

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 sea level (Bureau of Reclamation datum), adjustment of 1937. 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.--87 years (water years 1914-2000), 109,200 ft<sup>3</sup>/s, 79,120,000 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, 202,000 ft<sup>3</sup>/s Apr. 24; minimum daily discharge, 44,100 ft<sup>3</sup>/s Oct. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77400	90500	130000	109000	144000	98600	74800	176000	83300	78000	116000	85100
2	89800	101000	149000	114000	117000	86500	81600	167000	115000	62600	120000	66200
3	81000	107000	150000	143000	106000	93900	111000	166000	99600	106000	119000	54700
4	93500	103000	144000	155000	140000	65200	104000	167000	107000	82400	125000	80100
5	97300	115000	134000	156000	114000	94600	91100	157000	125000	129000	98800	88200
6	81400	74600	143000	158000	75600	127000	91100	131000	98400	148000	102000	96900
7	83300	64900	166000	150000	119000	106000	115000	144000	91500	154000	119000	78500
8	75800	114000	147000	129000	128000	117000	121000	156000	95300	114000	125000	68200
9	78900	105000	146000	91300	139000	116000	129000	174000	77100	80600	145000	61700
10	72900	106000	133000	162000	156000	126000	121000	163000	82500	118000	149000	63000
11	98000	96900	107000	150000	141000	70000	132000	151000	104000	120000	123000	99600
12	93500	89300	108000	159000	110000	89000	127000	152000	122000	125000	117000	93300
13	105000	72300	150000	157000	104000	124000	136000	146000	110000	125000	103000	96200
14	81800	51600	154000	146000	147000	130000	113000	129000	115000	122000	126000	102000
15	76000	105000	143000	110000	113000	132000	102000	160000	100000	98000	131000	84100
16	77100	96400	124000	91500	114000	92100	123000	149000	82900	80300	124000	61600
17	76100	114000	141000	136000	105000	111000	151000	150000	93700	116000	125000	79000
18	104000	98800	123000	149000	98900	62300	160000	150000	77700	128000	91900	109000
19	107000	104000	106000	151000	105000	55500	170000	147000	121000	120000	51400	106000
20	111000	95000	166000	142000	71200	120000	161000	124000	108000	129000	70000	99100
21	108000	101000	143000	124000	109000	117000	186000	129000	117000	106000	84400	78200
22	90600	146000	159000	105000	108000	102000	182000	150000	118000	91700	74800	85400
23	83800	131000	173000	137000	124000	89600	184000	116000	98100	82200	76200	62800
24	74000	138000	150000	168000	99800	87400	202000	126000	109000	112000	100000	61000
25	101000	113000	96000	150000	118000	66400	183000	103000	93200	123000	84400	80600
26	86400	98300	138000	148000	75700	53800	162000	102000	139000	108000	57800	73400
27	101000	99400	157000	145000	62200	109000	187000	85100	158000	118000	80600	81000
28	81400	99200	143000	148000	107000	105000	160000	79000	120000	119000	99800	81800
29	77000	134000	163000	145000	86800	95500	152000	94800	119000	96500	108000	80900
30	49300	116000	158000	158000	---	96200	154000	138000	98400	114000	102000	56800
31	44100	---	153000	166000	---	86900	---	109000	---	135000	98900	---
TOTAL	2657400	3080200	4397000	4352800	3238200	3025500	4166600	4290900	3178700	3441300	3248000	2414400
MEAN	85720	102700	141800	140400	111700	97600	138900	138400	106000	111000	104800	80480
MAX	111000	146000	173000	168000	156000	132000	202000	176000	158000	154000	149000	109000
MIN	44100	51600	96000	91300	62200	53800	74800	79000	77100	62600	51400	54700
AC-FT	5271000	6110000	8721000	8634000	6423000	6001000	8264000	8511000	6305000	6826000	6442000	4789000
CAL YR 1999	TOTAL 46519400	MEAN 127500	MAX 183000	MIN 44100	AC-FT 92270000							
WTR YR 2000	TOTAL 41491000	MEAN 113400	MAX 202000	MIN 44100	AC-FT 82300000							