

APPENDIX F: COLUMBIA AND SNAKE RIVER NAVIGATION CLEARANCES

Appendix F. Navigation Clearances for Facilities Crossing the Columbia and Snake Rivers

Table F-1 summarizes the navigation clearances for facilities (bridges, cables and locks) that cross or are in the Columbia River (from the mouth to Richland, Washington) and the Snake River (from the mouth to Lewiston, Idaho). This information is provided by river mile beginning at the mouth of the Columbia River and progressing upstream. Horizontal and vertical clearances are provided for bridges, horizontal clearances for navigation locks, and vertical clearances for overhead power lines. Most of the information provided in the table was obtained from the most recent National Oceanographic and Atmospheric Administration (NOAA) navigation chart available online (NOAA, 2012). Some of the bridge names (e.g., most of the railroad bridges upstream of The Dalles Dam) were obtained from the USCG bridge inspection logs available through the internet (USCG, 2011). In addition, USACE channel condition surveys were reviewed for additional information and for cross comparison with the information on the NOAA navigation charts.

Information differing materially between the NOAA charts and either the USACE charts or USCG bridge inspection logs are provided in the notes. In some cases, the reported river mile may be slightly different. The river miles provided in the tables were estimated to the nearest 1/10 statute mile based on river miles provided in the NOAA charts. In addition, the horizontal and vertical clearances were taken from the NOAA navigation charts. The datum for each reach of the river is controlled by the pool elevation of the various dams above Bonneville Dam. Below Bonneville Dam, the CRD is used except near the coast at the Astoria-Megler Bridge where Mean Lower Low Water (MLLW) is used.

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Table F-1. Columbia and Snake River Navigation Clearances

