

Water-Data Report 2008

08099100 Leon River near De Leon, TX

Little Basin
Leon Subbasin

LOCATION.--Lat 32°10'25", long 98°31'58" referenced to North American Datum of 1927, Comanche County, TX, Hydrologic Unit 12070201, on left bank at downstream end of bridge on State Highway 16, 1.5 mi upstream from Flat Creek, 4.4 mi northeast of De Leon, 6.0 mi downstream from Hog Creek, and 250.1 mi upstream from mouth.

DRAINAGE AREA.--479 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Sept. 1960 to Sept. 1986 (daily mean discharge), Oct. 1986 to Sept. 1995 (daily mean discharges greater than 600 ft³/s), Oct. 1995 to Sept. 30, 2007 (peak discharges greater than base discharge 600 ft³/s), Oct. 1, 2007 to current year (daily mean discharge).

PERIOD OF RECORD, Water-Quality.--

CHEMICAL DATA: May 1981 to July 1982, Nov. 1990 to Aug. 1997, Jan. 2005 to Apr. 2006.

BIOCHEMICAL DATA: May 1981 to July 1982, Nov. 1990 to Aug. 1997, Jan. 2005 to Apr. 2006.

RADIOCHEMICAL DATA: May 1981 to June 1981, Jan. 2005 to Apr. 2006.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,209.93 ft above NGVD of 1929. Prior to Nov. 22, 1960, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good, except those for estimated days, which are poor. Since installation of gage at least 10% of contributing drainage area has been regulated. There are numerous diversions above station for municipal, steam powerplant operation, and other uses.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s Apr. 26, 1990 (gage height, 19.00 ft, from floodmarks), from rating curve extended above 17,600 ft³/s; prior to Apr. 26, 1990, maximum discharge, 7,540 ft³/s June 21, 1968, (gage height, 15.50 ft); no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 19.3 ft occurred in May 1908 at a point 2,000 ft downstream from present gage site and is the highest since that time, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,460 ft³/s, Mar. 19, gage height, 10.53 ft; minimum discharge, 0.00 ft³/s, on many days, gage height, 1.49 ft.

08099100 Leon River near De Leon, TX—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
 [e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6.6	0.79	2.4	1.8	2.8	4.0	41	91	0.49	0.00	0.00	e0.00
2	5.0	0.90	1.9	1.7	2.7	4.4	35	70	0.29	0.00	0.00	e0.00
3	3.6	1.6	1.9	1.7	2.8	7.1	31	54	0.14	0.00	0.00	e0.00
4	2.7	1.9	1.7	2.0	3.3	11	28	42	0.06	0.00	0.00	e0.00
5	2.1	1.7	1.7	2.3	3.4	22	25	36	0.01	0.00	0.00	e0.00
6	1.8	1.0	1.8	2.5	3.2	18	23	34	0.00	0.00	0.00	e0.00
7	1.6	0.81	1.6	2.6	3.0	16	22	36	0.00	0.00	0.00	e0.00
8	1.5	0.75	1.6	2.6	3.0	11	20	32	0.00	0.00	0.00	e0.00
9	1.4	0.79	1.5	2.3	2.7	10	19	25	0.00	0.00	e0.00	e0.00
10	1.1	0.89	1.7	2.5	2.7	16	35	21	0.00	0.00	e0.00	e0.00
11	1.2	0.86	2.0	3.6	3.1	18	60	17	0.00	0.00	e0.00	e0.00
12	1.3	0.74	2.7	5.9	4.0	17	37	13	0.00	0.00	e0.00	e0.00
13	1.1	0.85	3.4	3.6	3.9	15	30	11	0.00	0.00	e0.00	e0.00
14	0.91	0.80	4.1	2.7	3.4	13	26	11	0.00	0.00	e0.00	e0.00
15	4.4	0.54	5.8	2.4	3.2	11	22	11	0.00	0.00	e0.00	e0.00
16	3.4	0.66	3.9	2.5	6.2	8.0	18	9.4	0.00	0.00	e0.00	e0.00
17	2.9	0.84	2.9	2.5	7.1	8.7	16	8.6	0.00	0.00	e0.00	e0.00
18	2.7	1.1	2.7	2.7	6.1	609	14	8.4	0.00	0.00	e0.00	e0.00
19	2.0	1.0	2.6	2.5	5.2	1,360	13	7.3	0.00	0.00	e0.00	e0.00
20	1.6	1.1	2.6	2.3	5.4	1,230	11	6.2	97	0.00	e0.00	e0.00
21	1.0	0.95	2.4	2.8	5.4	721	11	5.6	31	0.00	e0.00	e0.00
22	1.1	1.2	2.3	3.2	5.2	351	10	4.8	8.1	0.00	e0.00	e0.00
23	0.96	1.7	2.1	3.1	4.7	211	13	4.3	12	0.00	e0.00	e0.00
24	2.1	2.8	2.2	3.1	4.4	143	451	3.5	9.6	0.00	e0.00	e0.00
25	2.2	10	2.4	4.4	4.2	107	135	3.0	5.9	0.00	e0.00	e0.00
26	1.0	14	2.5	4.7	3.8	86	70	2.6	3.2	0.00	e0.00	e0.00
27	1.0	6.8	2.6	4.2	3.5	72	427	2.2	1.1	0.00	e0.00	e0.00
28	1.0	4.7	2.5	4.0	3.4	62	327	2.0	0.19	0.00	e0.00	e0.00
29	0.91	3.2	2.1	3.9	3.8	53	194	1.9	0.00	0.00	e0.00	e0.00
30	1.1	3.1	2.0	3.3	---	48	127	1.4	0.00	0.00	e0.00	e0.00
31	0.93	---	2.0	3.0	---	45	---	0.82	---	0.00	e0.00	---
Mean	2.01	2.27	2.44	2.98	3.99	171	76.4	18.6	5.64	0.00	0.00	0.00
Max	6.6	14	5.8	5.9	7.1	1,360	451	91	97	0.00	0.00	0.00
Min	0.91	0.54	1.5	1.7	2.7	4.0	10	0.82	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2008^h, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	37.8	14.5	8.23	50.8	25.2	58.6	57.2	103	89.6	13.9	6.03	19.2
Max	474	157	69.8	1,005	191	516	698	762	714	135	88.8	271
(WY)	(1982)	(1965)	(1970)	(1968)	(1975)	(1968)	(1969)	(1965)	(1986)	(1962)	(1971)	(1962)
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1961)	(1961)	(1961)	(1978)	(1978)	(1978)	(1984)	(1984)	(1964)	(1964)	(1965)	(1972)

08099100 Leon River near De Leon, TX—Continued

SUMMARY STATISTICS

	Water Year 2008		Water Years 1960 - 2008 ^h	
Annual mean	23.9		40.4	
Highest annual mean			180	1968
Lowest annual mean			0.20	1978
Highest daily mean	1,360	Mar 19	18,500	Apr 26, 1990
Lowest daily mean	0.00	Jun 6	0.00	Sep 1, 1960
Annual seven-day minimum	0.00	Jun 6	0.00	Sep 1, 1960
Maximum peak flow	1,410	Mar 19	1,510	Nov 17, 2004
Maximum peak stage	10.53	Mar 19	10.53	Mar 19, 2008
10 percent exceeds	31		38	
50 percent exceeds	2.2		1.0	
90 percent exceeds	0.00		0.00	

^h See Period of Record paragraph.

