

Water-Data Report 2011

08147000 Colorado River near San Saba, TX

Middle Colorado-Llano Basin
Buchanan-Lyndon B. Johnson Lakes Subbasin

LOCATION.--Lat 31°13'04", long 98°33'51" referenced to North American Datum of 1927, Lampasas County, TX, Hydrologic Unit 12090201, on left bank at downstream side of bridge on U.S. Highway 190, 5.2 mi downstream from San Saba River, 9.2 mi east of San Saba, and at mile 474.3.

DRAINAGE AREA.--31,217 mi² of which 11,398 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Oct. 1915 to Oct. 1922, published as "near Chadwick", Oct. 1923 to Aug. 1930, published as "near Tow", Sept. 1930 to current year. Monthly discharge only for some periods, published in WSP 1312.

PERIOD OF RECORD, Water-Quality.--

CHEMICAL DATA: Oct. 1959 to Aug. 1993.

BIOCHEMICAL DATA: Oct. 1959 to Aug. 1993.

BIOLOGICAL DATA: Oct. 1977 to Aug. 1993.

PESTICIDE DATA: Jan. 1968 to Apr. 1982.

RADIOCHEMICAL DATA: Dec. 1980 to July 1981.

SEDIMENT DATA: Oct. 1960 to Aug. 1993.

PERIOD OF DAILY RECORD, Water-Quality.--

SPECIFIC CONDUCTANCE: Sept. 1947 to Sept. 1992.

WATER TEMPERATURE: Sept. 1947 to Sept. 1992.

REVISED RECORDS.--WSP 458: 1916. WSP 858: 1900(M), 1936(M). WSP 1512: 1916-18(M), 1936. WSP 1732: 1925-26(M). WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,096.22 ft above NGVD of 1929. See WSP 1922 for brief history of changes prior to May 23, 1940. Radio telemeter at station. Satellite telemeter at station.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation of low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, supplements low-flow measurements, and computes and publishes streamflow record.

