Water-Data Report 2007

# 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, at downstream side 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. Water-quality records: Chemical data: Oct. 1980 to Sept. 1982, Oct. 1998 to Sept. 2004. Biochemical data: Oct. 1980 to Sept. 1982, Oct. 1998 to Sept. 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 good. 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.

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.

**08063100 Richland Creek near Dawson, TX—Continued**

**DISCHARGE, CUBIC FEET PER SECOND**
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**
**DAILY MEAN VALUES**

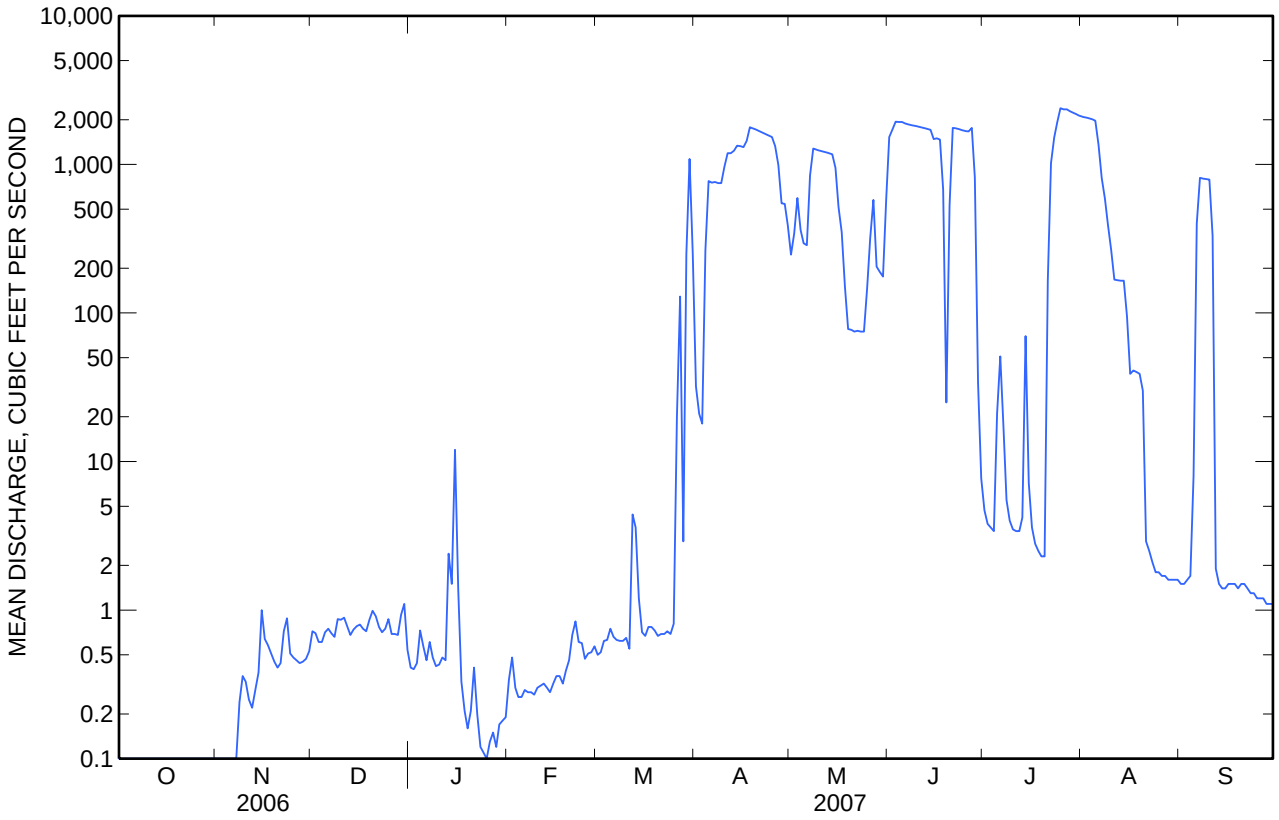
| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.72 | 0.41 | 0.34 | 0.50 | 32 | 247 | 1,530 | 4.7 | 2,090 | 1.5 |
| 2 | 0.00 | 0.00 | 0.70 | 0.40 | 0.48 | 0.52 | 21 | 343 | 1,720 | 3.8 | 2,070 | 1.5 |
| 3 | 0.00 | 0.00 | 0.61 | 0.44 | 0.30 | 0.62 | 18 | 594 | 1,940 | 3.6 | 2,050 | 1.6 |
| 4 | 0.00 | 0.00 | 0.61 | 0.73 | 0.26 | 0.63 | 264 | 362 | 1,930 | 3.4 | 2,010 | 1.7 |
| 5 | 0.00 | 0.00 | 0.71 | 0.57 | 0.26 | 0.75 | 774 | 295 | 1,930 | 21 | 1,970 | 8.0 |
| 6 | 0.00 | 0.00 | 0.75 | 0.46 | 0.29 | 0.66 | 755 | 286 | 1,890 | 51 | 1,360 | 400 |
| 7 | 0.00 | 0.00 | 0.70 | 0.61 | 0.28 | 0.63 | 763 | 844 | 1,860 | 17 | 810 | 812 |
| 8 | 0.00 | 0.24 | 0.66 | 0.48 | 0.28 | 0.62 | 749 | 1,280 | 1,840 | 5.5 | 589 | 803 |
| 9 | 0.00 | 0.36 | 0.87 | 0.42 | 0.27 | 0.62 | 749 | 1,260 | 1,820 | 4.0 | 392 | 796 |
| 10 | 0.00 | 0.33 | 0.86 | 0.43 | 0.30 | 0.65 | 966 | 1,240 | 1,800 | 3.5 | 266 | 790 |
| 11 | 0.00 | 0.25 | 0.89 | 0.48 | 0.31 | 0.55 | 1,190 | 1,220 | 1,780 | 3.4 | 168 | 331 |
| 12 | 0.00 | 0.22 | 0.78 | 0.46 | 0.32 | 4.4 | 1,190 | 1,210 | 1,760 | 3.4 | 166 | 1.9 |
| 13 | 0.00 | 0.29 | 0.68 | 2.4 | 0.30 | 3.6 | 1,240 | 1,190 | 1,730 | 4.2 | 165 | 1.5 |
| 14 | 0.00 | 0.38 | 0.74 | 1.5 | 0.28 | 1.2 | 1,340 | 1,170 | 1,710 | 70 | 165 | 1.4 |
| 15 | 0.00 | 1.0 | 0.78 | 12 | 0.32 | 0.71 | 1,330 | 947 | 1,480 | 7.2 | 95 | 1.4 |
| 16 | 0.00 | 0.64 | 0.80 | 1.4 | 0.36 | 0.67 | 1,310 | 517 | 1,500 | 3.6 | 39 | 1.5 |
