

Water-Data Report 2012

08114000 Brazos River at Richmond, TX

Lower Brazos Basin
Lower Brazos Subbasin

LOCATION.--Lat 29°34'56", long 95°45'27" referenced to North American Datum of 1927, Fort Bend County, TX, Hydrologic Unit 12070104, on right bank at upstream side of downstream bridge on U.S. Highway 90 in Richmond, 850 ft downstream from Texas and New Orleans Railroad Co. bridge, and at mile 92.0.

DRAINAGE AREA.--45,107 mi² of which 9,566 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Jan. 1903 to June 1906, Oct. 1922 to current year. Published as "at Rosenberg" Oct. 1922 to Sept. 1931. Records from June to Nov. 1901 and June to Sept. 1902 contained in U.S. Department of Agriculture, Office of Experiment Stations, Bulletin Nos. 119 and 133. Gage-height records collected in this vicinity since 1914 are contained in reports of the National Weather Service.

PERIOD OF RECORD, Water-Quality.--

CHEMICAL DATA: Oct. 1941 to Sept. 2002.

BIOCHEMICAL DATA: Oct. 1959 to Sept. 2002.

BIOLOGICAL DATA: Oct. 1980 to Sept. 1995.

PESTICIDE DATA: Oct. 1967 to May 1982.

SEDIMENT DATA: Apr. 1957 to Sept. 1995.

PERIOD OF DAILY RECORD, Water-Quality.--

SPECIFIC CONDUCTANCE: Oct. 1941 to Sept. 1995.

WATER TEMPERATURE: Nov. 1950 to Sept. 1995.

SUSPENDED-SEDIMENT DATA: Jan. 1966 to Sept. 1986.

REVISED RECORDS.--WSP 1392: 1933. WSP 1632: 1958. WDR TX-76-2: Drainage area. WDR TX-00-3 Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 27.94 ft above NGVD of 1929. Prior to Oct. 1, 1922, various types of nonrecording gages at railroad bridge 925 ft upstream at different datums. Oct. 1, 1922 to Sept. 30, 1931, nonrecording chain gage at Rosenberg 7.6 mi upstream at datum about 17 ft higher; Oct. 1, 1931 to Sept. 30, 1975, water-stage recorder at present site at datum 13.00 ft higher than current datum; Oct. 1, 1975 to Dec. 31, 1988, water-stage recorder at present site and at datum 10.00 ft higher than current datum. Satellite telemeter at station.

