Water-Data Report 2013

07335500 RED RIVER AT ARTHUR CITY, TX

Red-Little Basin
Bois D'Arc-Island Subbasin

LOCATION.--Lat 33°52′30″, long 95°30′06″ referenced to North American Datum of 1927, in NW ¼ sec.11, T.8 S., R.17 E., Choctaw County, OK, Hydrologic Unit 11140101, on right downstream bank of bridge on U.S. Highway 271 at Arthur City, 10.6 mi downstream from Muddy Boggy River, 26.0 mi upstream from Kiamichi River, and at mile 633.1.

DRAINAGE AREA.--44,445 mi^2 of which 7,928 mi^2 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 to September 1905 (gage heights and discharge measurements only), October 1905 to December 1911, July 1936 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site since 1891 are contained in reports of the National Weather Service.

REVISED RECORDS.--WDR 2012: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 375.07 ft above NGVD of 1929. Prior to Oct. 7, 2008, at datum 5.00 ft. higher. From 1905-11 nonrecording gage at St. Louis-San Francisco Railway Co. bridge 200 ft upstream at prior datum. July 1, 1936, to Mar. 24, 1940, nonrecording gage at present site and prior datum.

REMARKS.--Records poor. Flow regulated since October 1943 by Lake Texoma (station 07331500), 92.8 mi upstream from station. U.S. Army Corps of Engineers' satellite telemeter at station.

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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	e925	381	839	709	e419	1,040	1,490	1,490	7,550	1,020	721	3,340
2	e736	360	669	816	e461	1,170	e2,170	e970	8,820	838	e570	3,170
3	e509	352	1,070	570	640	1,080	4,510	885	9,920	649	e836	2,440
4	e592	e410	959	608	767	982	4,800	1,040	11,700	e488	1,130	2,280
5	748	806	837	1,030	544	682	e4,440	852	11,800	e421	1,160	2,290
6	774	773	1,110	1,030	e410	517	4,300	635	10,200	e378	972	2,840
7	997	616	943	827	e437	e460	3,410	540	7,350	e355	780	2,970
8	1,070	534	873	560	e440	e435	2,180	505	8,760	e334	781	3,160
9	711	552	1,150	502	e377	e661	1,530	e503	8,750	321	976	3,150
10	487	867	e990	843	e408	2,670	1,230	479	7,390	317	1,050	e2,290
11	e407	775	716	1,070	e437	11,200	1,490	e439	6,510	309	1,070	2,350
12	481	726	e509	854	e460	7,970	3,630	e414	4,420	e301	1,060	3,070
13	719	649	e743	812	582	3,310	3,470	389	3,510	e298	909	3,460
14	921	894	1,470	821	707	2,100	2,650	375	3,020	349	764	3,620
15	1,960	1,590	1,180	714	749	1,600	1,670	371	2,720	585	857	3,940
16	1,770	1,070	610	764	755	e1,170	1,200	1,060	3,180	e630	1,020	3,630
17	1,270	889	e466	1,090	674	e947	961	5,500	3,460	e488	e810	2,560
18	919	974	e440	1,260	560	820	1,500	12,900	3,460	398	e946	e2,480
19	755	1,090	e403	1,130	509	727	2,210	7,100	e3,490	392	1,680	2,950
20	947	643	e390	917	493	673	1,680	3,600	3,380	498	2,180	3,840
21	779	e486	e382	833	481	648	1,660	2,550	2,820	519	2,370	4,620
22	617	504	e380	563	489	616	1,360	13,400	1,840	510	2,700	4,130
23	549	754	e386	e451	506	585	994	21,900	1,250	401	2,800	3,140
24	546	798	e566	e428	672	572	838	23,800	974	e397	2,870	2,180
25	800	674	554	e404	1,280	734	734	22,900	820	394	2,900	2,150
26	1,020	e498	471	e391	1,150	826	666	22,700	703	e501	2,820	2,370
27	921	e439	483	e388	846	667	616	21,900	602	568	2,270	2,870
28	1,010	e410	482	386	703	866	578	18,600	e545	794	2,230	3,300
29	732	e399	737	e434	---	966	1,160	13,000	e482	904	2,780	3,500
30	e498	e487	800	e421	---	729	2,220	6,340	e526	1,170	2,930	2,940
31	e422	---	579	e410	---	803	---	4,610	---	942	3,100	---
Total	25,592	20,400	22,187	22,036	16,956	48,226	61,347	211,747	139,952	16,469	50,042	91,030
Mean	826	680	716	711	606	1,556	2,045	6,831	4,665	531	1,614	3,034
Max	1,960	1,590	1,470	1,260	1,280	11,200	4,800	23,800	11,800	1,170	3,100	4,620
Min	407	352	380	386	377	435	578	371	482	298	570	2,150
Ac-ft	50,760	40,460	44,010	43,710	33,630	95,660	121,700	420,000	277,600	32,670	99,260	180,600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	6,236	6,866	6,922	7,013	8,256	10,500	11,210	15,580	16,080	7,816	5,007	4,532
Max	40,240	37,170	32,340	39,930	32,130	39,430	55,500	103,900	83,820	55,530	36,590	19,010
(WY)	(1982)	(1975)	(1992)	(1992)	(2001)	(2001)	(1990)	(1990)	(1957)	(2007)	(2007)	(1950)
Min	263	242	456	711	606	1,118	1,344	1,750	1,508	531	899	399
(WY)	(1957)	(1957)	(2009)	(2013)	(2013)	(1967)	(1956)	(2012)	(2011)	(2013)	(2012)	(2006)

