## Attachment B-1: Polygon Tree Inventory Results

Polygon ID	Species: Common Name	Species: Scientific Name	0.40	140.00	Dead (DBH in cm)	140.50	150	0.40	10.00	Poor (DBF	l in cm)	40.50	50 0 4	<u></u>	40.00	Fair (DBH	in cm)	10.50	0.40	0	Good (DBI	H in cm)	40 50	Total Per Species	Significance
D010a D01	Apple op	Malua on	0-10cm	10-20cm	20-30cm 30-40cm	1 40-50 CM	50+	0-10Cm	10-20cm	20-30cm	30-40cm	40-50 cm	50+ 0-1	UCm	10-20cm	20-30Cm	30-40Cm	40-50cm 50+	0-10cm 10-	-20cm	20-30Cm	30-40CM	40-50Cm 50+	- 1	M
P019a-P01	Apple sp.	Malus Sp.														1					1		2	1	
P019a-P01 P010a P02	Sugar maple	Acer succiarum				1		1					1	10	0	5			09	10	2		2	125	M
P019a-P02 P010a P02	Groop ash	Prinus sylvestris						I						1	0	5 1			90	10	3			130	
P019a-F02	White alm													<u>'</u>		I								2	
P019a-F02		Malus cn													1									1	M
P019a-F02	Apple Sp. Sugar maple	Malus sp.													I		1							1	
P019a-F02	White ach	Eravinus amoricana						5						1		1	1		2	1	1		1	18	
P020a P01	Scots pipo	Dinus sulvestris						5						-					1	<del>т</del>	1			10	M
P020a-P01	Sugar maple	Acor saccharum																			1		4 1	6	Н
P020a-F01	Black cherry	Acer succiduum																			1	1		1	M
P020a P02	Silver maple	Acor saccharinum																		1				1	1
P020a-P02	White elm		1																	•				1	
P020a-P02	Scots nine	Dinus sulvestris												1										1	
P021a-P01	White mulberry	Morus alba												1										1	
P021a-P01	White ash	Fraxinus americana	3			1								1	1									5	
P021a-P01	Crack willow	Saliy fragilis	0											1					Δ	3		1		9	M
P021a-P01	Silver manle	Suitz Jrugilis Acer saccharinum												·					1	5		•		1	M
P021a-P01	Trembling aspen	Populus tremuloides				1								1	1				1	7	1			11	1
P021a-F01	Eastern white codar	Thuia occidentalis				1							3	35			-		25	1	1			60	M
P021a-F01	Apple sp	Malus sp				1								55		1	-		25		2			3	M
P021a-P01	Norway maple	Acer platanoides																			1			1	M
P021a-P01	Eastern cottonwood	Acer platanoides Populus deltoides				1															1	1		1	M
P021a-P01	Black cherry	Prunus seroting																					1	1	M
P022a-P01	Eastern white cedar	Thuia occidentalis																			1		1	1	M
P022a-F01	Norway maple	Acer platanoides															1				1	4		5	M
P022a-F01	Colorado spruco	Acer plutunolues															1					4		1	M
P022a-F01	Sugar maple	Acor caccharum																				1	2	2	ы
P022a-F01	Erooman manlo	Acer succidurum							2	1				3	1	3	1	1	1	1			2	17	M
P023a-F01	White ash	Acer x freemann Fravinus amaricana							2					<u> </u>	I	5	1	· ·						17	101
P023a-P01	Norway maple	Acer platanoides				1										1	-		'	1	4	2		8	M
P023a-P01	Eastern white cedar	Thuig occidentalis														a I	6			•	-	2		15	M
P023a-P01	Siberian elm	Illmus numila								2	2					5	1							5	1
D02/J_D01	White elm	Ulmus amaricana						1	1		~					4	1			1	1			9	
P024-F01	Red maple	Acer rubrum				1		1	I							4	- 1		3	1	1				M
P024-F01	White ash	Eravinus americana	1					1												•					101
P024-P01	Silver maple	Acer saccharinum	I		2	1																		2	M
P024-P02	White elm				3				1					3										7	1
P024-F02	White ash	Eravinus americana			, , , , , , , , , , , , , , , , , , ,				2					1	1				1					5	
P024-P02	Black walput	luglans nigra						1	2					2										4	M
P024-P02	Eastern white cedar	Thuia occidentalis			1					1				-		1	1			1	1			6	M
P025-P01	Green ash	Fravinus poppsylvanica						3									-		1	•				4	101
P027-P01	White spruce																		8	5				13	M
P027-P01	Manitoba manle	Acer negundo				1								-					1	0				1	
P027-P01	Red oak	Quercus rubra		1		1																		2	Н
P027-P01	Balsam poplar	Ahies halsamea												-					1		2			3	M
P027-P01	Green ash	Fraxinus nennsvlvanica		1		1								$\frac{1}{1}$							-			1	
P027-P01	Freeman maple	Acer x freemanii		1		1								<u> </u>						5				5	M
P027-P01	Pear sp	Pyrus sn		l		1														2				2	M
P027-P01	Colorado spruce	Picea nunaens		1		1										1				-	2			3	M
P027a-P01	Balsam poplar	Populus halsamifera	2	l		1														2	_			4	M
P027a-P01	Choke cherry	Prunus virginiang		I		1			1					2	1					_				5	M
P027a-P01	Trembling aspen	Populus tremuloides		l		1		4	1	1				23	1	1			21	9				61	M
P027a-P01	Green ash	Fraxinus nennsylvanica		1		1		<u> </u>	•					6	•	· ·				-				8	
P027a-P01	White elm	Ulmus americana		1		1			1	2	1			3	3	1				2		2		16	M
P027a-P01	Crack willow	Salix fragilis		<u> </u>		1		3		-				8	1				5	5		-		22	M
P027a-P01	Pin cherry	Prunus pensylvanica		1				5						<del>~  </del>	'				4	1				5	M
P0272-P01	White ash	Fraxinus americana			+ +	+	$\vdash$	9						2										32	M
P027a-P01	Fastern redcedar					+		<u> </u>						1										1	M
P027a-P01	Honey locust	Gleditsia triacanthos		<del> </del>		+		1						1				<u>├</u>		1				4	M
P027a-P01	White spruce	Picea alauca		1										<u> </u>						1				2	M
P027a-P01	Apple sp	Malus sp.				1				1										•				1	M
P028-P01	Fastern white cedar	Thuia occidentalis						10					4	40				<u>├                                    </u>	22					72	M
					1									-											



## Attachment B-1: Polygon Tree Inventory Results

Polygon ID	Species: Common Name	Species: Scientific Name			Dead (DBI	H in cm)				-	Poor (DBI	H in cm)					Fair (DBH	l in cm)					Good (DB	H in cm)			Total Per Species	Significance
			0-10cm	10-20cm	n 20-30cm	30-40cm	40-50 cm	i 50+	0-10cm	10-20cm	20-30cm	30-40cm	1 40-50 cm	n 50+	0-10cm	10-20cm	20-30cm	30-40cm	40-50cm	50+	0-10cm	10-20cm	1 20-30cm	30-40cm	40-50cm	50+	opooloo	
P028-P01	White spruce	Picea glauca																			3						3	М
P028-P01	White ash	Fraxinus americana							2						20						27						49	L
P028-P01	Trembling aspen	Populus tremuloides													6						4						10	L
P028-P01	Crack willow	Salix fragilis																			4						4	M
P029a-P01	Colorado spruce	Picea pungens														1	1				2	1	4				9	M
P029a-P01	Balsam fir	Abies balsamea																			1						1	M
P029a-P01	Scots pine	Pinus sylvestris								1	4				1		6	2					2	1			17	M
P029a-P01	Eastern white cedar	Thuja occidentalis													15	2	3				15	2					37	M
P029a-P01	White ash	Fraxinus americana							7						10						7						24	L
P029a-P01	White spruce	Picea glauca														1					1	1	1				4	M
P029a-P01	Norway maple	Acer platanoides								1						2	1					2	1				7	M
P029a-P01	Eastern redcedar	Juniperus virginiana														1						1					2	L
P029a-P01	Sugar maple	Acer saccharum																					1	1		1	3	Н
P029a-P01	Red oak	Quercus rubra																						1			1	Н
P029a-P03	White spruce	Picea glauca													1						3	1					5	M
P029a-P03	Eastern white cedar	Thuja occidentalis																			8						8	M
P031-P02	White ash	Fraxinus americana	1							2					3	2											8	L
P031-P02	Trembling aspen	Populus tremuloides															1				3	3	2				9	M
P031-P02	Manitoba maple	Acer negundo																			1						1	L
P031-P02	Eastern white cedar	Thuja occidentalis	5						5	2	2			1	5	5					2						27	M
P031-P02	White birch	Betula papyrifera														1											1	M
P031-P02	White elm	Ulmus americana															1										1	М
	-	Totals	45	52	9	4	0	1	134	58	31	8	0	3	812	252	98	38	19	10	754	201	112	37	18	14	2710	
		Total Per Condition						111				1		234						1229						1136		1
		Grand Total	2710		-	-	-			-	-		-	_			-	-	-	-	-	-	-	-	-			



## Attachment B-2: Prism Sweep Tree Inventory Results

Polygon & Prism	Species:	Species:	UTM		_		1:				_		( ] ::::						:					1 in		r	otal Per	Signifi	ioonoo
Tally ID	Common Name	Scientific Name	Co-ordinates	0-10cm	L 10-20cm	20-30cm	30-40cm	40-50 cm	50+	0-10cm	∎ 10-20cm	20-30cm	30-40cm	40-50 cm	50+	0-10cm	10-20cm	20-30cm	30-40cm	40-50cm 50+	· 0-10cm	10-20cm	20-30cm	30-40cm	40-50cm	50+	Species	Sigini	cance
P009-P01-PR01	Sugar maple	Acer saccharum	0565892/4812992																		3	12					15	F F	-
P009-P01-PR02	Sugar maple	Acer saccharum	0565297/4812913																			8					8	F	1
P009-P01-PR02	White mulberry	Morus alba	0565297/4812913														1										1	Ļ	<u>!</u>
P009-P01-PR02	Black cherry	Prunus serotina	0565297/4812913													1						1					1	┢──┼	<u> </u>
P009-P01-PR02 P009-P01-PR03	Sugar manle	Acer saccharum	0565873/4812913																			12	2				14	┝──テ	<u></u>
P009-P01-PR04	Sugar maple	Acer saccharum	0565855/4812936																		2	6	<u> </u>				12	+	<u> </u>
P009-P01-PR04	American beech	Fagus grandifolia	0565855/4812936						1 1												-	Ű	· ·	1		1	2	<u>├</u>	4
P012a-P01-PR01	Scots pine	Pinus sylvestris	0566227/4813034							1							2	5	1		1			1			11	Ň	л
P012a-P01-PR01	Sugar maple	Acer saccharum	0566227/4813034																			2					2	F	-
P012a-P01-PR02	Scots pine	Pinus sylvestris	0566222/4813034								1					1	8										10	N	Л
P012a-P01-PR02	Eastern white cedar	Thuja occidentalis	0566222/4813034																		1	-					1	N	Λ
P012a-P01-PR02	Sugar maple	Acer saccharum	0566222/4813034													4					0	1					1	<u>⊢</u> ⊢-⊦	<u> </u>
P012a-P02-PR01	Sugar maple	Acer saccharum	0566165/4812977												-	1					2	3					<u>/</u>	+-+	<u> </u>
P012a-P02-PR01 P012a-P02-PR02	Basswood	Tilia americana	0566275/4812900								1											4	3				8	┝──テ	<u> </u>
P012a-P02-PR02	Sugar maple	Acer saccharum	0566275/4812999																			2	2				4	╆──┾	
P012a-P03-PR01	Sugar maple	Acer saccharum	0566099/4812950																1		2	3					6	<del>i i</del>	i
P012a-P03-PR01	American beech	Fagus grandifolia	0566099/4812950																			1					1	F	-
P012a-P03-PR01	White elm	Ulmus americana	0566099/4812950									1															1	N	Λ
P012a-P03-PR01	Ash sp.	<i>Fraxinu</i> s sp.	0566099/4812950		2	1																					3	L	
P012a-P03-PR01	Eastern cottonwood	Populus deltoides	0566099/4812950															1									_1	N	<u>/</u>
P012a-P03-PR01	Basswood	Tilia americana	0566099/4812950																			0	1				1	┢──┾	<u> </u>
P012a-P03-PR02	American beech	Pagus granditolia	0566023/4812973												1				1			2					3	F	1
P012a-P03-PR02	Sugar manle	Acer saccharum	0566023/4812973														1		1		2		2				5		
P012a-P03-PR02	Green ash	Fraxinus pennsvlvanica	0566023/4812973													1					2		2				<u> </u>		<u>л</u>
P012a-P04-PR01	Sugar maple	Acer saccharum	0565972/4813063														1						2				3	<del>Γ</del>	. <u></u>
P012a-P04-PR01	European buckthorn	Rhamus cathartica	0565972/4813063																								NA	N	A
P012a-P04-PR01	American beech	Fagus grandifolia	0565972/4813063																							1	1	F	ł
P012a-P04-PR01	Norway maple	Acer platanoides	0565972/4813063																					2			2	L	
P014-P02-PR01	Trembling aspen	Populus tremuloides	0565954/4811371							1						1							3				5	N	<u>/</u>
P014-P02-PR01	Eastern White cedar	I nuja occidentalis	0565954/4811371												_		1					2	2	1			<u>6</u>		/
P014-P02-PR01	Black cherry	Detula papyrilera Prunus serotina	0565054/4611371																1					1			1	N	/I /I
P014-P02-PR02	Tamarack	l arix laricina	0565904/4811877																•					1			1		<u></u>
P014-P02-PR02	Eastern white cedar	Thuia occidentalis	0565904/4811877														2					7	1				10		<u>л</u>
P014-P06-PR01	Eastern white cedar	Thuja occidentalis	0566091/4812330							1											1	2	3	1	1		9	N	л
P014-P06-PR01	Choke cherry	Prunus virginiana	0566091/4812330								1																1	Ν	Л
P014-P06-PR02	White ash	Fraxinus americana	0566151/4812259																			2					2	N	Λ
P014-P06-PR02	Balsam poplar	Populus balsamifera	0566151/4812259							1							1					2					4	N	Λ
P014-P06-PR02	Crack willow	Salix tragilis	0566151/4812259														-			3	4	4					3	N	<u>/</u>
P015-P02-PK01 P015-D02 DD01	Eastern white cedar	Triuja occidentalis	0565710/4811803						┢─┤			1					5				4	1	1			$\vdash$	<u></u>		<u>/I</u>
P015-P02-PR01	White elm	Lanx lancina Ulmus americana	0565710/4811803									· ·					1					2	1				<del></del>		<u>л</u>
P015-P02-PR02	Eastern white cedar	Thuja occidentalis	0565687/4811790	1					+			2			+	1	3	3		1	12	1				+	20	I N	1
P015-P02-PR02	Tamarack	Larix laricina	0565687/4811790														-	1				2					3	N N	л
P017-P01-PR01	Trembling aspen	Populus tremuloides	0566211/4811916														2					2					4	Ν	Л
P017-P01-PR01	Crack willow	Salix fragilis	0566211/4811916																	1							1	N	Λ
P017-P01-PR02	Eastern white cedar	Thuja occidentalis	0566247/4811926													4	2										6	N	Л
P017-P01-PR03	White birch	Betula papyrifera	0566261/4811941														1										1		<u>/</u>
P017-P01-PK03	Eastern white cedar	Thuja occidentalis	0566251/4811941						┥							1	2					+				$\vdash$	<u></u>		/1
P017-P01-PR04	Trembling aspen	Populus tremulaides	0566251/4811968	+					┥┥						+		1			l	+	+				$\vdash$			<u>/</u>
P017-P01-PR04	White birch	Betula papvrifera	0566251/4811968						+						1	<u> </u>		<u> </u>	1			1	<u> </u>		<u> </u>		1		
P017-P01-PR05	Trembling aspen	Populus tremuloides	0566246/4811987	1						1		1			1	1		1		1	1	1	1	1	1		5		Л
P017-P01-PR05	White ash	Fraxinus americana	0566246/4811987							1					L			2									3	N	Л
P018a-P02-PR01	Tamarack	Larix laricina	0566315/4811984																			1					1	N	Λ
P018a-P02-PR01	Eastern white cedar	Thuja occidentalis	0566315/4811984														1										1	N	Λ
P018a-P02-PR01	Choke cherry	Prunus virginiana	0566315/4811984		ļ			ļ				ļ			1	1	ļ								I	$\square$	1	<u>N</u>	<u>/</u>
P018a-P02-PR01	Balsam fir	Ables balsamea	0566315/4811984					<u> </u>	$\left  \right $			ļ				ļ									ļ	$\vdash$	2		/
P018a-P02-PK02	Tamarack White birch	Larix laricina Betula papyrifora	0566265/4812155						┥						┨──	<u> </u>	2				1	+				$\vdash$	<u>∠</u>		/1
FUIDA-FUZ-PRUZ		Detula papyrilera	0000200/4812155			ļ			1				ļ		<u> </u>	I		1	ļ	I I	1 1	ļ	1		1		<u> </u>	<u>IV</u>	4



