

Appendix F

Detailed Cover Type Tables

Introduction

This DEIS utilized the MnDNR GAP Level 4 Landcover data set to characterize the vegetation communities within the Route and Segment Alternatives. Within the text of the DEIS, the vegetation communities were consolidated into larger groups based upon common structure and ecology. The tables below (Tables F-1 through F-4) are provided to describe the detailed baseline conditions and impacts of the Project. To aid in that comparison, brief descriptions of each of the major community classifications used in the DEIS are described below. Where appropriate, the discussion identifies the individual GAP Level 4 class groups that were consolidated to form the major community classifications discussed in the DEIS.

These species descriptions were derived from the MnDNR's *Tomorrow's Habitat for the Wild and Rare: An Action Plan for Minnesota Wildlife, Comprehensive Wildlife Conservation Strategy* (MnDNR, 2006).

Upland Deciduous Forest - Aspen

Aspen-dominated forest habitat is the most abundant forest habitat in Minnesota and is a subset of the upland deciduous forests (see below). Due to its prevalence within the Route and Segment Alternatives, this cover type was described separately from the overall upland deciduous forests.

Upland hardwood forest (aspen) is characterized by a canopy dominated by quaking aspen (*Populus tremuloides*), big-toothed aspen (*P. grandidentata*), paper birch (*Betula papyrifera*), or a mixture of these species. Aspen forests typically have a nearly complete canopy of aspen or birch, but the canopy is not as dense as that of sugar maple. As a result of greater light levels penetrating the canopy, these forests usually have a well-developed shrub layer dominated by hazelnuts (*Corylus* spp.) or dogwoods (*Cornus* spp.). Many older aspen stands are relatively structurally diverse, with large trees, snags, down logs, and an understory containing more shade-tolerant hardwoods or conifers that will become the canopy dominants if the forest does not experience a stand-replacing disturbance.

Broadleaf Sedge/Cattail

Broadleaf Sedge/Cattail communities are wetlands with less than 10 percent crown cover and dominated by emergent herbaceous plant species such as cattails (*Typha* spp.) and various sedge species (*Carex* spp.). Like all wetlands, this habitat occurs on sites with a high water table, and soils in these habitats are usually inundated for at least part of the year. As a result, the substrate surface alternates between aerobic and anaerobic conditions (MnDNR, 2006).

Cropland

Cropland consists of active agricultural land currently under cultivation (MnDNR, 2006).

Grassland (Surrogate)

Surrogate grasslands are grasslands that developed as a result of human activities since settlement by Europeans and are typically dominated by non-native, cool-season grasses. Surrogate grasslands include old fields, hayfields, pastures, and roadside grasslands (Sample and Mossman, 1997, as cited in MnDNR, 2006). They occur on sites that once supported prairie or forest communities and are found across the state (MnDNR, 2006).

Lowland Coniferous Forest

Lowland conifer forest habitats are found in shallow basins, along lakes and streams, and as part of large peatland complexes. The soils are peat or mucky mineral soil that is usually saturated with water deficient in oxygen and low in nutrients. Tree height and density vary from nearly closed canopies of white cedar or black spruce of moderate height on richer sites to scattered, stunted black spruce in the most nutrient poor black spruce bogs. The understory of this habitat is characterized by a mossy ground layer with an abundance of forbs, sedges, and broad-leaved evergreen shrubs. Brown mosses predominate in the richer environments, whereas the more acid-loving species of *Sphagnum* dominate the bogs. Typical shrubs include Labrador tea (*Ledum groenlandicum*), leatherleaf (*Chamaedaphne calyculata*), and bog rosemary (*Andromeda glaucophylla*).

In the DEIS, this habitat classification includes the following GAP Level 4 classes: lowland black spruce, lowland northern white cedar, stagnant conifer, and tamarack.

Lowland Conifer-Deciduous Mix

Lowland conifer-deciduous forests are bottomland forests with a mixed conifer-deciduous canopy. However, lowland conifers (e.g., black spruce, tamarack, white-cedar) predominate in the conifer component, with various interspersed lowland deciduous species (see below) (MnDNR, 2006).

