## COLORADO RIVER MAIN STEM

### 09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA
### (NATIONAL STREAM-QUALITY ACCOUNTING NETWORK)

**LOCATION**.--Lat 32°43'07", long 114°43'05", in NE1/4SE1/4 sec. 21, T.8 S., R.24 W., Gila and Salt River meridian, in Yuma County, AZ, Hydrologic Unit 15030108, on left bank at northerly international boundary, 0.5 mi east of Andrade, 1.1 mi upstream from Morelos Dam, 1.1 mi downstream from Rockwood Gate, and 6.4 mi downstream from gaging station on Colorado River below Yuma Main Canal wasteway.

**DRAINAGE AREA**.--246,700 $mi^2$, approximately, including all closed basins entirely within the drainage boundary, also 3,959 $mi^2$ in Great Divide Basin in southern Wyoming.

### WATER-DISCHARGE RECORDS

**PERIOD OF RECORD**.--Jan. 1950 to current year. Prior to Oct. 1958 published as "at international boundary."

**GAGE**.--Water-stage recorder. Datum of gage is mean sea level. Supplementary water-stage recorder 1,680 ft upstream at same datum.

**REMARKS**.--No estimated daily discharges. This record shows water passing northerly international boundary. Minor diversions to the United States below this station by pumping from ground water for irrigation in the floodway between river and Yuma levee.

**COOPERATION**.--Records furnished by International Boundary and Water Commission, U.S. Section (discharge figures rounded in accordance with U.S. Geological Survey standard practice).

**EXTREMES FOR PERIOD OF RECORD**.--Maximum discharge, 40,600 $ft^3/s$ Aug. 20, 1983; maximum elevation, 115.65 ft Aug. 18 and 19, 1983; minimum discharge, 495 $ft^3/s$ Sept. 28, 1970; minimum elevation, 101.72 ft, Nov. 2, 1981.

