Water-Data Report 2012

03596000 DUCK RIVER BELOW MANCHESTER, TN

Lower Tennessee Basin
Upper Duck Subbasin

LOCATION.--Lat 35°28′15″, long 86°07′18″ referenced to North American Datum of 1927, Coffee County, TN, Hydrologic Unit 06040002, on right bank 225 feet downstream from Powers Bridge, 1.9 miles west on Powers Bridge Road from Westwood School in Manchester and 3.0 miles south-southeast from Blantons Chapel Church, 3.25 river miles downstream from the confluence with Little Duck River, in Coffee County, TN.

DRAINAGE AREA.--107.00 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1934 to November 1987, August 2008 to current year.

GAGE.--Data collection platform and encoder. Datum of gage is 878.23 ft above NGVD of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft^3/s, May 27, 1973, gage height, 20.95 ft, from rating curve extended above 12,000 ft^3/s, based on contracted-opening measurement at gage height 15.04 ft, and slope area measurements at gage heights 18.93 ft and 20.95 ft; minimum, 8.0 ft^3/s, Aug. 12, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Food in March 1929 reached a stage of 23.2 ft from floodmarks by Tennessee Valley Authority, discharge, about 50,000 ft^3/s. Flood in March 1902 reached approximately same stage.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 28	1115	*2,870	*6.19

Minimum discharge, 21 ft^3/s, on several days.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 03596000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/03596000.2012.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	33	40	268	178	280	331	72	43	39	22	41	33
2	32	38	212	163	394	266	70	43	38	22	69	31
3	32	47	182	145	289	550	67	42	37	22	42	39
4	31	52	164	135	282	296	65	43	38	23	62	33
5	30	51	240	130	453	233	64	42	36	24	39	35
6	31	47	1,460	124	311	201	63	42	32	23	36	33
7	30	45	972	123	258	183	61	46	31	23	35	44
8	30	43	619	136	230	215	59	44	30	23	33	40
9	30	41	328	129	211	1,090	58	42	29	24	66	32
10	29	40	243	125	198	313	57	42	31	24	128	31
11	35	39	200	1,290	190	207	57	41	53	24	198	30
12	36	38	178	1,000	176	169	56	41	69	33	82	30
13	41	38	164	473	169	150	54	47	39	31	55	29
14	41	39	152	330	173	134	53	44	32	31	69	29
15	38	38	152	274	172	122	53	42	30	44	63	28
16	34	160	564	241	209	128	52	41	30	31	49	28
17	33	218	483	281	232	122	52	41	28	28	90	146
18	36	99	273	446	197	123	51	40	27	52	82	1,470
19	66	77	214	289	288	113	50	40	27	53	60	222
20	57	67	186	251	370	103	49	40	26	457	50	128
21	48	203	305	1,300	257	96	50	40	26	117	44	91
22	44	199	895	660	231	90	49	40	25	105	40	73
23	40	147	1,280	1,210	263	90	48	40	24	58	38	62
24	39	114	360	561	228	95	48	40	24	65	36	56
25	37	94	255	358	192	97	47	40	24	48	35	52
26	36	82	211	484	174	92	47	40	22	38	34	49
27	36	297	1,400	869	166	84	47	39	22	35	32	47
28	44	2,370	567	425	159	79	45	39	22	34	33	50
29	49	809	310	310	201	76	44	38	22	32	32	50
30	47	390	239	266	---	73	44	40	22	32	32	45
31	43	---	201	239	---	72	---	38	---	31	32	---
Total	1,188	5,962	13,277	12,945	6,953	5,993	1,632	1,280	935	1,609	1,737	3,066
Mean	38.3	199	428	418	240	193	54.4	41.3	31.2	51.9	56.0	102
Max	66	2,370	1,460	1,300	453	1,090	72	47	69	457	198	1,470
Min	29	38	152	123	159	72	44	38	22	22	32	28
Cfsm	0.36	1.86	4.00	3.90	2.24	1.81	0.51	0.39	0.29	0.49	0.52	0.96
In.	0.41	2.07	4.62	4.50	2.42	2.08	0.57	0.45	0.33	0.56	0.60	1.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	53.4	114	238	361	372	407	275	180	82.8	60.3	50.9	54.7
Max	509	652	791	1,314	1,125	1,130	785	835	479	212	230	542
(WY)	(1976)	(1958)	(1970)	(1950)	(1948)	(1973)	(1994)	(1973)	(1997)	(1967)	(1982)	(1990)
Min	15.1	20.4	26.1	26.9	57.0	83.2	54.4	34.2	23.8	21.5	20.4	11.7
(WY)	(1940)	(1955)	(1964)	(1981)	(1941)	(1981)	(2012)	(1941)	(1936)	(1952)	(1934)	(1954)

