



Water-Data Report 2008

08211900 San Fernando Creek at Alice, TX

Southwestern Texas Coastal Basin
San Fernando Subbasin

LOCATION.--Lat 27°46'20", long 98°02'00" referenced to North American Datum of 1927, Jim Wells County, TX, Hydrologic Unit 12110204, on left bank 34 ft downstream from downstream bridge on State Highways 44 and 359, 0.5 mi downstream from confluence of San Diego and Chiltipin Creeks, 2.3 mi upstream of Pintas Creek, and 2.7 mi northeast of Alice.

DRAINAGE AREA.--507 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Dec. 1964 to Mar. 1987, Apr. 1999 to current year.

PERIOD OF RECORD, Water-Quality.--

CHEMICAL DATA: May 1965.

BIOCHEMICAL DATA: May 1965.

GAGE.--Water-stage recorder. Datum of gage is 160.05 ft above NGVD of 1929. Prior to Mar. 1987 at datum 1.63 ft higher at same site. Satellite telemeter at station.

REMARKS.--Records good. San Diego Creek joins Chiltipin Creek below Lake Alice to form San Fernando Creek. Since installation of gage at least 10% of contributing drainage area has been regulated. Flow is affected at times by discharge from the flood-detention pools of ten floodwater-retarding structures. These structures control runoff from 170 mi² in the San Diego-Rosita drainage basins. Records furnished by the city of Alice show that sewage effluent is discharged into San Diego Creek 1.3 mi upstream, which comprises most of the low flow. City of Alice (Engineering Department) has the ability to divert water, via pump, to the golf course, bypassing the gage. Logs are kept and available upon request of the City. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically.

