# 11414250 SOUTH YUBA RIVER AT LANGS CROSSING, NEAR EMIGRANT GAP, CA

Sacramento River Basin

LOCATION.--Lat 39°19′07″, long 120°39′24″ referenced to North American Datum of 1927, in SW ¼ SW ¼ sec.20, T.17 N., R.12 E., Nevada County, Hydrologic Unit 18020125, on right bank, 50 ft downstream from road bridge, 0.8 mi downstream from Spaulding Nos. 1 and 2 Powerplants, and 1.6 mi northeast of Emigrant Gap.

DRAINAGE AREA.--120 $mi^2$.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,432.44 ft above NGVD of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Flow regulated by Lake Spaulding (station 11414140) 0.8 mi upstream. Lake Spaulding receives water from Canyon Creek via the Bowman-Spaulding Canal (station 11416100). Most of the water is diverted out of the Yuba River just downstream from Spaulding Dam via Drum Canal (station 11414170) and South Yuba Canal (station 11414200). See schematic diagrams of South Yuba River and Bear River Basins.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2310.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 34,200 $ft^3/s$, Jan. 1, 1997, gage height, 23.60 ft, from rating curve extended above 8,800 $ft^3/s$, on basis of spillway rating at Spaulding Dam; minimum daily, 2.1 $ft^3/s$, on several days during July and September 1977.

