

# **APPENDIX 12-VIII**

## **Critical Landform Vegetation Associations in the Ecodistricts that Intersect with the Vegetation and Wetlands Local Study Area**

**APPENDIX 12-VIII**

**CRITICAL LANDFORM/VEGETATION ASSOCIATIONS IN THE ECODISTRICTS THAT INTERSECT WITH THE VEGETATION AND WETLANDS LOCAL STUDY AREA**

**Table 12-VIII-1: Critical Landform/Vegetation Associations in the Ecodistricts that Intersect with the Vegetation and Wetlands Local Study Area**

Ecodistrict LV File	Landform Description	Vegetation Description	Reference Case Protected Areas (ha)	Project Case Protected Area (ha)	Change in Area (ha)	Percent Change (%)
4E1	Alluvial & Fluvial Deposits	Bedrock	37.2	37.2	0.0	0.0
		Open Bog	18.5	18.5	0.0	0.0
	Coarse Ground Moraine	Open Bog	12.1	12.1	0.0	0.0
	Coarse Lacustrine & Glaciolacustrine	Bedrock	30.8	30.8	0.0	0.0
	Glaciofluvial Esker-Kettle Terrain	Coniferous Forest	20.6	20.6	0.0	0.0
		Sparse Forest	4.4	4.4	0.0	0.0
		Treed Bog	4.9	4.9	0.0	0.0
	Glaciofluvial Outwash	Open Bog	19.9	19.9	0.0	0.0
	Organic Deposits	Open Bog	12.2	12.2	0.0	0.0
Precambrian Basic to Int. Bedrock	Treed Bog	38.6	38.6	0.0	0.0	
3W5	Alluvial & Fluvial Deposits	Bedrock	17.9	17.9	0.0	0.0
		Disturbance - Non and Sparse Woody	6.8	6.8	0.0	0.0
		Disturbance - Treed and/or Shrub	17.6	17.6	0.02	0.14
		Fresh Water Marsh	2.4	2.4	0.0	0.0
		Open Fen	2.6	2.6	0.0	0.0
		Sparse Treed	6.7	6.3	0.45	6.71
		Treed Bog	10.0	9.7	0.33	3.27
		Treed Fen	1.3	1.3	0.0	0.0
	Coarse Lacustrine & Glaciolacustrine	Bedrock	18.6	18.6	0.0	0.0
		Deciduous Swamp	1.7	1.7	0.0	0.0
		Disturbance - Non and Sparse Woody	27.3	27.3	<0.01	<0.01
		Disturbance - Treed and/or Shrub	40.0	40.0	0.0	0.0
		Fresh Water Marsh	1.8	1.8	0.0	0.0
		Open Fen	1.3	1.3	0.0	0.0
		Sand/Gravel/Mine Tailings	71.7	71.7	0.0	0.0
		Sparse Treed	25.9	25.9	0.04	0.14
		Thicket Swamp	6.5	6.5	0.0	0.0
		Treed Bog	29.2	26.9	2.32	7.96
	Treed Fen	8.2	8.2	0.0	0.0	
	Fine Lacustrine & Glaciolacustrine	Coniferous Swamp	103.9	103.9	0.0	0.0
		Coniferous Treed	231.6	231.6	0.0	0.0
		Deciduous Swamp	16.7	16.7	0.0	0.0
		Deciduous Treed	217.4	217.4	0.0	0.0
		Disturbance - Non and Sparse Woody	0.4	0.4	0.0	0.0
		Disturbance - Treed and/or Shrub	48.7	48.7	0.0	0.0
		Fresh Water Marsh	10.7	10.7	0.0	0.0
		Open Fen	12.6	12.6	0.0	0.0
		Sparse Treed	1.4	1.4	0.0	0.0
		Thicket Swamp	6.3	6.3	0.0	0.0
		Treed Bog	11.4	11.4	0.0	0.0
		Treed Fen	3.9	3.9	0.0	0.0

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**CRITICAL LANDFORM/VEGETATION ASSOCIATIONS IN THE ECODISTRICTS THAT INTERSECT WITH THE VEGETATION AND WETLANDS LOCAL STUDY AREA**

**Table 12-VIII-1: Critical Landform/Vegetation Associations in the Ecodistricts that Intersect with the Vegetation and Wetlands Local Study Area**