## Attachment B-2: Prism Sweep Tree Inventory Results

Descr         Descr <th< th=""><th>Polygon &amp; Prism</th><th>Species:</th><th>Species:</th><th>UTM</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>-</th><th></th><th></th><th></th><th></th><th></th><th>•</th><th></th><th></th><th></th><th></th><th>Total Per</th><th>Cignificance</th></th<>	Polygon & Prism	Species:	Species:	UTM														-						•					Total Per	Cignificance
	Tally ID	Common Name	Scientific Name	Co-ordinates	0.10cm	10.20cm	Dead (DBI	H in cm)	40.50 cm	501	0.10cm	10.20cm	20 20 cm	H in cm)	40.50 cm	50+	0.10cm	10.20cm		<b>in cm)</b>	40.50cm	501 0 1	) cm 1 (	G	000 (DBH	30.40cm	40.50cm	50+	Species	Significance
	P018a-P02-PR02	Eastern white cedar	Thuia occidentalis	0566265/4812155	0-10011	10-20011	20-30011		40-30 011	30+	0-10011	10-200111	20-30011	30-40Cm	40-30 CIII	30+	1	10-200111	20-30011	30-40Cm	40-300111	JUT 0-1		J-200111	20-300111	30-40cm	40-300111	30+	1	M
Philo Map         Again allow and Map	P018a-P02-PR03	Eastern white cedar	Thuja occidentalis	0566252/4812208												1			10					1	4				16	M
	P018a-P02-PR04	Eastern white cedar	Thuja occidentalis	0566241/4812227									2				9		1					6		1			19	М
Conservation         Product gene base         Product gene base <t< td=""><td>P018a-P02-PR05</td><td>Eastern white cedar</td><td>Thuja occidentalis</td><td>0566230/4812263</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td><td></td><td></td><td></td><td></td><td>4</td><td>4</td><td>4</td><td></td><td></td><td>15</td><td>М</td></t<>	P018a-P02-PR05	Eastern white cedar	Thuja occidentalis	0566230/4812263															3					4	4	4			15	М
	P018a-P02-PR06	Largetooth aspen	Populus grandidentata	0566205/4812305							1							5							2				8	M
NUMBER         NUMBER<	P018a-P02-PR07	Trembling aspen	Populus tremuloides	0566211/4812392																0					3				3	M
Norther Norther         Norther	P018a-P02-PR07	Eastern white cedar	Thuja occidentalis	0566211/4812392																2				2	3				5	M
PRIME       PRIME <th< td=""><td>P018b-P02-PR01</td><td>Speckled alder</td><td>Alnus incana</td><td>0566477/4811989</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>5</td><td></td><td></td><td></td><td></td><td>-</td><td>1</td><td>3</td><td></td><td></td><td></td><td></td><td>8</td><td>M</td></th<>	P018b-P02-PR01	Speckled alder	Alnus incana	0566477/4811989													5					-	1	3					8	M
PR-30-7003       Pressure and	P018b-P02-PR02	Eastern white cedar	Thuia occidentalis	0566403/4811970								5					5	2				1	,		1				18	M
	P018b-P02-PR02	Tamarack	Larix laricina	0566403/4811970																					1				1	M
Phile PQ2800         Sandwaler         Phile PQ2800         Phile PQ28000         Phile PQ28000         Phile PQ28000         Phile PQ28000         Phile PQ28000         Phile PQ28000         Phile PQ280000         Phile PQ28000000000000000000000000000000000000	P018b-P02-PR03	Tamarack	Larix laricina	0566368/4811965													1	3							1				5	M
NDB/CX2455         NTHE BLOW         Deally Apply Description         OPEN PARAMENT         PAIL APPLY APPLY         PAIL APPLY APPLY APPLY         PAIL APPLY APPL	P018b-P02-PR03	Serviceberry	Amelanchier sp.	0566368/4811965																				1					2	М
Phile Priori         Prior Prior         Prior Prior         Prior Prior         Prior Prior         Prior Prior         Prior Prior         Pr	P018b-P02-PR03	White birch	Betula papyrifera	0566368/4811965																									1	М
Phile         Phile <th< td=""><td>P018d-P01-PR01</td><td>Eastern white cedar</td><td>Thuja occidentalis</td><td>0566239/4812351</td><td></td><td></td><td></td><td></td><td></td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>6</td><td>М</td></th<>	P018d-P01-PR01	Eastern white cedar	Thuja occidentalis	0566239/4812351						2																			6	М
Profile-1-biol:         Sign: Arriver for any constraint         Object of any constraint         Profile-1-biol:         Sign: Arriver for any constraint         Profile-1-biol:         Profile-1-bio:         Profile-1-bio:         Pr	P018d-P01-PR01	White birch	Betula papyrifera	0566239/4812351													1							_					1	M
NON-DOM         Non-Dom         Constrained         C	P018d-P01-PR02	Eastern white cedar	Thuja occidentalis	0566232/4812406								1						6	4	2				5					24	M
Product Schwart         Product Sc	P0180-P01-PR02	Yellow birch	Betula allegnaniesnsis	0566232/4812406									1					2						1					3	M
Photo:         Photo:<	P0100-P01-PR02 P0272-P04-PR01	Trembling aspen	Acel negundo Populus tremuloides	0566581/4811201																		-	2	6	1				10	M
P225-05-PPRO2         Tending ages         PX0Ad symplex         OSSA         C        C	P027a-P04-PR02	Furopean alder	Alnus alutinosa	0566616/4811170																		-	,	2	I				3	M
P122-P64-PR02         Wine and         Products anomana         OSCON 10641179         Image anomana         I	P027a-P04-PR02	Trembling aspen	Populus tremuloides	0566616/4811179									1											~					1	M
PM27	P027a-P04-PR02	White ash	Fraxinus americana	0566616/4811179									· ·																1	M
Philos Prove PAGE PROS 0         Descond Latitities         D <thd< th="">         D         <thd< th=""> <thd< th=""></thd<></thd<></thd<>	P027a-P04-PR03	European alder	Alnus glutinosa	0566641/4811164						1 1							1						2						3	М
POPD-PAGE-PRO3       White shift       Produce spectra (0.00000000000000000000000000000000000	P027a-P04-PR03	Trembling aspen	Populus tremuloides	0566641/4811164																				1	1	1			3	М
Norz-M015-PN01       Obset Manual       Anse anothenum       Obset Montal       And anothenum       Obset Montal       And anothenum       And anothenum </td <td>P027a-P04-PR03</td> <td>White ash</td> <td>Fraxinus americana</td> <td>0566641/4811164</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td></td> <td>2</td> <td>М</td>	P027a-P04-PR03	White ash	Fraxinus americana	0566641/4811164							2																		2	М
PD72-605-PH02         Bilver marghe         Acta stanchardum         Gessessival H1044         Image         Image<	P027a-P05-PR01	Silver maple	Acer saccharinum	0566866/4811033								1							1						3	4		5	14	Н
P272-P6XPR02       Wine birch       Debia payring       0.66682/431044       Image: Constraint of the const	P027a-P05-PR02	Silver maple	Acer saccharinum	0566932/4811044																				1	4	1		1	7	Н
PACE-PAPERIZ         Promote anomazame         Genes anoma	P027a-P05-PR02	White birch	Betula papyrifera	0566932/4811044															1						2				3	M
Partial product and order         Operation of the second product a	P027a-P05-PR02	White ash	Fraxinus americana	0566932/4811044														2											2	M
Program         Product annucleary         Observation         Product annucleary         Product annuclear	P027a-P05-PR02	Eastern cottonwood	Populus deitoides	0566932/4811044																								1	1	M
P2072-PPC2-PRG2       Basemactarum       DS       A       D       A       D       A       D       A       D       A       D       A       D       A       D       A       D       A       D       A       D       A       D       A       D       A       D       D       A       D       D       A       D       D       A       D       D       A       D       D       A       D <thd< th="">       D</thd<>	P027a-P05-PR03	Dul Oak White ach	Erovinus amoricana	0566995/4811035							2	2						4						2					11	<u>п</u> М
P027-P05-P804         P038-month         Sept79-P8411083         P	P027a-P05-PR03	Rasswood	Tilia americana	0566995/4811035							3	2						4				_		2				1	1	H
P027+P05-P04       Matcha maple       Advances	P027a-P05-PR04	Eastern cottonwood	Populus deltoides	0567078/4811063								1						3							6		1	- 1	11	M
Operator         Bolta payrifera         Operator	P027a-P05-PR04	Manitoba maple	Acer negundo	0567078/4811063														1											1	M
P027-P05-P04       White ash       Frazinus americana       05670724811063       Image: Second S	P027a-P05-PR04	White birch	Betula papyrifera	0567078/4811063																						1			1	М
P027ap05-P044       Cate kinguis       Osfir 109/4411031       Image: Constraint of the second sec	P027a-P05-PR04	White ash	Fraxinus americana	0567078/4811063									2					1	1										4	М
P027a-P05-PR05         Solts pine         Pinus sylvestris         O657199/4811091         Image: Constraint of the	P027a-P05-PR04	Crack willow	Salix fragilis	0567078/4811063																								1	1	М
P027a-95-PR05         White birch         Betula payrifiera         0567199/4811101         1	P027a-P05-PR05	Scots pine	Pinus sylvestris	0567199/4811091								3						7	1						1				12	L
P02/A-P03-PK06       Eastern actionwood Populus tenniolodes       0567249/431112	P027a-P05-PR05	White birch	Betula papyrifera	0567199/4811091								1						-											1	M
PU28-P02-PK01       Trembing aspen       Popular terminances       Osobi 14//4811864       Image: Constraint of the constrain	P027a-P05-PR06	Eastern cottonwood	Populus deltoides	0567289/4811112														2						2	3				<u> </u>	M
PU24P02-FN01         Leasent write gent         mile acid muscle         Discontration         Discontration <thdiscontration< th="">         Discontration         Di</thdiscontration<>	PU28-PU2-PKU1	Factors white pine	Populus tremuloides	0566147/4811864						+						<u> </u>			4							2		+	<u>∠</u>	IVI NA
Dock Die Druge         Datage         Die Druge         Die Druge <thdie druge<="" th=""> <thdie druge<="" th=""> <t< td=""><td>P028-P02-PR01</td><td>Eastern white cedar</td><td>Thuia occidentalis</td><td>0566147/4611604</td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td>2</td><td>3</td><td>1</td><td></td><td></td><td></td><td></td><td>1</td><td>Δ</td><td>Δ</td><td></td><td><math>\vdash</math></td><td>15</td><td>M</td></t<></thdie></thdie>	P028-P02-PR01	Eastern white cedar	Thuia occidentalis	0566147/4611604							1						2	3	1					1	Δ	Δ		$\vdash$	15	M
P028-P02-PR02         Eastern cottonwood         Populus deltoides         0566199/4811884         Image: control of the prime structure of the prima structure of the pri	P028-P02-PR01	White birch	Betula papyrifera	0566147/4811864													2	5						1					10	M
P028-P02_PR02       Eastern white pine       Pinus strobus       0566199/4811884       Image: Control of the strobus       Control of the strobus<	P028-P02-PR02	Eastern cottonwood	Populus deltoides	0566199/4811884			1						1	1		1								•				1	1	M
P028-P02-PR02       Eastern white cedar       Thuja occidentalis       0566199/4811884       Image: Control of the spruce       P128-P02-PR02       Termbling aspen       P021/15       M         P028-P02-PR02       Trembling aspen       P024/94211884       Image: Control of the spruce       P128-P02-PR02       Thui a occidentalis       0566199/4811884       Image: Control of the spruce       P128-P02-PR02       Thui a occidentalis       1       Image: Control of the spruce       P128-P02-PR03       Eastern white cedar       Thui a occidentalis       0566129/4811886       Image: Control of the spruce       P1       Image: Control of	P028-P02-PR02	Eastern white pine	Pinus strobus	0566199/4811884																					1				1	M
P028-P02-PR02       White spruce       Pice glauca       0566199/4811884       Image: Control of the spruce       Pice glauca       0566199/4811884       Image: Control of the spruce       Pice glauca       0566199/4811884       Image: Control of the spruce       Pice glauca       0566199/4811886       Image: Control of the spruce       Pice glauca       0566199/4811886       Image: Control of the spruce       Pice glauca       056621/4811886       Image: Control of the spruce       Pice glauca       0566221/4811886       Image: Control of the spruce       Pice glauca       0566246/4811886       Image: Control of the spruce       Pice glauca	P028-P02-PR02	Eastern white cedar	Thuja occidentalis	0566199/4811884									1							2		1		7					15	М
P028-P02-PR03       White spruce       Pice aglauca       056619/4811886       Image: Constraint of the spruce       Pice aglauca       056621/4811886       Image: Constraint of the spruce       Pice aglauca       056624/4811886       Image: Con	P028-P02-PR02	Trembling aspen	Populus tremuloides	0566199/4811884																					1	1			2	М
P028-P02-PR03       Eastern ottomwood       Populus deltoides       0566221/4811886       Image: Constraint of the constraint	P028-P02-PR02	White spruce	Picea glauca	0566199/4811884														1							1				2	М
PU28-P02-PR03       Eastern white cedar       Thija occidentalis       0566221/4811886       O       O       O       O       O       I <th< td=""><td>P028-P02-PR03</td><td>Eastern cottonwood</td><td>Populus deltoides</td><td>0566221/4811886</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td>3</td><td>M</td></th<>	P028-P02-PR03	Eastern cottonwood	Populus deltoides	0566221/4811886										1						1						1			3	M
P028-P02-PR04       Eastern white cedar       Thuja occidentalis       0566221/4811886       Image: Constraints       0566246/4811886       Image: Constraints       Image: Cons	P028-P02-PR03	White spruce	Picea glauca	0566221/4811886			ļ	ļ	ļ	$\left  \right $		ļ	ļ	ļ		1									1	1	ļ	$\square$	2	M
r02c+r02+r04       castent winte cedal intig accidentation       0566246/4811886         2        1       10        8       6       27       M         P028-P02+P04       White ash       Fraxinus americana       0566246/4811886        1        1       0        8       6       0       1       Law         P028-P02+P04       Tamarack       Laix laricina       0566246/4811886        1       1       1       0       1 <td>P028-P02-PR03</td> <td>Eastern white cedar</td> <td>I nuja occidentalis</td> <td>0566221/4811886</td> <td></td> <td></td> <td>ļ</td> <td></td> <td><u> </u></td> <td>+</td> <td>3</td> <td> </td> <td>ļ</td> <td></td> <td>l</td> <td></td> <td>4</td> <td>40</td> <td>9</td> <td></td> <td></td> <td></td> <td></td> <td>22</td> <td></td> <td></td> <td></td> <td>+</td> <td>34</td> <td>M</td>	P028-P02-PR03	Eastern white cedar	I nuja occidentalis	0566221/4811886			ļ		<u> </u>	+	3		ļ		l		4	40	9					22				+	34	M
PO20-P02-PR04       Travarack       Larix laricina       0506246/4811886       Image: control of the con	PU20-PU2-PKU4	Eastern White cedar	Thuja occidentalis	0566246/4811886			<b> </b>	ł	<b> </b>	┥┥	2	<b> </b>	<b> </b>		ļ		1	10			├			ŏ	ь		<b> </b>	$\vdash$	27	M
NormationLandonCardenomicCooperand/PointCooperand<	P028-P02 PR04	Tamarack	Larix laricino	0566246/4811886						┥	I	1						1										$\vdash$	ו ס	
PO28-P02-PR04Crack willowSalix fragilisO566246/4811886Image: Constraint of the second of t	P028-P02-PR04	White spruce	Picea dauca	0566246/4011000			l			┼─┤	1		l	+		<del> </del>		2							1	1		+	5	
P028-P02-PR05       Eastern white cedar       Thuja occidentalis       0566160/4811823       Image: Construction of the	P028-P02-PR04	Crack willow	Salix fragilis	0566246/4811886			1	1		+		<u> </u>				1		-				1			'	I		+	1	M
P028-P02-PR05         Scots pine         Pinus sylvestris         0566160/4811823         0         2         0         7         1         12         M           P028-P02-PR05         Norway maple         Acer platanoides         0566160/4811823         0         0         0         0         1         0         1         M           P028-P02-PR05         Norway maple         Acer platanoides         0566160/4811823         0         0         0         0         0         1         M           P028-P02-PR06         Eastern white cedar         Thuja occidentalis         0566172/4811783         0         0         0         0         2         0         7         0         9         M	P028-P02-PR05	Eastern white cedar	Thuja occidentalis	0566160/4811823			1	1	1			1	1	1		1	5						2						7	M
P028-P02-PR05       Norway maple       Acer platanoides       0566160/4811823       Image: Control of the state of the s	P028-P02-PR05	Scots pine	Pinus sylvestris	0566160/4811823			l –	I	1			1	2	1		1		1	2					7		1			12	M
P028-P02-PR06 Eastern white cedar Thuja occidentalis 0566172/4811783 9 M	P028-P02-PR05	Norway maple	Acer platanoides	0566160/4811823																				1					1	М
	P028-P02-PR06	Eastern white cedar	Thuja occidentalis	0566172/4811783														2					'						9	М



