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^2.

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 NGVD of 1929. Prior to Sept. 2, 1966, at datum 2.0 ft higher.

REMARKS.--Records good. Maximum discharge prior to regulation, 62,900 ft^3/s, Feb. 13, 1948, gage height, 38.40 ft, present datum, from floodmarks, from rating curve extended above 35,000 ft^3/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^3/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^3/s, at 0530 hours Dec. 1, gage height 22.21 ft; minimum discharge, 164 ft^3/s, Sept. 13, 14, 15; minimum daily, 166 ft^3/s, Sept. 14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	378	10,800	415	465	1,220	851	955	239	194	189	315
2	187	464	4,180	438	511	702	1,730	562	286	202	191	247
3	185	480	3,190	549	957	436	938	429	595	185	186	218
4	197	1,590	2,740	541	837	389	706	359	287	182	177	204
5	197	1,190	2,440	534	756	370	570	318	211	198	174	196
6	190	956	3,110	586	707	343	726	292	203	204	194	189
7	188	866	8,760	977	674	328	4,760	320	1,340	191	190	184
8	184	809	4,510	4,430	737	371	5,490	312	1,470	191	290	180
9	184	762	8,830	2,300	702	353	3,170	298	1,630	182	188	176
10	202	736	7,290	1,820	660	325	2,360	288	635	173	180	176
11	207	712	4,040	1,630	554	307	1,160	278	568	210	175	175
12	244	1,360	3,420	2,440	490	295	1,270	267	561	229	175	171
13	262	1,100	3,060	2,160	705	287	1,090	259	432	202	181	169
14	257	791	2,800	2,850	1,690	275	758	262	258	322	201	166
15	247	660	2,690	1,920	1,230	262	451	276	190	268	179	171
16	234	589	2,510	1,600	1,020	263	380	269	210	232	175	209
17	221	542	2,240	1,360	1,020	280	349	252	201	216	175	246
18	234	511	885	860	921	275	326	247	214	205	204	217
19	6,100	497	783	763	904	259	308	235	206	247	212	234
20	3,240	486	720	629	1,810	252	290	241	195	278	190	183
21	1,700	471	684	582	5,950	242	282	257	190	218	183	196
22	893	456	838	543	3,840	239	310	236	198	228	174	188
23	626	686	3,650	506	2,400	247	331	227	200	271	234	175
24	572	4,410	1,900	474	1,930	246	291	221	196	203	205	178
25	537	2,340	1,520	461	1,640	231	264	213	193	178	171	185
26	417	1,870	1,230	452	1,470	228	259	205	190	187	180	235
27	395	1,580	779	373	1,340	253	270	204	192	176	189	217
28	397	1,480	699	348	1,330	1,000	259	204	206	182	187	198
29	405	1,310	659	371	---	679	265	203	353	184	313	191
30	398	4,740	622	513	---	499	2,340	199	223	179	631	195
31	388	---	454	490	---	895	---	199	---	176	523	---
TOTAL	19,877	34,822	92,033	33,915	37,250	12,351	32,554	9,087	12,072	6,493	6,816	5,984
MEAN	641	1,161	2,969	1,094	1,330	398	1,085	293	402	209	220	199
MAX	6,100	4,740	10,800	4,430	5,950	1,220	5,490	955	1,630	322	631	315
MIN	184	378	454	348	465	228	259	199	190	173	171	166
(†)	-2,900	-3,900	-4,500	100	1,400	4,700	8,400	700	-900	-600	-2,000	2,600
MEAN(‡)	548	1,031	2,824	1,097	1,380	550	1,365	316	372	190	155	113
CFSM(‡)	1.14	2.14	5.87	2.28	2.87	1.14	2.84	0.66	0.77	0.40	0.32	0.23
IN.(‡)	1.31	2.39	6.77	2.63	2.99	1.32	3.17	0.76	0.86	0.46	0.37	0.26

CAL YR 2004 MEAN(‡) 1,212 CFSM(‡) 2.52 IN.(‡) 34.21
WTR YR 2005 MEAN(‡) 825 CFSM(‡) 1.72 IN.(‡) 23.28

(†) 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.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2005, BY WATER YEAR (WY)

MEAN	359	923	1,377	1,368	1,420	1,448	923	792	554	373	283	312
MAX	1,314	2,277	4,132	3,160	3,730	3,649	2,992	3,612	2,151	1,670	749	1,036
(WY)	(1990)	(1987)	(1992)	(2002)	(1994)	(1980)	(1994)	(2003)	(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)