Ecodistrict LV File	Landform Description	Vegetation Description	Reference Case Protected Areas (ha)	Project Case Protected Area (ha)	Change in Area (ha)	Percent Change (%)
3W5	Glaciofluvial Delta	Bedrock	0.2	0.2	0.0	0.0
		Coniferous Swamp	6.5	6.5	0.0	0.0
		Coniferous Treed	62.0	61.5	0.46	0.74
		Deciduous Swamp	4.1	4.1	0.0	0.0
		Disturbance - Treed and/or Shrub	36.8	36.8	0.0	0.0
		Open Bog	3.8	3.8	0.0	0.0
		Treed Fen	3.2	3.2	0.0	0.0
	Glaciofluvial Esker-Kettle Terrain	Coniferous Swamp	0.3	0.3	0.0	0.0
		Deciduous Treed	8.1	8.1	0.0	0.0
		Disturbance - Non and Sparse Woody	5.0	5.0	0.0	0.0
		Disturbance - Treed and/or Shrub	20.4	20.4	0.0	0.0
		Fresh Water Marsh	0.7	0.7	0.0	0.0
		Thicket Swamp	0.9	0.9	0.0	0.0
		Treed Bog	3.3	3.3	0.0	0.0
	Glaciofluvial Outwash	Bedrock	18.3	18.3	0.05	0.28
		Deciduous Swamp	14.4	12.1	2.29	15.90
		Disturbance - Non and Sparse Woody	46.0	46.0	0.0	0.0
		Fresh Water Marsh	5.0	5.0	0.0	0.0
		Open Fen	8.3	8.3	0.0	0.0
		Sand/Gravel/Mine Tailings	25.8	25.4	0.38	1.46
		Sparse Treed	12.0	12.0	0.0	0.0
		Thicket Swamp	20.6	20.5	0.09	0.42
		Treed Bog	3.3	3.3	0.0	0.0
	Treed Fen	39.6	39.6	<0.01	<0.01	
	Organic Deposits	Bedrock	4.4	4.4	0.0	0.0
		Coniferous Swamp	90.5	90.5	0.0	0.0
		Deciduous Swamp	1.5	1.5	0.0	0.0
		Deciduous Treed	0.8	0.8	0.0	0.0
		Disturbance - Non and Sparse Woody	0.6	0.6	0.0	0.0
		Disturbance - Treed and/or Shrub	8.8	8.8	0.0	0.0
		Mixed Treed	26.0	26.0	<0.01	0.01
		Open Bog	0.2	0.2	0.0	0.0
		Open Fen	24.8	24.8	0.0	0.0
		Thicket Swamp	0.9	0.9	0.0	0.0
		Treed Bog	7.3	7.3	0.0	0.0
	Treed Fen	8.4	8.4	0.0	0.0	
	Precambrian Basic to Int. Bedrock	Deciduous Swamp	2.2	2.2	0.0	0.0
		Open Bog	2.3	2.3	0.0	0.0
		Sand/Gravel/Mine Tailings	1.6	1.4	0.15	9.61
		Thicket Swamp	29.4	29.1	0.34	1.16

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Ecodistrict LV File	Landform Description	Vegetation Description	Reference Case Protected Areas (ha)	Project Case Protected Area (ha)	Change in Area (ha)	Percent Change (%)
3W5	Precambrian Int. to Acidic Bedrock	Bedrock	251.9	251.9	<0.01	<0.01
		Deciduous Swamp	57.3	57.3	0.0	0.0
		Open Bog	23.4	23.4	0.0	0.0
		Open Fen	91.8	91.6	0.14	0.15
		Sand/Gravel/Mine Tailings	63.7	63.7	0.0	0.0
		Thicket Swamp	34.1	34.1	0.0	0.0
		Treed Bog	55.6	55.6	0.0	0.0
3E2	Alluvial & Fluvial Deposits	Balsam Fir	8.0	8.0	0.0	0.0
		Black Spruce-Tam. Mixed	7.4	7.4	0.0	0.0
		Conifer Swamp/Fen/Bog	6.4	6.4	0.0	0.0
		Exposed Rock	0.1	0.1	0.0	0.0
		Jack Pine (pure)	29.8	29.8	0.0	0.0
		Jack Pine Mixedwoods	9.4	9.4	0.0	0.0
		Tamarack Dominated	3.6	3.6	0.0	0.0
		White Birch Assn.	0.3	0.3	0.0	0.0
		White Spruce	35.7	35.7	0.0	0.0
	Coarse Ground Moraine	Balsam Fir	44.9	44.9	0.0	0.0
		Black Spruce-Tam. Mixed	38.0	38.0	0.0	0.0
		Open Marsh/Fen/Bog	16.8	16.8	0.0	0.0
		White Spruce	55.5	55.5	0.0	0.0
	Fine Ground Moraine	Balsam Fir	13.1	13.1	0.0	0.0
		Conifer Swamp/Fen/Bog	42.7	42.7	0.0	0.0
		Jack Pine (pure)	2.1	2.1	0.0	0.0
		Jack Pine Mixedwoods	26.4	26.4	0.0	0.0
		Tamarack Dominated	25.0	25.0	0.0	0.0
		Thicket Swamp	10.7	10.7	0.0	0.0
		White Birch-Aspen	4.1	4.1	0.0	0.0
		White Cedar	20.2	20.2	0.0	0.0
	Fine Lacustrine & Glaciolacustrine	Balsam Fir	5.1	5.1	0.0	0.0
		Black Spruce-Tam. Mixed	43.6	43.6	0.0	0.0
		Exposed Rock	19.9	19.9	0.0	0.0
		Tamarack Dominated	18.8	18.8	0.0	0.0
		White Birch Assn.	38.3	38.3	0.0	0.0
		White Birch-Aspen	10.3	10.3	0.0	0.0
		White Spruce	12.5	12.5	0.0	0.0
	Glaciofluvial Esker-Kettle Terrain	Black Spruce-Tam. Mixed	14.2	14.2	0.0	0.0
		Conifer Swamp/Fen/Bog	24.9	24.9	0.0	0.0
		Exposed Rock	2.1	2.1	0.0	0.0
		Grass and Meadow	61.9	61.9	0.0	0.0
White Cedar		46.9	46.9	0.0	0.0	

