

## 12436500 COLUMBIA RIVER AT GRAND COULEE DAM, WA

Upper Columbia Basin  
Chief Joseph Subbasin

LOCATION.--Lat 47°57'56", long 118°58'54" referenced to North American Datum of 1927, in SW ¼ SE ¼ sec.36, T.29 N., R.30 E., Okanogan County, WA, 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>.

### SURFACE-WATER RECORDS

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.

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 three discharge measurements at this site during the year.

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.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--93 years (water years 1914-2006), 108,200 ft<sup>3</sup>/s, 78,390,000 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, 224,000 ft<sup>3</sup>/s, May 28; minimum daily discharge, 29,000 ft<sup>3</sup>/s, Mar. 26.

## 12436500 COLUMBIA RIVER AT GRAND COULEE DAM, WA—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	56,600	92,900	116,000	61,700	92,900	79,600	111,000	148,000	161,000	113,000	97,700	71,400
2	64,700	70,100	78,000	73,900	85,500	111,000	87,200	171,000	159,000	93,300	121,000	74,800
3	66,700	89,700	90,600	98,600	86,200	114,000	121,000	148,000	184,000	105,000	102,000	55,700
4	77,300	94,500	80,000	89,800	78,100	90,800	112,000	155,000	159,000	96,900	83,300	63,100
5	82,300	95,600	99,000	96,400	44,900	57,700	114,000	153,000	164,000	140,000	104,000	65,100
6	90,900	62,300	93,400	98,000	114,000	89,600	88,000	147,000	185,000	138,000	81,000	85,400
7	71,600	83,100	111,000	75,800	116,000	78,700	124,000	136,000	179,000	145,000	121,000	66,600
8	63,200	62,600	105,000	67,600	104,000	114,000	129,000	146,000	169,000	135,000	121,000	66,000
9	53,500	83,100	102,000	91,100	106,000	106,000	94,800	138,000	179,000	120,000	94,600	44,200
10	109,000	86,500	86,800	87,400	117,000	100,000	134,000	128,000	170,000	144,000	90,000	51,000
11	79,400	76,500	86,200	96,100	108,000	78,100	150,000	146,000	185,000	137,000	87,900	86,200
12	105,000	52,600	123,000	98,600	76,200	40,100	151,000	134,000	182,000	118,000	69,000	86,300
13	110,000	46,100	114,000	97,400	117,000	106,000	158,000	121,000	189,000	133,000	74,200	84,100
14	84,800	100,000	107,000	91,900	113,000	98,400	166,000	89,200	185,000	147,000	113,000	67,200
15	63,500	116,000	116,000	99,800	99,500	68,100	167,000	134,000	190,000	130,000	95,200	61,900
16	49,700	108,000	101,000	147,000	127,000	82,200	157,000	117,000	202,000	98,600	106,000	47,900
17	82,300	117,000	95,200	137,000	135,000	103,000	159,000	106,000	185,000	124,000	98,400	47,800
18	74,000	99,400	106,000	133,000	116,000	73,000	154,000	119,000	158,000	131,000	94,900	83,100
19	84,100	90,700	93,600	119,000	96,100	54,500	156,000	97,800	182,000	131,000	96,000	64,000
20	78,900	69,200	97,000	103,000	121,000	120,000	168,000	82,800	169,000	132,000	65,300	75,100
21	81,300	112,000	94,600	101,000	102,000	79,100	166,000	77,800	183,000	121,000	112,000	53,600
22	74,500	119,000	92,000	77,900	108,000	93,800	159,000	107,000	200,000	125,000	129,000	47,500
23	62,100	113,000	87,900	120,000	112,000	74,000	157,000	108,000	168,000	106,000	122,000	46,400
24	105,000	54,600	56,500	107,000	111,000	99,300	159,000	137,000	163,000	137,000	115,000	38,700
25	82,100	80,400	41,200	116,000	106,000	76,000	156,000	163,000	167,000	115,000	114,000	81,300
26	98,700	97,800	63,400	117,000	81,400	29,000	135,000	180,000	162,000	110,000	100,000	76,100
27	105,000	91,100	91,900	100,000	109,000	78,300	145,000	212,000	166,000	146,000	98,000	68,100
28	73,700	129,000	79,100	113,000	98,900	71,600	154,000	224,000	156,000	126,000	122,000	77,900
29	51,800	117,000	72,900	90,600	---	112,000	156,000	220,000	135,000	97,700	99,600	81,700
30	60,400	101,000	80,800	106,000	---	74,600	146,000	191,000	148,000	72,500	88,400	50,700
31	76,500	---	76,800	119,000	---	57,900	---	155,000	---	124,000	121,000	---
<b>Total</b>	2,418,600	2,710,800	2,837,900	3,130,600	2,881,700	2,610,400	4,234,000	4,391,600	5,184,000	3,792,000	3,136,500	1,968,900
<b>Mean</b>	78,020	90,360	91,550	101,000	102,900	84,210	141,100	141,700	172,800	122,300	101,200	65,630
<b>Max</b>	110,000	129,000	123,000	147,000	135,000	120,000	168,000	224,000	202,000	147,000	129,000	86,300
<b>Min</b>	49,700	46,100	41,200	61,700	44,900	29,000	87,200	77,800	135,000	72,500	65,300	38,700
<b>Ac-ft</b>	4,797,000	5,377,000	5,629,000	6,210,000	5,716,000	5,178,000	8,398,000	8,711,000	10,280,000	7,521,000	6,221,000	3,905,000

	Calendar Year 2005	Water Year 2006
<b>Total</b>	35,481,300	39,297,000
<b>Mean</b>	97,210	107,700
<b>Max</b>	162,000	224,000
<b>Min</b>	36,500	29,000
<b>Ac-ft</b>	70,380,000	77,950,000

12436500 COLUMBIA RIVER AT GRAND COULEE DAM, WA—Continued

