
6	653	2,780	1,820	970	1,800	1,320	1,400	15,200	282	280	483	312
7	502	2,230	1,750	861	1,590	1,210	4,380	15,900	2,650	279	1,600	260
8	423	1,430	1,490	786	1,420	1,080	3,500	14,100	6,720	276	635	217
9	436	1,100	1,180	735	1,220	981	2,220	11,500	2,030	273	404	191
10	1,130	921	999	666	1,160	893	1,760	3,810	1,430	260	317	178
11	4,060	1,420	1,900	581	1,150	823	1,540	4,730	1,070	244	261	158
12	2,680	1,950	2,230	521	1,150	779	1,310	3,830	1,310	234	250	144
13	1,620	1,250	2,150	472	1,060	735	1,100	2,480	1,170	231	294	132
14	1,130	956	2,810	441	5,060	688	960	1,900	866	263	398	127
15	880	1,130	e2,700	420	e16,000	629	856	1,580	886	235	373	163
16	752	2,530	1,920	409	e24,000	591	771	1,340	1,570	204	296	200
17	630	2,350	1,540	404	e16,000	567	864	1,310	1,870	188	238	150
18	529	1,580	1,350	374	5,910	547	966	1,980	1,630	180	206	131
19	452	1,240	1,600	373	3,480	935	770	1,970	1,090	172	180	124
20	435	1,020	4,100	379	3,590	2,030	652	1,480	976	161	161	120
21	419	849	2,820	427	3,550	1,420	859	1,250	872	146	149	116
22	378	725	1,950	417	10,100	1,030	851	1,170	660	153	143	5,310
23	342	602	1,500	374	11,300	869	699	1,060	552	168	135	9,940
24	308	514	2,060	328	5,740	767	586	890	476	173	140	2,670
25	284	463	3,320	333	3,670	683	568	783	413	171	136	1,350
26	277	440	2,340	331	2,920	854	635	756	373	155	124	955
27	271	406	1,770	309	2,820	815	545	651	422	143	116	723
28	265	374	1,460	308	2,880	825	494	531	383	136	134	584
29	267	339	1,240	747	---	1,170	439	456	338	334	122	462
30	302	320	1,060	1,340	---	1,460	404	399	328	249	117	394
31	595	---	980	1,180	---	1,140	---	362	---	485	190	---
TOTAL	22,651	31,348	53,859	20,486	134,853	34,131	34,077	105,750	31,907	7,994	8,825	27,430
MEAN	731	1,045	1,737	661	4,816	1,101	1,136	3,411	1,064	258	285	914
MAX	4,060	2,780	4,100	1,340	24,000	2,420	4,380	15,900	6,720	557	1,600	9,940
MIN	265	315	272	308	768	547	404	362	282	136	116	116
MED	466	935	1,750	472	2,850	935	853	1,310	763	235	225	208
CFSM	1.07	1.53	2.55	0.97	7.07	1.62	1.67	5.01	1.56	0.38	0.42	1.34
IN.	1.24	1.71	2.94	1.12	7.37	1.86	1.86	5.78	1.74	0.44	0.48	1.50