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Ecodistrict LV File	Landform Description	Vegetation Description	Reference Case Protected Areas (ha)	Project Case Protected Area (ha)	Change in Area (ha)	Percent Change (%)
3E2	Glaciofluvial Outwash	Balsam Fir	3.9	3.9	0.0	0.0
		Conifer Swamp/Fen/Bog	20.4	20.4	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	48.4	48.4	0.0	0.0
		Open Marsh/Fen/Bog	26.0	26.0	0.0	0.0
		Tamarack Dominated	1.8	1.8	0.0	0.0
		Thicket Swamp	49.5	49.5	0.0	0.0
		White Birch Assn.	40.5	40.5	0.0	0.0
		White Birch-Aspen	8.0	8.0	0.0	0.0
	White Cedar	37.6	37.6	0.0	0.0	
	Organic Deposits	Balsam Fir	14.3	14.3	0.0	0.0
		Black Spruce-Tam. Mixed	9.9	9.9	0.0	0.0
		Exposed Rock	9.6	9.6	0.0	0.0
		Jack Pine (pure)	55.9	55.9	0.0	0.0
		Jack Pine Mixedwoods	26.3	26.3	0.0	0.0
		White Birch Assn.	5.8	5.8	0.0	0.0
		White Spruce	0.4	0.4	0.0	0.0
	Precambrian Basic to Int. Bdrck	Balsam Fir	102.2	102.2	0.0	0.0
		Black Spruce Dominated	787.6	787.6	0.0	0.0
		Conifer Swamp/Fen/Bog	37.6	37.6	0.0	0.0
		Tamarack Dominated	9.2	9.2	0.0	0.0
		White Birch Assn.	7.8	7.8	0.0	0.0
	Precambrian Int. to Acidic Bdrck	White Cedar	1.0	1.0	0.0	0.0
		Balsam Fir	119.6	119.6	0.0	0.0
		Black Spruce-Tam. Mixed	41.9	41.9	0.0	0.0
Jack Pine (pure)		368.5	368.5	0.0	0.0	
3E4	Alluvial & Fluvial Deposits	White Spruce	24.9	24.9	0.0	0.0
		Balsam Fir	16.8	16.8	0.0	0.0
		Exposed Rock	2.3	2.3	0.0	0.0
	Coarse Ground Moraine	Jack Pine Mixedwoods	4.9	4.9	0.0	0.0
		Black Spruce Dominated	16.0	16.0	0.0	0.0
		Intol Hdwd-Other Con Mixed	22.1	22.1	0.0	0.0
		Open Marsh/Fen/Bog	1.8	1.8	0.0	0.0
	Coarse Lacustrine & Glaciolacustrine	White Birch Assn.	27.3	27.3	0.0	0.0
		Balsam Fir	176.0	176.0	0.0	0.0
		Conifer Swamp/Fen/Bog	2.7	2.7	0.0	0.0
		Exposed Rock	20.2	20.2	0.0	0.0
		Jack Pine Mixedwoods	33.7	33.7	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	29.0	29.0	0.0	0.0
		Open Marsh/Fen/Bog	6.3	6.3	0.0	0.0
	Fine Lacustrine & Glaciolacustrine	Tamarack Dominated	18.0	18.0	0.0	0.0
		Exposed Rock	0.6	0.6	0.0	0.0
Glaciofluvial Outwash	Open Marsh/Fen/Bog	2.7	2.7	0.0	0.0	
	Balsam Fir	85.6	85.6	0.0	0.0	
	Exposed Rock	2.9	2.9	0.0	0.0	