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

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | 3.6 | 1.2 | 1.9 | 1.0 | 0.85 | 1.5 | 1.5 | 0.05 | 0.09 | 1.3 | 1.5 | 1.3 |
| 2 | 7.4 | 0.56 | 2.0 | 0.82 | 0.80 | 1.5 | 3.1 | 0.03 | 0.51 | 1.3 | 1.5 | 1.5 |
| 3 | 3.5 | 1.5 | 2.2 | 0.55 | 0.83 | 1.3 | 5.8 | 0.25 | 1.1 | 1.1 | 1.5 | 1.5 |
| 4 | 3.2 | 1.4 | 1.9 | 0.38 | 0.55 | 1.0 | 7.9 | 0.60 | 0.96 | 1.4 | 1.0 | 1.5 |
| 5 | 4.1 | 1.3 | 2.0 | 0.70 | 0.51 | 0.71 | 7.6 | 0.69 | 0.56 | 1.4 | 0.29 | 1.3 |
| 6 | 3.1 | 1.4 | 1.6 | 0.66 | 0.98 | 1.6 | 1.7 | 0.66 | 0.16 | 1.3 | 0.27 | 0.30 |
| 7 | 2.8 | 1.1 | 0.92 | 0.33 | 1.0 | 1.5 | 0.42 | 0.72 | 0.56 | 0.84 | 0.24 | 0.24 |
| 8 | 2.8 | 1.1 | 0.86 | 0.39 | 0.91 | 1.5 | 0.38 | 0.71 | 0.92 | 1.1 | 0.18 | 0.86 |
| 9 | 2.7 | 0.75 | 1.4 | 0.85 | 1.0 | 1.0 | 0.61 | 0.49 | 1.0 | 1.5 | 0.75 | 1.2 |
| 10 | 2.4 | 1.4 | 0.89 | 0.93 | 1.0 | 1.1 | 0.72 | 0.05 | 0.53 | 1.4 | 1.4 | 1.2 |
| 11 | 2.3 | 1.3 | 0.92 | 0.73 | 1.1 | 1.6 | 1.0 | 0.01 | 0.16 | 1.7 | 1.4 | 1.2 |
| 12 | 2.4 | 0.69 | 1.4 | 0.81 | 1.1 | 1.6 | 1.0 | 0.36 | 0.10 | 1.4 | 1.4 | 1.2 |
| 13 | 1.7 | 0.36 | 1.2 | 0.84 | 1.1 | 1.1 | 0.98 | 0.69 | 0.27 | 1.3 | 1.5 | 1.2 |
| 14 | 1.8 | 1.4 | 1.1 | 0.77 | 0.67 | 0.78 | 1.1 | 0.67 | 0.90 | 1.3 | 1.2 | 1.4 |
| 15 | 2.1 | 1.6 | 1.1 | 0.45 | 0.51 | 1.6 | 1.3 | 0.72 | 0.85 | 0.59 | 0.33 | 1.6 |
| 16 | 1.9 | 1.7 | 0.91 | 1.2 | 1.0 | 1.5 | 1.3 | 1.00 | 0.93 | 0.61 | 0.91 | 1.5 |
| 17 | 2.3 | 1.8 | 0.54 | 1.3 | 1.0 | 1.1 | 0.59 | 0.84 | 0.53 | 0.92 | 1.5 | 1.7 |
| 18 | 2.1 | 1.2 | 0.46 | 1.2 | 1.1 | 0.42 | 0.05 | 0.95 | 0.46 | 1.2 | 1.4 | 2.0 |
| 19 | 2.3 | 1.1 | 0.86 | 1.5 | 1.2 | 0.91 | 0.02 | 1.2 | 0.52 | 0.33 | 1.6 | 1.5 |
| 20 | 2.2 | 0.92 | 0.66 | 1.3 | 1.3 | 1.6 | 0.39 | 1.3 | 0.30 | 0.25 | 2.1 | 0.43 |
| 21 | 2.3 | 1.9 | 0.45 | 1.1 | 1.4 | 1.6 | 0.76 | 0.94 | 0.22 | 0.80 | 1.8 | 1.3 |
| 22 | 2.5 | 2.0 | 0.01 | 0.93 | 1.6 | 1.5 | 0.80 | 0.07 | 0.14 | 1.3 | 1.6 | 0.77 |
| 23 | 1.6 | 2.1 | 0.35 | 0.92 | 1.7 | 1.4 | 0.88 | 0.41 | 0.64 | 1.8 | 1.4 | 0.40 |
| 24 | 1.5 | 2.2 | 0.76 | 1.0 | 1.7 | 0.87 | 0.65 | 1.1 | 1.0 | 2.6 | 1.4 | 1.4 |
| 25 | 2.0 | 2.0 | 0.67 | 1.2 | 1.9 | 1.4 | 0.49 | 1.1 | 1.2 | 2.3 | 1.5 | 0.99 |
| 26 | 1.7 | 2.0 | 0.82 | 1.2 | 1.5 | 1.5 | 0.98 | 1.3 | 1.3 | 2.0 | 1.4 | 1.4 |
| 27 | 1.6 | 2.1 | 0.81 | 1.2 | 1.3 | 1.5 | 0.79 | 1.3 | 0.71 | 1.9 | 1.5 | 0.72 |
| 28 | 1.5 | 2.1 | 0.95 | 1.0 | 0.96 | 2.3 | 0.90 | 0.85 | 0.54 | 1.7 | 1.4 | 0.75 |
| 29 | 1.2 | 2.1 | 0.96 | 1.1 | 1.6 | 2.4 | 0.88 | 0.76 | 1.1 | 0.97 | 2.5 | 1.6 |
| 30 | 1.6 | 2.1 | 0.95 | 0.97 | --- | 2.4 | 0.66 | 1.2 | 1.2 | 0.63 | 1.7 | 2.0 |
| 31 | 1.7 | --- | 1.0 | 1.00 | --- | 1.4 | --- | 0.16 | --- | 0.58 | 1.3 | --- |
| Total | 75.9 | 44.38 | 32.55 | 28.33 | 32.17 | 43.19 | 45.25 | 21.18 | 19.46 | 38.82 | 39.47 | 35.96 |
| Mean | 2.45 | 1.48 | 1.05 | 0.91 | 1.11 | 1.39 | 1.51 | 0.68 | 0.65 | 1.25 | 1.27 | 1.20 |
| Max | 7.4 | 2.2 | 2.2 | 1.5 | 1.9 | 2.4 | 7.9 | 1.3 | 1.3 | 2.6 | 2.5 | 2.0 |
| Min | 1.2 | 0.36 | 0.01 | 0.33 | 0.51 | 0.42 | 0.02 | 0.01 | 0.09 | 0.25 | 0.18 | 0.24 |
| Ac-ft | 151 | 88 | 65 | 56 | 64 | 86 | 90 | 42 | 39 | 77 | 78 | 71 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2008^b, BY WATER YEAR (WY)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Mean | 35.7 | 19.7 | 4.19 | 3.20 | 3.59 | 4.06 | 8.20 | 19.9 | 8.14 | 29.8 | 25.7 | 102 |
| Max | 827 | 492 | 38.6 | 17.0 | 18.5 | 28.6 | 93.7 | 121 | 59.8 | 591 | 403 | 1,419 |
| (WY) | (1972) | (2002) | (2002) | (1980) | (1969) | (1965) | (1985) | (2004) | (1981) | (2002) | (1980) | (1971) |
| Min | 0.84 | 0.95 | 0.93 | 0.91 | 0.84 | 0.94 | 0.72 | 0.68 | 0.65 | 0.63 | 0.69 | 0.70 |
| (WY) | (2001) | (2000) | (2000) | (2008) | (2000) | (2000) | (2000) | (2008) | (2008) | (2000) | (2000) | (2000) |

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SUMMARY STATISTICS

| | Calendar Year 2007 | Water Year 2008 | Water Years 1965 - 2008^h |
|---------------------------------|---------------------------|------------------------|--|
| Annual total | 8,814.87 | 456.66 | |
| Annual mean | 24.2 | 1.25 | 23.0 |
| Highest annual mean | | | 126 |
| Lowest annual mean | | | 0.94 |
| Highest daily mean | 1,620 | May 25 | 22,200 |
| Lowest daily mean | 0.01 | Dec 22 | 0.01 |
| Annual seven-day minimum | 0.48 | Dec 17 | 0.31 |
| Maximum peak flow | | 11 | 26,800 |
| Maximum peak stage | | 1.57 | 16.51 |
| Annual runoff (ac-ft) | 17,480 | 906 | 16,660 |
| 10 percent exceeds | 12 | 2.1 | 8.0 |
| 50 percent exceeds | 4.0 | 1.1 | 2.0 |
| 90 percent exceeds | 1.1 | 0.41 | 0.99 |

^h See Period of Record paragraph.

