

COLUMBIA RIVER MAIN STEM

12450700 COLUMBIA RIVER BELOW WELLS DAM, WA

LOCATION.--Lat 47°56'48", long 119°51'56", in SW 1/4 SE 1/4 sec.6, T.28 N., R.24 E., Chelan County, Hydrologic Unit 17020005, at powerhouse of Wells Dam, 0.7 mi northeast of Azwell, and at mile 515.9.

DRAINAGE AREA.--86,100 mi², approximately.

PERIOD OF RECORD.--October 1967 to current year. October 1953 to September 1967 (monthly discharge only) in the files of the U.S. Geological Survey.

GAGE.--Daily discharge determined from flow through turbines plus spillway flow when present. Datum of gage is NGVD of 1929 (levels by Bechtel Corporation). Prior to Oct. 1, 1970, at site 0.8 mi downstream at same datum. Oct. 1, 1970, to July 20, 1988, water-stage recorder at present site and datum with auxiliary water-stage recorder 6.8 mi downstream from base gage at same datum.

REMARKS.--Flow regulated by numerous reservoirs. Feeder Canal diversion (station 12435500) for Columbia Basin project is used to irrigate approximately 600,000 acres in the United States. An additional 66,500 acres in Canada are irrigated by other diversions.

COOPERATION.--Discharge records provided by Public Utility District No. 1 of Douglas County at Wells Dam through the Corps of Engineers, North Pacific Division, Reservoir Control Center. The U.S. Geological Survey made 6 discharge measurements at this site during the year.

AVERAGE DISCHARGE.--49 years (water years 1954-2002), 115,300 ft³/s, 83,530,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 402,000 ft³/s June 15, 1972; maximum elevation, 731.92 ft June 16, 1972; minimum discharge, 17,900 ft³/s Oct. 5, 1970 (from powerplant records); minimum elevation, 703.55 ft Sept. 28, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 251,000 ft³/s July 2; minimum daily discharge, 28,500 ft³/s Mar. 31.

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	65400	53700	47800	67500	98500	88000	56700	124000	132000	241000	137000	46100
2	50500	51200	49500	93900	85700	72200	66100	133000	161000	251000	145000	64900
3	58900	46600	92400	101000	72300	52200	59700	128000	194000	249000	116000	92500
4	58800	44500	95800	112000	117000	73700	52900	120000	238000	219000	93500	68100
5	45300	74800	89800	91700	105000	60200	58900	111000	233000	187000	114000	69900
6	38500	74800	75000	59700	107000	87200	38300	158000	220000	190000	123000	67400
7	43100	75400	75300	81200	91800	94500	33400	156000	235000	143000	144000	54800
8	59600	75100	48000	76200	100000	93200	51700	128000	221000	152000	147000	52500
9	53500	65800	52400	59800	91000	65400	59600	145000	208000	184000	138000	86800
10	57400	54000	93700	60400	83500	55500	51100	130000	230000	207000	116000	73500
11	57800	56200	99900	75700	122000	88200	115000	107000	204000	204000	98300	62600
12	64200	65900	93700	63300	106000	84300	116000	101000	209000	218000	125000	78800
13	42500	60000	86400	65300	101000	70600	94700	137000	189000	200000	131000	77800
14	44700	65200	79100	105000	91700	70200	113000	134000	199000	142000	126000	46400
15	68600	70700	66300	110000	114000	79800	141000	131000	176000	175000	123000	46700
16	74000	74800	46700	100000	95900	67700	177000	140000	170000	208000	98300	80300
17	64500	57200	84200	107000	69600	54400	186000	129000	193000	185000	81400	71000
18	61400	62000	94500	103000	97300	88200	189000	119000	214000	183000	81300	82500
19	64400	82300	96300	90400	96400	78300	180000	117000	231000	199000	121000	99500
20	45700	87500	107000	62200	92900	97800	179000	130000	248000	180000	118000	94200
21	44500	86600	96000	110000	83000	79700	155000	125000	229000	156000	117000	81000
22	62900	55200	76400	105000	73400	49300	176000	136000	185000	176000	132000	73500
23	58500	69600	63100	105000	77400	31800	159000	147000	147000	173000	120000	100000
24	66100	73100	87000	91000	61300	35800	157000	146000	186000	154000	96800	101000
25	63700	66600	53300	107000	84200	47500	152000	124000	216000	139000	73500	97000
26	54000	100000	100000	78200	82600	63600	145000	144000	209000	119000	116000	85100
27	44500	97700	97600	68200	95700	57300	124000	156000	233000	104000	110000	61600
28	43900	102000	89300	111000	76700	52100	114000	155000	245000	106000	118000	65200
29	72900	95400	68800	117000	---	47800	152000	160000	218000	129000	107000	43300
30	60200	83400	53800	120000	---	34700	152000	151000	197000	148000	111000	85700
31	46100	---	92100	122000	---	28500	---	162000	---	152000	89500	---
TOTAL	1736100	2127300	2451200	2819700	2572900	2049700	3505100	4184000	6170000	5473000	3567600	2209700
MEAN	56000	70910	79070	90960	91890	66120	116800	135000	205700	176500	115100	73660
MAX	74000	102000	107000	122000	122000	97800	189000	162000	248000	251000	147000	101000
MIN	38500	44500	46700	59700	61300	28500	33400	101000	132000	104000	73500	43300
AC-FT	3444000	4220000	4862000	5593000	5103000	4066000	6952000	8299000	12240000	10860000	7076000	4383000

CAL YR 2001 TOTAL 25912300 MEAN 70990 MAX 123000 MIN 29500 AC-FT 51400000
WTR YR 2002 TOTAL 38866300 MEAN 106500 MAX 251000 MIN 28500 AC-FT 77090000