ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
19	SWC1	>120	2.9737	balsam fir white cedar coniferous swamp	not within 120m - n/a
20	FOC2-2	>120	0.7844	white cedar coniferous forest	not within 120m - n/a
21	FOC2-2	25	5.3213	white cedar coniferous forest	White cedar dominates this community within the canopy, and is abundant within the subcanopy. There are open patches between treed areas that have evidence of ATV paths.
22	FOD5	0	3.8996	Sugar maple deciduous forest	not within 120m - n/a
23	CUW1	0	2.3384	Coniferous cultural woodlands	This woodland contains a mixture of Scotch pine (*Pinus sylvestris*), eastern white cedar (*Thuja occidentalis*), white spruce (*Picea glauca*), tamarack and white pine (*Pinus strobus*). Trembling aspen (*Populus tremuloides*) and basswood (*Tilia americana*) are found along the perimeter of the community. Ground cover is predominantly composed of common meadow species including black knapweed (*Centaurea nigra*), anemone (*Anemone ssp*.) species, common milkweed (*Asclepias syriaca*), and aster (*Symphyotrichum ssp*.) species. The south section of this community slopes down towards old railway tracks.
24	CUP3	0	2.6367	coniferous plantation	This plantation is dominated by Scotch pine within the canopy. The density of plantings is variable throughout, with open patches occurring. Ground cover is dominated by early successional species typical after a disturbance.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
25	FOD5-2	0	7.0770	Sugar maple deciduous forest - Found along the east side of Baptist Church Road that turns into unpaved trail south of The Glen Road. Evaluated at community boundary. Large sugar maples (~60cm) can be seen from edge.	Sugar maple (*Acer saccharum*) dominates the canopy and is abundant within the understory of this community. Black cherry (*Prunus serotina*), and white ash (*Fraxinus americana*) are also occasional species within the canopy. Trout lily (*Erythronium americanum*) is dominant groundcover within the forest. Other common ground species include asters (*Symphyotrichum* ssp., *Solidago* ssp.), lilies (*Liliaceae* ssp.), and violets (*viola* ssp. The south section of this community slopes down towards old railway tracks.
26	CUP3-9	67	8.6204	Norway spruce plantation	The canopy is dominated by Norway spruce, with white pine also abundant. White elm can also be found in the subcanopy. Riverbank grape joins ribgrass, wild carrot, St. John's wort, and common milkweed in the groundcover layer.
27	MAM2-10	>120	0.2087	forb mineral deciduous swamp	not within 120m - n/a
28	FOD5	45	0.6487	Sugar maple deciduous forest	Sugar maple (*Acer saccharum*) dominates the canopy and is abundant within the understory of this community. Trout lily (*Erythronium americanum*) is dominant groundcover within the forest. Other common ground species include asters (Symphyotrichum ssp., Solidago ssp.), lilies (*Liliaceae ssp*.), and violets (*viola s*sp.)

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
29	FOD5	>0	25.7395	Sugar maple deciduous forest	Sugar maple (*Acer saccharum*) dominates the canopy and is abundant within the understory of this community. Trout lily (*Erythronium americanum*) is dominant groundcover within the forest. Other common ground species include asters (*Symphyotrichum ssp.*, *Solidago ssp*.), lilies (*Liliaceae ssp*.), and violets (*viola ssp*.)
30	CUW1	0	1.1633	apple cultural woodland	This community was an old orchard. Canopy is dominated by apple (*Malus pumila*) with young white ash *(Fraxinus americana*) and common buckthorn (*Rhamnus cathartica*) colonizing the area.
31	FOD5-8	0	15.4111	Sugar maple ash deciduous forest	Sugar maple (*Acer saccharum*) dominates the canopy and is abundant within the understory of this community. Evidence of logging and large canopy gaps suggests that this forest is managed. Lots of regenerating ash and maple trees in the understory. Trout lily (*Erythronium americanum*) is dominant groundcover within the forest. Other common ground species include asters (*Symphyotrichum ssp.*, *Solidago ssp*.), lilies (*Liliaceae ssp*.), and violets (*viola ssp*.). Forest contains butternut within the forest and along the edge.
32	CUP3-2	0	6.3169	white pine plantation	Dense white pine plantation that contains limited understory and ground cover.
33	SWC4	>0	14.3333	tamarack balsam fir coniferous swamp	Coniferous swamp dominated by tamarack (*Larix laricina*) and balsam fir (*Abies balsamifera*) with occasional black ash (*Fraxinus nigra*) and red maple (*Acer rubrum*).

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
34	FOC2-2	0	3.0716	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
35	CUP3	>120	1.0369	coniferous plantation	not within 120m - n/a
36	FOD5-8	>0	55.2402	Sugar maple deciduous forest – This forest is located north of County Road 4, between Baptist Church Road and County Road 23. It is connected with coniferous forest/swamp communities.	Sugar maple dominates the canopy in this community while black cherry is abundant. Butternut (*Juglans cinerea*) is rare, but present along with American beech (*Fagus grandifolia*). Area slopes down along the northwest edge of the community. Ironwood (*Ostrya virginiana*) is abundant in the subcanopy. Trout lily, blue cohosh (*Caulophyllum thalictroides*), wild leek (*Allium tricoccum*), and wild ginger (*Asarum canadensis*) are common ground species.
37	CUP3	90	0.1593	coniferous plantation	White spruce dominated planted. Trees are young measuring less than 10 cm diameter at breast height. Ground cover typical of cultural meadow.
38	SWT2-5	86	0.1551	Red osier dogwood swamp thicket	Small pond too small to assess for ELC and OWES dominated by red-osier dogwood (*Cornus sericea*) with balsam poplar (*Populus balsamifera*). Pond is ephemeral and dries up later in the year.
39	CUP3-8	0	1.9944	white spruce coniferous plantation	Young plantation dominated by white spruce. Butternut trees are found along the edge. Community is situated on a slope.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
40	SWT2-2	47	0.1859	willow swamp thicket	Small pond too small to assess for ELC and OWES dominated by willows and contains meadow species such as spotted joe-pye weed, lance leaved aster and lance leaved goldenrod. Pond is ephemeral and dries up later in the year.
41	CUP3	14	0.4968	coniferous plantation	White spruce and white pine dominated planted.
42	CUP3	0	0.8631	coniferous plantation	White spruce and white pine dominated planted.
43	CUP3	>120	0.4493	coniferous plantation	White spruce and white pine dominated planted.
44	CUP3	0	3.7758	coniferous plantation	White spruce and white pine dominated planted.
45	CUP3-2	62	4.6828	white pine plantation	White pine dominated plantation
46	CUP3-8	>0	3.8291	white spruce coniferous plantation	White spruce dominated plantation.
47	FOD5	0	52.2038	Sugar maple Ash deciduous forest	Sugar maple dominates the canopy while alternate-leaved dogwood (*Cornus alternifolia*) dominates the understory and trout lily dominates the groundcover. Yellow trout lily, white trillium and wild leek and Canada goldenrod (*Solidago canadensis*) were occasionally found within the ground cover.
48	MAS2-1	60	1.9372	cattail shallow marsh	Broad leaved cattail dominated wetland. Balsam polar are found occasionally throughout with wet meadow species colonizing the area near reed canary grass (*Phalaris arundinacea*), (*Scirpus atrovirens*), and lance leaved goldenrod (*Euthamia graminifolia*).
49	CUP3-3	0	1.8085	Scotch pine coniferous plantation	Scotch pine dominated feature with little to no understory or ground cover. Gaps contain early colonizing meadow species.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
50	CUW1	26	0.6478	Hawthorn, black cherry cultural woodlot – Community is surrounded by agricultural land and vegetation is restricted to knoll. Very disturbed due to within cattle pasture.	Sugar maple, black cherry, and basswood (*Tilia americana*) are occasional species in the canopy while hawthorn (*Crataegus* sp.) dominates the community. Avens (*Geum* sp.), agrimony (*Agrimonia gryposepala*), and red baneberry (*Actaea rubra*) and typical disturbance tolerant species were occasional in the ground cover.
51	OAO	70	1.8359	Open water aquatic – Surrounded by sugar maple deciduous forest (FOD5), northeast of County Road 23 & 4 intersection. Turtles were documented in this pond.	The wetland is dominated by un-vegetated open water. A few trees of red maple (*Acer rubrum*) and yellow birch (*Betula alleghaniensis*) and shrubs consisting of red-osier dogwood (*Cornus sericea ssp. sericea*) and pussy willow (Salix discolour) occur along the edge or on elevated mounds within the pond. Horsetail (*Equisetum* ssp.), broad-leaved cattail (*Typha latifolia*), and lesser duckweed (*Lemna minor*) were common ground species that colonized the fringe.
52	FOD5 (part of unit 47)	5	52.2038	Sugar maple Ash deciduous forest	Sugar maple dominates the canopy while alternate-leaved dogwood (*Cornus alternifolia*) dominates the understory and trout lily dominates the groundcover. Yellow trout lily, white trillium and wild leek and Canada goldenrod (*Solidago canadensis*) were occasionally found within the ground cover.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
53	SWC4-1	38	5.0354	Tamarack coniferous swamp - Located north of County Road 4, between Sideroad 40 and County Road 23. Live electric fence limited access.	Tamarack (*Larix laricina*), black ash (*Fraxinus nigra*) and balsam fir (*Abies balsamea*) dominated the canopy layer while members of the carrot family (*Apiaceae*) were found alongside sensitive fern (*Onoclea sensibilis*) as groundcover.
54	BOS1	117	0.4689	shrub bog	
55	OAO	120	0.2430	Open water aquatic – Pond is surrounded by FOD5 and located north of County Road 4, between Sideroad 40 and County Road 23. Beavers are active around the pond.	Pond is surrounded by red maples and occasional white elm. Species found around or emerging from the open water include sedges, manna grass, water parsnip, reed-canary grass, and sensitive fern.
56	OAO	57	0.1044	open water aquatic	Small pond that dries up later in the year. Duckweed (*Lemna minor*) dominated with small clusters of water parsnip, jewel weed, and sensitive fern along the edges.
57	OAO	>120	0.0471	open water aquatic	not within 120m - n/a
58	OAO	>120	0.0270	open water aquatic	not within 120m - n/a
59	OAO	>120	0.0246	open water aquatic	not within 120m - n/a
60	MAM2-9	>120	0.0582	forb mineral deciduous swamp	not within 120m - n/a
61	MAS2-1	>0	1.72	cattail shallow marsh – Located just north of County Road 4 and bordering swamp communities to the east and agriculture to the west.	Canopy cover includes species such as white elm, tamarack, white cedar, and balsam poplar (*Populus balsamifera*). Broad-leaved cattail, nannyberry (*Viburnum lentago*), and sandbar willow (*Salix exigua*) are dominant in the understory. The groundcover is composed of primarily marsh marigold (*Caltha palustris*), field horsetail (*Equisetum arvense*), and sedges.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
62	SWC3-1	6	0.40	white cedar coniferous swamp	Coniferous swamp dominated by white cedar with occasional tamarack (*Larix laricina*) and balsam fir (*Abies balsamifera*)
63	MAS2-1	>0	0.5386	cattail shallow marsh	Broad leaved cattail dominated wetland with balsam polar found along the edges.
64	SWC3-2	12	2.83	Balsam fir black ash coniferous swamp	Balsam fir and tamarack dominated wetland with eastern white cedar, red maple, and black ash as associates.
65	FOC2-2	5	0.3051	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
66	SWD5-1	>120	4.92	black ash deciduous swamp	not within 120m - n/a
67	MAS2-1	7	0.7871	cattail shallow marsh	Broad leaved cattail dominated wetland with balsam polar are found along the edges.
68	FOC2-2	0	2.0804	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
69	SWC1	35	4.4796	balsam fir white cedar coniferous swamp	Balsam fir dominated wetland with eastern white cedar, red maple, and black ash as associates.
70	FOC2-2	>120	2.3427	white cedar coniferous forest	not within 120m - n/a

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
71	FOC2-2	28	3.0119	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps. This forested is actively being managed by the property owner.
72	FOD5	>120	9.9958	Sugar maple deciduous forest	not within 120m - n/a
73	FEO1-2	>120	4.4879	slender sedge open fen	not within 120m - n/a
74	SWT2-2	>120	0.1173	willow swamp thicket	not within 120m - n/a
75	SWT2-2	>120	0.3804	willow swamp thicket	not within 120m - n/a
76	SWD4	>120	0.4426	balsam poplar deciduous swamp	not within 120m - n/a
77	FOC2-2	>120	0.4089	white cedar coniferous forest	not within 120m - n/a
78	FOC2-2	>120	0.7004	white cedar coniferous forest – Located southeast of County Road 23 & 4 intersection	Tree canopy dominated by white cedar. Subcanopy and understory with little vegetation cover. Groundcover species include agrimony, black knapweed, sedges (*Carex* sp.), and silverweed (*Argentia anserina*).
79	SWC3-1	>120	2.0311	white cedar coniferous swamp – wetland contains seepage indicator plants	Canopy dominated by white cedar, and accompanied by a few red maple, balsam fir, and trembling aspen (*Populus tremuloides*). Canopy gaps contain red elderberry (*Sambucus racemosa var. racemosa*), red-osier dogwood, and slender willow (*Salix petiolaris*) in the understory. Groundcover includes species like reed-canary grass, jewelweed, sedges, rough-leaved goldenrod (*Solidago rugosa* ssp. *rugosa*) and skunk cabbage (*Symplycarpus foetidus*).

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
80	OAO	>120	0.0351	open water aquatic	not within 120m - n/a
81	SWT2-2/SWD2-1	>120	0.5536	willow thicket swamp/black ash swamp	The canopy is sparse, while the subcanopy has some black ash scattered throughout. Willows are dominant within the understory, while hydrophytic grasses and herbs are found within the ground layer.
82	CUP3-3	>0	9.11	Scotch pine cultural plantation	Scotch pine dominated feature with little to no understory or ground cover. Gaps contain early colonizing meadow species.
83	SWC1-1	113	2.6799	white cedar mineral coniferous swamp	White cedar dominates the canopy and subcanopy. Some black ash and red maple are scattered throughout. This feature is included within the Beaver Meadow PSW boundary.
84	CUP3-8	3	2.9789	white spruce coniferous plantation	Dense plantation dominated by white spruce with little to no understory and ground cover.
85	SWC4-1	5	10.9696	tamarack coniferous swamp	Tamarack (*Larix laricina*) with eastern white cedar (*Thuja occidentalis*) and balsam fir (*Abies balsamea*) dominated the canopy.
86	FOC2-2	0	3.1755	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
87	FOD5	12	0.6078	Sugar maple deciduous forest	Small remnant forest associated with the wetland. Sugar maple (Acer saccharum) dominates the canopy and is abundant within the understory as well.
88	MAS2-1	10	3.9740	cattail shallow marsh	Broad leaved cattail dominated wetland with balsam poplar are found along the edges.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
89	FOD4	9	2.6845	Deciduous forest	Deciduous forest dominated by a mixture of associate species such as trembling aspen (*Poplus tremuloides*), white ash (Fraxinus americana), basswood (*Tilia americana*) and sugar maple.
90	FOD5	73	86.3521	Sugar maple deciduous forest	not within 120m - n/a
91	MAM2-10	>120	0.1932	forb mineral deciduous swamp	not within 120m - n/a
92	SWC1	84	6.6723	balsam fir white cedar coniferous swamp	Wet forest dominated by Balsam fir with eastern white occasional cedar, red maple, and black ash as associates in the canopy and subcanopy. The ground cover contains a mixture of wetland species in depressions and upland species on the knolls. Area is rich with ferns and forb species.
93	CUM1-1	>120	0.3156	Cultural meadow	not within 120m - n/a
94	FOC2-2	62	0.8097	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
95	SWD4/SWT2-2	7	1.1848	balsam poplar deciduous swamp willow swamp thicket	Balsam poplar dominated wetland with abundant willows within the understory.
96	CUM1-1	10	0.4744	Cultural meadow	Cleared area now dominated by early colonizing and contains species such as awnless brome (*Bromus inermis* ssp. *inermis*), wild strawberry (*Fragaria virginiana*), knapweed (*Centaurea nigra*), and black eyed susan (*Rudbeckia hirta*).
97	MAM2-2	7	0.2597	Reed-canary grass meadow marsh	Meadow marsh dominated by reed canary grass (*Phalaris arundinacea*).

