## 12439500 OKANOGAN RIVER AT OROVILLE, WA
(International gaging station)

LOCATION.--Lat 48°55'51", long 119°25'09", in SE 1/4 SW 1/4 sec.27, T.40 N., R.27 E., Okanogan County, Hydrologic Unit 17020006, on left bank in Oroville, 20 ft downstream from Burlington Northern trestle, 0.5 mi downstream from Tonasket Creek, 1.7 mi downstream from Osoyoos Lake, 3.2 mi upstream from Similkameen River, and at mile 77.3.

DRAINAGE AREA.--3,195 $mi^2$.

PERIOD OF RECORD.--October 1942 to current year.

REVISED RECORDS.--WDR WA-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Oct. 26, 1944, nonrecording gage at Zosel Mill dam 200 ft upstream, Oct. 26, 1944, to Mar. 6, 1948, water-stage recorder on railroad trestle 20 ft upstream, both at same datum. Auxiliary water-stage recorder 0.5 mi downstream used during high-water periods; May 15, 1946, to Apr. 9, 1948, nonrecording gage at same site, both at datum 900.00 ft above sea level. To convert to 1947 joint adjustment of U.S. Coast and Geodetic Survey and Geodetic Survey of Canada, subtract 0.26 ft.

REMARKS.--Records good except for estimated daily discharges and backwater periods, May 23-29, which are fair. Diversions made to irrigate approximately 44,000 acres in Canada and minor diversions in the United States upstream from station. Natural regulation in several large lakes and artificial regulation in Okanagan Lake 46.7 mi upstream for flood control and irrigation; also regulated by Zosel dam at Oroville, 500 ft upstream from gage. Water temperature April 1986 to September 1987. U.S. Geological Survey satellite telemeter at station.

COOPERATION.--This station is maintained by the United States under agreement with Canada.

AVERAGE DISCHARGE.--59 years (water years 1943-2001), 699 $ft^3/s$, 506,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,770 $ft^3/s$ June 7, 1997; maximum elevation, 916.89 ft June 2, 1972, at datum then in use, backwater from Similkameen River; minimum daily discharge, -2,270 $ft^3/s$ reverse flow May 29, 1948; minimum elevation, 903.98 ft Mar. 1, 1948, at datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,260 $ft^3/s$ May 15; maximum elevation, 907.87 ft May 25 result of backwater from Similkameen River and result of regulation at Zosel Dam; minimum discharge, 53 $ft^3/s$ May 1; minimum elevation, 905.48 ft May 1, result of regulation at Zosel Dam.