Lowland Deciduous Forest

Lowland deciduous forests occur primarily along major rivers and their tributaries and in shallow, poorly drained basins. The canopy is dominated by deciduous trees that are tolerant of saturated soils, prolonged inundation, frequent erosion, and sediment deposition. Common canopy species include black ash and silver maple with lesser amounts of green ash, American elm, bur oak, and basswood. Canopy coverage is highly variable because areas of continuous canopy are punctuated with large gaps,

which may be vegetated with ephemeral herbaceous plants or may remain largely unvegetated if flood disturbance is repeated and severe. The understory is typically open, with few shrubs or saplings. Pools or mucky depressions in old river channels are often present on actively flooded sites (MnDNR, 2006).

Lowland Shrub

Lowland shrub habitat occurs in basins, along streams and rivers, and around lakes and ponds where broad-leaved shrubs are the dominant plant growth form. The dominant shrub species in the more acid wetlands include evergreen ericaceous shrubs, such as leatherleaf (*Chamaedaphne calyculata*), along with bog birch (*Betula pumila*). Speckled alder (*Alnus incana*) is important primarily in the Laurentian Mixed Forest Province whereas willows (*Salix* spp.) and red-osier dogwood (*Cornus sericea*) are found across the state. Lowland shrub habitats are a successional stage between wet meadows, wetland prairie, graminoid fens, bogs, lowland forests, and conifer swamps. Succession, however, is usually a very slow process in most lowland shrub habitats (MnDNR, 2006).

In the DEIS, this habitat classification includes the following the GAP Level 4 classes: lowland deciduous shrub and lowland evergreen shrub.

Sedge Meadow

Sedge meadows are open graminoid-dominated wetlands that are annually subjected to moderate inundation, following the spring thaw and heavy rains, and to periodic drawdowns during summer. The dominant graminoids are broad-leaved species such as lake sedge (*Carex lacustris*), tussock sedge (*C. stricta*), and bluejoint (*Calamagrostis canadensis*). Peak water levels are high and persistent enough to prevent trees and most shrubs from becoming established. However, there may be little or no standing water present during much of the growing season. Wet meadows are present statewide in wetland basins, along streams and drainageways, in drained beaver ponds, in shallow bays, and as semi-floating mats along sheltered lake shorelines. Wet meadows grade into lowland shrub communities where water levels are lower and less persistent (MnDNR, 2006).

Jack Pine Forest

This cover type is a subset of the upland conifer forests (see below) where the dominant canopy species is Jack Pine. This habitat is relatively uncommon within the Route and Segment Alternatives. However, this habitat type has shown a significant (i.e., greater than 50 percent) decline from historic levels.

Upland Conifer Forest

Upland coniferous forests occur primarily on coarse sandy or gravelly soils or thin soils over bedrock. The dominant tree species are pines, spruce, balsam fir, or white cedar. The predominant ecological factor shaping this habitat is wildfire. Fires in this habitat vary greatly in intensity from severe crown fires, which kill most of the canopy trees, to

moderate surface fires, which kill few canopy trees. The frequency of wildfires in this habitat historically varied from an average of every 20 years to every 100 years (In upland coniferous forests in the Mesic Hardwood System, return intervals were longer). Most of the remaining upland conifer forests (i.e., pine) have been thinned or originated following clear-cutting and typically lack the structural diversity of stands originating following fire. These conifers often occur with hardwoods such as quaking aspen, paper birch, oaks, and red maple (MnDNR, 2006).

In the DEIS, this habitat classification includes the following GAP Level 4 classes: balsam fir mixes; red, red/white pine, and red/white pine with deciduous mixes; spruce/fir deciduous mixes; white cedar; white pine mixes; and white spruce.