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
98	FOC2-2	14	0.2186	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
99	CUM1-1	0	0.1900	Cultural meadow	Cleared area on slope now dominated by early colonizing and contains species such as awnless brome (*Bromus inermis* ssp. *inermis*), wild strawberry (*Fragaria virginiana*), knapweed (*Centaurea nigra*), and black eyed susan (*Rudbeckia hirta*).
100	SWD4	110	0.3899	balsam poplar and red maple deciduous swamp	Wet depression dominated by balsam poplar and red maple.
101	MAM2-2	40	0.2815	Reed-canary grass meadow marsh	Wet depression dominated by reed canary grass.
102	FOD5-	95	1.2343	Sugar maple ash deciduous forest – small remnant sugar maple forest	Canopy is dominated by sugar maple with occasional hemlock (*Tsuga canadensis*). Alternate-leaved dogwood, serviceberry, and apple (*Malus pumila*) are common species in the understory and subcanopy. Common ground species include goldenrods (*Solidago* ssp.), blue cohosh, white snakeroot (*Ageratina altissima* var. *altissima*), and trout lily. Portions of the ground cover within the community is composed of disturbance tolerant species which reflects the nature of the area as there are rock and fill piles along the perimeter.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
103	SWD5-1	76	4.2834	Black ash deciduous swamp – Feature is isolated, and surrounded by primarily agriculture and with sugar maple deciduous forest bordering on southwest edge.	Wetland dominated by ash (*Fraxinus* ssp.) and maple (*Acer* ssp.) with abundant Chokeberry (*Photinia melanocarpa*), pussy willow, and leatherleaf (*Chamaedaphne calyculata*) in the understory, while fringed sedge (*Carex crinita*), reed-canary grass, and water parsnip (*Sium suave*) are abundant among groundcover.
104	FOD5	0	17.4380	Sugar maple deciduous forest – managed forest with limited to no understory	Sugar maple, black cherry and white ash are common within the canopy and subcanopy while white ash, alternate-leaved dogwood, and raspberry (*Rubus idaeus* ssp. *strigosus*) area found in varying densities within the understory. Trout lily, herb-robert (*Geranium robertianum*), and violets (*Viola* ssp.) are common within groundcover species.
105	SWD3-1	32	5.41	red maple deciduous swamp – ephemeral pond	Pond is surrounded by predominantly red maples and occasional white elm. Species found around or emerging from the open water include sedges, manna grass, water parsnip, reed-canary grass, and sensitive fern.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
106	SWT3-2	15	1.5106	willow swamp thicket – seepage area in small dug pond	Wetland dominated by willows (*Salix* ssp.) and red-osier dogwood. Mud sedge (*Carex limosa*) and marsh horsetail (*Equisetum palustre*) are dominant within groundcover, while rushes (*Juncus* ssp.) and silverweed are abundant. Wetland contains a small dug pond dominated by watercress, spike rush (Eleocharis erythropoda) with Loesel's twayblade (*Liparis loeselii*) around the perimeter of the pond.
107	CUP3-5	71	1.3131	Tamarack coniferous plantation - Located just north of Southline and east of Boot Jack Ranch Road. Surrounded by willow swamp thickets (SWT3-2).	Tamarack dominates the canopy in this upland plantation, with a few black cherry and trembling aspen interspersed throughout. Wild raspberry, heal-all (*Prunella vulgaris* ssp. *vulgaris*), and riverbank grape (*Vitis riparia*) are common sporadically within the understory. Gaps in the canopy contain common helleborine (*Epipactis helleborine*), violets, and avens (*Geum* spp.). Ground cover densities vary depending on openings.
108	SWT3-2	8	1.1303	Willow swamp thicket - Located just north of Southline and east of Boot Jack Ranch Road.	Shining willow (*Salix lucida*) shrubs dominate the community with a few red maple trees scattered throughout. Boneset (*Eupatorium perfoliatum*), narrow leaf meadowsweet (*Spiraea alba*), and bulrushes (*Scirpus* spp.) are found in the ground layer.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
110	MAS2-1	13	0.2514	Cattail shallow marsh – Evidence of grazing and trampling around the disturbed perimeter due to cattle/horses grazing.	Wetland within grazing pasture. Feature dominated by broad leaved cattail with reed canary grass and blue flag are also common throughout. Red maple and hybrid willow are sparse and line the wetland edge.
111	SWD4	>120	0.6834	Balsam poplar and red maple deciduous swamp - Located just north of Southline and east of Boot Jack Ranch Road. Bordering coniferous plantation (CUP3-8) and forest (FOC2-2)	This area represents a transition between upland and wetland communities. Balsam poplar and trembling aspen dominate the canopy layer while white cedar and white elm are occasionally present within subcanopy. The understory is dominated by red-osier dogwood and occasional willows. The ground layer is dominated by sedges, field horsetail, and dwarf raspberry (*Rubus pubescens*).
112	CUP3-8	>120	13.6432	white spruce coniferous plantation	not within 120m - n/a
113	SWD5	>120	4.3132	balsam poplar and red maple deciduous swamp	not within 120m - n/a
114	CUP3-8	>120	1.0245	white spruce coniferous plantation	not within 120m - n/a
115	SWD3-1	66	3.2104	Red maple deciduous swamp – Located south of Concession 4 Road, west of driveway on Black property.	The canopy is dominated by red maple, with abundant black ash (*Fraxinus nigra*). Red-osier dogwood and red elderberry were present in low densities within the understory. The ground layer was composed of mainly sedges, ferns (*O. sensibilis, Dryopteris* spp.), and water parsnip.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
117	SWD3-1	46	0.2006	red maple deciduous swamp –	Wetland dominated by red maple, with some yellow birch, red ash (*Fraxinus pennsylvanica*), and white elm. Alder-leaved buckthorn (*Rhamnus alnifolia*) is abundant within the understory, while reed-canary grass and ferns (*O. sensibilis, Osmunda regalis, Thelypteris palustris* var. *pubescens*) are found within the ground layer.
118	SWD3-1	16	0.2648	Red maple deciduous swamp – Groundwater seepage was noted in the area.	Red maple represents the dominant species type within the canopy, with sugar maple, balsam fir, and black ash found in a lesser extent. Dogwood (*Cornus* spp.) occurs occasionally within the understory. Sedges, fowl meadow grass (*Poa palustris*), and jewelweed were common groundcover species.
119	SWM2-1	27	2.0724	Red maple coniferous mixed swamp – Community is surrounded by deciduous forest (FOD5-7) and south of Concession 4 Road on Black property.	Red maple, black ash and balsam fir dominates the wetland while yellow birch and white cedar are found in the subcanopy. Red-osier dogwood and wild red currant (*Ribes triste*) are common in the understory. Manna grass, sensitive fern, white lettuce (*Prenanthes alba*), and sedges make up the ground layer.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
120	SWT2-2/SWD3-1	36	0.4201	Willow thicket swamp/red maple swamp –Wetland is ephemeral, and becomes dry during summer drought conditions.	Slender willow, and red-osier dominate the community with red maple occurring along the perimeter, while sedges (*Dulichium arundinaceum*), grasses (*Glyceria* spp., *P. arundinacea*), and mosses are common in the ground layer. Red maple dominates the canopy with fewer white elm, white cedar, and yellow birch throughout.
121	SWT2-2	36	0.4075	willow thicket swamp – Connected to deciduous swamp feature (SWD3-1) and surrounding area is primarily deciduous forest (FOD5-7). Cattle have entered the features and disturbed portions of the wetland.	Pussy willow dominates the wetland with red maple trees occurring along the edge. The ground layer includes species such as bittersweet nightshade (So*lanum dulcamara*), dark-green bulrush (*Scirpus atrovirens*), marsh cinquefoil (*Comarum palustre*), and marsh fern.
122	FOD5-7	>0	96.0620	sugar maple black cherry deciduous forest – Contiguous deciduous forest type at the south end of the Black property.	The canopy is dominated by sugar maple and black cherry. The subcanopy layer is composed of species like white ash, and ironwood. This forest has been managed over time, and many trees present are between 10 and 40cm. There is limited to no understory as a result of logging and clearing. Sedges, violets, baneberry (*Actaea* spp.), and trout lily are all common ground layer species here.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
123	MAM2-10	45	0.1629	forb mineral deciduous swamp – Located at the south end of the Black property.	Wetland dominated by forb species such as spotted joe-pye weed (Eupatorium maculatum var. maculatum), buttercup (Ranunculus spp.), lance leaved goldenrod (*Euthamia graminifolia*), ferns and sedges (*Scirpus atrovirens, Carex vulpinoidea*) and grasses (*Phalaris arundinacea, Leersia oryzoide*s) with occasional trees such as red ash and balsam fir in the canopy.
124	SWD5-1	8	2.8722	black ash deciduous swamp - Located at the south end of the Black property.	Black ash with occasional red maple and balsam fir are found within the canopy layer, while red-osier dogwood, willows and narrow leaf meadowsweet are common in the understory. Wood ferns (*Dryopteris* spp.), sedges, spotted joe-pye weed (*Eupatorium maculatum* var. *maculatum*), and buttercup (*Ranunculus* spp.) make up the ground layer.
125	FOM5	9	8.0700	Balsam fir sugar maple mixed forest - Located at the south end of the Black property.	This upland mixed forest is dominated by balsam fir, sugar maple, red maple, and white ash within the canopy. White elm is occasional within the subcanopy, while alternate-leaved dogwood and red elderberry are found within the understory. Pennsylvania sedge (*Carex pensylvanica*), swamp aster (*Symphyotrichum puniceum*), and field horsetail are common ground cover species, though this layer is limited in its coverage (10-20%).

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
126	FOD5	2	40.2787	Sugar maple deciduous forest - Located at the south east corner of the Black property.	The canopy is dominated by sugar maple and black cherry. The subcanopy layer is composed of species such as white ash, and ironwood. This forest has been managed over time, and many trees present are between 10 and 40cm. There is limited to no understory as a result of logging and clearing. Understory that does persist includes alternate leaved dogwood, leatherwood (*Dirca palustris*) young ash and maples. Sedges, violets, baneberry (*Actaea* spp.), and trout lily are all common ground layer species here.
127	MAS2-1	>120	1.7337	cattail shallow marsh	not within 120m - n/a
128	CUP3-1	97	0.5410	Coniferous pine plantation	Small coniferous plantation adjacent to the agricultural field dominated by white pine. Contains limited to no understorey or ground cover.
129	CUM1-1	19	0.0810	Cultural meadow	Meadow species colonizing a fill piles adjacent to a dug pond. Knapweed, wild strawberry, and awnless brome dominate the ground cover.
130	SWC4-1	>0	0.5539	Tamarack coniferous swamp – located east of Boot Jack Ranch Road and just north of Southline, bordering the road.	Tamarack dominates the wetland, with occasional white cedar and balsam poplar while willows make up the understory. Field horsetail is an abundant ground species, with grass-leaved goldenrod (*Euthamia graminifolia*), rough-leaved goldenrod, blue-flag iris, and northern bugleweed (*Lycopus uniflorus*) as occasional species.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
131	CUW1	3	1.5820	Maple cultural woodland – Located north of County Road 4 and east of County Road 23. It is bordered to the north by contiguous deciduous forest (FOD5).	The community is dominated by a mixture of young scattered trees consisting of sugar maple, white ash, white cedar, downy hawthorn (*Crataegus mollis*), and white spruce (*Picea glauca*). The groundcover is dominated typical meadow species such as grasses (*Poa* spp.), black-eyed susan (*Rudbeckia hirta*), goldenrods (*Solidago* spp.), and common burdock (*Arctium minus*).
132	CUM1-1	3	1.1460	Cultural meadow – Located north of County Road 4 and east of County Road 23. Agriculture land borders to the south.	The meadow is dominated by spreading dogbane (*Apocynum androsaemifolium ssp. androsaemifolium*) and other abundant ground species which include field hawkweed (*Hieracium caespitosum*), goldenrods, and ribgrass (*Plantago lanceolata*).
133	CUP3	>120	0.6725	Coniferous cultural plantation	not within 120m - n/a
134	SWD3-1	60	0.3650	red maple deciduous swamp – Located south of Concession Road 4 on the Black property. Cattle have entered the features and disturbed portions of the wetland. Grazing and trampling are evident.	Red maple dominates the canopy, while ashes and trembling aspen, yellow birch and sugar maple are minor associates. Shrubs like red-osier dogwood and nannyberry sparsely make up the understory of the swamp. Sedges, field horsetail, water parsnip, and marsh fern were found within the ground cover layer as well.
135	FOC2-2	>0	0.1061	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
136	SWT2-2	10	0.1914	Willow swamp thicket – Located south of County Road 4, and east of County Road 23.	This wetland is dominated by a dense cluster pussy willow with occasional red-osier dogwood. The ground layer is composed primarily of species like field horsetail, grass-leaved goldenrod, lance-leaved aster (*Symphyotrichum lanceolatum*), sedges, and rushes (*Juncus spp.*).
137	CUM1-1	0	3.0839	Cultural meadow - Located south of County Road 4, and east of County Road 23.	This is a transition area between upland meadow and meadow marsh that slopes towards the Beaver Meadow PSW. Cleared area now dominated by early colonizing and contains species such as wild strawberry (*Fragaria virginiana*), knapweed (*Centaurea nigra*), black eyed susan (*Rudbeckia hirta*), goldenrods, and grasses (*B. inermis, A. gigantea, E. repens, P. pratense, Panicum capillare*).
139	AGR	0	13.8541	Agricultural field and associated hedgerow	Wheat
140	AGR	0	1.1988	Agricultural field and associated hedgerow	Wheat
141	AGR	0	13.6968	Agricultural field and associated hedgerow	Wheat
142	AGR	0	8.5929	Agricultural field and associated hedgerow	Wheat
143	AGR	0	2.2782	Agricultural field and associated hedgerow	Wheat
144	AGR	85	10.0420	Agricultural field and associated hedgerow	Hay
145	AGR	5	3.1898	Agricultural field and associated hedgerow	Hay

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
146	AGR	5	3.6600	Agricultural field and associated hedgerow	Hay
147	AGR	>120	2.7965	Agricultural field and associated hedgerow	not within 120m - n/a
148	AGR	66	3.5148	Agricultural field and associated hedgerow	Hay
149	AGR	0	4.4897	Agricultural field and associated hedgerow	Hay
150	AGR	0	1.9631	Agricultural field and associated hedgerow	Hay
151	AGR	69	1.4554	Agricultural field and associated hedgerow	Hay
152	AGR	>120	2.9997	Agricultural field and associated hedgerow	not within 120m - n/a
153	AGR	88	4.2741	Agricultural field and associated hedgerow	Hay
154	AGR	0	3.3165	Agricultural field and associated hedgerow	Hay
155	AGR	25	3.6195	Agricultural field and associated hedgerow	Pasture
156	AGR	0	2.7715	Agricultural field and associated hedgerow	Pasture
157	AGR	0	3.1579	Agricultural field and associated hedgerow	Pasture
158	AGR	0	3.6807	Agricultural field and associated hedgerow	soy
159	AGR	0	4.8318	Agricultural field and associated hedgerow	hay
160	AGR	>120	2.6603	Agricultural field and associated hedgerow	not within 120m - n/a

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
161	AGR	0	2.4209	Agricultural field and associated hedgerow	
162	AGR	0	2.4962	Agricultural field and associated hedgerow	soy
163	AGR	0	2.4147	Agricultural field and associated hedgerow	hay
164	AGR	15	3.5584	Agricultural field and associated hedgerow	
165	AGR	>120	3.2827	Agricultural field and associated hedgerow	not within 120m - n/a
166	AGR	0	4.0651	Agricultural field and associated hedgerow	Pasture
167	AGR	0	1.0045	Agricultural field and associated hedgerow	hay
168	AGR	0	3.6464	Agricultural field and associated hedgerow	hay
169	AGR	0	4.7417	Agricultural field and associated hedgerow	soy
170	AGR	0	3.9353	Agricultural field and associated hedgerow	
171	AGR	0	3.9311	Agricultural field and associated hedgerow	soy
172	AGR	0	4.3829	Agricultural field and associated hedgerow	hay
173	AGR	0	4.2625	Agricultural field and associated hedgerow	soy
174	AGR	0	3.5617	Agricultural field and associated hedgerow	soy
175	AGR	12	2.2846	Agricultural field and associated hedgerow	soy

