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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: MRWC SE70

Date: May 31/12

Field Personnel: M. Ross

Weather Conditions:

TEMP (°C):
19°C

WIND:
3

CLOUD:
80%

PPT:
None

PPT (in last 24 hrs):
None

ELC Polygon: # C Assessment Type: ☐ Visual; roadside, no access / ☒ Physical; walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☒ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities
619999-4753467	(3)	ACER	~50	65	5	~2	6-10m, Rot/woodpecker
619991-4753447	(4)	Am. Beech	45-50	66	5	3+	4-10m Rot/woodpecker

Stick Nests:

Contains large stick nests?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
620070-4753485	(5)	10x15m	50cm	67	No	Yes

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

RTHA	AMRE	HAWD	Many moist, low lying areas
BLJA	EAWP	Raccoon scat	in feature
AMCR	AMRO	Deer Tracks	
CHSP	REVI	Eastern Chipmunk	
TUVN	BAOR	AMTO	
RBGR	WAVI	Common Gartersnake	
	SOOP		

Additional Bat Roosts:
620035-4753432, (6) Am Beech, 50+, 68, 52
Rot+ (flaking bark as well)

CA=carcass; DP=distinctive pairs; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

REV: 2011-07-18

SE70; T1250

COMPLEX ONLY (for Poly C)

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NRWC SE70	POLYGON: C (Complex)		
	SURVEYOR(S): M. Ross	DATE:	UTME:	
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
		☒ TABLELAND		☐ LICHEN	☒ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
					☐ PRAIRIE
					☐ THICKET
					☐ SAVANNAH
					☐ WOODLAND
					☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	2	3	ACE FREE > FRAPENN > ACER R > 1. 0
2 SUB-CANOPY	3	3	ACE RUB = FRAPENN > ULM AMER = TIL
3 UNDERSTOREY	3-4	3	Spicebush > 1. 0 > 1. 0 > 1. 0
4 GRD. LAYER	5-7	4	IMP CAPE > ONO SENS = PARVITA = J. d. 1. 0

HT CODES: 1=>25m 2=10<HT<25m 3=2<HT<10m 4=1<HT<2m 5=0.5<HT<1m 6=0.2<HT<0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%-CVR<10% 2=10<CVR<25% 3=25<CVR<60% 4=CVR>60%

STAND COMPOSITION:				BA:				
SIZE CLASS ANALYSIS:	A	<10	A	10-24	A	25-50	O	>50
STANDING SNAGS:	O	<10	O	10-24	O	25-50	R	>50
DEADFALL LOGS:	A	<10	A	10-24	O	25-50	R	>50
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT								
COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH			

SOIL ANALYSIS:

TEXTURE: Sandy loam	DEPTH TO MOTTLES/GLEY	g= 30cm	G= /
MOISTURE: 4	DEPTH OF ORGANICS:	~ 8cm	(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	12	(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:	
COMMUNITY SERIES:	CODE:	
ECOSITE:	CODE:	
VEGETATION TYPE:	CODE:	
INCLUSION		CODE:
COMPLEX		CODE: SWD 3-2

Evidence of Disturbance / Notes: deciduous swamp

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	POLYGON:
	DATE:	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

SPECIES CODE	LAYER				COLL	SPECIES CODE	LAYER				COLL
	1	2	3	4			1	2	3	4	
Yellow Birch	R					J. d. P. p.					A
AC FR L	A					IMP AP					A
ACER BR						ONO SENS					O
FRAP	A					far					O
Ulm			R			M. Fern					O
Ulm AMER		R	R			G. Y. R.					O
AM R	R	R	R			ay Apr					O
						Rog Fern					O
						G. d. Fern					O
						Beng. ticks					R
						Avers sp					O
						over sp					O
						Eq. se. M. sp					R

Page 1 of 1
Signature: [Signature] (Field Personnel)
Quality Control: This form is complete & legible.
Signature: [Signature] (Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 1629502G9