Bridge	River Mile	Horiz. Clr. (ft)	Vert. Clr. (ft)	Vert. Clr. at Center (ft)	Vert. Clr. w/Span Open (ft)	Location	NOAA Chart #	NOAA Chart (date)	Carries	Datum
Columbia River										
Astoria-Megler Bridge	13.5	1070	193	205	--	Astoria	18521	Aug-09	US 101	Mean Lower Low Water (MLLW)
Power Cable	40.0	--	230	--	--	Puget Island	18523	May-10	Power	Columbia River Datum (CRD)
Power Cable	62.4	--	216	--	--	Longview	18524	Jun-11	Power	CRD
Lewis & Clark Bridge	66.0	1120	187	--	--	Longview	18524		SR 433	CRD
Power Cable (main channel)	104.2	--	220	--	--	Vancouver-Portland	18525	Apr-09	Power	CRD
(North Portland Harbor)	1.6	--	160			Vancouver-Portland	18525		Power	CRD
BNSF Rail Bridge	105.6	200	39	--	Unlimited	Vancouver-Portland	18525		BNSF Rail Road (RR)	CRD
(North Portland Harbor)	3.2	125	39	--	Unlimited	Vancouver-Portland	18525			CRD
Interstate Bridge (lift bridge)	106.5	263	39	--	178	Vancouver-Portland	18525		I-5	CRD
(barge channel)		511	46	58	--	Vancouver-Portland	18525			CRD
(alt. barge channel)		260	72	--	--	Vancouver-Portland	18525			CRD
(North Portland Harbor)	4.5	215	35	--	--		18525			CRD
Power Cable (North Portland Harbor)	4.5	--	54	--	--	Vancouver-Portland	18525		Power	CRD
Glenn L. Jackson Memorial Bridge	112.7	469	136	144	--	Vancouver-Portland	18531	Sep-05	I-205	CRD
Power Cable	120.0	--	133	--	--	Camas-Troutdale	18531		Power	CRD
Bonneville Dam - Navigation Lock	145.1	86	--	--	--		18531			
Power Cable	145.1	--	210	--	--	Bonneville	18531		Power	CRD
Power Cable	146.6	--	190	--	--	Bonneville	18531		Power	Normal Pool (NP) (72 ft above Mean Sea Level (MSL))
Bridge of the Gods	148.3	655	135	--	--	Cascade Locks	18532	May-06	Pacific Crest Trail	NP (72 ft above MSL)
Hood River Bridge	169.8	246	67	--	148	Hood River	18532		SR 35	NP (72 ft above MSL)
Power Cable	171.1	--	155	--	--	Bingen	18532		Power	NP (72 ft above MSL)
Power Cable	173.8	--	159	--	--	Eighteen Mile Island	18532		Power	NP (72 ft above MSL)
Power Cable	186.2	--	155	--	--	The Dalles	18532		Power	NP (72 ft above MSL)
The Dalles Bridge (nav. lock approach)	191.6	250	100	--	--	The Dalles	18532		US 197	NP (72 ft above MSL)
(main span)		551	81	--	--	The Dalles	18532			
The Dalles Dam - Navigation Lock	191.8	86	--	--	--		18532			
Power Cable	191.9	--	125	--	--	The Dalles	18533	Sep-04	Power	NP (160 ft above MSL)
Power Cable	201.0	--	123	--	--	Wishram	18533		Power	NP (160 ft above MSL)
Celilo Bridge	201.2	300	20	--	79	Wishram	18533		BNSF RR	NP (160 ft above MSL)
Power Cable	204.5	--	115	--	--	Miller Island	18533		Power	NP (160 ft above MSL)
Sam Hill Memorial Bridge	209.1	300	88	--	--	Biggs	18533		US 97	NP (160 ft above MSL)
Power Cable	215.8	--	93	--	--	Biggs	18535	Aug-04	Power	NP (160 ft above MSL)
John Day Dam - Navigation Lock	216.6	86	--	--	--		18535			
Power Cable	263.3	--	95	--	--	Crowe Butte	18537	Jul-99	Power	NP (265 ft above MSL)
SR-82 Bridge, SB	291.0	335	85	--	--	Umatilla	18539	Mar-04	I-82, SR 395	NP (265 ft above MSL)
SR-82 Bridge, NB		400	71	--	--		18539			
Power Cable	291.2	--	82	--	--	Umatilla	18539		Power	NP (265 ft above MSL)
McNary Dam - Navigation Lock	292.6	86	--	--	--		18541	Mar-02		
McNary Dam Locks Bridge	292.6	86	15				18541		--	NP (340 ft above MSL)
Kalan Bridge	323.5	378	11	--	72	Burbank	18542	Jan-00	Union Pacific RR	NP (340 ft above MSL)
Power Cable	325.6	--	85	--	--	Kennewick-Pasco	18542		Power	NP (340 ft above MSL)
BNSF Rail Bridge	328.1	290	18		70	Kennewick-Pasco	18542		BNSF RR	NP (340 ft above MSL)
Benton-Franklin Intercounty Bridge	328.5	578	56	--	--	Kennewick-Pasco	18542		SR 397	NP (340 ft above MSL)
Power Cable	328.7	--	54	--	--	Kennewick-Pasco	18542		Power	NP (340 ft above MSL)
Pioneer Memorial Bridge	330.1	500	61		--	Kennewick-Pasco	18542		US 395	NP (340 ft above MSL)
Lee-Volpentest Bridges	336.1	400	73	--	--	Kennewick-Pasco	18542		I-182, US 12	NP (340 ft above MSL)

