

11042000 San Luis Rey River at Oceanside, CA

San Luis Rey River Basin

LOCATION.--Lat 33°13'05", long 117°21'34" referenced to North American Datum of 1927, in SE ¼ SW ¼ sec.13, T.11 S., R.5 W., San Diego County, CA, Hydrologic Unit 18070303, on left bank, 1.9 mi upstream from bridge on Interstate Highway 5, 2.4 mi upstream from mouth, and 1.9 mi northeast of Oceanside.

DRAINAGE AREA.--557 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942, October 1946 to current year. Discharge measurements only Oct. 1, 1992, to Aug. 16, 1993, and Nov. 10, 1997, to Apr. 28, 1998.

CHEMICAL DATA: Water years 1978-92.

BIOLOGICAL DATA: Water years 1978-81.

SPECIFIC CONDUCTANCE: Water years 1978-81.

WATER TEMPERATURE: Water years 1971-81.

SEDIMENT DATA: Water years 1969-93.

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above NGVD of 1929, from topographic map. April 1912 to September 1914, nonrecording gage at site 0.4 mi downstream at different datum. January 1916, nonrecording gage 1.4 mi downstream at different datum. October 1929 to Nov. 9, 1981, at site 0.8 mi downstream at different datum.

REMARKS.--Records fair. Gage out of operation for channel work from Nov. 10, 1997, to Apr. 28, 1998. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft, since 1923. Several diversions for irrigation and domestic use upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,600 ft³/s, Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in some years.

Since regulation by Lake Henshaw, maximum discharge, 25,700 ft³/s, Jan. 16, 1993, gage height, 21.70 ft, on basis of slope-area measurement of peak flow.

