Water-Data Report 2012

03606500 BIG SANDY RIVER AT BRUCETON, TN

Lower Tennessee Basin
Kentucky Lake Subbasin

LOCATION.--Lat 36°02'12.92", long 88°13'44.68" referenced to North American Datum of 1927, Carroll County, TN, Hydrologic Unit 06040005, at bridge on U.S. Highway 70, 0.9 mi east of Bruceton and 2 mi east of Carroll-Benton County line, and at mile 31.6

DRAINAGE AREA.--205 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1929 to November 1988, January 2002 to current year.

REVISED RECORDS.--WSP 853: Drainage area. WSP 923: 1929-35.

GAGE.--Data collection platform. Datum of gage is 380.58 ft above NGVD of 1929. Prior to March 1, 1940, nonrecording gage at same site.

REMARKS.--Records fair, except for estimated days which are considered poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge unknown, May 2, 2010, gage height 20.16 ft.; maximum daily discharge 30,000 ft^3/s (estimated); minimum discharge 28 ft^3/s Aug. 14, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1897 reached a stage of 18 ft, discharge 25,000 ft^3/s, and flood in March 1919 reached a stage of 17 ft, discharge, 21,000 ft^3/s, from reports by Tennessee Valley Authority.

REVISIONS.--On June 18, 2013 the May 2, 2010 peak was revised to 20.16 ft. (discharge unknown). This supersedes the value of 19.00 published in the reports for 2010 and 2011 http://wdr.water.usgs.gov/wy2010/pdfs/03606500.2010.pdf http://wdr.water.usgs.gov/wy2011/pdfs/03606500.2011.pdf. The daily mean discharge for May 2, 2010 is estimated to be 30,000 ft^3/s and is the value now used (and flagged as a daily mean) for the 2010 peak in the USGS peak flow file.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 6	0430	*2,950	*13.02

Minimum discharge, 34 ft^3/s, July 4, 5.

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 03606500, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/03606500.2012.pdf