**EXTREMES FOR CURRENT YEAR**.--Maximum daily discharge, 5,370 $ft^3/s$ Mar. 18. Minimum daily discharge, 720 $ft^3/s$ Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1200 | 1260 | 1790 | 1620 | 2470 | 2530 | 3220 | 2400 | 1430 | 1840 | 1740 | 1320 |
| 2 | 879 | 1270 | 2110 | 1770 | 2520 | 2520 | 3220 | 1970 | 1440 | 1840 | 1760 | 1290 |
| 3 | 826 | 1360 | 1980 | 1580 | 2680 | 2820 | 3320 | 1950 | 1480 | 1890 | 1710 | 1320 |
| 4 | 819 | 1410 | 1850 | 1560 | 2560 | 3030 | 3260 | 1760 | 1560 | 1840 | 1630 | 1290 |
| 5 | 830 | 1440 | 1840 | 1600 | 2410 | 2900 | 3210 | 2660 | 1540 | 1800 | 1670 | 1310 |
| 6 | 1240 | 1470 | 1960 | 1760 | 2500 | 2870 | 3290 | 2320 | 1520 | 1840 | 1600 | 1290 |
| 7 | 961 | 1490 | 2280 | 1720 | 2420 | 2890 | 3640 | 2510 | 1580 | 1800 | 1710 | 1270 |
| 8 | 848 | 1530 | 2100 | 1760 | 2430 | 2890 | 3530 | 2030 | 1500 | 1790 | 1650 | 1280 |
| 9 | 858 | 1510 | 2070 | 1720 | 2460 | 2960 | 3450 | 1810 | 1640 | 1680 | 1560 | 1350 |
| 10 | 795 | 1500 | 1960 | 1810 | 2400 | 3070 | 3350 | 1430 | 1590 | 1610 | 1580 | 1310 |
| 11 | 720 | 1510 | 1970 | 1920 | 2400 | 3200 | 3220 | 1420 | 1620 | 1660 | 1480 | 1350 |
| 12 | 780 | 1500 | 1920 | 2460 | 2490 | 3440 | 3250 | 1340 | 1650 | 1660 | 1400 | 1290 |
| 13 | 862 | 1500 | 1960 | 2280 | 2380 | 3450 | 3230 | 1370 | 1680 | 1660 | 1430 | 1290 |
| 14 | 925 | 1570 | 1950 | 1930 | 3570 | 3090 | 3220 | 1340 | 1650 | 1640 | 1410 | 1260 |
| 15 | 1010 | 1480 | 1960 | 1950 | 4270 | 2910 | 3220 | 1460 | 1650 | 1890 | 1420 | 1210 |
| 16 | 939 | 1510 | 1850 | 1910 | 3880 | 2840 | 3190 | 1370 | 1700 | 1760 | 1400 | 1350 |
| 17 | 964 | 1530 | 1880 | 1950 | 3470 | 4270 | 3190 | 1360 | 1610 | 1670 | 1410 | 1330 |
| 18 | 1020 | 1530 | 1870 | 1970 | 3850 | 5370 | 3640 | 1390 | 1510 | 1580 | 1350 | 1300 |
| 19 | 1430 | 1530 | 1830 | 2290 | 4200 | 3880 | 3880 | 1480 | 1660 | 1640 | 1310 | 1230 |
| 20 | 1860 | 1560 | 1820 | 2700 | 3780 | 3450 | 4340 | 1370 | 1700 | 1670 | 1360 | 1320 |
| 21 | 1290 | 1540 | 1830 | 2720 | 3050 | 3050 | 3810 | 1340 | 1660 | 1650 | 1300 | 1270 |
| 22 | 1000 | 1510 | 1780 | 2080 | 2750 | 3080 | 2820 | 1350 | 1680 | 1890 | 1390 | 1250 |
| 23 | 964 | 1500 | 1710 | 2110 | 2820 | 3120 | 3340 | 1370 | 1800 | 2340 | 1330 | 1370 |
| 24 | 982 | 1550 | 1690 | 2120 | 2860 | 3180 | 2840 | 1420 | 2060 | 2090 | 1340 | 1530 |
| 25 | 957 | 1580 | 1660 | 2100 | 2950 | 3150 | 2790 | 1400 | 2030 | 1950 | 1320 | 1490 |
| 26 | 932 | 1600 | 1580 | 2130 | 4240 | 3170 | 2790 | 1440 | 1950 | 1970 | 1320 | 1500 |
| 27 | 975 | 1590 | 1510 | 2190 | 4910 | 3020 | 2790 | 1440 | 1960 | 1980 | 1370 | 1590 |
| 28 | 1050 | 1610 | 1510 | 2220 | 3470 | 3090 | 2580 | 1580 | 2030 | 1940 | 1300 | 1640 |
| 29 | 1220 | 1600 | 1510 | 2170 | --- | 3070 | 2420 | 1520 | 2060 | 1790 | 1320 | 1610 |
| 30 | 1700 | 1600 | 1570 | 2220 | --- | 3180 | 2410 | 1560 | 2100 | 1640 | 1340 | 1520 |
| 31 | 1510 | --- | 1600 | 2260 | --- | 3160 | --- | 1560 | --- | 1790 | 1410 | --- |
| TOTAL | 32346 | 45140 | 56900 | 62580 | 86190 | 98650 | 96460 | 50720 | 51040 | 55790 | 45320 | 40730 |
| MEAN | 1043 | 1505 | 1835 | 2019 | 3078 | 3182 | 3215 | 1636 | 1701 | 1800 | 1462 | 1358 |
| MAX | 1860 | 1610 | 2280 | 2720 | 4910 | 5370 | 4340 | 2660 | 2100 | 2340 | 1760 | 1640 |
| MIN | 720 | 1260 | 1510 | 1560 | 2380 | 2520 | 2410 | 1340 | 1430 | 1580 | 1300 | 1210 |
| AC-FT | 64160 | 89540 | 112900 | 124100 | 171000 | 195700 | 191300 | 100600 | 101200 | 110700 | 89890 | 80790 |

CAL YR 2002 TOTAL 748846 MEAN 2052 MAX 4870 MIN 720 AC-FT 1485000
WTR YR 2003 TOTAL 721866 MEAN 1978 MAX 5370 MIN 720 AC-FT 1432000

