

VIRGIN RIVER BASIN

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09409100 SANTA CLARA RIVER ABOVE BAKER RESERVOIR, NEAR CENTRAL, UT

LOCATION.--Lat 37°23'05", long 113°37'52", in SW^{1/4}NW^{1/4}NE^{1/4} sec. 22, T. 39 S., R. 16 W., Washington County, Hydrologic Unit 15010008, on left bank 0.6 mi downstream from Kane Spring Draw, 0.8 mi upstream from Baker Dam, 2.6 mi south of Central and 4.0 mi north of Veyo.

DRAINAGE AREA.--116 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,875 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges and flows less than 2.0 ft³/s, which are poor. Diversion 0.5 mi upstream for power generation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s (estimated), Mar 11, 1995, gage height, 5.79 ft, from rating curve extended above 100 ft³/s on basis of slope-area measurement at gage height, 2.28 ft and velocity-area measurement at gage height, 2.78 ft; minimum daily discharge, 0.08 ft³/s, Aug 9-14, 2002 and Aug 10, 11, 2003.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec 6, 1966 reached a discharge of 2,080 ft³/s, from flow over dam measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43 ft³/s, Sep 9, gage height, 1.53 ft; minimum daily discharge, 0.20 ft³/s, Oct 9, 10.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|--------|-------|-------|------|-------|-------|--------|--------|-------|-------|-------|
| 1 | 0.96 | 0.40 | 6.2 | 7.9 | 0.41 | 0.30 | 0.51 | 2.4 | 0.79 | 3.9 | 4.9 | 5.0 |
| 2 | 1.2 | 0.40 | 6.2 | 8.4 | 0.41 | 0.29 | 0.79 | 2.7 | 1.0 | 6.3 | 4.8 | 5.1 |
| 3 | 1.5 | 0.46 | 6.1 | 8.3 | 0.28 | 0.29 | 8.0 | 7.3 | 0.81 | 7.1 | 5.4 | 5.3 |
| 4 | 1.7 | 3.8 | 6.0 | 8.0 | 0.28 | 0.29 | 4.0 | 12 | 0.92 | 6.6 | 5.3 | 5.4 |
| 5 | 1.7 | 6.2 | 6.0 | 7.5 | 0.27 | 0.29 | 1.5 | 18 | 0.96 | 5.5 | 5.0 | 4.9 |
| 6 | 1.6 | 6.2 | 6.0 | 7.7 | 0.25 | 0.31 | 1.0 | 21 | 0.97 | 5.7 | 5.0 | 5.3 |
| 7 | 0.80 | 6.2 | 6.0 | 7.6 | 0.26 | 0.34 | 1.5 | 19 | 0.72 | 5.4 | 5.0 | 5.8 |
| 8 | 0.21 | 6.4 | 6.2 | 7.7 | 0.29 | 0.52 | 4.6 | 16 | 0.58 | 5.4 | 4.8 | 5.9 |
| 9 | 0.20 | 6.5 | 6.0 | 7.5 | 0.27 | 1.3 | 11 | 15 | 0.63 | 4.5 | 4.8 | 6.5 |
| 10 | 0.20 | 6.2 | 6.0 | 7.2 | 0.30 | 1.6 | 7.3 | 14 | 1.6 | 4.5 | 4.5 | 4.4 |
| 11 | 0.22 | 5.6 | 6.0 | 6.3 | 0.30 | 1.3 | 4.9 | 13 | 5.2 | 4.6 | 4.5 | 4.2 |
| 12 | 0.22 | 5.6 | 6.0 | 7.1 | 0.30 | 0.85 | 3.5 | 9.0 | 7.4 | 5.2 | 4.5 | 4.5 |
| 13 | 0.23 | 5.8 | 6.2 | 6.9 | 0.29 | 0.57 | 2.2 | 5.0 | 5.9 | 5.3 | 4.5 | 4.3 |
| 14 | 0.24 | 5.5 | 6.3 | 6.9 | 0.30 | 0.54 | 2.1 | 3.7 | 5.4 | 5.2 | 4.9 | 4.3 |
| 15 | 0.25 | 5.5 | 6.4 | 7.0 | 0.28 | 0.64 | 1.4 | 3.1 | 5.7 | 5.3 | 5.2 | 4.2 |
| 16 | 0.24 | 5.5 | 6.6 | 6.8 | 0.30 | 0.65 | 2.0 | 2.3 | 6.1 | 5.6 | 5.0 | 4.1 |
| 17 | 0.25 | 5.5 | 6.6 | 6.9 | 0.27 | 0.55 | 1.6 | 2.6 | 6.6 | 7.3 | 5.0 | 4.1 |
| 18 | 0.25 | 5.5 | 6.7 | 6.7 | 0.35 | 0.65 | 3.0 | 3.7 | 7.5 | 6.9 | 5.9 | 4.0 |
| 19 | 0.26 | 5.6 | 6.6 | 6.7 | 0.36 | 0.91 | 1.6 | 5.3 | 6.9 | 6.8 | 5.7 | 4.8 |
| 20 | 0.26 | 6.0 | 6.8 | 6.4 | 0.28 | 1.3 | 0.94 | 4.8 | 5.8 | 6.5 | 5.8 | 4.5 |
| 21 | 0.26 | 6.0 | 7.6 | 6.4 | 0.30 | 2.2 | 1.1 | 5.1 | 5.1 | 6.0 | 5.9 | 4.9 |
| 22 | 0.27 | 6.0 | 7.8 | 6.2 | 0.36 | 6.0 | 1.4 | 2.8 | 6.0 | 6.0 | 5.6 | 5.2 |
| 23 | 0.28 | 6.0 | 7.6 | 6.3 | 0.36 | 12 | 0.91 | 2.0 | 6.0 | 4.9 | 5.5 | 4.9 |
| 24 | 0.33 | 6.0 | 8.0 | 6.6 | 0.39 | 15 | 0.74 | 1.8 | 6.8 | 5.1 | 5.4 | 4.8 |
| 25 | 0.57 | 6.3 | 8.1 | 6.5 | 0.30 | 6.6 | 0.84 | 1.1 | 7.3 | 5.5 | 5.4 | 4.7 |
| 26 | 1.0 | 6.2 | 11 | 6.1 | 0.39 | 3.7 | 1.4 | 0.82 | 6.8 | 5.9 | 5.3 | 4.8 |
| 27 | 1.4 | 6.2 | 8.2 | 6.2 | 0.38 | 1.2 | 1.3 | 0.60 | 6.1 | 5.6 | 5.1 | 4.5 |
| 28 | 1.5 | 6.1 | 7.5 | 6.4 | 0.36 | 1.1 | 3.0 | 0.57 | 5.8 | 5.5 | 5.0 | 4.4 |
| 29 | 0.97 | 6.2 | 7.8 | 6.3 | 0.33 | 0.84 | 7.4 | 0.81 | 5.7 | 4.9 | 4.9 | 4.5 |
| 30 | 0.31 | 6.2 | 8.1 | 6.3 | --- | 0.54 | 4.5 | 0.93 | 2.3 | 4.8 | 4.9 | 4.6 |
| 31 | 0.39 | --- | 8.1 | 2.7 | --- | 0.49 | --- | 1.1 | --- | 5.1 | 4.9 | --- |
| TOTAL | 19.77 | 160.06 | 214.7 | 211.5 | 9.22 | 63.16 | 86.03 | 197.53 | 129.38 | 172.9 | 158.4 | 143.9 |
| MEAN | 0.64 | 5.34 | 6.93 | 6.82 | 0.32 | 2.04 | 2.87 | 6.37 | 4.31 | 5.58 | 5.11 | 4.80 |
| MAX | 1.7 | 6.5 | 11 | 8.4 | 0.41 | 15 | 11 | 21 | 7.5 | 7.3 | 5.9 | 6.5 |
| MIN | 0.20 | 0.40 | 6.0 | 2.7 | 0.25 | 0.29 | 0.51 | 0.57 | 0.58 | 3.9 | 4.5 | 4.0 |
| AC-FT | 39 | 317 | 426 | 420 | 18 | 125 | 171 | 392 | 257 | 343 | 314 | 285 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| MEAN | 2.78 | 4.04 | 3.65 | 3.01 | 2.74 | 9.94 | 8.80 | 18.9 | 15.6 | 5.88 | 2.66 | 3.81 |
| MAX | 14.6 | 12.9 | 10.6 | 12.9 | 11.8 | 63.7 | 35.1 | 77.8 | 84.1 | 32.1 | 7.36 | 15.5 |
| (WY) | (1996) | (1996) | (1993) | (1993) | (1993) | (1995) | (1993) | (1993) | (1995) | (1995) | (1995) | (1995) |
| MIN | 0.31 | 0.50 | 0.40 | 0.47 | 0.30 | 0.31 | 0.35 | 0.47 | 0.16 | 0.11 | 0.10 | 0.23 |
| (WY) | (2002) | (1990) | (1990) | (2000) | (2003) | (2002) | (2003) | (1990) | (2002) | (2002) | (2003) | (2001) |