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Ecodistrict LV File	Landform Description	Vegetation Description	Reference Case Protected Areas (ha)	Project Case Protected Area (ha)	Change in Area (ha)	Percent Change (%)
3E4	Organic Deposits	Balsam Fir	7.1	7.1	0.0	0.0
		Exposed Rock	0.3	0.3	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	1.3	1.3	0.0	0.0
		White Birch-Aspen	0.1	0.1	0.0	0.0
		White Spruce	0.1	0.1	0.0	0.0
	Precambrian Basic to Int. Bdrck	Balsam Fir	277.4	277.4	0.0	0.0
		Conifer Swamp/Fen/Bog	2.4	2.4	0.0	0.0
		Exposed Rock	23.6	23.6	0.0	0.0
		Jack Pine Mixedwoods	49.5	49.5	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	20.2	20.2	0.0	0.0
		Open Marsh/Fen/Bog	141.3	141.3	0.0	0.0
		Red Maple Assn.	4.2	4.2	0.0	0.0
		Thicket Swamp	9.0	9.0	0.0	0.0
		White Birch-Aspen	142.3	142.3	0.0	0.0
	White Spruce	17.8	17.8	0.0	0.0	
Precambrian Int. to Acidic Bdrck	Yellow Birch Assn.	38.8	38.8	0.0	0.0	
3E5	Alluvial & Fluvial Deposits	Exposed Rock	4.4	4.4	0.0	0.0
		Grass and Meadow	0.2	0.2	0.0	0.0
	Coarse Ground Moraine	Exposed Rock	18.7	18.7	0.0	0.0
		Hardwoods-Black Ash	7.9	7.9	0.0	0.0
		Red Maple Assn.	0.1	0.1	0.0	0.0
		White Pine-Red Pine	47.6	47.6	0.0	0.0
		Yellow Birch Assn.	7.1	7.1	0.0	0.0
	Coarse Lacustrine & Glaciolacustrine	Exposed Rock	14.1	14.1	0.0	0.0
		Jack Pine Mixedwoods	0.9	0.9	0.0	0.0
		Tamarack Dominated	23.0	23.0	0.0	0.0
		White Spruce	7.1	7.1	0.0	0.0
	Eolian Sand Dunes	Balsam Fir	48.2	48.2	0.0	0.0
		Exposed Rock	7.2	7.2	0.0	0.0
		White Pine-Red Pine	5.3	5.3	0.0	0.0
		Yellow Birch Assn.	4.0	4.0	0.0	0.0
	Fine Ground Moraine	Conifer Swamp/Fen/Bog	15.6	15.6	0.0	0.0
		Open Marsh/Fen/Bog	8.8	8.8	0.0	0.0
		Tamarack Dominated	2.8	2.8	0.0	0.0
		White Birch Assn.	6.9	6.9	0.0	0.0
		White Cedar	0.4	0.4	0.0	0.0
	Fine Lacustrine & Glaciolacustrine	Balsam Poplar Assn.	12.2	12.2	0.0	0.0
		Exposed Rock	7.5	7.5	0.0	0.0
		Tamarack Dominated	9.3	9.3	0.0	0.0
	Glaciofluvial Esker-Kettle Terrain	Black Spruce-Tam. Mixed	38.0	38.0	0.0	0.0
		Exposed Rock	13.6	13.6	0.0	0.0
		Red Maple Assn.	0.1	0.1	0.0	0.0
		Red Pine Dominated	0.4	0.4	0.0	0.0
Tamarack Dominated		19.8	19.8	0.0	0.0	
White Pine-Red Pine		40.6	40.6	0.0	0.0	

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3E5	Glaciofluvial Outwash	Hardwoods-Black Spruce	5.5	5.5	0.0	0.0
		Mixed Tol Hdwds	9.6	9.6	0.0	0.0
		Red Pine Dominated	0.7	0.7	0.0	0.0
		Sugar Maple	8.5	8.5	0.0	0.0
		White Pine-Red Pine	17.2	17.2	0.0	0.0
		Yellow Birch Assn.	9.0	9.0	0.0	0.0
	Organic Deposits	Exposed Rock	9.1	9.1	0.0	0.0
		White Spruce	14.6	14.6	0.0	0.0
	Precambrian Basic to Int. Bdrck	Balsam Fir	37.5	37.5	0.0	0.0
		Black Spruce-Tam. Mixed	4.9	4.9	0.0	0.0
		Hardwoods-Black Ash	11.5	11.5	0.0	0.0
		Jack Pine (pure)	61.2	61.2	0.0	0.0
		Red Maple Assn.	12.4	12.4	0.0	0.0
		Sugar Maple	0.3	0.3	0.0	0.0
		Tamarack Dominated	11.0	11.0	0.0	0.0
		White Spruce	12.5	12.5	0.0	0.0
	Precambrian Int. to Acidic Bdrck	Yellow Birch Assn.	4.5	4.5	0.0	0.0
		Hardwoods-Black Ash	0.3	0.3	0.0	0.0
		Hardwoods-White Cedar	36.9	36.9	0.0	0.0
		Sugar Maple	42.6	42.6	0.0	0.0
3W2	Alluvial & Fluvial Deposits	White Pine-Red Pine	5.6	5.6	0.0	0.0
		Conifer Swamp/Fen/Bog	14.8	14.8	0.0	0.0
		Exposed Rock	9.0	9.0	0.0	0.0
		Jack Pine Mixedwoods	13.5	13.5	0.0	0.0
		Tamarack Dominated	4.8	4.8	0.0	0.0
		White Birch-Aspen	1.2	1.2	0.0	0.0
		White Cedar	29.1	29.1	0.0	0.0
	Coarse Ground Moraine	White Spruce	4.0	4.0	0.0	0.0
		Black Spruce-Tam. Mixed	5.7	5.7	0.0	0.0
		Hardwoods-Black Ash	3.8	3.8	0.0	0.0
	Coarse Lacustrine & Glaciolacustrine	Tamarack Dominated	0.7	0.7	0.0	0.0
		Balsam Fir	42.6	42.6	0.0	0.0
		Black Spruce-Tam. Mixed	50.3	50.3	0.0	0.0
		Open Marsh/Fen/Bog	179.1	179.1	0.0	0.0
		Tamarack Dominated	2.8	2.8	0.0	0.0
		Thicket Swamp	28.1	28.1	0.0	0.0
		White Birch Assn.	40.1	40.1	0.0	0.0
		White Birch-Aspen	13.6	13.6	0.0	0.0
		White Cedar	115.7	115.7	0.0	0.0
		White Spruce	0.4	0.4	0.0	0.0
Colluvium (Coarse)	Black Spruce Dominated	0.8	0.8	0.0	0.0	
	Exposed Rock	32.0	32.0	0.0	0.0	
	Intol Hdwd-Other Con Mixed	36.8	36.8	0.0	0.0	
	Jack Pine Mixedwoods	28.8	28.8	0.0	0.0	
	Thicket Swamp	1.5	1.5	0.0	0.0	
	White Birch Assn.	0.7	0.7	0.0	0.0	
	White Cedar	5.1	5.1	0.0	0.0	