## 09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA—CONTINUED

### WATER-QUALITY RECORDS

**PERIOD OF RECORD**.--Oct. 1968 to current year.

**PERIOD OF DAILY RECORD.--**

**SPECIFIC CONDUCTANCE**: Oct. 1969 to Sept. 1984.

**REMARKS**.--Discharge reported by International Boundary and Water Commission. Unpublished chemical analyses for water years 1961–68 available from District Office in Tucson, AZ.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date | Time | Instantaneous discharge, cfs (00061) | Turbidity, NTU (00076) | Barometric pressure, mm Hg (00025) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | pH, water, unfltrd field, std units (00400) | Specif. conductance, wat unf uS/cm 25 degC (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) | Hardness, water, unfltrd mg/L as CaCO3 (00900) | Noncarb hardness, wat flt field, mg/L as CaCO3 (00904) | Calcium water, fltrd, mg/L (00915) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | 0840 | 1530 | -- | 764 | 6.2 | 63 | 8.2 | 1330 | 14.0 | 16.0 | 370 | 210 | 92.5 |
| 19... | 0841 | 1530 | 4.3 | 764 | 6.2 | 63 | 8.2 | 1330 | 14.0 | 16.0 | 360 | 200 | 90.0 |
| 19... | 0850 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | 0900 | 2060 | -- | 763 | 6.7 | 67 | 8.1 | 1320 | 13.0 | 15.0 | 370 | 200 | 91.0 |
| 22... | 0901 | 2060 | 4.9 | 763 | 6.7 | 67 | 8.1 | 1320 | 13.0 | 15.0 | 350 | 190 | 87.0 |
| 22... | 0911 | -- | 2.3 | -- | -- | -- | -- | -- | -- | -- | 360 | -- | 88.0 |
| APR | | | | | | | | | | | | | |
| 16... | 0810 | 3200 | -- | 762 | 7.7 | 83 | 7.9 | 1220 | 18.0 | 19.0 | 340 | 190 | 85.3 |
| 16... | 0820 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | 0820 | 1410 | -- | 755 | 6.4 | 77 | 8.1 | 1530 | 27.0 | 24.0 | 390 | 220 | 99.2 |
| 20... | 0821 | 1410 | 2.5 | 755 | 6.4 | 77 | 8.1 | 1530 | 27.0 | 24.0 | 380 | 210 | 95.0 |
| 20... | 0830 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | 0830 | 1770 | -- | 759 | 5.3 | 68 | 8.0 | 1380 | 32.0 | 28.0 | 350 | 200 | 87.6 |
| 29... | 0840 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | 0800 | 1270 | -- | 758 | 5.0 | 66 | 8.0 | 1440 | 32.0 | 29.0 | 350 | 190 | 85.1 |
| 19... | 0801 | 1270 | 3.3 | 758 | 5.0 | 66 | 8.0 | 1440 | 32.0 | 29.0 | 380 | 220 | 93.0 |
| 19... | 0810 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| Date | Calcium water unfltrd recoverable, mg/L (00916) | Magnesium, water, fltrd, mg/L (00925) | Magnesium, water, unfltrd recoverable, mg/L (00927) | Potassium, water, fltrd, mg/L (00935) | Sodium adsorption ratio (00931) | Sodium, water, fltrd, mg/L (00930) | Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086) | Bicarbonate, wat flt incrm. titr., field, mg/L (00453) | Carbonate, wat flt incrm. titr., field, mg/L (00452) | Chloride, water, fltrd, mg/L (00940) | Fluoride, water, fltrd, mg/L (00950) | Silica, water, fltrd, mg/L (00955) | Sulfate water, fltrd, mg/L (00945) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | -- | 32.3 | -- | 4.50 | 3 | 139 | 160 | 192 | <1 | 139 | .45 | 12.1 | 305 |
| 19... | 91.0 | 33.0 | 33.0 | 4.70 | 3 | 140 | 160 | 192 | <1 | 140 | .4 | -- | 310 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | -- | 33.3 | -- | 4.45 | 3 | 140 | 166 | 199 | <1 | 142 | .44 | 12.0 | 291 |
| 22... | 87.0 | 33.0 | 32.0 | 4.70 | 3 | 150 | 166 | 199 | <1 | 140 | .4 | -- | 300 |
| 22... | 87.0 | 33.0 | 32.0 | 4.70 | 3 | 150 | -- | -- | -- | 140 | .4 | -- | 300 |
| APR | | | | | | | | | | | | | |
| 16... | -- | 31.4 | -- | 4.31 | 3 | 122 | 156 | 190 | <1 | 127 | .41 | 9.83 | 279 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | -- | 34.9 | -- | 5.41 | 4 | 161 | 174 | 208 | -- | 170 | .5 | 12.9 | 320 |
| 20... | 95.0 | 34.0 | 34.0 | 5.10 | 4 | 170 | 174 | 208 | <1 | 170 | .5 | -- | 330 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | -- | 32.7 | -- | 4.94 | 4 | 153 | 158 | 193 | <1 | 144 | .5 | 13.4 | 292d |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | -- | 32.4 | -- | 4.39 | 4 | 153 | 157 | 188 | <1 | 158 | .5 | 14.1 | 312d |
| 19... | 95.0 | 35.0 | 35.0 | 4.90 | 4 | 160 | 157 | 188 | <1 | 160 | .4 | -- | 310 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA—CONTINUED

