Water-Data Report 2012

# 08059000 East Fork Trinity River near McKinney, TX

Upper Trinity Basin
East Fork Trinity Subbasin

LOCATION.--Lat 33°12′13″, long 96°35′44″ referenced to North American Datum of 1927, Collin County, TX, Hydrologic Unit 12030106, on downstream right bank of U.S. Highway 380 bridge, 1.1 mi east of Highway 5, 1.2 mi northeast of downtown McKinney, 4.2 mi downstream from Honey Creek, 11.0 mi upstream from Wilson Creek, 22.0 mi upstream from Lavon Dam, and at river mile 82.4.

DRAINAGE AREA.--190 $mi^2$.

## SURFACE-WATER RECORDS

PERIOD OF RECORD.--Sept. 1949 to Sept. 1975, Dec. 2009 to current year.

PERIOD OF RECORD, Water-Quality.--
CHEMICAL DATA: Dec. 1965.

GAGE.--Water-stage recorder. Datum of gage is 511.69 ft above NGVD of 1929. Satellite telemeter at station.

REMARKS.--Records fair except daily mean discharges from June through Sept., which are poor. There are small diversions for irrigation above station. Flow from 91.7 $mi^2$ above this station is partially controlled by 51 floodwater-retarding structures with a combined capacity of 33,760 acre-ft, of which 6,900 acre-ft is sediment-pool capacity. The capacity in these pools allocated to sediment storage will be used for conservation storage until eliminated by sedimentation. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1913, 21 ft in Apr. 1942, from information by local residents.

REVISIONS.--WSP 1512: 1950, 1951(P). WSP 1732: 1950-1954(P), 1956(P). WSP 1922: Drainage area.



Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 08059000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/08059000.2012.pdf

**08059000 East Fork Trinity River near McKinney, TX—Continued**

**DISCHARGE, CUBIC FEET PER SECOND**
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**
**DAILY MEAN VALUES**
[e, estimated]

