

12462600 COLUMBIA RIVER BELOW ROCK ISLAND DAM, WA

Upper Columbia Basin
Upper Columbia-Entiat Subbasin

LOCATION.--Lat 47°19'57", long 120°04'48" referenced to North American Datum of 1927, in NE ¼ NW ¼ sec.9, T.21 N., R.22 E., Douglas County, WA, Hydrologic Unit 17020010, on left bank 1.0 mi downstream from Rock Island Dam, 2.0 mi downstream from Rock Island Creek, 12 mi southeast of Wenatchee, and at mile 452.4.

Auxiliary GAGE: Lat 47 18'15", long 120 05'00", in NE ¼ NW ¼ sec. 21, T. 21 N., R. 22 E., Douglas County, Hydrologic Unit 17020010, on left bank 2.0 mi downstream from the base gage, and at mile 450.4.

DRAINAGE AREA.--89,400 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--January to December 1910 (gage heights only), May 1913 to December 1916, October 1930 to current year. Published as "at Wenatchee" January 1910 to December 1916, and as "at Trinidad" October 1930 to May 1961.

GAGE.--Daily discharge determined from flow through turbines plus spillway flow when present. Datum of gage is NGVD of 1929. Prior to Jan. 1, 1916, nonrecording gage 1.2 mi upstream from highway bridge at Wenatchee, at mile 466.3, at datum 583 ft above NGVD of 1929. Jan. 1 to Dec. 31, 1916, nonrecording gage on pier of highway bridge at Wenatchee, at mile 465.1, at datum 579.30 ft above NGVD of 1929. Oct. 1, 1930, to May 31, 1961, water-stage recorder 0.5 mi southwest of Trinidad, at mile 441.7, at datum 499.3 ft above NGVD of 1929 (river-profile survey). June 1, 1961, to July 22, 1988, water-stage recorder at present site and datum; May 21, 1963, to July 22, 1988, auxiliary water-stage recorder 2.0 mi downstream at same datum.

COOPERATION.--Discharge records provided by Public Utility District No. 1 of Chelan County at Rock Island 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.

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.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--84 years (water years 1914-16, 1931-2011), 117,900 ft³/s, 85,419,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 692,600 ft³/s, June 12, 1948, gage height, 59.35 ft, site and datum then in use; minimum discharge, 4,120 ft³/s, Feb. 10, 1932, gage height, 11.40 ft, site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 7, 1894, reached a discharge of about 740,000 ft³/s, from flood-marks at Wenatchee.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 317,000 ft³/s, June 1; minimum daily discharge, 43,000 ft³/s, Dec. 15.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
 [$\times 10^6$, million]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	74,900	75,000	100,000	103,000	143,000	141,000	151,000	150,000	317,000	251,000	164,000	105,000
2	73,700	90,800	99,200	108,000	147,000	131,000	157,000	148,000	295,000	263,000	158,000	82,300
3	53,700	95,100	95,200	125,000	142,000	142,000	152,000	137,000	300,000	256,000	163,000	73,000
4	71,700	88,600	100,000	133,000	121,000	143,000	162,000	135,000	292,000	235,000	149,000	67,600
5	80,200	95,200	86,500	128,000	97,200	131,000	148,000	128,000	310,000	236,000	143,000	61,800
6	82,200	85,700	98,600	115,000	111,000	137,000	153,000	146,000	304,000	265,000	159,000	94,700
7	79,400	56,500	102,000	99,200	128,000	126,000	158,000	149,000	282,000	254,000	153,000	100,000
8	88,800	77,100	100,000	82,700	143,000	134,000	166,000	150,000	276,000	254,000	145,000	88,000
9	77,800	93,700	96,800	78,300	162,000	142,000	166,000	121,000	254,000	240,000	147,000	81,800
10	59,300	87,800	86,700	117,000	164,000	134,000	160,000	159,000	265,000	244,000	154,000	79,200
11	92,000	87,500	84,800	132,000	175,000	139,000	157,000	185,000	287,000	233,000	153,000	77,400
12	93,400	70,000	57,000	132,000	143,000	143,000	158,000	189,000	290,000	222,000	161,000	69,600
13	84,400	63,200	76,600	113,000	139,000	136,000	158,000	200,000	270,000	230,000	136,000	79,000
14	68,400	49,800	65,900	84,700	152,000	129,000	150,000	200,000	295,000	225,000	133,000	81,800
15	74,400	83,000	43,000	78,800	146,000	129,000	148,000	200,000	283,000	224,000	151,000	68,700
16	70,600	98,600	83,500	54,600	139,000	120,000	136,000	199,000	291,000	204,000	154,000	69,500
17	69,700	102,000	120,000	67,700	134,000	104,000	134,000	189,000	276,000	196,000	155,000	64,800
18	76,800	103,000	98,200	102,000	132,000	92,600	137,000	218,000	278,000	203,000	154,000	50,700
19	73,200	97,500	82,500	127,000	131,000	93,200	144,000	233,000	271,000	209,000	150,000	76,900
20	54,800	81,900	106,000	127,000	134,000	80,800	149,000	239,000	264,000	198,000	135,000	73,600
21	60,400	94,400	94,000	145,000	137,000	119,000	139,000	268,000	257,000	193,000	144,000	77,500
22	62,900	99,000	101,000	141,000	144,000	130,000	148,000	270,000	262,000	184,000	141,000	80,000
23	61,300	110,000	98,000	129,000	139,000	137,000	151,000	236,000	272,000	191,000	153,000	87,200
24	54,500	113,000	92,800	138,000	142,000	131,000	139,000	249,000	262,000	194,000	150,000	80,100
25	65,200	118,000	68,900	146,000	148,000	134,000	139,000	241,000	206,000	180,000	132,000	46,800
26	77,200	89,600	63,200	164,000	151,000	119,000	143,000	243,000	234,000	166,000	137,000	87,200
27	77,200	92,600	103,000	168,000	143,000	104,000	143,000	280,000	228,000	180,000	133,000	69,300
28	67,900	87,700	107,000	154,000	139,000	117,000	136,000	290,000	234,000	167,000	116,000	74,100
29	72,600	111,000	90,700	151,000	---	136,000	141,000	298,000	235,000	176,000	116,000	78,800
30	54,300	114,000	105,000	141,000	---	139,000	138,000	299,000	235,000	164,000	113,000	81,400
31	50,200	---	119,000	149,000	---	147,000	---	308,000	---	152,000	125,000	---
Total	2,203,100	2,711,300	2,825,100	3,734,000	3,926,200	3,940,600	4,461,000	6,457,000	8,125,000	6,589,000	4,477,000	2,307,800
Mean	71,070	90,380	91,130	120,500	140,200	127,100	148,700	208,300	270,800	212,500	144,400	76,930
Max	93,400	118,000	120,000	168,000	175,000	147,000	166,000	308,000	317,000	265,000	164,000	105,000
Min	50,200	49,800	43,000	54,600	97,200	80,800	134,000	121,000	206,000	152,000	113,000	46,800
Ac-ft	4,370,000	5,378,000	5,604,000	7,406,000	7,788,000	7,816,000	8,848,000	12.81 $\times 10^6$	16.12 $\times 10^6$	13.07 $\times 10^6$	8,880,000	4,578,000

	Calendar Year 2010	Water Year 2011
Total	33,835,700	51,757,100
Mean	92,700	141,800
Max	237,000	317,000
Min	33,700	43,000
Ac-ft	67,110,000	102,700,000

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