REMARKS.--Records good. Since water year 1931, at least 10% of contributing drainage area has been regulated. Flow is also affected at times by discharge from the flood-detention pools of 187 floodwater-retarding structures. These flood-detention structures control runoff from a 944 mi² area above this station. There are many diversions above station for irrigation, municipal use, and for oil field operations. No flow at times. Some records listed in the period of record may not be available electronically.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--12 years (water years 1917-19, 1921-22, 1924-30) prior to completion of Lake Nasworthy, 1,440 ft³/s (1,040,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage during period 1878 to Sept. 1930, 58.4 ft, Sept. 25, 1900, discharge 184,000 ft³/s, present site, from floodmarks at former site.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1917-1919, 1921-1922, 1924-1930: Maximum discharge, 130,000 ft³/s, Apr. 26, 1922, gage height about 54.0 ft, present site, from information by local residents; minimum observed discharge, 1.5 ft³/s, Aug. 22, 23, 1918.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,370 ft³/s, May 13, gage height, 4.55 ft; minimum daily discharge, 0.25 ft³/s, Sept. 16.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	56	53	59	78	85	72	51	33	20	8.5	3.6	6.4
2	55	53	59	78	80	71	49	51	18	7.8	3.1	5.4
3	54	55	60	78	83	70	52	58	15	8.4	3.2	4.0
4	53	53	59	77	85	70	50	50	12	8.9	4.3	3.5
5	53	53	59	76	82	69	45	52	10	9.3	4.8	2.8
6	53	51	59	75	82	69	48	48	11	9.5	4.4	2.1
7	52	51	61	74	80	69	48	45	10	8.9	3.8	1.8
8	52	52	60	74	80	70	47	41	10	8.6	3.7	2.3
9	52	53	59	96	81	66	46	39	11	7.7	3.4	3.1
10	53	53	59	93	79	66	45	38	9.9	7.1	2.9	3.2
11	52	55	59	99	80	64	54	38	9.0	6.0	2.7	2.6
12	51	55	59	93	80	62	50	294	8.1	5.4	2.6	e2.1
13	50	53	59	88	80	60	47	871	8.1	4.8	2.3	e0.96
14	48	55	59	94	78	61	51	264	8.3	4.5	1.9	0.68
15	46	58	60	102	78	62	51	132	8.4	4.3	1.5	0.40
16	47	59	59	101	79	63	48	91	8.5	3.8	1.2	0.25
17	49	59	60	99	81	62	47	69	8.8	3.0	1.1	0.35
18	50	57	59	93	80	61	46	57	8.2	2.5	1.1	2.5
19	51	58	62	89	82	60	45	48	7.3	2.3	1.1	8.1
20	52	60	62	85	81	60	43	44	7.1	2.9	1.5	11
21	53	61	60	83	79	59	42	39	7.8	4.2	1.7	12
22	51	60	59	81	76	59	42	37	13	5.9	1.5	11
23	52	61	60	80	75	57	40	34	13	5.9	1.2	10
24	54	62	66	79	76	55	40	34	14	5.5	1.4	8.2
25	54	59	73	80	75	55	40	33	19	5.0	2.6	7.4
26	52	57	84	79	75	54	38	30	18	3.5	3.6	7.1
27	52	57	85	79	76	52	34	28	17	2.4	3.5	6.3
28	50	56	82	78	73	51	33	24	14	2.9	3.3	6.3
29	49	57	80	79	---	52	32	22	12	4.6	3.6	5.8
30	48	58	77	78	---	52	33	21	10	4.8	4.2	5.7
31	50	---	79	77	---	52	---	21	---	4.2	5.2	---
Total	1,594	1,684	1,997	2,615	2,221	1,905	1,337	2,686	346.5	173.1	86.0	143.34
Mean	51.4	56.1	64.4	84.4	79.3	61.5	44.6	86.6	11.6	5.58	2.77	4.78
Max	56	62	85	102	85	72	54	871	20	9.5	5.2	12
Min	46	51	59	74	73	51	32	21	7.1	2.3	1.1	0.25
Ac-ft	3,160	3,340	3,960	5,190	4,410	3,780	2,650	5,330	687	343	171	284

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2011, BY WATER YEAR (WY) ²

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,203	485	430	470	617	589	896	2,113	1,613	1,220	474	1,340
Max	15,300	5,164	9,242	5,105	10,760	5,002	6,907	23,620	10,940	32,210	3,915	29,380
(WY)	(1931)	(2005)	(1992)	(1968)	(1992)	(1992)	(1957)	(1957)	(1935)	(1938)	(1971)	(1936)
Min	29.5	39.3	31.8	41.5	40.5	24.4	33.6	11.2	4.16	2.06	2.68	4.78
(WY)	(1952)	(1952)	(1955)	(1955)	(1952)	(1952)	(1986)	(1984)	(1984)	(1964)	(1952)	(2011)

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SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1931 - 2011 ^Z	
Annual total	104,486		16,787.94			
Annual mean	286		46.0		955	
Highest annual mean					3,880	1938
Lowest annual mean					46.0	2011
Highest daily mean	9,650	Jan 29	871	May 13	191,000	Jul 23, 1938
Lowest daily mean	36	Aug 17	0.25	Sep 16	0.00	Aug 27, 1954
Annual seven-day minimum	40	Aug 11	1.0	Sep 12	0.00	Aug 3, 1963
Maximum peak flow			1,370	May 13	224,000	Jul 23, 1938
Maximum peak stage			4.55	May 13	^{aa} 62.24	Jul 23, 1938
Annual runoff (ac-ft)	207,200		33,300		692,100	
10 percent exceeds	543		80		1,480	
50 percent exceeds	96		51		202	
90 percent exceeds	50		3.2		48	

^Z Period of regulated streamflow.

^{aa} From floodmark at site then in use adjusted to present datum.