## Attachment B-2: Prism Sweep Tree Inventory Results

Polygon & Prism	Species:	Species:	UTM		D	Dead (DBH in cm)					Poor (DB	H in cm)				F	air (DBH	in cm)				G	ood (DBF	l in cm)		-	Total Per	Significance
Tally ID	Common Name	Scientific Name	Co-ordinates	0-10cm	10-20cm	20-30cm 30-40cm	40-50 cm	50+	0-10cm	10-20cm	20-30cm	30-40cm	40-50 cm	50+	0-10cm	10-20cm	20-30cm	30-40cm	40-50cm	50+	0-10cm	10-20cm	20-30cm	30-40cm	40-50cm	50+	Species	-
P028-P02-PR06	Scots pine	Pinus svlvestris	0566172/4811783														3					2					5	М
P028-P02-PR07	Eastern white cedar	Thuja occidentalis	0566228/4811758								2					8	3				7						20	M
P028-P02-PR07	Eastern cottonwood	Populus platanoides	0566228/4811758																	1			2				3	М
P028-P02-PR07	White birch	Betula papyrifera	0566228/4811758												1								1				2	М
P028-P02-PR08	Eastern white cedar	Thuja occidentalis	0566278/4811704						2							1	6				13						22	М
P028-P02-PR08	White birch	Betula papyrifera	0566278/4811704								3						1						1				5	М
P028-P02-PR08	White spruce	Picea glauca	0566278/4811704									1										1					1	М
P028-P02-PR09	Eastern white cedar	Thuja occidentalis	0566282/4811635												2	3						6	9				20	М
P028-P02-PR09	White birch	Betula papyrifera	0566282/4811635								3						3						3				9	М
P028-P02-PR09	Red maple	Acer rubrum	0566282/4811635								1																1	М
P028-P02-PR09	White elm	Ulmus americana	0566282/4811635													1	1										2	М
P028-P02-PR10	Eastern white cedar	Thuja occidentalis	0566310/4811681								5					2						4					11	М
P028-P02-PR10	White birch	White birch	0566310/4811681							1	1																2	L
P028-P02-PR11	Eastern white cedar	Thuja occidentalis	0556292/4811718												8						1						9	М
P028-P02-PR11	White birch	Betula papyrifera	0556292/4811718						1						1	``						2					4	М
P028-P02-PR11	Red maple	Acer rubrum	0556292/4811718						4							1											5	М
P028-P02-PR11	Balsam fir	Abies balsamea	0556292/4811718																		2						2	М
P028-P02-PR11	Black cherry	Prunus serotina	0556292/4811718							1																	1	М
P028-P02-PR12	White ash	Fraxinus americana	0566274/4811781																					2			2	L
P028-P02-PR12	Eastern white cedar	Thuja occidentalis	0566274/4811781								1					2		1					10				14	М
P028-P02-PR12	Eastern white pine	Pinus strobus	0566274/4811781																					1			1	Н
P028-P02-PR12	White birch	Betula papyrifera	0566274/4811781																			1	2				3	М
P028-P02-PR12	White elm	Ulmus americana	0566274/4811781																					1			1	М
P028-P02-PR13	Tamarack	Larix laricina	0566265/4811833															1									1	М
P028-P02-PR13	Eastern white cedar	Thuja occidentalis	0566265/4811833								2				5						4	12					23	М
P028-P02-PR13	White ash	Fraxinus americana	0566265/4811833							1	1																2	L
P028-P02-PR13	White elm	Ulmus americana	0566265/4811833							1																	1	М
P029a-P02-PR01	Eastern white cedar	Thuja occidentalis	0566126/4811860						4							6						2	3				15	М
P029a-P02-PR01	White birch	Betula papyrifera	0566126/4811860																					1			1	М
P029a-P02-PR01	Sugar maple	Acer saccharum	0566126/4811860													1					1	2	5				9	M
P030-P01-PR01	Yellow birch	Betula alleghaniesnsis	0565966/4811811														1						4				5	М
P030-P01-PR01	Eastern white cedar	Thuja occidentalis	0565966/4811811						2							1					1	7	3				14	H
P030-P01-PR02	White birch	Betula papyrifera	0565926/4811812																				1	-			1	M
P030-P01-PR02	Yellow birch	Betula alleghaniesnsis	0565926/4811812														1							1			2	M
P030-P01-PR02	Eastern white cedar	Thuja occidentalis	0565926/4811812													1	2					3	3				9	M
P031a-P01-PR01	Serviceberry	Amelanchier sp.	0565866/4811801							1					1						3						5	M
P031a-P01-PR01	Eastern white cedar	Thuja occidentalis	0565866/4811801														1						2				3	M
P031a-P01-PR01	White ash	Fraxinus americana	0565866/4811801							1																	1	
P031a-P01-PR01	vvnite birch	Betula papyritera	0565866/4811801										ļ			-							1	1	L		2	<u> </u>
P031a-P01-PR02	Eastern white cedar	I huja occidentalis	0565824/4811794										ļ			2						1	6		ļ		9	M
P031a-P01-PR02	Serviceberry	Amelanchier sp.	0565824/4811794									<u> </u>		$\vdash$							2				ļ	$ \vdash  $	2	<u>M</u>
P031a-P01-PR02		Betula papyritera	0565824/4811794									<u> </u>	<u> </u>	$\vdash$								1			L	$\vdash$	1	<u>M</u>
P031a-P01-PR02	vvnite ash	Fraxinus americana	0565824/4811794	<u> </u>			<u> </u>			1		<u> </u>	<u> </u>			404				_	405		400		<u> </u>		2	L
			Iotais	0	2		0	2	33	31	35	<u>1</u>	L 0	1	56	124	/0	14	3	4	105	207	139	39		13	882	
			Total per condition	000				5						101						2/1						505		
			Grand total	88Z	J																							



# Attachment B-3: Individual Tree Inventory Results

Property ID	Tree ID	Tree Species (Common Name)	Tree Species (Scientific Name)	DBH (cm)	Crown Reserve (m)	Height (m)	Age	Crown Spread (m)	Crown Health Rating	Stem Health Rating	Overall Health Rating	Condition	Significance
P012a	1	Eastern cottonwood	Populus deltoides	37	9	17	20	4.5	3	2	2.5	F	L
P012a	2	White mulberry	Morus alba	7	6	4	5	3	3	2	2.5	F	L
P012a	3	White ash	Fraxinus americana	5	4	3.5	4	2	4	3	3.5	F	М
P012a	4	White ash	Fraxinus americana	4	3	3.5	4	1.5	4	3	3.5	F	М
P012a	5	White mulberry	Morus alba	3	4	2	3	2	3	2	2.5	Р	L
P014	6	Basswood	Tilia americana	8	2	4	3	1	3	2	2.5	F	М
P014	7	Basswood	Tilia americana	4	1	4	2	0.5	2	2	2	Р	М
P014	8	Manitoba maple	Acer negundo	14	6	6	10	3	4	2	3	F	L
P014	9	Manitoba maple	Acer negundo	22	7	8	20	3.5	3	3	3	F	L
P020	10	Green ash	Fraxinus pennsylvanica	6	4	6	10	2	2	3	2.5	F	М





# Attachment **C**

# **Tree Significance Rationale**

# **Tree Significance Rationale**

#### High:

- Healthy and structurally strong individual trees or groups of trees of desirable, long-lived species;
- Trees that are native to the area and are in or adjacent to a contiguous forest habitat;
- Regionally rare or Species at Risk (SAR) tree species of any size;
- Desirable native tree species of any size that provide important roles and functions within certain habitats and ecosystems;
- Significant trees in hedgerows or fragmented woodlots that are connected with other significant habitats and provide a vital role for native fauna movement and cover;
- Designated heritage trees;
- Exceptionally large trees.

#### Medium:

- Common or short-lived native tree species;
- Non-native tree species that supply good ecosystem services to native habitats;
- Trees nearing the end of their lifespan or are declining in health;
- Native trees that are not rare and do not provide a significant role or function within its habitat and ecosystem.
- Native trees that are under significant threat or have been affected by major pests and diseases.

#### Low:

- Invasive and non-desirable tree species;
- Trees or groups of trees in poor and very poor health;
- Trees not suited to the site or the habitat that it is part of;
- Structurally compromised and hazardous trees.

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# Appendix E

**Breeding Birds Results** 

Taxonomy	Species	ESA Status	SARA Status	COSEWIC Status	Preferred Habitat <sup>1, 2</sup>	Known Species Range <sup>1, 2</sup>	Source Identifying Species Record	Suitable Habitat Identified within Limits of Work During Background Review	Species Observed During Field Investigations
Amphibians	Jefferson Salamander Ambystoma jeffersonianum	END	THR Schedule 1	END	Adults live in moist, loose soil, under logs or in leaf litter. Jefferson salamander migrate to vernal pools in the early spring to breed. They lay their eggs in clumps attached to underwater vegetation. By midsummer, the larvae lose their gills and leave the pond and head into the surrounding forest. Once in the forest, Jefferson salamanders spend much of their time underground in rodent burrows, and under rocks and stumps. They feed primarily on insects and worms. This species can be associated with the following ELC code: <b>FOD</b> where permanent or temporary ponds or pools are present.	In Canada, it is found only in southern Ontario, mainly along the Niagara Escarpment.	MNRF Correspondence ORAA	Yes, Potentially Suitable Habitat was identified within the Study Area.	No, Jefferson Salamander was not observed, within the limits of work, during species specific surveys for the species which were conducted in 2018, 2019 or 2020.
Amphibians	Unisexual Ambystoma (Jefferson Salamander dependent)	END	No Status	END	Unisexual Ambystoma (Jefferson Salamander dependent population), utilize the same habitat as Jefferson Salamander, which has been reproduced below: Adults live in moist, loose soil, under logs or in leaf litter. Unisexual Ambystomasalamander migrate to vernal pools in the early spring to breed. They lay their eggs in clumps attached to underwater vegetation. By midsummer, the larvae lose their gills and leave the pond and head into the surrounding forest. As adults, Unisexual Ambystoma salamander's spend much of their time underground in rodent burrows, and under rocks and stumps. They feed primarily on insects and worms. This species can be associated with the following ELC code: FOD where permanent or temporary ponds or pools are present.	In Canada, it is found only in southern Ontario, mainly along the Niagara Escarpment.	MNRF Correspondence ORAA	Yes, Potentially Suitable Habitat was identified within the Study Area.	No, Unisexual Ambystoma (Jefferson Salamander dependent) was not observed, within the limits of work, during species specific surveys for the species which were conducted in 2018, 2019 or 2020.
Birds	Bank Swallow <i>Riparia riparia</i>	THR	No Status	THR	Bank swallows nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. Many nests are on banks of rivers and lakes, but they are also found in active sand and gravel pits or former ones where the banks remain suitable. The birds breed in colonies ranging from several to a few thousand pairs.	The bank swallow is found all across southern Ontario, with sparser populations scattered across northern Ontario. The largest populations are found along the Lake Erie and Lake Ontario shorelines, and the Saugeen River (which flows into Lake Huron).	MNRF Correspondence OBBA	No, Potentially Suitable Habitat was not identified within the Study Area.	No, The species was not observed during field investigations.
Birds	Barn Swallow <i>Hirundo rustica</i>	THR	No Status	THR	Barn Swallows often live in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures such as open barns, under bridges and in culverts. The species is attracted to open structures that include ledges where they can build their nests, which are often re-used from year to year. They prefer unpainted, rough-cut wood, since the mud does not adhere as well to smooth surfaces. This species can typically be associated with the following ELC communities: <b>TPO</b> , <b>CUM1</b> , <b>MAM</b> , <b>MAS</b> , <b>OAO</b> , <b>SAS1</b> , <b>SAM1</b> , <b>SAF1</b> ; containing or adjacent structures that are suitable for nesting.	The Barn Swallow may be found throughout southern Ontario and can range as far north as Hudson Bay, wherever suitable locations for nests exist.	MNRF Correspondence OBBA	Yes, Potentially suitable foraging habitat (i.e., fields) are present. No culverts or bridges that would be suitable as nesting habitat are present.	No, Nesting Barn Swallow were observed within the Study Area; however the species was observed foraging within the Study Area. Yet observations of foraging does not confirm nesting habitat (i.e., that which is protected under the ESA, 2007), given that the species may forage widely from its nesting habitat.
Birds	Bobolink Dolichonyx oryzivorus	THR	No Status	THR	Historically, Bobolinks lived in North American tallgrass prairie and other open meadows. With the clearing of native prairies, Bobolinks moved to living in hayfields. Bobolinks often build their small nests on the ground in dense grasses. Both parents usually tend to their young, sometimes with a third Bobolink helping. This species can typically be associated with the following ELC communities: <b>TPO</b> , <b>TPS</b> , <b>CUM1</b> and <b>MAM2</b> .	The Bobolink breeds across North America. In Ontario, it is widely distributed throughout most of the province south of the boreal forest, although it may be found in the north where suitable habitat exists.	MNRF Correspondence OBBA	Yes, Potentially Suitable Habitat was identified within the Study Area.	Yes, Bobolink were observed in suitable breeding habitat within the Study Area.
Birds	Chimney swift Chaetura pelagica	THR	THR Schedule 1	THR	<ul> <li>Before European settlement Chimney Swifts mainly nested on cave walls and in hollow trees or tree cavities in old growth forests. Today, they are more likely to be found in and around urban settlements where they nest and roost (rest or sleep) in chimneys and other manmade structures. They also tend to stay close to water as this is where the flying insects they eat congregate.</li> <li>Foraging habitat for this species can be associated with the following ELC codes: TPO, CUM1, MAM, MAS, OAO, SAS1, SAM1, SAF1 containing or adjacent structures with suitable nesting habitat (i.e. chimneys).</li> </ul>	The Chimney Swift breeds in eastern North America, possibly as far north as southern Newfoundland. In Ontario, it is most widely distributed in the Carolinian zone in the south and southwest of the province, but has been detected throughout most of the province south of the 49th parallel. It winters in northwestern South America.	OBBA	No, There are no anthropogenic structures with suitable chimneys that will be removed in order to accommodate the project within the limits of work.	No, This species was identified within the limits of work during field investigations

Taxonomy	Species	ESA Status	SARA Status	COSEWIC Status	Preferred Habitat <sup>1, 2</sup>	Known Species Range <sup>1, 2</sup>	Source Identifying Species Record	Suitable Habitat Identified within Limits of Work During Background Review	Species Observed During Field Investigations
Birds	Eastern Meadowlark <i>Sturnella magna</i>	THR	No Status	THR	Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches. This species can typically be associated with the following ELC communities: <b>TPO</b> , <b>TPS</b> , <b>CUM1</b> , <b>CUS</b> , and <b>MAM2</b> with elevated song perches.	In Ontario, the Eastern Meadowlark is primarily found south of the Canadian Shield but it also inhabits the Lake Nipissing, Timiskaming and Lake of the Woods areas.	MNRF Correspondence OBBA	Yes, Potentially Suitable Habitat was identified within the Study Area.	Yes, Eastern Meadowlark were observed in suitable breeding habitat within the Study Area.
Birds	Eastern Whip-poor-will Antrostomus vociferus	THR	THR Schedule 1	THR	The Eastern Whip-poor-will is usually found in areas with a mix of open and forested areas, such as savannahs, open woodlands or openings in more mature, deciduous, coniferous and mixed forests. It forages in these open areas and uses forested areas for roosting (resting and sleeping) and nesting. I lays its eggs directly on the forest floor, where its colouring means it will easily remain undetected by visual predators. This species can typically be associated with the following ELC communities: <b>TPS, TPW, CUW, FOD FOC</b> and <b>FOM</b> where open areas are present.	The Eastern Whip-poor-will's breeding range includes two widely separate areas. It breeds throughout much of eastern North America, reaching as far north as southern Canada and also from the southwest United States to Honduras. In (Canada, the Whip-poor-will can be found from east-central Saskatchewan to central Nova Scotia and in Ontario they breed as far north as the shore of Lake Superior. Although Eastern Whip-poor-wills were once widespread throughout the central Great Lakes region of Ontario, their distribution in this area is now fragmented. The Whip-poor-will migrates to Mexico and Central America, where it stays throughout the cold Canadian winter.	Additional MNRF correspondence	Yes, Potentially Suitable Habitat was identified within the Study Area.	No, Species specific surveys for Eastern Whip-poor-will were undertaken within potentially suitable habitats in the limits of work. The species was not observed.
Birds	Henslow's Sparrow Ammodramus henslowii	END	END Schedule 1	END	In Ontario, the Henslow's Sparrow lives in open fields with tall grasses, flowering plants, and a few scattered shrubs. It has also been found in abandoned farm fields, pastures, and wet meadows. It tends to avoid fields that have been grazed or are crowded with trees and shrubs. It prefers extensive dense, tall grasslands where it can more easily conceal its small ground nest. This species can typically be associated with the following ELC communities: <b>TPO</b> , <b>CUM</b> , and <b>MAM</b> that are a minimum of 30 ha in size with vegetation that is over 30cm in height with a thick thatch layer and a lack of emergent woody vegetation.	The Henslow's Sparrow breeds in the northeastern and east-central United , States, and reaches its northeastern limit in Ontario. It was once fairly common in scattered areas of suitable habitat south of the Canadian Shield. However, steep declines since the 1960s have all but wiped this bird out as a breeding species in Ontario. A few are still seen each spring at migration hotspots such as Point Pelee National Park, and a few may breed at selected locations.	Notice of Approval to Proceed with the Undertaking, NHIC (historical record)	No, There are no grasslands within the Study Area that meet the 30 ha size minimum. However the largest grass land within the Limits of Work was considered potentially suitable habitat, despite being smaller than then the species minimum size requirement.	No, Species specific surveys for Henslow Sparrow were undertaken within potentially suitable habitats in the limits of work. The species was not observed.
Birds	Least Bittern Ixobrychus exilis	THR	THR Schedule 1	THR	In Ontario, the Least Bittern is found in a variety of wetland habitats, but strongly prefers cattail marshes with a mix of open pools and channels. This bird builds its nest above the marsh water in stands of dense vegetation, hidden among the cattails. The nests are almost always built near open water, which is needed for foraging. This species eats mostly frogs, small fish, and aquatic insects. This species can typically be associated with the following ELC communities: MAS2-1, MAS3-1, SA and OAO.	In Ontario, the Least Bittern is mostly found south of the Canadian Shield, especially in the central and eastern part of the province. Small numbers also breed occasionally in northwest Ontario. This species has disappeared from much of its former range, especially in southwestern Ontario, where wetland loss has been most severe. In winter, Least Bitterns migrate to the southern United States, Mexico and Central America.	OBBA	No, Potentially Suitable Habitat was not identified within the Study Area.	No, the species was not observed during field investigations within the Limits of work.

