

TULALIP AND MISSION CREEK BASINS

12158040 TULALIP CREEK NEAR TULALIP, WA

LOCATION.--Lat 48°04'07", long 122°17'10", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.22, T.30 N., R.4 E., Snohomish County, Hydrologic Unit 17110019, Tulalip Indian Reservation, on left bank 200 ft upstream from highway crossing, 0.15 mi east of Tulalip and 0.30 mi above mouth.

DRAINAGE AREA.--15.4 mi².

PERIOD OF RECORD.--October 1974 to September 1977, November 2000 to current year. Published as "at Tulalip" 1974-77.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 43.6 ft above NGVD of 1929, from precision Global Positioning System (GPS). October 1974 to September 1977, water-stage recorder, at site 600 ft upstream from highway crossing, at different datum.

REMARKS.--Records good except for estimated daily discharges, and discharges below 15 ft³/s, and above 80 ft³/s, which are fair. Some regulation at outlet of Lake Shoecraft, drainage area 6.12 mi², and natural regulation in lakes and ponds in basin. Minor diversions above station for domestic use from East Branch Tulalip Creek. Tulalip Fish Hatchery diverts entire flow at times from East Branch Tulalip Creek, and Tulalip Creek above East Branch for use in hatchery. Water is returned to creek above station. Chemical Analysis November 1974 to March 1977, water temperature October 1974 to March 1977.

AVERAGE DISCHARGE.--4 years (water years 1975-77, 2002), 13.0 ft³/s, 11.51 in/yr, 9,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 136 ft³/s Dec. 17, 2001, gage height, 97.81 ft; minimum discharge, 2.0 ft³/s Aug. 12, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 136 ft³/s Dec. 17, 2001, gage height 97.81 ft; minimum discharge, 4.4 ft³/s June 2, 3, 6, Sept. 1, 2002.