Project Name: NPWC SE70

Date: May 31/12

Field Personnel: M. Ross

Weather Conditions:	TEMP (°C): <u>19</u>	WIND: <u>3</u>	CLOUD: <u>80</u>	PPT: <u>None</u>	PPT (in last 24 hrs): <u>None</u>
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ELC Polygon: # C Assessment Type: ☐-Visual; roadside, no access / ☐-Physical; walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge-abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

Complex w FOD -

Same species / Habitat obs

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

REV: 2011-07-18



Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Name: NRWC
Field Personnel: M. Ross

POLYGON DESCRIPTION

ELC

COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: A
START TIME:
END TIME:

TOPOGRAPHIC FEATURE		HISTORY
☐ LACUSTRINE	☐ TALUS	☐ NATURAL
☐ RIVERINE	☐ CREVICE / CAVE	☒ CULTURAL
☐ BOTTOMLAND	☐ ALVAR	
☐ TERRACE	☐ ROCKLAND	
☐ VALLEY SLOPE	☐ BEACH / BAR	
☒ TABLELAND	☐ SAND DUNE	
☐ ROLL. UPLAND	☐ BLUFF	
☐ CLIFF		

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	ACERUB > Blackwalnut > FRAPENN
2	SUB-CANOPY	3	2	ACERUB = ULMAMER = Blackwalnut
3	UNDERSTOREY	4	1	Black walnut
4	GRD. LAYER	6-7	4	Grass Sp.

IT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60% N/O=not observed

STANDING SNAGS: M <10 5 10 - 24 A 25 - 50 R >50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT N/O=Not observed

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
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VEGETATION TYPE: <i>Maple-Walnut Cultural Woodland</i>		CODE: <i>CUW 1-4*</i>
COMPLEX		CODE:

Evidence of Disturbance / Notes:

Evidence of Past logging,
Old pasture

SE 70 (across Rd)

LAYERS: 1=CANOPY >10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT N/O=Not observed

SPECIES CODE	LAYER				DISTANCE FROM RD.		COLL.
	1	2	3	4	≤5 m	>5 m	
TREES:							
Black Walnut	GA	0	0		✓	✓	
ULM AMER		0				✓	
ACE RUBR	A	0				✓	
FRAPENN	0					✓	
E. Cottonwood		R			✓		
Malus sp.		R				✓	
SHRUBS:							
GROUND:							
Grass Sp				D		✓	

Quality Control: This form is complete ☒ & legible ☒.

Signature: [Signature]
(Field Personnel)

Signature: _____
_____ (Project Manager)

ELC Polygon: # A Assessment Type: ☒ Visual; no access / ☐ Walk through feature

SE 70

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☒ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature
N/A	Old Silo (concrete)	S8	None

Bat Roosting Features: Contains potential bat roosting features?
☒ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities
N/A	①	Unknown	40	S9	5	~2	~8-10m, Rot

Stick Nests: Contains large stick nests?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)	
WAVI Gray Squirrel BAOR CHSP EUST AMPO COGR	

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

ELC	SITE: SE771		(1)	POLYGON: 51-1	
	SURVEYOR(S): NC		DATE: May 25		UTME:
COMMUNITY DESCRIPTION & CLASSIFICATION	START: 3:00	END: 4:00	UTMZ:		UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☐ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☒ FOREST
					☒ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ULM AMER > FRAPENN
2	SUB-CANOPY	3	4	ULM AMER > FRAPENN
3	UNDERSTOREY	4	3	gray dogwood > sp. alba > rub. idae
4	GRD. LAYER	5-7	1	SOL RUGO > IMPRAPE > PARINSE > CAREX = NO SENS

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:		A	<10	A	10 - 24	0	25 - 50	R	>50		
STANDING SNAGS:		A	<10	A	10 - 24	0	25 - 50	N	>50		
DEADFALL LOGS:		A	<10	A	10 - 24	0	25 - 50	N	>50		
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT			
COMM. AGE:		PIONEER	X YOUNG	MID-AGE		MATURE		OLD GROWTH			