Taxonomy	Species	ESA Status	SARA Status	COSEWIC Status	Preferred Habitat <sup>1, 2</sup>	Known Species Range <sup>1, 2</sup>	Source Identifying Species Record	Suitable Habitat Identified within Limits of Work During Background Review	Species Observed During Field Investigations
Mammals	Little Brown Myotis <i>Myotis lucifugus</i>	END	No Status	END	Bats are nocturnal. During the day they roost in trees and buildings. They often select attics, abandoned buildings and barns for summer colonies where they can raise their young. Bats can squeeze through very tiny spaces (as small as six millimetres across) and this is how they access many roosting areas. Little brown bats hibernate from October or November to March or April, most often in caves or abandoned mines that are humid and remain above freezing. This species can typically be associated with any community where suitable roosting (i.e. cavity trees, houses, abandoned buildings, barns, etc.) habitat is available.	The little brown bat is widespread in southern Ontario and found as far north as Moose Factory and Favourable Lake. Outside Ontario, this bat is found across Canada (except in Nunavut) and most of the United States.	BCI, MNRF Correspondence	Yes, Potentially Suitable Habitat woodlands were identified within the limits of work.	Yes, Little Brown Myotis was confirmed present by acoustic monitoring within the limits of work.
Mammals	Eastern Small-footed Myotis ( <i>Myotis leibii</i> )	END			In the spring and summer, eastern small-footed bats will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. These bats often change their roosting locations every day. At night, they hunt for insects to eat, including beetles, mosquitos, moths, and flies. In the winter, these bats hibernate, most often in caves and abandoned mines. They seem to choose colder and drier sites than similar bats and will return to the same spot each year.	The eastern small-footed bat has been found from south of Georgian Bay to Lake Erie and east to the Pembroke area. There are also records from the Bruce Peninsula, the Espanola area, and Lake Superior Provincial Park. Most documented sightings are of bats in their winter hibernation sites.	BCI, MNRF Correspondence	Yes, Potentially Suitable Habitat woodlands were identified within the limits of work.	Yes, Eastern Small-footed Myotis was confirmed present by acoustic monitoring within the Limits of Work.
Mammals	Northern Myotis <i>Myotis septentrionalis</i>	END	No Status	END	Northern long-eared bats are associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. These bats hibernate from October or November to March or April, most often in caves or abandoned mines. This species can typically be associated with the following ELC communities: <b>FOC</b> , <b>FOM</b> , <b>FOD</b> , <b>SWC</b> . <b>SWM</b> and <b>SWD</b> where suitable roosting (i.e. cavity trees and trees with loose bark) habitat is available.	The northern long-eared bat is found throughout forested areas in southern Ontario, to the north shore of Lake Superior and occasionally as far north as Moosonee, and west to Lake Nipigon. This bat is found in all Canadian provinces as well as the Yukon and Northwest Territories.	BCI, MNRF Correspondence	Yes, Potentially Suitable Habitat woodlands were identified within the limits of work.	No, Northern Myotis was not present during acoustic monitoring surveys for bat SAR within the Limits of Work.
Mammals	Tri-colored Bat Perimyotis subflavus	END	END Schedule 1	END	In Ontario, the Tri-colored Bat lives in forested habitats, forming day roosts and maternity colonies in older forest within foliage or in high tree cavities, occasionally also in bars or other structures. This species forages over water and along streams in forests. At the close of the summer season, this species congregate at a location to swarm, usually near caves, mines or underground locations where they will winter; it has a strong fidelity to its winter hibernation sites. This bat overwinters in caves, typically individually instead of as a group.	This bat is found in Southern Ontario and ranging as far north as Espanola, near Sudbury, having a scattered distribution. Its broad range sweeps from eastern North America down to Central America.	BCI, MNRF Correspondence	Yes, Potentially Suitable Habitat woodlands were identified within the limits of work.	Yes, Tri-colored Bat was confirmed present by acoustic monitoring within the Limits of Work.
Plants	Butternut Juglans cinerea	END	END Schedule 1	END	In Ontario, Butternut usually grows alone or in small groups in deciduous forests. It prefers moist, well- drained soil and is often found along streams. It is also found on well-drained gravel sites and rarely on dry rocky soil. This species does not do well in the shade, and often grows in sunny openings and near forest edges. This species can typically be associated with the following ELC communities: <b>FOD</b> and mature hedgerows; Soil: dry rocky or moist (4, 5, 6) to fresh (2, 3).	Butternut can be found throughout central and eastern North America. In Canada, Butternut occurs in Ontario, Quebec and New Brunswick. In Ontario, this species is found throughout the southwest, north to the Bruce Peninsula, and south of the Canadian Shield.	N/A	Yes, Potentially Suitable Habitat of FOD and Hedgerows are present within the Study Area.	No, No butternut were identified during field investigations.
Reptiles	Blanding's Turtle <i>Emydoidea blandingii</i>	THR	THR Schedule 1	THR	Blanding's Turtles live in shallow water, usually in large wetlands and shallow lakes with lots of water plants. It is not unusual, though, to find them hundreds of metres from the nearest water body, especially while they are searching for a mate or traveling to a nesting site. Blanding's Turtles hibernate in the mud at the bottom of permanent water bodies from late October until the end of April. This species can typically be associated with the following ELC communities: <b>SWT2</b> , <b>SWT3</b> , <b>SWD</b> , <b>SWM</b> , <b>MAS2</b> , <b>SAS1</b> , <b>SAM1</b> , where open water is present.	The Blanding's Turtle is found in and around the Great Lakes Basin, with isolated populations elsewhere in the United States and Canada. In Canada, the Blanding's Turtle is separated into the Great Lakes-St. Lawrence population and the Nova Scotia population. Blanding's Turtles can be found throughout southern, central and eastern Ontario.	ORAA, Additional MNRF Correspondence	Yes, Potentially Suitable Habitat was identified within the Study Area.	No, This species was not observed, within the limits of work, during species specific surveys for Blanding's Turtle which were conducted in 2018.
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# Appendix F

**Incidental Wildlife Observations** 

# Appendix F: Incidental WIIdlife Observations

Таха	Common Name	Latin Name	S-Rank	ESA Status	SARA Status
Amphibians	Gray Treefrog	Hyla versicolor	S5	-	-
Amphibians	Green Frog	Lithobates clamitans	S5	-	-
Birds	American Goldfinch	Carduelis tristis	S5B	-	-
Birds	American Robin	Turdus migratorius	S5B	-	-
Birds	Baltimore Oriole	Icterus galbula	S4B	-	-
Birds	Barn Swallow	Hirundo rustica	S4B	THR	THR
Birds	European Starling	Sturnus vulgaris	SNA	-	-
Birds	Field sparrow	Spizella pusilla	S4B	-	-
Birds	Gray Catbird	Dumetella carolinensis	S4B	-	-
Birds	Indigo bunting	Passerina cyanea	S4B	-	-
Birds	Red-eyed Vireo	Vireo olivaceus	S5B	-	-
Birds	Red-winged Blackbird	Agelaius phoeniceus	S4	-	-
Birds	Song Sparrow	Melospiza melodia	S5B	-	-
Birds	Wild Turkey	Meleagris gallopavo	S5	-	-
Birds	Yellow Warbler	Setophaga petechia	S5B	-	-
Insects	Bluet species	Enallagma speces	-	-	-
Insects	Calico Pennant	Celithemis elisa	S5	-	-
Insects	Clouded Sulphur	Colias philodice	S5	-	-
Insects	Common Ringlet	Coenonympha tullia	S5	-	-
Insects	Dot-tailed Whiteface	Leucorrhinia intacta	S5	-	-
Insects	Hobomok Skipper	Poanes hobomok	S5	-	-
Insects	Monarch	Danaus plexippus	S2N,S4B	SC	SC
Insects	Northern Crescent	Phyciodes cocyta	S5	-	-
Insects	Red Admiral	Vanessa atalanta	S5	-	-
Insects	Silvery Blue	Glaucopsyche lygdamus	S5	-	-
Insects	Wild Indigo Duskywing	Erynnis baptisiae	S4	-	-
Mammals	Eastern chipmunk	Tamias striatus	S5	-	-
Mammals	Eastern Gray Squirrel	Sciurus carolinensis	S5	-	-
Mammals	White-tailed Deer	Odocoileus virginianus	S5	-	-
Reptiles	Eastern Gartersnake	Thamnophis sirtalis sirtalis	S5	-	-
Reptiles	Midland Painted Turtle	Chrysemys picta marginata	S4	-	-
Reptiles	Snapping Turtle	Chelydra serpentina	S3	SC	SC



# Appendix G

Significant Wildlife Habitat Screening

# SWH Ecoregion 6E Criterion Schedule – January 2015

#### Table 1.1 Seasonal Concentration Areas of Animals.

			CANDIDATE SWH	CONFIRMED SWH	Candidate Habitat	Confirmer
Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Present Within the Study Area	Within the
Waterfowl Stopover and Staging Areas (Terrestrial) <u>Rationale:</u> Habitat important to migrating waterfowl.	American Black Duck Wood Duck Green-winged Teal Blue-winged Teal Mallard Northern Pintail Northern Shoveler American Wigeon Gadwall	CUM1 CUT1 Plus evidence of annual spring flooding from melt water or run-off within these Ecosites.	<ul> <li>Fields with sheet water during Spring (mid-March to May).</li> <li>Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl.</li> <li>Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available cxlviii.</li> <li>Information Sources</li> <li>Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining occurrence.</li> <li>Reports and other information available from Conservation Authorities</li> <li>Sites documented through waterfowl planning processes (e.g. EHJV implementation plan)</li> <li>Field Naturalist Clubs</li> <li>Ducks Unlimited Canada</li> <li>Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area</li> </ul>	<ul> <li>Studies carried out and verified presence of an annual concentration of any listed species, evaluation</li> <li>methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"ccxi</li> <li>Any mixed species aggregations of 100<sup>(E)</sup> or more individuals required.</li> <li>The flooded field ecosite habitat plus a 100-300m radius area, dependant on local site conditions and adjacent land use is the significant wildlife habitat</li> <li>Annual use of habitat is documented from information sources or field studies (annual use can be based on studies or determined by past surveys with species numbers and dates).</li> <li>SWHMiST Index #7 provides development effects and mitigation measures.</li> </ul>	N	N
Waterfowl Stopover and Staging Areas (Aquatic) <u>Rationale:</u> Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district.	Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Cong-tailed Duck Surf Scoter White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck	MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7	<ul> <li>Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify.</li> <li>These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water)</li> <li>Information Sources         <ul> <li>Environment Canada.</li> <li>Naturalist clubs often are aware of staging/stopover areas.</li> <li>OMNRF Wetland Evaluations indicate presence of locally and regionally significant waterfowl staging.</li> <li>Sites documented through waterfowl planning processes (e.g. EHJV implementation plan)</li> <li>Ducks Unlimited projects</li> <li>Element occurrence specification by Nature Serve: http://www.natureserve.org</li> <li>Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area</li> </ul> </li> </ul>	<ul> <li>Studies carried out and verified presence of:</li> <li>Aggregations of 100(E) or more of listed species for 7 days(E), results in &gt; 700 waterfowl use days.</li> <li>Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH cxlix</li> <li>The combined area of the ELC ecosites and a 100m radius area is the SWH cxlviii</li> <li>Wetland area and shorelines associated with sites identified within the SWHTG cxlviii Appendix K cxlix are significant wildlife habitat.</li> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"ccxi</li> <li>Annual Use of Habitat is Documented from Information Sources or Field Studies (Annual can be based on completed studies or determined from past surveys with species numbers and dates recorded).</li> <li>SWHMiSTcxlix Index #7 provides development effects and mitigation measures.</li> </ul>	N	N

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ned Habitat Found In the Study Area	Conclusions/ Recommendations
	Suitable habitat not present
	Suitable habitat not present

CANDIDATE SWH CONFIRMED SWH Candidate Hab		Candidate Habitat	Confirmed			
Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Present Within the Study Area	Within the
Shorebird Migratory Stopover Area <u>Rationale:</u> High quality shorebird stopover habitat is extremely rare and typically has a long history of use.	Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden-Plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird's Sandpiper Least Sandpiper Stilt Sandpiper Stilt Sandpiper Stilt Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin	BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5	<ul> <li>Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and unvegetated shoreline habitats.</li> <li>Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October.</li> <li>Sewage treatment ponds and storm water ponds do not qualify as a SWH.</li> <li><u>Information Sources</u></li> <li>Western hemisphere shorebird reserve network.</li> <li>Canadian Wildlife Service (CWS) Ontario Shorebird Survey.</li> <li>Bird Studies Canada</li> <li>Ontario Nature</li> <li>Local birders and naturalist clubs</li> <li>Natural Heritage Information Center (NHIC) Shorebird Migratory Concentration Area</li> </ul>	<ul> <li>Studies confirming:</li> <li>Presence of 3 or more of listed species and &gt; 1000<sup>(E)</sup> shorebird use days during spring or fall migration period. (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring migration period)</li> <li>Whimbrel stop briefly (&lt;24hrs) during spring migration, any site with &gt;100<sup>(E)</sup> Whimbrel used for 3 years or more is significant.</li> <li>The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area cxlviii</li> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"ccxi</li> <li>SWHMiSTcxlix Index #8 provides development effects and mitigation measures.</li> </ul>	N	Ν
Raptor Wintering Area <u>Rationale:</u> Sites used by multiple species, a high number of individuals and used annually are most significant	Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl <u>Special Concern:</u> Short-eared Owl Bald Eagle	Hawks/Owls: Combination of ELC Community Series; need to have present one Community Series from each land class; Forest: FOD, FOM, FOC. Upland: CUM; CUT; CUS; CUW. Bald Eagle: Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).	<ul> <li>The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors.</li> <li>Raptor wintering sites (hawk/owl) need to be &gt; 20 ha cxlviii, cxlix with a combination of forest and upland. xvi, xvii, xviii, xix, xx, xxi.</li> <li>Least disturbed sites, idle/fallow or lightly grazed field/meadow (&gt;15ha) with adjacent woodlands</li> <li>Field area of the habitat is to be wind swept with limited snow depth or accumulation.</li> <li>Eagle sites have open water, large trees and snags available for roosting cxlix</li> <li>Information Sources:</li> <li>OMNRF Ecologist or Biologist</li> <li>Field Naturalist Clubs</li> <li>Natural Heritage Information Center (NHIC) Raptor Winter Concentration Area</li> <li>Data from Bird Studies Canada</li> <li>Reports and other information available from Conservation Authorities.</li> </ul>	<ul> <li>Studies confirm the use of these habitats by:</li> <li>One or more Short-eared Owls or; One or more Bald Eagles or; At least 10 individuals and two of the listed hawk/owl species (E).</li> <li>To be significant a site must be used regularly (3 in 5 years) cxlix for a minimum of 20 days by the above number of birds(E).</li> <li>The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area(E)</li> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMIST Index #10 and #11 provides development effects and mitigation measures.</li> </ul>	Ν	Ν

d Habitat Found he Study Area	Conclusions/ Recommendations
	Suitable habitat not present
	Suitable babitat not present
	ounable habitat not present

