

Water-Data Report 2011

08151500 Llano River at Llano, TX

Middle Colorado-Llano Basin
Llano Subbasin

LOCATION.--Lat 30°45'04", long 98°40'10" referenced to North American Datum of 1927, Llano County, TX, Hydrologic Unit 12090204, on right bank in Llano, 0.4 mi downstream from bridge on State Highway 16, 7.0 mi upstream from Little Llano River, and 29.3 mi upstream from mouth.

DRAINAGE AREA.--4,197 mi² of which 5 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Sept. 1939 to current year.

PERIOD OF RECORD, Water-Quality.--

CHEMICAL DATA: Apr. 1948 to Oct. 1967, Apr. 1979 to Aug. 1986.

BIOCHEMICAL DATA: Apr. 1979 to Aug. 1986.

BIOLOGICAL DATA: Apr. 1979 to Aug. 1986.

SEDIMENT DATA: Sept. 1964, Apr. 1979 to Aug. 1986.

RADIOCHEMICAL DATA: Mar. to July 1981.

TAXONOMIC DATA: May 1979 to Sept. 1981.

PERIOD OF DAILY RECORD, Water-Quality.--

SPECIFIC CONDUCTANCE: Apr. 1979 to Sept. 1980.

WATER TEMPERATURE: Apr. 1979 to Sept. 1980.

REVISED RECORDS.--WDR TX-81-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 970.01 ft above NGVD of 1929. Radio telemeter at station. Satellite telemeter at station.

COOPERATION.--Lower Colorado River Authority provides operation and maintenance of the gage and verification of stage-discharge relation at low stages. U.S. Geological Survey maintains stage-discharge relation at medium to high stages, computes and publishes streamflow record.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No known regulation or diversions. Part of the flow of the Llano River disappears into various formations, many of which are faulted, between Llano River near Junction (station 08150000) and this station. No flow at times. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1879, 41.5 ft, June 14, 1935, discharge, 380,000 ft³/s, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 12	0915	*415	*2.11

Water-Data Report 2011

08151500 Llano River at Llano, TX—Continued

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	82	77	95	121	126	93	73	39	23	13	4.7	2.7
2	79	80	96	119	121	91	68	49	19	13	5.0	2.6
3	76	80	96	116	128	90	71	45	16	13	4.7	2.6
4	74	79	97	115	124	91	68	47	13	12	4.3	2.5
5	73	78	98	115	122	91	65	57	13	10	3.6	2.6
6	73	78	99	115	123	88	62	60	13	8.3	2.8	2.3
7	72	78	99	113	120	86	61	59	13	6.1	2.2	2.1
8	73	80	100	111	118	86	60	59	11	5.7	2.1	2.3
9	74	83	102	149	122	85	60	55	8.1	5.3	2.6	2.3
10	74	86	102	136	118	85	58	51	6.2	5.0	3.1	2.3
11	74	89	101	154	119	83	74	84	e3.8	4.3	3.3	2.8
12	74	91	103	140	116	84	66	278	3.8	4.8	3.3	2.9
13	72	89	103	132	115	86	67	225	3.8	4.8	3.5	3.4
14	71	88	101	128	113	83	74	136	3.8	4.6	3.5	3.8
15	71	89	104	129	114	82	66	93	3.8	4.6	3.2	5.3
16	72	88	104	137	114	84	59	73	3.7	4.4	2.7	7.0
17	72	91	103	134	113	85	56	63	3.8	4.0	2.3	8.8
18	71	89	102	134	112	84	51	59	3.8	3.7	2.2	10
19	73	89	103	130	112	83	49	57	4.2	4.0	2.0	11
20	75	89	107	124	112	79	50	55	4.7	3.4	2.2	12
21	75	93	108	117	108	79	50	50	6.6	3.1	2.3	13
22	77	96	109	117	105	80	53	46	15	2.6	3.2	12
23	81	98	109	116	108	78	49	41	9.8	2.4	5.4	11
24	82	97	124	115	107	77	47	40	9.4	2.4	6.1	14
25	81	96	120	113	103	77	53	38	8.7	4.6	6.1	18
26	80	95	127	111	103	75	50	32	7.3	8.8	6.0	24
27	80	94	127	113	101	70	45	32	7.4	8.3	5.5	31
28	77	94	123	112	95	69	43	30	12	7.4	5.1	35
29	77	96	125	113	---	72	42	26	14	6.7	4.0	36
30	76	94	125	113	---	72	40	25	13	5.6	4.1	31
31	75	---	124	112	---	72	---	24	---	4.9	3.3	---
Total	2,336	2,644	3,336	3,804	3,192	2,540	1,730	2,028	277.7	190.8	114.4	316.3
Mean	75.4	88.1	108	123	114	81.9	57.7	65.4	9.26	6.15	3.69	10.5
Max	82	98	127	154	128	93	74	278	23	13	6.1	36
Min	71	77	95	111	95	69	40	24	3.7	2.4	2.0	2.1
Ac-ft	4,630	5,240	6,620	7,550	6,330	5,040	3,430	4,020	551	378	227	627

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	493	379	283	276	372	328	368	503	554	246	298	403
Max	3,700	7,149	3,179	2,483	3,754	2,798	3,115	3,350	4,620	1,796	3,605	3,891
(WY)	(1974)	(2001)	(1992)	(1968)	(1992)	(1997)	(1977)	(1957)	(1997)	(1988)	(1974)	(1952)
Min	18.0	20.7	27.5	31.7	37.7	23.7	20.9	41.0	7.93	0.00	0.09	0.56
(WY)	(1952)	(1957)	(1955)	(1957)	(1954)	(1954)	(1955)	(1984)	(1953)	(1956)	(1952)	(1954)

08151500 Llano River at Llano, TX—Continued**SUMMARY STATISTICS**

	Calendar Year 2010	Water Year 2011			Water Years 1939 - 2011	
Annual total	137,273		22,509.2			
Annual mean	376		61.7		375	
Highest annual mean					1,308	1997
Lowest annual mean					50.0	1954
Highest daily mean	6,660	Jan 29	278	May 12	88,500	Nov 4, 2000
Lowest daily mean	56	Aug 30	2.0	Aug 19	0.00	Aug 5, 1952
Annual seven-day minimum	59	Aug 27	2.3	Sep 4	0.00	Aug 27, 1952
Maximum peak flow			415	May 12	i260,000	Jun 23, 1997
Maximum peak stage			2.11	May 12	a38.86	Jun 23, 1997
Annual runoff (ac-ft)	272,300		44,650		271,400	
10 percent exceeds	750		117		533	
50 percent exceeds	145		72		155	
90 percent exceeds	73		3.6		44	

^a From floodmark.ⁱ From indirect measurement of peak flow.