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
176	AGR	106	1.2298	Agricultural field and associated hedgerow	Pasture
177	AGR	111	1.8440	Agricultural field and associated hedgerow	soy
178	AGR	0	1.4628	Agricultural field and associated hedgerow	soy
179	AGR	0	2.6656	Agricultural field and associated hedgerow	soy
180	AGR	0	18.9196	Agricultural field and associated hedgerow	Wheat
181	AGR	0	9.5829	Agricultural field and associated hedgerow	Wheat
182	AGR	0	9.0131	Agricultural field and associated hedgerow	Wheat
183	AGR	0	6.0122	Agricultural field and associated hedgerow	Wheat
184	AGR	0	7.4865	Agricultural field and associated hedgerow	Wheat
185	AGR	0	8.1692	Agricultural field and associated hedgerow	Wheat
186	AGR	0	10.3922	Agricultural field and associated hedgerow	Wheat
187	AGR	9	1.7166	Agricultural field and associated hedgerow	Pasture
188	AGR	0	2.1677	Agricultural field and associated hedgerow	Pasture
189	AGR	9	2.9096	Agricultural field and associated hedgerow	Pasture
190	AGR	0	2.3327	Agricultural field and associated hedgerow	Pasture

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
191	AGR	0	2.8811	Agricultural field and associated hedgerow	Pasture
192	AGR	0	4.7468	Agricultural field and associated hedgerow	Pasture
193	AGR	0	5.2465	Agricultural field and associated hedgerow	Pasture
194	AGR	0	3.7814	Agricultural field and associated hedgerow	Pasture
195	AGR	0	3.1420	Agricultural field and associated hedgerow	soy
196	AGR	0	9.0563	Agricultural field and associated hedgerow	soy
197	AGR	0	10.9776	Agricultural field and associated hedgerow	Wheat
198	AGR	85	1.4403	Agricultural field and associated hedgerow	Pasture
199	AGR	0	7.5081	Agricultural field and associated hedgerow	Pasture
200	AGR	0	5.5787	Agricultural field and associated hedgerow	Pasture
201	AGR	0	3.6000	Agricultural field and associated hedgerow	Pasture
202	AGR	0	1.8003	Agricultural field and associated hedgerow	Hay
203	AGR	0	2.6229	Agricultural field and associated hedgerow	Hay
204	AGR	74	0.6360	Agricultural field and associated hedgerow	Hay
205	AGR	0	2.0883	Agricultural field and associated hedgerow	Hay

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
206	AGR	>120m	n/a	Agricultural field and associated hedgerow	not within 120m - n/a
207	AGR	>120m	n/a	Agricultural field and associated hedgerow	not within 120m - n/a
208	AGR	0	7.8764	Agricultural field and associated hedgerow	soy
209	AGR	0	21.6204	Agricultural field and associated hedgerow	Corn
210	AGR	0	17.4662	Agricultural field and associated hedgerow	Corn
211	AGR	0	8.2126	Agricultural field and associated hedgerow	Cut Hay
212	AGR	0	3.2236	Agricultural field and associated hedgerow	Cut Hay
213	AGR	0	9.2869	Agricultural field and associated hedgerow	Pasture
214	AGR	0	6.1110	Agricultural field and associated hedgerow	Pasture
215	AGR	0	6.9316	Agricultural field and associated hedgerow	Pasture
216	AGR	10	3.9102	Agricultural field and associated hedgerow	Pasture
217	AGR	12	2.6477	Agricultural field and associated hedgerow	Pasture
218	AGR	6	3.0244	Agricultural field and associated hedgerow	Pasture

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
219	FOC2-2	114	0.5338	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
220	MAS2-1	>120m	1.2642	Cattail shallow marsh – Located north of Southline along the east border of the residential driveway.	The wetland is dominated by reed canary grass with a few cottonwoods (*Populus deltoides*) and white elm occurring in the canopy. Spotted joe-pye weed, broad-leaved cattail, and swamp aster are other common in the ground layer.
222	MAM2-2	110	0.2431	Reed-canary grass meadow marsh – Located south of County Road 4 and east of Boot Jack Ranch Road.	Reed canary dominated wetland with a few white elm, cottonwood and red maple occurring in the canopy. A few gray dogwood (*Cornus racemosa*), red elderberry, and nannyberry shrubs are found in the understory. Sedges, agrimony, silverweed, Canada goldenrod (*Solidago Canadensis*), and dark-green bulrush are also abundant in the ground cover.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
223	CUW1	>120m	0.6294	Apple and hawthorn cultural woodland – Located south of County Road 4, east of Boot Jack Ranch Road.	Community is disturbed and dominated by apple with other native trees species colonizing post disturbance. Other tree species occupying the canopy include white elm, black cherry, and trembling aspen. This community appears to have been part of an old orchard and is now a transition area between wetland and agricultural. There is limited to no understory however species persisting include hawthorn, choke cherry (*Prunus virginiana*), and raspberry. Species typical of disturbance area found in meadows dominate the ground layer. Species found include grasses (*B. inermis, P. pratense,* and *Dactylis* glomerata), while agrimony, wild carrot (*Daucus carota*), strawberry (*Fragaria virginiana*), and ribgrass.
224	FOD4	0	0.2868	Deciduous forest – Located along County Road 23.	Small remnant forest adjacent to residential home composed of a mixture of associate species. Species found include sugar maple, white ash, black cherry, trembling aspen.
225	CUP3-2	0	3.2889	White pine plantation – Located at the southwest intersection of County Rd 23 and Northline.	Scotch pine dominates the canopy layer, while black cherries are also abundant. Riverbank grape extends into the subcanopy along with white cedar, apple, and balsam poplar. Few sugar maple, white ash, and alternate-leaved dogwood are present within the understory. Black knapweed, wild carrot, and ribgrass are common within the groundcover.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
226	FOD5-8	0	4.7087	Sugar maple white ash deciduous forest - Located at the southeast intersection of County Rd 23 and Northline.	Sugar maple dominates the canopy, with white elm and white ash also fairly common. Alternate-leaved dogwood and Tartarian honeysuckle (*Lonicera tatarica*) make up the understory while Canada goldenrod, strawberry, and Virginia creeper (*Parthenocissus vitacea*) are found in the ground layer. There is a small inclusion of coniferous plantation at the south end.
227	FOD5-8	0	2.6228	Sugar maple white ash deciduous forest - Located just north of the intersection of County Rd 23 and Northline. Agricultural land surrounds.	Sugar maple dominates the canopy, followed by abundant white ash. Willow (*Salix* sp.), dotted hawthorn, and alternate-leaved dogwood make up the understory. The ground layer contains species like trout lily, violets, and wild black currant.
228	CUP3-9	0	8.9792	Norway spruce plantation – Located along County Rd 23.	The canopy is dominated by planted Norway spruce (*Picea abies*) and white spruce. White cedar, sugar maple, and white ash are found sporadically in the subcanopy while apple, serviceberry (*Amelanchier* sp.), and alternate-leaved dogwood are part of the subcanopy. The groundcover includes species like tall goldenrod (*S. canadensis* var. *scabra*) and St. John's wort (*Hypericum perforatum*).

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
229	CUW1	0	3.1349	Ash Cultural woodland – Located along County Rd 23, and is bordered by all agricultural land.	White ash dominates the tree canopy here, with sugar maple, Scotch pine, and black cherry to a lesser degree. Subcanopy species included white spruce and white elm. Riverbank grape extends into the understory alongside alternate-leaved dogwood. This very young, regenerating old field contains common ground species like Canada goldenrod, black knapweed, wild basil (*Clinopodium vulgare*), and bird's foot trefoil (*Lotus corniculatus*).
230	FOD5	0	122.5740	Sugar maple deciduous forest – Located along County Rd 23.	Sugar maple dominates the canopy with white ash, black cherry and few basswood, beech, and ironwood interspersed. White spruce, apple, and downy hawthorn reach into the subcanopy while alternate-leaved dogwood dominates the understory. Choke cherry and Tartarian honeysuckle are also found in lower number in the understory. The groundcover layer includes species like strawberry, trout lily, herb-robert, and sedges.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
231	CUP3-2	0	2.2658	White pine plantation - Located along County Rd 23 and bordering contiguous deciduous forest.	White pine dominates the canopy, with small numbers of sugar maple, trembling aspen, and Scotch pine. The subcanopy includes species like ironwood, white elm, and apple. Species like alternate-leaved dogwood, common lilac (*Syringa vulgaris*), and dotted hawthorn compose the understory layer. Canada goldenrod, heal-all, cow vetch (*Vicia cracca*), and ox-eye daisy (*Leucanthemum vulgare*) are all found in the ground layer.
232	CUP3-9	0	2.9257	Norway spruce plantation - Located along County Rd 23 and bordering residential areas.	The canopy is dominated by Norway spruce, with white pine also abundant. White elm can also be found in the subcanopy. Riverbank grape joins ribgrass, wild carrot, St. John's wort, and common milkweed in the groundcover layer.
233	FOD4	0	0.1600	Deciduous forest - Located at southeast corner of County Rd 23 and Concession Rd 4 intersection.	Sugar maple dominated canopy with black cherry, and white elm.
234	SWD4/MAM2-10	110	4.2389	Balsam poplar deciduous swamp – Located northwest of residential home on turbine 13 property.	White elm, balsam poplar, and trembling aspen are common species within the canopy with a few tamarack and white cedar mixed through. Lance-leaved aster, sedges, spotted joe-pye weed, reed-canary grass, and rough-leaved goldenrod are dominant within the ground layer.
235	AGR	0	3.3987	Agricultural field and associated hedgerow	Agricultural Field
236	AGR	0	10.1417	Agricultural field and associated hedgerow	Agricultural Field

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
237	AGR	0	3.3662	Agricultural field and associated hedgerow	Agricultural Field
238	AGR	0	14.5211	Agricultural field and associated hedgerow	Agricultural Field
239	AGR	0	16.8505	Agricultural field and associated hedgerow	Agricultural Field
240	AGR	0	14.5203	Agricultural field and associated hedgerow	Soy
241	MAM2-5	87	1.6131	Narrow leaved sedge meadow marsh – adjacent to tamarack plantation, west of residential dwelling on turbine 13 property.	The wetland is dominated by sedges (*Carex* spp., *Scirpus* spp.) along with abundant rice cut grass (*Leersia oryzoides*), reed-canary grass, and timothy grass (*Phleum pratense*).
242	SWC1	49	0.4974	Balsam fir white cedar coniferous swamp – Located south of Concession 4 Rd, and southwest of residential dwelling on Black property.	Wetland dominated by balsam fir, with occasional white cedar throughout. The understory has a few shrub species, including mountain ash (*Sorbus* sp.), red-osier dogwood, willow (*Salix* sp.), and elderberry (*Sambucus* sp.). The ground layer is dominated by sedges, jewelweed, and ferns (*Dryopteris* spp., *O. sensibilis, Osmunda cinnamomea, O. regalis, Gymnocarpium dryopteris*).
243	MAM2-2/OAO	>120	0.4755	Narrow leaved sedge meadow marsh – Located south of County Road 4, east of Boot Jack Ranch Road.	not within 120m - n/a
244	AGR	0	18.1706	Agricultural field and associated hedgerow	Agricultural Field
245	AGR	0	3.7525	Agricultural field and associated hedgerow	Agricultural Field

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
246	AGR	0	2.4259	Agricultural field and associated hedgerow	Agricultural Field
247	AGR	0	1.6658	Agricultural field and associated hedgerow	Agricultural Field
248	SWD4/MAM2-10	>0	0.3923	balsam poplar deciduous swamp forb meadow marsh	White elm, balsam poplar, and trembling aspen are common species within the canopy with a few tamarack and white cedar mixed through. Lance-leaved aster, sedges, spotted joe-pye weed, reed-canary grass, and rough-leaved goldenrod are dominant within the ground layer.
249	CUP3-2	0	0.2685	white pine plantation	This plantation community is dominated by white pine and also has an abundance of white cedar. Fewer balsam poplar, red ash and sugar maple are also scattered within the canopy.
250	SWD4-2	>0	1.3882	White elm deciduous swamp – Located south, but bordering Southline road, west of Sideroad 50.	White elm is most prominent, followed by a few red maples within the light canopy. Willows are abundant in the understory while reed-canary dominates the ground cover.
251	CUM1-1	0	0.8148	Cultural meadow – Located on north side of Southline, bordering road and west of Sideroad 50.	Canada goldenrod dominates the groundcover layer, while black knapweed, wild carrot, ribgrass, and alsike clover (*Trifolium hybridum* ssp. *elegans*) are also found in abundance.
252	FOC2-2	0	1.8869	White cedar coniferous forest – Located on north side of Southline, bordering road and west of Sideroad 50.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
253	SWT2-2	>0	4.8020	Willow swamp thicket – Located on north side of Southline, bordering road and west of Sideroad 50.	The community is dominated by willows shrubs, with some red-osier dogwood interspersed. Trees form a minor component - composed of red maple, tamarack, and white elm. Species such as turtlehead (*Chelone glabra*), spotted joe-pye weed, reed-canary grass, sensitive fern, and narrow-leaved cattail (*Typha angustifolia*) can be found amongst the groundcover.
254	SWD4-3	>0	2.9437	Balsam poplar deciduous swamp - Located south, but bordering Southline road, west of Sideroad 50.	The canopy layer is dominated by balsam poplar, while red maple is also abundant. White cedar and few white elms make up the subcanopy. Nannyberry, red-osier dogwood and sandbar willow make up the understory. Grass (*Glyceria* sp.), sensitive fern, and rough-leaved goldenrod can be found in the ground layer.
255	FOC2-2	0	1.0667	white cedar coniferous forest - Located on north side of Southline, bordering road and west of Sideroad 50. Borders onto wetland areas.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
256	SWD3-1	>0	1.0272	Red maple deciduous swamp - Located on north side of Southline, bordering road and west of Sideroad 50.	Canopy is dominated by red maple. The understory has occasional red-osier dogwood, narrow-leaved cattail, and white cedar. Lake-bank sedge (*Carex lacustris*) dominates the groundcover, followed by an abundance of Bebb's willow (*Salix bebbiana*), spotted joe-pye weed, and reed-canary grass.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
257	MAM2-10	>0	0.9056	forb mineral deciduous swamp - Located on north side of Southline, bordering road and west of Sideroad 50. Surrounded by agricultural land, feature extends to south side of road to unit 399.	Wetland dominated by forb species such as spotted joe-pye weed (Eupatorium maculatum var. maculatum), buttercup (Ranunculus spp.), lance leaved goldenrod (*Euthamia graminifolia*), ferns and sedges (*Scirpus atrovirens, Carex vulpinoidea*) and grasses (*Phalaris arundinacea, Leersia oryzoide*s).
258	SWD3-1	>0	0.7196	Red maple deciduous swamp – Located at the northeast corner of the intersection at Boot Jack Ranch Road and Southline. Bordered to the north by agriculture.	Red maple is the dominant species within the canopy layer. Understory species include slender willow, chokeberry, and narrow-leaved cattail. Common milkweed, spotted joe-pye weed, timothy grass, and water parsnip join reed-canary grass as the dominant species within the groundcover.
259	FOC2-2	0	0.8824	White cedar coniferous forest – Located at the southeast corner of the intersection of Southline and Boot Jack Ranch Road.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
260	MAM2-2	11	0.0731	Reed-canary grass meadow marsh – Located along Boot Jack Ranch Road, and bordered by agriculture to the south, and cultural meadow to the north.	The thin canopy here is composed of red maple and balsam poplar. Groundcover species include common milkweed, *Eupatorium spp*., and the dominant reed-canary grass.
261	CUM1-1	5	0.2548	Cultural meadow – Located along Boot Jack Ranch Road.	White elm makes up what little canopy exists, while the groundcover includes species like common yarrow (*Achillea millefolium*), black-eyed susan, Canada goldenrod, and black knapweed.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
263	FOD5	0	4.9428	Sugar maple deciduous forest – Located along east side of Boot Jack Ranch Road, with agriculture to the south and residential to the north.	Sugar maple is the dominant species within the canopy, with less white ash, black cherry, and white elm scattered throughout. Shrubs like alternate-leaved dogwood, chokecherry, and prickly gooseberry (*Ribes cynosbati*) make up the understory. Groundcover is composed of species like false Solomon's seal (*Maianthemum racemosum*), heal-all, bittersweet nightshade, and Canada goldenrod.
264	CUM1-1	0	4.6620	Cultural meadow – Located along west side of Boot Jack Ranch Road.	Cleared area on slope now dominated by early colonizing and contains species such as awnless brome (*Bromus inermis* ssp. *inermis*), wild strawberry (*Fragaria virginiana*), knapweed (*Centaurea nigra*), and black eyed susan (*Rudbeckia hirta*).
265	CUW1	0	10.0188	Ash and hawthorn cultural woodlot – Located on west side of Boot Jack Ranch Road, south of County Road 4.	This early successional community has white ash within the canopy, subcanopy, as well as understory. Hawthorn is also found alongside apple and white cedar within the understory. Species found within the groundcover layer include common yarrow, black knapweed, wild carrot, and cow vetch.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
266	SWD4	>0	1.1812	Balsam poplar and red maple deciduous swamp – Located on the east side of Boot Jack Ranch Road, bordered by agriculture. Feature is associated with small tributary and pond located to the east.	Balsam poplar is the dominant species within the canopy with a few trembling aspen and tamarack scattered throughout. Red ash, and trembling aspen are found within the subcanopy. The understory is dominated by willows. Groundcover species include common milkweed, blue-flag iris, lake-bank sedge, *Eupatorium* spp., sensitive fern, and narrow-leaved cattail.
267	CUP3-2/3	0	1.7844	White and scotch pine plantation – Located just south of the intersection of Boot Jack Ranch Road and County Road 4.	The canopy is dominated by the plantation species of white pine and Scotch pine. Very little understory and groundcover is present.
268	SWC3-2	93	2.6750	Balsam fir black ash coniferous swamp – Located east of County Road 23 and south of County Road 4. It is bordered by unit 73, which is part of the Beaver Meadow PSW.	Wetland is dominated by balsam fir and white cedar, with abundant black in both canopy and subcanopy. The understory is composed of species such as red-osier dogwood, alder-leaved buckthorn, red elderberry, and Missouri willow (*Salix eriocephala*). The ground layer is abundant with reed-canary grass, narrow-leaved aster, and boneset.
269	SWD4-3	88	0.3478	Balsam poplar deciduous swamp – Located east of County Road 23 and south of County Road 4. Bordered by cultural meadow to the east.	Black ash with occasional red maple and balsam fir are found within the canopy layer, while red-osier dogwood, willows and narrow leaf meadowsweet are common in the understory. Groundcover species include several members of the aster family (*Symphyotrichum* spp., *Solidago* spp., *E. graminifolia, Eupatorium* spp.) as well as sedges (*Carex* spp., *S. atrovirens*).

