

Water-Data Report 2011

08128000 South Concho River at Christoval, TX

Middle Colorado-Concho Basin
South Concho Subbasin

LOCATION.--Lat 31°11'13", long 100°30'06" referenced to North American Datum of 1927, Tom Green County, TX, Hydrologic Unit 12090102, on left upstream side of U.S. Highway 277 bridge, 9.5 mi upstream from Twin Buttes Dam, and 23.7 mi upstream from mouth.

DRAINAGE AREA.--413 mi² of which 59 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Feb. 1930 to Sept. 1995 (daily mean discharge), Oct. 1995 to Apr. 2001 (peak discharges greater than base discharge), May 2001 to current year.

PERIOD OF RECORD, Water-Quality.--

CHEMICAL DATA: Sept. 1964 to Aug. 1965, May 1971 to July 1971.

BIOCHEMICAL DATA: Sept. 1964 to Aug. 1965, May 1971 to July 1971.

REVISED RECORDS.--WSP 1118: 1943(M). WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,010.22 ft above NGVD of 1929. Prior to July 17, 1930, non-recording gage at same site and datum. Water-stage recorder at same site and datum from July 17, 1930, to Nov. 15, 1977, at site 160 ft downstream at same datum from Nov. 16, 1977, to May 5, 1987. Satellite telemeter at station.

REMARKS.--Records good. No known regulation. Low flow is affected by diversions to the South Concho Irrigation Company canal 800 ft upstream from station. No flow Feb. 28 and Mar. 1, 1955. Some records listed in the period of record may not be available electronically.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1882, about 23 ft, Aug. 6, 1906 (discharge, 115,000 ft³/s), from rating curve extended above 15,100 ft³/s on basis of slope-area measurement of 80,100 ft³/s, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 65 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 23	1100	*26	*2.19

