Water-Data Report 2011

08091000 Brazos River near Glen Rose, TX

Middle Brazos-Bosque Basin
Middle Brazos-Lake Whitney Subbasin

LOCATION.--Lat 32°15′32″, long 97°42′08″ referenced to North American Datum of 1927, Somervell County, TX, Hydrologic Unit 12060202, at upstream side of bridge on Farm Road 200, 2.5 mi downstream from Georges Creek, 2.0 mi upstream from Paluxy River and 4.0 mi northeast of Glen Rose.

DRAINAGE AREA.--25,818 mi^2 of which 9,566 mi^2 probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Oct. 1923 to current year.

PERIOD OF RECORD, Water-Quality.--
CHEMICAL DATA: Oct. 1980 to Aug. 2004.
BIOCHEMICAL DATA: Oct. 1980 to Aug. 2004.
RADIOCHEMICAL DATA: Jan. 1981 to Aug. 2004.
SEDIMENT DATA: Sept. 1964.

REVISED RECORDS.--WSP 1058: 1932. WSP 1512: 1946-47, 1949. WSP 1712: 1928(M). WDR TX-76-2: Drainage area. WDR TX-03-3: 2002(M).

GAGE.--Water-stage recorder. Datum of gage is 561.79 ft above NGVD of 1929. Prior to May 7, 1931, nonrecording gage at site 0.1 mi downstream at datum 6.03 ft higher. May 7, 1931, to Sept. 30, 1957, water-stage recorder at site at datum 6.03 ft higher, used as supplementary gage Oct. 1, 1957, to Apr. 1, 1959. Apr. 27, 1950, to Sept. 30, 1957, water-stage recorder at site 2.4 mi upstream at datum 6.03 ft higher, used as supplementary gage. Oct. 1, 1957 to Apr. 12, 2002, water-stage recorder at site 2.4 mi upstream at datum 6.03 ft higher. Satellite telemeter at station.

REMARKS.--Records good. Some records listed in the Period of Record for surface water and water quality may not be available electronically. Since 1941, at least 10% of contributing drainage area has been regulated. There are many diversions above station for irrigation and municipal supplies, and oil field operations.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--17 years (water years 1924-40) prior to regulation by Possum Kingdom Lake, 1,581 ft^3/s (1,145,000 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Second highest known flood since at least 1876 occurred in May 1922 and reached a stage of 29.5 ft, and flood in May 1908 reached a stage of 27 ft, each at present site and datum then in use, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1924-1940: Maximum discharge, 97,600 ft^3/s May 18, 1935 (gage height, 23.68 ft, from floodmarks); no flow at times prior to construction of Morris Sheppard Dam in 1941 on the Brazos River, forming Possum Kingdom Lake.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 08091000, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/08091000.2011.pdf