| 17 | 0.00 | 0.58 | 0.75 | 0.33 | 0.36 | 0.77 | 1,440 | 350 | 1,470 | 2.8 | 41 | 1.5 |
| 18 | 0.00 | 0.51 | 0.72 | 0.21 | 0.32 | 0.77 | 1,780 | 151 | 676 | 2.5 | 40 | 1.5 |
| 19 | 0.00 | 0.45 | 0.86 | 0.16 | 0.39 | 0.73 | 1,750 | 78 | 25 | 2.3 | 39 | 1.4 |
| 20 | 0.00 | 0.41 | 0.99 | 0.21 | 0.46 | 0.67 | 1,710 | 77 | 528 | 2.3 | 30 | 1.5 |
| 21 | 0.00 | 0.44 | 0.91 | 0.41 | 0.68 | 0.69 | 1,680 | 75 | 1,760 | 165 | 2.9 | 1.5 |
| 22 | 0.00 | 0.72 | 0.77 | 0.20 | 0.84 | 0.69 | 1,640 | 76 | 1,750 | 1,020 | 2.5 | 1.4 |
| 23 | 0.00 | 0.88 | 0.71 | 0.12 | 0.61 | 0.72 | 1,600 | 75 | 1,730 | 1,520 | 2.1 | 1.3 |
| 24 | 0.00 | 0.51 | 0.75 | 0.11 | 0.60 | 0.69 | 1,560 | 75 | 1,700 | 1,920 | 1.8 | 1.3 |
| 25 | 0.00 | 0.48 | 0.87 | 0.10 | 0.47 | 0.81 | 1,530 | 148 | 1,680 | 2,390 | 1.8 | 1.2 |
| 26 | 0.00 | 0.46 | 0.69 | 0.13 | 0.51 | 20 | 1,330 | 319 | 1,670 | 2,350 | 1.7 | 1.2 |
| 27 | 0.00 | 0.44 | 0.69 | 0.15 | 0.52 | 129 | 992 | 577 | 1,760 | 2,350 | 1.7 | 1.2 |
| 28 | 0.00 | 0.45 | 0.68 | 0.12 | 0.57 | 2.9 | 548 | 205 | 817 | 2,280 | 1.6 | 1.1 |
| 29 | 0.00 | 0.47 | 0.93 | 0.17 | --- | 249 | 542 | 189 | 34 | 2,230 | 1.6 | 1.1 |
| 30 | 0.00 | 0.53 | 1.1 | 0.18 | --- | 1,090 | 389 | 176 | 7.7 | 2,180 | 1.6 | 1.1 |
| 31 | 0.00 | --- | 0.54 | 0.19 | --- | 250 | --- | 583 | --- | 2,130 | 1.6 | --- |
| Total | 0.00 | 11.04 | 23.82 | 25.98 | 11.28 | 1,764.77 | 31,182 | 16,159 | 43,827.7 | 20,754.2 | 14,575.9 | 3,972.3 |
| Mean | 0.00 | 0.37 | 0.77 | 0.84 | 0.40 | 56.9 | 1,039 | 521 | 1,461 | 669 | 470 | 132 |
| Max | 0.00 | 1.0 | 1.1 | 12 | 0.84 | 1,090 | 1,780 | 1,280 | 1,940 | 2,390 | 2,090 | 812 |
| Min | 0.00 | 0.00 | 0.54 | 0.10 | 0.26 | 0.50 | 18 | 75 | 7.7 | 2.3 | 1.6 | 1.1 |
| Ac-ft | 0.00 | 22 | 47 | 52 | 22 | 3,500 | 61,850 | 32,050 | 86,930 | 41,170 | 28,910 | 7,880 |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2007 [Z], BY WATER YEAR (WY)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 42.1 | 132 | 178 | 197 | 192 | 219 | 233 | 255 | 327 | 100 | 33.5 | 20.2 |
| 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) |