WATER-QUALITY DATA, OCTOBER 2002 TO SEPTEMBER 2003

| Date | Residue water, fltrd, sum of consti-tuents mg/L (70301) | Residue water, fltrd, tons/ acre-ft (70303) | Residue on evap. at 180degC wat flt mg/L (70300) | Residue total at 105 deg. C, sus-pended, mg/L (00530) | Ammonia + org-N, water, fltrd, mg/L as N (00623) | Ammonia + org-N, water, unfltrd mg/L as N (00625) | Ammonia water, fltrd, mg/L as N (00608) | Ammonia water unfltrd mg/L (71845) | Ammonia water, unfltrd mg/L as N (00610) | Nitrate water, fltrd, mg/L (71851) | Nitrate water, fltrd, mg/L as N (00618) | Nitrite + nitrate water fltrd, mg/L as N (00631) | Nitrite + nitrate water unfltrd mg/L as N (00630) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | 823 | 1.18 | 871 | -- | .31 | .39 | .187 | -- | -- | 1.26 | .28 | .306 | -- |
| 19... | 813 | 1.18 | 867 | 12 | -- | .50 | -- | .21 | .16 | -- | -- | -- | .310 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | 816 | 1.18 | 866 | -- | .29 | .35 | .120 | -- | -- | 1.96 | .44 | .460 | -- |
| 22... | 813 | 1.15 | 847 | 9 | -- | .50 | -- | .17 | .13 | -- | -- | -- | .480 |
| 22... | 815 | 1.15 | 848 | 9 | -- | .40 | -- | .17 | .13 | -- | -- | -- | .470 |
| APR | | | | | | | | | | | | | |
| 16... | 756 | 1.10 | 811 | -- | .24 | .35 | .092 | -- | -- | 1.91 | .43 | .446 | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | 911 | 1.35 | 991 | -- | .35 | .33 | .147 | -- | -- | 2.32 | .52 | .563 | -- |
| 20... | 907 | 1.32 | 973 | 7 | -- | .40 | -- | .19 | .15 | -- | -- | -- | .550 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | 828 | 1.18 | 865 | -- | .38 | .39 | .130 | -- | -- | 2.16 | .49 | .512 | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | 857 | 1.27 | 932 | -- | .29 | .38 | .113 | -- | -- | 2.19 | .49 | .526 | -- |
| 19... | 856 | 1.25 | 916 | 4 | -- | .30 | -- | .18 | .14 | -- | -- | -- | .520 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| Date | Nitrite water, fltrd, mg/L as N (00613) | Organic nitro-gen, water, fltrd, mg/L (00607) | Organic nitro-gen, water, unfltrd mg/L (00605) | Ortho-phos-phate, water, fltrd, mg/L (00660) | Ortho-phos-phate, water, fltrd, mg/L as P (00671) | Phos-phorus, water, fltrd, mg/L (00666) | Phos-phorus, water, unfltrd mg/L (00665) | Total nitro-gen, water, fltrd, mg/L (00602) | Total nitro-gen, water, unfltrd mg/L (00600) | Total nitro-gen, water, unfltrd mg/L as NO3 (71887) | Organic carbon, suspnd sedimnt total, mg/L (00689) | Organic carbon, water, fltrd, mg/L (00681) | COD, high level, water, unfltrd mg/L (00340) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | .022 | .13 | .20 | .028 | .009 | .013 | .026 | .62 | .69 | -- | .3 | 2.3 | -- |
| 19... | -- | -- | .34 | -- | -- | -- | <.02 | -- | .81 | 3.6 | -- | -- | 10 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | .017 | .17 | .23 | -- | E.005 | .010 | .021 | .75 | .81 | -- | .5 | 2.4 | -- |
| 22... | -- | -- | .37 | -- | -- | -- | <.02 | -- | .98 | 4.3 | -- | -- | 8 |
| 22... | -- | -- | .27 | -- | -- | -- | .02 | -- | .87 | 3.9 | -- | -- | 8 |
| APR | | | | | | | | | | | | | |
