

Water-Data Report 2011

**11180825 San Lorenzo Creek above Don Castro Reservoir, near Castro Valley, CA**

San Lorenzo Creek Basin

LOCATION.--Lat 37°41'43", long 122°02'38" referenced to North American Datum of 1927, Alameda County, CA, Hydrologic Unit 18050004, in San Lorenzo Grant, on right bank at Interstate Highway 580, 0.3 mi southeast of Independent School, and 2.2 mi east of Castro Valley.

DRAINAGE AREA.--18.0 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1980 to September 1994, October 1997 to current year.

WATER TEMPERATURE: Water years 1981-94, 1998-2003.

SEDIMENT DATA: Water years 1981-94, 1998-2003.

GAGE.--Water-stage recorder. Elevation of gage is 260 ft above NGVD of 1929, from topographic map. October 1980 to September 1994 at site 250 ft downstream at same datum.

REMARKS.--Records good. Some regulation of low flow by ponds upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,890 ft<sup>3</sup>/s, Feb. 3, 1998, gage height, 15.48 ft; no flow for many days in some years.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 275 ft<sup>3</sup>/s and (or) maximum (\*):

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|--------|------|-----------------------------------|---------------------|
| Dec 19 | 0830 | 371                               | 7.36                |
| Dec 29 | 0200 | 983                               | 10.38               |
| Feb 25 | 1000 | 326                               | 7.01                |
| Mar 20 | 0315 | 561                               | 8.56                |
| Mar 24 | 1345 | *1,610                            | *12.44              |

