

Appendix H

Terrestrial Vegetation Tables

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Table H-1. Land Cover with Vegetation Communities for Washington State Rail, Mid-Columbia, and Vessel Corridors

Vegetation Type	Rail Corridor Acreage ^a	Mid-Columbia Corridor Acreage ^b	Vessel Corridor Acreage ^c
Agricultural Vegetation	45,110.3	9,846.9	14,358.8
Cultivated cropland	35,493.2	2,589.9	26.7
Pasture/hay	9,617.1	7,257.1	14,332.0
Aquatic Vegetation	-	-	4.8
Temperate Pacific intertidal mudflat	-	-	4.8
Developed and Other Human Use	33,251.1	17,959.6	5,238.0
Developed, high intensity	1,843.0	426.6	1.9
Developed, low intensity	19,113.0	10,711.6	5,075.2
Developed, medium intensity	9,230.4	4,151.9	16.0
Developed, open space	3,058.9	2,668.9	144.9
Quarries, mines, gravel pits and oil wells	5.8	0.6	-
Forest and Woodland	21,031.5	13,565.2	23,257.9
Columbia Basin foothill riparian woodland and shrubland	783.7	762.8	-
Columbia Plateau western juniper woodland and savanna	3.4	116.4	-
East Cascades mesic montane mixed-conifer forest and woodland	1,144.8	371.5	-
East Cascades oak-ponderosa pine forest and woodland	1,594.5	1,331.5	-
Great Basin foothill and lower montane riparian woodland and shrubland	61.5	11.5	-
Intermountain Basins aspen-mixed conifer forest and woodland	0.4	-	-
North Pacific broadleaf landslide forest and shrubland	414.9	281.6	673.4
North Pacific dry Douglas-fir-(madrone) forest and woodland	305.7	1,195.0	3.0
North Pacific hardwood-conifer swamp	38.3	179.3	3,376.6
North Pacific hypermaritime sitka spruce forest	-	-	1,353.7
North Pacific hypermaritime western red-cedar-western hemlock forest	-	-	631.1
North Pacific lowland mixed hardwood-conifer forest and woodland	1,570.7	3,858.5	2,499.1
North Pacific lowland riparian forest and shrubland	163.8	335.4	10,014.5
North Pacific maritime dry-mesic Douglas-fir-western hemlock forest	3,396.1	2,791.8	1,557.5
North Pacific maritime mesic-wet Douglas-fir-western hemlock forest	2,504.7	609.2	1,221.1

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Vegetation Type	Rail Corridor Acreage ^a	Mid-Columbia Corridor Acreage ^b	Vessel Corridor Acreage ^c
North Pacific montane riparian woodland and shrubland	363.2	489.1	-
North Pacific oak woodland	726.8	421.9	7.6
North Pacific shrub swamp	138.4	242.4	1,920.2
Northern Rocky Mountain dry-mesic montane mixed conifer forest	411.4	98.0	-
Northern Rocky Mountain lower montane riparian woodland and shrubland	23.2	3.4	-
Northern Rocky Mountain ponderosa pine woodland and savanna	7,322.1	462.9	-
Rocky Mountain aspen forest and woodland	7.6	-	-
Rocky Mountain lower montane riparian woodland and shrubland	56.1	3.0	-
Introduced and Semi-Natural Vegetation	19,773.5	7,321.6	-
Introduced riparian and wetland Vegetation	-	4,237.8	-
Introduced upland vegetation - annual grassland	19,751.6	3,070.8	-
Introduced upland vegetation - perennial grassland and forbland	9.1	0.2	-
Introduced upland vegetation - shrub	12.7	12.7	-
Nonvascular and Sparse Vascular Rock Vegetation	3,599.4	3,260.9	1.6
Intermountain Basins active and stabilized dune	2,783.5	1,611.4	-
Intermountain Basins cliff and canyon	473.9	1,226.1	-
North Pacific montane massive bedrock, cliff and talus	56.9	116.8	1.6
Rocky Mountain alpine bedrock and scree	0.4	-	-
Rocky Mountain cliff, canyon, and massive bedrock	229.6	169.0	-
Unconsolidated shore	55.1	137.5	-
Open Water	58,980.4	128,252.4	108,019.0
Introduced riparian and wetland Vegetation	1,937.4	-	-
Open water (brackish/salt)	-	-	66,737.9
Open water (fresh)	57,043.0	128,252.4	41,281.2
Polar and High Montane Vegetation	2.0	-	-
Rocky Mountain alpine fell-field	2.0	-	-
Recently Disturbed or Modified	2,448.7	864.7	2,217.0
Disturbed, non-specific	109.7	61.5	-
Harvested forest - grass/forb regeneration	602.3	104.7	253.3
Harvested forest - northwestern conifer regeneration	604.2	110.2	1,170.1
Harvested forest-shrub regeneration	819.7	144.9	409.0