Upland Deciduous Forest

Upland deciduous hardwood forests occur on upland sites with soils that retain water and infrequent wildfires. These forest stands are generally characterized by a continuous, often dense canopy of deciduous trees including sugar maple, basswood, and red oak. Other canopy trees include American elm, red elm, black ash, green ash, bitternut hickory, and hackberry. Older forests commonly have several nearly closed canopies of woody plants, including a well-defined forest canopy, subcanopy, and shrub layer. Thus, most sunlight is filtered and attenuated before it reaches herbaceous plants and seedlings on the forest floor. The plants found in this habitat are adapted to the low intensity of light in these forests (MnDNR, 2006).

In the DEIS, this habitat classification includes the following GAP Level 4 classes: black ash, maple/basswood, red oak, and general upland deciduous stands.

Upland Shrub

The upland shrub habitat includes uplands with less than 10 percent tree canopy cover and greater than 33 percent cover of low-growing deciduous woody plants. Characteristic shrub species include juneberries (*Amelanchier* spp.), bush honeysuckle (*Diervilla lonicera*), and shrubby northern red oaks (*Quercus borealis*) or northern pin oak (*Q. ellipsoidalis*). These communities are generally small (less than 25 acres) and seldom provide large areas of contiguous shrub/woodland-upland habitat for birds and large vertebrates (MnDNR, 2006).

Urban/Developed

Urban/developed lands include all industrial, commercial, and residential lands and are generally characterized by impervious or landscaped surfaces.

In the DEIS, this classification includes the following GAP Level 4 classes: barren, high- and low-intensity urban, mixed developed, and transportation.

Water

Water refers to all streams, rivers, and open water bodies within the Route and Segment Alternatives.

Table F-1: Vegetation Cover Types within the Route Alternatives

General Cover Category	Cover Type	Route Alternative 1		Route Alternative 2		Route Alternative 3	
		Acres	Percent of Route	Acres	Percent of Route	Acres	Percent of Route
Aspen/White Birch	Aspen/White Birch	1,956	23.36	1,696	20.82	3,931	27.84
Broadleaf Sedge/Cattail	Broadleaf Sedge/Cattail	394	4.71	435	5.34	284	2.01
Cropland	Cropland	1,474	17.6	1,072	13.16	3,344	23.68
Grassland	Grassland	82	0.98	70	0.86	137	0.97
Lowland Conifer	Lowland Black Spruce	195	2.33	124	1.52	755	5.35
	Lowland Northern White-Cedar	108	1.29	41	0.5	85	0.6
	Stagnant Conifer	0	0	-	-	4	0.03
	Tamarack	60	0.72	48	0.59	49	0.35
Lowland Conifer-Deciduous mix	Lowland Conifer-Deciduous mix	112	1.34	67	0.82	167	1.19
Lowland Deciduous	Lowland Deciduous	291	3.47	273	3.35	384	2.72
Lowland Shrub	Lowland Deciduous Shrub	958	11.44	945	11.59	1,353	9.59
	Lowland Evergreen Shrub	58	0.7	35	0.43	39	0.28
Sedge Meadow	Sedge Meadow	157	1.87	100	1.23	134	0.95
Jack Pine	Jack Pine	220	2.63	337	4.14	129	0.91
	Jack Pine-Deciduous mix	19	0.23	39	0.48	37	0.26
Upland Conifer	Balsam Fir mix	69	0.83	58	0.71	45	0.32
	Red Pine		0	-	-	3	0.02
	Red/White Pine	408	4.87	367	4.51	174	1.23
	Red/White Pine-Deciduous mix	9	0.1	4	0.05	11	0.08
	Spruce/Fir-Deciduous mix	1	0.01	5	0.06	-	-
	Upland Conifer	100	1.19	264	3.24	67	0.47
	Upland Northern White-Cedar	49	0.58	44	0.54	68	0.48
	White Pine mix	0	0	0	0	1	0.01
	White Spruce	0	0	0	0	2	0.01
Upland Deciduous	Black Ash	52	0.62	17	0.21	84	0.59
	Maple/Basswood	207	2.48	48	0.59	281	1.99
	Red Oak	65	0.78	3	0.03	26	0.18
	Upland Deciduous	958	11.43	409	5.02	1,297	9.18