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3W2	End Moraine	Balsam Fir	1.4	1.4	0.0	0.0
		Conifer Swamp/Fen/Bog	10.1	10.1	0.0	0.0
		Jack Pine (pure)	48.2	48.2	0.0	0.0
		Jack Pine Mixedwoods	7.9	7.9	0.0	0.0
		Open Marsh/Fen/Bog	14.0	14.0	0.0	0.0
		Thicket Swamp	2.9	2.9	0.0	0.0
		White Birch Assn.	13.9	13.9	0.0	0.0
		White Birch-Aspen	36.4	36.4	0.0	0.0
	Fine Ground Moraine	Intol Hdwd-Other Con Mixed	36.2	36.2	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	14.3	14.3	0.0	0.0
		Thicket Swamp	0.8	0.8	0.0	0.0
		White Birch-Aspen	0.7	0.7	0.0	0.0
	Fine Lacustrine & Glaciolacustrine	Balsam Fir	32.6	32.6	0.0	0.0
		Conifer Swamp/Fen/Bog	46.5	46.5	0.0	0.0
		Tamarack Dominated	19.1	19.1	0.0	0.0
		White Cedar	46.5	46.5	0.0	0.0
	Glaciofluvial Delta	Balsam Fir	26.4	26.4	0.0	0.0
		Black Spruce Dominated	41.9	41.9	0.0	0.0
		Conifer Swamp/Fen/Bog	3.4	3.4	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	46.1	46.1	0.0	0.0
		Open Marsh/Fen/Bog	15.8	15.8	0.0	0.0
		Thicket Swamp	29.6	29.6	0.0	0.0
	Glaciofluvial Esker-Kettle Terrain	White Birch Assn.	5.2	5.2	0.0	0.0
		Conifer Swamp/Fen/Bog	27.8	27.8	0.0	0.0
		Exposed Rock	8.6	8.6	0.0	0.0
		Tamarack Dominated	7.6	7.6	0.0	0.0
		Thicket Swamp	28.7	28.7	0.0	0.0
	Glaciofluvial Outwash	White Cedar	94.9	94.9	0.0	0.0
		White Pine-Red Pine	12.0	12.0	0.0	0.0
		Balsam Fir	56.8	56.8	0.0	0.0
		Black Spruce-Tam. Mixed	0.9	0.9	0.0	0.0
		Tamarack Dominated	19.9	19.9	0.0	0.0
Organic Deposits	White Cedar	66.2	66.2	0.0	0.0	
	White Spruce	41.2	41.2	0.0	0.0	
	Balsam Fir	8.2	8.2	0.0	0.0	
	Black Spruce-Tam. Mixed	12.0	12.0	0.0	0.0	
	Exposed Rock	0.1	0.1	0.0	0.0	
	White Birch Assn.	122.7	122.7	0.0	0.0	
	White Birch-Aspen	20.3	20.3	0.0	0.0	
White Cedar	199.3	199.3	0.0	0.0		
White Spruce	19.8	19.8	0.0	0.0		



**APPENDIX 12-VIII**

**CRITICAL LANDFORM/VEGETATION ASSOCIATIONS IN THE ECODISTRICTS THAT INTERSECT WITH THE VEGETATION AND WETLANDS LOCAL STUDY AREA**

**Table 12-VIII-1: Critical Landform/Vegetation Associations in the Ecodistricts that Intersect with the Vegetation and Wetlands Local Study Area**