**11414250 SOUTH YUBA RIVER AT LANGS CROSSING, NEAR EMIGRANT GAP, CA—Continued**

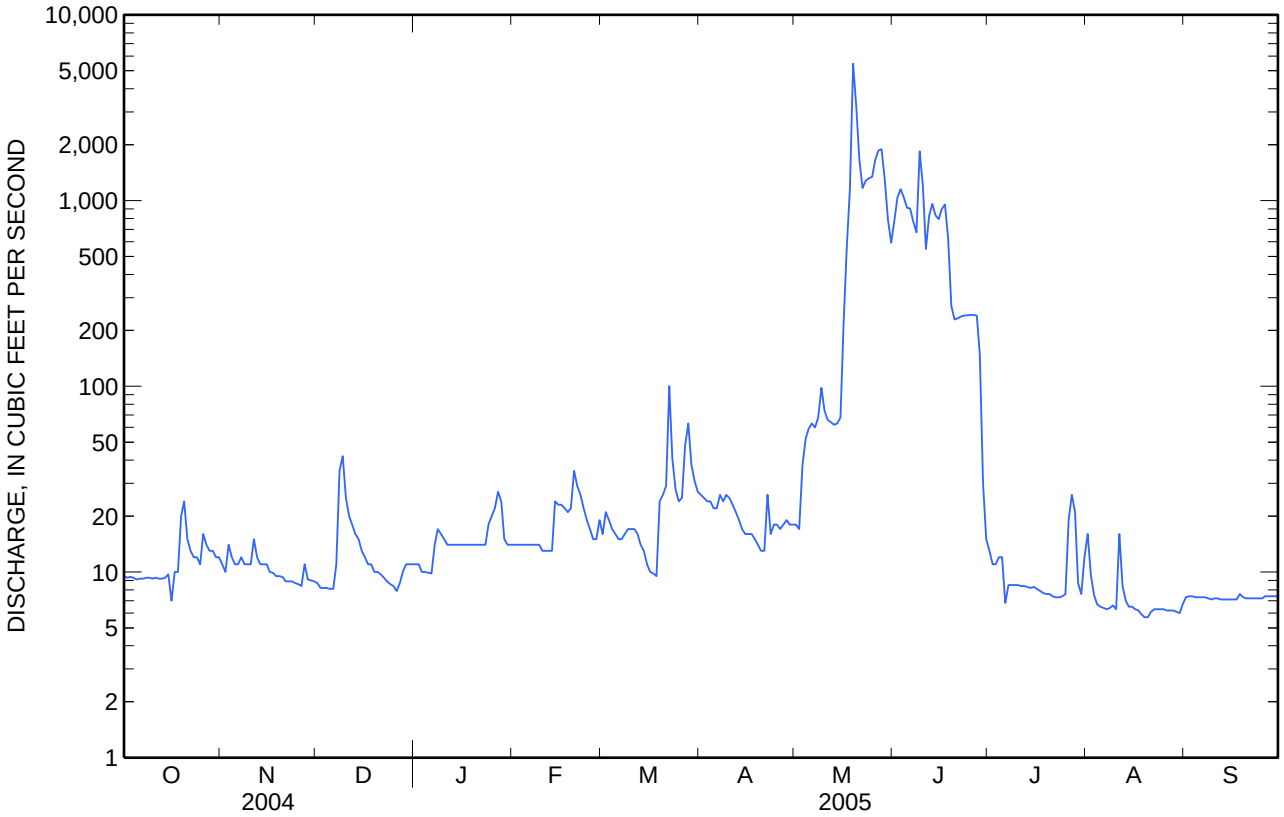
**DISCHARGE, CUBIC FEET PER SECOND**
**WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005**
**DAILY MEAN VALUES**
[e, estimated]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9.5 | 11 | 8.7 | 11 | e14 | 16 | 26 | 18 | 769 | 13 | 16 | 7.3 |
| 2 | 9.3 | 10 | 8.2 | 11 | e14 | 21 | 25 | 17 | 1,040 | 11 | 9.6 | 7.4 |
| 3 | 9.4 | 14 | 8.2 | 10 | e14 | 19 | 24 | 37 | 1,150 | 11 | 7.5 | 7.4 |
| 4 | 9.3 | 12 | 8.2 | 10 | e14 | 17 | 24 | 52 | 1,040 | 12 | 6.7 | 7.3 |
| 5 | 9.1 | 11 | 8.1 | 9.9 | e14 | 16 | 22 | 59 | 914 | 12 | 6.5 | 7.3 |
| 6 | 9.2 | 11 | 8.1 | 9.8 | e14 | 15 | 22 | 63 | 906 | 6.8 | 6.4 | 7.3 |
| 7 | 9.2 | 12 | 11 | 14 | e14 | 15 | 26 | 60 | 771 | 8.5 | 6.3 | 7.3 |
| 8 | 9.3 | 11 | 35 | 17 | e14 | 16 | 24 | 68 | 675 | 8.5 | 6.4 | 7.2 |
| 9 | 9.3 | 11 | 42 | e16 | e14 | 17 | 26 | 98 | 1,840 | 8.5 | 6.6 | 7.1 |
| 10 | 9.2 | 11 | 25 | e15 | e13 | 17 | 25 | 74 | 1,200 | 8.5 | 6.3 | 7.2 |
| 11 | 9.3 | 15 | 20 | e14 | e13 | 17 | 23 | 66 | 548 | 8.4 | 16 | 7.2 |
| 12 | 9.2 | 12 | 18 | e14 | e13 | 16 | 21 | 64 | 827 | 8.4 | 8.4 | 7.1 |
| 13 | 9.2 | 11 | 16 | e14 | e13 | 14 | 19 | 62 | 958 | 8.3 | 7.0 | 7.1 |
| 14 | 9.3 | 11 | 15 | e14 | e24 | 13 | 17 | 63 | 833 | 8.2 | 6.5 | 7.1 |
| 15 | 9.7 | 11 | 13 | e14 | 23 | 11 | 16 | 68 | 794 | 8.3 | 6.5 | 7.1 |
| 16 | 7.0 | 10 | 12 | e14 | 23 | 10 | 16 | 212 | 900 | 8.1 | 6.3 | 7.1 |
| 17 | 10 | 9.9 | 11 | e14 | 22 | 9.8 | 16 | 550 | 953 | 7.9 | 6.2 | 7.1 |
| 18 | 10 | 9.5 | 11 | e14 | 21 | 9.5 | 15 | 1,160 | 623 | 7.7 | 5.9 | 7.6 |
| 19 | 20 | 9.5 | 10 | e14 | 22 | 24 | 14 | e5,450 | 270 | 7.6 | 5.7 | 7.3 |
| 20 | 24 | 9.4 | 10 | e14 | 35 | 26 | 13 | 3,180 | 229 | 7.6 | 5.7 | 7.2 |
| 21 | 15 | 8.9 | 9.7 | e14 | 29 | 29 | 13 | 1,660 | 232 | 7.4 | 6.1 | 7.2 |
| 22 | 13 | 8.9 | 9.3 | e14 | 26 | 100 | 26 | 1,170 | 237 | 7.3 | 6.3 | 7.2 |
| 23 | 12 | 8.9 | 8.9 | e14 | 22 | 41 | 16 | 1,280 | 240 | 7.3 | 6.3 | 7.2 |
| 24 | 12 | 8.7 | 8.6 | e18 | 19 | 28 | 18 | 1,320 | 241 | 7.4 | 6.3 | 7.2 |
| 25 | 11 | 8.6 | 8.4 | e20 | 17 | 24 | 18 | 1,340 | 242 | 7.6 | 6.3 | 7.2 |
| 26 | 16 | 8.4 | 7.9 | e22 | 15 | 25 | 17 | 1,650 | 242 | 19 | 6.2 | 7.4 |
| 27 | 14 | 11 | 8.7 | e27 | 15 | 48 | 18 | 1,860 | 240 | 26 | 6.2 | 7.4 |
| 28 | 13 | 9.1 | 10 | e24 | 19 | 63 | 19 | 1,890 | 148 | 21 | 6.2 | 7.4 |
| 29 | 13 | 9.0 | 11 | e15 | --- | 38 | 18 | 1,290 | 30 | 8.7 | 6.1 | 7.4 |
| 30 | 12 | 8.9 | 11 | e14 | --- | 31 | 18 | 784 | 15 | 7.6 | 6.0 | 7.4 |
| 31 | 12 | --- | 11 | e14 | --- | 27 | --- | 593 | --- | 12 | 6.7 | --- |
| Total | 353.5 | 312.7 | 403.0 | 459.7 | 510 | 773.3 | 595 | 26,258 | 19,107 | 311.6 | 221.2 | 217.7 |
| Mean | 11.4 | 10.4 | 13.0 | 14.8 | 18.2 | 24.9 | 19.8 | 847 | 637 | 10.1 | 7.14 | 7.26 |
| Max | 24 | 15 | 42 | 27 | 35 | 100 | 26 | 5,450 | 1,840 | 26 | 16 | 7.6 |
| Min | 7.0 | 8.4 | 7.9 | 9.8 | 13 | 9.5 | 13 | 17 | 15 | 6.8 | 5.7 | 7.1 |
| Ac-ft | 701 | 620 | 799 | 912 | 1,010 | 1,530 | 1,180 | 52,080 | 37,900 | 618 | 439 | 432 |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2005, BY WATER YEAR (WY)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 7.36 | 37.2 | 44.4 | 107 | 83.9 | 80.1 | 76.3 | 323 | 406 | 62.0 | 6.42 | 6.70 |
| Max | 18.8 | 683 | 685 | 2,465 | 1,626 | 1,304 | 620 | 1,734 | 2,613 | 822 | 11.8 | 12.1 |
| (WY) | (1972) | (1984) | (1982) | (1997) | (1986) | (1986) | (1982) | (1996) | (1983) | (1983) | (2004) | (2004) |
| Min | 2.68 | 4.51 | 5.44 | 4.51 | 5.58 | 5.10 | 3.41 | 5.29 | 3.05 | 2.34 | 2.43 | 2.73 |
| (WY) | (1978) | (1978) | (1977) | (1976) | (1977) | (1977) | (1977) | (1977) | (1977) | (1977) | (1977) | (1977) |