			CANDIDATE SWH	CONFIRMED SWH	Candidate Habitat	Confirmed
Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Present Within the Study Area	Within the
Bat Hibernacula <u>Rationale;</u> Bat hibernacula are rare habitats in all Ontario landscapes.	Big Brown Bat Tri-coloured Bat	Bat Hibernacula may be found in these ecosites: CCR1 CCR2 CCA1 CCA2 (Note: buildings are not considered to be SWH)	<ul> <li>Hibernacula may be found in caves, mine shafts, underground foundations and Karsts.</li> <li>Active mine sites should not be considered as SWH</li> <li>The locations of bat hibernacula are relatively poorly known.</li> <li>Information Sources:</li> <li>OMNRF for possible locations and contact for local experts</li> <li>Natural Heritage Information Center (NHIC) Bat Hibernaculum</li> <li>Ministry of Northern Development and Mines for location of mine shafts.</li> <li>Clubs that explore caves (e.g. Sierra Club)</li> <li>University Biology Departments with bat experts.</li> </ul>	<ul> <li>All sites with confirmed hibernating bats are SWH (E).</li> <li>The habitat area includes a 200m radius around the entrance of the hibernaculum, (E) for most development types and 1000m for wind farms.</li> <li>Studies are to be conducted during the peak swarming period (Aug. – Sept.). Surveys should be conducted following methods outlined in the "Bats and Bat Habitats: Guidelines for Wind Power Projects".</li> <li>SWHMIST Index #1 provides development effects and mitigation measures.</li> </ul>	N	Ν
Bat Maternity Colonies Rationale: Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.	Big Brown Bat Silver-haired Bat	Maternity colonies considered SWH are found in forested Ecosites. All ELC Ecosites in ELC Community Series: FOD FOM SWD SWM	<ul> <li>Maternity colonies can be found in tree cavities, vegetation and often in buildings xxii, xxv, xxvi, xxvii, xxxi (buildings are not considered to be SWH).</li> <li>Maternity roosts are not found in caves and mines in Ontario.</li> <li>Maternity colonies located in Mature deciduous or mixed forest stands, ,with &gt;10/ha large diameter (&gt;25cm dbh) wildlife trees</li> <li>Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2.</li> <li>Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred, Information Sources:</li> <li>OMNRF for possible locations and contact for local experts</li> <li>University Biology Departments with bat experts</li> </ul>	<ul> <li>Maternity Colonies with confirmed use by;</li> <li>&gt;10 Big Brown Bats(E)</li> <li>&gt;5 Adult Female Silver-haired Bats(E)</li> <li>The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Ecoelement containing the maternity colonies(E).</li> <li>Evaluation methods for maternity colonies should be conducted following methods outlined in the "Bats and Bat Habitats: Guidelines for Wind Power Projects".</li> <li>SWHMiSTIndex #12 provides development effects and mitigation measures.</li> </ul>	Y	Y
Turtle Wintering Areas <u>Rationale:</u> Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Midland Painted Turtle <u>Special Concern:</u> Northern Map Turtle Snapping Turtle	Midland Painted Turtles; ELC Community Classes; SW, MA, OA and SA, ELC Community Series; FEO and BOO Northern Map Turtle; Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.	<ul> <li>For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates.</li> <li>Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen cix, cx, cxi, cxii</li> <li>Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.</li> <li>Information Sources:</li> <li>EIS studies carried out by Conservation Authorities.</li> <li>Local field naturalists and experts, as well as university herpetologists may also know where to find some of these sites.</li> <li>OMNRF Ecologist or Biologist</li> </ul>	<ul> <li>Presence of 5 over-wintering Midland Painted Turtles is significant<sup>®</sup>.</li> <li>One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant<sup>®</sup>.</li> <li>The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering areas may be identified by searching for congregations (Basking Areas) of turtles on warm, sunny days during the fall (Sept. – Oct.) or spring (Mar. – May) cvii.</li> <li>Congregation of turtles is more common where wintering areas are limited and therefore significant cix, cx, cxi, cxii.</li> </ul>	Y	Ν

d Habitat Found he Study Area	Conclusions/ Recommendations
	Suitable habitat not present
	Suitable woodlands are present within the Study Area. Those features studied with acoustic monitoring that confirmed the presence of either big brown bat or silver- haired bat presence are confirmed.
	Suitable wetlands are present in the Study Area.

			CANDIDATE SWH	CONFIRMED SWH	Candidate Habitat	
Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Present Within the Study Area	Within the
			<ul> <li>Field Naturalist clubs</li> <li>Natural Heritage Information Center (NHIC)</li> </ul>	<ul> <li>SWHMiSTcxlix Index #28 provides development effects and mitigation measures for turtle wintering habitat.</li> </ul>		
Reptile Hibernaculum <u>Rationale:</u> Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Snakes: Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Smooth Green Snake Smooth Green Snake Northern Ring-necked Snake Special Concern: Milksnake Eastern Ribbonsnake Lizard: Special Concern (Southern Shield population): Five-lined Skink	For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, Rock Barren, Crevice, Cave, and Alvar sites may be directly related to these habitats. Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator. For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1 FOC3	<ul> <li>For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH.</li> <li>Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line xliv, l, li, lii, cxii.</li> <li>Wetlands can also be important overwintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover.</li> <li>Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures .</li> <li>Information Sources:</li> <li>In spring, local residents or landowners may have observed the emergence of snakes on their property (e.g. old dug wells).</li> <li>Reports and other information available from Conservation Authorities.</li> <li>Field Naturalists clubs</li> <li>University herpetologists</li> <li>Natural Heritage Information Center (NHIC)</li> <li>OMNRF ecologist or biologist may be gware of locations of wintering elvictor</li> </ul>	<ul> <li>Studies confirming:</li> <li>Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (e.g. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct)<sup>(E)</sup></li> <li>Note: If there are Special Concern Species present, then site is SWH</li> <li><u>Note:</u> Sites for hibernation possess specific habitat parameters (e.g. temperature, humidity, etc.) and consequently are used annually, often by many of the same individuals of a local population (i.e. strong hibernation site fidelity). Other critical life processes (e.g. mating) often take place in close proximity to hibernacula. The feature in which the hibernacula is located plus a 30 m radius area is the SWH<sup>(E)</sup></li> <li>SWHMiSTcxlix Index #13 provides development effects and mitigation measures for snake hibernacula.</li> <li>Presence of any active hibernacula.</li> <li>SWHMiSTcxlix Index #37 provides development effects and mitigation measures for five-lined skink wintering habitat.</li> </ul>	Y	Ν
Colonially -Nesting Bird Breeding Habitat (Bank and Cliff) <u>Rationale:</u> Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.	Cliff Swallow Northern Rough- winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles. Cliff faces, bridge abutments, silos, barns. Habitat found in the following ecosites: CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1	<ul> <li>Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area.</li> <li>Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles.</li> <li>Does not include a licensed/permitted Mineral Aggregate Operation.</li> <li>Information Sources</li> <li>Reports and other information available from Conservation Authorities.</li> <li>Ontario Breeding Bird Atlas</li> <li>Bird Studies Canada; <i>NatureCounts</i> http://www.birdscanada.org/birdmon/</li> <li>Field Naturalist Clubs.</li> </ul>	<ul> <li>Studies confirming:</li> <li>Presence of 1 or more nesting sites with 8or more cliff swallow pairs and/or rough- winged swallow pairs during the breeding season.</li> <li>A colony identified as SWH will include a 50m radius habitat area from the peripheral nests</li> <li>Field surveys to observe and count swallow nests are to be completed during the breeding season. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiSTIndex #4 provides development effects and mitigation measures</li> </ul>	N	Ν

d Habitat Found he Study Area	Conclusions/ Recommendations
	Suitable features are present in the Study Area.
	Suitable habitat not present

			CANDIDATE SWH	CONFIRMED SWH	Candidate Habitat	
Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Present Within the Study Area	Within the
Colonially -Nesting Bird Breeding Habitat (Tree/Shrubs) Rationale: Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Great Blue Heron Black-crowned Night-Heron Great Egret Green Heron	SWM2 SWM3 SWM5 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1	<ul> <li>Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used.</li> <li>Most nests in trees are 11 to 15 m from ground, near the top of the tree.</li> <li>Information Sources</li> <li>Ontario Breeding Bird Atlas, colonial nest records.</li> <li>Ontario Heronry Inventory 1991 available from Bird Studies Canada or NHIC (OMNRF).</li> <li>Natural Heritage Information Center (NHIC) Mixed Wader Nesting Colony</li> <li>Aerial photographs can help identify large heronries.</li> <li>Reports and other information available from CAs.</li> <li>MNRF District Offices.</li> <li>Local naturalist clubs.</li> </ul>	<ul> <li>Studies confirming:</li> <li>Presence of 5 (E) or more active nests of Great Blue Heron or other listed species.</li> <li>The habitat extends from the edge of the colony and a minimum 300m radius or extent of the Forest Ecosite containing the colony or any island &lt;15.0ha with a colony is the SWH cc, ccvii</li> <li>Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells</li> <li>SWHMiSTcxlix Index #5 provides development effects and mitigation measures.</li> </ul>	Ν	Ν
Colonially -Nesting Bird Breeding Habitat (Ground) <u>Rationale:</u> Colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer's Blackbird	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1:50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6; MAS1 – 3; CUM CUT CUS	<ul> <li>Local naturalist clubs.</li> <li>Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas.</li> <li>Brewers Blackbird colonies are found loosely on the ground in low bushes in close proximity to streams and irrigation ditches within farmlands.</li> <li>Information Sources</li> <li>Ontario Breeding Bird Atlas, rare/colonial species records.</li> <li>Canadian Wildlife Service</li> <li>Reports and other information available from CAs.</li> <li>Natural Heritage Information Center (NHIC) Colonial Waterbird Nesting Area</li> <li>MNRF District Offices.</li> <li>Field Naturalist clubs.</li> </ul>	<ul> <li>Studies confirming:</li> <li>Presence of &gt; 25 active nests for Herring Gulls or Ring-billed Gulls, &gt;5 active nests for Common Tern or &gt;2 active nests for Caspian Tern(E).</li> <li>Presence of 5 or more pairs for Brewer's Blackbird(E).</li> <li>Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant(E).</li> <li>The edge of the colony and a minimum 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island &lt;3.0ha with a colony is the SWH ,</li> <li>Studies would be done during May/June when actively nesting. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"ccxi</li> <li>SWHMiSTcxlix Index #6 provides development effects and mitigation measures.</li> </ul>	N	N
Migratory Butterfly Stopover Areas <u>Rationale:</u> Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.	Painted Lady Red Admiral <u>Special Concern</u> Monarch	Combination of ELC Community Series; need to have present one Community Series from each land class: <u>Field:</u> CUM CUT CUS <u>Forest:</u> FOC	<ul> <li>A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Ontario cxlix.</li> <li>The habitat is typically a combination of field and forest, and provides the butterflies with a location to rest prior to their long migration south xxxii, xxxiii, xxxiv, xxxv, xxxvi.</li> <li>The habitat should not be disturbed, fields/meadows with an abundance of preferred pectar plants and woodland</li> </ul>	<ul> <li>Studies confirm:</li> <li>The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct). MUD is based on the number of days a site is used by Monarchs, multiplied by the number of individuals using the site. Numbers of butterflies can range from 100-500/day, significant variation can occur between years and multiple years of sampling should occur xl, xlii.</li> <li>Observational studies are to be completed and need to be done frequently during the migration period to</li> </ul>	Ν	Ν
		FOD	edge providing shelter are requirements	estimate MUD.		

d Habitat Found he Study Area	Conclusions/ Recommendations
	Suitable habitat not present
	Suitable habitat not present
	Suitable habitat not present

			CANDIDATE SWH	CONFIRMED SWH	Candidate Habitat	Confirme
Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Present Within the Study Area	Within t
		FOM CUP Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.	<ul> <li>for this habitat cxlviii, cxlix.</li> <li>Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest distance to cross the Great Lakes xxxvii, xxxviii, xxxix, xl, xli.</li> <li>Information Sources</li> <li>OMNRF (NHIC)</li> <li>Agriculture Canada in Ottawa may have list of butterfly experts.</li> <li>Field Naturalist Clubs</li> <li>Toronto Entomologists Association</li> <li>Conservation Authorities</li> </ul>	<ul> <li>MUD of &gt;5000 or &gt;3000 with the presence of Painted Ladies or Red Admiral's is to be considered significant.</li> <li>SWHMiST Index #16 provides development effects and mitigation measures.</li> </ul>		
Landbird Migratory Stopover Areas <u>Rationale:</u> Sites with a high diversity of species as well as high numbers are most significant.	All migratory songbirds. Canadian Wildlife Service Ontario website: <u>http://www.ec.gc.ca/nature/defa</u> <u>ult.asp?lang=En&amp;n=421B7A9D-1</u> All migrant raptors species: Ontario Ministry of Natural Resources: Fish and Wildlife Conservation Act, 1997. Schedule 7: Specially Protected Birds (Raptors)	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	<ul> <li>Woodlots need to be &gt;10 ha<sup>(E)</sup> in size and within 5 km iv, v, vi, vii, viii, ix, x, xi, xii, xi</li></ul>	<ul> <li>Studies confirm:</li> <li>Use of the habitat by &gt;200 birds/day and with &gt;35 spp with at least 10 bird spp. recorded on at least 5 different survey dates(E). This abundance and diversity of migrant bird species is considered above average and significant.</li> <li>Studies should be completed during spring (Apr/May) and fall (Aug/Oct) migration using standardized assessment techniques. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiST Index #9 provides development effects and mitigation measures.</li> </ul>	N	Ν
Deer Yarding Areas <u>Rationale:</u> Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in "yards" to survive severe winter conditions. Deer yards typically have a long history of annual use by deer; yards typically represent 10-15% of an areas summer range.	White-tailed Deer	Note: OMNRF to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard would include; FOM, FOC, SWM and SWC. Or these ELC Ecosites; CUP2 CUP3 FOD3 CUT	<ul> <li>Deer yarding areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area and is located within the Stratum II areas where</li> </ul>	<ul> <li>No Studies Required:</li> <li>Snow depth and temperature are the greatest influence on deer use of winter yards. Snow depths &gt; 40cm for more than 60 days in a typically winter are minimum criteria for a deer yard to be considered as SWH. Ivi, Ivii, Ivii, Ix, Ix, E</li> <li>Deer Yards are mapped by OMNRF District offices. Locations of Core or Stratum 1 and Stratum 2 Deer yards considered significant by OMNRF will be available at local MNRF offices or via Land Information Ontario (LIO).</li> <li>Field investigations that record deer tracks in winter are done to confirm use (best done from an aircraft). Preferably, this is done over a series of winters to establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations. cxcv</li> <li>If a SWH is determined for Deer Wintering Area or if a proposed</li> </ul>	Ν	Y



d Habitat Found he Study Area	Conclusions/ Recommendations
	Suitable habitat not present.
	These features are identified and assessed by the Ministry of Natural Resources and Forestry (MNRF) but are not present within the Study Area.
	-

			CANDIDATE SWH	CONFIRMED SWH	Candidate Habitat	Confirmed Habitat Found	
Wildlife Habitat	Wildlife Species	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Present Within the Study Area	Within the Study Area	Conclusions/ Recommendations
Deer Winter	White-tailed Deer	All Forested Ecosites with	<ul> <li>winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%cxciv.</li> <li>OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual" cxcv</li> <li>Woodlots with high densities of deer due to artificial feeding are not significant<sup>©</sup>.</li> <li>Woodlots will typically be &gt;100 ba in</li> </ul>	<ul> <li>development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule.</li> <li>SWHMiSTcxlix Index #2 provides development effects and mitigation measures.</li> </ul>	N	Y	These features are identified and assessed by
Congregation Areas <u>Rationale:</u> Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions cxlviii.		these ELC Community Series; FOC FOM FOD SWC SWM SWD Conifer plantations much smaller than 50 ha may also be used.	<ul> <li>violation with typically be &gt;100 ha may be considered as significant based on MNRF studies or assessment.</li> <li>Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands.</li> <li>If deer are constrained by snow depth refer to the Deer Yarding Area habitat within Table 1.1 of this Schedule.</li> <li>Large woodlots &gt; 100ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha.</li> <li>Woodlots with high densities of deer due to artificial feeding are not significant<sup>©</sup>.</li> <li>Information Sources</li> <li>MNRF District Offices.</li> <li>LIO/NRVIS</li> </ul>	<ul> <li>Deer management is an MNRF responsibility, deer winter congregation areas considered significant will be mapped by MNRF.</li> <li>Use of the woodlot by white-tailed deer will be determined by MNRF, all woodlots exceeding the area criteria are significant, unless determined not to be significant by MNRF (E)</li> <li>Studies should be completed during winter (Jan/Feb) when &gt;20cm of snow is on the ground using aerial survey techniques, ground or road surveys. or a pellet count deer density survey.</li> <li>If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule.</li> <li>SWHMiST Index #2 provides development effects and mitigation measures.</li> </ul>			the Ministry of Natural Resources and Forestry (MNRF) and are present within the Study Area.

