Water-Data Report 2008

08161000 Colorado River at Columbus, TX

Lower Colorado Basin
Lower Colorado-Cummins Subbasin

LOCATION.--Lat 29°42′22″, long 96°32′12″ referenced to North American Datum of 1927, Colorado County, TX, Hydrologic Unit 12090301, near right bank at downstream side of pier of bridge on U.S. Highway 90 at eastern edge of Columbus, 340 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.6 mi downstream from Cummins Creek, and at mile 135.1.

DRAINAGE AREA.--41,640 mi^2 of which 11,403 mi^2 probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Jan. 1903 to Dec. 1911 (gage heights only), May 1916 to current year. Discharge records for 1902-11, published in WSP 84, 99, 132, 174, 210, 288, and 308, have been found to be unreliable and should not be used. Records collected at site 23 mi downstream Oct. 1930 to May 1939, published as "near Eagle Lake". Gage-height records collected in this vicinity since 1903 are contained in reports of the National Weather Service. Water-quality records: Chemical data: Oct. 1967 to Sept. 1981. Biochemical data: Feb. 1968 to Sept. 1981. Sediment data: Mar. 1957 to Sept. 1973.

REVISED RECORDS.--WSP 1562: 1920-21(M), 1922. WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 145.52 ft above NGVD of 1929. Prior to May 1, 1919, various nonrecording gages at sites in the immediate vicinity at datum 7.00 ft higher. May 1, 1919, to Nov. 23, 1930, water-stage recorder at site about 300 ft downstream at datum 7.00 ft higher. Sept. 17, 1930, to June 12, 1939 (Oct. 1, 1930, to May 31, 1939, used herein), water-stage recorder at site 23 mi downstream at different datum. May 17 to Nov. 14, 1939, nonrecording gage at present site and datum 10.00 ft higher; Nov. 15, 1939, to Dec. 31, 1988, water-stage recorder at present site and at datum 10.00 ft higher. 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 at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes, and publishes streamflow record.

REMARKS.--Records fair. Since installation of gage in May 1916, at least 10% of contributing drainage area has been regulated. There are many other diversions above this station for irrigation and municipal supply. Low-flow releases from Lake Travis (1,144,100 acre-ft) 251 mi upstream, are made for the generation of electric power and to fulfill downstream water contracts.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1852, 51.6 ft, present datum, in July 1869 and Dec. 6, 1913, from information by local resident. River divided each time and left city of Columbus on an island.

08161000 Colorado River at Columbus, TX—Continued

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,510	801	856	525	717	711	1,080	1,820	2,000	2,000	1,190	1,200
2	1,360	772	795	516	651	706	1,110	1,610	2,030	1,990	1,150	1,240
3	1,300	767	726	585	662	752	1,100	1,520	2,040	2,020	1,130	1,190
4	1,240	725	686	595	621	789	1,140	1,390	2,000	1,970	1,160	1,250
5	1,150	707	644	600	684	774	1,160	1,390	1,890	2,010	1,180	1,190
6	1,090	650	629	681	713	892	1,300	1,560	1,860	1,970	1,160	1,210
7	1,040	576	599	700	731	1,090	1,490	1,390	2,120	1,880	1,180	1,270
8	981	571	611	730	697	1,380	1,520	1,490	2,120	1,930	1,180	1,260
9	903	580	642	724	719	1,010	1,460	1,430	2,150	1,920	1,150	1,370
10	891	580	623	716	733	981	1,480	1,430	2,130	1,960	1,100	1,620
11	892	571	610	720	640	3,050	1,510	1,490	2,110	1,920	1,140	1,490
12	866	559	603	732	703	3,590	1,520	1,450	2,100	1,740	1,140	1,320
13	849	533	630	736	670	2,600	1,550	1,510	2,100	1,540	1,150	1,280
14	849	554	649	703	716	1,680	1,470	1,590	2,100	1,330	1,130	1,100
15	931	520	686	686	735	1,300	1,210	1,910	2,110	1,220	1,210	849
16	1,050	485	2,640	737	1,520	1,070	1,020	2,160	2,120	1,170	1,250	848
17	869	481	1,520	684	4,810	923	1,120	e2,680	2,120	1,300	1,290	1,460
18	839	18,400	1,040	688	3,580	818	1,220	e2,390	2,120	1,290	1,310	1,590
19	821	13,900	891	869	1,720	982	1,280	e1,920	2,130	1,240	1,460	1,570
20	810	4,140	768	827	1,310	1,700	1,370	1,670	2,170	1,210	1,380	1,330
21	803	1,830	689	779	1,040	1,420	1,640	1,710	2,190	1,220	1,370	1,280
22	793	1,410	678	791	884	1,380	1,370	1,620	2,100	1,240	1,520	1,260
23	802	968	610	794	763	1,020	1,300	1,680	2,090	1,240	1,390	1,240
24	883	3,100	600	823	807	951	1,260	1,730	2,100	1,310	1,310	1,250
25	1,160	6,080	543	950	768	869	1,230	2,040	2,090	1,310	1,200	1,240
26	957	3,560	577	976	775	809	1,360	2,080	2,080	1,290	1,150	1,250
27	865	1,720	535	929	750	754	2,380	2,100	2,050	1,320	1,120	1,260
28	824	1,340	555	818	722	776	2,040	2,110	2,020	1,220	1,140	1,260
29	815	1,120	508	755	716	802	2,320	2,120	2,050	1,160	1,150	1,270
30	892	964	529	699	---	793	2,660	2,030	2,060	1,160	1,190	1,270
31	860	---	501	720	---	957	---	1,960	---	1,180	1,240	---
Total	29,895	68,964	23,173	22,788	30,557	37,329	43,670	54,980	62,350	47,260	37,820	38,217
Mean	964	2,299	748	735	1,054	1,204	1,456	1,774	2,078	1,525	1,220	1,274
Max	1,510	18,400	2,640	976	4,810	3,590	2,660	2,680	2,190	2,020	1,520	1,620
Min	793	481	501	516	621	706	1,020	1,390	1,860	1,160	1,100	848
Ac-ft	59,300	136,800	45,960	45,200	60,610	74,040	86,620	109,100	123,700	93,740	75,020	75,800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2,877	2,498	2,171	2,336	2,641	2,569	3,371	5,151	5,148	3,501	1,941	2,794
Max	25,310	18,150	16,450	19,800	33,800	20,220	17,350	40,630	30,060	25,710	10,030	32,690
(WY)	(1937)	(2005)	(1992)	(1992)	(1992)	(1992)	(1922)	(1922)	(1935)	(1938)	(1938)	(1936)
Min	204	197	162	182	203	275	308	1,257	574	569	128	347
(WY)	(1935)	(1918)	(1964)	(1964)	(1967)	(1952)	(1925)	(1937)	(1934)	(1933)	(1917)	(1934)