| 16... | .014 | .15 | .26 | -- | E.005 | .009 | .024 | .69 | .79 | -- | .6 | 2.8 | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | .040 | .20 | .18 | .025 | .008 | .016 | .028 | .91 | .89 | -- | .4 | 2.2 | -- |
| 20... | -- | -- | .25 | -- | -- | -- | <.02 | -- | .95 | 4.2 | -- | -- | 10 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | .025 | .25 | .26 | .025 | .008 | .015 | .029 | .89 | .90 | -- | .5 | 2.5+c | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | .031 | .18 | .26 | .025 | .008 | .016 | .031 | .82 | .90 | -- | .4 | 2.4+c | -- |
| 19... | -- | -- | .16 | -- | -- | -- | <.02 | -- | .82 | 3.6 | -- | -- | 11 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date | E coli, m-TEC MF, water, col/ 100 mL (31633) | Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625) | Alum-inum, water, fltrd, ug/L (01106) | Anti-mony, water, fltrd, ug/L (01095) | Anti-mony, water, unfltrd ug/L (01097) | Arsenic water, fltrd, ug/L (01000) | Arsenic water unfltrd ug/L (01002) | Barium, water, fltrd, ug/L (01005) | Barium, water, unfltrd recover -able, ug/L (01007) | Beryll-ium, water, fltrd, ug/L (01010) | Beryll-ium, water, unfltrd recover -able, ug/L (01012) | Boron, water, fltrd, ug/L (01020) | Boron, water, unfltrd recover -able, ug/L (01022) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | E1k | 43 | <2 | E.23 | -- | 2.5 | -- | 99 | -- | <.06 | -- | 161 | -- |
| 19... | E1k | 43 | -- | <1 | <1 | 3 | 3 | 93.0 | 96.0 | <1 | <1 | 187 | 188 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | E1k | E18k | M | E.28 | -- | 2.5 | -- | 94 | -- | <.06 | -- | 207 | -- |
| 22... | E1k | E18k | -- | <1 | <1 | 3 | 6 | 93.0 | 94.0 | <1 | <1 | 197 | 194 |
| 22... | -- | -- | -- | <1 | <1 | 3 | 7 | 93.0 | 95.0 | <1 | <1 | 199 | 198 |
| APR | | | | | | | | | | | | | |
| 16... | -- | -- | M | E.22 | -- | 2.9 | -- | 96 | -- | <.06 | -- | 175 | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | -- | 42 | M | E.22 | -- | 3.3 | -- | 106 | -- | <.06 | -- | 268 | -- |
| 20... | -- | 42 | -- | <1 | <1 | 5 | 7 | 93.0 | 98.0 | <1 | <1 | 225 | 229 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | -- | E350k | E1n | E.19n | -- | 3.2 | -- | 94 | -- | <.06 | -- | 189 | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | 130 | -- | Mn | E.19n | -- | 3.7 | -- | 97 | -- | <.06 | -- | 218 | -- |
| 19... | 130 | -- | -- | <1 | <1 | 5 | 10 | 96.0 | 100 | <1 | <1 | 221 | 224 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| Date | Cadmium water, fltrd, ug/L (01025) | Cadmium water, unfltrd ug/L (01027) | Chrom-ium, water, fltrd, ug/L (01030) | Chrom-ium, water, unfltrd recover -able, ug/L (01034) | Cobalt water, fltrd, ug/L (01035) | Copper, water, fltrd, ug/L (01040) | Copper, water, unfltrd recover -able, ug/L (01042) | Iron, water, fltrd, ug/L (01046) | Iron, water, unfltrd recover -able, ug/L (01045) | Lead, water, fltrd, ug/L (01049) | Lead, water, unfltrd recover -able, ug/L (01051) | Lithium water, fltrd, ug/L (01130) | Mangan-ese, water, fltrd, ug/L (01056) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | <.04 | -- | <.8 | -- | .183 | 1.1 | -- | <10 | -- | E.05 | -- | 53.0 | 23.7 |
| 19... | <.5 | <.5 | <1 | <1 | -- | <2 | <2 | 3 | 176 | <2 | <2 | -- | 23 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | E.02 | -- | <.8 | -- | .269 | 1.4 | -- | <10 | -- | <.08 | -- | 65.7 | 20.7 |