Ecodistrict LV File	Landform Description	Vegetation Description	Reference Case Protected Areas (ha)	Project Case Protected Area (ha)	Change in Area (ha)	Percent Change (%)
3W2	Precambrian Basic to Int. Bdrck	Balsam Fir	15.9	15.9	0.0	0.0
		Conifer Swamp/Fen/Bog	20.6	20.6	0.0	0.0
		Exposed Rock	5.4	5.4	0.0	0.0
		Intol Hdwd-Other Con Mixed	278.2	278.2	0.0	0.0
		Open Marsh/Fen/Bog	14.8	14.8	0.0	0.0
		Thicket Swamp	23.2	23.2	0.0	0.0
	Precambrian Int. to Acidic Bdrck	Black Spruce-Tam. Mixed	13.7	13.7	0.0	0.0
		Tamarack Dominated	9.7	9.7	0.0	0.0
White Spruce		66.2	66.2	0.0	0.0	
3W3	Alluvial & Fluvial Deposits	Conifer Swamp/Fen/Bog	24.8	24.8	0.0	0.0
		Exposed Rock	1.2	1.2	0.0	0.0
		Jack Pine Mixedwoods	20.8	20.8	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	31.8	31.8	0.0	0.0
		White Birch-Aspen	62.1	62.1	0.0	0.0
		White Spruce	22.0	22.0	0.0	0.0
	Coarse Ground Moraine	Hardwoods-Black Ash	15.0	15.0	0.0	0.0
		Hardwoods-White Cedar	33.6	33.6	0.0	0.0
		Tamarack Dominated	49.6	49.6	0.0	0.0
		White Pine-Red Pine	2.1	2.1	0.0	0.0
	Coarse Lacustrine & Glaciolacustrine	Black Spruce-Tam. Mixed	9.2	9.2	0.0	0.0
		Hardwoods-Black Ash	27.9	27.9	0.0	0.0
		Tamarack Dominated	17.1	17.1	0.0	0.0
		White Pine-Red Pine	50.3	50.3	0.0	0.0
	Colluvium (Coarse)	Balsam Fir	25.2	25.2	0.0	0.0
		Conifer Swamp/Fen/Bog	2.4	2.4	0.0	0.0
		Jack Pine (pure)	7.2	7.2	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	5.6	5.6	0.0	0.0
		Open Marsh/Fen/Bog	8.1	8.1	0.0	0.0
		Thicket Swamp	8.6	8.6	0.0	0.0
		White Spruce	33.2	33.2	0.0	0.0
	End Moraine	Balsam Fir	107.9	107.9	0.0	0.0
		Black Spruce-Tam. Mixed	20.6	20.6	0.0	0.0
		Conifer Swamp/Fen/Bog	7.8	7.8	0.0	0.0
		Exposed Rock	22.8	22.8	0.0	0.0
		Jack Pine (pure)	11.3	11.3	0.0	0.0
		Open Marsh/Fen/Bog	41.5	41.5	0.0	0.0
		Thicket Swamp	37.9	37.9	0.0	0.0
White Birch-Aspen		223.8	223.8	0.0	0.0	

**APPENDIX 12-VIII**

**CRITICAL LANDFORM/VEGETATION ASSOCIATIONS IN THE ECODISTRICTS THAT INTERSECT WITH THE VEGETATION AND WETLANDS LOCAL STUDY AREA**

**Table 12-VIII-1: Critical Landform/Vegetation Associations in the Ecodistricts that Intersect with the Vegetation and Wetlands Local Study Area**

Ecodistrict LV File	Landform Description	Vegetation Description	Reference Case Protected Areas (ha)	Project Case Protected Area (ha)	Change in Area (ha)	Percent Change (%)
3W3	Eolian Sand Dunes	Aspen Dominated	53.8	53.8	0.0	0.0
		Black Spruce Dominated	39.1	39.1	0.0	0.0
		Exposed Rock	2.3	2.3	0.0	0.0
		Intol Hdwd-Other Con Mixed	197.3	197.3	0.0	0.0
		Jack Pine (pure)	132.7	132.7	0.0	0.0
		Jack Pine Mixedwoods	6.8	6.8	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	23.2	23.2	0.0	0.0
		Jack-Red-White Pine	37.3	37.3	0.0	0.0
		Open Marsh/Fen/Bog	3.3	3.3	0.0	0.0
		Red Pine Dominated	58.9	58.9	0.0	0.0
		White Cedar	13.0	13.0	0.0	0.0
	Fine Ground Moraine	Balsam Fir	1228.0	1228.0	0.0	0.0
		Black Spruce-Tam. Mixed	23.4	23.4	0.0	0.0
		Exposed Rock	11.3	11.3	0.0	0.0
		Jack Pine (pure)	0.9	0.9	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	18.3	18.3	0.0	0.0
	Fine Lacustrine & Glaciolacustrine	Hardwoods-Black Ash	7.4	7.4	0.0	0.0
		White Pine-Red Pine	28.8	28.8	0.0	0.0
	Glaciofluvial Delta	Balsam Fir	426.8	426.8	0.0	0.0
		Conifer Swamp/Fen/Bog	40.2	40.2	0.0	0.0
		Exposed Rock	19.9	19.9	0.0	0.0
		Jack Pine (pure)	69.1	69.1	0.0	0.0
		Jack Pine Mixedwoods	128.0	128.0	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	1.4	1.4	0.0	0.0
		Open Marsh/Fen/Bog	65.4	65.4	0.0	0.0
		Red Pine Dominated	45.3	45.3	0.0	0.0
		Thicket Swamp	93.8	93.8	0.0	0.0
		White Birch-Aspen	160.1	160.1	0.0	0.0
		White Spruce	538.1	538.1	0.0	0.0
	Glaciofluvial Esker-Kettle Terrain	Aspen Dominated	112.5	112.5	0.0	0.0
		Balsam Fir	126.6	126.6	0.0	0.0
		Conifer Swamp/Fen/Bog	14.7	14.7	0.0	0.0
		Jack Pine (pure)	57.8	57.8	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	41.2	41.2	0.0	0.0
		Open Marsh/Fen/Bog	51.9	51.9	0.0	0.0
		Thicket Swamp	23.5	23.5	0.0	0.0
		White Birch Assn.	59.9	59.9	0.0	0.0
	White Cedar	0.1	0.1	0.0	0.0	
	Glaciofluvial Outwash	Conifer Swamp/Fen/Bog	59.2	59.2	0.0	0.0
		Exposed Rock	66.0	65.9	0.09	0.14
	Organic Deposits	Balsam Fir	212.2	212.2	0.0	0.0
		Exposed Rock	42.7	42.7	0.0	0.0
		Hardwoods-Black Ash	0.4	0.4	0.0	0.0
		Red Pine Dominated	0.5	0.5	0.0	0.0
		White Pine-Red Pine	29.5	29.5	0.0	0.0