03606500 BIG SANDY RIVER AT BRUCETON, TN—Continued

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

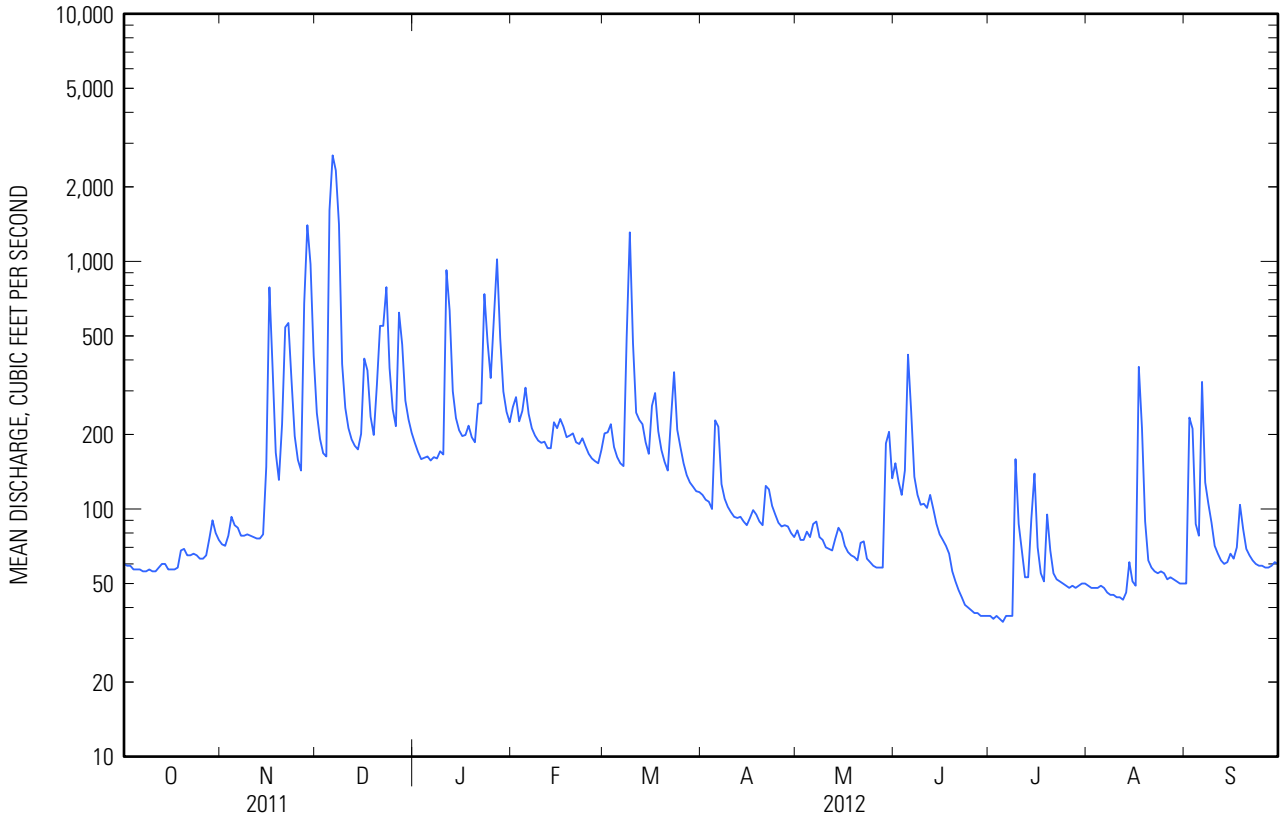
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	60	72	244	185	258	202	114	82	153	37	49	50
2	59	71	192	170	283	204	109	75	129	36	48	234
3	59	78	168	159	226	220	107	75	114	37	48	211
4	57	93	163	161	249	178	100	81	143	36	48	87
5	57	86	1,610	163	309	162	228	77	420	35	49	78
6	57	84	2,680	157	242	153	215	87	247	37	48	326
7	56	78	2,330	162	212	149	126	89	135	37	46	128
8	56	78	1,410	160	198	493	110	77	114	37	45	105
9	57	79	385	171	189	1,310	102	75	104	159	45	88
10	56	78	256	166	185	468	97	70	105	87	44	71
11	56	77	212	922	187	245	93	69	101	68	44	66
12	58	76	191	634	176	229	92	68	114	53	43	62
13	60	76	180	299	176	220	93	76	100	53	46	60
14	60	79	174	233	224	186	89	84	87	91	61	61
15	57	148	201	208	212	167	86	80	79	139	51	66
16	57	786	405	197	231	261	92	71	75	70	49	63
17	57	372	363	199	215	294	99	67	71	55	375	70
18	58	169	236	217	195	206	95	65	66	51	212	104
19	68	131	199	195	198	173	89	64	e56	95	89	83
20	69	220	318	186	202	155	86	62	e51	68	62	69
21	65	542	549	266	186	143	124	73	e47	55	58	65
22	65	564	549	267	183	229	120	74	e44	52	56	62
23	66	329	787	738	193	357	103	63	e41	51	55	60
24	65	197	371	473	179	209	95	61	e40	50	56	59
25	63	158	253	338	167	178	88	59	e39	49	55	59
26	63	143	216	589	160	153	85	58	e38	48	52	58
27	65	677	621	1,020	156	137	86	58	e38	49	53	58
28	76	1,400	461	490	153	128	85	58	37	48	52	59
29	90	975	274	298	173	123	80	184	37	49	51	61
30	80	415	230	247	---	118	77	205	37	50	50	60
31	75	---	203	224	---	117	---	133	---	50	50	---
Total	1,947	8,331	16,431	9,894	5,917	7,567	3,165	2,520	2,862	1,832	2,090	2,683
Mean	62.8	278	530	319	204	244	106	81.3	95.4	59.1	67.4	89.4
Max	90	1,400	2,680	1,020	309	1,310	228	205	420	159	375	326
Min	56	71	163	157	153	117	77	58	37	35	43	50
Cfsm	0.31	1.35	2.59	1.56	1.00	1.19	0.51	0.40	0.47	0.29	0.33	0.44
In.	0.35	1.51	2.98	1.80	1.07	1.37	0.57	0.46	0.52	0.33	0.38	0.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	125	254	358	486	432	476	397	347	174	150	124	139
Max	534	995	1,011	2,712	1,235	1,478	1,292	2,300	956	929	613	885
(WY)	(1973)	(1958)	(1950)	(1937)	(1950)	(1975)	(1979)	(2010)	(1974)	(1972)	(1971)	(2002)
Min	42.0	65.7	88.1	90.8	96.4	84.6	89.2	51.6	41.8	32.9	38.6	35.7
(WY)	(1944)	(1955)	(1964)	(1963)	(1941)	(1941)	(1967)	(1941)	(1941)	(1943)	(2007)	(1942)

03606500 BIG SANDY RIVER AT BRUCETON, TN—Continued

SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1929 - 2012	
Annual total	106,309		65,239			
Annual mean	291		178		287	
Highest annual mean					632	1950
Lowest annual mean					77.8	1941
Highest daily mean	6,230	Apr 28	2,680	Dec 6	[a]30,000	May 2, 2010
Lowest daily mean	44	Sep 1	35	Jul 5	28	Aug 17, 1943
Annual seven-day minimum	45	Aug 27	36	Jun 29	29	Aug 17, 1943
Maximum peak flow			2,950	Dec 6		
Maximum peak stage			13.02	Dec 6	20.16	May 2, 2010
Instantaneous low flow			[b]34	Jul 4	28	Aug 17, 1943
Annual runoff (cfsm)	1.42		0.870		1.40	
Annual runoff (inches)	19.29		11.84		19.03	
10 percent exceeds	548		327		621	
50 percent exceeds	132		93		126	
90 percent exceeds	57		49		53	

[a] Estimated
[b] Also occurred Jul. 5.