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Vegetation Type	Rail Corridor Acreage ^a	Mid-Columbia Corridor Acreage ^b	Vessel Corridor Acreage ^c
Recently burned forest	-	-	1.3
Recently burned grassland	312.8	443.5	383.3
Semi-desert	55,366.6	23,737.9	-
Columbia plateau low sagebrush steppe	20.5	7.6	-
Columbia plateau scabland shrubland	2,922.6	433.7	-
Columbia plateau steppe and grassland	2,162.8	1,233.0	-
Intermountain Basins big sagebrush shrubland	18,823.2	8,333.5	-
Intermountain Basins big sagebrush steppe	29,856.9	13,294.1	-
Intermountain Basins mixed salt desert scrub	1,522.0	404.7	-
Intermountain Basins montane sagebrush steppe	1.0	0.2	-
Intermountain Basins semi-desert grassland	22.2	31.0	-
Intermountain Basins semi-desert shrub steppe	35.5	-	-
Shrubland and Grassland	8,481.7	2,833.1	28,766.9
Columbia Basin foothill and canyon dry grassland	3,319.4	968.4	-
Columbia Basin palouse prairie	177.6	14.2	-
Columbia Plateau vernal pool	0.2	-	-
Intermountain Basins alkaline closed depression	110.0	29.0	-
Intermountain Basins greasewood flat	23.1	8.8	-
Intermountain Basins playa	0.1	-	-
North American arid west emergent marsh	139.2	-	-
North Pacific bog and fen	13.7	-	-
North Pacific coastal cliff and bluff	-	-	16.5
North Pacific herbaceous bald and bluff	41.6	87.0	1.3
North Pacific hypermaritime shrub and herbaceous headland	-	-	43.0
North Pacific intertidal freshwater wetland	251.2	423.9	12,305.4
North Pacific maritime coastal sand dune and strand	69.5	362.6	10,425.5
North Pacific montane shrubland	0.2	-	-
Northern and central California dry-mesic chaparral	-	0.6	-
Northern Rocky Mountain lower montane, foothill and valley grassland	3,115.3	12.1	-
Northern Rocky Mountain montane-foothill deciduous shrubland	468.9	-	-
Rocky Mountain alpine-montane wet meadow	11.6	-	-
Rocky Mountain subalpine-montane mesic meadow	151.5	-	-

Table H-1. Land Cover with Vegetation Communities for Washington State Rail, Mid-Columbia, and Vessel Corridors

Vegetation Type	Rail Corridor Acreage ^a	Mid-Columbia Corridor Acreage ^b	Vessel Corridor Acreage ^c
Rocky Mountain subalpine-montane riparian shrubland	4.2	4.0	–
Temperate Pacific freshwater emergent marsh	421.3	637.0	422.4
Temperate Pacific freshwater mudflat	155.8	206.2	5,498.9
Temperate Pacific tidal salt and brackish marsh	–	–	31.3
Willamette Valley upland prairie and savanna	5.8	76.2	16.4
Willamette Valley wet prairie	1.5	3.1	6.4
Total	248,045.0	207,642.2	181,864.0

Source: USGS (2011)

- ^a Calculated within 0.5 mile on both sides of the railway along the in-state portion of the delivery route (95% Washington, 5% Oregon, <1% Idaho); overlaps with Mid-Columbia corridor, Oregon and Idaho.
- ^b Calculated within 0.25 mile of both sides of the Columbia River shorelines in Washington (55%) and Oregon (45%).
- ^c Calculated within 0.25 mile of both sides of the Columbia River shoreline in Washington (36%) and Oregon (64%).
- Indicates the land cover or vegetation type does not occur within the corridor area.

Table H-2. Land Cover with Vegetation Communities for the Rail Corridor outside of Washington State

Land Cover / Vegetation Communities	Idaho (acres)	Montana (acres)	North Dakota (acres)	Total (acres)
Agricultural Vegetation	4,652.1	150,018.9	4,592.3	159,263.2
Cultivated cropland	2,766.8	139,756.9	4,432.1	146,955.8
Pasture/hay	1,885.2	10,262.0	160.1	12,307.3
Developed & Other Human Use	7,692.7	39,670.5	1,737.6	49,100.8
Developed, high intensity	160.1	562.9	52.7	775.7
Developed, low intensity	4,217.1	16,372.7	674.7	21,264.5
Developed, medium intensity	1,146.7	2,911.6	159.2	4,217.5
Developed, open space	2,168.9	19,823.3	850.9	22,843.1
Forest & Woodland	32,470.8	111,282.0	2,129.9	145,882.6
Intermountain Basins aspen-mixed conifer forest and woodland	0.4	826.4	-	826.9
Middle Rocky Mountain montane Douglas-fir forest and woodland	-	15.8	-	15.8
Northern Rocky Mountain conifer swamp	11.8	1.6	-	13.3
Northern Rocky Mountain dry-mesic montane mixed conifer forest	13,377.9	34,356.4	-	47,734.4
Northern Rocky Mountain foothill conifer wooded steppe	-	39.8	-	39.8
Northern Rocky Mountain lower montane riparian woodland and shrubland	1,181.9	7,520.7	-	8,702.5
Northern Rocky Mountain mesic montane mixed conifer forest	11,042.5	23,623.1	-	34,665.6
Northern Rocky Mountain ponderosa pine woodland and savanna	6,797.8	11,141.3	-	17,939.1
Northern Rocky Mountain subalpine woodland and parkland	-	182.6	-	182.6
Northern Rocky Mountain western larch savanna	-	81.2	-	81.2
Northwestern Great Plains floodplain	-	9,207.6	-	9,207.6
Northwestern Great Plains riparian	-	5,553.2	-	5,553.2
Northwestern Great Plains shrubland	-	2,489.0	148.6	2,637.6
Rocky Mountain aspen forest and woodland	44.2	2,017.4	-	2,061.6
Rocky Mountain foothill limber pine-juniper woodland	-	11.8	-	11.8
Rocky Mountain lodgepole pine forest	-	3,950.2	-	3,950.2
Rocky Mountain lower montane riparian woodland and shrubland	-	341.8	-	341.8
Rocky Mountain subalpine dry-mesic spruce-fir forest and woodland	6.4	6,679.0	-	6,685.4