**APPENDIX 12-VIII**

**CRITICAL LANDFORM/VEGETATION ASSOCIATIONS IN THE ECODISTRICTS THAT INTERSECT WITH THE VEGETATION AND WETLANDS LOCAL STUDY AREA**

**Table 12-VIII-1: Critical Landform/Vegetation Associations in the Ecodistricts that Intersect with the Vegetation and Wetlands Local Study Area**

Ecodistrict LV File	Landform Description	Vegetation Description	Reference Case Protected Areas (ha)	Project Case Protected Area (ha)	Change in Area (ha)	Percent Change (%)
3W3	Precambrian Basic to Int. Bdrck	Grass and Meadow	1.4	1.4	0.0	0.0
		Hardwoods-Black Ash	4.0	4.0	0.0	0.0
		Red Pine Dominated	0.1	0.1	0.0	0.0
	Precambrian Int. to Acidic Bdrck	Black Spruce-Tam. Mixed	3.6	3.6	0.0	0.0
		Conifer Swamp/Fen/Bog	88.4	88.4	0.0	0.0
		Exposed Rock	103.1	103.1	0.0	0.0
		Tamarack Dominated	48.1	48.1	0.0	0.0
		Thicket Swamp	122.0	122.0	0.0	0.0
		White Pine-Red Pine	10.8	10.8	0.0	0.0
		4W2	Alluvial & Fluvial Deposits	Aspen Dominated	16.8	16.8
Balsam Fir	42.6			42.6	0.0	0.0
Black Spruce Dominated	0.9			0.9	0.0	0.0
Grass and Meadow	0.6			0.6	0.0	0.0
Intol Hdwd-Other Con Mixed	9.2			9.2	0.0	0.0
Open Marsh/Fen/Bog	1.9			1.9	0.0	0.0
Thicket Swamp	13.2			13.2	0.0	0.0
White Birch-Aspen	1.6			1.6	0.0	0.0
White Cedar	17.6			17.6	0.0	0.0
Coarse Lacustrine & Glaciolacustrine	Black Spruce Dominated			1.9	1.9	0.0
	Black Spruce-Tam. Mixed		3.0	3.0	0.0	0.0
	Conifer Swamp/Fen/Bog		3.7	3.7	0.0	0.0
	Exposed Rock		5.9	5.9	0.0	0.0
	Hardwoods-White Cedar		1.3	1.3	0.0	0.0
	Jack Pine Mixedwoods		19.1	19.1	0.0	0.0
	Open Marsh/Fen/Bog		19.9	19.9	0.0	0.0
	Thicket Swamp		7.8	7.8	0.0	0.0
	White Birch Assn.		68.6	68.6	0.0	0.0
	White Cedar		12.0	12.0	0.0	0.0
	White Spruce		1.6	1.6	0.0	0.0
	Colluvium (Coarse)		Balsam Fir	44.1	44.1	0.0
Black Spruce Dominated			26.8	26.8	0.0	0.0
Conifer Swamp/Fen/Bog			1.5	1.5	0.0	0.0
Exposed Rock			28.7	28.7	0.0	0.0
Jack Pine (pure)			9.3	9.3	0.0	0.0
Jack Pine Mixedwoods			17.1	17.1	0.0	0.0
Jack Pine-Spruces-Bal. Fir			14.6	14.6	0.0	0.0
Open Marsh/Fen/Bog			3.7	3.7	0.0	0.0
Thicket Swamp		4.5	4.5	0.0	0.0	
White Cedar		13.1	13.1	0.0	0.0	

**APPENDIX 12-VIII**

**CRITICAL LANDFORM/VEGETATION ASSOCIATIONS IN THE ECODISTRICTS THAT INTERSECT WITH THE VEGETATION AND WETLANDS LOCAL STUDY AREA**

**Table 12-VIII-1: Critical Landform/Vegetation Associations in the Ecodistricts that Intersect with the Vegetation and Wetlands Local Study Area**