Upland Shrub	Upland Shrub	267	3.19	853	10.47	758	5.37
Urban/Developed	Barren	0	0.00	0	0.00	15	0.11
	High intensity urban	0.06	0.00	129.76	1.59	37.90	0.27
	Low intensity urban	38	0.45	318	3.90	90	0.64
	Mixed Developed	0	0.00	2	0.02	0	0.00
	Transportation	35	0.42	310	3.81	252	1.78
Water	Water	33	0.39	33	0.4	76	0.54
Total		8,375	100%	8,147	100%	14,120	100%

Table F-2: Vegetation Cover Type within the Segment Alternatives (acres and percentages)

Segment Alternatives	Segment Alternatives																																	
	A		B		C		D		E		F		G		H		I		J		K		L		M		N		O		P		Q	
Applicable Route Alternatives	1		1		1, 2		1		3		2		2		2		2		1, 2		1, 2		1		1, 2		1, 2		1, 2		1, 2		1, 2	
New Segment #	18		71		72		22												70						97		28		30					
Replaces Segment #	17a, 17b		26		none		24																		29		103		146					
Cover Type																																		
	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route
Aspen/White Birch	469	24.40%	465	35.77%	281	51.75%	122	19.58%	263	20.22%	23	12.78%	18	8.82%	8	4.17%	8	10.39%	0	0.00%	99	13.52%	135	42.59%	104	33.44%	111	23.57%	156	44.32%	52	22.03%	9	19.57%
Balsam Fir mix	7	0.36%	14	1.08%	23	4.24%	0	0.00%	24	1.84%	7	3.89%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	5	0.68%	0	0.00%	0	0.00%	11	2.34%	0	0.00%	1	0.42%	0	0.00%
Black Ash	0	0.00%	4	0.31%	0	0.00%	0	0.00%	7	0.54%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Broadleaf Sedge/Cattail	49	2.55%	67	5.15%	18	3.31%	13	2.09%	19	1.46%	4	2.22%	5	2.45%	7	3.65%	3	3.90%	0	0.00%	47	6.42%	15	4.73%	28	9.00%	0	0.00%	4	1.14%	27	11.44%	0	0.00%
Cropland	597	31.06%	47	3.62%	2	0.37%	273	43.82%	444	34.13%	23	12.78%	100	49.02%	82	42.71%	38	49.35%	52	76.47%	194	26.50%	116	36.59%	36	11.58%	0	0.00%	0	0.00%	17	7.20%	14	30.43%
Grassland	7	0.36%	4	0.31%	0	0.00%	3	0.48%	1	0.08%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	5	0.68%	2	0.63%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Urban/Developed/Barren	12	0.62%	1	0.08%	0	0.00%	4	0.64%	4	0.31%	47	26.11%	19	9.31%	49	25.52%	21	27.27%	15	22.06%	5	0.68%	2	0.63%	0	0.00%	2	0.42%	3	0.85%	19	8.05%	0	0.00%
Jack Pine	31	1.61%	94	7.23%	13	2.39%	2	0.32%	3	0.23%	15	8.33%	23	11.27%	9	4.69%	0	0.00%	0	0.00%	123	16.80%	0	0.00%	51	16.40%	27	5.73%	0	0.00%	15	6.36%	0	0.00%
Jack Pine-Deciduous mix	8	0.42%	2	0.15%	0	0.00%	2	0.32%	3	0.23%	0	0.00%	9	4.41%	3	1.56%	0	0.00%	0	0.00%	8	1.09%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Lowland Black Spruce	18	0.94%	14	1.08%	10	1.84%	1	0.16%	22	1.69%	3	1.67%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	19	2.60%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Lowland Conifer-Deciduous mix	2	0.10%	19	1.46%	8	1.47%	0	0.00%	16	1.23%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	5	0.68%	0	0.00%	0	0.00%	6	1.27%	0	0.00%	0	0.00%	1	2.17%