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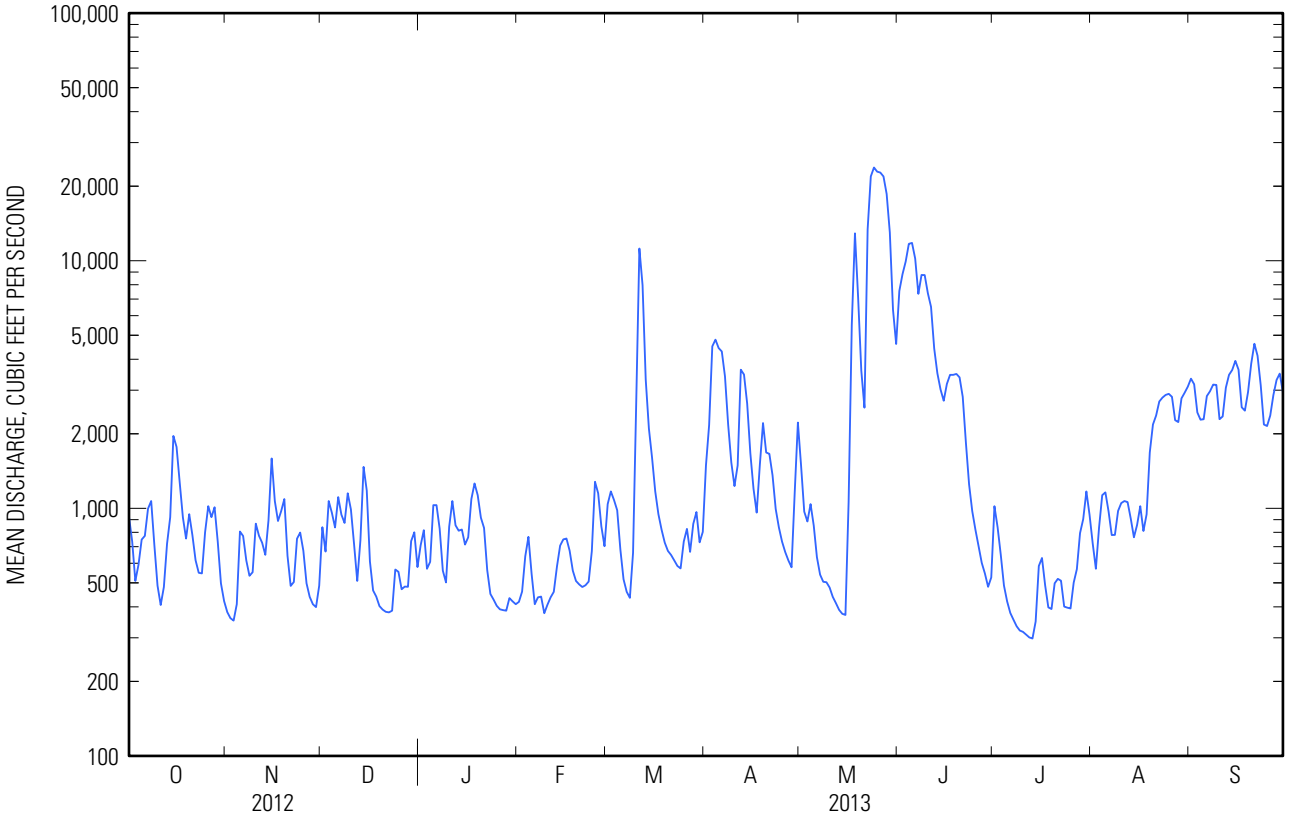
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1945 - 2013	
Annual total	1,276,320		725,984			
Annual mean	3,487		1,989		[b]8,829	
Highest annual mean					23,290	1990
Lowest annual mean					1,794	2006
Highest daily mean	56,300	Mar 21	23,800	May 24	269,000	May 4, 1990
Lowest daily mean	352	Nov 3	[a]298	Jul 13	134	Dec 11, 1956 [c]
Annual seven-day minimum	407	Dec 17	318	Jul 8	134	Dec 11, 1956
Maximum peak flow			24,000	May 24	[d]275,000	May 4, 1990
Maximum peak stage			15.31	May 24	[e]34.21	May 4, 1990
Annual runoff (ac-ft)	2,532,000		1,440,000		6,396,000	
10 percent exceeds	10,800		3,630		23,100	
50 percent exceeds	1,090		839		4,020	
90 percent exceeds	450		410		1,170	

[a] Estimated.
[b] Prior to regulation, water years 1906-11, 1937-43, 9,266 ft³/s.
[c] Also occurred Dec. 12, 1956.
[d] Maximum discharge for period of record, 400,000 ft³/s, May 28, 1908.
[e] Maximum gage height for period of record, 43.2 ft, May 28, 1908.