

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.

08114000 Brazos River at Richmond, TX—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,790	51,300	7,600	5,330	28,300	20,000	13,600	14,600	3,980	2,910	2,850	732
2	1,660	42,000	8,590	4,730	37,900	19,200	12,900	12,900	4,240	4,240	2,650	638
3	1,520	31,600	9,880	4,250	38,400	19,300	11,900	11,300	5,150	4,560	2,290	584
4	1,520	26,500	12,600	3,950	32,700	19,200	10,900	9,520	4,290	3,560	1,950	668
5	1,670	25,100	13,900	3,730	29,200	19,500	10,200	8,180	4,270	3,190	1,750	898
6	2,520	24,900	14,800	3,470	31,600	19,700	9,710	6,790	5,120	3,110	1,610	934
7	4,410	24,200	13,600	3,410	37,500	18,200	9,020	6,130	5,580	3,250	1,510	1,150
8	6,220	21,900	12,200	3,410	43,800	17,100	8,400	6,740	5,200	3,270	1,420	1,430
9	8,600	19,500	11,100	3,450	47,500	16,100	7,850	7,850	4,970	3,200	1,350	1,570
10	7,330	17,400	10,300	3,540	47,400	15,500	7,630	6,920	4,560	2,930	1,230	1,510
11	6,160	16,000	9,550	3,540	43,700	18,400	7,500	5,670	7,420	2,580	1,170	1,360
12	7,710	15,100	10,600	3,490	42,700	27,800	7,480	5,040	17,200	2,260	1,060	14,500
13	10,200	14,000	10,000	3,340	45,300	29,300	7,180	4,760	21,200	1,970	990	25,900
14	12,900	13,400	9,790	3,190	46,500	25,600	6,500	5,070	19,200	1,860	929	26,300
15	11,600	12,300	9,980	3,260	46,300	22,300	5,650	6,780	16,000	2,140	913	24,000
16	e11,000	11,100	9,480	4,250	45,100	19,600	5,280	6,910	12,400	2,690	811	21,800
17	e18,200	10,200	9,440	5,010	40,900	18,700	5,210	5,990	9,830	3,040	795	19,000
18	e18,000	9,260	8,530	5,440	35,600	20,600	5,310	6,420	8,940	3,320	846	17,700
19	e15,000	9,160	7,600	5,640	31,600	20,800	5,220	8,620	7,910	3,270	899	16,000
20	12,100	8,870	6,890	5,550	29,100	19,300	5,600	12,400	6,910	3,030	874	14,500
21	9,730	8,450	6,580	5,900	27,400	17,300	6,220	12,000	6,260	2,790	997	13,600
22	8,700	7,990	6,370	5,350	26,100	15,700	7,920	12,400	5,810	2,580	979	12,700
23	7,880	8,050	5,920	4,600	25,000	15,100	8,960	11,100	5,570	2,270	826	12,100
24	7,390	9,210	7,340	4,220	24,300	16,700	14,200	8,230	5,650	2,000	844	11,500
25	16,600	11,700	10,900	4,650	23,900	16,400	19,300	6,140	5,720	1,990	907	10,600
26	28,600	12,200	12,500	4,970	22,800	14,900	20,200	5,770	5,320	2,100	936	9,470
27	31,100	10,600	8,510	4,560	21,900	14,600	20,400	5,960	4,630	2,420	811	8,290
28	34,500	9,200	6,580	4,110	21,000	16,600	21,400	5,110	4,020	e2,100	836	7,140
29	40,400	8,560	6,230	4,200	---	18,800	20,900	4,390	3,450	1,900	845	6,340
30	49,300	7,800	5,910	5,610	---	16,700	18,000	4,010	3,150	1,900	845	5,520
31	52,600	---	6,210	12,000	---	14,600	---	3,770	---	2,220	898	---
Mean	14,420	16,580	9,338	4,585	34,770	18,830	10,680	7,660	7,465	2,731	1,214	9,614
Max	52,600	51,300	14,800	12,000	47,500	29,300	21,400	14,600	21,200	4,560	2,850	26,300
Min	1,520	7,800	5,910	3,190	21,000	14,600	5,210	3,770	3,150	1,860	795	584
Ac-ft	886,400	986,900	574,200	282,000	1,931,000	1,158,000	635,800	471,000	444,200	167,900	74,620	572,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2010^Z, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	5,222	6,110	7,283	7,938	9,166	9,463	9,070	14,150	11,430	5,580	2,849	3,501
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	800	819	458	717	550	414
(WY)	(1953)	(1989)	(1955)	(2009)	(2009)	(1954)	(1996)	(1996)	(2009)	(1956)	(1963)	(1954)

08114000 Brazos River at Richmond, TX—Continued

SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1941 - 2010 ^z	
Annual mean	4,935		11,300		7,637	
Highest annual mean					26,620	1992
Lowest annual mean					1,201	2000
Highest daily mean	52,600	Oct 31	52,600	Oct 31	118,000	May 5, 1957
Lowest daily mean	201	Jun 17	584	Sep 3	55	Jul 5, 1956
Annual seven-day minimum	230	Jun 12	744	Aug 29	93	Jul 4, 1956
Maximum peak flow			53,200	Oct 31	119,000	May 5, 1957
Maximum peak stage			37.85	Oct 31	50.30	Oct 21, 1994
Annual runoff (ac-ft)	3,573,000		8,184,000		5,533,000	
10 percent exceeds	13,500		25,700		19,400	
50 percent exceeds	1,090		7,800		2,940	
90 percent exceeds	405		1,520		754	

^z Period of regulated streamflow.

