Water-Data Report 2007

08092000 Nolan River at Blum, TX

Middle Brazos-Bosque Basin
Middle Brazos-Lake Whitney Subbasin

LOCATION.--Lat 32°09′02″, long 97°24′09″ referenced to North American Datum of 1927, Hill County, TX, Hydrologic Unit 12060202, on right bank 60 ft upstream from bridge on Farm Road 933, 0.6 mi northwest of Blum 2.8 mi downstream from Mustang Creek, 3.0 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 3.2 mi upstream from Rock Creek, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--282 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1924 to Sept. 1925, Nov. 1947 to Sept. 1985 (daily mean discharge). Oct. 1985 to Sept. 2005 (peaks above base discharge), Oct. 2005 to current year.

REVISED RECORDS.--WSP 1312: 1925(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 551.48 ft above NGVD of 1929. July 29, 1924, to Sept. 30, 1925, and Nov. 14, 1947, to May 28, 1949, nonrecording gage at railway bridge (now abandoned) 0.5 mi upstream at datum 5.00 ft higher. May 29 to July 7, 1949, nonrecording gage at present site and datum then in use (5.00 ft higher than present datum). Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since water year 1965, at least 10% of contributing drainage area has been regulated. The city of Cleburne diverts water from Lake Pat Cleburne and returns wastewater effluent to a tributary upstream.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--17 years (water years 1925, 1949-64) prior to regulation by Lake Pat Cleburne, 66.1 ft^3/s (47,890 acre-ft/yr).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1887, 35.0 ft May 8, 1922, present site and datum, from information by local resident.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1924-1925, 1949-1964: Maximum discharge prior to regulation by Lake Pat Cleburne, 25,000 ft^3/s, May 17, 1949, gage height, 24.0 ft (from floodmark); no flow at times.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	11	0.72	29	40	72	20	1,810	271	509	2,380	129	4.8
2	9.2	0.33	8.6	23	215	23	727	423	788	2,620	814	5.5
3	10	0.90	3.4	17	125	14	426	1,280	1,040	1,950	615	9.2
4	12	0.51	2.2	474	98	18	295	614	735	1,550	306	11
5	9.9	1.2	3.0	244	83	9.8	218	355	399	1,780	195	4,100
6	4.9	2,090	3.9	150	72	9.4	164	248	270	1,700	135	432
7	10	299	2.8	106	61	13	124	192	202	1,530	96	187
8	4.8	91	2.8	77	62	13	116	150	161	1,760	69	117
9	8.6	40	2.9	58	54	11	97	126	138	1,850	51	81
10	90	23	2.4	46	47	9.7	89	108	117	1,210	40	74
11	52	16	2.5	37	41	7.9	81	94	101	726	32	72
12	12	9.6	3.7	37	42	91	66	86	85	377	29	61
13	4.2	6.4	3.7	1,300	56	54	56	117	71	194	25	52
14	7.8	6.0	2.5	561	42	110	83	87	63	150	21	44
15	45	3.7	4.5	276	e30	78	54	72	130	125	18	35
16	107	1.9	3.3	174	e28	66	43	58	216	105	15	30
17	55	1.5	3.6	124	e24	53	41	40	2,590	88	15	26
18	14	4.8	5.2	112	e20	42	113	32	1,370	72	38	23
19	4.5	3.4	4.9	105	e19	38	e66	29	558	63	24	21
20	2.8	4.2	20	155	e22	38	63	26	332	87	17	18
21	2.1	7.5	29	393	e20	35	68	23	229	142	14	15
22	1.6	6.5	7.7	257	20	34	63	25	178	84	12	15
23	0.96	6.5	4.2	176	21	34	47	23	144	71	12	13
24	1.3	5.7	3.4	133	24	35	45	54	115	324	9.1	14
25	2.8	2.5	17	104	34	33	68	141	98	247	8.0	13
26	3.6	3.1	15	86	20	35	60	6,090	1,700	172	7.5	14
27	5.7	4.9	6.4	76	18	213	45	1,770	4,200	139	6.9	12
28	4.0	4.1	4.3	67	17	186	39	1,090	3,720	108	6.0	14
29	e3.3	9.5	197	49	---	559	38	3,450	1,670	87	8.1	11
30	2.1	60	452	43	---	2,440	38	2,850	3,010	87	7.0	7.0
31	1.7	---	93	40	---	13,000	---	957	---	73	5.0	---
Mean	16.3	90.5	30.4	179	49.5	559	175	674	831	705	89.7	184
Max	107	2,090	452	1,300	215	13,000	1,810	6,090	4,200	2,620	814	4,100
Min	0.96	0.33	2.2	17	17	7.9	38	23	63	63	5.0	4.8
Ac-ft	999	5,380	1,870	10,990	2,750	34,360	10,400	41,420	49,470	43,340	5,510	10,970