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#### Table 1.2.1 Rare Vegetation Communities.

Paro Vogetation Community	CANDIDATE SWH				CONFIRMED SWH	Candidate Habitat within	Confirm	
ELC Ecosite Code         Habi           Cliffs and Talus Slopes         Any ELC Ecosite within         A Cliff is		Habitat Description	Detailed Information and Sources		Defining Criteria	the Study Area	the	
Cliffs and Talus Slopes	Any ELC Ecosite within Community Series:	A Cliff is vertical to near vertical bedrock >3m in	Most cliff and talus slopes occur along the Niagara Escarpment.	•	Confirm any ELC Vegetation Type for Cliffs or Talus Slopes	Ν	N	
Rationale:	TAO	height.						
Cliffs and Talus Slopes are extremely rare habitats in Ontario.	TAS TAT CLO CLS CLT	A Talus Slope is rock rubble at the base of a cliff made-up of coarse rocky debris.	<ul> <li>Information Sources</li> <li>The Niagara Escarpment Commission has detailed information on location of these habitats.</li> <li>OMNRF District</li> <li>Natural Heritage Information Center (NHIC) has location</li> </ul>	•	SWHMiSTIndex #21 provides development effects and mitigation measures.			
			<ul> <li>Information available on their website</li> <li>Field Naturalist clubs</li> <li>Conservation Authorities</li> </ul>					
Sand Barren	ELC Ecosites: SBO1	Sand Barrens typically are exposed sand, generally	A sand barren area >0.5ha in size). Information Sources	•	Confirm any ELC Vegetation Type for Sand Barrens	N	N	
Rationale:	SBS1	sparsely vegetated and	OMNRF Districts.					
Sand barrens are rare in Ontario	SBT1	caused by lack of moisture,	Natural Heritage Information	•	Site must not be dominated by exotic or			
and support rare species. Most		periodic fires and erosion.	Center (NHIC) has location		introduced species (<50% vegetative cover			
Sand Barrens have been lost due	Vegetation cover varies	Usually located within other	information available on their		are exotic sp.)(E).			
to cottage development and	from patchy and barren	types of hatural habitat	Website.		SWUNISTINARY #20 provides development			
lorestry	(SBO1), thicket-like (SBS1), or more closed and treed (SBT1). Tree cover always < 60%.	Vegetation can vary from patchy and barren to tree covered, but less than 60%.	Conservation Authorities		effects and mitigation measures.			
Alvar	ALO1	An alvar is typically a level,	An Alvar site > 0.5 ha in size lxxv.	•	Field studies that identify four of the five	Ν	N	
	ALS1	mostly unfractured			Alvar Indicator Species at a Candidate			
Rationale:	ALT1	calcareous bedrock feature	Information Sources		Alvar site is Significant.			
Alvars are extremely rare habitats	FOC1	with a mosaic of rock	Alvars of Ontario (2000),					
in Ecoregion 6E. Most alvars in	FOC2	pavements and bedrock	Federation of Ontario Naturalists.	•	Site must not be dominated by exotic or			
Ontario are in Ecoregions 6E and	CUM2	overlain by a thin veneer of	Ontario Nature – Conserving		introduced species (<50% vegetative cover			
7E. Alvars in 6E are small and	CUS2	soil. The hydrology of	Great Lakes Alvars.		are exotic sp.).			
nignly localized just north of the		alvars is complex, with	Natural Heritage Information     Conter (NHIC) has leastion		The alver must be in excellent condition and			
	0002	periods of inundation and	information available on their	•	fit in with surrounding landscape with few			
	Five Alvar	drought Vegetation cover	website		conflicting land uses lxxy			
	Indicator Species:	varies from sparse lichen-	OMNRF Districts					
	1) Carex crawei	moss associations to	Feld Naturalist clubs.	•	SWHMiSTcxlix Index #17 provides			
	2) Panicum	grasslands and shrublands	Conservation Authorities.		development effects and mitigation			
	philadelphicum	and comprising a number of			measures.			
	3) Eleocharis	characteristic or indicator						
	compressa	plants. Undisturbed alvars						
	4) Scutellaria parvula	can be phyto- and						
	5) Tricnostema brachiatum	supporting many						
	<b>-</b>	uncommon or are relict						
	These indicator species	plant and animal species.						
	Alvars within Ecorogian	from patchy to barron with a						
	6E©cxlix	less than 60% tree cover						
		lxxviii.						

ed Habitat within Study Area	Conclusions/Recommendations
	Suitable habitat not present.
	Suitable habitat not present.
	Suitable habitat not present.

		CANDIDATE SV	VH	CONFIRMED SWH	Candidate Habitat within	Confirme
Rare vegetation Community	ELC Ecosite Code Habitat Description Detailed Information and Sources			Defining Criteria	the Study Area	the S
Old Growth Forest Rationale: Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.	Forest Community Series: FOD FOC FOM SWD SWC SWM	Old Growth forests are characterized by heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	<ul> <li>Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest (E).</li> <li><u>Information Sources</u></li> <li>OMNRF Forest Resource Inventory mapping</li> <li>OMNRF Districts.</li> <li>Field Naturalist clubs</li> <li>Conservation Authorities</li> <li>Sustainable Forestry Licence (SFL) companies will possibly know locations through field operations.</li> <li>Municipal forestry departments</li> </ul>	<ul> <li>Field Studies will determine:</li> <li>If dominant trees species of the are &gt;140 years old, then the area containing these trees is Significant Wildlife Habitat</li> <li>The forested area containing the old growth characteristics will have experienced no recognizable forestry activities (cut stumps will not be present)</li> <li>The area of forest ecosites combined or an eco-element within an ecosite that contains the old growth characteristics is the SWH.</li> <li>Determine ELC vegetation types for the forest area containing the old growth characteristics lxxviii</li> <li>SWHMiSTcxlix Index #23 provides development effects and mitigation measures.</li> </ul>	N	N
Savannah <u>Rationale:</u> Savannahs are extremely rare habitats in Ontario.	TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.lxxix, lxxx, lxxxi, lxxxii, lxxxiii	<ul> <li>No minimum size to site (E) Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH.</li> <li><u>Information Sources</u></li> <li>Natural Heritage Information Center (NHIC) has location information available on their website</li> <li>OMNRF Districts</li> <li>Feld Naturalist clubs.</li> <li>Conservation Authorities.</li> </ul>	<ul> <li>Field studies confirm one or more of the Savannah indicator species listed in cxlix Appendix N should be present (E). Note: Savannah plant spp. list from Ecoregion 6E should be used cxlviii.</li> <li>Area of the ELC Ecosite is the SWH.</li> <li>Site must not be dominated by exotic or introduced species (&lt;50% vegetative cover are exotic sp.).</li> <li>SWHMiSTIndex #18 provides development effects and mitigation measures.</li> </ul>	Ν	Ν
Tallgrass Prairie <u>Rationale:</u> Tallgrass Prairies are extremely rare habitats in Ontario.	TPO1 TPO2	A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover. Ixxix, Ixxx, Ixxxi, Ixxxii, Ixxxiii	<ul> <li>No minimum size to site E. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH.</li> <li><u>Information Sources</u></li> <li>Natural Heritage Information Center (NHIC) has location information available on their website</li> <li>OMNRF Districts</li> <li>Feld Naturalist clubs.</li> <li>Conservation Authorities.</li> </ul>	<ul> <li>Field studies confirm one or more of the Prairie indicator species listed in cxlix Appendix N should be present (E). Note: Prairie plant spp. list from Ecoregion 6E should be used cxlviii</li> <li>Area of the ELC Ecosite is the SWH.</li> <li>Site must not be dominated by exotic or introduced species (&lt;50% vegetative cover are exotic sp.).</li> <li>SWHMiSTcxlix Index #19 provides development effects and mitigation measures.</li> </ul>	N	N
Other Rare Vegetation Communities <u>Rationale:</u> Plant communities that often contain rare species which depend on the habitat for survival.	Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG cxlviii. Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	<ul> <li>ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in appendix M cxlviii</li> <li>The OMNRF/NHIC will have up to date listing for rare vegetation communities.</li> <li><u>Information Sources</u></li> <li>Natural Heritage Information Center (NHIC) has location information available on their website</li> <li>OMNRF Districts</li> <li>Feld Naturalist clubs.</li> <li>Conservation Authorities.</li> </ul>	<ul> <li>Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG cxlviii.</li> <li>Area of the ELC Vegetation Type polygon is the SWH.</li> <li>SWHMiST Index #37 provides development effects and mitigation measures.</li> </ul>	N	N

nfirmed Habitat within the Study Area	Conclusions/Recommendations
	Suitable habitat not present.

 Table 1.2.2 Specialized Habitats of Wildlife considered SWH.

Specialized Wildlife	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Candidate Habitat within	Confirmed Habitat within the	Conclusions/
Habitat	whalle Species	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	the Study Area Study Area		Recommendations
Waterfowl Nesting Area Rationale: Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.	American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4 Note: includes adjacency to Provincially Significant Wetlands	<ul> <li>A waterfowl nesting area extends 120 m cxlix from S a wetland (&gt; 0.5 ha) or a wetland (&gt;0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (&lt;0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur cxlix.</li> <li>Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests.</li> <li>Wood Ducks and Hooded Mergansers utilize large diameter trees (&gt;40cm dbh) in woodlands for cavity nest sites.</li> <li>Information Sources</li> <li>Ducks Unlimited staff may know the locations of particularly productive nesting sites.</li> <li>OMNRF Wetland Evaluations for indication of significant waterfowl nesting habitat.</li> <li>Reports and other information available from Conservation Authorities.</li> </ul>	<ul> <li>Studies confirmed:</li> <li>Presence of 3 or more nesting pairs for listed species excluding Mallards(E), or;</li> <li>Presence of 10 or more nesting pairs for listed species including Mallards(E).</li> <li>Any active nesting site of an American Black Duck is considered significant.</li> <li>Nesting studies should be completed during the spring breeding season (April - June). Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m cxlviii from the wetland and will provide enough habitat for waterfowl to successfully nest.</li> <li>SWHMiSTcxlix Index #25 provides development effects and mitigation measures</li> </ul>	Y	N	Suitable wetlands are present in the Study Area.
Bald Eagle and Osprey Nesting,	Osprey	ELC Forest Community Series: FOD, FOM, FOC,	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on	Studies confirm the use of these nests by:	Ν	N	Suitable habitat not present.
Foraging and Perching Habitat Rationale: Nest sites are fairly uncommon in Eco- region 6E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.	Special Concern Bald Eagle	SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands	<ul> <li>structures over water.</li> <li>Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy.</li> <li>Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms).</li> <li><u>Information Sources</u></li> <li>Natural Heritage Information Center (NHIC) compiles all known nesting sites for Bald Eagles in Ontario.</li> <li>MNRF values information (LIO/NRVIS) will list known nesting locations. Note: data from NRVIS is provided as a point and does not represent all the habitat.</li> <li>Nature Counts, Ontario Nest Records Scheme data.</li> <li>OMNRF Districts.</li> <li>Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented</li> <li>Reports and other information available from Conservation Authorities.</li> <li>Field Naturalists clubs</li> </ul>	<ul> <li>One or more active Osprey or Bald Eagle nests in an area.</li> <li>Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH.</li> <li>For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH , maintaining undisturbed shorelines with large trees within this area is important .</li> <li>For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. Area of the habitat from 400-800m is dependent on site lines from the nest to the development and inclusion of perching and foraging habitat cvi</li> <li>To be significant a site must be used annually. When found inactive, the site must be known to be inactive for &gt; 3 years or suspected of not being used for &gt;5 years before being considered not significant. ccvii</li> <li>Observational studies to determine nest site use, perching sites and</li> </ul>			

Specialized Wildlife Wildlife Species		CANDIDATE SWH		CONFIRMED SWH	Candidate Habitat within	Confirmed Habitat within the	Conclusions/
Habitat	wildlife Species	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	the Study Area	Study Area	Recommendations
				<ul> <li>foraging areas need to be done from mid-March to mid-August.</li> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"ccxi</li> <li>SWHMiSTcxlix Index #26 provides development effects and mitigation measures</li> </ul>			
Woodland Raptor Nesting Habitat Rationale: Nests sites for these species are rarely identified; these area sensitive habitats and are often used annually by	Northern Goshawk Cooper's Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk	May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3	<ul> <li>All natural or conifer plantation woodland/forest stands &gt;30ha with &gt;10ha of interior habitat lxxxviiii, lxxxix, xc, xci, xciii, xciv, xcv,xcvi, cxxxiii. Interior habitat determined with a 200m buffer cxlviii</li> <li>Stick nests found in a variety of intermediateaged to mature coniferous, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands.</li> <li>In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest.</li> <li>Information Sources</li> <li>OMNRF Districts.</li> <li>Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented.</li> <li>Check data from Bird Studies Canada.</li> <li>Reports and other information available from Conservation Authorities.</li> </ul>	<ul> <li>Studies confirm:</li> <li>Presence of 1 or more active nests from species list is considered significant.</li> <li>Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH. (the 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest)</li> <li>Barred Owl – A 200m radius around the nest is the SWH ccvii.</li> <li>Broad-winged Hawk and Coopers Hawk – A 100m radius around the nest is the SWH ccvii.</li> <li>Sharp-Shinned Hawk – A 50m radius around the nest is the SWH ccvii.</li> <li>Conduct field investigations from mid-March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area.</li> <li>SWHMiST cxlix Index #27 provides development effects and mitigation measures.</li> </ul>	N	N	Suitable habitat not present.
Turtle Nesting Areas Rationale: These habitats are rare and when identified will often be the only breeding site for local populations of turtles.	Midland Painted Turtle <u>Special Concern Species</u> Northern Map Turtle Snapping Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) cxlviii or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1	<ul> <li>Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals.</li> <li>For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH.</li> <li>Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used.</li> <li>Information Sources</li> <li>Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well-drained sands and fine gravels).</li> <li>Check the Ontario Herpetofaunal Summary Atlas records or other similar atlases for uncommon turtles; location information may help to find potential nesting habitat for them.</li> <li>Natural Heritage Information Center (NHIC)</li> </ul>	<ul> <li>Studies confirm:</li> <li>Presence of 5 or more nesting Midland Painted Turtles<sup>(E)</sup></li> <li>One or more Northern Map Turtle or Snapping Turtle nesting is a SWH<sup>(E)</sup>.</li> <li>The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area dependant on slope, riparian vegetation and adjacent land use is the SWH cxlviii</li> <li>Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat. cxlix</li> <li>Field investigations should be conducted in prime nesting season typically late spring to early summer. Observational studies observing the turtles nesting is a recommended method.</li> <li>SWHMiST cxlix Index #28 provides development effects and mitigation measures for turtle nesting habitat.</li> </ul>	Ν	Ν	Suitable habitat not present.



Specialized Wildlife			CANDIDATE SWH	CONFIRMED SWH	Candidate Habitat within	Confirm
Habitat	wildlife Species	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	the Study Area	
Seeps and Springs <u>Rationale:</u> Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.	Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	<ul> <li>Any forested area (with &lt;25% meadow/field/pasture) within the headwaters of a stream or river system cxvii, cxlix.</li> <li>Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species cxix, cxx, cxxi, cxxii, cxiii, cxiv .</li> <li><u>Information Sources</u></li> <li>Topographical Map.</li> <li>Thermography.</li> <li>Hydrological surveys conducted by Conservation Authorities and MOE.</li> <li>Field Naturalists clubs and landowners.</li> <li>Municipalities and Conservation Authorities may have drainage maps and headwater areas mapped</li> </ul>	<ul> <li>Field Studies confirm:</li> <li>Presence of a site with 2 or more seeps/springs should be considered SWH.</li> <li>The area of an ELC forest ecosite or an Ecoelement within ecosite containing the seeps/springs is the SWH. The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat.</li> <li>SWHMIST Index #30 provides development effects and mitigation measures</li> </ul>	N	N
Amphibian Breeding Habitat (Woodland). Rationale: These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians	<ul> <li>Presence of a wetland, pond or woodland pool (including vernal pools) &gt;500m2 (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). clxxxii, lxiii, lxv, lxvi, lxvii, lxviii, lxix, lxx Some small wetlands may not be mapped and may be important breeding pools for amphibians.</li> <li>Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat</li> <li>Information Sources</li> <li>Ontario Herpetofaunal Summary Atlas (or other similar atlases) for records</li> <li>Local landowners may also provide assistance as they may hear spring-time choruses of amphibians on their property.</li> <li>OMNRF District.</li> <li>OMNRF wetland evaluations</li> <li>Field Naturalist clubs</li> <li>Canadian Wildlife Service Amphibian Road Call Survey</li> <li>Ontario Vernal Pool Association: http://www.ontariovernalpools.org</li> </ul>	<ul> <li>Studies confirm:</li> <li>Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog species with Call Level Codes of 3<sup>(E)</sup>.</li> <li>A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands.</li> <li>The habitat is the wetland area plus a 230m radius of woodland area lxiii, lxv, lxvi, lxvii, lxviii, lxix, lxx, lxxi. If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat.</li> <li>SWHMiST Index #14 provides development effects and mitigation measures.</li> </ul>	N	Y
Amphibian Breeding Habitat (Wetlands) Rationale; Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	ELC Community Classes SW, MA, FE, BO, OA and SA. Typically these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.	<ul> <li>Wetlands&gt;500m2 (about 25m diameter) ccvii), supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats clxxxii.</li> <li>Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators.</li> <li>Bullfrogs require permanent water bodies with</li> </ul>	<ul> <li>Studies confirm:</li> <li>Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog/toad species with Call Level Codes of 3(E). or; Wetland with confirmed breeding Bullfrogs are significant(E).</li> <li>The ELC ecosite wetland area and the shoreline are the SWH.</li> </ul>	N	N

rmed Habitat within the Study Area	Conclusions/ Recommendations
	Suitable habitat not present.
	Suitable woodlands are present in the
	Study Area and studies have confirmed the presence of a sufficient number of
	breeding amphibian species.
	Suitable habitat not present.

