Water-Data Report 2013

07231500 CANADIAN RIVER AT CALVIN, OK

Lower Canadian Basin
Lower Canadian-Walnut Subbasin

LOCATION.--Lat 34°58′40″, long 96°14′36″ referenced to North American Datum of 1927, in NW ¼ SW ¼ sec.22, T.6 N., R.10 E., Hughes County, OK, Hydrologic Unit 11090202, on downstream left bank at north end of bridge on U.S. Highway 75, 0.5 mi northeast of Calvin, 2.6 mi upstream from Shawnee Creek, 8.4 mi downstream from Little River, and at mile 94.1.

DRAINAGE AREA.--27,417 mi² of which 4,637 mi² probably is noncontributing, from automated delineation using 10-meter National Elevation Dataset digital elevation model data dated 10/01/2006 and Watershed Boundary Dataset dated 10/01/2006, using Albers Equal-Area Projection, North American Datum 1983.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--January 1905 to December 1908 (gage heights and discharge measurements only, except for period July 1905 to December 1906), October 1938 to September 1942, July 1944 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1904 are contained in reports from the National Weather Service.

REVISED RECORDS.--WDR 2012: Drainage area.

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 682.72 ft above NGVD of 1929. January 1905 to December 1908, nonrecording gage at site 0.7 mi upstream at datum 4.00 ft higher. Oct. 1, 1938 to Aug. 12, 1944, nonrecording gage at site 0.2 mi downstream and at same datum. Aug. 13, 1944 to July 31,1977, water-stage recorder at site 0.2 mi downstream and datum 2.00 ft higher. Aug. 1, 1977 to Nov. 15, 1988, water-stage recorder 0.2 mi downstream and at present datum.

REMARKS.--Records poor. Occasional slight regulation by dams in New Mexico and Texas since 1964; Lake Thunderbird (station 07229900) since March 1965. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
May 21	2200	*30,100	*9.90

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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	355	e49	45	139	72	541	282	717	10,200	e317	3,660	214
2	551	e48	46	151	64	716	1,020	533	14,000	e300	2,020	195
3	418	e47	47	130	78	448	4,530	435	12,500	e283	1,520	175
4	331	e46	e43	108	87	e328	3,730	397	4,480	e266	1,250	155
5	289	e46	e40	104	74	e273	e3,200	314	4,160	e255	1,260	141
6	256	e45	39	91	72	283	e2,050	298	5,210	e245	1,090	129
7	169	e44	42	85	82	265	1,290	263	3,820	e236	917	121
8	117	e42	45	85	92	247	e740	228	2,410	e227	e750	114
9	85	e41	e47	e105	82	312	e626	221	1,980	e220	e635	105
10	e65	e40	46	e126	86	e370	e712	224	1,730	e215	1,200	97
11	53	e55	47	133	78	e371	e669	654	1,650	e211	834	92
12	44	69	47	140	85	343	1,750	588	1,260	e207	992	88
13	43	74	45	138	113	292	1,820	398	989	e204	858	82
14	54	70	47	166	98	268	e637	324	775	e198	1,150	80
15	49	67	e52	152	169	233	e494	437	757	e237	872	84
16	52	117	52	e131	198	212	470	2,320	745	e1,190	919	78
17	37	93	51	e125	153	199	e415	2,120	838	e1,050	1,300	91
18	60	72	50	e112	113	190	e432	1,350	1,170	e909	1,670	86
19	241	65	e50	e105	95	186	6,180	864	989	e753	1,630	76
20	e145	59	e53	e98	196	183	3,900	620	1,280	e598	1,330	222
21	e110	e54	55	e93	533	e190	1,470	10,800	1,160	e474	1,320	106
22	e88	e50	53	e88	687	e193	1,010	18,000	e910	e400	1,140	124
23	e78	e46	51	e84	512	e193	762	3,660	e684	e350	912	169
24	e73	43	50	e80	e362	e185	e575	4,320	e568	e300	607	140
25	e69	43	e49	e77	403	e175	e454	3,680	e500	e2,930	508	106
26	e66	43	e48	e74	619	165	e399	1,750	e449	1,950	408	90
27	e61	42	e48	e72	e717	158	892	1,300	e415	11,500	358	77
28	e58	41	e55	e70	577	150	1,810	918	e383	7,630	315	88
29	e56	40	e60	e69	---	214	1,500	e660	e357	3,290	282	107
30	e54	42	e82	e72	---	222	814	e1,560	e335	1,920	254	115
31	e52	---	109	71	---	258	---	784	---	3,630	231	---
Total	4,179	1,633	1,594	3,274	6,497	8,363	44,633	60,737	76,704	42,495	32,192	3,547
Mean	135	54.4	51.4	106	232	270	1,488	1,959	2,557	1,371	1,038	118
Max	551	117	109	166	717	716	6,180	18,000	14,000	11,500	3,660	222
Min	37	40	39	69	64	150	282	221	335	198	231	76
Ac-ft	8,290	3,240	3,160	6,490	12,890	16,590	88,530	120,500	152,100	84,290	63,850	7,040

