Water-Data Report 2013

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).

PERIOD OF RECORD, Water-Quality.--
CHEMICAL DATA: Jan. 1968 to Aug. 1994.
BIOCHEMICAL DATA: Feb. 1968 to Sept. 1994.
RADIOCHEMICAL DATA: Jan. 1981 to July 1981.

PERIOD OF DAILY RECORD, Water-Quality.--
SPECIFIC CONDUCTANCE: Oct. 1984 to Sept. 1994.
WATER TEMPERATURE: Oct. 1984 to Sept. 1994.
pH: 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 Sept. 30, 1973, and Oct. 1, 1975 to Oct. 28, 1986, 400 ft upstream from present site at same datum. Radio and 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 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. 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 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 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,020	240	226	248	224	216	326	593	458	486	382	234
2	671	225	231	247	220	219	360	559	441	550	385	216
3	478	219	240	243	224	226	1,030	513	487	587	386	197
4	378	216	238	235	226	233	1,900	517	392	547	385	188
5	319	206	231	237	230	226	815	516	353	531	387	206
6	278	218	218	235	236	226	502	513	349	541	371	211
7	258	220	224	251	226	224	358	517	335	583	361	210
8	278	212	236	256	219	221	326	525	357	609	367	238
9	334	207	260	448	208	215	312	567	371	608	371	191
10	403	208	226	1,580	212	236	294	621	360	612	413	167
11	430	204	219	988	228	538	296	1,630	436	619	485	161
12	400	198	218	545	249	523	319	1,760	471	608	540	146
13	375	193	218	412	260	371	440	778	465	632	552	135
14	347	188	219	351	257	304	479	574	442	659	561	304
15	329	188	212	325	250	272	512	585	412	674	486	963
16	324	186	219	313	243	261	544	596	439	706	372	1,070
17	326	192	214	298	230	252	552	605	455	810	286	1,030
18	301	241	213	283	231	246	575	595	466	953	272	1,030
19	289	279	214	293	232	237	577	547	470	1,420	318	993
20	273	258	213	280	232	248	601	475	547	1,340	287	473
21	260	246	214	275	242	238	526	484	514	969	236	527
22	242	240	208	267	261	265	533	540	460	712	213	2,250
23	228	242	210	269	272	242	601	548	442	610	212	872
24	217	233	214	268	252	229	558	535	472	561	220	492
25	200	219	217	264	247	230	527	994	522	532	213	362
26	193	207	204	265	239	231	534	2,210	518	521	221	302
27	191	205	208	265	238	223	538	1,130	510	529	241	268
28	190	218	204	258	220	234	536	733	507	557	250	258
29	184	227	203	257	---	252	628	525	512	1,020	264	567
30	181	222	201	247	---	263	604	468	508	666	259	5,500
31	209	---	217	233	---	315	---	455	---	424	253	---
Total	10,106	6,557	6,789	10,936	6,608	8,216	16,703	22,208	13,471	21,176	10,549	19,761
Mean	326	219	219	353	236	265	557	716	449	683	340	659
Max	1,020	279	260	1,580	272	538	1,900	2,210	547	1,420	561	5,500
Min	181	186	201	233	208	215	294	455	335	424	212	135
Ac-ft	20,050	13,010	13,470	21,690	13,110	16,300	33,130	44,050	26,720	42,000	20,920	39,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,285	1,401	1,427	1,553	1,907	2,166	2,230	3,019	4,033	2,887	1,815	1,664
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	557	716	361	683	340	450
(WY)	(1965)	(1964)	(1964)	(1964)	(1964)	(1964)	(2013)	(2013)	(2012)	(2013)	(2013)	(2012)