Specialized Wildlife	Vildlife Wildlife Species CANDIDATE SWH		CONFIRMED SWH	Candidate Habitat within	Confirmed	
Habitat	Wildlife Opecies	ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	the Study Area	S
			<ul> <li>abundant emergent vegetation.</li> <li><u>Information Sources</u></li> <li>Ontario Herpetofaunal Summary Atlas (or other similar atlases)</li> <li>Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count.</li> <li>OMNRF Districts and wetland evaluations</li> <li>Reports and other information available from Conservation Authorities.</li> </ul>	<ul> <li>A combination of observational study and call count surveys will be required during the spring (March- June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands.</li> <li>If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule.</li> <li>SWHMiST Index #15 provides development effects and mitigation measures.</li> </ul>		
Woodland Area-Sensitive Bird Breeding Habitat <u>Rationale:</u> Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds.	Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird Scarlet Tanager Winter Wren <b>Special Concern:</b> Cerulean Warbler Canada Warbler	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	<ul> <li>Habitats where interior forest breeding birds are breeding, typically large mature (&gt;60 yrs. old) forest stands or woodlots &gt;30 ha. cv, cxxxi, cxxxii, cxxxiii, cxxxiv, cxxv, cxxxvi, cxxxvii, cxxviii, cxxxix, cxl, cxli, cxlii, cxliii, cxliv, cxlv, cxlvi, cl, cli, clii, cliii, cliv, clv, clvi, clvii, clviii, clix,</li> <li>Interior forest habitat is at least 200 m from forest edge habitat. clxiv</li> <li>Information Sources</li> <li>Local bird clubs.</li> <li>Canadian Wildlife Service (CWS) for the location of forest bird monitoring.</li> <li>Bird Studies Canada conducted a 3-year study of 287 woodlands to determine the effects of forest fragmentation on forest birds and to determine what forests were of greatest value to interior species</li> <li>Reports and other information available from Conservation Authorities.</li> </ul>	<ul> <li>Studies confirm:</li> <li>Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. (E)</li> <li>Note: any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH.(E)</li> <li>Conduct field investigations in spring and early summer when birds are singing and defending their territories.</li> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiST Index #34 provides development effects and mitigation measures.</li> </ul>	Ν	Ν



ed Habitat within the Study Area	Conclusions/ Recommendations
	Suitable habitat not present.

#### Table 1.3. Habitats of Species of Conservation Concern considered SWH.

	<b>O</b> mosion		CANDIDATE SWH	CONFIRMED SWH	Candidate Habitat within the	Confirmed Habitat within the	Conclusions/
wildlife	Species	ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	Study Area	Study Area	Recommendations
Marsh Breeding Bird	American Bittern	MAM1	<ul> <li>Nesting occurs in wetlands.</li> </ul>	Studies confirm:	Y	N	Suitable habitat is present within
Habitat	Virginia Rail	MAM2	• All wetland habitat is to be considered as	Presence of 5 or more nesting pairs of Sedge			the Study Area.
	Sora	MAM3	long as there is shallow water with	Wren or Marsh Wren or 1 pair of Sandhill			
Rationale:	Common Moorhen	MAM4	emergent aquatic vegetation present.	Cranes; or breeding by any combination of 5 or			
Wetlands for these bird	American Coot	MAM5	<ul> <li>For Green Heron, habitat is at the edge of</li> </ul>	more of the listed species (E).			
species are typically	Pied-billed Grebe	MAM6	water such as sluggish streams, ponds	Note: any wetland with breeding of 1 or more			
productive and fairly rare in	Marsh Wren	SAS1 SAM1	and marsnes sneltered by snrubs and	Black Terns, Trumpeter Swan, Green Heron or			
landscapes		SAMI SAF1	upland shrubs or forest a considerable	• Area of the ELC ecosite is the SW/H			
lanuscapes.	Sandhill Crane	FFO1	distance from water	<ul> <li>Breeding surveys should be done in May/June</li> </ul>			
	Green Heron	BOO1		when these species are actively nesting in			
	Trumpeter Swan		Information Sources	wetland habitats.			
		For Green Heron:	• OMNRF District and wetland evaluations.	Evaluation methods to follow "Bird and Bird			
	Special Concern:	All SW, MA and CUM1	<ul> <li>Field Naturalist clubs</li> </ul>	Habitats: Guidelines for Wind Power Projects"			
	Black Tern	sites.	<ul> <li>Natural Heritage Information Center</li> </ul>	<ul> <li>SWHMiST Index #35 provides development</li> </ul>			
	Yellow Rail		(NHIC) Records.	effects and mitigation measures			
			Reports and other information available     from Concentration Authorities				
			Ontario Breeding Bird Atlas				
Open Country Bird	Upland Sandpiper	CUM1	Large grassland areas (includes natural	Field Studies confirm:	N	N	Suitable habitat not present.
Breeding Habitat	Grasshopper	CUM2	and cultural fields and meadows) >30 ha	<ul> <li>Presence of nesting or breeding of 2 or more of</li> </ul>			
	Sparrow		clxiv, clxv, clxvi, clxvii, clxviii, clxix.	the listed species.			
Rationale:	Vesper Sparrow		<ul> <li>Grasslands not Class 1 or 2 agricultural</li> </ul>	A field with 1 or more breeding Short-eared Owls			
This wildlife habitat is	Northern Harrier		lands, and not being actively used for	is to be considered SWH.			
declining throughout	Savannah Sparrow		farming (i.e. no row cropping or intensive	• The area of SWH is the contiguous ELC ecosite			
Ontario and North America.	0		hay or livestock pasturing in the last 5	field areas.			
Species such as the Upland	Special Concern		years) 但. Grassland sites considered significant	Conduct field investigations of the most likely     areas in spring and early summer when birds			
significantly the past 40	Short-eared Owr		<ul> <li>Grassiand sites considered significant should have a history of longevity, either</li> </ul>	are singing and defending their territories			
vears based on CWS			abandoned fields mature bayfields and	<ul> <li>Evaluation methods to follow "Bird and Bird</li> </ul>			
(2004) trend records.			pasturelands that are at least 5 years or	Habitats: Guidelines for Wind Power Projects"			
,			older.	SWHMiST Index #32 provides development			
			<ul> <li>The Indicator bird species are area</li> </ul>	effects and mitigation measures			
			sensitive requiring larger grassland areas				
			than the common grassland species.				
			Information Courses				
			Agricultural land classification maps				
			<ul> <li>Agricultural land classification maps,</li> <li>Ministry of Agriculture</li> </ul>				
			<ul> <li>Local bird clubs.</li> </ul>				
			<ul> <li>Ontario Breeding Bird Atlas</li> </ul>				
			Reports and other information available				
			from Conservation Authorities.				
Shrub/Early Successional	Indicator Spp:	CUT1	Large field areas succeeding to shrub and	Field Studies confirm:	N	N	Suitable habitat not present.
Bird Breeding Habitat	Brown Thrasher	CU12	thicket habitats>10haclxiv in size.	Presence of nesting or breeding of 1 of the     indicates and at least 0 of the			
Detionale	Clay-coloured		<ul> <li>Shrub land or early successional fields,</li> <li>not close 1 or 2 pariaultural lands, not</li> </ul>	indicator species and at least 2 of the common			
This wildlife babitat is	Sparrow		holi class 1 of 2 agricultural lands, not	<ul> <li>A babitat with breeding Vellow-breasted Chat or</li> </ul>			
declining throughout	Common Spp	CUW2	row-cropping having or live-stock	Golden-winged Warbler is to be considered as			
Ontario and North America.	Field Sparrow	Patches of shrub ecosites	pasturing in the last 5 years) (E).	Significant Wildlife Habitat. (E)			
The Brown Thrasher has	Black-billed	can be	• Shrub thicket habitats (>10 ha) are most	• The area of the SWH is the contiguous ELC			
declined significantly over	Cuckoo	complexed into a larger	likely to support and sustain a diversity of	ecosite field/thicket area.			
the past 40 years based on	Eastern Towhee	habitat for some bird	these species clxxiii.	Conduct field investigations of the most likely			
CWS (2004) trend records	Willow Flycatcher	species	<ul> <li>Shrub and thicket habitat sites considered</li> </ul>	areas in spring and early summer when birds			
cxcix.			significant should have a history of	are singing and defending their territories			
	Special Concern:		iongevity, either abandoned fields or	Evaluation methods to follow "Bird and Bird			
	r ellow-preasted		pasturelands.	mapilals: Guidelines for wind Power Projects"			



Wildlife	Species		CANDIDATE SWH	CONFIRMED SWH	Candidate Habitat within the	Confirmed Habitat within the	Conclusions/
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	Study Area	Study Area	Recommendations
	Chat Golden-winged Warbler		<ul> <li>Information Sources</li> <li>Agricultural land classification maps, Ministry of Agriculture.</li> <li>Local bird clubs.</li> <li>Ontario Breeding Bird Atlas</li> <li>Reports and other information available from Conservation Authorities</li> </ul>	<ul> <li>SWHMiST Index #33 provides development effects and mitigation measures.</li> </ul>			
Terrestrial Crayfish <u>Rationale:</u> Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare. ccii	Chimney or Digger Crayfish; ( <i>Fallicambarus fodiens</i> ) Devil Crayfish or Meadow Crayfish; ( <i>Cambarus diogenes</i> )	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial	<ul> <li>Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish.</li> <li>Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water.</li> <li>Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well formed.</li> <li><u>Information Sources</u></li> <li>Information sources from "Conservation Status of Freshwater Crayfishes" by Dr. Premek Hamr for</li> </ul>	<ul> <li>Studies Confirm:</li> <li>Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites</li> <li>Area of ELC ecosite or an Ecoelement area of meadow marsh or swamp within the larger ecosite area is the SWH.</li> <li>Surveys should be done April to August in temporary or permanent water. Note the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very difficult cci</li> <li>SWHMiST cxlix Index #36 provides development effects and mitigation measures.</li> </ul>	Y	N	Suitable habitat is present within the Study Area.
Special Concern and Rare Wildlife Species Rationale: These species are quite rare or have experienced significant population declines in Ontario.	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre.	All plant and animal element occurrences (EO) within a 1 or 10km grid. Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy	<ul> <li>The WWF and CNF March 1998</li> <li>When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites Ixxviii</li> <li>Information Sources</li> <li>Natural Heritage Information Centre (NHIC) will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data.</li> <li>NHIC Website "Get Information" : http://nhic.mnr.gov.on.ca</li> <li>Ontario Breeding Bird Atlas</li> <li>Expert advice should be sought as many of the rare spp. have little information available about their requirements.</li> </ul>	<ul> <li>Studies Confirm:</li> <li>Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable.</li> <li>The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH; this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species e.g. specific nesting habitat or foraging habitat.</li> <li>SWHMIST Index #37 provides development effects and mitigation measures.</li> </ul>	Y	Υ	Suitable habitat for the following species is present within the Study Area: eastern ribbonsnake, monarch, west Virginia white, Canada warbler, golden-winged warbler, eastern wood-pewee, Plant SOCC (honey locust, hispid buttercup and field sedge), red-headed Woodpecker and snapping turtle. There are also confirmed habitat for the following species: monarch, eastern wood-pewee and plant SOCC.



#### Table 1.4 Animal Movement Corridors

		C	ANDIDATE SWH	CONFIRMED SWH	Candidate Habitat Present	Confirmed Habitat Present within the	Conclusions/
Habitat	SPECIES	ELC Eco-sites	Habitat Criteria and Information Sources	Defining Criteria	Within the Study Area	Study Area	Recommendations
Amphibian Movement Corridors Rationale: Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	<ul> <li>Corridors may be found in all ecosites associated with water.</li> <li>Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1</li> </ul>	<ul> <li>Movement corridors between breeding habitat and summer habitat clxxiv, clxxv, clxxvi, clxxvii, clxxviii, clxxix, clxxx, clxxxi.</li> <li>Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (Amphibian Breeding Habitat –Wetland) of this Schedule</li> <li>(E).</li> <li>Information Sources</li> <li>MNRF District Office.</li> <li>Natural Heritage Information Center (NHIC).</li> <li>Reports and other information available from Conservation Authorities.</li> <li>Field Naturalist Clubs.</li> </ul>	Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant cxlix Corridors should have at least 15m of vegetation on both sides of waterway cxlix or be up to 200m wide cxlix of woodland habitat and with gaps <20mcxlix . Shorter corridors are more significant than longer corridors; however amphibians must be able to get to and from their summer and breeding habitat cxlix. SWHMiST cxlix Index #40 provides development effects and mitigation measures	N	N	Suitable habitat not present.
Deer Movement Corridors Rationale: Corridors important for all species to be able to access seasonally important life-cycle habitats or to access new habitat for dispersing individuals by minimizing their vulnerability while travelling.	White-tailed Deer	Corridors may be found in all forested ecosites. A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors.	<ul> <li>Movement corridor must be determined when</li> <li>Deer Wintering Habitat is confirmed as SWH from Table 1.1 of this schedule. (E)</li> <li>A deer wintering habitat identified by the OMNRF as SWH in Table 1.1 of this Schedule will have corridors that the deer use during fall migration and spring dispersion</li> <li>Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges).</li> <li><u>Information Sources</u></li> <li>MNRF District Office.</li> <li>Natural Heritage Information Center (NHIC).</li> <li>Reports and other information available from Conservation Authorities.</li> <li>Field Naturalist Clubs.</li> </ul>	Studies must be conducted at the time of year when deer are migrating or moving to and from winter concentration areas. Corridors that lead to a deer wintering habitat should be unbroken by roads and residential areas. Corridors should be at least 200m wide with gaps < 20m and if following riparian area with at least 15m of vegetation on both sides of waterway. Shorter corridors are more significant than longer corridors, cxlix. SWHMiST cxlix Index #39 provides development effects and mitigation measures	Ν	N	Suitable habitat not present.



