Water-Data Report 2009

08063100 Richland Creek near Dawson, TX

Upper Trinity Basin
Richland Subbasin

LOCATION.--Lat 31°56′18″, long 96°40′52″ referenced to North American Datum of 1927, Navarro County, TX, Hydrologic Unit 12030108, on upstream right bank of bridge on State Highway 31, 1.3 mi upstream from St. Louis Southwestern Railway Lines bridge, 1.7 mi downstream from Navarro Mills Dam, 2.5 mi upstream from Post Oak Creek, and 3.6 mi northeast of Dawson.

DRAINAGE AREA.--333 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Oct. 1960 to current year.

PERIOD OF RECORD, Water-Quality.--

CHEMICAL DATA: Jan. to Mar. 1964, Oct. 1980 to Sept. 1982, Feb. 2000 to Aug. 2004.
BIOCHEMICAL DATA: Oct. 1980 to Sept. 1982, Feb. 2000 to July 2001.
RADIOCHEMICAL DATA: Mar. to May 1981, Feb. 2000 to Aug. 2004.

GAGE.--Water-stage recorder. Datum of gage is 367.52 ft above NGVD of 1929. Nov. 21, 1960, to Sept. 30, 1982, recording gage at same site and at 3.00 ft higher datum. Prior to Nov. 21, 1960, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records fair, including those for estimated daily discharge. Since Mar. 15, 1963, at least 10% of contributing drainage area has been regulated. At times flow may be affected by discharge from floodwater-retarding structures controlling runoff from a 1.28 mi^2 area below Navarro Mills Lake and above this station. No known diversions. No flow at times. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--3 years (water years 1961-63) prior to completion of Navarro Mills Lake, 181 ft^3/s (131,100 acre-ft/yr)

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1895, about 31 ft June 19, 1929, from information by local residents. Floods in 1946 and 1957 reached a stage of about 26 ft, from information by local residents.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--WATER YEARS 1961-1963: Maximum discharge, 25,500 ft^3/s, July 3, 1961, gage height, 22.50 ft, from rating curve extended above 14,000 ft^3/s; no flow at times.

REVISIONS.--The maximum discharge for the water year 1988 has been revised to 827 ft^3s, Apr. 8, 1988, gage height, 13.17 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.22	0.74	0.95	0.67	0.26	0.52	0.59	687	1.2	0.25	0.36	0.18
2	0.24	0.86	1.1	0.62	0.26	0.56	0.60	448	0.84	0.24	0.36	0.18
3	0.24	1.0	0.91	0.55	0.32	0.56	0.58	490	0.27	0.24	0.30	0.20
4	0.27	1.1	0.88	0.50	0.34	0.53	0.59	735	0.22	0.23	0.29	0.24
5	0.36	1.1	0.95	0.66	0.38	0.54	0.57	954	0.19	0.25	0.28	0.27
6	0.48	1.2	1.2	0.67	0.46	0.49	0.53	780	0.19	0.37	0.26	0.27
7	0.59	1.2	0.99	0.58	0.53	0.49	0.57	436	0.19	0.31	0.24	0.25
8	0.48	1.1	0.91	0.55	0.46	0.50	0.60	223	0.19	0.28	0.23	0.23
9	0.56	1.1	0.83	0.54	0.44	0.48	0.61	54	0.19	0.26	0.22	0.21
10	0.58	1.0	0.76	0.50	0.41	0.48	0.60	47	0.20	0.25	0.19	0.18
11	0.62	1.4	0.88	0.56	0.44	0.83	0.57	41	0.32	0.24	0.18	0.21
12	0.65	1.6	0.73	0.63	0.36	1.8	0.78	20	0.25	0.23	0.17	0.28
13	0.64	1.5	0.71	0.59	0.38	6.5	0.65	6.9	0.24	0.23	0.17	73
14	0.62	1.3	0.67	0.67	0.37	12	0.55	6.8	0.23	0.23	0.21	620
15	0.61	1.3	0.60	0.66	0.35	1.4	0.54	6.7	0.23	0.22	0.24	416
16	0.61	1.6	0.83	0.66	0.30	0.98	0.49	7.1	0.22	0.23	0.21	197
17	0.58	1.7	0.74	0.62	0.37	0.89	1.5	6.7	0.22	0.25	0.20	154
18	0.59	0.88	0.63	0.34	0.39	0.87	37	6.6	0.23	0.25	0.21	17
19	0.59	0.53	0.58	0.26	0.34	0.82	5.2	6.3	0.24	0.24	0.22	17
20	0.54	0.52	0.55	0.45	0.42	0.84	12	3.5	0.26	0.24	0.23	16
21	0.50	0.38	0.49	0.46	0.42	0.89	39	1.2	0.26	0.26	0.28	17
22	0.51	0.60	0.57	0.49	0.45	0.91	39	1.4	0.25	0.25	0.27	142
23	0.57	0.60	0.60	0.49	0.47	0.95	39	1.4	0.25	0.24	0.26	245
24	0.59	0.57	0.58	0.44	0.49	0.87	38	1.4	0.25	0.26	0.25	117
25	0.62	0.74	0.53	1.6	0.48	0.75	39	1.3	0.24	0.26	0.24	18
26	0.58	0.77	0.59	0.21	0.49	0.74	40	1.3	0.24	0.25	0.22	17
27	0.56	0.73	0.58	0.22	0.47	0.79	89	1.3	0.25	0.27	0.21	16
28	0.78	0.80	0.61	0.53	0.46	0.67	117	1.3	0.25	0.30	0.22	7.3
29	0.83	0.89	0.66	0.32	---	0.64	569	1.3	0.25	0.28	0.21	0.28
30	0.81	0.89	0.62	0.26	---	e0.58	985	1.3	0.24	0.35	0.20	0.22
31	0.74	---	0.57	0.25	---	0.61	---	1.3	---	0.33	0.18	---
Total	17.16	29.70	22.80	16.55	11.31	40.48	2,059.12	4,980.1	8.60	8.09	7.31	2,092.50
Mean	0.55	0.99	0.74	0.53	0.40	1.31	68.6	161	0.29	0.26	0.24	69.8
Max	0.83	1.7	1.2	1.6	0.53	12	985	954	1.2	0.37	0.36	620
Min	0.22	0.38	0.49	0.21	0.26	0.48	0.49	1.2	0.19	0.22	0.17	0.18
Ac-ft	34	59	45	33	22	80	4,080	9,880	17	16	14	4,150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2009 [Z], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	40.3	126	170	189	183	212	230	258	314	96.1	32.1	20.8
Max	400	1,366	1,425	1,288	1,090	971	1,039	980	1,461	773	541	269
(WY)	(1974)	(1968)	(2005)	(1998)	(1992)	(1970)	(2007)	(1980)	(2007)	(1968)	(1995)	(1974)
Min	0.00	0.00	0.00	0.06	0.07	0.22	0.02	0.02	0.00	0.00	0.00	0.00
(WY)	(1964)	(1964)	(1964)	(1964)	(1964)	(1971)	(1964)	(1964)	(1964)	(1970)	(2006)	(2006)