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 | 985 | 402 | 384 | 242 | 155 | 136 | 152 | 94 | 201 | 382 | 266 | 259 |
| 2 | 889 | 402 | 380 | 239 | 155 | 137 | 216 | 91 | 202 | 214 | 219 | 259 |
| 3 | 759 | 394 | 380 | 239 | 157 | 140 | 244 | 93 | 278 | 137 | 220 | 259 |
| 4 | 565 | 391 | 375 | 239 | 159 | 140 | 242 | 96 | 297 | 134 | 220 | 260 |
| 5 | 381 | 391 | 372 | 239 | 159 | 140 | 214 | 99 | 219 | 143 | 221 | 261 |
| 6 | 300 | 387 | 369 | 239 | 161 | 140 | 172 | 100 | 248 | 153 | 223 | 259 |
| 7 | 300 | 446 | 369 | 239 | 162 | 140 | 172 | 102 | 346 | 152 | 224 | 259 |
| 8 | 304 | 475 | 364 | 239 | 163 | 143 | 172 | 106 | 311 | 243 | 224 | 258 |
| 9 | 305 | 473 | 364 | 239 | 163 | 143 | 205 | 109 | 312 | 233 | 182 | 258 |
| 10 | 407 | 469 | 365 | 242 | 163 | 143 | 306 | 120 | 310 | 163 | 159 | 256 |
| 11 | 464 | 464 | 322 | 244 | 163 | 143 | 291 | 130 | 307 | 163 | 159 | 271 |
| 12 | 368 | 460 | 303 | 244 | 163 | 143 | 254 | 127 | 337 | 165 | 160 | 269 |
| 13 | 290 | 448 | 300 | 244 | 166 | 145 | 230 | 129 | 306 | 250 | 262 | 269 |
| 14 | 322 | 445 | 263 | 244 | 167 | 147 | 215 | 220 | 400 | 322 | 258 | 291 |
| 15 | 347 | 441 | e185 | 244 | 171 | 147 | 215 | 724 | 487 | 276 | 305 | 311 |
| 16 | 379 | 437 | e210 | 244 | 172 | 147 | 215 | 467 | 302 | 167 | 305 | 308 |
| 17 | 399 | 434 | 243 | 244 | 170 | 149 | 185 | 459 | 249 | 301 | 267 | 305 |
| 18 | 403 | 428 | 244 | 233 | 167 | 151 | 175 | 284 | 154 | 662 | 224 | 305 |
| 19 | 407 | 424 | 244 | 196 | 167 | 151 | 176 | 176 | 102 | 344 | 223 | 305 |
| 20 | 408 | 420 | 244 | 181 | 167 | 151 | 177 | 222 | 102 | 254 | 222 | 305 |
| 21 | 408 | 419 | 244 | 183 | 169 | 151 | 176 | 222 | 102 | 254 | 221 | 305 |
| 22 | 408 | 413 | 244 | 186 | 172 | 151 | 176 | 221 | 103 | 254 | 190 | 303 |
| 23 | 408 | 408 | 244 | 158 | 151 | 153 | 154 | 217 | 102 | 299 | 192 | 304 |
| 24 | 407 | 405 | 244 | 143 | 136 | 152 | 135 | 290 | 101 | 321 | 316 | 305 |
| 25 | 402 | 400 | 244 | 147 | 136 | 151 | 131 | 547 | 104 | 204 | 426 | 305 |
| 26 | 402 | 397 | 244 | 147 | 136 | 180 | 125 | 222 | 167 | 155 | 458 | 305 |
| 27 | 402 | 396 | 244 | 147 | 136 | 266 | 96 | 264 | 232 | 155 | 398 | 305 |
| 28 | 402 | 392 | 244 | 147 | 136 | 322 | 93 | 290 | 449 | 157 | 322 | 353 |
| 29 | 402 | 391 | 244 | 149 | --- | 346 | 93 | 167 | 288 | 160 | 260 | 408 |
| 30 | 402 | 391 | 244 | 151 | --- | 280 | 93 | 234 | 182 | 297 | 250 | 408 |
| 31 | 402 | --- | 243 | 153 | --- | 174 | --- | 200 | --- | 375 | 261 | --- |
| TOTAL | 13427 | 12643 | 8963 | 6425 | 4442 | 5202 | 5500 | 6822 | 7300 | 7489 | 7837 | 8828 |
| MEAN | 433 | 421 | 289 | 207 | 159 | 168 | 183 | 220 | 243 | 242 | 253 | 294 |
| MAX | 985 | 475 | 384 | 244 | 172 | 346 | 306 | 724 | 487 | 662 | 458 | 408 |
| MIN | 290 | 387 | 185 | 143 | 136 | 136 | 93 | 91 | 101 | 134 | 159 | 256 |
| AC-FT | 26630 | 25080 | 17780 | 12740 | 8810 | 10320 | 10910 | 13530 | 14480 | 14850 | 15540 | 17510 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2001, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEAN | 511 | 481 | 469 | 490 | 584 | 659 | 780 | 1172 | 1160 | 834 | 670 | 574 |
| MAX | 1430 | 1551 | 1404 | 1190 | 1214 | 1918 | 2475 | 2870 | 3165 | 2598 | 2570 | 2279 |
| (WY) | 1949 | 1949 | 1949 | 1949 | 1997 | 1983 | 1983 | 1983 | 1997 | 1997 | 1997 | 1997 |
| MIN | 179 | 148 | 149 | 162 | 140 | 74.1 | 115 | 180 | 111 | 126 | 150 | 81.7 |
| (WY) | 1989 | 1971 | 1971 | 1968 | 1971 | 1977 | 1968 | 1992 | 1992 | 1947 | 1963 | 1944 |

12439500 OKANOGAN RIVER AT OROVILLE, WA--Continued
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| SUMMARY STATISTICS | FOR 2000 CALENDAR YEAR | | FOR 2001 WATER YEAR | | WATER YEARS 1943 - 2001 | |
|---|---|---|---|---|---|---|
| ANNUAL TOTAL | 263555 | | 94878 | | | |
| ANNUAL MEAN | 720 | | 260 | | 699 | |
| HIGHEST ANNUAL MEAN | | | | | 1691 | 1997 |
| LOWEST ANNUAL MEAN | | | | | 213 | 1988 |
| HIGHEST DAILY MEAN | 2110 | May 12 | 985 | Oct 1 | 3680 | Jun 14 1972 |
| LOWEST DAILY MEAN | 172 | Mar 29 | 91 | May 2 | -2270 | May 29 1948 |
| ANNUAL SEVEN-DAY MINIMUM | 177 | Mar 29 | 93 | Apr 27 | -1080 | May 24 1948 |
| ANNUAL RUNOFF (AC-FT) | 522800 | | 188200 | | 506400 | |
| 10 PERCENT EXCEEDS | 1430 | | 408 | | 1510 | |
| 50 PERCENT EXCEEDS | 461 | | 244 | | 509 | |
| 90 PERCENT EXCEEDS | 244 | | 139 | | 203 | |

e Estimated