12452500 CHELAN RIVER AT CHELAN, WA

LOCATION.--Lat 47°50'05", long 120°00'43", in SE $^{1}/_{4}$ NE $^{1}/_{4}$ sec.30, T.27 N., R.23 E., Chelan County, Hydrologic Unit 17020009, at Chelan River powerplant tailrace, 4.3 mi downstream from control dam at outlet of Lake Chelan, and 3.0 mi southeast of Chelan.

DRAINAGE AREA.--924 mi$^2$.

PERIOD OF RECORD.--November 1903 to current year. Published as "below Chelan Lake" 1904-05. Adjusted records for October 1903 to September 1911, published in WSP 482, 492, and 870 are unreliable and should not be used.

REVISED RECORDS.--WSP 482: 1904-13. WSP 612: 1924. WSP 1246: 1951. WSP 1286: 1952. WSP 1933: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and watt-hour meters on each turbine. Datum of gage is 1,074.66 ft above sea level, datum of 1912. To convert to National Geodetic Vertical Datum of 1929, subtract 1.62 ft. See WSP 1933 for history of changes prior to Mar. 20, 1939. Mar. 20, 1939, to Sept. 30, 1981, gage at site 1.7 mi downstream from the Lake Chelan gage, at same datum, and published as the gage of record, used to determine head and spill discharge.

REMARKS.--Daily discharge determined from flow through turbines computed from relation between loading and head, plus flow through two irrigation pipes which divert water from the penstock just above the turbines, plus spill discharge. Unmeasured water that is diverted for irrigation upstream from station is a small percentage of total runoff. Public Utility District No. 1 of Chelan County diverts water at Chelan to develop about 40,000 kW and to irrigate 900 acres near Chelan. This quantity is included in records of daily discharge. Diversions for irrigation of about 6,280 acres with an annual depletion of about 11,000 acre-ft, 1946 estimate. Flow regulated by Lake Chelan (station 12452000).

COOPERATION.--Records partially furnished by Public Utility District No. 1 of Chelan County.