Lowland Deciduous	31	1.61%	22	1.69%	25	4.60%	11	1.77%	41	3.15%	15	8.33%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	7	0.96%	0	0.00%	2	0.64%	7	1.49%	3	0.85%	3	1.27%	0	0.00%
Lowland Deciduous Shrub	135	7.02%	60	4.62%	48	8.84%	44	7.06%	111	8.53%	9	5.00%	0	0.00%	4	2.08%	2	2.60%	0	0.00%	0	0.00%	14	4.42%	9	2.89%	8	1.70%	4	1.14%	32	13.56%	0	0.00%
Lowland Evergreen Shrub	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	56	7.65%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Lowland Northern White-Cedar	0	0.00%	0	0.00%	17	3.13%	0	0.00%	16	1.23%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	5	2.12%	0	0.00%
Maple/Basswood	89	4.63%	91	7.00%	0	0.00%	12	1.93%	3	0.23%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	3	0.95%	5	1.61%	19	4.03%	15	4.26%	0	0.00%	7	15.22%
Red Oak	43	2.24%	7	0.54%	0	0.00%	9	1.44%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	0.32%	8	2.57%	3	0.64%	0	0.00%	0	0.00%	0	0.00%
Red Pine		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
Red/White Pine	24	1.25%	34	2.62%	31	5.71%	13	2.09%	24	1.84%	26	14.44%	12	5.88%	13	6.77%	0	0.00%	0	0.00%	17	2.32%	0	0.00%	4	1.29%	33	7.01%	42	11.93%	8	3.39%	2	4.35%
Red/White Pine-Deciduous mix	0	0.00%	3	0.23%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	0.14%	0	0.00%	0	0.00%	4	0.85%	0	0.00%	0	0.00%	0	0.00%
Sedge Meadow	12	0.62%	1	0.08%	4	0.74%	9	1.44%	15	1.15%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	4	0.55%	0	0.00%	2	0.64%	0	0.00%	1	0.28%	19	8.05%	2	4.35%
Spruce/Fir-Deciduous mix	0	0.00%	2	0.15%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Stagnant Conifer		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
Tamarack	1	0.05%	7	0.54%	18	3.31%	0	0.00%	18	1.38%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	0.27%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Upland Conifer	3	0.16%	10	0.77%	4	0.74%	1	0.16%	73	5.61%	0	0.00%	5	2.45%	8	4.17%	0	0.00%	0	0.00%	3	0.41%	0	0.00%	3	0.96%	15	3.18%	0	0.00%	0	0.00%	0	0.00%
Upland Deciduous	312	16.23%	278	21.38%	31	5.71%	71	11.40%	116	8.92%	4	2.22%	3	1.47%	0	0.00%	0	0.00%	0	0.00%	13	1.78%	25	7.89%	37	11.90%	200	42.46%	97	27.56%	11	4.66%	11	23.91%
Upland Northern White-Cedar	5	0.26%	12	0.92%	1	0.18%	0	0.00%	7	0.54%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	4	0.85%	14	3.98%	0	0.00%	0	0.00%
Upland Shrub	67	3.49%	39	3.00%	9	1.66%	33	5.30%	71	5.46%	4	2.22%	10	4.90%	9	4.69%	5	6.49%	1	1.47%	119	16.26%	4	1.26%	22	7.07%	21	4.46%	13	3.69%	27	11.44%	0	0.00%
Water	0	0.00%	3	0.23%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
White Pine mix		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
White Spruce		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
Total	1,922	1	1,300	1	543	1	623	1	1,301	1	180	1	204	1	192	1	77	1	68	1	732	1	317	1	311	1	471	1	352	1	236	1	46	

Table F-3: Vegetation Cover Types within the Feasible 125-foot ROW for Route Alternatives (acres and percentages)