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,465	1,108	1,004	934	1,294	1,883	2,531	4,010	3,166	1,328	805	1,080
Max	21,530	6,529	9,355	6,655	7,059	10,230	15,110	20,640	15,350	9,669	8,398	6,467
(WY)	(1942)	(1993)	(1993)	(1998)	(1985)	(1998)	(1990)	(1990)	(1941)	(1950)	(1906)	(1941)
Min	0.10	3.82	7.76	16.4	23.4	20.9	45.7	195	33.7	6.47	0.00	0.00
(WY)	(1957)	(1967)	(1967)	(1940)	(1967)	(1967)	(1956)	(1966)	(1966)	(2011)	(2006)	(1956)

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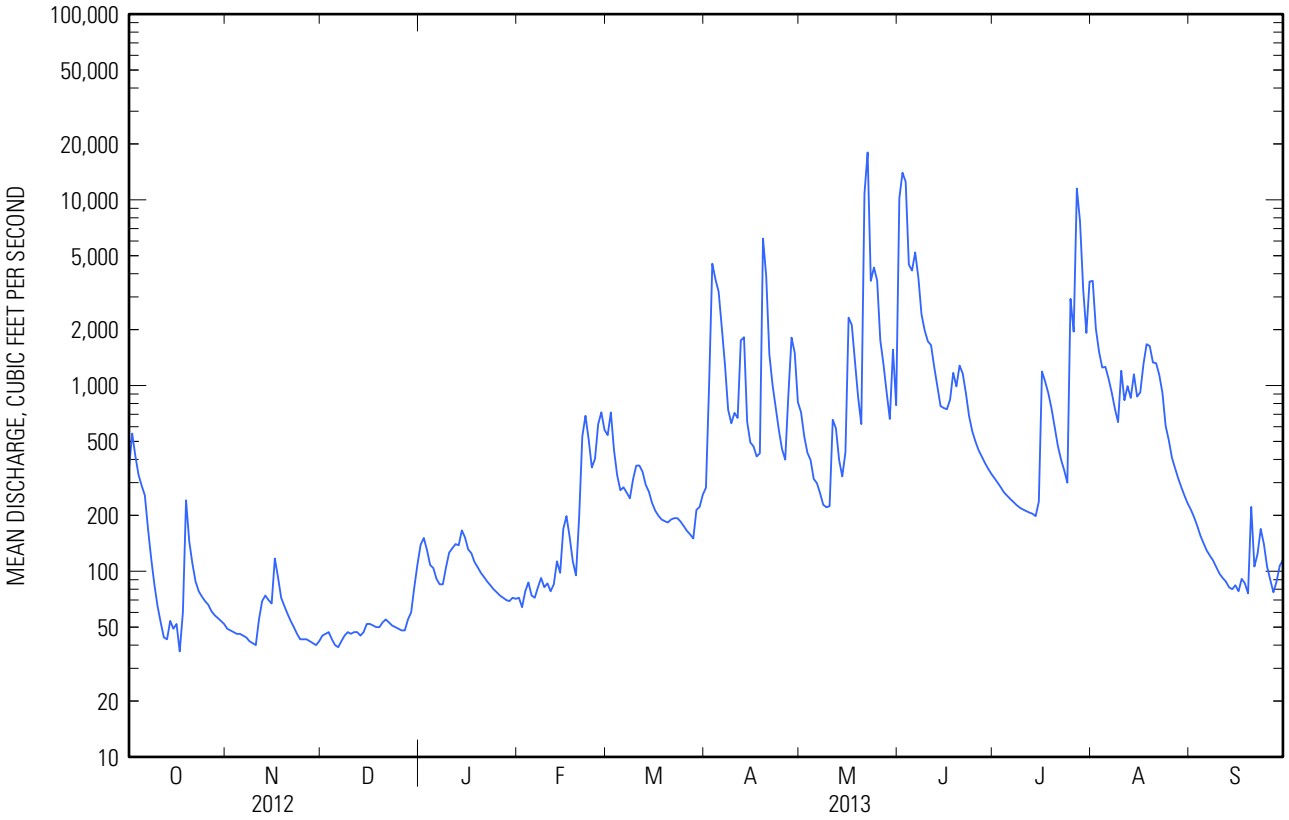
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1906 - 2013	
Annual total	129,120.5		285,848			
Annual mean	353		783		1,720	
Highest annual mean					5,513	1942
Lowest annual mean					184	1981
Highest daily mean	18,500	Mar 20	18,000	May 22	140,000	May 29, 1987
Lowest daily mean	[a]1.1	Sep 12[b]	37	Oct 17	0.00	At times
Annual seven-day minimum	1.3	Sep 7	42	Nov 24	0.00	Sep 10, 1939
Maximum peak flow			30,100	May 21	174,000	May 11, 1950
Maximum peak stage			9.90	May 21	[c]21.00	Aug 7, 1906
Annual runoff (ac-ft)	256,100		567,000		1,246,000	
10 percent exceeds	785		1,690		3,860	
50 percent exceeds	101		214		420	
90 percent exceeds	2.9		49		28	

[a] Estimated.
[b] Also Sep. 13.
[c] From floodmark, site and datum then in use.