

Water-Data Report 2011

## 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<sup>2</sup> of which 11,403 mi<sup>2</sup> 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.

PERIOD OF RECORD, Water-Quality.--

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 good. 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. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

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 2010 TO SEPTEMBER 2011**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,070	397	407	451	640	544	791	1,150	1,700	1,760	1,110	1,270
2	1,060	419	408	435	596	520	874	1,180	1,530	1,800	1,120	1,290
3	1,010	460	404	434	623	501	920	1,180	1,770	1,600	1,120	1,250
4	966	414	413	467	633	508	948	1,250	1,650	1,450	1,120	1,170
5	951	405	421	499	680	481	987	1,290	1,560	1,420	1,080	1,150
6	940	402	437	504	736	541	1,000	1,360	1,610	1,360	1,040	1,200
7	967	446	369	522	701	489	1,070	1,300	1,650	1,360	1,050	1,190
8	984	441	354	539	669	437	1,020	1,370	1,640	1,310	1,110	1,110
9	937	397	358	630	658	465	1,070	1,470	1,740	1,280	1,130	1,070
10	883	390	400	777	604	421	1,020	1,490	1,800	1,260	1,280	974
11	836	415	400	723	622	423	1,070	1,640	1,840	1,320	1,260	964
12	782	440	385	1,390	586	403	1,110	1,800	1,860	1,300	1,220	999
13	723	443	408	1,070	667	415	1,130	1,960	1,800	1,180	1,310	991
14	664	433	432	804	643	415	1,110	1,950	1,750	1,100	1,530	1,010
15	593	447	396	704	590	410	1,090	2,510	1,700	1,070	1,530	1,040
16	533	443	432	683	582	412	1,090	1,990	1,620	1,120	1,520	1,030
17	510	436	408	696	572	421	1,100	1,800	1,530	1,070	1,570	1,030
18	490	423	397	751	638	427	1,090	1,790	1,500	1,140	1,630	1,080
19	452	416	399	1,220	598	426	1,130	1,730	1,460	1,100	1,540	1,090
20	448	423	377	948	608	474	1,220	1,700	1,500	1,100	1,420	1,100
21	448	454	363	747	590	496	1,300	1,710	1,550	1,160	1,370	1,140
22	428	453	378	688	522	468	1,310	1,710	2,020	1,110	1,350	1,120
23	437	443	378	671	538	434	1,270	1,720	2,340	1,040	1,340	1,100
24	450	450	390	663	543	490	1,220	1,630	2,100	1,020	1,290	1,080
25	420	453	425	660	557	512	1,230	1,550	2,150	1,040	1,320	1,080
26	416	437	431	656	559	508	1,210	1,560	1,720	1,040	1,350	996
27	409	418	461	614	567	511	1,280	1,530	1,690	1,070	1,340	954
28	398	441	492	627	557	553	1,250	1,500	1,790	1,140	1,350	915
29	387	447	589	587	---	619	1,230	1,510	1,790	1,140	1,360	843
30	403	423	518	619	---	661	1,160	1,620	1,820	1,200	1,360	819
31	425	---	476	606	---	760	---	1,690	---	1,200	1,350	---
<b>Total</b>	20,420	12,909	12,906	21,385	17,079	15,145	33,300	49,640	52,180	38,260	40,470	32,055
<b>Mean</b>	659	430	416	690	610	489	1,110	1,601	1,739	1,234	1,305	1,068
<b>Max</b>	1,070	460	589	1,390	736	760	1,310	2,510	2,340	1,800	1,630	1,290
<b>Min</b>	387	390	354	434	522	403	791	1,150	1,460	1,020	1,040	819
<b>Ac-ft</b>	40,500	25,600	25,600	42,420	33,880	30,040	66,050	98,460	103,500	75,890	80,270	63,580

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2011, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	2,840	2,443	2,126	2,290	2,607	2,515	3,331	5,043	5,047	3,439	1,921	2,759
<b>Max</b>	25,310	18,150	16,450	19,800	33,800	20,220	17,350	40,630	30,060	25,710	10,030	32,690
<b>(WY)</b>	(1937)	(2005)	(1992)	(1992)	(1992)	(1992)	(1922)	(1922)	(1935)	(1938)	(1938)	(1936)
<b>Min</b>	204	197	162	182	203	275	308	1,257	574	569	128	347
<b>(WY)</b>	(1935)	(1918)	(1964)	(1964)	(1967)	(1952)	(1925)	(1937)	(1934)	(1933)	(1917)	(1934)

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SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1916 - 2011	
<b>Annual total</b>	599,074		345,749			
<b>Annual mean</b>	1,641		947		3,038	
<b>Highest annual mean</b>					10,810	1992
<b>Lowest annual mean</b>					653	1917
<b>Highest daily mean</b>	13,100	Feb 13	2,510	May 15	164,000	Jun 19, 1935
<b>Lowest daily mean</b>	354	Dec 8	354	Dec 8	93	Sep 1, 1918
<b>Annual seven-day minimum</b>	382	Dec 7	382	Dec 7	106	Aug 22, 1917
<b>Maximum peak flow</b>			2,700	May 15	190,000	Jun 18, 1935
<b>Maximum peak stage</b>			12.67	Jun 23	<sup>a</sup> 48.50	Jun 18, 1935
<b>Annual runoff (ac-ft)</b>	1,188,000		685,800		2,201,000	
<b>10 percent exceeds</b>	3,090		1,640		5,830	
<b>50 percent exceeds</b>	1,290		966		1,590	
<b>90 percent exceeds</b>	421		416		405	

<sup>a</sup> Adjusted to current datum.