AVERAGE DISCHARGE.--97 years (water years 1905-2001), 2,048 ft$^3$/s, 30.10 in/yr, 1,484,000 acre-ft/yr, adjusted for storage since October 1911.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 18,400 ft$^3$/s June 3, 1968; no flow part of day Jan. 30, 1917, when lake outlet was blocked with ice, and at other times owing to artificial regulation.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,220 ft$^3$/s May 23, 25, 31, June 1-5, 29, 30, July 1-14, Sept. 29-30; minimum daily discharge, 7.9 ft$^3$/s Feb. 17-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2210 | 2210 | 2210 | 109 | 108 | 9.2 | 8.9 | 1500 | 2220 | 2220 | 1400 | 1310 |
| 2 | 2210 | 2210 | 2210 | 109 | 108 | 9.2 | 751 | 1500 | 2220 | 2220 | 1480 | 693 |
| 3 | 2210 | 2210 | 2210 | 38 | 108 | 9.2 | 1330 | 386 | 2220 | 2220 | 1520 | 664 |
| 4 | 2120 | 2120 | 2210 | 9.2 | 108 | 9.1 | 1200 | 611 | 2220 | 2220 | 1400 | 1300 |
| 5 | 2210 | 2210 | 2210 | 9.1 | 108 | 9.1 | 1150 | 482 | 2220 | 2220 | 1440 | 1350 |
| 6 | 2210 | 2210 | 2210 | 9.1 | 108 | 9.0 | 1160 | 19 | 1920 | 2220 | 1520 | 1350 |
| 7 | 2210 | 2210 | 2210 | 9.1 | 108 | 8.9 | 643 | 1610 | 1870 | 2220 | 1520 | 1420 |
| 8 | 2210 | 2210 | 2210 | 9.0 | 108 | 8.9 | 10 | 1870 | 1240 | 2220 | 1540 | 1340 |
| 9 | 2210 | 2050 | 2210 | 9.1 | 104 | 8.8 | 1300 | 1860 | 964 | 2220 | 1500 | 368 |
| 10 | 2070 | 2210 | 2210 | 9.1 | 108 | 8.7 | 1410 | 1780 | 439 | 2220 | 1520 | 1340 |
| 11 | 2210 | 2210 | 2210 | 9.1 | 108 | 8.7 | 1430 | 1930 | 1290 | 2220 | 1500 | 864 |
| 12 | 2210 | 2210 | 2210 | 9.1 | 108 | 8.7 | 1570 | 1840 | 689 | 2220 | 1420 | 864 |
| 13 | 2210 | 2210 | 2210 | 9.0 | 108 | 8.6 | 1490 | 23 | 101 | 2220 | 1540 | 921 |
| 14 | 2210 | 2120 | 2030 | 9.0 | 108 | 8.7 | 1480 | 469 | 22 | 2220 | 1390 | 942 |
| 15 | 2030 | 2210 | 2210 | 9.0 | 108 | 8.7 | 10 | 215 | 668 | 2150 | 1450 | 867 |
| 16 | 2210 | 2210 | 2210 | 8.9 | 75 | 8.7 | 1410 | 19 | 443 | 2000 | 1390 | 121 |
| 17 | 2210 | 2210 | 2210 | 8.9 | 7.9 | 8.8 | 1420 | 1020 | 522 | 1540 | 899 | 996 |
| 18 | 2210 | 2210 | 2210 | 8.9 | 7.9 | 8.8 | 1480 | 664 | 1240 | 1030 | 407 | 1060 |
| 19 | 2210 | 2210 | 2210 | 42 | 7.9 | 280 | 1480 | 1480 | 418 | 1120 | 57 | 999 |
| 20 | 2210 | 2210 | 2210 | 8.8 | 7.9 | 438 | 1380 | 1390 | 47 | 1140 | 537 | 912 |
| 21 | 2210 | 2210 | 2040 | 8.8 | 7.9 | 284 | 744 | 1570 | 22 | 962 | 87 | 1290 |
| 22 | 2210 | 2210 | 1500 | 8.7 | 7.9 | 8.8 | 19 | 1720 | 839 | 24 | 474 | 1320 |
| 23 | 2210 | 2210 | 1520 | 8.7 | 7.9 | 8.7 | 1490 | 2220 | 21 | 992 | 24 | 120 |
| 24 | 2120 | 2210 | 1300 | 8.6 | 7.9 | 8.6 | 1400 | 1840 | 725 | 1300 | 241 | 1360 |
| 25 | 2030 | 2210 | 109 | 8.6 | 7.9 | 8.5 | 1440 | 2220 | 1060 | 1220 | 437 | 1240 |
| 26 | 2210 | 2210 | 109 | 8.6 | 7.9 | 8.4 | 1500 | 811 | 1270 | 996 | 124 | 1530 |
| 27 | 2210 | 2210 | 109 | 51 | 7.9 | 8.3 | 1400 | 712 | 1340 | 896 | 662 | 1520 |
| 28 | 2210 | 2210 | 109 | 109 | 7.9 | 8.3 | 1030 | 1020 | 2070 | 1300 | 1250 | 1660 |
| 29 | 2210 | 2210 | 101 | 108 | --- | 8.3 | 11 | 1800 | 2220 | 1300 | 1200 | 2220 |
| 30 | 2210 | 2210 | 80 | 104 | --- | 258 | 1390 | 1880 | 2220 | 1260 | 1440 | 2220 |
| 31 | 2210 | --- | 109 | 108 | --- | 8.3 | --- | 2220 | --- | 1370 | 1360 | --- |
| TOTAL | 67830 | 65960 | 51106 | 974.4 | 1785.8 | 1496.0 | 32536.9 | 38681 | 34760 | 51680 | 32729 | 34161 |
| MEAN | 2188 | 2199 | 1649 | 31.4 | 63.8 | 48.3 | 1085 | 1248 | 1159 | 1667 | 1056 | 1139 |
| MAX | 2210 | 2210 | 2210 | 109 | 108 | 438 | 1570 | 2220 | 2220 | 2220 | 1540 | 2220 |
| MIN | 2030 | 2050 | 80 | 8.6 | 7.9 | 8.3 | 8.9 | 19 | 21 | 24 | 24 | 120 |
| AC-FT | 134500 | 130800 | 101400 | 1930 | 3540 | 2970 | 64540 | 76720 | 68950 | 102500 | 64920 | 67760 |
| MEAN† | 659 | 408 | 415 | 257 | 278 | 513 | 1046 | 3743 | 2875 | 1746 | 948 | 448 |
| CFSM† | 0.71 | 0.44 | 0.45 | 0.28 | 0.30 | 0.56 | 1.13 | 4.05 | 3.11 | 1.89 | 1.03 | 0.48 |
| IN.† | 0.82 | 0.49 | 0.52 | 0.32 | 0.31 | 0.64 | 1.26 | 4.67 | 3.47 | 2.18 | 1.18 | 0.54 |
| AC-FT† | 40500 | 24300 | 25500 | 15830 | 15440 | 31570 | 62240 | 230200 | 171000 | 107400 | 58320 | 26660 |

CAL YR 2000 TOTAL 791811 MEAN 2163 MAX 5790 MIN 22 AC-FT 1571000 MEAN† 1929 CFSM† 2.09 IN.† 28.41 AC-FT† 1400000
WTR YR 2001 TOTAL 413700.1 MEAN 1133 MAX 2220 MIN 7.9 AC-FT 820600 MEAN† 1117 CFSM† 1.21 IN.† 16.42 AC-FT† 809100

† Adjusted for change in contents in Lake Chelan.