Bridge	River Mile	Horiz. Clr. (ft)	Vert. Clr. (ft)	Vert. Clr. at Center (ft)	Vert. Clr. w/Span Open (ft)	Location	NOAA Chart #	NOAA Chart (date)	Carries	Datum
Snake River										
BNSF Rail Bridge	1.5	380	14	--	60	Pasco-Burbank	18545	Sep-03	BNSF RR	NP (340 ft above MSL)
Vaughn Hubbard Bridge	2.2	400	61	--	--	Pasco-Burbank	18545		US 12	NP (340 ft above MSL)
Power Cable	4.0	--	68	--	--	Pasco-Burbank	18545		Power	NP (340 ft above MSL)
Power Cable	8.7	--	65	--	--	Ice Harbor Lock & Dam	18545		Power	NP (340 ft above MSL)
Power Cable	9.5	--	90	--	--	Ice Harbor Lock & Dam	18545		Power	NP (340 ft above MSL)
Ice Harbor Dam - Navigation Lock	9.7	86	--	--	--		18545			
Power Cable	16.0	--	80	--	--	1 mi. upstream of Dalton Lake	18545		Power	NP (440 ft above MSL)
Power Cable	40.1	--	148	--	--	Lower Monumental Dam	18545		Power	NP (440 ft above MSL)
Power Cable	41.0	--	94	--	--	Lower Monumental Dam	18545		Power	NP (440 ft above MSL)
Lower Monumental Dam - Navigation Lock	41.6	86	--	--	--		18546	Jan-04		
Joso Bridge	58.7	238	144	--	--	Lyons Ferry	18546		Union Pacific RR	NP (540 ft above MSL)
Lyons Ferry Bridge	59.2	200	74	--	--	Lyons Ferry	18546		SR 261	NP (540 ft above MSL)
Power Cable	59.6	--	178	--	--	Lyons Ferry	18546		Power	NP (540 ft above MSL)
Power Cable	60.6	--	178	--	--	Lyons Ferry	18546		Power	NP (540 ft above MSL)
Sargent Bridge	61.7	400	60	--	--	Tucannon	18546		Union Pacific RR	NP (540 ft above MSL)
Power Cable	69.1	--	95	--	--	Little Goose Lock & Dam	18546		Power	NP (540 ft above MSL)
Power Cable	69.3	--	90	--	--	Little Goose Lock & Dam	18546		Power	NP (540 ft above MSL)
Power Cable	70.0	--	93	--	--	Little Goose Lock & Dam	18546		Power	NP (540 ft above MSL)
Little Goose Dam - Navigation Lock	70.2	86	--	--	--		18547	Jul-99		
Elmer C. Huntley Bridge	83.2	520	60	--	--	Central Ferry	18547		SR 127	NP (638 ft above MSL)
Power Cable	83.3	--	80	--	--	Central Ferry	18547		Power	NP (638 ft above MSL)
Power Cable	85.3	--	95	--	--	2 mi. upstream of Central Ferry	18547		Power	NP (638 ft above MSL)
Power Cable	103.3	--	81	--	--	Almota	18547		Power	NP (638 ft above MSL)
Power Cable	104.3	--	75	--	--	Almota	18547		Power	NP (638 ft above MSL)
Lower Granite Dam - Navigation Lock	107.4	86	--	--	--		18548	Dec-02		
Power Cable	108.7	--	80	--	--	Lower Granite Dam	18548		Power	NP (738 ft above MSL)
Power Cable	110.2	--	101	--	--	Wawawai	18548		Power	NP (738 ft above MSL)
Power Cable	130.3	--	80	--	--	Near Silcott Island	18548		Power	NP (738 ft above MSL)
Power Cable	135.5	--	80	--	--	Wilma	18548		Power	NP (738 ft above MSL)
Red Wolf Crossing	137.3	400	60	--	--	Clarkston	18548		SR 128	NP (738 ft above MSL)
SR 12 Interstate Bridge	139.6	160	10	--	42	Clarkston-Lewiston	18548		US 12	NP (738 ft above MSL)
Lewiston/Clarkston Bridge	141.3	250	--	60	--	Clarkston-Lewiston	18548		Fleshman Way – Bryden Canyon Rd.	NP (738 ft above MSL)
Power Cable	141.4	--	80	--	--	Clarkston-Lewiston	18548		Power	NP (738 ft above MSL)
Power Cable	145.0	--	80	--	--	Asotin	18548		Power	NP (738 ft above MSL)
Clearwater River										
Power Cable	0.6	--	81	--	--	Lewiston-North Lewiston	18548		Power	NP (738 ft above MSL)
Camas Prairie Railroad Bridge	0.6	232	7	--	60	Lewiston-North Lewiston	18548		Camas Prairie RR	NP (738 ft above MSL)

References for Appendix F

National Oceanographic and Atmospheric Administration (NOAA) (2012), NOAA Nautical Chart online Viewer, Site accessed September 2021,
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