Water-Data Report 2011

08138000 Colorado River at Winchell, TX

Middle Colorado-Concho Basin
Middle Colorado Subbasin

LOCATION.--Lat 31°28′04″, long 99°09′43″ referenced to North American Datum of 1927, Brown County, TX, Hydrologic Unit 12090106, near left bank at downstream end of pier of old abandoned bridge, 300 ft upstream from bridge on U.S. Highway 377, 0.3 mi south of Winchell, 5.9 mi downstream from Home Creek, and at mile 560.7.

DRAINAGE AREA.--25,179 mi^2 of which 11,391 mi^2 probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Nov. 1923 to Sept. 1934 published as "near Milburn", June 1939 to Sept. 1993, and Oct. 1997 to current year.

PERIOD OF RECORD, Water-Quality.--
CHEMICAL DATA: Nov. 1964 to Aug. 1994.
BIOCHEMICAL DATA: Nov. 1967 to Aug. 1994.
RADIOCHEMICAL DATA: Dec. 1980 to May 1981.
SEDIMENT DATA: Sept. 1964.

PERIOD OF DAILY RECORD, Water-Quality.--
SPECIFIC CONDUCTANCE: Feb. 1991 to Sept. 1994.
WATER TEMPERATURE: Feb. 1991 to Sept. 1994.

REVISED RECORDS.--WDR TX-81-3: Drainage area. WDR TX-88-3: 1985.

GAGE.--Water-stage recorder. Datum of gage is 1,264.86 ft above NGVD of 1929. Nov. 1923 to Sept. 1934, nonrecording gage at site 4.2 mi downstream at datum 10.14 ft lower. Jan. 13, 1939, to Mar. 24, 1940, nonrecording gage at present site and datum. Radio telemeter at station. Satellite telemeter at station.

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

REMARKS.--No esimated daily discharges. Records good. Since water year 1931, at least 10% of contributing drainage area has been regulated. At times, flow may also be affected by discharge from the flood-detention pools of 89 floodwater-retarding structures. These flood-detention structures control runoff from 512 mi^2 above this station. There are many diversions above station for irrigation, municipal supply, and oil field operation. 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.--6 years (water years 1925-30) prior to construction of Lake Nasworthy, 798 ft^3/s (578,400 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Highest stages since 1882 were 62.2 ft Sept. 19, 1936, and 56.2 ft Aug. 8, 1906, at railway bridge 1,000 ft upstream and converted to present site and datum, from information by Gulf, Colorado, and Santa Fe Railway Co.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1925-1930: Maximum discharge, 42,300 ft^3/s, June 15, 1930, gage height, 38.3 ft, at site 4.2 mi downstream at datum 10.14 ft lower; no flow, Aug. 8-10, Sept. 1-5, 1929.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14 ft^3/s, Jan. 21, gage height, 2.45 ft; minimum daily discharge, 0.00 ft^3/s, on many days.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 08138000, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/08138000.2011.pdf

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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	1.5	0.00	0.00	0.00	8.6	0.59	0.00	0.00	0.00	---	---	---
2	5.1	0.00	0.00	0.00	6.9	0.74	0.00	0.00	0.00	---	---	---
3	10	0.00	0.00	0.00	5.7	0.97	0.00	0.00	0.00	---	---	---
4	12	0.00	0.00	0.00	4.7	0.47	0.00	0.00	0.00	---	---	---
5	12	0.00	0.00	0.00	4.1	0.25	0.00	0.00	0.00	---	---	---
6	11	0.00	0.00	0.00	4.4	0.16	0.00	0.00	0.00	---	---	---
7	9.2	0.00	0.00	0.00	4.3	0.07	0.00	0.00	0.00	---	---	---
8	7.2	0.00	0.00	0.00	4.2	0.01	0.00	0.00	0.00	---	---	---
9	4.6	0.00	0.00	0.00	4.7	0.00	0.00	0.00	0.00	---	---	---
10	2.4	0.00	0.00	0.00	4.3	0.00	0.00	0.00	0.00	---	---	---
11	1.0	0.00	0.00	0.00	4.1	0.00	0.00	0.00	0.00	---	---	---
12	0.30	0.00	0.00	0.00	4.3	0.00	0.00	0.00	0.00	---	---	---
13	0.03	0.00	0.00	0.00	4.2	0.00	0.00	0.00	0.00	---	---	---
14	0.00	0.00	0.00	0.00	4.6	0.00	0.00	0.00	0.00	---	---	---
15	0.00	0.00	0.00	0.00	4.7	0.00	0.00	0.00	0.00	---	---	---
16	0.00	0.00	0.00	2.2	4.4	0.00	0.00	0.00	0.00	---	---	---
17	0.00	0.00	0.00	8.7	4.1	0.00	0.00	0.00	0.00	---	---	---
18	0.00	0.00	0.00	10	3.3	0.00	0.00	0.00	0.00	---	---	---
19	0.00	0.00	0.00	10	2.8	0.00	0.00	0.00	0.00	---	---	---
20	0.00	0.00	0.00	11	2.7	0.00	0.00	0.00	0.00	---	---	---
21	0.00	0.00	0.00	13	2.1	0.00	0.00	0.00	0.00	---	---	---
22	0.00	0.00	0.00	11	2.0	0.00	0.00	0.00	0.00	---	---	---
23	0.00	0.00	0.00	10	1.8	0.00	0.00	0.00	0.00	---	---	---
24	0.00	0.00	0.00	9.8	1.4	0.00	0.00	0.00	0.00	---	---	---
25	0.00	0.00	0.00	7.9	1.8	0.00	0.00	0.00	0.00	---	---	---
26	0.00	0.00	0.00	7.2	1.5	0.00	0.00	0.00	0.00	---	---	---
27	0.00	0.00	0.00	6.5	1.0	0.00	0.00	0.00	0.00	---	---	---
28	0.00	0.00	0.00	6.3	0.71	0.00	0.00	0.00	0.00	---	---	---
29	0.00	0.00	0.00	7.1	---	0.00	0.00	0.00	0.00	---	---	---
30	0.00	0.00	0.00	6.4	---	0.00	0.00	0.00	---	---	---	---
31	0.00	---	0.00	6.9	---	0.00	---	0.00	---	---	---	---
Total	76.33	0.00	0.00	134.00	103.41	3.26	0.00	0.00	---	---	---	---
Mean	2.46	0.00	0.00	4.32	3.69	0.11	0.00	0.00	---	---	---	---
Max	12	0.00	0.00	13	8.6	0.97	0.00	0.00	---	---	---	---
Min	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	---	---	---	---
Ac-ft	151	0.00	0.00	266	205	6.5	0.00	0.00	---	---	---	---

