Water-Data Report 2013

03599500 DUCK RIVER AT COLUMBIA, TN

Lower Tennessee Basin
Lower Duck Subbasin

LOCATION.--Lat 35°37'04.74", long 87°01'56.43" referenced to North American Datum of 1927, Maury County, TN, 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^2.

SURFACE-WATER RECORDS

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 RECORDS.--WSP 783: 1929(M). WSP 853: Drainage area. WSP 1306: 1905-9, 1920-22, 1923(M).

GAGE.--Data collection platform and radar stage sensing device. Datum of gage is 535.33 ft above NGVD of 1929. Prior to Jan. 9, 1925, nonrecording gages near this site; all gages at datum 2.56 ft higher prior to Oct. 1, 1933.

REMARKS.--Records good except for estimated daily discharges which are poor. Maximum discharge prior to regulation, 61,500 ft^3/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^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,300 ft^3/s, Jan. 17, gage height, 26.64 ft; minimum discharge, 165 ft^3/s, Sept. 14.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 03599500, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/03599500.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	336	271	268	4,240	8,170	1,070	1,280	5,890	387	419	419	236
2	1,950	260	248	7,480	4,750	950	1,380	4,540	371	351	438	253
3	3,300	253	233	6,970	3,590	883	1,180	3,800	671	319	549	271
4	1,380	248	216	4,740	2,980	840	1,260	4,900	1,230	2,990	514	264
5	869	240	238	3,540	2,530	829	3,200	7,450	763	13,500	418	219
6	636	232	485	2,890	2,200	1,220	3,960	6,900	2,170	16,400	381	202
7	504	233	602	2,460	1,960	2,230	2,610	10,000	3,620	17,400	379	190
8	446	236	487	2,140	1,780	1,640	1,980	8,140	2,380	16,100	1,490	183
9	442	233	435	2,390	1,660	1,320	1,620	5,390	1,720	11,000	2,320	177
10	469	230	2,900	5,440	1,640	1,140	1,370	4,240	2,420	4,150	1,700	199
11	507	220	9,350	5,550	2,470	2,520	1,910	3,790	4,010	4,390	1,170	195
12	548	233	6,530	6,260	3,010	6,970	7,260	3,420	3,140	10,400	846	186
13	898	233	3,200	10,400	2,350	5,010	7,600	2,270	1,860	5,620	789	176
14	1,290	278	2,080	12,900	2,090	2,980	4,190	1,670	1,170	3,360	1,060	178
15	1,110	431	1,590	10,500	1,910	2,190	2,920	1,390	900	2,450	830	227
16	965	398	1,410	13,700	1,710	1,850	2,270	1,190	766	1,820	660	201
17	833	326	2,410	17,800	1,560	1,560	1,860	1,070	789	1,310	519	177
18	843	287	3,290	11,400	1,420	1,870	1,590	1,520	2,470	1,070	445	181
19	1,370	260	3,100	6,260	1,370	3,620	2,950	2,150	5,140	1,040	392	181
20	1,480	245	2,550	4,600	1,320	3,620	5,930	1,660	4,060	939	345	180
21	1,060	235	4,190	3,670	1,270	2,330	3,820	1,200	2,860	806	303	218
22	829	225	4,330	3,040	2,030	1,790	2,410	1,150	1,500	634	383	224
23	665	217	2,780	2,590	2,700	1,510	1,960	1,360	982	637	499	340
24	567	213	4,050	2,280	2,150	1,480	1,770	1,120	787	769	489	407
25	477	206	8,540	2,120	1,730	2,250	1,680	878	666	692	423	304
26	420	204	11,400	2,430	1,540	2,450	1,590	693	621	542	368	263
27	387	218	e10,200	2,580	1,460	1,850	4,110	609	579	480	283	247
28	351	235	e6,500	2,190	1,310	1,550	14,500	547	535	436	248	233
29	323	269	5,050	1,970	---	1,330	16,700	487	525	401	234	223
30	305	286	5,270	5,000	---	1,190	9,820	432	473	393	240	215
31	286	---	4,300	11,500	---	1,130	---	409	---	400	253	---
Total	25,846	7,655	108,232	181,030	64,660	63,172	116,680	90,265	49,565	121,218	19,387	6,750
Mean	834	255	3,491	5,840	2,309	2,038	3,889	2,912	1,652	3,910	625	225
Max	3,300	431	11,400	17,800	8,170	6,970	16,700	10,000	5,140	17,400	2,320	407
Min	286	204	216	1,970	1,270	829	1,180	409	371	319	234	176