Table H-2. Land Cover with Vegetation Communities for the Rail Corridor outside of Washington State

Land Cover / Vegetation Communities	Idaho (acres)	Montana (acres)	North Dakota (acres)	Total (acres)
Rocky Mountain subalpine mesic spruce-fir forest and woodland	7.8	2,048.7	-	2,056.5
Western Great Plains floodplain systems	-	2.1	1,811.3	1,813.4
Western Great Plains wooded draw and ravine	-	1,192.4	170.0	1,362.4
Introduced & semi natural vegetation	-	31,740.6	42.3	31,782.9
Introduced upland vegetation – perennial grassland and formland	-	31,740.6	42.3	31,782.9
Nonvascular & sparse vascular rock vegetation	6.7	3,058.4	-	3,065.0
Rocky Mountain Cliff, Canyon, and Massive Bedrock	6.7	17.1	-	23.8
Western Great Plains badland	-	3,033.2	-	3,033.2
Western Great Plains cliff and outcrop	-	8.0	-	8.0
Open Water	3,717.2	9,097.1	979.5	13,793.8
Open water (fresh)	3,717.2	9,097.1	979.5	13,793.8
Recently Disturbed or Modified	399.4	4,368.8	200.3	4,968.5
Disturbed, nonspecific	-	0.1	200.3	200.4
Harvested forest – grass/forb regeneration	87.0	974.5	-	1,061.5
Harvested forest – northwestern conifer regeneration	309.6	1,816.3	-	2,125.9
Harvested forest – shrub regeneration	2.9	175.5	-	178.4
Recently burned forest	-	1,402.4	-	1,402.4
Semi-Desert	-	10,133.9	10.5	10,144.3
Intermountain Basins big sagebrush shrubland	-	-	6.4	6.4
Intermountain Basins big sagebrush steppe	-	10,128.8	4.0	10,132.8
Intermountain Basins mat saltbush shrubland	-	5.1	-	5.1
Shrubland & Grassland	13,761.0	72,074.4	5,212.2	91,047.6
Intermountain Basins alkaline closed depression	-	3.1	-	3.1
Intermountain Basins greasewood flat	-	3,887.0	5.6	3,892.6
North American arid west emergent marsh	174.3	1,589.9	-	1,764.3
Northern Rocky Mountain lower montane, foothill, and valley grassland	9,874.6	15,015.6	-	24,890.2
Northern Rocky Mountain montane-foothill deciduous shrubland	788.6	2,329.4	-	3,118.0
Northern Rocky Mountain subalpine deciduous shrubland	-	3,697.3	-	3,697.3
Northern Rocky Mountain subalpine-upper montane grassland	-	1,872.1	-	1,872.1
Northern Rocky Mountain wooded vernal pool	-	3.3	-	3.3

Table H-2. Land Cover with Vegetation Communities for the Rail Corridor outside of Washington State

Land Cover / Vegetation Communities	Idaho (acres)	Montana (acres)	North Dakota (acres)	Total (acres)
Northwestern Great Plains mixed-grass prairie	-	34,075.2	4,969.7	39,045.0
Rocky Mountain alpine-montane wet meadow	2,580.6	1,498.6	-	4,079.2
Rocky Mountain subalpine-montane fen	5.3	199.3	-	204.6
Rocky Mountain subalpine-montane mesic meadow	337.6	613.1	-	950.7
Western Great Plains closed depression wetland	-	911.2	-	911.2
Western Great Plains depressional wetland systems	-	0.2	100.3	100.5
Western Great Plains open freshwater depression wetland	-	387.0	-	387.0
Western Great Plains saline depression wetland	-	4,152.6	-	4,152.6
Western Great Plains sand prairie	-	1,839.4	136.6	1,976.0
Grand Total	62,699.9	431,444.5	14,904.4	509,048.7

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