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
270	CUW1	>120	0.6823	Apple and hawthorn cultural woodland – Located south of County Rd 4, bordered by agriculture to the west.	not within 120m - n/a
271	SWC3-1	5	0.3124	White cedar coniferous swamp – Located south along Concession 4 Road. Included within the Black Wetland Complex.	Coniferous swamp dominated by white cedar with occasional tamarack (Larix laricina) and balsam fir (Abies balsamifera)
272	SWC4	5	6.9602	Tamarack balsam fir coniferous swamp – Located south along Concession 4 Road. Included within the Black Wetland Complex.	Coniferous swamp dominated by tamarack (*Larix laricina*) and balsam fir (*Abies balsamifera*) with occasional black ash (*Fraxinus nigra*) and red maple (*Acer rubrum*).
273	FEO1-2	62	0.5859	Slender sedge open fen – Located south along Concession 4 Road. Included within the Black Wetland Complex.	Open fen that contains few scattered tree species of cedar and tamarack. Wetland dominated by sedges, marsh cinquefoil (*Comarum palustre*), small cranberry (*Vaccinium oxycoccos*), pitcher plant (*Saracenia purpurea*), and fringed brome grass (*Bromus ciliatus*) are scattered between large patches of *Sphagnum* moss among the groundcover layer. A large variety of orchids were found throughout this wetland

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
274	FOC2-2	11	1.2765	White cedar coniferous forest - Located on the upper slopes of Saugeen Creek at the intersection of Concession Road 4 and County Rd 23.	White cedar is the dominant tree species within the canopy, with Manitoba maple (*Acer negundo*), white elm, and black cherry to a lesser extent. Apple, basswood, and white cedar also present in subcanopy. Understory is thin, with species like red ash, alternate-leaved dogwood, and common lilac.
275	FOC2-2	0	2.6287	White cedar coniferous forest - Located on the upper slopes of Saugeen Creek, east of the intersection of Concession Road 4 and County Rd 23.	White cedar dominates canopy and subcanopy while black cherry, sugar maple, red ash, and white elm are sporadically dispersed. Dotted hawthorn and chokecherry are included within the understory. Ground species include riverbank grape, common tansy (*Tanacetum vulgare*), and heart-leaved aster (*Symphyotrichum cordifolium*).
276	CUP3-3	0	19.2684	Scotch pine coniferous plantation – Located on the south side of Concession 4 Rd, and east of County Rd 23.	Scotch pine dominates the canopy and subcanopy, with few white cedar and sugar maple throughout. Understory species include common lilac, choke cherry, alternate-leaved dogwood, and red ash. Species found within the groundcover layer include strawberry, Canada goldenrod, heal-all, and thimbleweed (*Anemone virginiana*).
277	FOC2-2	0	7.8739	white cedar coniferous forest – Upland plantation bordering Concession 4 Rd.	The canopy and subcanopy layers are dominated by white cedar. The understory is thin and includes species like choke cherry, common lilac, dotted hawthorn, and downy serviceberry. Groundcover is sparse, but includes species like riverbank grape, Canada goldenrod, and violets.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
278	MAM2-10	40	1.0701	Forb meadow marsh - This community is just south of Concession 4 Road and lays within the floodplain of the Saugeen Creek that runs just to the west.	Wetland dominated by herbaceous plants and is composed of a mixture of common milkweed, purple angelica (*Angelica purpurea*), marsh marigold (*Caltha palustris*), spotted water hemlock (*Cicuta maculata*), and Eupatorium spp.. Spotted joe-pye weed. A few hybrid willow trees, apple and hawthorns are found throughout the community.
279	CUP3-3	0	3.7238	Scotch pine coniferous plantation – Located on south side of Concession 4 Rd.	This plantation is dominated by Scotch pine within the canopy. The density of plantings is variable throughout, with open patches occurring. Young sugar maple, white cedar, and red ash occur in the subcanopy near the edges or in open patches of the plantation. The understory is minimal, but in open areas contains species such as ninebark (*Physocarpus opulifolius*), alternate-leaved dogwood, and choke cherry occur. Minimal ground cover is present, and represented by species like Canada goldenrod, common milkweed, wild carrot, and timothy grass.
280	CUP3-8	0	2.3795	white spruce coniferous plantation – Located on north side of Concession 4 Rd.	White spruce are the dominant species within the canopy of this plantation, with fewer white cedar scattered throughout. The understory is composed of species like red ash, choke cherry, apple, dotted hawthorn, and ninebark. Ground species noted include Canada goldenrod, black knapweed, ribgrass, and rough-leaved goldenrod.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
281	SWD4	>0	1.3816	Balsam poplar and black ash deciduous swamp – Located on south side of Concession 4 Rd. Bordering coniferous forest/plantation.	Wetland dominated by a mixture of black ash, red maple and white elm. Narrow-leaved cattails, sedges (*C. flava*, *Scirpus* spp.), *Eupatorium* spp., and sensitive fern are present within the ground layer of this sloping wetland community.
282	CUP3-2	0	5.6573	white pine plantation – Located on north side of Concession 4 Rd.	This plantation community is dominated by white pine and also has an abundance of white cedar. Fewer balsam poplar, red ash and sugar maple are also scattered within the canopy.
283	FOC2-2	0	0.9138	white cedar coniferous forest – Located on south side of Concession 4 Rd.	This coniferous forest canopy is dense with white cedar, with some younger trees also present within the subcanopy. Very thin understory includes alternate-leaved dogwood, while the ground layer is almost completely bare.
284	FOC2-2	0	1.2501	white cedar coniferous forest – Located on south side of Concession 4 Rd.	The canopy here is dominated by white cedars. Sugar maple, white ash and yellow birch are occasional-to-rare within the subcanopy and canopy. Understory species include alternate-leaved dogwood, choke cherry and nannyberry. Groundcover is fairly minimal, but those species present include *Maianthemum* spp., common helleborine, and violets.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
285	SWM1	>0	0.9933	Black ash, balsam fir, tamarack mixed swamp – Located on north side of Concession 4 Rd. Tributary feature to the north is associated with this unit.	Swamp is dominated by a mixture of black ash, white cedar, and balsam fir with a few trembling aspen. Young black ash and white cedar are also present within the subcanopy and understory. Alder-leaved buckthorn and willows can be found within the understory. Groundcover species include reed-canary grass, *Scirpus* spp., *Eupatorium* spp., and goldenrods (*E. graminifolia, Solidago* spp.)
286	SWC4	>0	2.9353	tamarack balsam fir coniferous swamp - – Located on north side of Concession 4 Rd. Stream feature crosses the southwest corner of this unit.	Coniferous swamp dominated by tamarack (*Larix laricina*) and balsam fir (*Abies balsamifera*) with occasional black ash (*Fraxinus nigra*) and red maple (*Acer rubrum*).
287	SWT3-2	>0	2.1056	willow swamp thicket – Located on south side of Concession 4 Rd.	Wetland dominated by willows (*S. discolour, S. eriocephala*) with only a few scattered black ashes. Red-osier dogwood and narrow-leaved cattails found in the understory with the willows. Canary-reed grass, sensitive fern, and lance-leaved aster occur in the ground layer.
288	SAF1-1	>0	0.1385	forb shallow marsh – Located on south side of Concession 4 Rd. Small tributary feature is associated with this unit.	The open water pond is dominated by bull-head pond lily (Nuphar variegate) with occasional broad-leaved cattails, pussy willow, Lance-leaved aster, spotted joe-pye weed, found along the edges.
289	MAS3-1	>0	0.6172	cattail shallow marsh – Located on north side of Concession 4 Rd.	Broad leaved cattail dominated wetland with a few tamarack, white cedar, and balsam poplar scattered along the edge. Abundant bull-head pond lily can also be found in the ground layer.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
290	FOC2-2	0	6.6377	White cedar coniferous forest - – Located on north side of Concession 4 Rd at intersection with Sideroad 40.	The forest canopy is dominated by white cedar. Few trembling aspen, white elm and black cherry are dispersed through the subcanopy. Alder-leaved buckthorn and thimbleberry (*Rubus occidentalis*) can be found within the understory. Ground cover is very limited in this community, with goutweed (*Aegopodium podagraria*) one species noted.
291	CUW1	0	0.4600	White cedar and apple cultural woodland – Located on north side of Concession 4 Rd and bordered by coniferous forest (FOC2-3).	This early succession community has little canopy cover, with some white elm and sugar maple. Subcanopy includes red ash, Scotch pine, dotted hawthorn, and apples. The understory here is dominated by white cedar, with a few pussy willows and red-osier dogwood. Groundcover species include grasses (*Poa pratense, P. pratense, D. glomerata*), common milkweed, ribgrass, cow vetch, and Canada goldenrod.
292	FOC2-2	0	2.5772	white cedar coniferous forest – Located on north side of Concession 4 Rd.	This upland forest is dominated by white cedar within the canopy and subcanopy while a few white pine, trembling aspen, and white spruce are scattered throughout. Some red ash, balsam poplar, and black cherry are dispersed in the subcanopy as well. Understory species include Tartarian honeysuckle, and apple. *Solidago* spp., grasses (*Poa pratense, P. pratense, D. glomerata*) and birds-foot trefoil can be found in the ground layer.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
293	SWD4	>0	2.0396	Balsam poplar and black ash deciduous swamp - – Located on north side of Concession 4 Rd and has a small pond inclusion.	Wetland dominated by a mixture of black ash, red maple and white elm. Narrow-leaved cattails, sedges (*C. flava*, *Scirpus* spp.), *Eupatorium* spp., and sensitive fern are present within the ground layer of this sloping wetland community.
294	SWT2-2	>0	0.9720	Willow swamp thicket – Located on south side of Concession 4 Rd. Small tributary feature feeds into this unit.	Some plantation species seem to overlap within this community, including the presence of Scotch pine and white cedar scattered in the canopy and subcanopy. Red maple is also dotted through the subcanopy. Bebb's willow dominates the understory. Reed-canary grass is common on the ground in open areas, with smaller amounts of *Scirpus* spp., and *Symphyotrichum* spp.
295	CUP3-2/3	0	5.5805	White and scotch pine plantation - Located on north side of Concession 4 Rd and has tributary features associated.	This is a disturbed area with conifers planted irregularly throughout. Moist pockets are scattered throughout. Canopy species include white spruce, Scotch pine, and white cedar. A few trembling aspen and balsam poplar extend through the canopy and subcanopy. The understory is minimal, but ground species include an abundance of grasses, goldenrods and asters.
296	MAM2-2	5	0.3238	Reed-canary grass meadow marsh – Located on south side of Concession 4 Rd. Feature is more difficult to distinguish than what is seen in air photos.	Small area within a fallow field where water collects and wetland plants have started to colonize with reed canary grass.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
297	SWT3-2	3	1.3415	Willow swamp thicket– Located on south side of Concession 4 Rd and has a small tributary running through.	Willow (*S. discolour*) dominated wetland with occasional hybrid willow and black ash trees. Narrow-leaved cattail and lesser duckweed (*Lemna minor*) occur along the ditch with field horsetail, northern bugleweed, and fringed brome grass occupying the ground cover.
298	SWC3-1	>0	15.5143	white cedar coniferous swamp – Located on north side of Concession 4 Rd.	Coniferous swamp dominated by white cedar with occasional tamarack (*Larix laricina*) and balsam fir (*Abies balsamifera*)
299	CUT1	0	0.4594	Hawthorn cultural thicket – Located north of County Rd 4 along access to Turbine 8.	Thicket dominated by hawthorn and apple trees with occasional large trees such as sugar maple, white ash and white elm along the top of slope. Area is disturbed as it is within active cattle grazing area which has contributed to the limited understory found. Groundcover is limited due to grazing, but some species found include agrimony, common burdock, bull thistle (*Cirsium vulgare*), and wild coffee (*Triosteum aurantiacum*).
300	AGR	0	15.9937	Agricultural field and associated hedgerow	Agricultural Field
301	AGR	0	5.2472	Agricultural field and associated hedgerow	Agricultural Field
302	AGR	0	2.6889	Agricultural field and associated hedgerow	Agricultural Field

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
303	FOC2-2	0	0.6078	White cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
304	CUW1	100	0.7576	Apple cultural woodland	This community was an old orchard. Canopy is dominated by apple (*Malus pumila*) with young white ash *(Fraxinus americana*) and common buckthorn (*Rhamnus cathartica*) colonizing the area.
305	AGR	0	3.5471	Agricultural field and associated hedgerow	Agricultural Field
306	AGR	0	5.5527	Agricultural field and associated hedgerow	Agricultural Field
307	AGR	0	5.5326	Agricultural field and associated hedgerow	Agricultural Field
308	AGR	0	4.3872	Agricultural field and associated hedgerow	Agricultural Field
309	AGR	32	3.8763	Agricultural field and associated hedgerow	Agricultural Field
310	AGR	31	2.2681	Agricultural field and associated hedgerow	Agricultural Field
311	AGR	29	4.0017	Agricultural field and associated hedgerow	Agricultural Field
312	AGR	29	2.9083	Agricultural field and associated hedgerow	Agricultural Field
313	AGR	79	3.4123	Agricultural field and associated hedgerow	Agricultural Field
314	AGR	0	3.213	Agricultural field and associated hedgerow	Agricultural Field