| 22... | <.5 | <.5 | <1 | <1 | -- | <2 | <2 | 3 | 191 | <2 | <2 | -- | 20 |
| 22... | <.5 | <.5 | <1 | <1 | -- | <2 | <2 | 2 | 194 | <2 | <2 | -- | 20 |
| APR | | | | | | | | | | | | | |
| 16... | <.04 | -- | <.8 | -- | .183 | 1.5 | -- | <10 | -- | E.07 | -- | 58.0 | 13.4 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | <.04 | -- | <.8 | -- | .256 | 1.5 | -- | <10 | -- | E.07 | -- | 76.0 | 29.7 |
| 20... | <.5 | <.5 | <1 | <1 | -- | <2 | <2 | 2 | 160 | <2 | <2 | -- | 27 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | E.02n | -- | <.8 | -- | .192 | 1.4 | -- | 91 | -- | <.08 | -- | 56.9 | 20.1 |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | <.04 | -- | <.8 | -- | .248 | 1.5 | -- | E4n | -- | <.08 | -- | 57.5 | 16.0 |
| 19... | <.5 | <.5 | <1 | <1 | -- | <2 | <2 | 2 | 154 | <2 | <2 | -- | 16 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date | Manganese, water, unfltrd recoverable, ug/L (01055) | Mercury water, fltrd, ug/L (71890) | Mercury water, unfltrd recoverable, ug/L (71900) | Molybdenum, water, fltrd, ug/L (01060) | Nickel, water, fltrd, ug/L (01065) | Nickel, water, unfltrd recoverable, ug/L (01067) | Selenium, water, fltrd, ug/L (01145) | Selenium, water, unfltrd ug/L (01147) | Silver, water, fltrd, ug/L (01075) | Silver, water, unfltrd recoverable, ug/L (01077) | Strontium, water, fltrd, ug/L (01080) | Strontium, water, unfltrd recoverable, ug/L (01082) | Thallium, water, fltrd, ug/L (01057) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | -- | -- | -- | 6.4 | 3.93 | -- | 1.9 | -- | <.2 | -- | 1230 | -- | -- |
| 19... | 54 | <.10 | <.1 | -- | 1 | <1 | 2 | 2 | <1 | <1 | -- | 1260 | <2 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | -- | -- | -- | 7.1 | 5.78 | -- | 2.9 | -- | <.2 | -- | 1220 | -- | -- |
| 22... | 61 | <.10 | <.1 | -- | <1 | 1 | 3 | 2 | <1 | <1 | -- | 1190 | <2 |
| 22... | 59 | <.10 | <.1 | -- | <1 | 1 | 3 | 3 | <1 | <1 | -- | 1190 | <2 |
| APR | | | | | | | | | | | | | |
| 16... | -- | -- | -- | 6.4 | 3.98 | -- | 2.4 | -- | <.2 | -- | 1160 | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | -- | -- | -- | 7.9 | 3.95 | -- | 2.4 | -- | <.2 | -- | 1300 | -- | -- |
| 20... | 66 | <.10 | <.1 | -- | <1 | <1 | 3 | 3 | <1 | <1 | -- | 1260 | <2 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | -- | -- | -- | 7.0 | 3.24 | -- | 2.3 | -- | <.2 | -- | 1270 | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | -- | -- | -- | 7.1 | 3.93 | -- | 2.5 | -- | <.2 | -- | 1240 | -- | -- |
| 19... | 57 | .3 | .3 | -- | <1 | <1 | 3 | 3 | <1 | <1 | -- | 1240 | <2 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| Date | Thallium, water, unfltrd ug/L (01059) | Vanadium, water, fltrd, ug/L (01085) | Zinc, water, fltrd, ug/L (01090) | Zinc, water, unfltrd recoverable, ug/L (01092) | 2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660) | CIAT, water, fltrd, ug/L (04040) | Acetochlor, water, fltrd, ug/L (49260) | Alachlor, water, fltrd, ug/L (46342) | alpha-HCH, water, fltrd, ug/L (34253) | alpha-HCH-d6, surrog, wat flt 0.7u GF percent recovry (91065) | Atrazine, water, fltrd, ug/L (39632) | Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686) | Benfluralin, water, fltrd 0.7u GF ug/L (82673) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | -- | 2.4 | 3 | -- | <.006 | <.006 | <.006 | <.004 | <.005 | 87.5 | <.007 | <.050 | <.010 |
