

Water-Data Report 2008

08136000 Concho River at San Angelo, TX

Middle Colorado-Concho Basin
Concho Subbasin

LOCATION.--Lat 31°27'16", long 100°24'37" referenced to North American Datum of 1927, Tom Green County, TX, Hydrologic Unit 12090105, on left bank 0.4 mi downstream from confluence of North and South Concho Rivers, 1.8 mi southeast of Tom Green County Courthouse, in San Angelo at Rio Concho Sports Complex on Rio Concho Dr. below Bell St. bridge, and 61.9 mi upstream from mouth.

DRAINAGE AREA.--5,542 mi² of which 1,131 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Oct. 1915 to current year. Prior to Oct. 1969, published as "near San Angelo".

PERIOD OF RECORD.-Water-Quality.--

BIOCHEMICAL DATA: Oct. 1968.

REVISED RECORDS.--WSP 568: 1915-16, 1919-22. WSP 1148: 1916-22(M), 1924(M), 1925-26, 1929(M), 1930-32, 1935-37. WSP 1512: 1917-18. WSP 1712: 1936. WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,776.79 ft above NGVD of 1929. Prior to Aug. 11, 1917, nonrecording gage at same site and datum. Aug. 11, 1917, to May 15, 1963, water-stage recorder on right bank at same datum. Satellite telemeter at station.

REMARKS.--Records good except those above 500 ft³/s, which are fair. Since water year 1931, at least 10% of contributing drainage area has been regulated. There are many diversions upstream from station for irrigation, industrial, and municipal supply. No flow at times. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--15 years (water years 1916-30) prior to completion of Lake Nasworthy, 142 ft³/s (102,600 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1853, 47.5 ft, Aug. 6, 1906, discharge, about 246,000 ft³/s, from information by local resident. Other large floods are known to have occurred in June 1853, Aug. 1882, and Apr. 1900.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1916-1930: Maximum discharge, 92,000 ft³/s, Apr. 26, 1922, gage height, 36.8 ft, from floodmarks, on basis of slope-area measurements of 167,000 and 230,000 ft³/s in 1936; no flow at times in 1921.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4.7	5.6	2.3	4.4	2.6	4.1	6.6	9.3	5.6	14	12	14
2	4.8	7.5	4.6	4.6	4.4	7.6	7.0	7.5	4.6	5.9	17	11
3	4.2	8.6	7.4	5.3	5.4	58	8.2	7.0	4.3	5.3	20	8.8
4	3.8	8.8	9.5	6.3	4.9	9.2	7.6	8.7	7.1	6.8	17	9.8
5	3.0	11	15	6.4	2.6	5.4	8.2	13	16	7.2	8.3	9.8
6	3.1	5.1	12	5.8	2.9	15	8.7	23	11	6.8	6.5	9.5
7	3.0	6.6	7.8	6.4	5.5	9.5	9.4	10	14	7.2	7.1	8.5
8	2.7	7.6	6.6	5.7	5.7	5.7	8.9	4.3	9.7	7.2	9.7	20
9	3.2	6.2	5.6	5.8	5.9	5.9	9.5	4.9	9.2	7.9	8.2	29
10	5.3	5.1	5.7	5.8	6.6	5.5	36	5.3	14	5.9	7.1	39
11	5.5	7.1	6.5	5.3	4.2	7.5	8.5	4.3	18	5.2	18	69
12	4.4	6.2	8.4	5.1	5.7	10	7.1	9.0	17	6.7	9.9	9.2
13	6.0	5.9	6.6	4.5	12	11	6.8	11	18	7.5	5.7	4.0
14	5.4	5.8	6.7	4.4	10	9.4	6.8	57	13	7.9	5.0	1.9
15	13	4.7	7.1	4.8	4.5	8.1	6.7	15	13	8.4	6.4	1.2
16	7.4	5.9	5.8	5.4	16	8.7	6.0	9.1	11	13	8.9	0.87
17	7.5	6.2	6.7	4.0	17	40	8.3	9.2	9.6	9.8	92	5.2
18	4.3	7.0	6.3	4.4	6.4	641	7.4	8.3	25	10	74	8.8
19	3.4	7.3	6.0	4.6	6.3	115	8.8	7.7	10	13	22	9.1
20	4.7	8.3	6.4	5.2	6.6	16	9.3	6.6	97	14	3.7	8.5
21	6.1	7.1	6.9	5.7	5.2	9.2	9.3	7.2	18	13	2.0	8.8
22	8.9	5.2	7.4	4.9	5.4	20	9.3	7.9	12	8.3	6.2	9.3
23	5.4	5.7	3.7	4.5	6.1	180	9.0	7.4	8.5	7.3	84	8.4
24	4.9	24	5.0	5.1	4.8	26	9.4	6.6	7.4	11	46	8.5
25	4.3	61	5.1	10	6.7	15	8.0	7.9	9.3	13	12	9.2
26	4.2	11	5.7	7.0	2.5	13	6.8	8.4	10	17	9.4	9.7
27	5.0	3.2	5.2	6.3	3.6	11	107	7.4	9.4	14	13	5.8
28	4.7	2.3	4.5	7.4	4.8	8.4	23	6.8	13	13	12	3.1
29	5.1	1.5	4.6	6.3	4.3	8.3	10	6.5	116	17	21	2.7
30	5.7	1.7	5.2	4.2	---	8.8	9.1	6.4	41	15	111	2.3
31	5.7	---	4.7	6.9	---	8.2	---	6.1	---	13	110	---
Total	159.4	259.2	201.0	172.5	178.6	1,300.5	386.7	308.8	571.7	311.3	785.1	344.97
Mean	5.14	8.64	6.48	5.56	6.16	42.0	12.9	9.96	19.1	10.0	25.3	11.5
Max	13	61	15	10	17	641	107	57	116	17	111	69
Min	2.7	1.5	2.3	4.0	2.5	4.1	6.0	4.3	4.3	5.2	2.0	0.87
Ac-ft	316	514	399	342	354	2,580	767	613	1,130	617	1,560	684