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
315	CUM1-1	0	3.5372	Agricultural field and associated hedgerow	Agricultural Field
316	AGR	>0	6.4260	Agricultural field and associated hedgerow	Agricultural Field
317	AGR	0	10.4276	Agricultural field and associated hedgerow	Agricultural Field
318	AGR	20	8.9086	Agricultural field and associated hedgerow	Agricultural Field
319	R	n/a	1.0875	Residential Area	n/a
320	R	n/a	2.0318	Residential Area	n/a
321	AGR	0	7.1020	Agricultural field and associated hedgerow	Agricultural Field
322	AGR	0	1.1342	Agricultural field and associated hedgerow	Agricultural Field
323	AGR	0	2.8447	Agricultural field and associated hedgerow	Agricultural Field
324	AGR	0	5.9715	Agricultural field and associated hedgerow	Agricultural Field
325	AGR	0	8.7683	Agricultural field and associated hedgerow	Agricultural Field
326	AGR	0	5.5246	Agricultural field and associated hedgerow	wheat
327	AGR	59	4.7274	Agricultural field and associated hedgerow	Agricultural Field
328	R	n/a	1.1463	Residential Area	n/a
329	R	n/a	2.7955	Residential Area	n/a
330	AGR	0	2.1212	Agricultural field and associated hedgerow	Agricultural Field
331	AGR	6	16.1703	Agricultural field and associated hedgerow	Agricultural Field

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
332	AGR	0	4.5337	Agricultural field and associated hedgerow	Agricultural Field
333	AGR	0	4.0247	Agricultural field and associated hedgerow	Agricultural Field
334	AGR	0	5.2337	Agricultural field and associated hedgerow	Agricultural Field
335	AGR	20	2.7102	Agricultural field and associated hedgerow	Agricultural Field
336	AGR		1.8514	Agricultural field and associated hedgerow	Agricultural Field
337	R	n/a	2.3059	Residential Area	n/a
338	AGR	0	3.7231	Agricultural field and associated hedgerow	Agricultural Field
339	AGR	0	5.7944	Agricultural field and associated hedgerow	Agricultural Field
340	AGR	0	4.5683	Agricultural field and associated hedgerow	Agricultural Field
341	AGR	0	5.5333	Agricultural field and associated hedgerow	Agricultural Field
342	AGR	0	9.6966	Agricultural field and associated hedgerow	Agricultural Field
343	AGR	0	1.8928	Agricultural field and associated hedgerow	Agricultural Field
344	AGR	0	4.5317	Agricultural field and associated hedgerow	Agricultural Field
345	AGR	0	7.2559	Agricultural field and associated hedgerow	Agricultural Field
346	AGR	0	6.9065	Agricultural field and associated hedgerow	Agricultural Field

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
347	AGR	0	13.9921	Agricultural field and associated hedgerow	Agricultural Field
348	AGR	0	8.0809	Agricultural field and associated hedgerow	Agricultural Field
349	AGR	0	4.7089	Agricultural field and associated hedgerow	Agricultural Field
350	CUP3-2	0	4.0344	White pine plantation - Located along County Rd 23 and bordering contiguous deciduous forest.	White pine dominates the canopy, with a few sugar maple, trembling aspen, and Scotch pine. The subcanopy includes species like ironwood, white elm, and apple. Species such as alternate-leaved dogwood, common lilac (*Syringa vulgaris*), and dotted hawthorn compose the understory layer. Canada goldenrod, heal-all, cow vetch (*Vicia cracca*), and ox-eye daisy (*Leucanthemum vulgare*) are all found in the ground layer.
351	R	n/a	3.9023	Residential Area	n/a
352	AGR	0	3.2388	Agricultural field and associated hedgerow	Agricultural Field
353	R	n/a	4.3725	Residential Area	n/a
354	R	n/a	3.2317	Residential Area	n/a
355	AGR	0	3.3057	Agricultural field and associated hedgerow	Agricultural Field
356	AGR	0	21.7853	Agricultural field and associated hedgerow	Agricultural Field
357	AGR	3	3.0351	Agricultural field and associated hedgerow	Agricultural Field
358	AGR	0	3.1660	Agricultural field and associated hedgerow	Agricultural Field
359	R	n/a	1.7168	Residential Area	n/a
360	R	n/a	2.1936	Residential Area	n/a

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
361	R	n/a	0.9833	Residential Area	n/a
362	AGR	0	1.2134	Agricultural field and associated hedgerow	Agricultural Field
363	AGR	0	4.3022	Agricultural field and associated hedgerow	Agricultural Field
364	Church	n/a	1.1295	Church	n/a
365	Cemetery	n/a	3.4324	Cemetery	n/a
366	R	n/a	0.2238	Residential Area	n/a
367	R	n/a	0.4146	Residential Area	n/a
368	AGR	0	2.9299	Agricultural field and associated hedgerow	Agricultural Field
369	AGR	0	3.8991	Agricultural field and associated hedgerow	Agricultural Field
370	AGR	0	5.3879	Agricultural field and associated hedgerow	Agricultural Field
371	AGR	0	4.0553	Agricultural field and associated hedgerow	Agricultural Field
372	AGR	0	4.1639	Agricultural field and associated hedgerow	Agricultural Field
373	AGR	0	4.7241	Agricultural field and associated hedgerow	Agricultural Field
374	AGR	0	1.8559	Agricultural field and associated hedgerow	Agricultural Field
375	AGR	0	3.8555	Agricultural field and associated hedgerow	Agricultural Field
376	FOC2-2	0	0.9995	White cedar coniferous forest – Located west of Baptist Church Road, north of County Rd 4.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
377	R	n/a	0.4264	Residential Area	n/a

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
378	FOC2-2	0	2.1469	White cedar coniferous forest – Located east of Baptist Church Road, north of County Rd 4.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
379	R	n/a	0.5072	Residential Area	n/a
380	R	n/a	0.907	Residential Area	n/a
381	CUT1	0	21.3098	Cultural thicket – Located along County Rd 4 west of County Rd 23.	Cultural thicket dominated by low-lying shrubs. Ground cover is dominated by meadow species.
382	SWT2-2	>0	0.5864	Willow swamp thicket – Located south of County Rd 4, west of County Rd 23.	Riparian area dominated by willows and dogwoods. Ash and red maple are common found.
383	R	n/a	3.6835	Residential Area	n/a
384	AGR	0	2.8686	Agricultural field and associated hedgerow	Agricultural Field
385	FOM	25	5.1176	Mixed Deciduous-coniferous Forest	Forest dominated by a mixture of deciduous and coniferous trees typically ashes, maples, cedars and firs.
386	FOM	0	4.4844	Mixed forest – Located north of Concession Rd 4, west of Sideroad 40.	Forest dominated by a mixture of deciduous and coniferous trees typically ashes, maples, cedars and firs.
387	FOC2-2	38	1.4939	White cedar coniferous forest – Located north of Concession Rd 4, west of Sideroad 40. Surrounded by agriculture to the west.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
388	FOC2-2	>120m	1.2818	White cedar coniferous forest - Located east of County Rd 23, and south of County Rd 4.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
389	FOC2-2	>120m	2.6510	White cedar coniferous forest – Located east of County Rd 23, and south of County Rd 4.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
390	FOD5-7	7	0.2142	Sugar maple black cherry deciduous forest – Located south of Concession Rd 4, just west of Turbine 14.	The canopy is dominated by sugar maple and black cherry. The subcanopy layer is composed of species like white ash, and ironwood. This forest has been managed over time, and many trees present are between 10 and 40cm. There is limited to no understory as a result of logging and clearing. Sedges, violets, baneberry (*Actaea* spp.), and trout lily are all common ground layer species here.
391	FOM	58	30.1856	Mixed forest - Located south of Concession Rd 4, northeast of Turbine 14.	Mixed forest dominated by balsam fir with sugar maple, ash and cherry species.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
392	SWT2-2	18	0.2763	Willow swamp thicket – Located south of County Rd 4, and east of County Rd 23. Feature is surrounded by agriculture land.	The community is dominated by willows shrubs, with some red-osier dogwood interspersed. Trees form a minor component - composed of red maple, tamarack, and white elm. Species such as turtlehead (*Chelone glabra*), spotted joe-pye weed, reed-canary grass, sensitive fern, and narrow-leaved cattail (*Typha angustifolia*) can be found amongst the groundcover.
393	CUP3-2	0	6.4040	White pine plantation - Located along County Rd 23.	White pine dominates the canopy, with small numbers of sugar maple, trembling aspen, and Scotch pine. The subcanopy includes species like ironwood, white elm, and apple. Species like alternate-leaved dogwood, common lilac (*Syringa vulgaris*), and dotted hawthorn compose the understory layer. Canada goldenrod, heal-all, cow vetch (*Vicia cracca*), and ox-eye daisy (*Leucanthemum vulgare*) are all found in the ground layer.
394	CUP3-2	0	0.1560	white pine plantation – Located at the intersection of Concession 4 Rd and County Rd 23.	White pine dominates the canopy, with small numbers of sugar maple, trembling aspen, and Scotch pine. Canada goldenrod, heal-all, cow vetch (*Vicia cracca*), and ox-eye daisy (*Leucanthemum vulgare*) are all found in the ground layer.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
395	CUW1	>120m	0.4259	Apple and hawthorn cultural woodland – Located south of County Rd 4, and east of Boot Jack Ranch Road.	Community is disturbed and dominated by apple with other native trees species colonizing post disturbance. Other tree species occupying the canopy include white elm, black cherry, and trembling aspen. This community appears to have been part of an old orchard and is now a transition area between wetland and agricultural. There is limited to no understory however species persisting include hawthorn, choke cherry (*Prunus virginiana*), and raspberry. Species typical of disturbance area found in meadows dominate the ground layer. Species found include grasses (*B. inermis, P. pratense,* and *Dactylis* glomerata), while agrimony, wild carrot (*Daucus carota*), strawberry (*Fragaria virginiana*), and ribgrass.
396	FOC2-2	0	2.0478	White cedar coniferous forest – Located at the southeast corner of the intersection of Southline and Boot Jack Ranch Road.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
397	MAM2	21	0.8657	Meadow marsh – Located north of County Rd 4, west of turbine 8 access rd.	Mineral meadow marsh
398	CUP3-2	0	3.4683	white pine plantation - Located north of County Rd 4, west of turbine 8 access rd.	White pine dominates the canopy, with small numbers of sugar maple, trembling aspen, and Scotch pine.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
399	MAM2-10	>0	0.3743	forb mineral deciduous swamp - Located on south side of Southline, bordering road and west of Sideroad 50. Surrounded by agricultural land, feature extends to north side of road to unit 257.	Wetland dominated by forb species such as spotted joe-pye weed (*Eupatorium maculatum var. maculatum*), buttercup (Ranunculus spp.), lance leaved goldenrod (*Euthamia graminifolia*), ferns and sedges (*Scirpus atrovirens, Carex vulpinoidea*) and grasses (*Phalaris arundinacea, Leersia oryzoide*s).
400	SWD3-1	>0	3.0562	red maple deciduous swamp - Located on south side of Southline, bordering road and west of Sideroad 50.	Canopy is dominated by red maple. The understory has occasional red-osier dogwood, narrow-leaved cattail, and white cedar. Lake-bank sedge (*Carex lacustris*) dominates the groundcover, followed by an abundance of Bebb's willow (*Salix bebbiana*), spotted joe-pye weed, and reed-canary grass.
401	FOC2-2	0	0.1223	white cedar coniferous forest - Located on north side of Southline, bordering road and west of Sideroad 50. Borders onto wetland areas.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
402	FOC2-2	0	0.2794	White cedar coniferous forest – Located on south side of Southline, bordering road and west of Sideroad 50.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
403	FOD5	0	35.3247	Sugar maple deciduous forest – Located along County Rd 23.	Sugar maple dominates the canopy with white ash, black cherry and few basswood, beech, and ironwood interspersed. White spruce, apple, and downy hawthorn reach into the subcanopy while alternate-leaved dogwood dominates the understory. Choke cherry and Tartarian honeysuckle are also found in lower number in the understory. The groundcover layer includes species like strawberry, trout lily, herb-robert, and sedges.
404	FOC2-2	0	6.8988	White cedar coniferous forest – Upland plantation bordering Concession 4 Rd and Saugeen Creek.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
405	FOC2-2	0	3.9565	White cedar coniferous forest - – Located on south side of Concession 4 Rd at intersection with Sideroad 40.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
406	FOC2-2	0	1.7111	White cedar coniferous forest - – Located on northeast side of Concession 4 Rd at intersection with Sideroad 40.	The forest canopy is dominated by white cedar. Few trembling aspen, white elm and black cherry are dispersed through the subcanopy. Alder-leaved buckthorn and thimbleberry (*Rubus occidentalis*) can be found within the understory. Ground cover is very limited in this community, with goutweed (*Aegopodium podagraria*) one species noted.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
407	CUW1	0	2.9536	White cedar and apple cultural woodland – Located on south side of Concession 4 Rd and bordered by coniferous forest (FOC2-3).	This early succession community has little canopy cover, with some white elm and sugar maple. Subcanopy includes red ash, Scotch pine, dotted hawthorn, and apples. The understory here is dominated by white cedar, with a few pussy willows and red-osier dogwood. Groundcover species include grasses (*Poa pratense, P. pratense, D. glomerata*), common milkweed, ribgrass, cow vetch, and Canada goldenrod.
408	FOC2-2	0	114.0536	white cedar coniferous forest – Located on south side of Concession 4 Rd.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
409	CUP3-2/3	0	2.0834	White and scotch pine plantation - Located on south side of Concession 4 Rd and has tributary features associated.	This is a disturbed area with conifers planted irregularly throughout. Moist pockets are scattered throughout. Canopy species include white spruce, Scotch pine, and white cedar. A few trembling aspen and balsam poplar extend through the canopy and subcanopy. The understory is minimal, but ground species include an abundance of reed-canary grass within moist areas, as well as occasional goldenrods, awnless brome grass, and ribgrass.
410	SWC3-1	>0	0.5288	White cedar coniferous swamp – Located north along Concession 4 Road. Included within the Black Wetland Complex.	Coniferous swamp dominated by white cedar with occasional tamarack (*Larix laricina*) and balsam fir (*Abies balsamifera*)

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
411	SWD3-1	>0	0.0921	Red maple deciduous swamp – Located at the southeast corner of the intersection at Boot Jack Ranch Road and Southline.	Red maple is the dominant species within the canopy layer. Understory species include slender willow, chokeberry, and narrow-leaved cattail. Common milkweed, spotted joe-pye weed, timothy grass, and water parsnip join reed-canary grass as the dominant species within the groundcover.
412	FOC2-2	7	0.1832	White cedar coniferous forest – Located at the northwest corner of the intersection of Southline and Boot Jack Ranch Road.	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
413	SWD3-1	>0	12.70	Red maple deciduous swamp – Located at the northwest corner of the intersection at Boot Jack Ranch Road and Southline. Bordered to the north by agriculture.	Red maple is the dominant species within the canopy layer. Understory species include slender willow, chokeberry, and narrow-leaved cattail. Common milkweed, spotted joe-pye weed, timothy grass, and water parsnip join reed-canary grass as the dominant species within the groundcover.
414	OAO	42	0.0593	open aquatic - dugout pond	Dugout pond bordered by agricultural field and residential area.
415	OAO	98	0.0237	open aquatic - dugout pond	Dugout pond used for recreation by landowner. Surrounded by manicured lawn.
416	OAO	62	0.1024	open aquatic - dugout pond	Dugout pond used for recreation by landowner. Surrounded by manicured lawn.
417	FOC2-2	74	2.0436	white cedar mineral coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
418	FOD5	55	41.2615	Sugar maple deciduous forest	Sugar maple dominates the canopy of this deciduous forest. Small inclusion of white cedars in the north corner of the community. White ash, black cherry, and white elm are also occasional within the canopy.
419	R	n/a	0.6095	Residential Area	n/a
420	CUM1-1	89	2.0624	Cultural meadow	Few white cedar found in the canopy and sub canopy. Typical meadow grasses, herbs, and non-native herbaceous plants are found in the groundcover layer.
421	FOC2-2	87	2.0562	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
422	FOD5	110	18.9825	Sugar maple deciduous forest	This community is dominated by sugar maple within the canopy and subcanopy. Understory is sparse, with some alternate-leaved dogwood and raspberry shrubs. Typical dry-fresh upland herbaceous plants are found on the ground layer. A few white cedar are found scattered in the south corner of the community
423	CUM1-1	0	1.5164	Cultural meadow	Few white cedars are found in the canopy and subcanopy. Typical meadow grasses, herbs, and non-native herbaceous plants are found in the groundcover layer. An unpaved dirt road transects the community in the north half.
424	R	n/a	3.0307	Residential Area	n/a