08091000 Brazos River near Glen Rose, TX—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

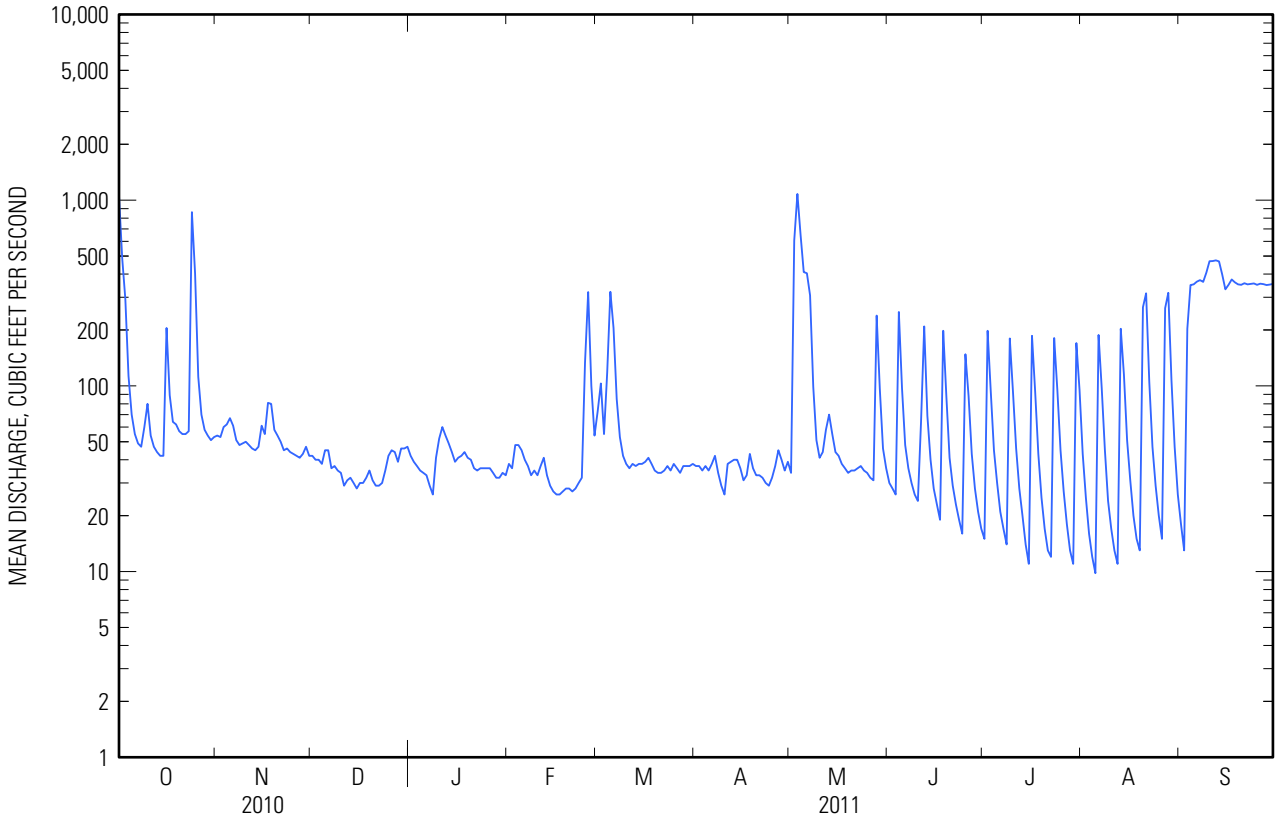
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,060	54	42	42	38	73	37	34	30	15	43	18
2	490	53	40	39	36	103	37	606	28	198	25	13
3	293	60	40	37	48	55	35	1,080	26	93	16	203
4	113	62	38	35	48	118	37	651	250	45	12	349
5	70	67	45	34	45	321	35	410	97	30	9.8	352
6	55	61	45	33	40	205	38	404	48	21	188	364
7	49	51	36	29	37	85	42	307	36	17	97	371
8	47	48	37	26	33	53	34	99	30	14	45	363
9	60	49	35	41	35	42	29	51	26	180	24	407
10	80	50	34	52	33	38	26	41	24	93	17	469
11	54	48	29	60	37	36	38	44	64	46	13	470
12	47	46	31	54	41	38	39	58	209	28	11	474
13	44	45	32	49	33	37	40	70	69	20	203	468
14	42	47	30	44	29	38	40	55	40	14	115	398
15	42	61	28	39	27	38	36	44	28	11	51	331
16	205	55	30	41	26	39	31	42	23	186	31	350
17	89	81	30	42	26	41	33	38	19	93	20	374
18	64	80	32	44	27	38	43	36	198	43	15	361
19	62	58	35	41	28	35	36	34	87	25	13	352
20	57	54	31	40	28	34	33	35	41	17	265	350
21	55	50	29	36	27	34	33	35	29	13	315	357
22	55	45	29	35	28	35	32	36	23	12	105	352
23	57	46	30	36	30	37	30	37	19	181	47	354
24	862	44	35	36	32	35	29	35	16	95	29	356
25	402	43	42	36	133	38	32	34	148	45	20	350
26	112	42	45	36	320	36	37	32	88	27	15	355
27	70	41	44	34	100	34	45	31	43	18	262	353
28	58	43	39	32	54	37	40	239	28	13	317	349
29	54	47	46	32	---	37	35	96	21	11	107	351
30	51	42	46	34	---	37	39	46	17	170	47	354
31	53	---	47	33	---	38	---	36	---	95	26	---
Total	4,852	1,573	1,132	1,202	1,419	1,865	1,071	4,796	1,805	1,869	2,503.8	10,368
Mean	157	52.4	36.5	38.8	50.7	60.2	35.7	155	60.2	60.3	80.8	346
Max	1,060	81	47	60	320	321	45	1,080	250	198	317	474
Min	42	41	28	26	26	34	26	31	16	11	9.8	13
Ac-ft	9,620	3,120	2,250	2,380	2,810	3,700	2,120	9,510	3,580	3,710	4,970	20,560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2011[Z], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,530	752	669	513	918	1,038	1,323	2,884	2,158	1,054	774	970
Max	17,860	6,209	14,960	3,180	11,290	6,684	14,360	44,800	13,660	9,882	6,621	9,994
(WY)	(1982)	(1975)	(1992)	(1968)	(1992)	(1992)	(1990)	(1957)	(1982)	(2007)	(1978)	(1966)
Min	7.42	12.6	25.0	25.8	15.9	34.3	9.99	15.7	17.5	12.1	12.3	15.9
(WY)	(1953)	(2002)	(2007)	(2009)	(1984)	(1974)	(1974)	(1996)	(1996)	(1978)	(2000)	(1998)

08091000 Brazos River near Glen Rose, TX—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1941 - 2011[z]	
Annual total	459,997		34,455.8			
Annual mean	1,260		94.4		1,217	
Highest annual mean					5,494	1957
Lowest annual mean					73.8	2009
Highest daily mean	31,000	Apr 19	1,080	May 3	85,100	May 1, 1957
Lowest daily mean	28	Dec 15	9.8	Aug 5	0.10	Oct 30, 1952
Annual seven-day minimum	30	Dec 11	27	Feb 15	0.36	Oct 27, 1952
Maximum peak flow			2,680	Oct 1	89,600	Dec 21, 1991
Maximum peak stage			8.78	Oct 1	35.76	Apr 28, 1990
Annual runoff (ac-ft)	912,400		68,340		881,400	
10 percent exceeds	2,590		325		2,270	
50 percent exceeds	126		41		295	
90 percent exceeds	42		25		30	

[z] Period of regulated streamflow.