

YAKIMA RIVER BASIN

12505450 GRANGER DRAIN AT GRANGER, WA

LOCATION.--Lat 46°20'37", long 120°11'09", in NW 1/4 NW 1/4 sec.22, T.10 N., R.21 E., Yakima County, Hydrologic Unit 17030003, on right bank, 330 ft upstream from E Street, at Granger, WA.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1975 to September 1976, August to September 1981 (discharge measurements only), May to September 1991, August 1999 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 720 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Most flow is return and waste from irrigation.

COOPERATION.--Gage-height records and nineteen discharge measurements were provided by Sunnyside Valley Irrigation District.

AVERAGE DISCHARGE.--3 years (water years 2000-2002), 34.1 ft<sup>3</sup>/s, 24,730 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 175 ft<sup>3</sup>/s June 20, 1991, gage height, 4.62 ft; minimum discharge, 15 ft<sup>3</sup>/s part or all of each day Mar. 26-29, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 73 ft<sup>3</sup>/s Sept. 3; minimum discharge, 15 ft<sup>3</sup>/s part or all of each day Mar. 26-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 25   | 19   | 22   | 20   | 18   | 19   | 16   | 44   | 47   | 58   | 49   | 63   |
| 2     | 29   | 19   | 22   | 23   | 17   | 19   | 17   | 49   | 46   | 54   | 49   | 64   |
| 3     | 27   | 19   | 23   | 22   | 17   | 19   | 18   | 43   | 48   | 54   | 51   | 66   |
| 4     | 29   | 19   | 21   | 21   | 16   | 19   | 19   | 43   | 45   | 54   | 56   | 63   |
| 5     | 30   | 20   | 21   | 22   | 17   | 19   | 25   | 45   | 46   | 53   | 55   | 58   |
| 6     | 31   | 20   | 24   | 22   | e17  | 20   | 27   | 43   | 47   | 50   | 50   | 55   |
| 7     | 33   | 19   | 21   | 22   | e17  | 19   | 23   | 42   | 48   | 50   | 51   | 55   |
| 8     | 35   | 19   | 20   | 23   | e18  | 19   | 26   | 43   | 50   | 51   | 50   | 58   |
| 9     | 33   | 19   | 20   | 22   | 18   | 19   | 31   | 44   | 57   | 46   | 50   | 59   |
| 10    | 38   | 19   | 21   | 22   | 18   | 19   | 36   | 44   | 51   | 48   | 48   | 53   |
| 11    | 36   | 19   | 21   | 21   | 18   | 19   | 42   | 43   | 48   | 48   | 53   | 54   |
| 12    | 35   | 19   | 20   | 20   | 19   | 19   | 39   | 45   | 43   | 48   | 50   | 53   |
| 13    | 31   | 19   | 21   | 19   | 20   | 19   | 41   | 44   | 43   | 48   | 48   | 55   |
| 14    | 31   | 19   | 20   | 19   | 19   | 19   | 45   | 44   | 43   | 52   | 50   | 57   |
| 15    | 31   | 20   | 20   | 19   | 18   | 18   | 41   | 42   | 42   | 54   | 49   | 61   |
| 16    | 32   | 21   | 20   | 19   | 18   | 18   | 35   | 42   | 45   | 49   | 47   | 61   |
| 17    | 33   | 21   | 20   | 19   | 19   | 17   | 34   | 44   | 48   | 47   | 50   | 61   |
| 18    | 23   | 20   | 21   | 19   | 19   | 18   | 30   | 46   | 51   | 47   | 55   | 58   |
| 19    | 19   | 21   | 22   | 20   | 19   | 17   | 33   | 50   | 51   | 48   | 55   | 56   |
| 20    | 17   | 21   | 20   | 23   | 18   | 17   | 38   | 54   | 48   | 52   | 52   | 57   |
| 21    | 18   | 22   | 20   | 23   | 18   | 16   | 40   | 50   | 45   | 53   | 53   | 56   |
| 22    | 25   | 22   | 23   | 20   | 18   | 17   | 37   | 50   | 45   | 50   | 55   | 58   |
| 23    | 21   | 20   | 20   | 20   | 19   | 17   | 32   | 48   | 45   | 47   | 56   | 59   |
| 24    | 19   | 21   | 20   | 21   | 19   | 17   | 29   | 47   | 44   | 47   | 58   | 55   |
| 25    | 19   | 20   | 20   | 20   | 18   | 16   | 36   | 46   | 43   | 48   | 63   | 54   |
| 26    | 21   | 19   | 20   | 18   | 19   | 16   | 41   | 50   | 43   | 48   | 61   | 55   |
| 27    | 21   | 19   | 20   | 17   | 20   | 15   | 45   | 49   | 45   | 46   | 53   | 59   |
| 28    | 20   | 20   | 20   | 16   | 20   | 16   | 44   | 50   | 47   | 50   | 55   | 60   |
| 29    | 19   | 21   | 20   | 16   | ---  | 16   | 44   | 50   | 58   | 54   | 56   | 61   |
| 30    | 20   | 20   | 21   | 17   | ---  | 16   | 44   | 47   | 61   | 50   | 55   | 60   |
| 31    | 20   | ---  | 20   | 17   | ---  | 16   | ---  | 46   | ---  | 48   | 56   | ---  |
| TOTAL | 821  | 596  | 644  | 622  | 511  | 550  | 1008 | 1427 | 1423 | 1552 | 1639 | 1744 |
| MEAN  | 26.5 | 19.9 | 20.8 | 20.1 | 18.2 | 17.7 | 33.6 | 46.0 | 47.4 | 50.1 | 52.9 | 58.1 |
| MAX   | 38   | 22   | 24   | 23   | 20   | 20   | 45   | 54   | 61   | 58   | 63   | 66   |
| MIN   | 17   | 19   | 20   | 16   | 16   | 15   | 16   | 42   | 42   | 46   | 47   | 53   |
| AC-FT | 1630 | 1180 | 1280 | 1230 | 1010 | 1090 | 2000 | 2830 | 2820 | 3080 | 3250 | 3460 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