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
425	SWD4	65	5.2060	balsam poplar deciduous swamp	This community is directly adjacent to the Saugeen Creek and is dominated by balsam poplar. White cedar and balsam fir are scattered within. Typical swamp species like ferns, sedges, and grasses dominate the ground layer as well.
426	FOC2-2	0	9.8293	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
427	R	n/a	1.7400	Residential Area	n/a
428	R	n/a	1.0771	Residential Area	n/a
429	R	n/a	1.0249	Residential Area	n/a
430	R	n/a	1.0892	Residential Area	n/a
431	R	n/a	1.4718	Residential Area	n/a
432	R	n/a	1.2254	Residential Area	n/a
433	R	n/a	2.7043	Residential Area	n/a
434	R	n/a	1.4385	Residential Area	n/a
435	FOD5	19	13.0261	Sugar maple deciduous forest	This community is dominated by sugar maple within the canopy and subcanopy. Understory is sparse, with some alternate-leaved dogwood and raspberry shrubs. Typical dry-fresh upland herbaceous plants are found on the ground layer. A few white cedar are found scattered in the south corner of the community
436	R	n/a	0.8909	Residential Area	n/a
437	FOC2-2	55	7.7161	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
438	FOC2-2	13	2.7842	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
439	R	n/a	0.2509	Residential Area	n/a
440	R	n/a	0.6236	Residential Area	n/a
441	SWT2	84	0.3086	mineral swamp thicket	Dominated by shrubs, likely willow and dogwood within understory layer.
442	FOC2-2	47	5.5162	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
443	CUW1	30	0.3824	cultural woodland	This community has white ash within the canopy, subcanopy, as well as understory. Hawthorn is also found alongside apple and a few white cedars within the understory. Species found within the groundcover layer include common yarrow, black knapweed, wild carrot, and cow vetch.
444	SWT2-2	89	0.6655	willow swamp thicket – Located on north side of Concession 4 Rd.	The community is dominated by willows shrubs, with some red-osier dogwood interspersed. Trees form a minor component - composed of red maple, tamarack, and white elm. Species such as turtlehead (*Chelone glabra*), spotted joe-pye weed, reed-canary grass, sensitive fern, and narrow-leaved cattail (*Typha angustifolia*) can be found amongst the groundcover.

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
445	MAM2	115	0.4649	reed-canary grass mineral meadow marsh	Assessed through aerial imagery – no detailed composition available.
446	MAS	118	0.1262	shallow marsh	Assessed through aerial imagery – no detailed composition available.
447	R	n/a	2.4120	Residential Area	n/a
448	R	0	0.4310	Residential Area	n/a
449	SWM1	83	52.1754	white cedar mineral mixed swamp	White cedar is dominant through the canopy, and abundant in sub canopy. Black ash, red maple, and balsam fir are also abundant tree species within the canopy. Ground species include grasses, sedges, and various herbs.
450	R	n/a	1.2751	Residential Area	n/a
451	AGR	>120	3.9856	Agricultural field and associated hedgerow	n/a
452	AGR	>120	6.9931	Agricultural field and associated hedgerow	n/a
453	MAS2-9	>120	9.10	Forb mineral shallow marsh	This shallow marsh is dominated by emergent plants including grasses, sedges (*Scirpus* sp., *Cyperaceae* sp.), and broad-leaved cattails. Some coniferous trees (dead and alive) are found along the north edge of the community.
454	OAO	>120	2.37	Open water aquatic	This wetland feature is dominated by floating aquatic plants like water lilies (*Nymphaea odorata, Nuphar variegata*), coontail (*Ceratophyllum demersum*), and watermilfoil (*Myriophyllum* sp.)

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
455	SWD3-1	>120	10.197614	Red maple mineral deciduous swamp	Red maple represents the dominant species type within the canopy, with sugar maple, balsam fir, and black ash found in a lesser extent. Dogwood (*Cornus* spp.) occurs occasionally within the understory. Sedges, fowl meadow grass (*Poa palustris*), and jewelweed were common groundcover species.
456	FOC2-2	>120	6.7170	white cedar coniferous forest	Forest dominated by eastern white cedar often the result of secondary growth from managed sites. Canopy cover varies from no understory or ground cover to meadow species dominating within the gaps.
457	SWM1-1	>120	19.5190	white cedar-hardwood mixed swamp	White cedar is common through the canopy, and in the sub canopy. Black ash, red maple, and balsam fir are also abundant tree species within the canopy. Ground species include grasses, sedges, and various herbs.
458	FOM2	>0	5.73	Scotch pine and sugar maple mixed forest	Scotch pine mixed forest that contains occasional black cherry and sugar maples within the canopy gaps. Some areas demonstrating transition between cultural plantation and deciduous forest. Southeast edge borders onto Beaver Meadow PSW.
459	FOC2	60	0.40	Coniferous forest	n/a
460	FOC2	97	0.45	Coniferous forest	n/a

APPENDIX C
QUALIFICATIONS

Allison Featherstone, B.Sc.
Senior Planning Ecologist, Assistant Manager

EDUCATION

1997	Bachelor of Science (B.Sc.), University of Guelph, Guelph, Ontario – Honours Specialization in Marine Biology.

PROFESSIONAL EXPERIENCE

June 2003 to present	Planning Ecologist, LGL Limited, Cambridge, Ontario
2001	Biologist and Consultant - Vancouver Aquarium Marine Science Centre, Vancouver, British Columbia
1998 - 2001	Zoologist - Greater Vancouver Zoo, Aldergrove, British Columbia
1997	Biologist - United States Fish and Wildlife Service, Homestead, Florida
1995 - 1997	Biologist and Naturalist – Halton Region Conservation Authority, Campbellville, Ontario
1996 - 1997	Biologist and Naturalist - NEST Inc., Eden Mills, Ontario
1994 - 1996	Biologist and Junior Naturalist Coordinator - The Arboretum, Guelph, Ontario
1991-1994	Biologist – University of Guelph Marine Annex
1990 - 1991	Environmental Technician - Conestoga Rovers and Associates Ltd., Waterloo, Ontario

VOLUNTEER EXPERIENCE

February 2006 to present	Ecological and Environmental Advisory Committee, Region of Waterloo

PROFILE

Since joining LGL in June 2003, she has been involved with natural heritage investigations in support of Environmental Assessments for sewer, water and transportation projects, Renewable Energy Projects, Comprehensive Broad Scale Environmental Studies and Environmental Impact Statements. She has participated in benthic and fisheries collections, wildlife monitoring, tree surveys and wildlife habitat assessments for amphibians including Jefferson salamander. She has coordinated one of the largest Jefferson salamander studies to date in the Province and possibly the range of the species, in order to address the requirements of the Endangered Species Act, 2007. Ms. Featherstone's role is to work as the project ecologist/biologist to provide a consolidated view of environmental sensitivities for a project and to work through project issues with the project team and approval agencies. Her experience as project manager and as part of a natural science team includes planning, investigating and preparing environmental impact studies, natural sciences reports, management plans, tree preservation plans and environmental inspection reports, permitting issues, including the determination of environmental constraints, development of monitoring strategies, recommendation of mitigation measures and attendance at public consultation centres for many projects.

PROJECT EXPERIENCE

Environmental Assessments (Highlighted Projects)

- Project Biologist for Burloak Water Purification Plant Class EA and Gore Bay Water Treatment Plant Class EA, involving assessment of fisheries habitats and terrestrial constraints for siting of water treatment plants and intake pipes into Lake Ontario and Lake Huron respectively.
- Project Biologist for Permit to Take Water 16th Avenue Trunk Sewer Phase 2 involving a detailed natural heritage environmental assessment based on secondary information, field investigations, and environmental monitoring of fisheries and terrestrial impacts.
- Project Biologist for Duffins Creek WPCP Upgrade EA, assessing the expansion of the plant.
- Project Biologist for the Oshawa WTP Upgrade and Expansion, involving the assessment of the expansion on the terrestrial and wetland features.
- Project Biologist for the 16th Ave Yong to McCowan Class EA, involving assessing the impacts relating to road improvements.
- Project Biologist for the South Kitchener Transportation Study Class EA, involving the assessment of transportation options, including detailed amphibian surveys.

- Project Biologist for Etobicoke Creek Sanitary Sewer Replacement, involving assessment of a sewermain replacement within the Etobicoke Creek floodplain.
- Project Biologist for Proprietary Wind Farm Project, involving screening of Natural Heritage Features at a broad environmental scale as well as a Bat Screening Assessment for determination of field efforts for pre-construction monitoring.
- Project Biologist for the Guelph Waste Water Treatment Plant involving a comprehensive benthic invertebrate investigation, which included the collection of benthic invertebrates, habitat information and detailed assessment of outfall, including the collection of data to satisfy the Ontario Benthos Biomonitoring Network protocol.
- Project Biologist for the Corner Brook Water Treatment Plant Upgrade EA and CEAA screening, involving a detailed desktop investigation of Natural Heritage Features.
- Project Biologist for a 4th Propriety Wind Farm Project, involving the completion of the Natural Heritage Review, field investigations, public and first nation's consultation to satisfy the new Green Energy Act and other project requirements.
- Project Biologist for the Grand and Nith River Water Quality Monitoring Program participating in the extensive benthic invertebrate sampling and water quality sampling portion of the project.
- Project Biologist for the River Road Extension Class EA, a transportation corridor project involving a complex Species at Risk permitting application under the Endangered Species Act, 2007.
- Project Biologist and coordinator for the Toronto Basement Flooding project, which is a large and complex project that involves assessing various flooding salutations at a large scale and small scale within a large geographic area.
- Project Biologist and coordinator for the Zone 1 and Zone 3 Burlington Oakville Interconnecting Watermains EAs (two separate EAs) involving a detailed and extensive program in support of the potential watermain crossing of Bronte Creek.

Comprehensive Environmental Studies, Environmental Impact Studies and Detailed Design (Highlighted Projects)

- Project Biologist for the Rockfort Quarry, proposed quarry application by James Dick Construction, involving detailed amphibian surveys.
- Project Biologist for Old Major Mackenzie Drive Fill Violation involving the preparation, approval, and implementation of a restoration plan as a result of a fill violation of TRCA policies along the Humber River valley.
- Project Biologist for the Etobicoke Creek Trunk Sewer Detailed Design which involved a detailed tree and vegetation survey and coordination with TRCA regarding their Habitat Implementation Programs for restoration of natural areas.
- Project Biologist and Project Manager for the Conestoga College Master Plan Environmental Impact Study for the new Cambridge Campus location.
- Project Biologist for the Credit Valley Trunk Sewer Rehabilitation Detailed Design involving the detailed assessment of impacts to natural heritage features within the Credit Valley River corridor.
- Project Biologist and Project Manager for the Brampton Christian School Natural Heritage Evaluation in support of the school expansion on table land adjacent the Etobicoke Creek valley in Brampton.

CERTIFICATIONS

2009	First Aid, Level I
1993	Sport SCUBA Diver – ACUC and NAUI Certification

Lynette Renzetti, B.Ed., B.Sc.
Planning Ecologist

EDUCATION

1991	Bachelor of Education (B.Ed.), University of Western Ontario, London, Ontario
1989	Bachelor of Science (B.Sc.Hons.), Biology – Environmental Sciences, Trent University, Peterborough, Ontario

PROFESSIONAL EXPERIENCE

2009 to present	Aquatic Biologist, LGL Limited, Cambridge, Ontario
	2007 - 2009 McNeil Consumer Healthcare, Guelph, Ontario
2003 - 2009	Self Employed, Guelph, Ontario
2006 - 2007	University of Guelph, Laboratory Services, Guelph, Ontario
2003 - 2004	Teacher, Upper Grand District School Board, Guelph, Ontario
1993 - 2001	Teacher, Abbotsford District School Board, Abbotsford, British Columbia
1995	Lab Supervisor, Kwantlen University College, Surrey, BC
1991 - 1993	Teacher, Academia Inter Americana, Guayaquil, Ecuador
1989-1991	Research Technician and Teaching Assistant, Trent University, Department of Biology, Limnology, Department of Environmental Science
1987 - 1989	Environmental Investigator, Ministry of the Environment

PROFILE

Ms Renzetti's work in the field of aquatic biology began in 1987 and has included field sampling, lab analysis, benthos identification, and limnological research. Lynette began her career in environmental science conducting research to investigate the role of feeding patterns on the uptake of heavy metals by benthic invertebrates. During this time she worked as an instructor teaching water quality field techniques at the post secondary level. As a field investigator with the MOE Lynette collected and analyzed water quality data on the Trent Severn waterway, investigated the effects of fish farming on stream water quality, and reported on the effects of pulp and paper effluent on the life history of benthos. Ms. Renzetti has dedicated many years to teaching environmental science and ecology at both the secondary and post secondary levels, within Canada and abroad. More recently, Lynette has worked in quality controlled manufacturing and laboratory testing environments writing and reviewing SOPs and working with Quality Management Plans. Since 2003 Lynette has acted as the benthos specialist for LGL Ltd. environmental research associates on several projects related to environmental assessment and joined the staff at LGL on a full time basis in 2009.

PROJECT EXPERIENCE

Renewable Energy Projects

- Natural Heritage Assessment for East Durham Wind Power
- Watercourse characterization and Water Body Report for Conestogo Wind Farm

Wastewater Water Quality Studies

- Surface Water Quality Monitoring Program for the Grand and Nith Rivers – Region of Waterloo
- Duffin Creek Water Pollution Control Plant EA – Regions of Durham and York

Invertebrate Studies

- Goderich Harbour Wharf Expansion EA – Goderich Port Management Corporation
- Earthworm Density Study, Detroit International River Crossing – Ministry of Transportation
- Biomonitoring of Wastewater Effluent Discharge on the Speed River – City of Guelph
- Grand and Nith River Biomonitoring – Region of Waterloo
- 16th Avenue Biomonitoring Program
- Nottawasaga River Biomonitoring Program

CERTIFICATIONS

2012 Standard First Aid and CPR (renewed annually)
2010 Swift Water Training, Access Rescue
2010 Working on Ice Safety Program, Access Rescue
2010 OBBN Benthos Identification Certificate, Ministry of the Environment
2010 Class 2 Backpack Electrofishing Certificate, Ministry of Natural Resources
2010 Ontario Stream Assessment Protocol, Ministry of Natural Resources

SELECTED TECHNICAL PAPERS AND REPORTS

2010 L.K. Renzetti, D.T. Summach, J.A. Fausto, and J.R. Bicudo. Surface Water Quality Monitoring Program on the Grand, Speed and Nith Rivers. Influents. Volume 5, Winter 2010
2010 Bicudo, J.R., Perrone, J., Anderson, M., Robertson, S., Summach, D. and L. Renzetti. A 'Grand' Challenge. Water Environment & Technology. November 2010
2009 Fausto, A., D. Summach, L. Renzetti. Surface Water Quality Monitoring Program for the Grand and Nith Rivers: Monitoring Reports. Prepared for the Region of Waterloo.
1991 Bigelow, Lynette, K. and David C. Lasenby. "Particle Size Selection in Cadmium Uptake by the Opossum Shrimp, *Mysis relicta*". Bulletin of Environmental Contamination and Toxicology (47):790-796.

