

COLUMBIA RIVER MAIN STEM

12436500 COLUMBIA RIVER AT GRAND COULEE DAM, WA

LOCATION.--Lat 47°57'56", long 118°58'54", in SW 1/4 SE 1/4 sec.36, T.29 N., R.30 E., Douglas County, Hydrologic Unit 17020005, in pier 3 on west side of bridge on State Highway 155, 3,200 ft downstream from Grand Coulee Dam, 14.2 mi upstream from Nespelem River, and at mile 596.3.

DRAINAGE AREA.--74,700 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--April 1913 to June 1923 (monthly discharge only), July to December 1923, January 1924 to May 1928 (monthly discharge only), June 1928 to current year. Published as "at Grand Coulee near Nespelem" prior to 1936 and as "at Grand Coulee" 1936-42.

REVISED RECORDS.--WSP 1286: 1942, 1947. WSP 1933: Drainage area.

GAGE.--Daily discharge determined from flow through turbines plus spillway flow when present. Datum of gage is NGVD of 1929, adjustment of 1937 (Bureau of Reclamation datum). June 27 to Dec. 31, 1923, June 12, 1928, to Mar. 31, 1931, nonrecording gage at site 0.5 mi upstream at datum 2.4 ft lower. Apr. 1, 1931, to Dec. 31, 1935, water-stage recorder 850 ft downstream at present datum. Jan. 1, 1936, to June 11, 1955, water-stage recorder at present site and datum. June 12, 1955, to July 18, 1988, water-stage recorder at present site and datum with auxiliary water-stage recorder 5.3 mi downstream at datum 1.42 ft lower.

REMARKS.--Flow is 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 Bureau of Reclamation at Grand Coulee Dam through the Corps of Engineers, Northwestern Division, Reservoir Control Center. The U.S. Geological Survey made 2 discharge measurements at this site during the year.

AVERAGE DISCHARGE.--89 years (water years 1914-2002), 108,700 ft<sup>3</sup>/s, 78,750,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 637,800 ft<sup>3</sup>/s June 12, 1948, elevation, 987.90 ft; minimum discharge, 14,900 ft<sup>3</sup>/s Dec. 17, 1956, elevation, 934.37 ft; minimum daily discharge, 15,300 ft<sup>3</sup>/s Feb. 1, 1937.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a discharge of 725,000 ft<sup>3</sup>/s, estimated.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 238,000 ft<sup>3</sup>/s July 2; minimum daily discharge, 24,000 ft<sup>3</sup>/s March 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	57900	52500	55400	71100	97800	84500	57000	111000	94800	221000	127000	36000
2	59200	53200	47400	99900	80600	66800	66400	128000	135000	238000	134000	67800
3	58800	43600	93800	101000	77100	46800	55000	110000	171000	221000	109000	84300
4	56500	46500	97700	107000	107000	79000	52200	115000	196000	192000	94800	70100
5	48900	72300	89600	94100	111000	56700	59300	102000	203000	177000	112000	69200
6	38600	73300	81100	60100	110000	86100	31200	144000	188000	171000	120000	63900
7	41800	76200	70400	83700	91100	94500	28200	134000	205000	111000	136000	54700
8	52800	73100	48900	74800	96800	90900	42900	125000	193000	148000	140000	52000
9	62800	67100	55900	56200	91100	64000	42800	128000	190000	189000	139000	84500
10	61600	56700	102000	61300	87000	51300	68100	118000	205000	189000	105000	64700
11	55900	51800	95700	81600	121000	91400	112000	91400	179000	186000	95400	58900
12	64500	64600	99600	52400	108000	84900	116000	91600	178000	199000	122000	81100
13	41400	61700	86500	62200	102000	65000	89000	134000	157000	178000	126000	75000
14	43800	62300	78900	115000	91400	67000	110000	125000	163000	123000	120000	40600
15	73400	68900	67300	101000	119000	75700	134000	116000	148000	187000	115000	51100
16	68200	75900	49300	106000	84600	68100	165000	128000	133000	184000	89700	77500
17	61200	60200	91700	111000	67400	47900	171000	114000	175000	168000	84100	69000
18	64700	54700	98200	105000	97600	89100	181000	111000	186000	174000	83000	87800
19	65000	86600	95800	85300	102000	78900	173000	101000	211000	183000	112000	92400
20	39800	93000	108000	60900	87000	99800	155000	114000	219000	158000	109000	95200
21	44900	82600	100000	108000	81400	70400	157000	111000	183000	140000	117000	81200
22	64200	55700	76500	114000	71100	47200	169000	119000	149000	174000	126000	64000
23	62500	66900	57600	100000	69600	28500	158000	124000	124000	156000	110000	95700
24	66100	74500	90300	101000	59900	29300	149000	120000	184000	142000	90300	107000
25	62800	68400	54500	102000	95800	48300	143000	103000	189000	131000	70700	92900
26	49300	105000	111000	78300	74900	61700	132000	124000	191000	112000	113000	76900
27	40500	104000	94000	69000	96700	54500	109000	139000	206000	94500	105000	62800
28	46400	109000	94000	113000	74300	49400	112000	132000	221000	97000	120000	66700
29	76600	96900	66800	117000	---	47400	140000	117000	182000	136000	107000	45200
30	60400	83200	52700	130000	---	31700	149000	109000	187000	143000	112000	79800
31	44100	---	95800	121000	---	24000	---	126000	---	133000	77500	---
TOTAL	1734600	2140400	2506400	2842900	2553200	1980800	3327100	3665000	5345800	5055500	3421500	2148000
MEAN	55950	71350	80850	91710	91190	63900	110900	118200	178200	163100	110400	71600
MAX	76600	109000	111000	130000	121000	99800	181000	144000	221000	238000	140000	107000
MIN	38600	43600	47400	52400	59900	24000	28200	91400	94800	94500	70700	36000
AC-FT	3441000	4245000	4971000	5639000	5064000	3929000	6599000	7270000	10600000	10030000	6787000	4261000
CAL YR 2001	TOTAL 25299800	MEAN 69310	MAX 127000	MIN 20900	AC-FT 50180000							
WTR YR 2002	TOTAL 36721200	MEAN 100600	MAX 238000	MIN 24000	AC-FT 72840000							