

12472800 COLUMBIA RIVER BELOW PRIEST RAPIDS DAM, WA

Upper Columbia Basin
Upper Columbia-Priest Rapids Subbasin

LOCATION.--Lat 46°37'44", long 119°51'49" referenced to North American Datum of 1927, in SE ¼ NW ¼ sec.7, T.13 N., R.24 E., Grant County, WA, Hydrologic Unit 17020016, on left bank 2.6 mi downstream from Priest Rapids Dam, 14.7 mi south of Beverly, and at mile 394.5.

DRAINAGE AREA.--96,000 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--January 1917 to current year. January 1917 to September 1930, at site 3.4 mi downstream, published as "at Vernita." October 1930 to July 27, 1959, at site 46.5 mi upstream, published as "at Trinidad."

REVISED RECORDS.--WSP 1933: Drainage area. WDR WA-82-2: 1965(m), 1971(m).

GAGE.--Water-stage recorder. Datum of gage is 390 ft above NGVD of 1929. Prior to Oct. 1, 1930, nonrecording gages at site 3.4 mi downstream at datum 388.7 ft above sea level. Oct. 1, 1930, to July 27, 1959, water-stage recorder at site 46.5 mi upstream at datum 499.3 ft above NGVD of 1929 (river-profile survey).

REMARKS.--No estimated daily discharges. Records good except December 11 to March 20 which are fair. Diversions for irrigation of about 600,000 acres upstream from station. Flow regulated by 10 major reservoirs and numerous smaller reservoirs and powerplants. U.S. Geological Survey satellite telemeter at station. Water temperatures March 1980 to April 1993. Temperature records for site "at Vernita Bridge, near Priest Rapids Dam" (station 12472900) for period July 1974 to September 1980 are equivalent.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--96 years (water years 1918-2013), 118,800 ft³/s, 86,070,000 acre-ft/yr, unadjusted. 54 years (water years 1960-2013), 118,600 ft³/s, 85,890,000 acre-ft/yr, regulated period.