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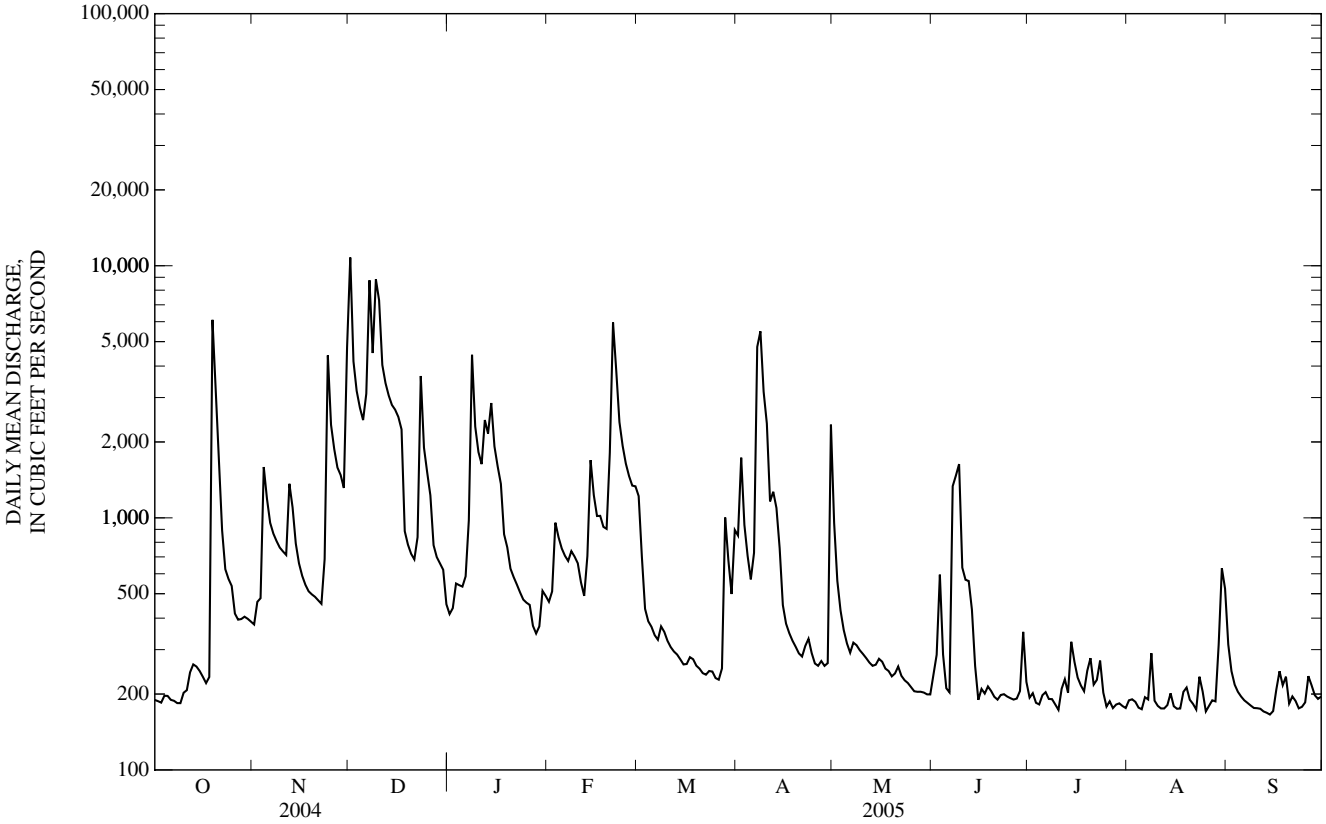
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		*WATER YEARS 1977 - 2005	
ANNUAL TOTAL	443,310		303,254			
ANNUAL MEAN	1,211		831		840	
HIGHEST ANNUAL MEAN					1,253	1991
LOWEST ANNUAL MEAN					257	1981
HIGHEST DAILY MEAN	17,200	Feb 6	10,800	Dec 1	30,100	May 8, 2003
LOWEST DAILY MEAN	138	May 28	166	Sep 14	72	Oct 1, 1982
ANNUAL SEVEN-DAY MINIMUM	159	May 23	172	Sep 9	88	Sep 25, 1982
MAXIMUM PEAK FLOW			13,600	Dec 1	37,200	May 7, 2003
MAXIMUM PEAK STAGE			22.21	Dec 1	33.46	May 7, 2003
INSTANTANEOUS LOW FLOW			a164	Sep 13	71	Sep 30, 1982
10 PERCENT EXCEEDS	3,080		2,020		2,050	
50 PERCENT EXCEEDS	512		322		314	
90 PERCENT EXCEEDS	206		185		174	

* Regulated period only.
a Also occurred Sept. 14, 15.