Water-Data Report 2011

08088000 Brazos River near South Bend, TX

Middle Brazos-Bosque Basin
Middle Brazos-Palo Pinto Subbasin

LOCATION.--Lat 33°01′27″, long 98°38′37″ referenced to North American Datum of 1927, Young County, TX, Hydrologic Unit 12060201, on left bank 225 ft downstream from bridge on State Highway 67, 1.8 mi downstream from Clear Fork Brazos River, 2.0 mi northeast of South Bend, and at mile 758.2.

DRAINAGE AREA.--22,673 mi^2 of which 9,566 mi^2 probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Sept. 1938 to current year.

PERIOD OF RECORD, Water-Quality.--
CHEMICAL DATA: July 1941 to Mar. 1948.
BIOCHEMICAL DATA: Nov. 1977 to Sept. 1991.
BIOLOGICAL DATA: Nov. 1977 to Aug. 1992.
PESTICIDE DATA: Mar. 1968 to Apr. 1982.
RADIOCHEMICAL DATA: Jan. 1981 to July 1981.
SEDIMENT DATA: May to Sept. 1962, Sept. 1964 to Aug. 1992.

PERIOD OF DAILY RECORD, Water-Quality.--
SPECIFIC CONDUCTANCE: Jan. 1942 to Mar. 1948, Nov. 1977 to Sept. 1981.
WATER TEMPERATURE: Nov. 1977 to Sept. 1981.

REVISED RECORDS.--WRD TX-74-1: 1973. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,002.98 ft above NGVD of 1929. Prior to Feb. 23, 1939, nonrecording gage at site 255 ft upstream, and Feb. 23, 1939, to Mar. 9, 1961, water-stage recorder at site 225 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since water year 1962, at least 10% of contributing drainage area has been regulated. There are many small diversions upstream from station for municipal supply and oil field operations. No flow at times.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--23 years (water years 1939-61), 993 ft^3/s (719,100 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1876 reached a stage of 36.2 ft, from information by Texas Department of Transportation and U.S. Army Corps of Engineers. Flood of Sept. 24, 1900, reached a stage of 29.5 ft, and flood of June 16, 1930, reached a stage of 35.5 ft, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS, 1939-1961: Maximum discharge, 87,400 ft^3/s May 4, 1941 (gage height, 27.35 ft); no flow at times.

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,240	157	101	144	117	78	54	21	4.2	0.00	0.00	0.00
2	819	138	99	130	110	79	49	25	3.6	0.00	0.00	0.00
3	633	144	101	119	109	76	49	24	3.1	0.00	0.00	0.00
4	512	146	97	111	109	77	47	20	2.7	0.00	0.00	0.00
5	420	138	94	105	102	71	45	22	2.7	0.00	0.00	0.00
6	365	131	97	104	98	73	46	20	2.4	0.00	0.00	0.00
7	318	129	102	100	121	63	45	18	1.9	0.00	0.00	0.00
8	283	123	100	99	145	71	41	15	1.4	0.00	0.00	0.00
9	244	114	100	112	134	68	39	13	1.1	0.00	0.00	0.00
10	216	117	103	108	121	68	43	13	0.80	0.00	0.00	0.00
11	197	108	103	106	109	68	41	17	0.67	0.00	0.00	0.00
12	176	108	107	98	102	69	38	21	0.43	0.00	0.00	0.00
13	158	110	105	94	106	66	35	15	0.43	0.00	0.00	0.00
14	139	109	103	94	114	63	38	14	0.31	0.00	165	0.00
15	134	113	103	96	109	60	30	14	0.26	0.00	61	0.00
16	123	119	98	95	103	59	30	13	0.12	0.00	22	0.00
17	116	115	103	96	103	62	27	9.8	0.07	0.00	9.8	0.00
18	110	118	98	98	99	64	29	7.5	0.04	0.00	5.1	0.00
19	106	110	100	96	96	62	26	5.9	0.04	0.00	2.3	0.00
20	98	110	101	93	97	58	26	10	e0.01	0.00	1.2	0.00
21	92	113	99	98	96	58	31	13	2.4	0.00	0.63	0.00
22	88	117	94	95	90	58	26	11	0.51	0.00	0.34	0.00
23	106	117	94	92	92	59	25	9.3	0.57	0.00	0.18	0.00
24	207	115	146	93	89	53	26	13	0.78	0.00	0.13	0.00
25	415	111	160	91	88	58	30	9.6	0.22	0.00	0.09	0.00
26	284	111	167	91	88	56	32	8.2	0.05	0.00	0.07	0.00
27	289	110	138	92	87	52	24	5.8	0.05	0.00	0.04	0.00
28	322	108	121	92	81	51	23	4.9	0.04	0.00	0.02	0.00
29	283	112	128	94	---	53	18	3.3	0.01	0.00	0.01	0.00
30	214	104	144	91	---	55	20	2.4	0.00	0.00	0.00	0.00
31	185	---	158	91	---	55	---	3.5	---	0.00	0.00	---
Total	8,892	3,575	3,464	3,118	2,915	1,963	1,033	402.2	30.91	0.00	267.91	0.00
Mean	287	119	112	101	104	63.3	34.4	13.0	1.03	0.00	8.64	0.00
Max	1,240	157	167	144	145	79	54	25	4.2	0.00	165	0.00
Min	88	104	94	91	81	51	18	2.4	0.00	0.00	0.00	0.00
Ac-ft	17,640	7,090	6,870	6,180	5,780	3,890	2,050	798	61	0.00	531	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2011[Z], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	758	399	303	214	451	453	557	1,177	1,465	472	796	846
Max	7,600	4,062	6,024	1,743	8,987	4,143	5,435	6,872	8,652	2,577	9,363	6,231
(WY)	(1982)	(2005)	(1992)	(1968)	(1992)	(1992)	(1990)	(1982)	(1982)	(2007)	(1978)	(1962)
Min	3.82	5.00	1.47	4.77	3.33	7.17	0.82	13.0	1.03	0.00	0.10	0.00
(WY)	(1999)	(2004)	(2004)	(2004)	(2000)	(1971)	(1971)	(2011)	(2011)	(2011)	(1998)	(1998)