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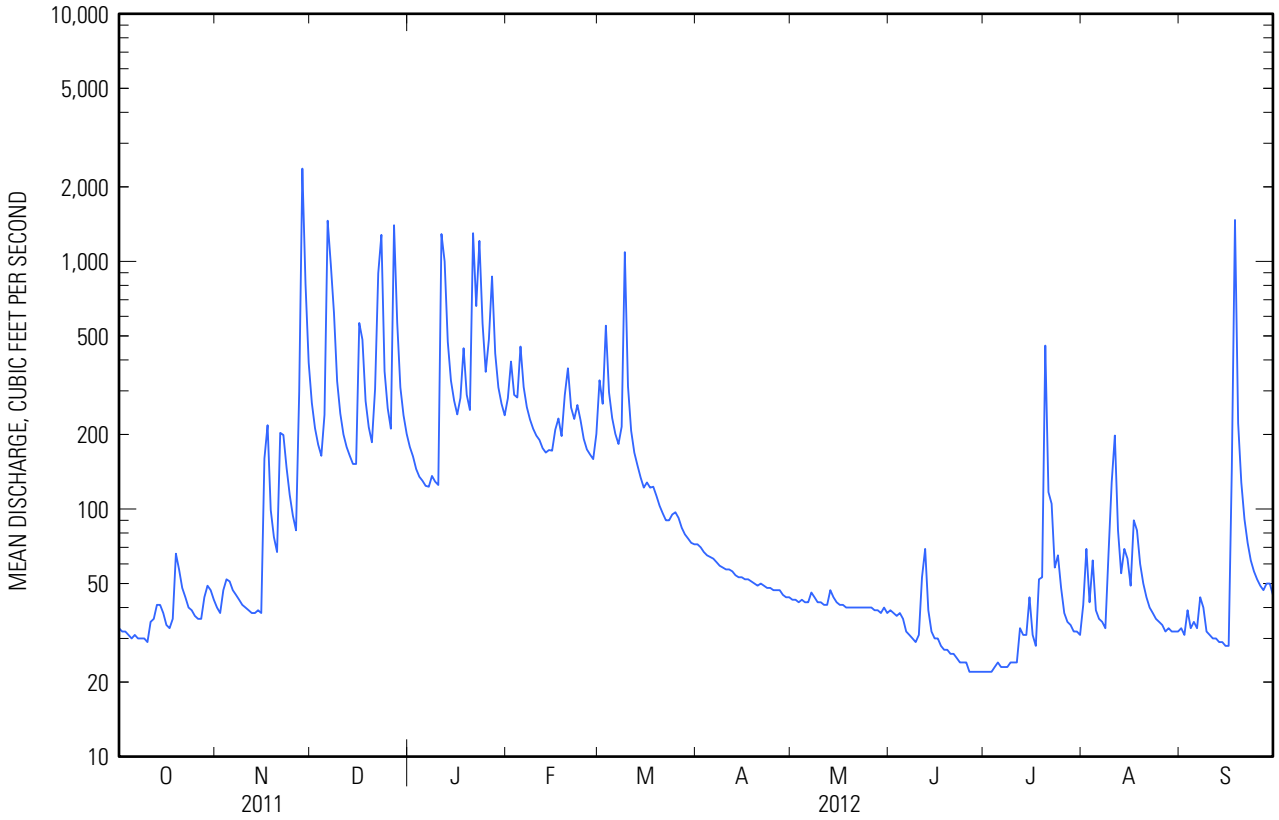
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1934 - 2012	
Annual total	73,785		56,577			
Annual mean	202		155		184	
Highest annual mean					394	1973
Lowest annual mean					47.7	1981
Highest daily mean	4,050	Apr 28	2,370	Nov 28	17,800	Dec 30, 1969
Lowest daily mean	29	Oct 10	22	Jun 26	9.1	Sep 19, 1947
Annual seven-day minimum	30	Oct 4	22	Jun 26	9.5	Sep 3, 1954
Maximum peak flow			2,870	Nov 28	[a]38,000	May 27, 1973
Maximum peak stage			6.19	Nov 28	20.95	May 27, 1973
Instantaneous low flow			[b]21	Jun 26	8.0	Aug 12, 1934
Annual runoff (cfsm)	1.89		1.44		1.72	
Annual runoff (inches)	25.65		19.67		23.40	
10 percent exceeds	394		312		371	
50 percent exceeds	92		52		64	
90 percent exceeds	36		30		22	

[a] From rating curve extended above 12,000 ft³/s, based on contracted-opening measurement at gage height 15.04 ft, and slope area measurements at gage heights 18.93 ft and 20.95 ft.
[b] Also occurred several days.