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, due to construction at Rock Island Dam, site and datum then in use; minimum daily discharge prior to construction of Rock Island Dam (1932), 22,000 ft³/s, Feb. 1-7, 1930, site and datum then in use; minimum daily discharge after completion of Rock Island Dam (1932), 20,000 ft³/s, Jan. 31 to Feb. 10, 1937, site and datum then in use; minimum discharge since completion of Priest Rapids Dam (1959), 16,300 ft³/s, Nov. 7, 1998, due to emergency flow reduction from Priest Rapids Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 7, 1894, reached a discharge of about 740,000 ft³/s, based on a rating extension for a Weather Bureau gage at Wenatchee.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 256,000 ft³/s, May 10, gage height, 414.90 ft; minimum discharge, 35,200 ft³/s, Oct. 17, gage height, 396.20 ft, minimum daily discharge, 38,200 ft³/s, Oct. 14.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
 [$\times 10^6$, million]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	67,200	85,500	99,600	156,000	92,700	70,900	89,800	160,000	145,000	230,000	137,000	84,800
2	70,000	82,400	116,000	145,000	93,400	67,800	91,700	162,000	179,000	224,000	120,000	61,700
3	69,900	95,900	101,000	142,000	92,000	69,400	96,600	154,000	178,000	236,000	135,000	77,100
4	68,500	62,000	105,000	152,000	73,900	74,400	128,000	154,000	180,000	201,000	140,000	76,000
5	62,000	75,900	103,000	157,000	77,800	67,600	139,000	145,000	193,000	206,000	136,000	75,200
6	60,700	95,300	145,000	156,000	96,500	80,100	136,000	143,000	172,000	210,000	123,000	75,800
7	45,400	98,900	120,000	149,000	128,000	74,900	124,000	159,000	160,000	200,000	127,000	52,000
8	68,900	92,100	138,000	144,000	134,000	83,600	136,000	192,000	164,000	180,000	133,000	50,400
9	79,000	86,400	137,000	126,000	129,000	93,200	179,000	189,000	158,000	168,000	130,000	77,200
10	70,700	98,900	139,000	122,000	93,100	88,000	186,000	233,000	151,000	160,000	107,000	99,400
11	71,800	94,800	150,000	146,000	93,000	72,500	205,000	223,000	150,000	156,000	98,000	78,300
12	58,800	105,000	148,000	145,000	83,500	68,900	189,000	182,000	189,000	178,000	128,000	81,900
13	40,200	93,300	156,000	142,000	74,000	69,600	183,000	202,000	183,000	164,000	120,000	79,000
14	38,200	86,600	158,000	142,000	91,900	86,000	196,000	183,000	165,000	170,000	117,000	70,300
15	59,800	94,300	140,000	138,000	123,000	69,200	192,000	197,000	157,000	156,000	133,000	64,000
16	52,800	103,000	155,000	140,000	95,800	69,500	198,000	191,000	158,000	168,000	137,000	90,900
17	52,800	109,000	139,000	154,000	80,000	69,900	185,000	208,000	162,000	146,000	125,000	79,600
18	52,900	97,200	157,000	158,000	111,000	70,100	174,000	218,000	160,000	161,000	111,000	57,100
19	49,100	102,000	136,000	150,000	123,000	72,100	155,000	216,000	161,000	166,000	111,000	77,500
20	47,600	121,000	140,000	162,000	116,000	71,000	158,000	210,000	146,000	160,000	117,000	65,800
21	48,100	74,500	142,000	139,000	104,000	69,800	148,000	198,000	166,000	150,000	125,000	64,200
22	70,100	69,100	115,000	157,000	96,100	73,700	144,000	212,000	208,000	130,000	119,000	62,800
23	85,800	79,100	97,000	154,000	73,400	74,300	147,000	216,000	201,000	134,000	110,000	70,000
24	96,600	78,000	118,000	147,000	79,100	71,000	165,000	209,000	217,000	128,000	87,700	70,200
25	95,400	98,500	107,000	138,000	72,300	69,900	149,000	220,000	207,000	140,000	89,000	72,200
26	94,400	113,000	133,000	124,000	81,500	76,000	161,000	212,000	215,000	151,000	104,000	73,000
27	92,200	104,000	128,000	123,000	87,400	88,700	153,000	213,000	219,000	118,000	102,000	73,300
28	73,300	84,500	132,000	78,200	84,600	108,000	145,000	211,000	230,000	112,000	106,000	64,500
29	63,000	112,000	164,000	116,000	---	116,000	141,000	201,000	222,000	119,000	110,000	45,900
30	75,800	116,000	147,000	114,000	---	98,500	146,000	156,000	235,000	141,000	109,000	63,200
31	64,000	---	147,000	95,900	---	95,800	---	143,000	---	146,000	103,000	---
Total	2,045,000	2,808,200	4,112,600	4,312,100	2,680,000	2,430,400	4,640,100	5,912,000	5,431,000	5,109,000	3,649,700	2,133,300
Mean	65,970	93,610	132,700	139,100	95,710	78,400	154,700	190,700	181,000	164,800	117,700	71,110
Max	96,600	121,000	164,000	162,000	134,000	116,000	205,000	233,000	235,000	236,000	140,000	99,400
Min	38,200	62,000	97,000	78,200	72,300	67,600	89,800	143,000	145,000	112,000	87,700	45,900
Ac-ft	4,056,000	5,570,000	8,157,000	8,553,000	5,316,000	4,821,000	9,204,000	11.73 $\times 10^6$	10.77 $\times 10^6$	10.13 $\times 10^6$	7,239,000	4,231,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	79,710	89,240	101,500	107,400	108,100	105,900	118,800	162,900	203,200	156,400	110,700	78,350
Max	118,300	121,200	163,800	168,400	195,000	201,800	189,100	271,700	461,400	294,300	191,000	126,700
(WY)	(1998)	(1991)	(1996)	(1996)	(1996)	(1983)	(1996)	(1997)	(1961)	(1964)	(1976)	(1976)
Min	60,870	56,100	52,570	55,070	72,700	58,170	57,920	61,840	78,810	56,650	66,740	56,720
(WY)	(2010)	(1964)	(1962)	(1964)	(1964)	(1962)	(1993)	(2001)	(1977)	(2001)	(1985)	(2009)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1960 - 2013	
Annual total	54,054,700		45,263,400		118,600	
Annual mean	147,700		124,000		118,600	
Highest annual mean					165,600	1997
Lowest annual mean					80,650	2001
Highest daily mean	349,000	Jun 26	236,000	Jul 3	533,000	Jun 10, 1961
Lowest daily mean	38,200	Oct 14	38,200	Oct 14	36,400	Jan 1, 1962
Annual seven-day minimum	49,400	Oct 13	49,400	Oct 13	44,600	May 14, 2001
Annual runoff (ac-ft)	107,200,000		89,780,000		85,890,000	
10 percent exceeds	255,000		194,000		188,000	
50 percent exceeds	127,000		121,000		104,000	
90 percent exceeds	71,600		69,500		64,900	

