COLUMBIA RIVER MAIN STEM

12472800 COLUMBIA RIVER BELOW PRIEST RAPIDS DAM, WA

LOCATION.--Lat 46°37'44", long 119°51'49", in SE $^1/_4$ NW $^1/_4$ sec.7, T.13 N., R.24 E., Grant County, 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 mi^2, approximately.

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 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. 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.--85 years (water years 1918-2002), 119,400 ft^3/s, 86,490,000 acre-ft/yr, unadjusted.
43 years (water years 1960-2002), 119,600 ft^3/s, 86,660,000 acre-ft/yr, regulated period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 692,600 ft^3/s June 12, 1948, gage height, 59.35 ft, site and datum then in use; minimum discharge, 4,120 ft^3/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 ft^3/s Feb. 1-7, 1930, site and datum then in use; minimum daily discharge after completion of Rock Island Dam (1932), 20,000 ft^3/s Jan. 31 to Feb. 10, 1937, site and datum then in use; minimum discharge since completion of Priest Rapids Dam (1959), 16,300 ft^3/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 ft^3/s, based on a rating extension for a Weather Bureau gage at Wenatchee.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 318,000 ft^3/s Jul. 1, elevation, 418.11 ft; minimum discharge, 36,400 ft^3/s Nov. 18, elevation, 396.40 ft; minimum daily discharge, 39,900 ft^3/s Oct. 6.

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	79600	61900	75500	92800	128000	85100	53300	140000	191000	249000	113000	59200
2	63100	53500	54700	87700	94300	88800	50300	137000	138000	270000	129000	67100
3	55000	47600	68800	119000	86800	74800	55100	134000	191000	258000	108000	88000
4	59000	43700	110000	121000	108000	64000	62300	148000	249000	235000	89700	77700
5	61300	70400	95900	101000	113000	75800	62600	101000	252000	195000	103000	83200
6	39900	75800	88700	92000	106000	80300	52000	163000	236000	197000	94400	67700
7	42700	89300	75100	78800	109000	88900	50000	168000	245000	208000	118000	63500
8	60100	86500	68800	76500	112000	113000	50600	143000	254000	185000	128000	47000
9	66700	85800	53100	87500	101000	76200	56700	139000	208000	135000	114000	79600
10	80000	48200	87100	76300	88000	73000	80200	148000	230000	178000	110000	84400
11	61100	44300	114000	72100	109000	72000	74300	122000	224000	226000	103000	66700
12	70200	68400	93900	85100	125000	95600	133000	114000	231000	195000	94000	68400
13	48400	86700	107000	70500	132000	91000	112000	157000	200000	218000	114000	69700
14	51100	70600	90100	93500	97500	73800	104000	139000	197000	207000	113000	79900
15	69200	71200	75400	129000	111000	69600	144000	119000	208000	150000	120000	52500
16	71400	86900	72600	116000	107000	80400	181000	137000	192000	195000	110000	59600
17	101000	74400	79200	104000	81200	74700	194000	139000	200000	219000	78300	79600
18	69700	68900	95000	121000	93600	88800	211000	121000	219000	165000	81900	67500
19	49500	68300	102000	97000	109000	84300	175000	131000	250000	192000	117000	99400
20	43800	91100	119000	103000	93400	95100	189000	140000	267000	184000	122000	94300
21	43300	88500	106000	89100	97900	78000	170000	143000	252000	188000	114000	97800
22	69200	80800	92700	121000	83200	88400	196000	135000	216000	152000	122000	84400
23	84500	67900	87100	128000	80700	54500	185000	163000	210000	179000	130000	89800
24	66900	87300	75900	105000	83600	50800	164000	154000	189000	151000	109000	97000
25	60200	68600	75300	94900	92200	50600	166000	144000	191000	159000	81400	107000
26	71300	94900	90100	100000	88900	50400	160000	135000	218000	125000	96000	98500
27	62700	112000	114000	80000	99400	51300	115000	171000	244000	104000	122000	67600
28	47800	115000	96100	102000	95800	51200	117000	179000	261000	110000	113000	55900
29	63000	106000	86600	124000	---	53800	149000	156000	242000	133000	117000	55700
30	56400	94400	73300	125000	---	54100	169000	179000	200000	128000	89100	67100
31	71700	---	70900	138000	---	53600	---	165000	---	139000	112000	---
TOTAL	1939800	2308900	2693900	3130800	2826500	2281900	3681400	4464000	6605000	5629000	3365800	2275800
MEAN	62570	76960	86900	101000	100900	73610	122700	144000	220200	181600	108600	75860
MAX	101000	115000	119000	138000	132000	113000	211000	179000	267000	270000	130000	107000
MIN	39900	43700	53100	70500	80700	50400	50000	101000	138000	104000	78300	47000
AC-FT	3848000	4580000	5343000	6210000	5606000	4526000	7302000	8854000	13100000	11170000	6676000	4514000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2002, BY WATER YEAR (WY)

MEAN	72040	73200	77420	80310	81570	82390	104200	192300	266800	197900	120400	82300
MAX	119800	121200	163800	168400	195000	201800	196500	348500	590700	385400	192000	131700
(WY)	1928	1991	1996	1996	1996	1983	1934	1934	1948	1950	1920	1927
MIN	45950	32290	26840	21710	20900	26500	37160	61840	78810	56650	66740	60050
(WY)	1932	1937	1937	1937	1937	1937	1944	2001	1977	2001	1985	1994

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1918 - 2002	
ANNUAL TOTAL	27625500		41202800			
ANNUAL MEAN	75690		112900		119400	
HIGHEST ANNUAL MEAN					165600	1997
LOWEST ANNUAL MEAN					78070	1944
HIGHEST DAILY MEAN	135000	Jan 3	270000	Jul 2	690000	Jun 12 1948
LOWEST DAILY MEAN	36800	Jul 29	39900	Oct 6	20000	Jan 31 1937
ANNUAL SEVEN-DAY MINIMUM	44600	May 14	51700	Mar 24	20100	Jan 30 1937
ANNUAL RUNOFF (AC-FT)	54800000		81730000		86490000	
10 PERCENT EXCEEDS	106000		195000		231000	
50 PERCENT EXCEEDS	70500		97000		93800	
90 PERCENT EXCEEDS	50400		56600		46500	