**11414250 SOUTH YUBA RIVER AT LANGS CROSSING, NEAR EMIGRANT GAP, CA—Continued**

**SUMMARY STATISTICS**

| | Calendar Year 2004 | | Water Year 2005 | | Water Years 1966 - 2005 | |
|---|---|---|---|---|---|---|
| **Annual total** | 4,857.5 | | 49,522.7 | | | |
| **Annual mean** | 13.3 | | 136 | | 106 | |
| **Highest annual mean** | | | | | 448 | 1997 |
| **Lowest annual mean** | | | | | 4.35 | 1977 |
| **Highest daily mean** | 83 | Feb 16 | 5,450 | May 19 | 25,400 | Jan 1, 1997 |
| **Lowest daily mean** | 6.0 | Apr 30 | 5.7 | Aug 19 | 2.1 | Jul 15, 1977 |
| **Annual seven-day minimum** | 8.1 | Jun 3 | 6.0 | Aug 16 | 2.1 | Sep 22, 1977 |
| **Maximum peak flow** | | | 12,600 | May 19 | 34,200 | Jan 1, 1997 |
| **Maximum peak stage** | | | 16.60 | May 19 | 23.60 | Jan 1, 1997 |
| **Annual runoff (ac-ft)** | 9,630 | | 98,230 | | 76,440 | |
| **10 percent exceeds** | 18 | | 241 | | 84 | |
| **50 percent exceeds** | 12 | | 14 | | 8.0 | |
| **90 percent exceeds** | 8.8 | | 7.2 | | 5.4 | |