SOIL ANALYSIS:

TEXTURE: clay	DEPTH TO MOTTLES/GLEY	g= 20 cm	G= 20 cm
MOISTURE: 6	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>Fm white elm lowland deciduous</i>		CODE: <i>FOD7-1</i>
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

very moist, but extent of pooling uncertain and little bare ground to indicate intense pooling

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Project Name: NRWC

Field Personnel: N. Charlton

PPT (in last 24 hrs):

—

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

[i.e. karst topography, abandoned mines or caves]

Spp. Observed Using Feature

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

Height and Type of Cavities

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

Spp. Observed Using Feature

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

Shrubs/ Logs at Edge Present?

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

REV: 2011-07-18

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>E</u>		(1)	POLYGON: <u>51-2</u>	
	SURVEYOR(S): <u>NC</u>		DATE: <u>MAY 25</u>	UTME:	
	START: <u>4</u>	END: <u>4 0</u>		UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☒ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☒ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	7		FRAP N>ACEPREE>ULM
2	SUB-CANOPY		4	RAPENN>>
3	UNDERSTOREY	4		F P N>CORNM>P
4	GRD. LAYER	7	4	PARI SE>CAREX<PP>GEUM

HT CODES: 1⇒25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	A	<10	A	10 - 24	0	25 - 50	2	>50
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STANDING SNAGS:	0	<10	0	10 - 24	0	25 - 50	N	>50
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DEADFALL/LOGS: R <10 0 10-24 R 25-50 N >50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH
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SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:	(cm)	
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	(cm)	

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>Green ash mineral deciduous swamp</i>		CODE: <i>SWD2-2</i>
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Project Name: NRWC

Field Personnel: N. Charlton

PPT (in last 24 hrs):

✓

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (indicate on map)

Contains potential reptile hibernacula features?

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

Spp. Observed Using Feature

Contains potential bat roosting features?

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

Height and Type of Cavities

Contains large stick nests?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

Spp. Observed Using Feature

Contains seeps/springs/vernal pools?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FI=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

REV: 2011-07-18

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE77 (12) south rd. albuzara		POLYGON: 51-A	
	SURVEYOR(S): NC	DATE: May 25	UTME:	
	START: 2:00	END: 2:15	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☒ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	FRAPPEN > POPDEL T = ULM, PULB
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	5-7	4	SOLIDAGO

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:		A	<10	A	10-24	0	25-50	R	>50		
STANDING SNAGS:		N/O	<10		10-24		25-50		>50		
DEADFALL/LOGS:		N/O	R	<10			25-50		>50		
ABUNDANCE CODES:			N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT		
COMM. AGE:		PIONEER	YOUNG	☒ MID-AGE		MATURE		OLD GROWTH			

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: F-M Ash Lowland deciduous forest		CODE: FOD7-2
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

- visibility low
- green ash lowland - no access

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature: Naw Chel
(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature: Charles H. Ross
(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Project Name: NRWC

Field Personnel: N. Charlton

PPT (in last 24 hrs):

reverse

V:\1609\Actual\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: tcorper



Legend

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands

- Standard Turbine (105 dBA)

51 m Turbine Setback

- Non-Participating Receptor
- Participating Receptor

Preliminary Study Area

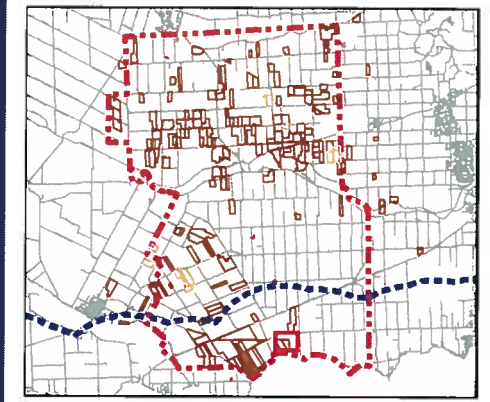
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area