|      | 2000 | 2001 | 2002 | 2000 | 2001 | 2002 | 2000 | 2001 | 2002 | 2000 | 2001 | 2002 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 40.9 | 22.7 | 21.5 | 21.5 | 21.3 | 20.6 | 31.9 | 41.5 | 44.5 | 45.9 | 48.1 | 48.4 |
| MAX  | 49.9 | 24.2 | 22.1 | 23.0 | 24.5 | 23.8 | 36.0 | 46.2 | 55.1 | 58.7 | 59.2 | 61.4 |
| (WY) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| MIN  | 26.5 | 19.9 | 20.8 | 20.1 | 18.2 | 17.7 | 26.0 | 32.3 | 30.9 | 28.8 | 32.2 | 25.8 |
| (WY) | 2002 | 2002 | 2002 | 2002 | 2002 | 2002 | 2001 | 2001 | 2001 | 2001 | 2001 | 2001 |

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 2000 - 2002

|                          |       |        |                |
|--------------------------|-------|--------|----------------|
| ANNUAL TOTAL             | 9313  | 12537  |                |
| ANNUAL MEAN              | 25.5  | 34.3   | 34.1           |
| HIGHEST ANNUAL MEAN      |       |        | 40.4 2000      |
| LOWEST ANNUAL MEAN       |       |        | 27.6 2001      |
| HIGHEST DAILY MEAN       | 40    | Jun 4  | 66 Sep 3 2000  |
| LOWEST DAILY MEAN        | 17    | Oct 20 | 15 Mar 27 2002 |
| ANNUAL SEVEN-DAY MINIMUM | 18    | Sep 20 | 16 Mar 25 2002 |
| ANNUAL RUNOFF (AC-FT)    | 18470 | 24870  | 24730          |
| 10 PERCENT EXCEEDS       | 35    | 55     | 58             |
| 50 PERCENT EXCEEDS       | 23    | 31     | 27             |
| 90 PERCENT EXCEEDS       | 19    | 18     | 19             |

e Estimated