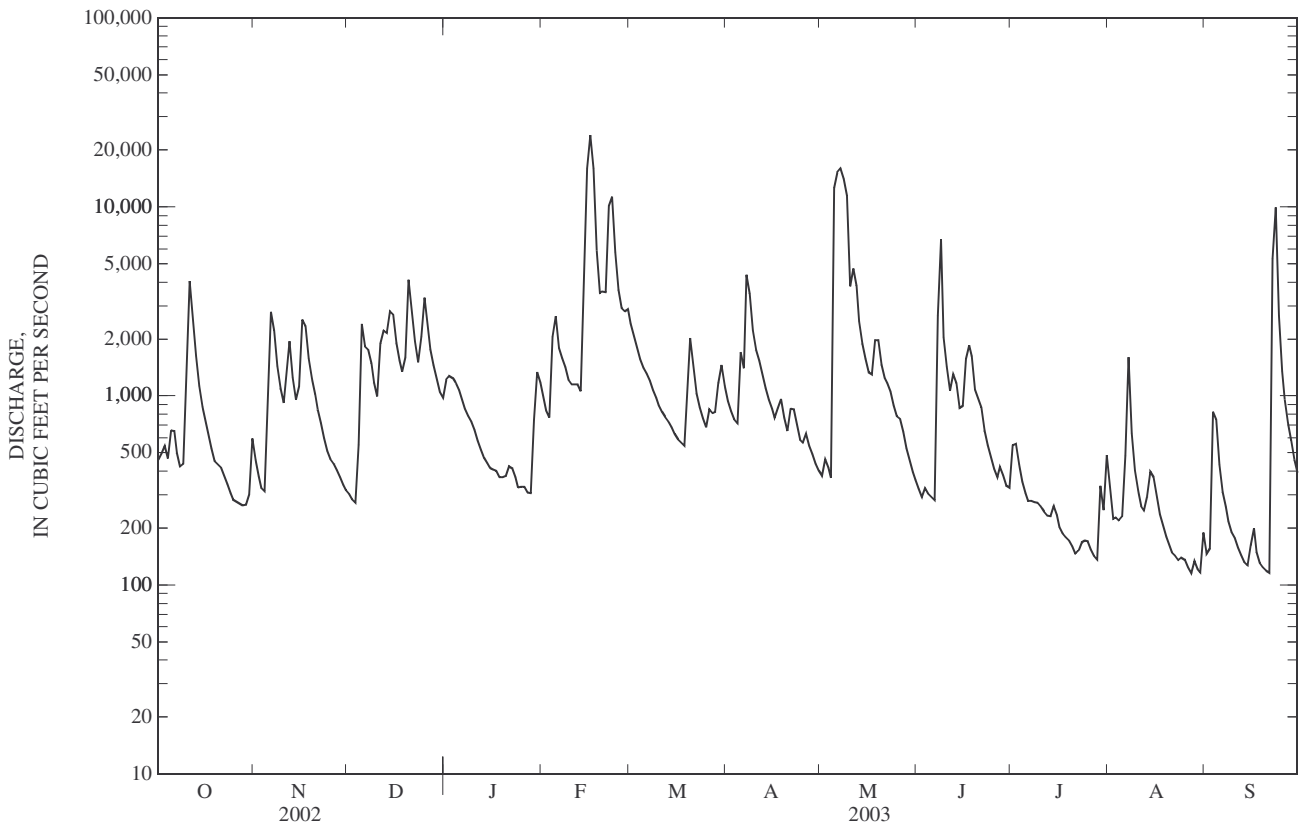
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)

MEAN	233	621	1,311	1,852	2,086	2,146	1,470	1,051	530	271	211	223
MAX	1,516	2,761	6,274	6,975	6,078	6,806	3,942	5,107	2,849	1,071	1,099	2,530
(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)

03434500 HARPETH RIVER NEAR KINGSTON SPRINGS, TN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003	
ANNUAL TOTAL	392,880		513,311			
ANNUAL MEAN	1,076		1,406		996	
HIGHEST ANNUAL MEAN					2,000	1973
LOWEST ANNUAL MEAN					249	1941
HIGHEST DAILY MEAN	18,000	Mar 18	24,000	Feb 16	43,100	Feb 14, 1948
LOWEST DAILY MEAN	31	Sep 13	116	Aug 27	16	Sep 28, 1939
ANNUAL SEVEN-DAY MINIMUM	35	Sep 9	127	Aug 24	18	Sep 22, 1939
MAXIMUM PEAK FLOW			31,000	Feb 16	60,000	Jan 7, 1946
MAXIMUM PEAK STAGE			26.04	Feb 16	a32.20	Jan 7, 1946
INSTANTANEOUS LOW FLOW			b110	Aug 28	12	Sep 18, 1939
ANNUAL RUNOFF (CFSM)	1.58		2.07		1.46	
ANNUAL RUNOFF (INCHES)	21.46		28.04		19.86	
10 PERCENT EXCEEDS	2,310		2,670		2,240	
50 PERCENT EXCEEDS	466		723		354	
90 PERCENT EXCEEDS	98		185		72	

a From high-water mark in gage house.
 b Also occurred Sept. 21.
 c Estimated



CUMBERLAND RIVER BASIN

03434500 HARPETH RIVER NEAR KINGSTON SPRINGS, TN

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

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)
OCT 17...	1130	610	426	14.5	--
DEC 10...	1305	951	350	8.5	--
APR 03...	0955	754	287	15.5	--
JUN 10...	1045	1,260	341	19.5	32
JUL 30...	0930	240	283	24.5	20
SEP 30...	1255	391	385	19.0	--

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