

COLUMBIA RIVER MAIN STEM

12473520 COLUMBIA RIVER AT RICHLAND, WA

LOCATION.--Lat 46°18'46", long 119°15'28", in NW 1/4 NW 1/4 sec.36, T.10 N., R.28 E., Benton County, Hydrologic Unit 17020016, at city of Richland pumping plant, 4.8 mi upstream from Yakima River, and at mile 340.2.

DRAINAGE AREA.--96,900 mi², approximately.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1974 to March 1993.

REMARKS.--Water temperatures as recorded for the period July 1974 to January 1977 did not represent mean stream temperatures (see previous state reports for correlation between thermal load measurements and recorded temperatures). Temperature probe, relocated January 1977, represents both horizontal and vertical cross section of the river. Unpublished records of stage at site 2.3 miles downstream are available in files of the Geological Survey and U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 22.0°C July 21, Aug. 4, 5, 1985; minimum, 0.0°C Feb. 3, 6-9, 1989.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	SPE-CIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	HARDNESS NONCARBONIC (MG/L AS CaCO3) (00904)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)
DEC 03...	1130	130	8.0	9.4	1.1	11.2	97	60	5	17.5
MAR 09...	1230	151	8.2	4.7	.8	13.2	103	69	10	19.5
JUN 28...	1200	115	8.1	16.7	.7	11.1	115	51	9	14.4
SEP 21...	1200	129	8.0	18.4	.5	8.8	95	59	7	16.7

DATE	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	BICARBONATE WATER FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER FIELD (MG/L AS CO3) (00452)	ALKALINITY WATER TOTAL (MG/L AS CaCO3) (39086)	SULFATE SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS Cl) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
DEC 03...	4.07	67	0	55	7.7	.9	<.1	76	<.010
MAR 09...	5.00	73	0	60	10.2	1.4	<.1	90	<.010
JUN 28...	3.57	51	0	42	6.7	.9	<.1	68	<.010
SEP 21...	4.15	63	0	52	8.1	1.0	<.1	81	<.010

DATE	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SEDIMENT, SUSPENDED (MG/L) (80154)
DEC 03...	.139	<.020	<.10	<.050	.013	<.8	<10	1.2	5
MAR 09...	.151	<.020	.13	<.050	<.010	<.8	<10	1.1	3
JUN 28...	.067	<.020	.13	<.050	<.010	<.8	<10	1.8	7
SEP 21...	.096	<.020	.17	<.050	<.010	E.5	<10	7.8	4