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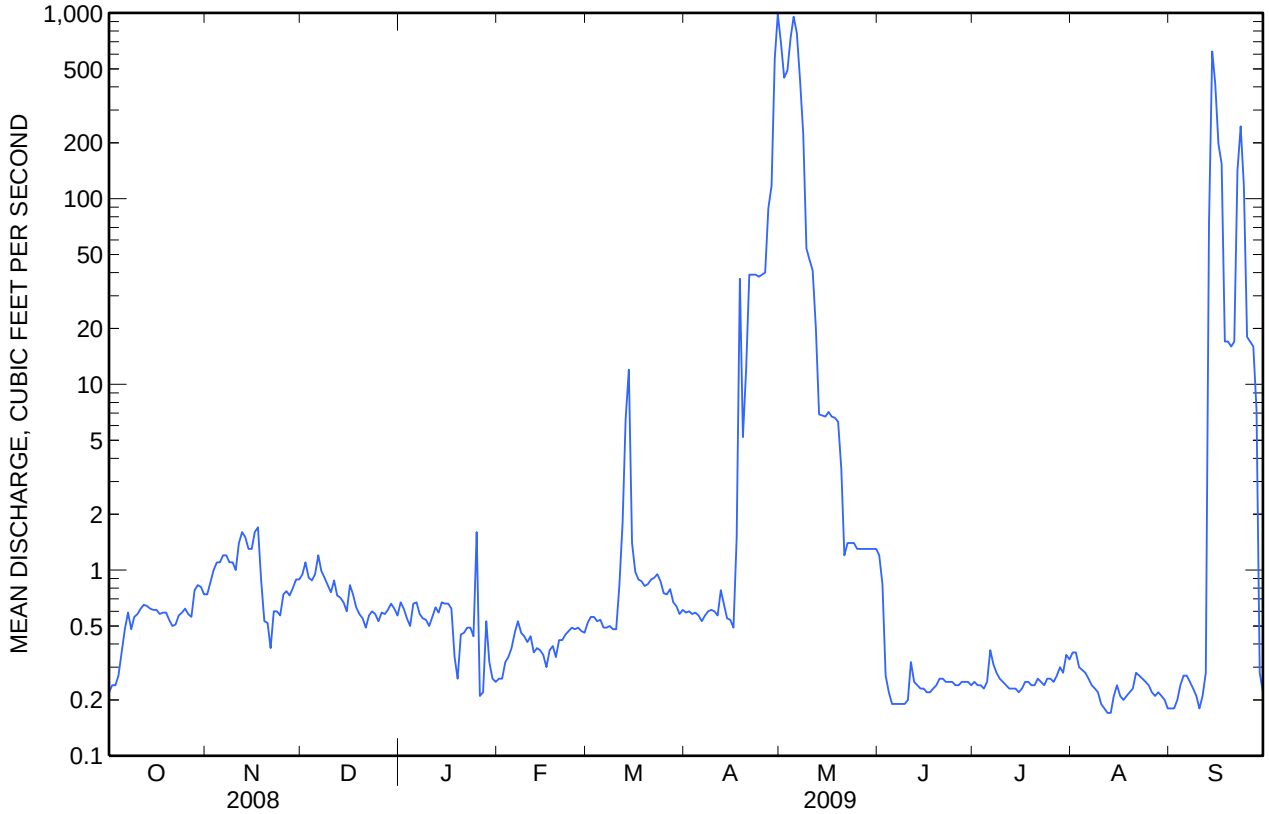
SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1964 - 2009 [Z]	
Annual total	28,328.13		9,293.72			
Annual mean	77.4		25.5		156	
Highest annual mean					561	1968
Lowest annual mean					0.20	1964
Highest daily mean	1,060	Mar 29	985	Apr 30	2,620	Aug 4, 1995
Lowest daily mean	0.20	Sep 27	0.17	Aug 12	0.00	Oct 1, 1963
Annual seven-day minimum	0.21	Sep 25	0.20	Jun 4	0.00	Oct 1, 1963
Maximum peak flow			1,570	Sep 14	3,850	Nov 24, 1974
Maximum peak stage			16.14	Sep 14	22.61	Jan 6, 1998
Annual runoff (ac-ft)	56,190		18,430		112,700	
10 percent exceeds	169		16		609	
50 percent exceeds	0.92		0.56		1.5	
90 percent exceeds	0.55		0.23		0.04	

[Z] Period of regulated streamflow.