Water-Data Report 2007

08159200 Colorado River at Bastrop, TX

Lower Colorado Basin
Lower Colorado-Cummins Subbasin

LOCATION.--Lat 30°06′16″, long 97°19′09″ referenced to North American Datum of 1927, Bastrop County, TX, Hydrologic Unit 12090301, on the left bank on the downstream side of State Highway 71 bridge on Water Street, at Bastrop, 0.3 mi upstream from Gills Creek, 1.2 mi downstream from Piney Creek, and at mile 236.6.

DRAINAGE AREA.--39,979 mi^2 of which 11,403 mi^2 probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Mar. 1960 to current year. Oct. 1973 to Sept. 1975, daily discharges estimated by hydrographic comparison with Colorado River at Austin (station 08158000) and Colorado River near Smithville (station 08159500).

WATER QUALITY RECORDS: Chemical Data: Feb. 1968 to Sept. 1994. Biochemical Data: Feb. 1968 to Sept. 1994. Radiochemical Data: Jan. 1981 to July 1981.

DAILY DATA: Specific Conductance: Oct. 1984 to Sept. 1994. pH: Oct. 1984 to Sept. 1994. Water Temperature: Oct. 1984 to Sept. 1994. Dissolved Oxygen: Oct. 1984 to Sept. 1994.

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

GAGE.--Water-stage recorder. Datum of gage is 307.38 ft above NGVD of 1929. Prior to May 10, 1960, nonrecording gage at a site 400 ft upstream from present site and at same datum. May 10, 1960, to Sept. 30, 1973, Oct. 1, 1975, to Oct. 28, 1986, at a site 400 ft upstream from present site and at same datum. 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 except those for estimated daily discharges, which are poor. Since installation of gage in 1960, at least 10% of contributing drainage area has been regulated. There are many diversions above station for irrigation and municipal supply. The city of Austin diverts water into Decker Lake (by pumpage) upstream from this station. The Lower Colorado River Authority also diverts water from the Colorado into Lake Bastrop (by pumpage) upstream from this station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1845, 60.3 ft July 7 or 8, 1869. Flood of June 16, 1935, reached a stage of 57.0 ft, and flood of Dec. 4, 1913, reached a stage of 53.3 ft, from information by local resident.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	723	354	920	809	544	348	2,590	685	6,280	25,800	6,490	5,680
2	700	374	572	541	534	351	1,360	3,910	6,050	26,400	6,530	4,760
3	731	344	432	500	529	331	1,060	4,450	5,880	27,000	6,910	4,410
4	767	336	329	1,460	506	334	982	3,530	12,300	29,600	6,240	3,520
5	1,050	347	341	2,150	498	321	1,230	1,400	10,700	30,500	6,060	4,550
6	694	353	287	798	478	322	878	977	5,810	33,700	5,930	4,490
7	641	340	254	623	476	304	764	826	4,900	29,000	5,850	4,160
8	601	333	252	512	451	301	827	701	4,640	28,100	5,590	4,200
9	495	407	254	425	439	300	1,120	654	4,480	27,100	4,300	4,180
10	601	303	243	392	442	303	902	611	4,350	26,800	4,270	4,160
11	901	272	258	380	431	281	787	709	4,290	26,400	4,140	4,210
12	705	299	251	376	427	6,230	714	692	4,140	26,100	4,070	6,070
13	387	293	245	4,260	419	6,720	668	828	2,220	25,900	4,110	4,740
14	322	267	253	29,300	401	10,200	683	858	1,860	25,200	3,780	4,430
15	274	271	333	5,700	398	3,200	672	904	1,790	23,800	1,870	4,230
16	691	276	251	3,590	391	1,380	565	1,180	1,780	23,600	e1,840	e4,310
17	959	280	251	1,920	381	989	601	2,450	2,650	21,900	2,620	e4,260
18	430	300	248	1,990	380	810	633	1,830	3,960	19,400	5,670	e4,230
19	2,270	305	244	1,780	382	730	777	1,480	5,100	16,900	5,890	4,170
20	1,110	283	256	1,340	387	662	689	1,480	12,300	12,000	5,580	4,140
21	629	293	263	1,310	394	629	644	1,520	23,100	13,800	5,460	e3,790
22	442	280	258	1,130	376	585	608	1,620	15,200	13,000	5,320	1,840
23	369	275	274	866	349	553	595	1,980	14,900	8,520	5,280	1,480
24	346	264	717	854	356	545	646	1,780	9,400	8,380	5,200	1,400
25	337	268	2,750	1,360	362	518	880	1,800	4,830	8,560	5,380	1,350
26	1,030	263	975	961	355	585	949	2,270	5,890	10,000	5,350	1,310
27	1,150	286	551	781	351	4,800	701	2,990	6,490	11,800	5,350	1,400
28	678	266	465	682	426	3,130	619	6,960	e17,200	9,500	5,360	1,220
29	538	286	442	626	---	1,450	502	15,000	26,700	8,200	5,310	1,330
30	461	271	2,390	598	---	1,400	680	7,520	26,000	7,510	5,330	1,130
31	380	---	2,390	566	---	2,830	---	6,100	---	6,800	5,510	---
Total	21,412	9,089	17,949	68,580	11,863	51,442	25,326	79,695	255,190	611,270	156,590	105,150
Mean	691	303	579	2,212	424	1,659	844	2,571	8,506	19,720	5,051	3,505
Max	2,270	407	2,750	29,300	544	10,200	2,590	15,000	26,700	33,700	6,910	6,070
Min	274	263	243	376	349	281	502	611	1,780	6,800	1,840	1,130
Ac-ft	42,470	18,030	35,600	136,000	23,530	102,000	50,230	158,100	506,200	1,212,000	310,600	208,600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,368	1,531	1,557	1,666	2,066	2,333	2,369	3,226	4,352	3,090	1,910	1,730
Max	6,380	13,010	14,770	17,490	29,140	16,910	11,080	10,420	23,620	19,720	5,051	4,930
(WY)	(1974)	(2005)	(1992)	(1992)	(1992)	(1992)	(1977)	(1975)	(1987)	(2007)	(2007)	(1974)
Min	291	94.6	111	109	138	131	565	1,471	1,489	1,230	1,110	1,003
(WY)	(1965)	(1964)	(1964)	(1964)	(1964)	(1964)	(1962)	(1962)	(1993)	(2006)	(2005)	(1999)