CONFERENCES AND WORKSHOPS

2011 A.D. Latornell Conservation Symposium, Alliston, Ontario
2011 Water Environment Association of Ontario, Toronto Ontario; presenter
2010 Ontario Benthos Biomonitoring Network Identification Course, Oshawa, Ontario
2010 Ontario Stream Assessment Protocol Course, Oshawa, Ontario
2009 Grand River Watershed Conference, GRCA, Cambridge, Ontario

Jennifer Noël, M.Sc.
Botanist, ISA Certified Arborist, Butternut Health Assessor

EDUCATION

2004	Master of Science (M.Sc.), Watershed Ecosystem Graduate Program, Environmental Science, Trent University, Peterborough, Ontario
2000	Bachelor of Science Honours Conservation and Restoration Ecology Laurentian University, Sudbury, Ontario
2000	Certificate in Environmental Biology Laurentian University, Sudbury, Ontario

PROFESSIONAL EXPERIENCE

Present	Botanist, and ISA Certified Arborist, LGL Limited, Cambridge, Ontario
2006	Ecologist, Watershed Management Ecology, Milton, Ontario
2005	Terrestrial Monitoring Assistant, Credit Valley Conservation, Mississauga, Ontario
2005	Data Manager, Ontario Soybean Growers, Guelph, Ontario
2004	Class Two Electrofishing Instructor, MRN Nipigon, Ontario
2004	Fisheries Research Technician, Trout Unlimited, Guelph, Ontario
2001-04	Graduate Teaching Assistant, Trent University, Peterborough, Ontario
2001	Biological Science Technician (Botany), USGS, Corvallis, Oregon
2001	Biology Research Assistant, MNR Fish Co-op Unit Sudbury, Ontario
1998-2001	Biology Research Assistant, Laurentian University, Sudbury, Ontario
1997	Field Technician, Ecological Service Group for Planning, Timmins

PROFILE

Jennifer Noël joined LGL's Cambridge Office in 2006, after 10 years of experience working for various stakeholders which include educational institutions, government agencies, conservation authorities, non profit organizations and the private sector. She has participated in a variety of projects including due diligence surveys, environmental impact studies, class environmental assessments, tree health assessments, hazard tree assessments, species at risk surveys, butternut health assessments, wetland identification and delineation, biodiversity assessments and natural heritage investigations. Ms. Noël has extensive experience in field sampling and analysis of aquatic and terrestrial ecosystems using a wide range of sampling gear such as seine nets, electrofishing gear, flow gauge, pH meters, conductivity meter and various plot sampling devices. Ms. Noël is certified in electrofishing, ecological monitoring and land classification (ELC), Ontario Wetland Evaluation System (OWES), tree assessments (ISA), butternut health assessment (BHA) and is familiar with the identification of aquatic and terrestrial plant, fish, and amphibians in Ontario. Ms. Noël has experience with project management, design and monitoring. She is fluent in both English and French.

PROJECT EXPERIENCE

Transportation Planning

- Bathurst Street Road Extension Green Lane Northerly to Yonge Street - Detail Design Class EA, York Region
- Bathurst Street Widening from Highway 7 to Teston Road – Detail Design, Town of Richmond Hill
- Bolton Arterial Road King Street to Highway 50 – EIS Regional Municipality of Peel
- Highway 50 from Castlemore Road to Mayfield Road –NHR Schedule C Class EA, York Region
- Detroit River International Crossing – Species at Risk Survey, Windsor

Species at Risk

- Bathurst Street Road Extension – Butternut Assessment and Permit Application, York Region
- Evergreen EIS – Butternut Screening and Assessment, Burlington
- Piller EIS – Butternut Screening and Assessment, Fort Erie
- Ipperwash Species at Risk Screening surrounding unexploded ordinance; bluehearts, American ginseng, heart-leaved plantain, goldenseal, butternut, dwarf hackberry, and spike blazing star
- Central Avenue EIS – Butternut Screening and Permit Application, Grimsby
- Highland Gardens Water Reservoir – Butternut Assessment and Permit Application, Hamilton
- Strasburg Road – salamander surveys, Kitchener
- DRIC – Species at Risk Surveys: spike blazing star, butternut, Kentucky coffee tree, willow leaf aster, colic-root, butternut, fox snake, butler garter snake, Windsor
- Meaford LFTC – Butternut, American Ginseng, Heart's-tongue fern, Meaford
- Bronte Creek Interconnecting Watermain- butternut, eastern flowering dogwood, Burlington

Biodiversity

- Belledune Risk Assessment New Brunswick
- Biodiversity Assessment of Xstrata's Mines 12 and 6. New Brunswick
- Vegetation Stress Analysis using NDVI of Xstrata's Mine 12. New Brunswick

Municipal infrastructure

- Lornewood Creek Sewer Replacement – Schedule C Class EA
- Highland Gardens Water Reservoir Improvements – Detail Design Class EA
- Coatsworth Cut CSO and Stormwater Outfalls Control in the City of Toronto– Preliminary Assessment Schedule "C" Class EA
- Watermain improvements EIS Meadowvale Pumping Station to Mill Creek Drive Mississauga - Natural Heritage Report
- Bronte Creek Interconnecting Watermain- Tree survey, Restoration Plan Recommendations and SAR Screening , Burlington

Arborist Tree Assessments

- Toronto Basement Flooding - Toronto
- Bronte Creek Interconnecting Watermain – Burlington
- Bathurst Street – Toronto, York Region
- D'Arcy Street to Gerard Tree Inventory for watermain – Toronto
- Tree inventory and Appraisal plan of subdivision - Beaton

Fisheries/Wildlife Biology Studies

- Deer survey - Meaford
- Fisheries investigation Highway 11 Frederick House and Kendal River Bridge –Cochrane.
- Amphibian surveys – Kitchener

Wetlands

- Jocic wetland delineation – Township of West Lincoln
- Conestoga College wetland delineation – Kitchener
- Conservation Halton wetland verification – Milton
- Windsor significant wetland evaluation - Windsor
- Rockfort wetland photo monitoring – Credit Valley Watershed
- Pine Ridge wetland photo monitoring – Milton

- Conservation Estates photo monitoring - Guelph
- Dolphin wetland impact and restoration – Georgina
- Shaver Road wetland delineation – Ancaster

CERTIFICATES

2010	ISA Hazard Tree Assessment Workshop, Toronto, Ontario
2009	ISA Certified Arborist, Gormley, Ontario
2008	Ontario Wetland Evaluation System, North Bay, Ontario
	Butternut Health Assessment Workshop, Burlington, Ontario
2007	Ecological Land Classification for Southern Ontario, Turkey Point, Ontario.
2005	Ecological Monitoring Assessment Network, Turkey Point, Ontario.

SELECTED TECHNICAL PAPERS AND REPORTS

2004	Noël, J. Growth, reproduction and control of an invasive aquatic plant, Cabomba caroliniana in Kasshabog Lake, Ontario and its potential dispersal. M.Sc. Thesis, Trent University, Peterborough, ON. 89 pp.
2000	Noël, J. Killarney sinkhole bog, a wetland investigation. B.Sc. Thesis, Sudbury, Laurentian University, ON 43 pp.

CONFERENCES AND WORKSHOPS

May 2008	Butternut Health Assessment Workshop, Burlington, Ontario
June 2008	Sedges Workshop, RBG, Burlington, Ontario
May 2009	Grasses Workshop, University of Guelph, Ontario
July 2009	Wetland Plant Identification Course, Guelph, Ontario

Karen Chung, B.Sc., G.I.S. Cert.
GIS Analyst

EDUCATION

2007-2008 Postgraduate Certificate in GIS – Applications Specialist, Sir Sanford Fleming College
2003-2007 B.Sc.(Honours) in Biology, Queen's University

PROFESSIONAL EXPERIENCE

2008-present GIS Analyst
LGL Limited, Cambridge, Ontario

Mapping and Geospatial Data Processing

Provides mapping for reports and field programs for a variety of projects. Routine tasks include:

- georeferencing and mosiacing air photo
- digitizing
- ELC mapping
- constraints mapping
- mapping and processing Land Information Warehouse (LIO) warehouse data and MNR data
- mapping and processing Natural Heritage Information Centre (NHIC) natural heritage areas and at risk species data
- mapping and processing Forest Resource Inventory (FRI) data
- deriving secondary attributes from data
- area and length calculations for spatial features
- querying and classification of spatial data

GIS Analysis

Grand & Nith Rivers Surface Water Quality Monitoring Program, Region of Waterloo

- subwatershed delineation using Digital Elevation Model (DEM)

Gowganda Surface Water Sampling, BacTech Mining Corp

- subwatershed delineation using Digital Elevation Model (DEM)
- habitat screening for selected at risk species

Xstrata Little River Surface Water Aquatic Assessment, Task A 2009 Field Work, Xstrata Zinc Canada

- subwatershed delineation using Digital Elevation Model (DEM)
- land cover and vegetation analysis

Xstrata Biodiversity Assessment, Xstrata Zinc Canada

- derived Normalized Difference Vegetative Index (NDVI) with Landsat imagery
- involved with development of a model to assess biodiversity based on forest habitat structure and composition around mine sites
- created a workflow for the model in ArcGIS model builder
- created raster surfaces of benthic invertebrate diversity by interpolating values at sampling stations

Database Design and Management

Grand & Nith Rivers Surface Water Quality Monitoring Program, Region of Waterloo

- designed database structure
- processed field sampling data for input into database

Cobalt – Chemical & Biological Study to Assess the Receiving Waters, Ministry of Northern Development and Mines

- designed database structure
- processed historical data for input into database

Xstrata Little River Surface Water Aquatic Assessment, Task A 2009 Field Work, Xstrata Zinc Canada
- designed database structure
- processed historical data for input into database

Xstrata Biodiversity Assessment, Xstrata Zinc Canada
- designed six databases to store biodiversity data for six mine sites across Canada
- processed historical data for input into databases
- programmed customized functions in the databases with VBA

Programming and Customization

Routinely creates scripts and codes to perform customized functions and to simplify workflow for mapping and querying
- linear interpolation tool with ArcObjects for interpolating parameter values between sampling stations. This tool was also used in several projects involving water quality sampling.

CERTIFICATES

ESRI Virtual Campus Training

Aug 2009	Creating and Integrating Data for Natural Resource Applicationsl
Jul 2009	Learning ArcGIS 3D Analyst
Jun 2009	Georeferencing Rasters in ArcGIS
Dec 2008	Customizing ArcGIS Desktop (for ArcGIS 9.0-9.1)
Oct 2008	Learning ArcGIS Spatial Analyst (for ArcGIS Spatial Analyst 9.0-9.1)
Jul 2008	Creating, Editing, and Managing Geodatabases for ArcGIS Desktop
Jul 2008	Using CASE Tools (for ArcEditor and ArcInfo)
Feb 2008	Geoprocessing with ArcGIS Desktop (for ArcGIS 9.0-9.1)
Feb 2008	Introduction to ArcGIS 9 Geostatistical Analyst
Feb 2008	Learning ArcGIS Desktop (for ArcGIS 9.0-9.1)
Jan 2008	Understanding Map Projections and Coordinate Systems
Oct 2007	Basics of the Geodatabase Data Model

Victoria Kennedy, B.Sc.
Field Biologist, Botanist

EDUCATION

2010	Plant Identification and Arboriculture, Sustainable Landscapes Certificate program, Office of Open Learning, University of Guelph, Ontario
2007	Bachelor of Science (Honours), Environmental Science, York University, Ontario
2007	Certificate in Geographic Information Systems and Remote Sensing, York University, Ontario

PROFESSIONAL EXPERIENCE

Present	LGL Limited, Ecologist, Burlington, Ontario
2008-2010	AGAT Laboratories, Sample Coordinator Logistics, Mississauga, Ontario
2006	York University, Biological Field Assistant, Toronto, Ontario

PROJECT EXPERIENCE

Species at Risk

- Ipperwash Biological Investigation, Lambton County - surrounding unexploded ordinance, species at risk survey and mitigation; Bluehearts, American Ginseng, Heart-leaved Plantain, Goldenseal, Butternut, Dwarf Hackberry, Acadian Flycatcher, and Eastern Hog-nose Snake.
- Detroit River International Crossing, Windsor - Species at Risk Surveys: spike blazing star, butternut, Kentucky coffee tree, willow leaf aster, colic-root, butternut, fox snake, butler garter snake.
- Evergreen EIS - Butternut Screening and Assessment, Burlington
- Piller EIS - Butternut Screening and Assessment, Fort Erie

Botany

- Basement Flooding, Toronto - Arborist assessments and reporting
- Bronte Creek Interconnecting Watermain, Burlington - Arborist and vegetation survey
- Hanlan Feedermain, Mississauga – Arborist survey
- Bolton Aterial Road King Street to Highway 50, Bolton - Tree survey
- Milton Phase III Arborist Report, Milton
- Milton Local Long-term Monitoring Plan, Milton – Vegetation survey

Wildlife

- Halton Biosolids Pond Berm Assessment, Halton – Muskrat damage surveys
- New Oakville Hospital Biological Studies, Oakville – Breeding bird survey
- Strasburg Road Extension, Kitchener – Salamander survey
- Chaplin YMCA, Cambridge – Breeding bird surveys and point counts
- Conestogo Wind Farm, Grey County – Significant wildlife habitat assessment
- Burnhamthorpe Road, Oakville – Frog and breeding bird surveys
- Upper Middle Road, Oakville – Frog and breeding bird surveys
- East Durham Wind Farm Natural Heritage Assessment, Wellington County – Wildlife survey

GIS

- Henvey Inlet Wind Farm – Wetland delineation and polygon digitizing
- Yonge Street EIS, Toronto – Historical woodlot comparisons, ELC digitizing
- Bronte Creek Interconnecting Watermain, Burlington – Vegetation and restoration zone mapping
- Alloa Feedermain, Brampton – Mapping and processing Natural Heritage Information Centre (NHIC) natural heritage areas and species at risk data, and fish habitat and vegetation mapping

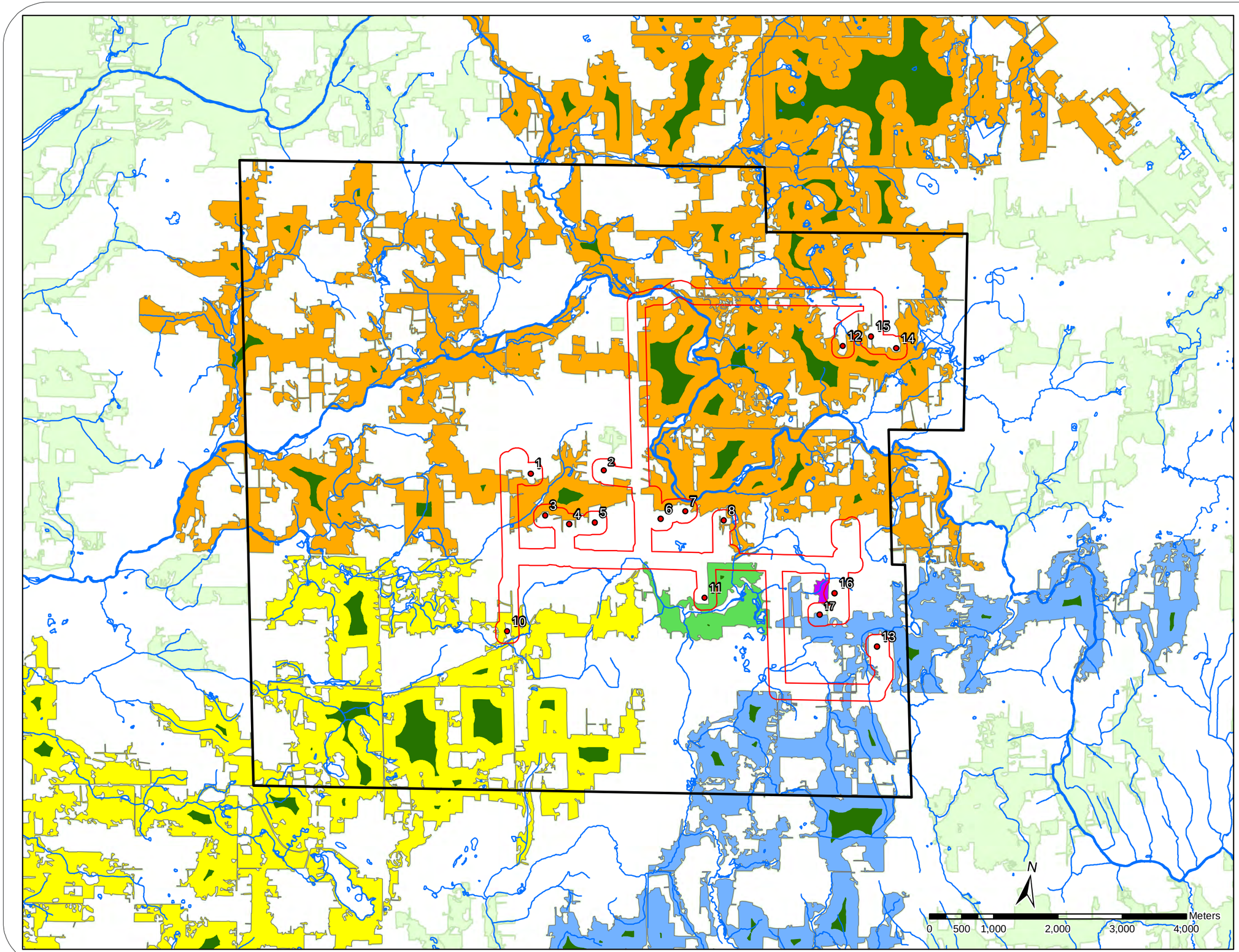
Additional Projects

- Grand and Nith River Long-Term Water Monitoring – Surface water sampling

CERTIFICATES

2007	Certificate in Geographic Information Systems and Remote Sensing
2012	Working on Ice Safety Training Certificate
2012	Class II Electrofishing Certification
2012	Ecological Land Classification Certification