Cover Type	Cover Type	Route Alternatives					
		1		2		3	
		Acres	Percent of Route	Acres	Percent of Route	Acres	Percent of Route
Aspen/White Birch	Aspen/White Birch	249	23.81	199	19.52	430	24.47
Upland Conifer	Balsam Fir mix	6	0.53	4	0.41	2	0.14
Urban/Developed	Barren	--	--	--	--	1	0.05
Upland Deciduous	Black Ash	2	0.16	1	0.06	1	0.05
Broadleaf Sedge/Cattail	Broadleaf Sedge/Cattail	43	4.11	56	5.55	43	2.42
Cropland	Cropland	211	20.15	115	11.27	459	26.07
Grassland	Grassland	8	0.79	11	1.08	26	1.48
Urban/Developed	High intensity urban	--	--	21	2.02	5	0.28
Jack Pine	Jack Pine	27	2.57	27	2.63	12	0.70
Jack Pine	Jack Pine-Deciduous mix	1	0.10	4	0.37	2	0.11
Urban/Developed	Low intensity urban	3	0.30	50	4.87	9	0.53
Lowland Conifer	Lowland Black Spruce	20	1.94	9	0.93	74	4.20
Lowland Conifer-Deciduous mix	Lowland Conifer-Deciduous mix	7	0.63	6	0.63	12	0.66
Lowland Deciduous	Lowland Deciduous	44	4.23	25	2.45	23	1.33
Lowland Shrub	Lowland Deciduous Shrub	144	13.72	110	10.83	167	9.48
Lowland Shrub	Lowland Evergreen Shrub	7	0.70	6	0.59	4	0.21
Lowland Conifer	Lowland Northern White-Cedar	9	0.84	2	0.22	2	0.09
Upland Deciduous	Maple/Basswood	21	2.03	8	0.82	36	2.07
Urban/Developed	Mixed Developed	--	--	--	--	--	--
Upland Deciduous	Red Oak	3	0.30	--	--	0	0.02
Upland Conifer	Red Pine	--	--	--	--	0	0.00
Upland Conifer	Red/White Pine	41	3.89	47	4.58	13	0.72
Upland Conifer	Red/White Pine-Deciduous mix	1	0.08	0	0.01	1	0.07
Sedge Meadow	Sedge Meadow	22	2.07	14	1.40	23	1.32
Upland Conifer	Spruce/Fir-Deciduous mix	--	--	0	0.04	--	--

Lowland Conifer	Stagnant Conifer	--	--	--	--	--	--
Lowland Conifer	Tamarack	5	0.50	6	0.56	2	0.13
Urban/Developed	Transportation	5	0.46	40	3.95	55	3.15
Upland Conifer	Upland Conifer	6	0.59	55	5.41	12	0.67
Upland Deciduous	Upland Deciduous	133	12.68	36	3.55	187	10.63
Upland Conifer	Upland Northern White-Cedar	5	0.46	3	0.27	3	0.14
Upland Shrub	Upland Shrub	24	2.29	162	15.93	153	8.70
Water	Water	1	0.06	1	0.06	2	0.09
Upland Conifer	White Pine mix	--	--	--	--	--	--
Upland Conifer	White Spruce	--	--	--	--	0	0.01
Total		1,048	100%	1,018	100%	1,759	100%

Table F-4: Vegetation Cover Type within the Feasible 125-foot ROW for Segment Alternatives (acres and percentages)