#### Table 1.5.1 Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 6E

	Wildlife Habitat and		Candidate SWH	Confirmed SWH	Candidate Habitat within the St	
EcoDistrict	Species	Ecosites	Habitat Description	Habitat Criteria and Information	Defining Criteria	Area
6E-14 <u>Rationale:</u> The Bruce Peninsula has an isolated and distinct population of black bears. Maintenance of large woodland tracts with mast-producing tree species is important for bears. clxxxvi, ccxvii	Mast Producing Areas Black Bear	All Forested habitat represented by ELC Community Series: FOM FOD	<ul> <li>Black bears require forested habitat that provides cover, winter hibernation sites, and mast-producing tree species.</li> <li>Forested habitats need to be large enough to provide cover and protection for black bears.</li> </ul>	Woodland ecosites >30ha with mast-producing tree species, either soft (cherry) or hard (oak and beech), <u>Information Sources</u> Important forest habitat for black bears may be identified by OMNRF.	All woodlands > 30ha with a 50%composition of these ELC Vegetation(E) Types are considered significant: FOM1-1 FOM2-1 FOM3-1 FOD1-2 FOD2-1 FOD2-2 FOD2-3 FOD2-3 FOD2-4 FOD4-1 FOD4-1 FOD5-2 FOD5-3 FOD5-7 FOD6-5 SWHMiST cxlix Index #3 provides development effects and mitigation measures.	
6E-17 <u>Rationale:</u> Sharp-tailed grouse only occur on Manitoulin Island in Eco-region 6E, Leks are an important habitat to maintain their population	Lek Sharp-tailed Grouse	CUM CUS CUT	<ul> <li>The lek or dancing ground consists of bare, grassy or sparse shrubland. There is often a hill or rise in topography.</li> <li>Leks are typically a grassy field/meadow &gt;15ha with adjacent shrublands and &gt;30ha with adjacent deciduous woodland. Conifer trees within 500m are not tolerated.</li> </ul>	Grasslands (field/meadow) are to be >15ha when adjacent to shrubland and >30ha when adjacent to deciduous woodland ccxix. • Grasslands are to be undisturbed with low intensities of agriculture (light grazing or late haying) • Leks will be used annually if not destroyed by cultivation or invasion by woody plants or tree planting <u>Information Sources</u> • OMNRF district office • Bird watching clubs • Local landowners • Ontario Breeding Bird Atlas	<ul> <li>Studies confirming lek habitat are to be completed from late March to June.</li> <li>Any site confirmed with sharp-tailed grouse courtship activities is considered significant<sup>(E)</sup></li> <li>The field/meadow ELC ecosites plus a 200 m radius area with shrub or deciduous woodland is the lek habitat<sup>(E)</sup></li> <li>SWHMiST Index #32 provides development effects and mitigation measures</li> </ul>	



ıdy	Confirmed Habitat within the Study Area	Conclusions/ Recommendations
		N/A
		N/A



# **Appendix H**

**Species at Risk Screening** 

Taxonomy	Species	ESA Status	SARA Status	COSEWIC Status	Preferred Habitat <sup>1, 2</sup>	Known Species Range <sup>1, 2</sup>	Source Identifying Species Record	Suitable Habitat Identified within Limits of Work During Background Review	Species Observed During Field Investigations
Amphibians	Jefferson Salamander Ambystoma jeffersonianum	END	THR Schedule 1	END	Adults live in moist, loose soil, under logs or in leaf litter. Jefferson salamander migrate to vernal pools in the early spring to breed. They lay their eggs in clumps attached to underwater vegetation. By midsummer, the larvae lose their gills and leave the pond and head into the surrounding forest. Once in the forest, Jefferson salamanders spend much of their time underground in rodent burrows, and under rocks and stumps. They feed primarily on insects and worms. This species can be associated with the following ELC code: <b>FOD</b> where permanent or temporary ponds or pools are present.	In Canada, it is found only in southern Ontario, mainly along the Niagara Escarpment.	MNRF Correspondence ORAA	Yes, Potentially Suitable Habitat was identified within the Study Area.	No, Jefferson Salamander was not observed, within the limits of work, during species specific surveys for the species which were conducted in 2018, 2019 or 2020.
Amphibians	Unisexual Ambystoma (Jefferson Salamander dependent)	END	No Status	END	<ul> <li>Unisexual Ambystoma (Jefferson Salamander dependent population), utilize the same habitat as Jefferson Salamander, which has been reproduced below:</li> <li>Adults live in moist, loose soil, under logs or in leaf litter. Unisexual Ambystomasalamander migrate to vernal pools in the early spring to breed. They lay their eggs in clumps attached to underwater vegetation. By midsummer, the larvae lose their gills and leave the pond and head into the surrounding forest. As adults, Unisexual Ambystoma salamander's spend much of their time underground in rodent burrows, and under rocks and stumps. They feed primarily on insects and worms.</li> <li>This species can be associated with the following ELC code: FOD where permanent or temporary ponds or pools are present.</li> </ul>	In Canada, it is found only in southern Ontario, mainly along the Niagara Escarpment.	MNRF Correspondence ORAA	Yes, Potentially Suitable Habitat was identified within the Study Area.	No, Unisexual Ambystoma (Jefferson Salamander dependent) was not observed, within the limits of work, during species specific surveys for the species which were conducted in 2018, 2019 or 2020.
Birds	Bank Swallow <i>Riparia riparia</i>	THR	No Status	THR	Bank swallows nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. Many nests are on banks of rivers and lakes, but they are also found in active sand and gravel pits or former ones where the banks remain suitable. The birds breed in colonies ranging from several to a few thousand pairs.	The bank swallow is found all across southern Ontario, with sparser populations scattered across northern Ontario. The largest populations are found along the Lake Erie and Lake Ontario shorelines, and the Saugeen River (which flows into Lake Huron).	MNRF Correspondence OBBA	No, Potentially Suitable Habitat was not identified within the Study Area.	No, The species was not observed during field investigations.
Birds	Barn Swallow <i>Hirundo rustica</i>	THR	No Status	THR	Barn Swallows often live in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures such as open barns, under bridges and in culverts. The species is attracted to open structures that include ledges where they can build their nests, which are often re-used from year to year. They prefer unpainted, rough-cut wood, since the mud does not adhere as well to smooth surfaces. This species can typically be associated with the following ELC communities: <b>TPO</b> , <b>CUM1</b> , <b>MAM</b> , <b>MAS</b> , <b>OAO</b> , <b>SAS1</b> , <b>SAM1</b> , <b>SAF1</b> ; containing or adjacent structures that are suitable for nesting.	The Barn Swallow may be found throughout southern Ontario and can range as far north as Hudson Bay, wherever suitable locations for nests exist.	MNRF Correspondence OBBA	Yes, Potentially suitable foraging habitat (i.e., fields) are present. No culverts or bridges that would be suitable as nesting habitat are present.	No, Nesting Barn Swallow were observed within the Study Area; however the species was observed foraging within the Study Area. Yet observations of foraging does not confirm nesting habitat (i.e., that which is protected under the ESA, 2007), given that the species may forage widely from its nesting habitat.
Birds	Bobolink Dolichonyx oryzivorus	THR	No Status	THR	Historically, Bobolinks lived in North American tallgrass prairie and other open meadows. With the clearing of native prairies, Bobolinks moved to living in hayfields. Bobolinks often build their small nests on the ground in dense grasses. Both parents usually tend to their young, sometimes with a third Bobolink helping. This species can typically be associated with the following ELC communities: <b>TPO</b> , <b>TPS</b> , <b>CUM1</b> and <b>MAM2</b> .	The Bobolink breeds across North America. In Ontario, it is widely distributed throughout most of the province south of the boreal forest, although it may be found in the north where suitable habitat exists.	MNRF Correspondence OBBA	Yes, Potentially Suitable Habitat was identified within the Study Area.	Yes, Bobolink were observed in suitable breeding habitat within the Study Area.
Birds	Chimney swift Chaetura pelagica	THR	THR Schedule 1	THR	<ul> <li>Before European settlement Chimney Swifts mainly nested on cave walls and in hollow trees or tree cavities in old growth forests. Today, they are more likely to be found in and around urban settlements where they nest and roost (rest or sleep) in chimneys and other manmade structures. They also tend to stay close to water as this is where the flying insects they eat congregate.</li> <li>Foraging habitat for this species can be associated with the following ELC codes: TPO, CUM1, MAM, MAS, OAO, SAS1, SAM1, SAF1 containing or adjacent structures with suitable nesting habitat (i.e. chimneys).</li> </ul>	The Chimney Swift breeds in eastern North America, possibly as far north as southern Newfoundland. In Ontario, it is most widely distributed in the Carolinian zone in the south and southwest of the province, but has been detected throughout most of the province south of the 49th parallel. It winters in northwestern South America.	OBBA	No, There are no anthropogenic structures with suitable chimneys that will be removed in order to accommodate the project within the limits of work.	No, This species was identified within the limits of work during field investigations

Taxonomy	Species	ESA Status	SARA Status	COSEWIC Status	Preferred Habitat <sup>1, 2</sup>	Known Species Range <sup>1, 2</sup>	Source Identifying Species Record	Suitable Habitat Identified within Limits of Work During Background Review	Species Observed During Field Investigations
Birds	Eastern Meadowlark <i>Sturnella magna</i>	THR	No Status	THR	Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches. This species can typically be associated with the following ELC communities: <b>TPO</b> , <b>TPS</b> , <b>CUM1</b> , <b>CUS</b> , and <b>MAM2</b> with elevated song perches.	In Ontario, the Eastern Meadowlark is primarily found south of the Canadian Shield but it also inhabits the Lake Nipissing, Timiskaming and Lake of the Woods areas.	MNRF Correspondence OBBA	Yes, Potentially Suitable Habitat was identified within the Study Area.	Yes, Eastern Meadowlark were observed in suitable breeding habitat within the Study Area.
Birds	Eastern Whip-poor-will Antrostomus vociferus	THR	THR Schedule 1	THR	The Eastern Whip-poor-will is usually found in areas with a mix of open and forested areas, such as savannahs, open woodlands or openings in more mature, deciduous, coniferous and mixed forests. It forages in these open areas and uses forested areas for roosting (resting and sleeping) and nesting. I lays its eggs directly on the forest floor, where its colouring means it will easily remain undetected by visual predators. This species can typically be associated with the following ELC communities: <b>TPS, TPW, CUW, FOD FOC</b> and <b>FOM</b> where open areas are present.	The Eastern Whip-poor-will's breeding range includes two widely separate areas. It breeds throughout much of eastern North America, reaching as far north as southern Canada and also from the southwest United States to Honduras. In , Canada, the Whip-poor-will can be found from east-central Saskatchewan to central Nova Scotia and in Ontario they breed as far north as the shore of Lake Superior. Although Eastern Whip-poor-wills were once widespread throughout the central Great Lakes region of Ontario, their distribution in this area is now fragmented. The Whip-poor-will migrates to Mexico and Central America, where it stays throughout the cold Canadian winter.	Additional MNRF correspondence	Yes, Potentially Suitable Habitat was identified within the Study Area.	No, Species specific surveys for Eastern Whip-poor-will were undertaken within potentially suitable habitats in the limits of work. The species was not observed.
Birds	Henslow's Sparrow Ammodramus henslowii	END	END Schedule 1	END	In Ontario, the Henslow's Sparrow lives in open fields with tall grasses, flowering plants, and a few scattered shrubs. It has also been found in abandoned farm fields, pastures, and wet meadows. It tends to avoid fields that have been grazed or are crowded with trees and shrubs. It prefers extensive dense, tall grasslands where it can more easily conceal its small ground nest. This species can typically be associated with the following ELC communities: <b>TPO</b> , <b>CUM</b> , and <b>MAM</b> that are a minimum of 30 ha in size with vegetation that is over 30cm in height with a thick thatch layer and a lack of emergent woody vegetation.	The Henslow's Sparrow breeds in the northeastern and east-central United , States, and reaches its northeastern limit in Ontario. It was once fairly common in scattered areas of suitable habitat south of the Canadian Shield. However, steep declines since the 1960s have all but wiped this bird out as a breeding species in Ontario. A few are still seen each spring at migration hotspots such as Point Pelee National Park, and a few may breed at selected locations.	Notice of Approval to Proceed with the Undertaking, NHIC (historical record)	No, There are no grasslands within the Study Area that meet the 30 ha size minimum. However the largest grass land within the Limits of Work was considered potentially suitable habitat, despite being smaller than then the species minimum size requirement.	No, Species specific surveys for Henslow Sparrow were undertaken within potentially suitable habitats in the limits of work. The species was not observed.
Birds	Least Bittern <i>Ixobrychus exilis</i>	THR	THR Schedule 1	THR	In Ontario, the Least Bittern is found in a variety of wetland habitats, but strongly prefers cattail marshes with a mix of open pools and channels. This bird builds its nest above the marsh water in stands of dense vegetation, hidden among the cattails. The nests are almost always built near open water, which is needed for foraging. This species eats mostly frogs, small fish, and aquatic insects. This species can typically be associated with the following ELC communities: MAS2-1, MAS3-1, SA and OAO.	In Ontario, the Least Bittern is mostly found south of the Canadian Shield, especially in the central and eastern part of the province. Small numbers also breed occasionally in northwest Ontario. This species has disappeared from much of its former range, especially in southwestern Ontario, where wetland loss has been most severe. In winter, Least Bitterns migrate to the southern United States, Mexico and Central America.	OBBA	No, Potentially Suitable Habitat was not identified within the Study Area.	No, the species was not observed during field investigations within the Limits of work.

Taxonomy	Species	ESA Status	SARA Status	COSEWIC Status	Preferred Habitat <sup>1, 2</sup>	Known Species Range <sup>1, 2</sup>	Source Identifying Species Record	Suitable Habitat Identified within Limits of Work During Background Review	Species Observed During Field Investigations
Mammals	Little Brown Myotis <i>Myotis lucifugus</i>	END	No Status	END	Bats are nocturnal. During the day they roost in trees and buildings. They often select attics, abandoned buildings and barns for summer colonies where they can raise their young. Bats can squeeze through very tiny spaces (as small as six millimetres across) and this is how they access many roosting areas. Little brown bats hibernate from October or November to March or April, most often in caves or abandoned mines that are humid and remain above freezing. This species can typically be associated with any community where suitable roosting (i.e. cavity trees, houses, abandoned buildings, barns, etc.) habitat is available.	The little brown bat is widespread in southern Ontario and found as far north as Moose Factory and Favourable Lake. Outside Ontario, this bat is found across Canada (except in Nunavut) and most of the United States.	BCI, MNRF Correspondence	Yes, Potentially Suitable Habitat woodlands were identified within the limits of work.	Yes, Little Brown Myotis was confirmed present by acoustic monitoring within the limits of work.
Mammals	Eastern Small-footed Myotis ( <i>Myotis leibii</i> )	END			In the spring and summer, eastern small-footed bats will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. These bats often change their roosting locations every day. At night, they hunt for insects to eat, including beetles, mosquitos, moths, and flies. In the winter, these bats hibernate, most often in caves and abandoned mines. They seem to choose colder and drier sites than similar bats and will return to the same spot each year.	The eastern small-footed bat has been found from south of Georgian Bay to Lake Erie and east to the Pembroke area. There are also records from the Bruce Peninsula, the Espanola area, and Lake Superior Provincial Park. Most documented sightings are of bats in their winter hibernation sites.	BCI, MNRF Correspondence	Yes, Potentially Suitable Habitat woodlands were identified within the limits of work.	Yes, Eastern Small-footed Myotis was confirmed present by acoustic monitoring within the Limits of Work.
Mammals	Northern Myotis <i>Myotis septentrionalis</i>	END	No Status	END	Northern long-eared bats are associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. These bats hibernate from October or November to March or April, most often in caves or abandoned mines. This species can typically be associated with the following ELC communities: <b>FOC</b> , <b>FOM</b> , <b>FOD</b> , <b>SWC</b> . <b>SWM</b> and <b>SWD</b> where suitable roosting (i.e. cavity trees and trees with loose bark) habitat is available.	The northern long-eared bat is found throughout forested areas in southern Ontario, to the north shore of Lake Superior and occasionally as far north as Moosonee, and west to Lake Nipigon. This bat is found in all Canadian provinces as well as the Yukon and Northwest Territories.	BCI, MNRF Correspondence	Yes, Potentially Suitable Habitat woodlands were identified within the limits of work.	No, Northern Myotis was not present during acoustic monitoring surveys for bat SAR within the Limits of Work.
Mammals	Tri-colored Bat Perimyotis subflavus	END	END Schedule 1	END	In Ontario, the Tri-colored Bat lives in forested habitats, forming day roosts and maternity colonies in older forest within foliage or in high tree cavities, occasionally also in bars or other structures. This species forages over water and along streams in forests. At the close of the summer season, this species congregate at a location to swarm, usually near caves, mines or underground locations where they will winter; it has a strong fidelity to its winter hibernation sites. This bat overwinters in caves, typically individually instead of as a group.	This bat is found in Southern Ontario and ranging as far north as Espanola, near Sudbury, having a scattered distribution. Its broad range sweeps from eastern North America down to Central America.	BCI, MNRF Correspondence	Yes, Potentially Suitable Habitat woodlands were identified within the limits of work.	Yes, Tri-colored Bat was confirmed present by acoustic monitoring within the Limits of Work.
Plants	Butternut Juglans cinerea	END	END Schedule 1	END	In Ontario, Butternut usually grows alone or in small groups in deciduous forests. It prefers moist, well- drained soil and is often found along streams. It is also found on well-drained gravel sites and rarely on dry rocky soil. This species does not do well in the shade, and often grows in sunny openings and near forest edges. This species can typically be associated with the following ELC communities: <b>FOD</b> and mature hedgerows; Soil: dry rocky or moist (4, 5, 6) to fresh (2, 3).	Butternut can be found throughout central and eastern North America. In Canada, Butternut occurs in Ontario, Quebec and New Brunswick. In Ontario, this species is found throughout the southwest, north to the Bruce Peninsula, and south of the Canadian Shield.	N/A	Yes, Potentially Suitable Habitat of FOD and Hedgerows are present within the Study Area.	No, No butternut were identified during field investigations.
Reptiles	Blanding's Turtle <i>Emydoidea blandingii</i>	THR	THR Schedule 1	THR	Blanding's Turtles live in shallow water, usually in large wetlands and shallow lakes with lots of water plants. It is not unusual, though, to find them hundreds of metres from the nearest water body, especially while they are searching for a mate or traveling to a nesting site. Blanding's Turtles hibernate in the mud at the bottom of permanent water bodies from late October until the end of April. This species can typically be associated with the following ELC communities: <b>SWT2</b> , <b>SWT3</b> , <b>SWD</b> , <b>SWM</b> , <b>MAS2</b> , <b>SAS1</b> , <b>SAM1</b> , where open water is present.	The Blanding's Turtle is found in and around the Great Lakes Basin, with isolated populations elsewhere in the United States and Canada. In Canada, the Blanding's Turtle is separated into the Great Lakes-St. Lawrence population and the Nova Scotia population. Blanding's Turtles can be found throughout southern, central and eastern Ontario.	ORAA, Additional MNRF Correspondence	Yes, Potentially Suitable Habitat was identified within the Study Area.	No, This species was not observed, within the limits of work, during species specific surveys for Blanding's Turtle which were conducted in 2018.
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