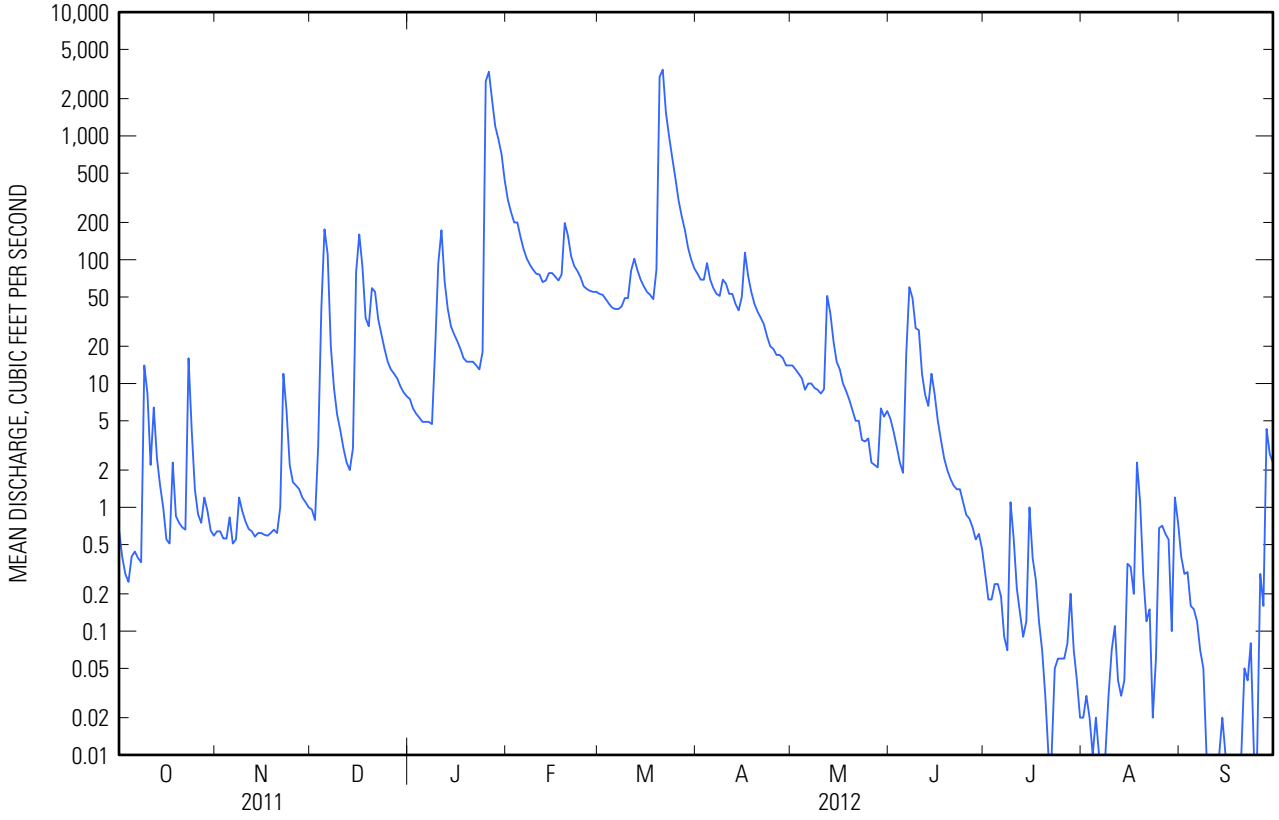
| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.66 | 0.64 | 0.96 | 7.5 | 305 | 53 | 77 | 14 | 5.2 | 0.29 | 0.02 | 0.40 |
| 2 | 0.40 | 0.64 | 0.79 | 6.3 | 243 | 52 | 69 | 13 | 4.1 | 0.18 | 0.03 | 0.29 |
| 3 | 0.29 | 0.56 | 3.1 | 5.7 | 200 | 48 | 69 | 12 | 3.1 | 0.18 | 0.02 | 0.30 |
| 4 | 0.25 | 0.56 | 40 | 5.3 | 200 | 44 | 94 | 11 | 2.3 | 0.24 | 0.01 | 0.16 |
| 5 | 0.40 | 0.83 | 176 | 4.9 | 153 | 41 | 69 | 8.9 | 1.9 | 0.24 | 0.02 | 0.15 |
| 6 | 0.44 | 0.51 | 111 | 4.9 | 121 | 40 | 59 | 10 | 17 | 0.19 | 0.01 | 0.12 |
| 7 | 0.39 | 0.55 | 20 | 4.9 | 102 | 40 | 53 | 10 | 60 | 0.09 | 0.01 | 0.07 |
| 8 | 0.36 | 1.2 | 9.2 | 4.7 | 91 | 42 | 51 | 9.2 | 49 | 0.07 | 0.00 | 0.05 |
| 9 | 14 | 0.93 | 5.6 | 19 | 83 | 49 | 69 | 8.9 | 28 | 1.1 | 0.03 | 0.00 |
| 10 | 8.3 | 0.77 | 4.2 | 94 | 77 | 49 | 64 | 8.3 | 27 | 0.56 | 0.07 | 0.00 |
| 11 | 2.2 | 0.67 | 3.0 | 173 | 76 | 82 | 53 | 9.0 | 12 | 0.22 | 0.11 | 0.00 |
| 12 | 6.4 | 0.64 | 2.3 | 67 | 66 | 102 | 53 | 51 | 8.1 | 0.14 | 0.04 | 0.00 |
| 13 | 2.5 | 0.58 | 2.0 | 40 | 68 | 82 | 44 | 37 | 6.6 | 0.09 | 0.03 | 0.00 |
| 14 | 1.5 | 0.62 | 3.0 | 29 | 78 | 69 | 39 | 22 | 12 | 0.12 | 0.04 | e0.02 |
| 15 | 0.99 | 0.62 | 79 | 25 | 78 | 61 | 50 | 15 | 8.2 | 1.0 | 0.35 | 0.01 |
| 16 | 0.55 | 0.60 | 160 | 22 | 73 | 55 | 114 | 13 | 5.0 | 0.39 | 0.33 | 0.00 |
| 17 | 0.51 | 0.59 | 88 | 19 | 68 | 52 | 74 | 10 | 3.5 | 0.26 | 0.20 | 0.00 |
| 18 | 2.3 | 0.62 | 34 | 16 | 76 | 48 | 55 | 8.7 | 2.5 | 0.12 | 2.3 | e0.00 |
| 19 | 0.85 | 0.66 | 29 | 15 | 198 | 83 | 44 | 7.4 | 2.0 | 0.07 | 1.1 | 0.00 |
| 20 | 0.75 | 0.62 | 59 | 15 | 157 | 3,000 | 38 | 6.1 | 1.7 | 0.03 | 0.28 | 0.00 |
| 21 | 0.69 | 1.0 | 55 | 15 | 107 | 3,430 | 34 | 5.0 | 1.5 | 0.01 | 0.12 | 0.05 |
| 22 | 0.66 | 12 | 33 | 14 | 89 | 1,540 | 30 | 5.0 | 1.4 | 0.01 | 0.15 | 0.04 |
| 23 | 16 | 6.0 | 25 | 13 | 81 | 990 | 24 | 3.5 | 1.4 | 0.05 | 0.02 | 0.08 |
| 24 | 4.2 | 2.2 | 19 | 18 | 72 | 666 | 20 | 3.4 | 1.1 | 0.06 | 0.06 | 0.00 |
| 25 | 1.4 | 1.6 | 15 | 2,760 | 61 | 455 | 19 | 3.6 | 0.87 | 0.06 | 0.68 | 0.00 |
| 26 | 0.88 | 1.5 | 13 | 3,300 | 58 | 302 | 17 | 2.3 | 0.81 | 0.06 | 0.71 | 0.29 |
| 27 | 0.75 | 1.4 | 12 | 1,960 | 56 | 224 | 17 | 2.2 | 0.69 | 0.08 | 0.61 | 0.16 |
| 28 | 1.2 | 1.2 | 11 | 1,200 | 55 | 174 | 16 | 2.1 | 0.55 | 0.20 | 0.55 | 4.3 |
| 29 | 0.93 | 1.1 | 9.5 | 943 | 55 | 125 | 14 | 6.3 | 0.61 | 0.07 | 0.10 | 2.7 |
| 30 | 0.65 | 1.0 | 8.5 | 714 | --- | 100 | 14 | 5.4 | 0.46 | 0.04 | 1.2 | 2.3 |
| 31 | 0.59 | --- | 7.9 | 438 | --- | 85 | --- | 6.0 | --- | 0.02 | e0.75 | --- |
| Mean | 2.32 | 1.41 | 33.5 | 386 | 109 | 393 | 48.1 | 10.6 | 8.95 | 0.20 | 0.32 | 0.38 |
| Max | 16 | 12 | 176 | 3,300 | 305 | 3,430 | 114 | 51 | 60 | 1.1 | 2.3 | 4.3 |
| Min | 0.25 | 0.51 | 0.79 | 4.7 | 55 | 40 | 14 | 2.1 | 0.46 | 0.01 | 0.00 | 0.00 |
| Ac-ft | 143 | 84 | 2,060 | 23,710 | 6,240 | 24,160 | 2,860 | 653 | 533 | 12 | 20 | 23 |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2012[h], BY WATER YEAR (WY)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 58.5 | 104 | 86.1 | 84.7 | 142 | 126 | 240 | 287 | 131 | 13.9 | 9.35 | 85.5 |
| Max | 489 | 1,008 | 1,179 | 386 | 610 | 605 | 1,673 | 1,700 | 707 | 71.9 | 140 | 541 |
| (WY) | (1974) | (1975) | (1972) | (2012) | (2010) | (1968) | (1957) | (1957) | (1951) | (1968) | (1950) | (1964) |
| Min | 0.07 | 0.14 | 0.19 | 0.26 | 0.42 | 2.19 | 9.05 | 1.68 | 0.75 | 0.02 | 0.00 | 0.00 |
| (WY) | (1964) | (1956) | (1956) | (1964) | (1964) | (1956) | (1959) | (1959) | (1956) | (1972) | (1972) | (1972) |

