Water-Data Report 2013

03491000 BIG CREEK NEAR ROGERSVILLE, TN

French Broad-Holston Basin
Holston Subbasin

LOCATION.--Lat 36°25′34″, long 82°57′07″ referenced to North American Datum of 1927, Hawkins County, TN, Hydrologic Unit 06010104, on left bank 500 ft upstream from county road bridge, 3 mi northeast of Rogersville, and at mile 2.0.

DRAINAGE AREA.--47.3 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1941 to June 1949, October 1957 to current year. Occasional low-flow measurements during water years 1950-55, and 1957. Annual maximum discharge data during water years 1955-57.

REVISED RECORDS.--WSP 1436: 1945.

GAGE.--Data collection platform, water level sensor, and crest-stage gage. Datum of gage is 1,128.9 ft above NGVD of 1929 (levels based on City of Rogersville construction plans for pumping station). Dec. 7, 1954, to Sept. 30, 1957, crest-stage gage at same site and datum.

REMARKS.--Records fair.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,380 ft^3/s, Jan.16, gage height 9.04 ft; minimum discharge, 3.4 ft^3/s, Dec. 2.

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 03491000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/03491000.2013.pdf

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	13	21	9.1	48	269	72	115	72	12	63	15	54
2	20	16	5.5	88	190	66	101	61	112	236	13	26
3	29	13	6.6	85	161	61	91	54	102	102	11	24
4	17	12	6.9	64	135	56	105	48	39	120	11	22
5	13	11	7.9	52	119	363	211	50	26	123	10	15
6	12	10	7.2	46	107	666	150	172	29	99	9.3	12
7	11	9.8	7.6	41	96	223	121	176	47	152	7.7	11
8	11	9.3	9.5	36	90	165	103	96	43	187	8.1	10
9	13	9.4	9.2	32	80	135	92	73	39	108	8.8	10
10	13	9.3	34	30	73	117	82	59	294	87	9.2	10
11	11	8.4	104	29	73	107	75	51	241	82	31	10
12	10	8.5	47	29	67	200	121	45	111	70	16	10
13	9.7	8.9	29	27	67	165	115	38	76	58	271	27
14	9.2	12	22	223	70	128	93	33	78	54	115	19
15	10	11	19	1,380	65	110	84	31	57	48	48	13
16	12	10	19	2,900	62	100	73	28	49	39	32	11
17	12	9.2	25	957	57	90	372	26	55	38	26	11
18	10	8.8	33	638	53	133	309	25	377	50	22	10
19	8.9	8.7	33	324	58	337	273	35	242	34	23	10
20	9.0	8.2	30	257	57	177	269	29	115	28	21	10
21	8.0	8.1	100	211	53	137	155	24	81	33	14	17
22	8.3	7.8	58	166	81	113	120	22	125	31	13	68
23	8.0	7.6	41	134	94	98	100	27	72	32	12	29
24	7.9	7.3	81	114	84	129	87	23	57	28	12	20
25	7.8	7.2	121	100	73	280	75	20	55	22	11	16
26	7.6	7.1	210	92	79	185	64	17	54	16	9.6	15
27	7.7	7.5	192	82	88	144	58	16	132	16	9.3	14
28	8.3	7.5	103	78	79	122	93	15	95	15	11	12
29	14	7.6	78	99	---	107	120	14	71	14	11	11
30	17	8.2	61	1,290	---	97	89	13	57	14	12	11
31	18	---	49	1,140	---	109	---	12	---	13	23	---
Total	366.4	290.4	1,558.5	10,792	2,580	4,992	3,916	1,405	2,943	2,012	846.0	538
Mean	11.8	9.68	50.3	348	92.1	161	131	45.3	98.1	64.9	27.3	17.9
Max	29	21	210	2,900	269	666	372	176	377	236	271	68
Min	7.6	7.1	5.5	27	53	56	58	12	12	13	7.7	10
Cfsm	0.25	0.20	1.06	7.36	1.95	3.40	2.76	0.96	2.07	1.37	0.58	0.38
In.	0.29	0.23	1.23	8.49	2.03	3.93	3.08	1.10	2.31	1.58	0.67	0.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	14.0	28.8	69.1	103	129	131	88.4	56.6	29.0	23.0	16.6	11.6
Max	109	124	258	331	472	366	342	206	150	96.5	67.1	58.7
(WY)	(1972)	(1974)	(1992)	(1974)	(1994)	(1963)	(1998)	(1958)	(1989)	(1960)	(1942)	(1989)
Min	3.19	4.43	5.06	9.33	23.6	27.4	15.4	10.7	7.07	4.35	2.45	2.60
(WY)	(2001)	(1988)	(1966)	(1981)	(2002)	(1983)	(1986)	(1985)	(2002)	(1988)	(1988)	(1999)