REMARKS.--Records fair. Since water year 1941, at least 10% of contributing drainage area has been regulated. Considerable water is diverted above station for irrigation and municipal supply. 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.--20 years (water years 1904-05, 1923-40) 7,209 ft³/s (5,223,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1852, 61.2 ft, Dec. 10, 1913, present datum, from floodmarks on right bank 1,000 ft upstream from gage. From information by Texas and New Orleans Railroad Co., stages of other floods at railroad bridge, present datum, are as follows: May 1884, 56.7 ft; June 13, 1885, 57.7 ft; July 1899, 58.6 ft; May 2, 1915, 56.3 ft; and May 9, 1922, 53.9 ft.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1903-1906, 1923-1940: Maximum discharge, 123,000 ft³/s, June 6, 1929 (gage height, 53.6 ft, from floodmark), present site and datum; minimum daily, 35 ft³/s, Aug. 23, 1934.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	414	371	763	1,220	5,660	4,920	40,000	3,010	948	620	557	780
2	434	353	653	1,020	3,930	4,330	40,500	3,080	856	607	446	805
3	410	339	657	968	3,180	3,640	33,600	3,030	820	665	414	818
4	314	353	586	895	3,540	3,040	25,300	2,850	820	873	374	865
5	368	327	691	812	5,330	2,580	20,000	2,410	798	917	444	798
6	369	323	632	787	15,200	2,160	16,900	2,080	738	847	479	679
7	382	335	588	716	21,100	1,970	15,300	1,960	653	772	400	765
8	329	439	530	753	20,500	1,940	14,400	1,880	951	684	347	836
9	523	449	447	3,890	14,500	2,040	13,100	1,820	1,200	622	365	876
10	730	486	439	3,440	10,200	2,950	11,700	1,810	1,120	679	365	768
11	492	501	819	2,950	7,650	6,180	10,400	1,880	908	1,130	417	748
12	494	518	1,340	2,900	5,880	9,280	9,500	9,550	927	1,680	518	789
13	492	489	1,290	1,840	4,800	20,000	9,340	4,750	967	11,200	564	908
14	495	477	1,000	1,170	4,050	25,300	9,260	2,940	1,240	12,600	477	1,000
15	1,040	551	839	981	3,390	22,800	8,970	2,630	1,360	8,800	449	1,030
16	1,960	525	718	966	3,050	17,500	8,250	2,340	1,250	5,470	653	1,280
17	1,620	508	747	1,120	6,420	13,200	7,290	2,440	1,740	3,840	666	1,360
18	1,150	491	651	1,220	11,200	9,940	6,760	2,450	1,700	3,230	551	1,450
19	883	508	560	1,090	13,100	7,630	6,400	2,250	1,430	2,460	684	1,470
20	700	518	636	921	20,000	7,250	6,060	2,020	1,280	2,000	944	1,440
21	494	462	687	782	24,000	9,310	5,920	1,960	1,170	1,720	1,040	1,500
22	395	452	1,260	593	26,700	21,600	5,900	1,940	977	1,830	898	1,530
23	342	413	1,590	519	21,500	36,300	5,540	1,710	821	1,730	860	1,440
24	295	391	1,600	485	14,500	44,900	5,270	1,480	732	1,430	923	1,480
25	251	389	1,490	844	10,500	49,700	4,940	1,350	736	1,230	1,100	1,410
26	230	529	1,970	2,880	8,420	49,200	4,320	1,250	701	1,090	1,360	1,550
27	322	612	2,370	4,310	7,240	43,000	3,410	1,130	582	1,030	1,270	1,720
28	375	638	2,230	8,140	6,380	38,000	2,860	1,100	535	936	1,070	1,570
29	427	604	2,040	15,500	5,680	35,000	2,810	1,030	565	850	919	1,580
30	477	751	1,740	13,000	---	33,400	2,900	982	598	763	843	1,620
31	390	---	1,450	8,770	---	35,400	---	956	---	651	858	---
Mean	568	470	1,065	2,757	10,610	18,210	11,900	2,325	971	2,353	686	1,162
Max	1,960	751	2,370	15,500	26,700	49,700	40,500	9,550	1,740	12,600	1,360	1,720
Min	230	323	439	485	3,050	1,940	2,810	956	535	607	347	679
Ac-ft	34,900	27,970	65,480	169,600	610,100	1,120,000	707,900	142,900	57,770	144,700	42,160	69,150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2012², BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	5,121	5,977	7,108	7,778	9,074	9,462	8,988	13,800	11,140	5,467	2,787	3,426
Max	28,760	32,360	52,860	60,500	54,410	54,050	41,900	77,200	58,350	61,010	23,380	19,850
(WY)	(1958)	(1975)	(1941)	(1992)	(1992)	(1992)	(1945)	(1957)	(1957)	(2007)	(2007)	(1974)
Min	203	366	480	482	460	445	378	684	458	638	503	414
(WY)	(1953)	(1989)	(1955)	(2009)	(2009)	(1954)	(2011)	(2011)	(2009)	(2011)	(2011)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1941 - 2012 ^Z	
Annual mean	720		4,397		7,500	
Highest annual mean					26,620	1992
Lowest annual mean					1,024	2011
Highest daily mean	5,240	Jan 22	49,700	Mar 25	118,000	May 5, 1957
Lowest daily mean	230	Oct 26	230	Oct 26	55	Jul 5, 1956
Annual seven-day minimum	269	Apr 2	316	Oct 22	93	Jul 4, 1956
Maximum peak flow			50,800	Mar 25	119,000	May 5, 1957
Maximum peak stage			38.22	Mar 25	50.30	Oct 21, 1994
Annual runoff (ac-ft)	521,600		3,192,000		5,434,000	
10 percent exceeds	1,220		12,700		19,200	
50 percent exceeds	586		1,170		2,840	
90 percent exceeds	341		442		727	

^Z Period of regulated streamflow.