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2007 [h z], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	30.3	68.3	36.2	102	50.8	404	117	368	429	356	59.2	111
Max	669	588	588	179	584	876	995	1,750	872	705	154	229
(WY)	(1972)	(1972)	(1972)	(2007)	(1975)	(1977)	(1973)	(1969)	(1973)	(2007)	(1974)	(1974)
Min	1.57	3.21	3.27	2.58	4.36	5.11	4.16	2.09	1.78	0.56	0.05	0.75
(WY)	(1984)	(1970)	(1979)	(1978)	(1984)	(1971)	(1984)	(1984)	(1984)	(1978)	(1984)	(1982)

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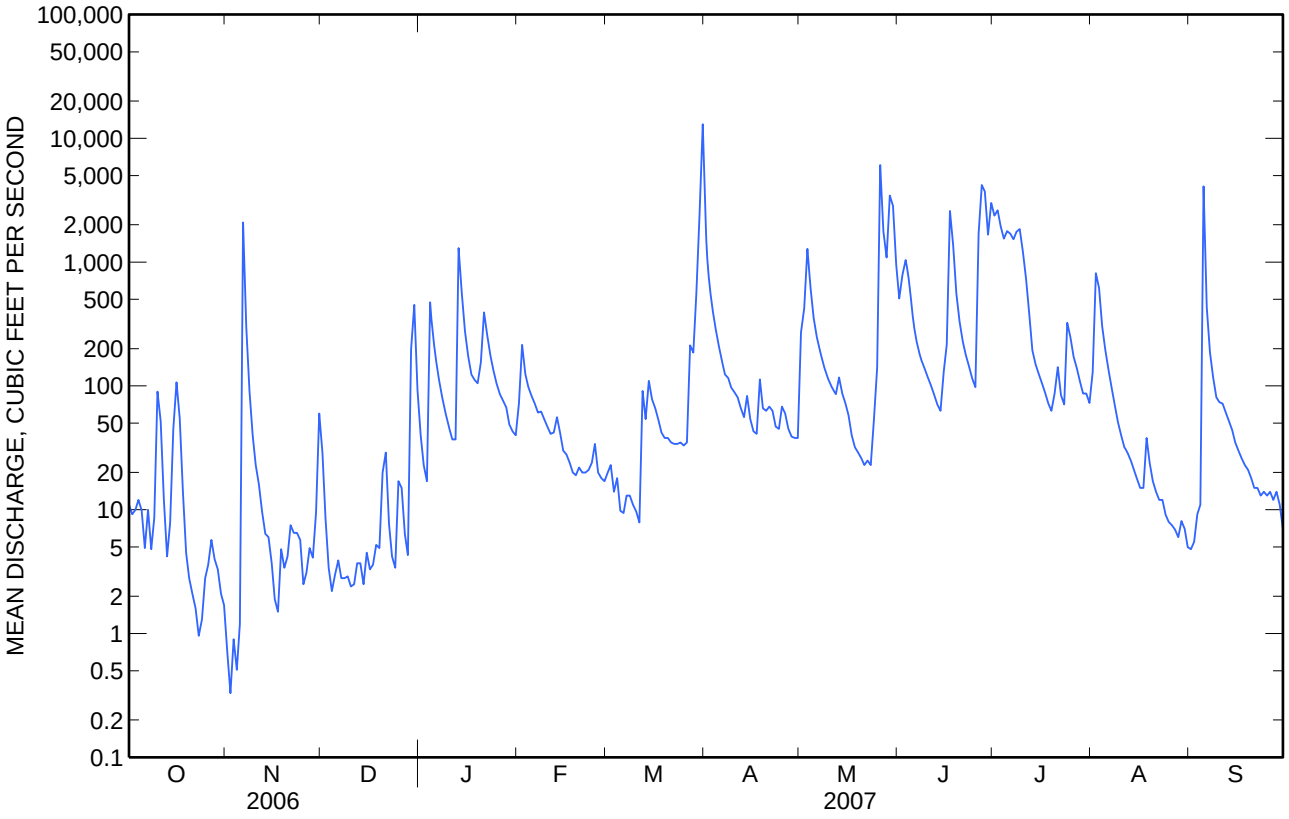
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1965 - 2007 [h z]	
Annual mean	52.4		300		179	
Highest annual mean					1,750	1969
Lowest annual mean					0.75	1982
Highest daily mean	3,020	Mar 20	13,000	Mar 31	13,000	Mar 31, 2007
Lowest daily mean	0.33	Nov 2	0.33	Nov 2	0.05	Aug 19, 1984
Annual seven-day minimum	1.1	Oct 30	1.1	Oct 30	1.1	Oct 30, 2006
Maximum peak flow			19,700	Mar 31	79,600	May 17, 1989
Maximum peak stage			21.30	Mar 31	33.44	May 17, 1989
Annual runoff (ac-ft)	37,920		217,500		129,500	
10 percent exceeds	55		659		238	
50 percent exceeds	21		46		28	
90 percent exceeds	3.8		4.0		6.7	

[h] See Period of Record paragraph.
[z] Period of regulated streamflow.
Peak of record discharge from rating curve extended above 22,000 ft³/s on basis of contracted-opening measurement of peak flow; no flow at times.