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2008², BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	109	30.6	30.6	27.3	32.5	27.3	84.7	169	78.5	93.9	37.8	230
Max	2,659	434	274	205	213	242	1,604	3,984	1,132	2,137	900	13,190
(WY)	(1960)	(1975)	(1975)	(1938)	(1975)	(1941)	(1949)	(1957)	(1941)	(1938)	(1942)	(1936)
Min	0.05	0.05	0.10	0.06	0.03	0.05	0.04	0.06	0.09	0.07	0.04	0.03
(WY)	(2000)	(2000)	(1974)	(1974)	(2000)	(1971)	(2000)	(2003)	(1971)	(1969)	(1999)	(1999)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1931 - 2008 ^z	
Annual total	6,666.24		4,979.77			
Annual mean	18.3		13.6		79.4	
Highest annual mean					1,132	1936
Lowest annual mean					1.55	2000
Highest daily mean	1,750	Aug 18	641	Mar 18	128,000	Sep 17, 1936
Lowest daily mean	0.05	Feb 25	0.87	Sep 16	0.00	Sep 14, 1952
Annual seven-day minimum	2.8	Feb 8	3.3	Oct 3	0.00	Sep 16, 1952
Maximum peak flow			1,460	Mar 18	ⁱ 230,000	Sep 17, 1936
Maximum peak stage			5.10	Mar 18	^a 46.60	Sep 17, 1936
Annual runoff (ac-ft)	13,220		9,880		57,510	
10 percent exceeds	23		17		63	
50 percent exceeds	5.7		7.3		6.0	
90 percent exceeds	3.0		4.3		0.10	

^z Period of regulated streamflow.

^a From floodmark.

ⁱ From slope-area measurement of peak flow.