**11180825 San Lorenzo Creek above Don Castro Reservoir, near Castro Valley, CA—Continued**

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**  
**DAILY MEAN VALUES**

| <b>Day</b>   | <b>Oct</b> | <b>Nov</b> | <b>Dec</b> | <b>Jan</b> | <b>Feb</b> | <b>Mar</b> | <b>Apr</b> | <b>May</b> | <b>Jun</b> | <b>Jul</b> | <b>Aug</b> | <b>Sep</b> |
|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>1</b>     | 0.19       | 0.30       | 0.98       | 20         | 2.8        | 24         | 31         | 4.4        | 3.2        | 1.4        | 0.83       | 0.69       |
| <b>2</b>     | 0.21       | 0.30       | 0.98       | 17         | 2.5        | 26         | 26         | 4.2        | 2.8        | 1.2        | 0.83       | 0.68       |
| <b>3</b>     | 0.20       | 0.28       | 0.98       | 13         | 2.4        | 19         | 22         | 4.2        | 2.7        | 1.2        | 0.83       | 0.64       |
| <b>4</b>     | 0.23       | 0.36       | 0.96       | 11         | 2.4        | 14         | 20         | 4.1        | 9.4        | 1.1        | 0.82       | 0.60       |
| <b>5</b>     | 0.25       | 0.35       | 4.7        | 11         | 2.4        | 13         | 18         | 3.8        | 3.2        | 1.1        | 0.85       | 0.67       |
| <b>6</b>     | 0.24       | 0.31       | 2.4        | 9.0        | 2.2        | 25         | 16         | 3.7        | 2.7        | 1.1        | 0.83       | 0.69       |
| <b>7</b>     | 0.24       | 4.2        | 1.1        | 8.6        | 2.2        | 17         | 15         | 3.7        | 2.6        | 1.0        | 0.81       | 0.67       |
| <b>8</b>     | 0.24       | 1.0        | 8.3        | 7.8        | 2.1        | 13         | 14         | 3.7        | 2.4        | 1.0        | 0.82       | 0.69       |
| <b>9</b>     | 0.25       | 0.55       | 3.8        | 7.3        | 2.1        | 12         | 12         | 3.6        | 2.3        | 1.0        | 0.79       | 0.72       |
| <b>10</b>    | 0.24       | 0.67       | 1.6        | 6.5        | 2.1        | 11         | 11         | 3.5        | 2.2        | 1.0        | 0.79       | 0.67       |
| <b>11</b>    | 0.24       | 0.36       | 1.4        | 6.4        | 2.1        | 10         | 10         | 3.5        | 2.2        | 1.1        | 0.79       | 0.71       |
| <b>12</b>    | 0.21       | 0.32       | 1.3        | 5.7        | 2.1        | 10         | 9.9        | 3.4        | 2.3        | 1.1        | 0.81       | 0.72       |
| <b>13</b>    | 0.20       | 0.31       | 1.3        | 6.2        | 2.1        | 14         | 9.9        | 3.3        | 2.3        | 1.2        | 0.73       | 0.72       |
| <b>14</b>    | 0.20       | 0.30       | 6.6        | 5.4        | 2.1        | 17         | 8.2        | 3.5        | 2.3        | 1.2        | 0.76       | 0.74       |
| <b>15</b>    | 0.20       | 0.29       | 2.6        | 4.9        | 2.6        | 15         | 7.8        | 5.9        | 2.3        | 1.1        | 0.77       | 0.76       |
| <b>16</b>    | 0.22       | 0.29       | 1.4        | 4.6        | 17         | 33         | 7.5        | 2.7        | 2.3        | 1.1        | 0.74       | 0.74       |
| <b>17</b>    | 0.26       | 0.29       | 6.2        | 4.4        | 48         | 14         | 7.3        | 3.7        | 2.3        | 1.1        | 0.72       | 0.68       |
| <b>18</b>    | 0.34       | 0.30       | 13         | 4.0        | 45         | 90         | 7.2        | 4.6        | 2.3        | 0.95       | 0.72       | 0.64       |
| <b>19</b>    | 0.32       | 1.2        | 129        | 3.9        | 68         | 147        | 7.8        | 3.1        | 2.3        | 0.94       | 0.74       | 0.61       |
| <b>20</b>    | 0.31       | 11         | 22         | 3.6        | 28         | 264        | 6.9        | 3.0        | 2.2        | 0.81       | 0.73       | 0.59       |
| <b>21</b>    | 0.81       | 8.4        | 10         | 3.5        | 17         | 73         | 7.0        | 2.9        | 2.2        | 0.73       | 0.69       | 0.55       |
| <b>22</b>    | 0.43       | 1.8        | 9.9        | 3.5        | 12         | 40         | 6.2        | 2.8        | 2.2        | 0.82       | 0.78       | 0.54       |
| <b>23</b>    | 0.58       | 7.8        | 6.3        | 3.2        | 10         | 54         | 6.0        | 2.7        | 2.3        | 0.83       | 0.72       | 0.60       |
| <b>24</b>    | 10         | 1.7        | 5.5        | 3.2        | 12         | 481        | 6.1        | 2.8        | 2.3        | 0.81       | 0.65       | 0.53       |
| <b>25</b>    | 1.4        | 1.2        | 18         | 3.1        | 136        | 235        | 5.6        | 3.0        | 2.2        | 0.86       | 0.73       | 0.61       |
| <b>26</b>    | 0.41       | 1.1        | 15         | 3.1        | 47         | 173        | 5.4        | 2.8        | 2.2        | 0.91       | 0.78       | 0.67       |
| <b>27</b>    | 0.32       | 4.5        | 6.8        | 2.8        | 32         | 108        | 5.2        | 2.8        | 2.2        | 0.86       | 0.77       | 0.56       |
| <b>28</b>    | 0.30       | 1.7        | 34         | 2.9        | 25         | 78         | 4.9        | 2.8        | 11         | 0.84       | 0.70       | 0.55       |
| <b>29</b>    | 0.30       | 1.1        | 242        | 2.8        | ---        | 57         | 4.8        | 2.8        | 2.5        | 0.78       | 0.75       | 0.50       |
| <b>30</b>    | 0.55       | 1.0        | 37         | 9.5        | ---        | 45         | 4.5        | 2.6        | 1.5        | 0.81       | 0.71       | 0.57       |
| <b>31</b>    | 0.34       | ---        | 21         | 3.4        | ---        | 37         | ---        | 3.1        | ---        | 0.85       | 0.71       | ---        |
| <b>Total</b> | 20.23      | 53.28      | 616.10     | 201.3      | 531.2      | 2,169      | 323.2      | 106.7      | 86.9       | 30.80      | 23.70      | 19.31      |
| <b>Mean</b>  | 0.65       | 1.78       | 19.9       | 6.49       | 19.0       | 70.0       | 10.8       | 3.44       | 2.90       | 0.99       | 0.76       | 0.64       |
| <b>Max</b>   | 10         | 11         | 242        | 20         | 136        | 481        | 31         | 5.9        | 11         | 1.4        | 0.85       | 0.76       |
| <b>Min</b>   | 0.19       | 0.28       | 0.96       | 2.8        | 2.1        | 10         | 4.5        | 2.6        | 1.5        | 0.73       | 0.65       | 0.50       |
| <b>Ac-ft</b> | 40         | 106        | 1,220      | 399        | 1,050      | 4,300      | 641        | 212        | 172        | 61         | 47         | 38         |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2011, BY WATER YEAR (WY)**