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

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	608	152	136	129	157	173	416	1,109	676	379	243	478
Max	9,878	1,515	1,907	1,718	2,453	1,069	4,576	13,910	5,313	4,746	2,227	6,020
(WY)	(1931)	(1975)	(1992)	(1968)	(1992)	(1987)	(1949)	(1957)	(1941)	(1945)	(1942)	(1932)
Min	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1964)	(2011)	(1952)	(1952)	(1952)	(1952)	(2011)	(1984)	(1984)	(1974)	(1952)	(1954)

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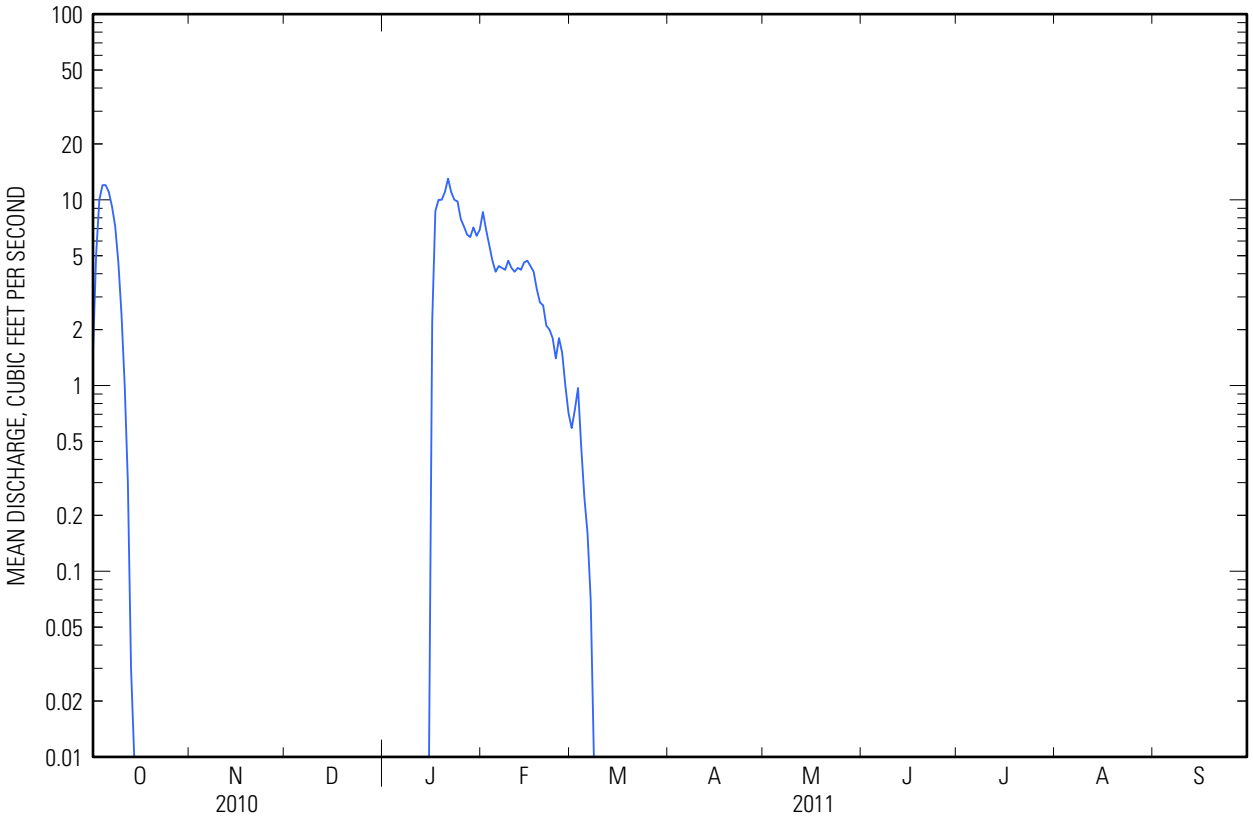
SUMMARY STATISTICS

	Calendar Year 2010		Water Years 1931 - 2011 [hz]	
Annual total	11,311.60			
Annual mean	31.0		389	
Highest annual mean			2,070	1957
Lowest annual mean			9.57	2009
Highest daily mean	1,760	Apr 17	67,000	Oct 14, 1930
Lowest daily mean	0.00	Jun 21	0.00	Aug 15, 1934
Annual seven-day minimum	0.00	Jun 21	0.00	Aug 15, 1934
Maximum peak flow			76,100	Oct 15, 1930
Maximum peak stage			48.71	Oct 15, 1930
Annual runoff (ac-ft)	22,440		281,800	
10 percent exceeds	45		575	
50 percent exceeds	7.2		47	
90 percent exceeds	0.00		1.8	

[h] See Period of Record paragraph.
[z] Period of regulated streamflow.
[a] From floodmarks at site then in use