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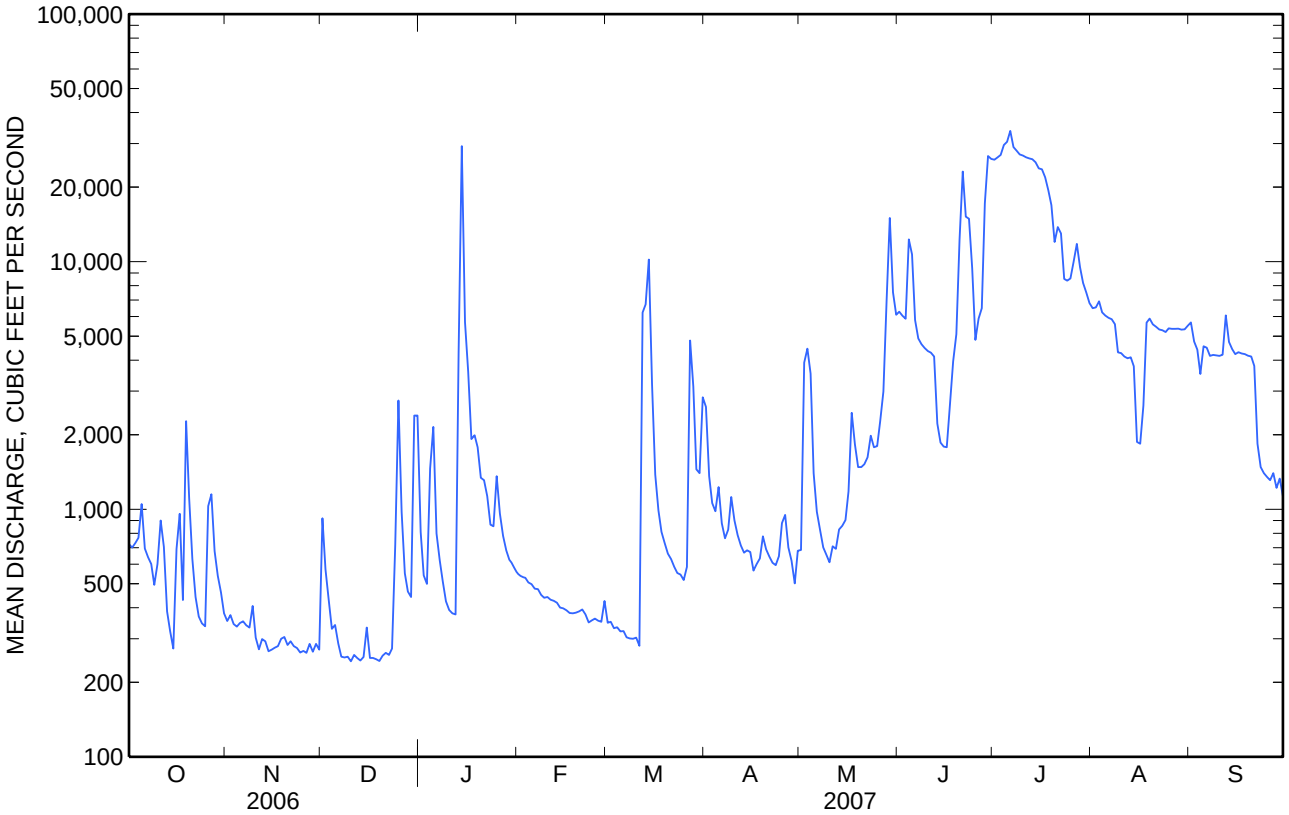
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1960 - 2007	
Annual total	356,472		1,413,556			
Annual mean	977		3,873		2,267	
Highest annual mean					9,073	1992
Lowest annual mean					828	1964
Highest daily mean	4,930	May 7	33,700	Jul 6	65,800	Dec 22, 1991
Lowest daily mean	243	Dec 10	243	Dec 10	75	Apr 1, 1964
Annual seven-day minimum	251	Dec 8	251	Dec 8	84	Oct 19, 1964
Maximum peak flow			36,400	Jan 14	79,600	Oct 29, 1960
Maximum peak stage			24.26	Jul 6	37.48	Dec 22, 1991
Annual runoff (ac-ft)	707,100		2,804,000		1,642,000	
10 percent exceeds	1,820		9,700		4,250	
50 percent exceeds	938		961		1,510	
90 percent exceeds	292		297		274