

Water-Data Report TX-2005

## 08114000 Brazos River at Richmond, TX

Brazos River Basin

LOCATION.--Lat 29°34'56", long 95°45'27" referenced to North American Datum of 1927, Fort Bend County, 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 mi<sup>2</sup> of which 9,566 mi<sup>2</sup> probably is noncontributing.

### WATER-DISCHARGE 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. Water-quality records: Chemical data: Oct. 1941 to Sept. 2002. Biochemical data: Jan. 1968 to Sept. 2002. Pesticide data: Oct. 1967 to May 1982. Sediment data: Apr. 1957 to Sept. 1986. 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; Oct. 1, 1975 to Dec. 31, 1988, water-stage recorder at present site and at datum 10.00 ft higher. 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.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--20 years (water years 1904-05, 1923-40) 7,209 ft<sup>3</sup>/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 ft<sup>3</sup>/s, June 6, 1929 (gage height, 53.6 ft, from floodmark), present site and datum; minimum daily, 35 ft<sup>3</sup>/s, Aug. 23, 1934.

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**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,620	7,980	63,700	14,300	19,700	28,700	11,000	4,170	1,790	1,170	1,370	7,500
2	1,590	7,260	51,100	13,900	19,700	29,900	10,500	3,460	2,020	1,130	1,280	7,420
3	1,610	6,260	44,500	13,200	19,900	31,500	10,600	3,060	2,750	1,230	1,200	7,060
4	1,600	6,560	44,900	13,400	21,000	33,100	10,600	2,780	3,450	1,190	1,160	6,050
5	1,580	9,160	46,700	13,900	22,400	38,300	10,300	2,580	3,640	1,290	1,150	4,940
6	3,390	9,650	47,800	14,200	21,200	43,000	9,950	2,360	4,560	1,320	1,160	4,190
7	5,430	7,540	46,700	16,100	19,000	42,600	8,960	2,260	4,610	1,250	1,080	3,760
8	4,610	6,370	41,900	16,400	24,100	38,600	8,030	2,580	4,240	1,220	1,070	3,490
9	3,470	5,920	36,300	16,100	34,000	33,700	7,580	3,970	3,870	1,100	1,070	3,310
10	3,090	5,450	32,300	16,500	31,300	31,100	7,300	2,950	3,640	1,320	1,210	3,170
11	3,430	5,000	30,800	15,700	25,500	28,400	6,970	2,700	3,520	1,270	1,350	3,030
12	4,800	4,850	29,500	14,800	23,800	24,600	6,290	3,010	3,290	1,420	1,420	2,850
13	4,050	5,040	27,000	14,800	22,500	22,700	6,490	3,480	3,050	1,320	9,930	2,540
14	3,240	4,920	24,200	14,200	20,400	22,100	5,740	3,470	2,680	1,220	28,800	2,280
15	2,800	4,600	21,700	14,200	18,700	21,100	4,980	3,220	2,410	1,290	29,600	2,090
16	2,460	4,330	19,900	13,800	18,100	20,300	4,880	2,890	2,280	1,700	19,200	2,030
17	2,500	4,130	19,300	13,600	17,400	19,700	5,100	2,790	2,220	1,510	11,800	1,990
18	2,910	4,370	19,800	12,700	16,200	18,200	5,110	2,650	2,120	1,650	9,140	1,790
19	3,130	5,400	19,900	10,600	15,100	16,100	5,340	2,840	2,120	1,930	8,320	1,680
20	2,900	15,800	19,800	8,690	13,900	14,500	4,630	2,970	2,040	1,830	7,840	1,840
21	2,380	33,200	19,500	8,020	12,500	14,100	3,940	2,940	1,780	1,570	7,060	2,040
22	1,960	42,800	18,300	7,490	11,700	15,000	3,550	2,830	1,840	1,700	6,720	1,880
23	2,020	60,200	17,500	7,060	10,700	14,300	3,390	2,650	1,880	1,740	8,050	1,620
24	2,650	71,000	17,300	7,140	12,000	14,500	3,380	2,480	1,760	1,520	8,750	1,450
25	2,600	74,200	16,800	7,040	12,700	14,100	4,000	2,410	1,580	1,370	8,750	1,300
26	2,230	74,800	16,600	6,820	16,300	13,300	4,620	2,350	1,440	1,340	8,800	1,330
27	5,860	75,200	16,500	6,680	26,500	12,000	5,070	2,140	1,220	1,300	8,760	1,490
28	7,210	76,100	16,100	6,410	29,500	11,800	5,050	1,920	1,220	1,300	8,860	2,570
29	5,980	76,400	15,700	7,120	---	11,800	5,150	1,810	1,230	1,230	8,800	2,630
30	8,240	73,400	14,600	10,500	---	11,500	4,940	1,790	1,260	1,340	8,410	2,250
31	9,120	---	14,200	15,900	---	11,300	---	1,720	---	1,410	7,930	---
<b>Mean</b>	3,563	26,260	28,090	11,980	19,850	22,640	6,448	2,749	2,517	1,393	7,421	3,052
<b>Max</b>	9,120	76,400	63,700	16,500	34,000	43,000	11,000	4,170	4,610	1,930	29,600	7,500
<b>Min</b>	1,580	4,130	14,200	6,410	10,700	11,300	3,380	1,720	1,220	1,100	1,070	1,300
<b>Ac-ft</b>	219,100	1,563,000	1,727,000	736,400	1,102,000	1,392,000	383,700	169,100	149,800	85,650	456,300	181,600

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005<sup>2</sup>, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	5,149	6,206	7,604	8,102	9,199	9,531	9,101	14,360	11,480	4,983	2,636	3,289
<b>Max</b>	28,760	32,360	52,860	60,500	54,410	54,050	41,900	77,200	58,350	21,980	11,800	19,850
<b>(WY)</b>	(1958)	(1975)	(1941)	(1992)	(1992)	(1992)	(1945)	(1957)	(1957)	(2004)	(1995)	(1974)
<b>Min</b>	203	366	480	543	528	445	800	819	786	717	550	414
<b>(WY)</b>	(1953)	(1989)	(1955)	(1952)	(2000)	(1954)	(1996)	(1996)	(1956)	(1956)	(1963)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2004		Water Year 2005		Water Years 1941 - 2005 <sup>z</sup>	
Annual mean	13,970		11,280		7,626	
Highest annual mean					26,620	1992
Lowest annual mean					1,201	2000
Highest daily mean	76,400	Nov 29	76,400	Nov 29	118,000	May 5, 1957
Lowest daily mean	743	Jan 15	1,070	Aug 8	55	Jul 5, 1956
Annual seven-day minimum	823	Jan 10	1,130	Aug 3	93	Jul 4, 1956
Maximum peak flow			76,700	Nov 29	119,000	May 5, 1957
Maximum peak stage			45.84	Nov 29	50.30	Oct 21, 1994
Annual runoff (ac-ft)	10,140,000		8,166,000		5,525,000	
10 percent exceeds	39,000		28,700		19,200	
50 percent exceeds	6,410		5,740		2,990	
90 percent exceeds	2,390		1,370		776	

<sup>z</sup> Period of regulated streamflow.