Segment Alternatives	Segment Alternatives																																	
	A		B		C		D		E		F		G		H		I		J		K		L		M		N		O		P		Q	
	1		1		1, 2		1		3		2		2		2		2		1, 2		1, 2		1		1, 2		1, 2		1, 2		1, 2		1, 2	
Cover Type	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route	Acres	% of Route		
Aspen/White Birch	36	15.00	63	38.18	37	56.06	9	10.98	25	15.63	3	14.29		0.00	2	7.69	2	16.67		0.00	13	13.98	17	40.48	14	35.00	15	26.32	22	53.66	3	10.34		0.00
Balsam Fir mix		0.00	2	1.21	4	6.06		0.00	2	1.25	1	4.76		0.00		0.00		0.00		0.00	1	1.08		0.00		0.00		0.00		0.00		0.00		0.00
Barren		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Black Ash		0.00		0.00		0.00		0.00	2	1.25		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Broadleaf Sedge/Cattail	9	3.75	6	3.64	2	3.03	1	1.22	1	0.63		0.00	1	3.85		0.00		0.00		0.00	8	8.60	3	7.14	5	12.50		0.00	1	2.44	1	3.45		0.00
Cropland	105	43.75	10	6.06		0.00	41	50.00	58	36.25	3	14.29	19	73.08	12	46.15	7	58.33	4	57.14	21	22.58	19	45.24	7	17.50		0.00		0.00	1	3.45	2	40.00
Grassland		0.00		0.00		0.00	1	1.22		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
High intensity urban		0.00		0.00		0.00		0.00		0.00	2	9.52		0.00	1	3.85	1	8.33		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Jack Pine	2	0.83	8	4.85	2	3.03		0.00		0.00	3	14.29	1	3.85		0.00		0.00		0.00	22	23.66		0.00	5	12.50	5	8.77		0.00	2	6.90		0.00
Jack Pine-Deciduous mix		0.00	1	0.61		0.00		0.00	1	0.63		0.00	1	3.85		0.00		0.00		0.00	1	1.08		0.00		0.00		0.00		0.00		0.00		0.00
Low intensity urban		0.00		0.00		0.00		0.00		0.00	2	9.52	1	3.85	5	19.23	1	8.33	3	42.86		0.00		0.00		0.00		0.00		0.00	1	3.45		0.00
Lowland Black Spruce	2	0.83	2	1.21	2	3.03		0.00		0.00		0.00		0.00		0.00		0.00		0.00	2	2.15		0.00		0.00		0.00		0.00		0.00		0.00
Lowland Conifer-Deciduous mix		0.00	3	1.82		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	1	1.08		0.00		0.00		0.00		0.00		0.00		0.00
Lowland Deciduous		0.00	2	1.21	5	7.58	1	1.22	2	1.25	2	9.52		0.00		0.00		0.00		0.00	2	2.15		0.00		0.00		0.00		0.00		0.00	1	20.00
Lowland Deciduous Shrub	14	5.83	8	4.85	3	4.55	3	3.66	18	11.25	1	4.76		0.00		0.00		0.00		0.00	7	7.53		0.00		0.00		0.00		0.00	4	13.79		0.00
Lowland Evergreen Shrub		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Lowland Northern White-Cedar		0.00		0.00	2	3.03		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Maple/Basswood	6	2.50	13	7.88		0.00	3	3.66		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	2	3.51	2	4.88		0.00	1	20.00
Mixed Developed		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Red Oak		0.00		0.00		0.00	1	1.22		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	1	1.75		0.00		0.00		0.00
Red Pine		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Red/White Pine	1	0.42	3	1.82	1	1.52	2	2.44	3	1.88	4	19.05	1	3.85	1	3.85		0.00		0.00	4	4.30		0.00		0.00		0.00	2	4.88	1	3.45		0.00
Red/White Pine-Deciduous mix		0.00	1	0.61		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Sedge Meadow	3	1.25		0.00		0.00	1	1.22		0.00		0.00		0.00		0.00		0.00		0.00	1	1.08		0.00	1	2.50		0.00		0.00	1	3.45		0.00
Spruce/Fir-Deciduous mix		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Stagnant Conifer		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Tamarack		0.00	1	0.61	2	3.03		0.00	1	0.63		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Transportation	2	0.83	1	0.61		0.00	1	1.22	1	0.63		0.00		0.00	1	3.85		0.00		0.00		0.00		0.00		0.00		0.00		0.00	5	17.24		0.00
Upland Conifer	1	0.42	2	1.21	1	1.52		0.00	20	12.50		0.00	1	3.85	2	7.69		0.00		0.00		0.00		0.00		0.00	6	10.53		0.00		0.00		0.00
Upland Deciduous	47	19.58	28	16.97	4	6.06	8	9.76	13	8.13		0.00		0.00		0.00		0.00		0.00	3	3.23	3	7.14	3	7.50	22	38.60	10	24.39	1	3.45	1	20.00
Upland Northern		0.00	2	1.21		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	2	4.88		0.00		0.00		0.00