**08059000 East Fork Trinity River near McKinney, TX—Continued**

**SUMMARY STATISTICS**

| | Calendar Year 2011 | | Water Year 2012 | | Water Years 1950 - 2012[h] | |
|---|---|---|---|---|---|---|
| **Annual mean** | 40.8 | | 83.3 | | 113 | |
| **Highest annual mean** | | | | | 307 | 1957 |
| **Lowest annual mean** | | | | | 10.1 | 1959 |
| **Highest daily mean** | 2,500 | May 3 | 3,430 | Mar 21 | 9,780 | Apr 25, 1962 |
| **Lowest daily mean** | 0.00 | Jul 29 | 0.00 | Aug 8 | 0.00 | Sep 5, 1952 |
| **Annual seven-day minimum** | 0.01 | Aug 7 | 0.00 | Sep 9 | 0.00 | Sep 6, 1953 |
| **Maximum peak flow** | | | 3,710 | Mar 20 | 23,900 | Apr 26, 1957 |
| **Maximum peak stage** | | | 17.00 | Mar 20 | 17.23 | Jun 11, 1950 |
| **Annual runoff (ac-ft)** | 29,540 | | 60,510 | | 81,720 | |
| **10 percent exceeds** | 60 | | 92 | | 181 | |
| **50 percent exceeds** | 8.5 | | 4.9 | | 11 | |
| **90 percent exceeds** | 0.15 | | 0.06 | | 0.20 | |

[h] See Period of Record paragraph.