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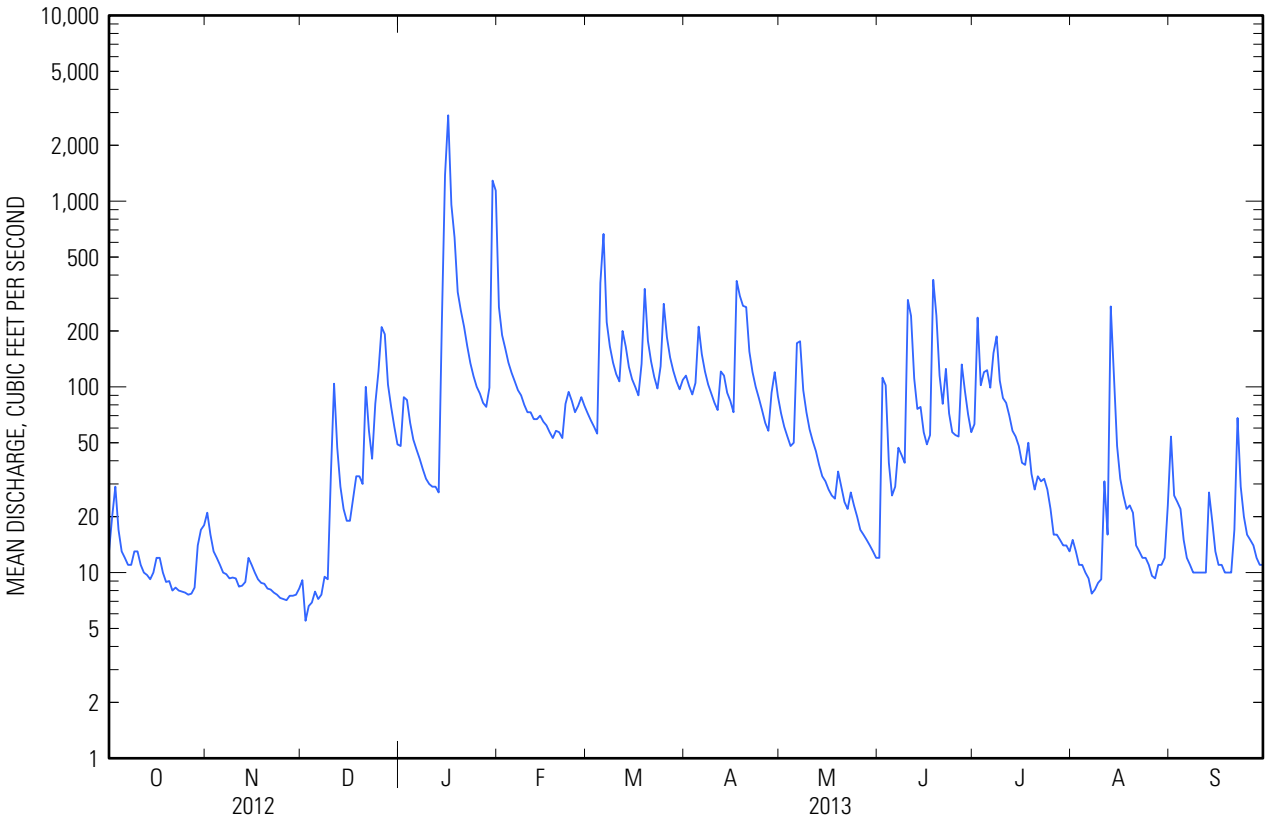
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1941 - 2002	
Annual total	16,839.9		32,239.3			
Annual mean	46.0		88.3		57.9	
Highest annual mean					123	1994
Lowest annual mean					20.1	2000
Highest daily mean	417	Feb 24	2,900	Jan 16	4,000	Feb 11, 1994
Lowest daily mean	3.8	Jul 1	5.5	Dec 2	1.1	Sep 11, 2002
Annual seven-day minimum	4.2	Jun 26	7.3	Dec 1	1.3	Sep 7, 2002
Maximum peak flow			5,380	Jan 16	[a]5,760	Mar 12, 1963
Maximum peak stage			9.04	Jan 16	[b]12.21	Apr 17, 1998
Instantaneous low flow			3.4	Dec 2	[c]1.0	Oct 3, 2007
Annual runoff (cfsm)	0.973		1.87		1.22	
Annual runoff (inches)	13.24		25.36		16.63	
10 percent exceeds	118		168		124	
50 percent exceeds	19		43		22	
90 percent exceeds	6.7		9.2		5.2	

[a] From rating curve extended above 3,000 ft³/s on basis of contracted-opening measurement of peak flow.
[b] Due to backwater from debris.
[c] Also occurred on Aug. 19 and 21,2008.