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

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------|------|------|---------|-------|-------|-------|-------|-------|-------|------|------|------|
| 1 | 1.7 | 1.5 | 2.3 | 32 | 22 | 39 | 22 | 13 | 9.5 | 4.8 | 1.1 | 0.00 |
| 2 | 1.7 | 1.7 | 2.1 | 30 | 23 | 38 | 22 | 14 | 9.5 | 4.9 | 1.1 | 0.00 |
| 3 | 1.8 | 1.8 | 2.0 | 32 | 21 | 38 | 22 | 14 | 9.4 | 4.8 | 1.1 | 0.00 |
| 4 | 1.9 | 2.1 | 2.0 | 31 | 22 | 37 | 22 | 13 | 8.9 | 4.5 | 1.0 | 0.00 |
| 5 | 2.0 | 1.9 | 1.9 | 29 | 24 | 36 | 21 | 14 | 9.2 | 4.5 | 0.95 | 0.00 |
| 6 | 2.2 | 1.8 | 2.0 | 28 | 32 | 36 | 20 | 14 | 9.3 | 4.5 | 0.83 | 0.00 |
| 7 | 2.1 | 1.7 | 2.1 | 27 | 59 | 36 | 20 | 13 | 9.3 | 4.3 | 0.65 | 0.00 |
| 8 | 1.9 | 1.7 | 2.2 | 28 | 82 | 36 | 20 | 12 | 9.4 | 4.2 | 0.34 | 0.00 |
| 9 | 2.0 | 1.8 | 2.0 | 28 | 94 | 35 | 20 | 12 | 9.3 | 4.3 | 0.06 | 0.00 |
| 10 | 2.0 | 1.7 | 2.1 | 26 | 101 | 33 | 20 | 12 | 8.7 | 4.2 | 0.00 | 0.00 |
| 11 | 1.8 | 1.6 | 2.1 | 25 | 102 | 32 | 20 | 11 | 7.8 | 4.0 | 0.00 | 0.00 |
| 12 | 1.7 | 1.6 | 2.2 | 25 | 79 | 30 | 19 | 11 | 7.3 | 3.6 | 0.00 | 0.00 |
| 13 | 1.6 | 1.7 | 2.5 | 24 | 62 | 29 | 20 | 11 | 7.0 | 2.8 | 0.00 | 0.00 |
| 14 | 1.6 | 1.7 | 2.4 | 24 | 59 | 30 | 20 | 11 | 6.7 | 2.5 | 0.00 | 0.00 |
| 15 | 1.9 | 1.5 | 33 | 24 | 54 | 29 | 19 | 11 | 6.5 | 2.7 | 0.00 | 0.00 |
| 16 | 1.9 | 1.4 | 95 | 23 | 55 | 28 | 18 | 11 | 6.4 | 2.6 | 0.00 | 0.00 |
| 17 | 1.9 | 1.4 | 132 | 24 | 65 | 28 | 17 | 11 | 6.5 | 2.7 | 0.00 | 0.00 |
| 18 | 2.0 | 1.4 | 208 | 22 | 87 | 28 | 17 | 10 | 6.5 | 2.7 | 0.00 | 0.00 |
| 19 | 2.0 | 1.4 | 157 | 21 | 75 | 27 | 16 | 9.7 | 6.4 | 2.6 | 0.00 | 0.00 |
| 20 | 2.0 | 1.6 | 100 | 21 | 62 | 27 | 15 | 9.1 | 6.4 | 2.4 | 0.00 | 0.00 |
| 21 | 2.1 | 1.6 | 70 | 21 | 55 | 27 | 15 | 8.5 | 6.0 | 2.3 | 0.00 | 0.00 |
| 22 | 1.9 | 1.6 | 62 | 23 | 50 | 27 | 15 | 8.2 | 5.6 | 2.2 | 0.00 | 0.00 |
| 23 | 1.8 | 1.6 | 61 | 25 | 46 | 28 | 15 | 7.9 | 5.7 | 2.1 | 0.00 | 0.00 |
| 24 | 1.8 | 1.6 | 50 | 25 | 44 | 27 | 15 | 7.6 | 5.7 | 1.8 | 0.00 | 0.00 |
| 25 | 1.8 | 1.6 | 46 | 24 | 43 | 25 | 14 | 7.5 | 5.3 | 1.7 | 0.00 | 0.00 |
| 26 | 1.9 | 7.2 | 44 | 22 | 41 | 24 | 14 | 7.4 | 5.4 | 1.7 | 0.00 | 0.00 |
| 27 | 1.9 | 15 | 47 | 25 | 40 | 23 | 14 | 7.6 | 5.4 | 1.7 | 0.00 | 0.00 |
| 28 | 1.9 | 7.3 | 45 | 25 | 39 | 23 | 14 | 8.0 | 5.1 | 1.2 | 0.00 | 0.00 |
| 29 | 1.7 | 3.7 | 40 | 25 | --- | 23 | 14 | 8.7 | 5.1 | 1.2 | 0.00 | 0.00 |
| 30 | 1.7 | 2.8 | 37 | 24 | --- | 23 | 13 | 9.6 | 5.1 | 1.1 | 0.00 | 0.00 |
| 31 | 1.6 | --- | 34 | 23 | --- | 23 | --- | 9.1 | --- | 1.1 | 0.00 | --- |
| Total | 57.8 | 77.0 | 1,290.9 | 786 | 1,538 | 925 | 533 | 326.9 | 214.4 | 91.7 | 7.13 | 0.00 |
| Mean | 1.86 | 2.57 | 41.6 | 25.4 | 54.9 | 29.8 | 17.8 | 10.5 | 7.15 | 2.96 | 0.23 | 0.00 |
| Max | 2.2 | 15 | 208 | 32 | 102 | 39 | 22 | 14 | 9.5 | 4.9 | 1.1 | 0.00 |
| Min | 1.6 | 1.4 | 1.9 | 21 | 21 | 23 | 13 | 7.4 | 5.1 | 1.1 | 0.00 | 0.00 |
| Ac-ft | 115 | 153 | 2,560 | 1,560 | 3,050 | 1,830 | 1,060 | 648 | 425 | 182 | 14 | 0.00 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2009, BY WATER YEAR (WY)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Mean | 4.81 | 8.87 | 21.1 | 64.4 | 104 | 129 | 53.3 | 27.9 | 13.9 | 7.01 | 5.17 | 3.19 |
| Max | 86.6 | 144 | 196 | 1,347 | 1,858 | 1,211 | 432 | 346 | 293 | 207 | 213 | 85.9 |
| (WY) | (2005) | (1984) | (1979) | (2005) | (1980) | (1995) | (1980) | (1980) | (1980) | (1980) | (1980) | (1980) |
| Min | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (WY) | (1930) | (1930) | (1930) | (1930) | (1930) | (1930) | (1930) | (1931) | (1931) | (1930) | (1930) | (1930) |

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SUMMARY STATISTICS

| | Calendar Year 2008 | | Water Year 2009 | | Water Years 1930 - 2009 | |
|---------------------------------|--------------------|--------|-----------------|--------|-------------------------|--------------|
| Annual total | 18,906.9 | | 5,847.83 | | | |
| Annual mean | 51.7 | | 16.0 | | 36.3 | |
| Highest annual mean | | | | | 415 | 1980 |
| Lowest annual mean | | | | | 0.00 | 1931 |
| Highest daily mean | 2,230 | Jan 8 | 208 | Dec 18 | 11,700 | Jan 10, 2005 |
| Lowest daily mean | 1.2 | Sep 24 | 0.00 | Aug 10 | 0.00 | Oct 1, 1929 |
| Annual seven-day minimum | 1.4 | Sep 20 | 0.00 | Aug 10 | 0.00 | Oct 1, 1929 |
| Maximum peak flow | | | 253 | Dec 18 | 25,700 | Jan 16, 1993 |
| Maximum peak stage | | | 8.32 | Dec 18 | 21.70 | Jan 16, 1993 |
| Annual runoff (ac-ft) | 37,500 | | 11,600 | | 26,310 | |
| 10 percent exceeds | 123 | | 39 | | 57 | |
| 50 percent exceeds | 6.8 | | 7.2 | | 2.2 | |
| 90 percent exceeds | 1.7 | | 0.00 | | 0.00 | |