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	689	1,799	3,393	3,619	3,559	3,684	2,597	2,208	968	723	431	651
Max	3,642	5,925	10,360	8,513	9,901	10,090	7,464	9,106	5,081	4,740	1,365	3,832
(WY)	(1990)	(1987)	(1991)	(1979)	(1991)	(1980)	(1994)	(1983)	(1997)	(1989)	(1998)	(1979)
Min	160	236	418	273	752	1,104	322	244	167	177	153	145
(WY)	(2000)	(1981)	(1981)	(1986)	(2007)	(1985)	(2012)	(1988)	(1988)	(2008)	(2007)	(2010)

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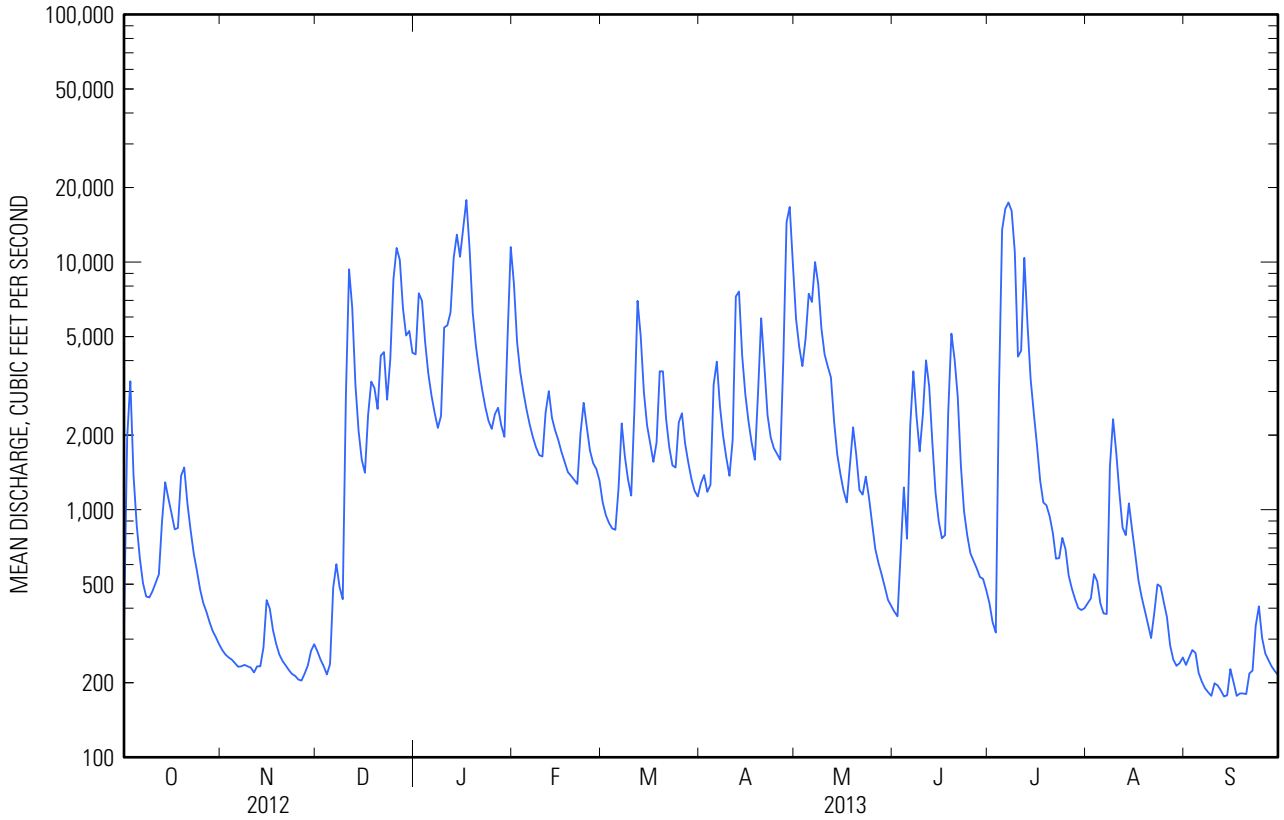
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1977 – 2013*	
Annual total	482,541		854,460			
Annual mean	1,318		2,341		2,021	
Highest annual mean					3,282	1989
Lowest annual mean					553	1981
Highest daily mean	12,600	Jan 12	17,800	Jan 17	52,300	Feb 20, 1991
Lowest daily mean	119	Jun 29	176	Sep 13	86	Oct 4, 1982
Annual seven-day minimum	124	Jun 27	185	Sep 8	100	Sep 28, 1982
Maximum peak flow			18,300	Jan 17	52,300	Feb 20, 1991
Maximum peak stage			26.64	Jan 17	45.82	Feb 20, 1991
Instantaneous low flow			165	Sep 14	113	Jul 2, 2012
10 percent exceeds	3,660		5,730		4,750	
50 percent exceeds	368		1,310		703	
90 percent exceeds	157		234		185	

* Regulated period only.