| 19... | <2 | -- | <2 | <2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | -- | 3.0 | 1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | <2 | -- | <2 | <2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | <2 | -- | <2 | <2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | | |
| 16... | -- | 3.2 | 7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | -- | 2.4 | 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | <2 | -- | <2 | <2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | -- | 2.5 | 5 | -- | <.006 | <.006 | <.006 | <.004 | <.005 | 91.6 | .008 | <.050 | <.010 |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | -- | 3.1 | 2 | -- | <.006 | <.006 | <.006 | <.004 | <.005 | 105 | E.003t | <.050 | <.010 |
| 19... | <2 | -- | <2 | <2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date | Butylate, water, fltrd, ug/L (04028) | Carbaryl, water, fltrd 0.7u GF ug/L (82680) | Carbofuran, water, fltrd 0.7u GF ug/L (82674) | Chlorpyrifos water, fltrd, ug/L (38933) | cis-Permethrin water fltrd 0.7u GF ug/L (82687) | Cyanazine, water, fltrd, ug/L (04041) | DCPA, water fltrd 0.7u GF ug/L (82682) | Diazinon, water, fltrd, ug/L (39572) | Diazinon-d10 surrog. wat flt 0.7u GF percent recovry (91063) | Dieldrin, water, fltrd, ug/L (39381) | Disulfoton, water, fltrd 0.7u GF ug/L (82677) | EPTC, water, fltrd 0.7u GF ug/L (82668) | Ethalfluralin, water, fltrd 0.7u GF ug/L (82663) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | <.002 | <.041 | <.020 | <.005 | <.006 | <.018 | <.003 | <.005 | 112 | <.005 | <.02 | <.010 | <.009 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | <.002 | <.041 | <.020 | <.005 | <.006 | <.018 | <.003 | <.005 | 119 | <.005 | <.02 | .005 | <.009 |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | <.002 | <.041 | <.020 | <.005 | <.006 | <.018 | <.003 | E.004n | 116 | <.005 | <.02 | <.010 | <.009 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| Date | Ethoprop, water, fltrd 0.7u GF ug/L (82672) | Fonofos water, fltrd, ug/L (04095) | Lindane water, fltrd, ug/L (39341) | Linuron water fltrd 0.7u GF ug/L (82666) | Malathion, water, fltrd, ug/L (39532) | Methyl parathion, water, fltrd 0.7u GF ug/L (82667) | Metolachlor, water, fltrd, ug/L (39415) | Metribuzin, water, fltrd, ug/L (82630) | Molinate, water, fltrd 0.7u GF ug/L (82671) | Napropamide, water, fltrd 0.7u GF ug/L (82684) | p,p'-DDE, water, fltrd, ug/L (34653) | Parathion, water, fltrd, ug/L (39542) | Pebulate, water, fltrd 0.7u GF ug/L (82669) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | <.005 | <.003 | <.004 | <.035 | <.027 | <.006 | <.013 | <.010 | <.002 | <.007 | <.003 | <.010 | <.004 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | <.005 | <.003 | <.004 | <.035 | <.027 | <.006 | <.013 | <.006 | <.002 | <.007 | <.003 | <.010 | <.004 |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | <.005 | <.003 | <.004 | <.035 | <.027 | <.006 | <.013 | <.006 | <.002 | <.007 | <.003 | <.010 | <.004 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date | Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683) | Phorate water fltrd 0.7u GF ug/L (82664) | Prome-ton, water, fltrd, ug/L (04037) | Pron-amide, water, fltrd 0.7u GF ug/L (82676) | Propa-chlor, water, fltrd, ug/L (04024) | Pro-panil, water, fltrd 0.7u GF ug/L (82679) | Propar-gite, water, fltrd 0.7u GF ug/L (82685) | Sima-zine, water, fltrd, ug/L (04035) | Tebu-thiuron water fltrd 0.7u GF ug/L (82670) | Terba-cil, water, fltrd 0.7u GF ug/L (82665) | Terbu-fos, water, fltrd 0.7u GF ug/L (82675) | Thio-bencarb water fltrd 0.7u GF ug/L (82681) | Tri-allate, water, fltrd 0.7u GF ug/L (82678) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | | |
| 19... | <.022 | <.011 | <.01 | .011 | <.010 | <.011 | <.02 | <.005 | <.02 | E.005 | <.02 | <.005 | <.002 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | | |
| 29... | <.022 | <.011 | <.01 | <.004 | <.010 | <.011 | <.02 | <.005 | <.02 | <.034 | <.02 | <.005 | <.002 |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | | |
| 19... | <.022 | <.011 | <.01 | <.004 | <.010 | <.011 | <.02 | <.005 | <.02 | E.051 | <.02 | <.005 | <.002 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| Date | Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661) | Alpha radio-activty water, fltrd, Th-230, pCi/L (04126) | Gross beta radioac water, fltrd, Cs-137, pCi/L (03515) | Ra-226, water, fltrd, radon method pCi/L (09511) | Uranium natural water, fltrd, ug/L (22703) | U-234, water, fltrd, pCi/L (22610) | U-235, water, fltrd, pCi/L (22620) | U-238, water, fltrd, pCi/L (22603) | Suspnd. sedi-ment, sieve diametr percent <.063mm (70331) | Sus-pended sedi-ment concen-tration mg/L (80154) | Sus-pended sedi-ment load, tons/d (80155) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 19... | <.009 | -- | -- | -- | 3.63 | -- | -- | -- | 93 | 10 | 41 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10 | 41 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | 98 | 7 | -- |
| JAN | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | 4.35 | -- | -- | -- | 98 | 10 | 56 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | 98 | 10 | 56 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | 96 | 8 | -- |
| APR | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | 3.96 | -- | -- | -- | 86 | 15 | 130 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | 89 | 15 | -- |
| MAY | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | 4.53 | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | 92 | 9 | 34 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | 93 | 12 | -- |
| JUL | | | | | | | | | | | |
| 29... | <.009 | -- | -- | -- | 3.82 | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 19... | <.009 | 2 | 3 | .10 | 3.88 | 2.1 | .1 | 1.3 | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Remark codes used in this report:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified
Value qualifier codes used in this report:
+ -- Improper preservation
c -- See laboratory comment
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range
n -- Below the NDV
t -- Below the long-term MDL