



Water-Data Report 2011

**12472900 COLUMBIA RIVER AT VERNITA BRIDGE, NEAR PRIEST RAPIDS DAM, WA**

Upper Columbia Basin  
Upper Columbia-Priest Rapids Subbasin

LOCATION.--Lat 46°38'24", long 119°43'54" referenced to North American Datum of 1927, in NW ¼ SE ¼ sec.6, T.13 N., R.25 E., Grant County, WA, Hydrologic Unit 17020016, at State Highway 24 Vernita Bridge crossing, 9.0 mi downstream from Priest Rapids Dam, and at mile 388.1.

DRAINAGE AREA.--96,000 mi<sup>2</sup>.

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1962-63, 1972, 1974 to December 2010 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1974 to September 1980.

REMARKS.--October 1971 to September 1972, at site 6.4 mi upstream, published as 12472800 "below Priest Rapids Dam." Prior to October 1971 published as 12472800 "at Vernita Ferry." Discharge determined by routing flows from the gaging station below Priest Rapids Dam (station 12472800) 6.4 miles upstream. National Stream Quality Accounting Network (NASQAN) 1975-2000.

**WATER-QUALITY DATA**

**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 6

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Discharge, instantaneous, ft <sup>3</sup> /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)	Temperature, water, °C (00010)
12-15-2010	1120	749	9.6	68,500	11.0	95	7.5	150	8.2

## 12472900 COLUMBIA RIVER AT VERNITA BRIDGE, NEAR PRIEST RAPIDS DAM, WA—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 2 of 6

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than]

Date	Sample start time	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Dissolved solids, water, filtered, sum of constituents, mg/L (70301)	Dissolved solids, water, filtered, tons per acre-foot (70303)	Dissolved solids, water, tons per day (70302)	Hardness, water, mg/L as CaCO <sub>3</sub> (00900)	Non-carbonate hardness, water, filtered, mg/L as CaCO <sub>3</sub> (00904)	Suspended solids, water, unfiltered, mg/L (00530)
12-15-2010	1120	< 2.0	84	77	.11	15,500	68.9	6	< 15

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 3 of 6

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than]

Date	Sample start time	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium adsorption ratio, water, number (00931)	Sodium fraction of cations, water, percent in equivalents of major cations (00932)	Sodium, water, filtered, mg/L (00930)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO <sub>3</sub> (39086)	Bicarbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00453)
12-15-2010	1120	19.6	4.83	.74	.13	7	2.39	62.8	76.5

## 12472900 COLUMBIA RIVER AT VERNITA BRIDGE, NEAR PRIEST RAPIDS DAM, WA—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 4 of 6

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

Date	Sample start time	Carbonate, water, filtered, inflection-point incremental	Chloride, water, filtered,	Fluoride, water, filtered,	Sulfate, water, filtered,	Ammonia plus organic nitrogen, water, unfiltered,	Ammonia, water, filtered,	Nitrate plus nitrite, water, filtered,	Nitrite, water, filtered,
		titration method, field, mg/L (00452)	mg/L (00940)	mg/L (00950)	mg/L (00945)	mg/L as N (00625)	mg/L as N (00608)	mg/L as N (00631)	mg/L as N (00613)
12-15-2010	1120	.0	1.13	.09	10.3	.07	< .010	.13	.002

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 5 of 6

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

Date	Sample start time	Orthophosphate, water, filtered,	Phosphorus, water, filtered,	Phosphorus, water, unfiltered,	Total nitrogen, water, unfiltered, analytically determined,	Chromium, water, filtered,	Iron, water, filtered,	Organic carbon, water, filtered,	Suspended sediment concentration,
		mg/L as P (00671)	mg/L as P (00666)	mg/L as P (00665)	mg/L (62855)	µg/L (01030)	µg/L (01046)	mg/L (00681)	mg/L (80154)
12-15-2010	1120	.006	< .02	< .02	.15	.09	< 3	1.1	1

**12472900 COLUMBIA RIVER AT VERNITA BRIDGE, NEAR PRIEST RAPIDS DAM, WA—Continued**

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2010 TO  
SEPTEMBER 2011**

Part 6 of 6

[%, percent; CaCO<sub>3</sub>, calcium carbonate;  
N, nitrogen; NTRU, nephelometric  
turbidity ratio unit; P, phosphorus; ft<sup>3</sup>/s,  
cubic feet per second; mg/L, milligrams  
per liter; mm Hg, millimeters of  
mercury; nm, nanometers; °C, degrees  
Celsius; µS/cm, microsiemens per  
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<, less than]

<b>Date</b>	<b>Sample start time</b>	<b>Suspended sediment discharge, tons per day (80155)</b>
<b>12-15-2010</b>	<b>1120</b>	185