Ecodistrict LV File	Landform Description	Vegetation Description	Reference Case Protected Areas (ha)	Project Case Protected Area (ha)	Change in Area (ha)	Percent Change (%)
4W2	Fine Ground Moraine	Aspen Dominated	256.8	256.8	0.0	0.0
		Balsam Fir	87.3	87.3	0.0	0.0
		Black Spruce Dominated	9.2	9.2	0.0	0.0
		Conifer Swamp/Fen/Bog	8.2	8.2	0.0	0.0
		Exposed Rock	20.8	20.8	0.0	0.0
		Jack Pine (pure)	2.2	2.2	0.0	0.0
		Jack Pine Mixedwoods	8.0	8.0	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	3.5	3.5	0.0	0.0
		Open Marsh/Fen/Bog	13.0	13.0	0.0	0.0
		Thicket Swamp	2.3	2.3	0.0	0.0
		White Birch Assn.	135.1	135.1	0.0	0.0
		White Birch-Aspen	9.2	9.2	0.0	0.0
		White Cedar	10.1	10.1	0.0	0.0
		White Pine-Red Pine	10.0	10.0	0.0	0.0
		White Spruce	23.6	23.6	0.0	0.0
	Fine Lacustrine & Glaciolacustrine	Balsam Fir	56.9	56.9	0.0	0.0
		Black Spruce Dominated	66.5	66.5	0.0	0.0
		Conifer Swamp/Fen/Bog	6.0	6.0	0.0	0.0
		Grass and Meadow	3.8	3.8	0.0	0.0
		Hardwoods-Black Ash	29.6	29.6	0.0	0.0
		Hardwoods-White Cedar	6.2	6.2	0.0	0.0
		Jack Pine (pure)	2.2	2.2	0.0	0.0
		Jack Pine Mixedwoods	0.1	0.1	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	1.7	1.7	0.0	0.0
		Open Marsh/Fen/Bog	43.9	43.9	0.0	0.0
		Red Pine Dominated	30.5	30.5	0.0	0.0
		Thicket Swamp	36.0	36.0	0.0	0.0
		White Birch Assn.	38.6	38.6	0.0	0.0
		White Birch-Aspen	20.3	20.3	0.0	0.0
		White Cedar	13.9	13.9	0.0	0.0
	White Pine-Red Pine	58.9	58.9	0.0	0.0	
	White Spruce	26.3	26.3	0.0	0.0	
	Glaciofluvial Delta	Black Spruce Dominated	5.7	5.7	0.0	0.0
		Conifer Swamp/Fen/Bog	8.1	8.1	0.0	0.0
		Exposed Rock	5.8	5.8	0.0	0.0
		Jack Pine (pure)	2.5	2.5	0.0	0.0
		Jack Pine Mixedwoods	11.5	11.5	0.0	0.0
		Jack-Red-White Pine	9.6	9.6	0.0	0.0
		Open Marsh/Fen/Bog	13.2	13.2	0.0	0.0
		Red Pine Dominated	5.9	5.9	0.0	0.0
		White Birch Assn.	0.7	0.7	0.0	0.0
		White Birch-Aspen	36.8	36.8	0.0	0.0
White Cedar		3.6	3.6	0.0	0.0	
White Pine-Red Pine		22.8	22.8	0.0	0.0	

**APPENDIX 12-VIII  
CRITICAL LANDFORM/VEGETATION ASSOCIATIONS IN THE ECODISTRICTS THAT  
INTERSECT WITH THE VEGETATION AND WETLANDS LOCAL STUDY AREA**

**Table 12-VIII-1: Critical Landform/Vegetation Associations in the Ecodistricts that Intersect with the Vegetation and Wetlands Local Study Area**

Ecodistrict LV File	Landform Description	Vegetation Description	Reference Case Protected Areas (ha)	Project Case Protected Area (ha)	Change in Area (ha)	Percent Change (%)
4W2	Glaciofluvial Outwash	Aspen Dominated	4.9	4.9	0.0	0.0
		Balsam Fir	3.2	3.2	0.0	0.0
		Exposed Rock	1.1	1.1	0.0	0.0
		Intol Hdwd-Other Con Mixed	17.6	17.6	0.0	0.0
		White Birch Assn.	0.5	0.5	0.0	0.0
	Organic Deposits	Exposed Rock	5.3	5.3	0.0	0.0
		Hardwoods-Black Ash	13.9	13.9	0.0	0.0
		Hardwoods-Tamarack	7.3	7.3	0.0	0.0
		Hardwoods-White Cedar	9.2	9.2	0.0	0.0
		Jack Pine (pure)	26.3	26.3	0.0	0.0
		Jack Pine Mixedwoods	1.0	1.0	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	17.7	17.7	0.0	0.0
	White Spruce	4.0	4.0	0.0	0.0	
	Precambrian Basic to Int. Bdrck	Black Spruce-Tam. Mixed	11.6	11.6	0.0	0.0
		Conifer Swamp/Fen/Bog	24.0	24.0	0.0	0.0
		Hardwoods-Black Ash	7.9	7.9	0.0	0.0
		Hardwoods-White Cedar	9.2	9.2	0.0	0.0
		Jack-Red-White Pine	27.9	27.9	0.0	0.0
		Red Pine Dominated	13.9	13.9	0.0	0.0
	Precambrian Int. to Acidic Bdrck	White Cedar	45.5	45.5	0.0	0.0
		Jack Pine Mixedwoods	0.5	0.5	0.0	0.0
		Jack Pine-Spruces-Bal. Fir	11.6	11.6	0.0	0.0
		Open Marsh/Fen/Bog	1.9	1.9	0.0	0.0
Total Wetland			7127.6	7127.5	-0.09	<0.01
Total Upland			9507.9	9500.8	-7.06	-0.07
<b>Total</b>			<b>16635.5</b>	<b>16628.3</b>	<b>-7.15</b>	<b>-0.04</b>

Note:

The most complete representation datasets were used in the analysis. Source data for the ecosites are:

- LVFN – 3W5;
- LVFRI – 3E5, 3E2, 3E4, 3W3, 3W2, 4W2;
- LV2000 – 4E1.