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.5	5.5	4.6	3.8	5.6	3.4	4.2	3.2	1.9	2.1	4.2	4.8
2	3.1	5.9	4.4	3.9	4.6	3.5	4.0	3.4	2.0	2.1	3.7	4.7
3	3.7	6.1	4.3	3.7	4.8	3.5	3.6	3.2	2.2	2.2	3.6	4.8
4	3.8	5.4	3.9	3.7	4.6	3.7	3.4	3.2	2.2	2.3	3.1	5.1
5	3.9	5.7	3.7	3.8	4.4	3.8	3.8	3.0	2.0	2.4	3.2	5.2
6	3.8	5.9	3.8	4.0	4.1	3.9	3.7	2.6	1.8	2.8	3.2	5.1
7	3.7	6.2	4.0	3.9	4.3	3.8	3.8	2.2	1.8	2.7	3.6	5.1
8	4.0	6.0	4.0	4.0	4.3	4.0	3.8	2.2	1.9	2.5	3.6	4.9
9	4.0	5.8	4.0	4.5	4.2	3.9	3.8	2.2	2.0	2.3	3.4	4.9
10	4.2	6.6	3.3	4.1	4.4	4.0	4.0	2.3	1.9	2.4	3.3	4.6
11	4.6	6.4	3.3	4.1	4.3	3.5	4.2	2.8	1.9	2.4	3.6	4.5
12	4.7	5.9	3.3	4.1	4.3	4.1	3.8	2.3	1.8	2.2	3.5	4.6
13	4.7	5.6	3.4	4.1	4.4	4.2	3.8	2.1	1.7	2.1	3.8	4.2
14	4.9	5.6	3.5	4.1	4.3	4.1	3.7	2.1	1.5	2.1	3.7	4.7
15	4.7	5.5	3.7	4.4	4.3	4.4	3.1	2.1	1.5	2.1	3.7	4.7
16	5.1	4.9	3.5	4.3	4.5	4.5	3.0	2.2	1.5	2.3	3.7	5.0
17	5.6	5.1	3.9	4.8	4.4	4.5	2.9	2.1	1.6	2.3	4.0	5.1
18	5.4	5.2	4.6	5.0	4.4	4.5	2.9	2.1	1.6	2.4	4.4	4.9
19	5.5	5.4	5.0	5.5	4.7	4.2	2.8	2.2	1.6	2.5	4.5	5.0
20	5.7	5.6	5.2	5.0	4.5	4.4	2.9	2.2	1.6	2.3	4.9	4.8
21	6.2	5.5	5.0	5.3	4.4	4.5	3.0	2.1	1.7	2.1	5.5	5.2
22	6.4	5.5	4.8	5.1	4.2	4.4	2.9	2.3	1.8	2.3	5.5	4.9
23	11	5.5	4.7	5.4	3.8	4.2	3.0	2.4	1.8	2.5	5.7	4.8
24	4.5	6.0	5.4	5.7	3.5	4.0	2.9	2.3	1.8	2.5	5.1	4.8
25	4.6	6.0	4.7	5.2	3.2	4.2	2.9	2.0	2.0	2.3	6.0	4.9
26	5.0	5.4	4.6	5.3	3.4	4.5	2.9	1.9	2.0	2.5	6.5	4.7
27	5.4	5.7	4.5	5.4	3.3	4.2	2.9	2.1	2.0	2.8	6.5	4.8
28	5.8	6.3	4.4	4.8	3.1	4.5	2.9	2.3	2.0	2.8	6.9	4.4
29	5.9	5.5	4.3	4.9	---	4.4	2.9	1.9	2.1	3.3	6.9	4.4
30	5.2	4.4	4.1	5.0	---	4.2	3.0	1.6	2.1	3.4	5.6	4.3
31	5.6	---	3.8	4.8	---	4.2	---	1.7	---	3.5	5.3	---
Total	153.2	170.1	129.7	141.7	118.3	127.2	100.5	72.3	55.3	76.5	140.2	143.9
Mean	4.94	5.67	4.18	4.57	4.22	4.10	3.35	2.33	1.84	2.47	4.52	4.80
Max	11	6.6	5.4	5.7	5.6	4.5	4.2	3.4	2.2	3.5	6.9	5.2
Min	2.5	4.4	3.3	3.7	3.1	3.4	2.8	1.6	1.5	2.1	3.1	4.2
Ac-ft	304	337	257	281	235	252	199	143	110	152	278	285

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2011^b, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	43.4	22.1	20.6	19.1	19.8	19.5	26.4	38.0	25.0	36.4	23.6	58.0
Max	851	146	126	100	91.5	88.4	479	1,116	189	1,445	330	2,352
(WY)	(1931)	(1975)	(1975)	(1975)	(1975)	(1992)	(1957)	(1957)	(1958)	(1938)	(2007)	(1936)
Min	0.54	0.51	0.57	0.40	0.35	0.39	1.09	2.33	1.08	1.08	1.08	0.85
(WY)	(1955)	(1955)	(1955)	(1955)	(1955)	(1955)	(1955)	(2011)	(1954)	(1952)	(1952)	(1954)

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	Calendar Year 2010	Water Year 2011	Water Years 1930 - 2011^h	
Annual total	2,665.8	1,428.9		
Annual mean	7.30	3.91	29.5	
Highest annual mean			207	1936
Lowest annual mean			3.20	1952
Highest daily mean	16	Apr 16	29,500	Jul 23, 1938
Lowest daily mean	2.1	Sep 26	0.10	Feb 27, 1955
Annual seven-day minimum	2.6	Sep 26	0.19	Feb 25, 1955
Maximum peak flow			100,000	Jul 23, 1938
Maximum peak stage			^a 21.95	Jul 23, 1938
Annual runoff (ac-ft)	5,290	2,830	21,360	
10 percent exceeds	14	5.5	39	
50 percent exceeds	5.6	4.0	14	
90 percent exceeds	3.3	2.1	3.6	

^h See Period of Record paragraph.

^a From floodmark.