**08063100 Richland Creek near Dawson, TX—Continued**

**SUMMARY STATISTICS**

| | Calendar Year 2006 | | Water Year 2007 | | Water Years 1964 - 2007 [Z] | |
|---|---|---|---|---|---|---|
| **Annual total** | 119.36 | | 132,307.99 | | | |
| **Annual mean** | 0.33 | | 362 | | 160 | |
| **Highest annual mean** | | | | | 561 | 1968 |
| **Lowest annual mean** | | | | | 0.20 | 1964 |
| **Highest daily mean** | 19 | Apr 29 | 2,390 | Jul 25 | 2,620 | Aug 4, 1995 |
| **Lowest daily mean** | 0.00 | Mar 29 | 0.00 | Oct 1 | 0.00 | Oct 1, 1963 |
| **Annual seven-day minimum** | 0.00 | Mar 29 | 0.00 | Oct 1 | 0.00 | Oct 1, 1963 |
| **Maximum peak flow** | | | 2,750 | Mar 30 | 3,850 | Nov 24, 1974 |
| **Maximum peak stage** | | | 20.27 | Mar 30 | 22.61 | Jan 6, 1998 |
| **Annual runoff (ac-ft)** | 237 | | 262,400 | | 116,200 | |
| **10 percent exceeds** | 0.70 | | 1,670 | | 649 | |
| **50 percent exceeds** | 0.16 | | 1.4 | | 1.6 | |
| **90 percent exceeds** | 0.00 | | 0.00 | | 0.04 | |

[Z] Period of regulated streamflow.