|                | <b>Oct</b> | <b>Nov</b> | <b>Dec</b> | <b>Jan</b> | <b>Feb</b> | <b>Mar</b> | <b>Apr</b> | <b>May</b> | <b>Jun</b> | <b>Jul</b> | <b>Aug</b> | <b>Sep</b> |
|----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>Mean</b>    | 0.92       | 2.48       | 8.77       | 14.7       | 27.6       | 19.2       | 8.82       | 3.07       | 1.46       | 0.60       | 0.32       | 0.26       |
| <b>Max</b>     | 3.45       | 16.6       | 51.9       | 79.3       | 194        | 90.7       | 56.5       | 13.0       | 4.44       | 2.05       | 0.78       | 0.64       |
| (WY)<br>(2010) | (1984)     | (2003)     | (1993)     | (1998)     | (1983)     | (2006)     | (1983)     | (1998)     | (1983)     | (1998)     | (1988)     | (2011)     |
| <b>Min</b>     | 0.07       | 0.12       | 0.65       | 0.16       | 0.65       | 0.47       | 0.70       | 0.19       | 0.14       | 0.02       | 0.00       | 0.00       |
| (WY)           | (1989)     | (1993)     | (1990)     | (1991)     | (1989)     | (1990)     | (1990)     | (1991)     | (1990)     | (1989)     | (1988)     | (1988)     |

**11180825 San Lorenzo Creek above Don Castro Reservoir, near Castro Valley, CA—Continued****SUMMARY STATISTICS**

|                                 | <b>Calendar Year 2010</b> | <b>Water Year 2011</b> | <b>Water Years 1981 - 2011</b> |        |
|---------------------------------|---------------------------|------------------------|--------------------------------|--------|
| <b>Annual total</b>             | 2,620.35                  | 4,181.72               |                                |        |
| <b>Annual mean</b>              | 7.18                      | 11.5                   | 7.24                           |        |
| <b>Highest annual mean</b>      |                           |                        | 25.8                           | 1998   |
| <b>Lowest annual mean</b>       |                           |                        | 0.70                           | 1989   |
| <b>Highest daily mean</b>       | 242                       | Dec 29                 | 481                            | Mar 24 |
| <b>Lowest daily mean</b>        | 0.16                      | Sep 28                 | 0.19                           | Oct 1  |
| <b>Annual seven-day minimum</b> | 0.18                      | Sep 25                 | 0.22                           | Oct 10 |
| <b>Maximum peak flow</b>        |                           |                        | 1,610                          | Mar 24 |
| <b>Maximum peak stage</b>       |                           |                        | 12.44                          | Mar 24 |
| <b>Annual runoff (ac-ft)</b>    | 5,200                     | 8,290                  | 5,240                          |        |
| <b>10 percent exceeds</b>       | 17                        | 20                     | 13                             |        |
| <b>50 percent exceeds</b>       | 1.4                       | 2.3                    | 0.88                           |        |
| <b>90 percent exceeds</b>       | 0.26                      | 0.36                   | 0.08                           |        |