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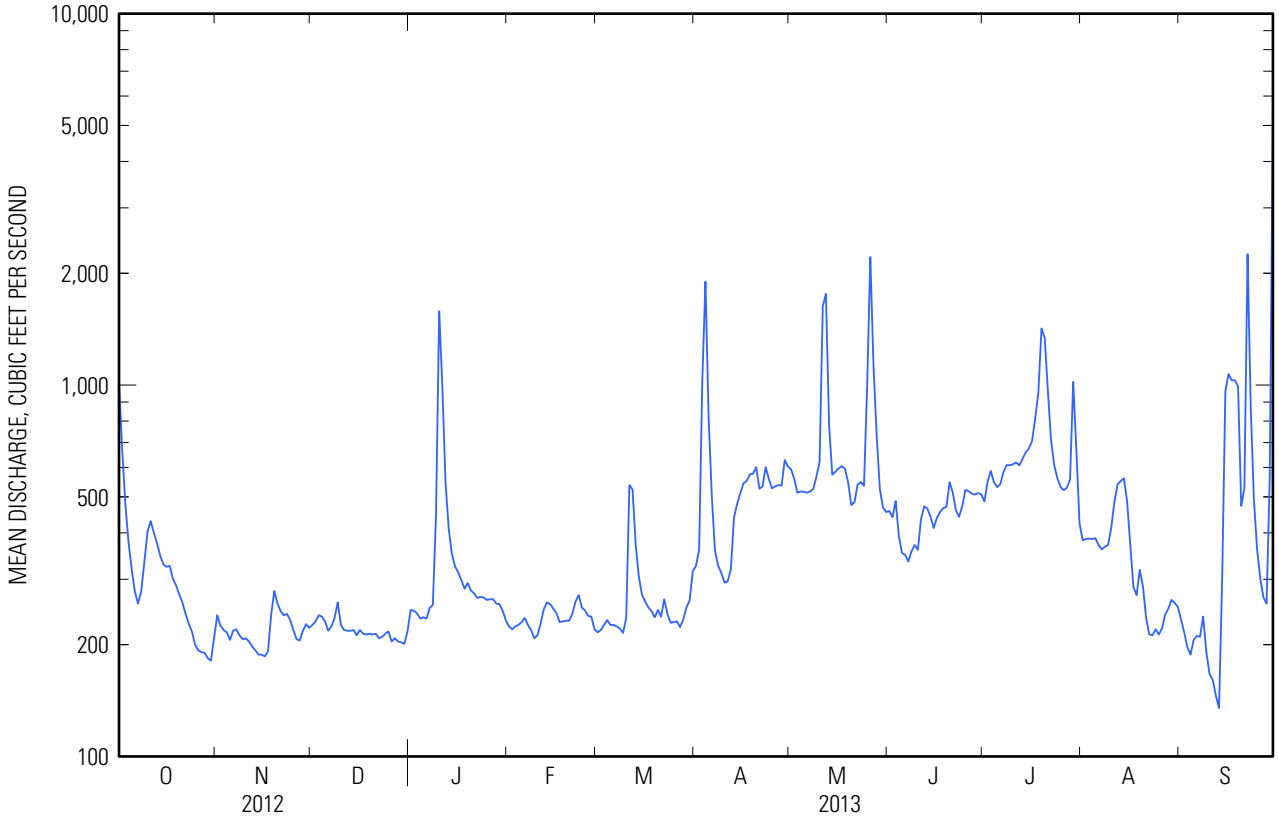
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1960 - 2013	
Annual total	247,036		153,080			
Annual mean	675		419		2,114	
Highest annual mean					9,073	1992
Lowest annual mean					419	2013
Highest daily mean	16,900	Jan 26	5,500	Sep 30	65,800	Dec 22, 1991
Lowest daily mean	181	Oct 30	135	Sep 13	75	Apr 1, 1964
Annual seven-day minimum	193	Oct 25	178	Sep 7	84	Oct 19, 1964
Maximum peak flow			7,880	Sep 30	79,600	Oct 29, 1960
Maximum peak stage			9.13	Sep 30	37.48	Dec 22, 1991
Annual runoff (ac-ft)	490,000		303,600		1,531,000	
10 percent exceeds	874		620		3,980	
50 percent exceeds	392		294		1,390	
90 percent exceeds	217		211		265