| SUMMARY STATISTICS | | | FOR 2003 CALENDAR YEAR | | | FOR 2004 WATER YEAR | | | WATER YEARS 1990 - 2004 | | |
|--------------------------|--|--|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL | | | 645.34 | | | 1,566.55 | | | 6.83 | | |
| ANNUAL MEAN | | | 1.77 | | | 4.28 | | | 24.5 | | |
| HIGHEST ANNUAL MEAN | | | | | | | | | 1995 | | |
| LOWEST ANNUAL MEAN | | | | | | | | | 1990 | | |
| HIGHEST DAILY MEAN | | | 11 | | | Dec 26 | | | 21 | | |
| LOWEST DAILY MEAN | | | 0.08 | | | Aug 10 | | | May 6 | | |
| ANNUAL SEVEN-DAY MINIMUM | | | 0.09 | | | Aug 8 | | | 0.22 | | |
| ANNUAL RUNOFF (AC-FT) | | | 1,280 | | | 3,110 | | | 393 | | |
| 10 PERCENT EXCEEDS | | | 6.2 | | | 7.3 | | | Mar 11, 1995 | | |
| 50 PERCENT EXCEEDS | | | 0.30 | | | 4.9 | | | 0.08 | | |
| 90 PERCENT EXCEEDS | | | 0.12 | | | 0.30 | | | 16 | | |
| | | | | | | | | | 1.2 | | |
| | | | | | | | | | 0.30 | | |