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 | 6.5 | 11 | 34 | e23 | 35 | 18 | 21 | 14 | 9.4 | 6.9 | 6.3 | 5.4 |
| 2 | 6.4 | 9.1 | 27 | e27 | 32 | 17 | 19 | 14 | 9.2 | 7.0 | 6.2 | 5.6 |
| 3 | 6.4 | 8.2 | 24 | e25 | 31 | 16 | 19 | 14 | 8.9 | 6.7 | 6.3 | 5.7 |
| 4 | 6.3 | 8.0 | 26 | e22 | 29 | 16 | 18 | 14 | 9.1 | 8.3 | 6.4 | 5.5 |
| 5 | 6.1 | 8.1 | 28 | e21 | 28 | 15 | 18 | 16 | 9.6 | 7.5 | 8.2 | 5.4 |
| 6 | 6.1 | 7.5 | 27 | e23 | 30 | 14 | 18 | 16 | 10 | 6.9 | 7.1 | 5.5 |
| 7 | 6.4 | 6.9 | 23 | e30 | 32 | 14 | 18 | 15 | 8.1 | 7.8 | 7.0 | e5.2 |
| 8 | 6.2 | 6.8 | 23 | e33 | 37 | 16 | 17 | 14 | 7.8 | 15 | 6.6 | e5.4 |
| 9 | 6.2 | 6.6 | 26 | e25 | 31 | 16 | 19 | 14 | 7.7 | 10 | 6.3 | e5.4 |
| 10 | 7.0 | 6.4 | 27 | e21 | 29 | 19 | 23 | 13 | 7.3 | 8.2 | 5.8 | e5.4 |
| 11 | 7.1 | 6.5 | 29 | e18 | 31 | 19 | 22 | 13 | 7.3 | 7.3 | 5.6 | e5.4 |
| 12 | 7.2 | 7.1 | 33 | e18 | 28 | 17 | 18 | 12 | 6.8 | 7.2 | 5.6 | 5.6 |
| 13 | 8.0 | 8.1 | 42 | e17 | 26 | 16 | 17 | 13 | 6.4 | 7.0 | 5.6 | 5.5 |
| 14 | 11 | 24 | 52 | e17 | 24 | 33 | 26 | 15 | 6.3 | 7.0 | 5.2 | 5.6 |
| 15 | 8.8 | 29 | 36 | e17 | 23 | 27 | 21 | 13 | 6.4 | 7.1 | 5.4 | 5.8 |
| 16 | 11 | 15 | 51 | e16 | 23 | 29 | 24 | 12 | 6.4 | 6.9 | 5.4 | 6.8 |
| 17 | 11 | 12 | 99 | e15 | 23 | 24 | 22 | 13 | 6.4 | 7.0 | 5.5 | 8.0 |
| 18 | 9.3 | 12 | 55 | e16 | 24 | 22 | 20 | 13 | 9.6 | 7.1 | 5.6 | 6.7 |
| 19 | 15 | 17 | 44 | e35 | 25 | 28 | 19 | 12 | 7.2 | 6.6 | 5.9 | 6.8 |
| 20 | 12 | 23 | e37 | e42 | 25 | 48 | 19 | 14 | 6.8 | 6.2 | 6.0 | 6.5 |
| 21 | 14 | 19 | e32 | e37 | 24 | 35 | 18 | 13 | 6.3 | 6.2 | 6.1 | 5.9 |
| 22 | 15 | 23 | e29 | e34 | 23 | 32 | 18 | 12 | 6.0 | 5.8 | 6.0 | 5.7 |
| 23 | 14 | 29 | e28 | e31 | 23 | 28 | 17 | 11 | 5.9 | 5.8 | 5.8 | 5.5 |
| 24 | 15 | 20 | e27 | 30 | 23 | 27 | 16 | 11 | 6.0 | 5.8 | 5.6 | 5.7 |
| 25 | 21 | 18 | e26 | 38 | 21 | 24 | 16 | 11 | 6.1 | 6.1 | 5.9 | 6.1 |
| 26 | 13 | 18 | e24 | 34 | 20 | 22 | 16 | 12 | 5.8 | 6.5 | 6.0 | 5.8 |
| 27 | 28 | 15 | e22 | 32 | 19 | 21 | 16 | 12 | 6.0 | 6.4 | 5.7 | 6.8 |
| 28 | 14 | 26 | e20 | 33 | 19 | 22 | 16 | 11 | 7.5 | 6.5 | 5.7 | 5.8 |
| 29 | 11 | 49 | e20 | 30 | --- | 22 | 15 | 11 | 8.5 | 6.8 | 5.6 | 6.8 |
| 30 | 11 | 34 | e20 | 34 | --- | 20 | 15 | 10 | 6.9 | 6.7 | 5.6 | 7.7 |
| 31 | 14 | --- | e21 | 37 | --- | 20 | --- | 9.8 | --- | 6.4 | 5.6 | --- |
| TOTAL | 334.0 | 483.3 | 1012 | 831 | 738 | 697 | 561 | 397.8 | 221.7 | 222.7 | 185.6 | 179.0 |
| MEAN | 10.8 | 16.1 | 32.6 | 26.8 | 26.4 | 22.5 | 18.7 | 12.8 | 7.39 | 7.18 | 5.99 | 5.97 |
| MAX | 28 | 49 | 99 | 42 | 37 | 48 | 26 | 16 | 10 | 15 | 8.2 | 8.0 |
| MIN | 6.1 | 6.4 | 20 | 15 | 19 | 14 | 15 | 9.8 | 5.8 | 5.8 | 5.2 | 5.2 |
| AC-FT | 662 | 959 | 2010 | 1650 | 1460 | 1380 | 1110 | 789 | 440 | 442 | 368 | 355 |
| CFSM | 0.70 | 1.05 | 2.12 | 1.74 | 1.71 | 1.46 | 1.21 | 0.83 | 0.48 | 0.47 | 0.39 | 0.39 |
| IN. | 0.81 | 1.17 | 2.44 | 2.01 | 1.78 | 1.68 | 1.36 | 0.96 | 0.54 | 0.54 | 0.45 | 0.43 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 8.76 | 12.0 | 19.1 | 18.6 | 17.9 | 18.4 | 17.0 | 10.9 | 8.33 | 6.38 | 7.04 | 6.55 |
| (WY) | 2002 | 2002 | 2002 | 2002 | 2002 | 1975 | 1976 | 2002 | 2001 | 2002 | 1976 | 1977 |
| MIN | 5.69 | 8.60 | 9.05 | 8.06 | 7.63 | 12.7 | 10.5 | 8.84 | 7.39 | 5.84 | 5.99 | 5.97 |
| (WY) | 1975 | 1977 | 1977 | 1977 | 1977 | 1977 | 1976 | 2002 | 1976 | 2002 | 2002 | 2002 |

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1975 - 2002

| | | | | |
|--------------------------|--------|--------|-------|-------------|
| ANNUAL TOTAL | 4730.8 | 5863.1 | | |
| ANNUAL MEAN | 13.0 | 16.1 | 13.0 | |
| HIGHEST ANNUAL MEAN | | | 16.1 | 2002 |
| LOWEST ANNUAL MEAN | | | 8.75 | 1977 |
| HIGHEST DAILY MEAN | 99 | Dec 17 | 99 | Dec 17 2001 |
| LOWEST DAILY MEAN | 5.4 | Aug 10 | 5.2 | Aug 14 1977 |
| ANNUAL SEVEN-DAY MINIMUM | 5.5 | Aug 9 | 5.4 | Sep 5 1977 |
| ANNUAL RUNOFF (AC-FT) | 9380 | | 11630 | 9450 |
| ANNUAL RUNOFF (CFSM) | 0.84 | | 1.04 | 0.85 |
| ANNUAL RUNOFF (INCHES) | 11.43 | | 14.16 | 11.51 |
| 10 PERCENT EXCEEDS | 23 | | 30 | 26 |
| 50 PERCENT EXCEEDS | 11 | | 14 | 9.4 |
| 90 PERCENT EXCEEDS | 5.8 | | 5.8 | 5.8 |

e Estimated