APPENDIX D
SITE INVESTIGATION RESULTS



LEGEND

Site Plan (2012-08-15)

- Turbine
- 120m Buffer from All Project Components
- Project Boundary (Dec 2011)

Woodlands

- WO-01
- WO-02
- WO-03
- WO-04
- WO-05
- 2011 Feb Woodlands Feb (County of Grey, 2011-08-02)
- Deep Interior Habitat (200m from Edge)

East Durham Wind Farm Deep Interior Habitat

LGL LIMITED
environmental research associates

Project	TA8119	**Figure**	
Date	September, 2012	**Prepared By:**	KC
Scale	1:57,000	**Verified By:**	LKR

Wildlife Habitat Type/ID	Project Phase & Activity within 120 m of the feature	Distance between Nearest Project Component & Wildlife Habitat	Potential Negative Effects to the Habitat	Mitigation Measures (if habitat is found to have species diversity or abundance at a level that would be considered significant)	Performance Objectives, Monitoring and Contingency Plans
				• Utilize erosion blankets, erosion control fencing, straw bales, siltation bags, etc. For construction activities within 30 m of a wetland, woodland or water body, to mitigate potential excessive erosion and sedimentation. Extra erosion and sediment control materials should be kept on hand, (i.e., heavy duty silt fencing, straw bales). • Avoid construction in areas that would cause a barrier to animal movement between upland and breeding habitat; Avoid intersection of wildlife movement corridors • Schedule grading within 30 m of a watercourse or wetland to avoid times of high runoff volumes (spring and fall), wherever possible. Temporarily suspend work if high runoff volume is noted or excessive flows of sediment discharges occur until mitigation measures are in place; • Ensure all equipment on site in good working order • Ensure safe storage of petroleum, oils and lubricants • Where possible, vehicle maintenance will be performed off site, at a nearby commercial fuelling station, in order to minimize the amount of lubricants stored on site	**Monitoring:** Inspect locations within 30m of breeding habitat following completion of access roads to ensure no grade changes. **Contingency Measures** If surface water drainage alterations are detected undertake corrective measures to restore pre-development drainage patterns.

Wildlife Habitat Type/ID	Project Phase & Activity within 120 m of the feature	Distance between Nearest Project Component & Wildlife Habitat	Potential Negative Effects to the Habitat	Mitigation Measures (if habitat is found to have species diversity or abundance at a level that would be considered significant)	Performance Objectives, Monitoring and Contingency Plans
				• Maintain an emergency spill kit on site during all maintenance activities • Ensure no grade changes within catchment area of ponds that would affect hydroperiods; • If surface drainage alterations are detected, undertake corrective measures to restore drainage pattern. • Ensure a plan is in place to address potential fuel or other deleterious substance spills and ensure vehicle refueling and storage of fuels occurs away from sensitive features.	
Wildlife WH-ABWE-01 (Amphibian wetland breeding habitat)	Operation of Access road	41m	• Disturbance from lighting; • Incidental mortality/roadkill from operational vehicle movement; • Disturbance from routine maintenance.	• Ensure lighting is directional and/or directed away from breeding habitat; • Ensure speed limits (30km/h) for maintenance vehicles are posted and adhered to; • Advise operations staff to avoid driving roads or undertaking maintenance activities in proximity to these features at night between April 1st and June 30th, and any rainy nights from spring to early autumn, wherever possible. • Maintain low speed limits of vehicles on access roads (30km/h). • Movement corridors from woodland to wetland will be maintained if identified as present.	**Monitoring:** Where access roads are installed within 30m of amphibian breeding (wetland) habitat, but not within the feature itself, one year of post construction monitoring to be completed in the form of a presence/absence habitat use survey using the Marsh Monitoring Protocol (aural surveys). Where a reduction of 50% to the species/individuals is observed contingency measures as they relate to the operational phase of the access road will be implemented.

Wildlife Habitat Type/ID	Project Phase & Activity within 120 m of the feature	Distance between Nearest Project Component & Wildlife Habitat	Potential Negative Effects to the Habitat	Mitigation Measures (if habitat is found to have species diversity or abundance at a level that would be considered significant)	Performance Objectives, Monitoring and Contingency Plans
					Contingency measures: Consult MNR for contingency measure where amphibian species/individuals decline by 50% compared to pre-construction results. **Monitoring:** Where vegetation removals are proposed, monitoring of vegetation for two years to ensure effective restoration of new habitat edge and effective stabilization of soils. **Contingency measures:** Replace failed plantings and institute controls of invasive species, if required. **Residual Effects** Operational effects are expected to be similar to agricultural use of the lands, and therefore residual effects are not anticipated.

Wildlife Habitat Type/ID	Project Phase & Activity within 120 m of the feature	Distance between Nearest Project Component & Wildlife Habitat	Potential Negative Effects to the Habitat	Mitigation Measures (if habitat is found to have species diversity or abundance at a level that would be considered significant)	Performance Objectives, Monitoring and Contingency Plans
Wildlife WH-CNTS-13 (Colonial Nesting Bird Breeding Habitat)	Construction and Decommissioning of Access Road	100m	• Potential for disturbance to breeding activity as a result of construction activities such as noise, vehicular movement and the presence of people	• *No construction is to occur during the heron breeding season of March 1 to August 1.* • Ensure staff working in the area is aware of habitat and sensitivity. • Ensure construction best management practices are followed, by a designated on-site Environmental Monitor(s) to reduce disturbance caused by noise. • Limit speeds of construction vehicles using road to 30km/h.	**Monitoring:** Ensure construction best management practices are followed, by a designated on-site Environmental Monitor(s) to reduce disturbance caused by noise. **Contingency Measures:** Contact MNR **Residual Effects** Construction/decommissioning effects are expected to be short and temporary in duration, with low risk of residual effects.
Wildlife WH-CNTS-13 (Colonial Nesting Bird Breeding Habitat)	Operation of Access road	100m	• Impacts not anticipated above and beyond what is existing use of roadway by residents of the property.	n/a	n/a

5.0 REFERENCES

County of Grey Official Plan. 2000. Grey County Planning & Development Department.

Environment Canada. (EC) 2007. Wind Turbines and Birds – A Guidance Document for Environmental Assessment. 46pp.

Genivar Inc. 2012a. Draft Project Description Report: East Durham Wind Energy Centre. February 2012.

Genivar Inc. 2012b. Draft Construction Plan Report: East Durham Wind Energy Centre. September, 2012.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and Its Application. Ontario Ministry of Natural Resources, South-central Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.

LGL Limited. 2012. East Durham Wind Energy Centre Natural Heritage Assessment.

Newmaster, S.G. and S. Ragupathy, 2012. Flora Ontario – Integrated Botanical Information System (FOIBIS), Phase I. University of Guelph, Canada. Available at: http://www.uoguelph.ca/foibis/

Natural Resource Solutions Inc. (NRSI). 2012. East Durham Wind Energy Centre Bat Monitoring Report and Environmental Impact Study.

Oldham, M.J. and S.R. Brinker. 2009. Rare Vascular Plants of Ontario. Fourth Edition. Natural Heritage Information Centre, Ontario Ministry of Natural Resources. Peterborough, Ontario. 188pp.

Oldham, M.J. 1993. Distribution and Status of the Vascular Plants of Southwestern Ontario. Draft. Ontario Ministry of Natural Resources, Aylmer. 150 pp.

Ontario Ministry of Natural Resources (OMNR). 2012 Significant Wildlife Habitat Draft Ecoregion 6E Criterion Schedule. As posted on the Environmental Registry at: http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTE1ODc5&statusId=MTczNDgy .

Ontario Ministry of Natural Resources (OMNR). 2011a. Natural Heritage Assessment Guide for Renewable Energy Projects. Queen's Printer for Ontario. Ontario, Canada.

Ontario Ministry of Natural Resources (OMNR). 2011b. Bat and Bat Habitats: Guidelines for Wind Power Projects. Queen's Printer for Ontario. Ontario, Canada.

Ontario Ministry of Natural Resources (OMNR). 1993. Ontario Wetland Evaluation System: Southern Manual. Queen's Printer for Ontario. Ontario, Canada.

Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide. Queen's Printer for Ontario. Ontario, Canada.

APPENDIX A
FIELD NOTES OCTOBER 24 2012

Oct 24/12
10 am 8°C
Overcast skies
FOG

-Field plough deering site visit

Trees around Barn Popbals

pic

Bigtooth Apple

Norway Spruce
White Pine
Black Cherry.
Alt lvd dogwood.
Apple.
Cedar.
pic

On 2012-10-10, at 1:47 PM, "Gesin, Matt" <Matt.Gesin@nexteraenergy.com> wrote:

Can you answer this?

Scattered. Pop tem pole Small Cedar. White Spruce

Alt lvd dogwood. Apple. Balsam poplar. Trembling Aspen Thuja occi Ash

Cemetary

- Small sized trees mostly pole few 10-15cm

Thanks,

Matt Gesin
Land Services Supervisor
NextEra Energy Resources
matt.gesin@nexteraenergy.com

From: Holly Davidson [mailto:hdavidson@callondietz.com]
Sent: Wednesday, October 10, 2012 01:44 PM
To: Gesin, Matt; Dudek, Derek
Cc: Cifone, Mark; Henehan, Gabe; Rickel, Adam
Subject: RE: East Durham substation location MET2

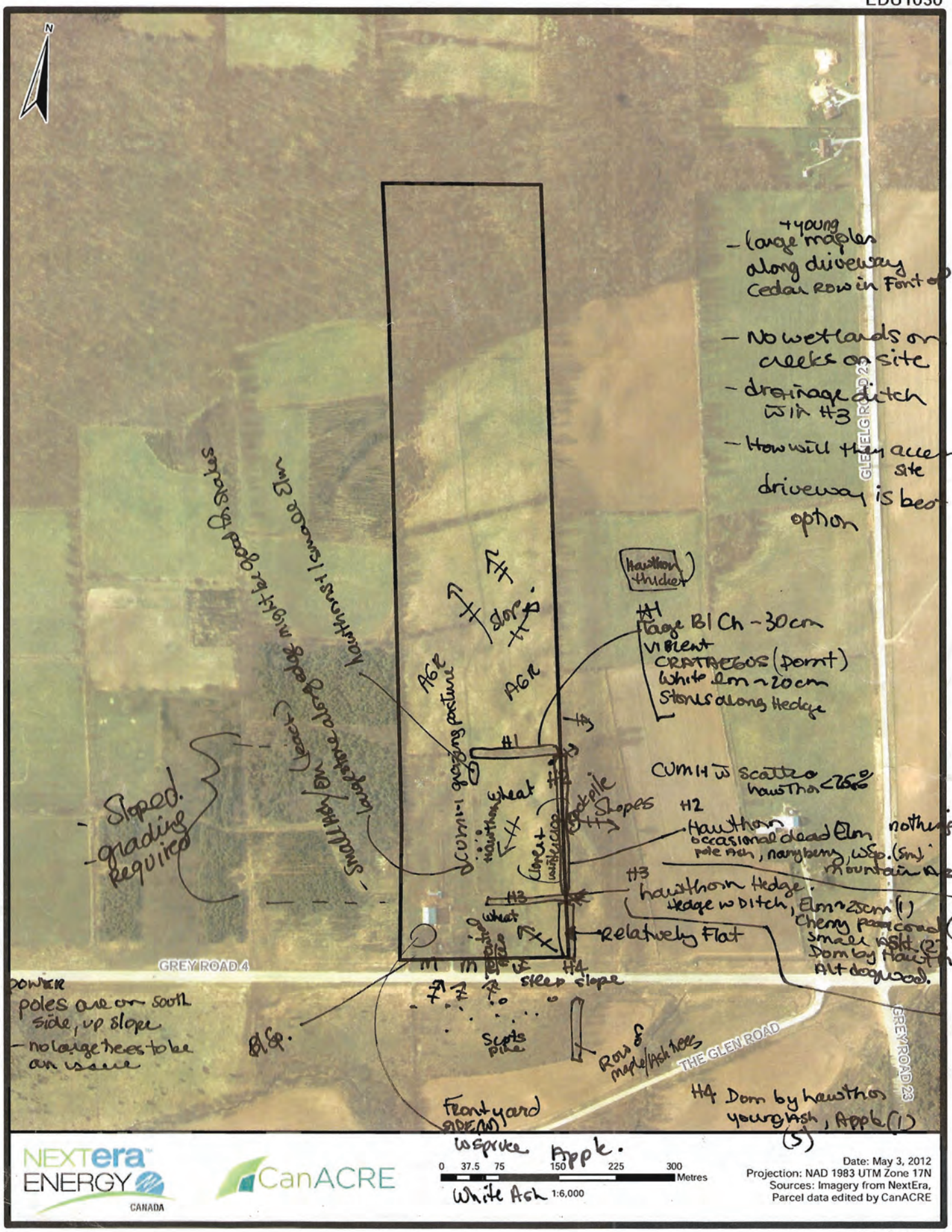
Hi land tem,

Has the access road for this MET been pre determined? SM02 on the EDU1309 laydown property.
<image003.jpg>

overcast skies
FOG

Oct 24

EDU1030



APPENDIX B
ELC DESCRIPTION TABLE

Appendix B Table 1: Description of Vegetation Communities Surveyed in Site Investigation (Refer to Figures 7-9 for locations of ELC units).

ELC Unit #	ELC Code	Minimum distance to Project Location (metres)	Size (ha)	Attributes	Composition
1	FOC2-2	>120	n/a	white cedar coniferous forest	not within 120m - n/a
2	SWD5-1	>120	n/a	black ash deciduous swamp	not within 120m - n/a
3	FOC2-2	>120	n/a	white cedar coniferous forest	not within 120m - n/a
4	MAS2-1	>120	0.1991	cattail shallow marsh	not within 120m - n/a
5	MAM2-2	>120	n/a	Reed-canary grass meadow marsh	not within 120m - n/a
6	CUP3-3	>120	3.0681	Scotch pine coniferous plantation	not within 120m - n/a
7	R	>120	0.5008	Residential area	not within 120m - n/a
8	AGR	>120	n/a	Agricultural field and associated hedgerow	not within 120m - n/a
9	SWC4	>120	n/a	tamarack balsam fir coniferous swamp	not within 120m - n/a
10	AGR	>120	n/a	Agricultural field and associated hedgerow	not within 120m - n/a
11	SWC4	>0	10.4571	tamarack balsam fir coniferous swamp	Coniferous swamp dominated by tamarack (*Larix laricina*) and balsam fir (*Abies balsamifera*) with occasional black ash (*Fraxinus nigra*) and red maple (*Acer rubrum*).
12	FOC2-2	>120	n/a	white cedar coniferous forest	not within 120m - n/a
13	SWC4	>120	n/a	tamarack balsam fir coniferous swamp	not within 120m - n/a
14	SWC3-2	>120	n/a	Balsam fir black ash coniferous swamp	not within 120m - n/a
15	FOD5	>120	n/a	Sugar maple deciduous forest	not within 120m - n/a
16	FOD5	>120	n/a	Sugar maple deciduous forest	not within 120m - n/a
17	AGR	>120	5.3143	Agricultural field and associated hedgerow	not within 120m - n/a
18	MAS2-1	>120	3.4801	cattail shallow marsh	not within 120m - n/a