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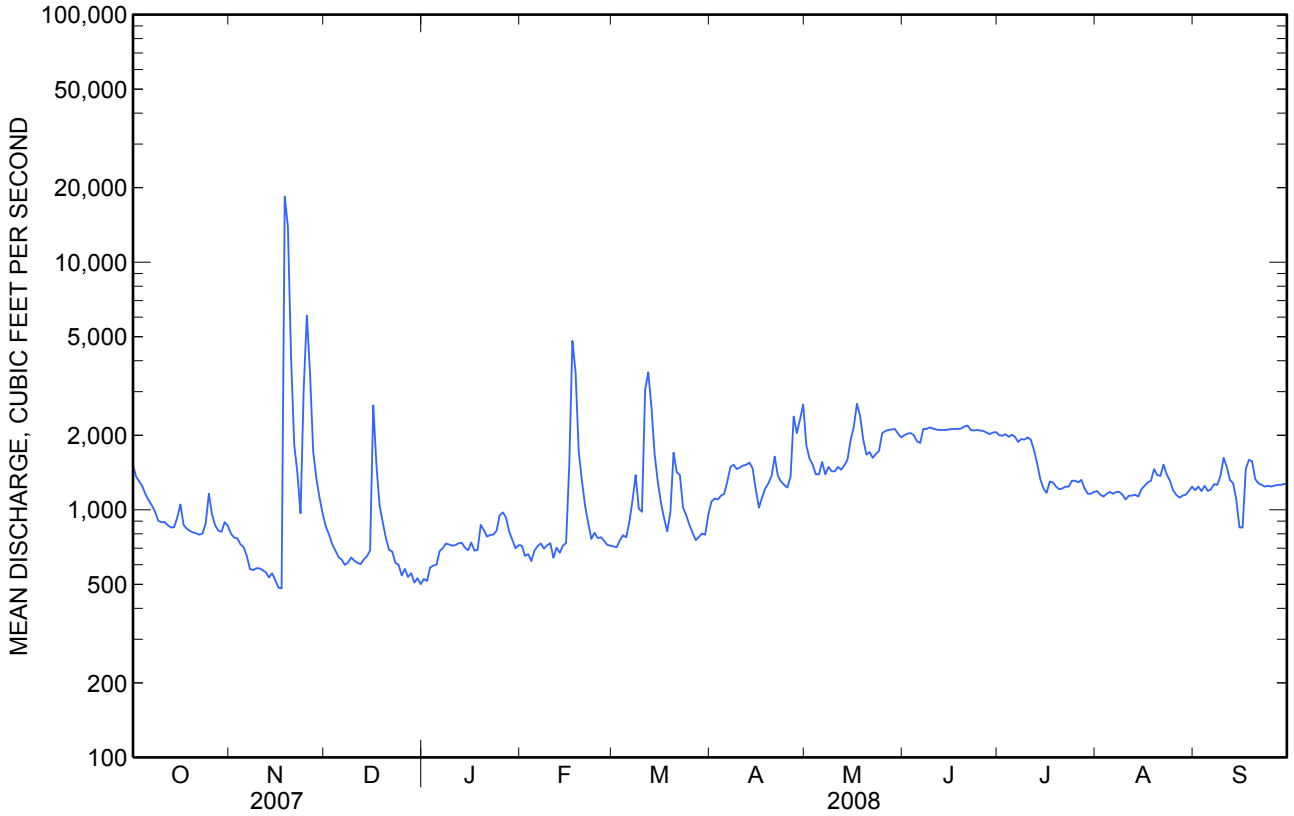
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1916 - 2008	
Annual total	1,760,165		497,003			
Annual mean	4,822		1,358		3,092	
Highest annual mean					10,810	1992
Lowest annual mean					653	1917
Highest daily mean	38,300	Jul 8	18,400	Nov 18	164,000	Jun 19, 1935
Lowest daily mean	390	Mar 11	481	Nov 17	93	Sep 1, 1918
Annual seven-day minimum	415	Mar 5	524	Dec 27	106	Aug 22, 1917
Maximum peak flow			25,000	Nov 18	190,000	Jun 18, 1935
Maximum peak stage			27.31	Nov 18	[a] 48.50	Jun 18, 1935
Annual runoff (ac-ft)	3,491,000		985,800		2,240,000	
10 percent exceeds	14,300		2,100		5,920	
50 percent exceeds	1,720		1,180		1,610	
90 percent exceeds	555		648		407	

[a] Adjusted to current datum.