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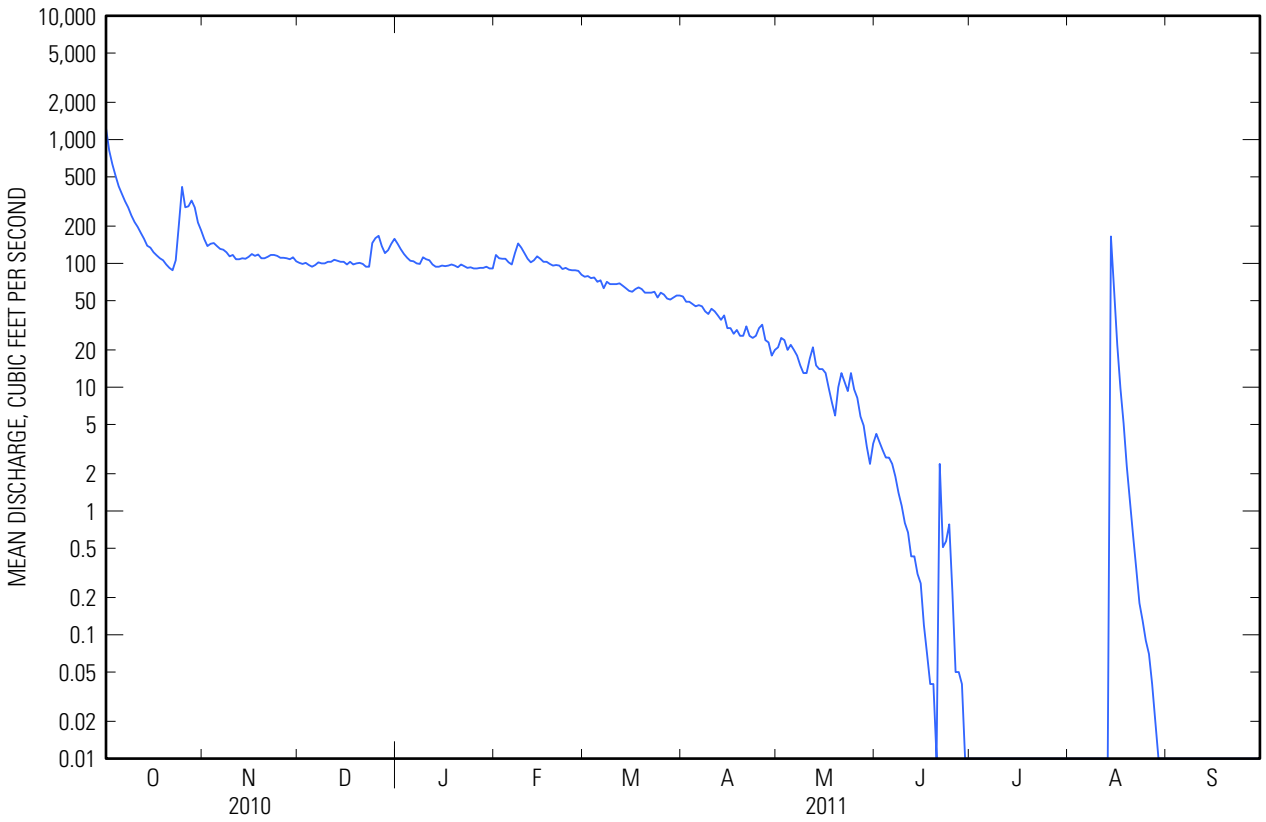
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1962 - 2011[z]	
Annual total	303,887		25,661.02			
Annual mean	833		70.3		657	
Highest annual mean					2,966	1992
Lowest annual mean					70.3	2011
Highest daily mean	18,900	Apr 19	1,240	Oct 1	74,700	Aug 6, 1978
Lowest daily mean	33	Jan 22	0.00	Jun 30	0.00	Aug 3, 1964
Annual seven-day minimum	35	Jan 21	0.00	Jun 30	0.00	Aug 3, 1964
Maximum peak flow			1,690	Oct 1	78,100	Aug 6, 1978
Maximum peak stage			8.05	Oct 1	41.50	Aug 6, 1978
Instantaneous low flow					0.00	Aug 3, 1964
Annual runoff (ac-ft)	602,800		50,900		476,300	
10 percent exceeds	1,580		136		1,150	
50 percent exceeds	264		53		124	
90 percent exceeds	84		0.00		12	

[z] Period of regulated streamflow.