ELC Boundary

- Provincially Significant Wetland
- Other/Locally Significant Wetland

Property Boundary

- Turbine and Access Road 150m buffer



- ### Notes
- Coordinate System: NAD 1983 UTM Zone 17N.
 - Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

May 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
51

Title
Property with Turbine
SE77

"Fop" pockets

↳ red banded dogwood

cultural thickets or SWF

W sol ruge

Carex spp

Fra Penn (young)

Vib lent + Raf,

Ulm rubr

SPIALBA

Grass

Cingulifol

blue eyed grass

parise

but dry

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Niagara SE77</i>		POLYGON: <i>52-2</i>	
	SURVEYOR(S): <i>NC</i>		DATE: <i>25/05/2012</i>	UTME:
	START: <i>2:45</i>	END: <i>1:00</i>	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☒ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☒ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION
SITE			COVER		
☐ OPEN WATER			☒ OPEN		
☒ SHALLOW WATER			☐ SHRUB		
☐ SURFICIAL DEP.			☐ TREED		
☐ BEDROCK					

STAND DESCRIPTION:

SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)			
LAYER	HT	CVR	
1 CANOPY			
2 SUB-CANOPY			
3 UNDERSTOREY			
4 GRD. LAYER	4	4	PHRAUST

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:			<10		10 – 24		25 – 50		>50		
STANDING SNAGS:			<10		10 – 24		25 – 50		>50		
DEADFALL/LOGS:			<10		10 – 24		25 – 50		>50		
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT			
COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH	

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>European reed shallow marsh</i>		CODE: <i>MAS2-10*</i>
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature: Nina Creek
(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature: Chris K. Brown
(Project Manager)



Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 25/05/2012

Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25</u>	<u>4</u>	<u>60-40</u>	<u>—</u>	<u>—</u>

ELC Polygon: # _____ Assessment Type: ☒ Visual; no access / ☐ Walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
<u> </u>	<u> </u>					

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S): <i>N</i>		DATE: <i>MAY 1</i>	UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☐ SURFICIAL DEP.		☐ SAND DUNE	☐ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	FRAPENN > POPDEL >> BETPARY
2	SUB-CANOPY	3	3	FRAPENN
3	UNDERSTOREY	4	3	FRAPENN > RUBIDAE > CORNUS (GRAY) = SPALB
4	GRD. LAYER	5-7	4	PARINSE > RHUS > IMPEAPE

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT≤0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
--------------------	-----

SIZE CLASS ANALYSIS:	A	<10	A	10 - 24	A	25 - 50	R	>50
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STANDING SNAGS:		<10	10 - 24	25	25 - 50	N	>50
-----------------	--	-----	---------	----	---------	---	-----

DEADFALL/LOGS:	A	<10	0	10-24	R	25-50	N	>50
----------------	---	-----	---	-------	---	-------	---	-----

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	☐ PIONEER	☐ YOUNG	☒ MID-AGE	☐ MATURE	☐ OLD GROWTH
------------	----------------------------------	--------------------------------	---	---------------------------------	-------------------------------------

SOIL ANALYSIS:

TEXTURE: <i>gd med</i>	DEPTH TO MOTTLES/GLEY	<i>g= 25 cm</i>	<i>G= 25 cm</i>
MOISTURE: <i>6</i>	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>Ash-poplar deciduous mineral swamp</i>		CODE: <i>SWD 2-3*</i>
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

Evidence of Disturbance / Notes:

- Bet Papy 9 months ^{wards} — pools throughout w frogs (20cm)
- FRAX most abundant but POP 1/1 more

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

By: Wendy Cheek
(Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature

Signature: Chad M. Horn
(Project Manager)



Stantec Consulting Ltd.
1 - 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 25/05/2012

Field Personnel: N-Charlton

Weather Conditions:	TEMP (°C): <u>25</u>	WIND: <u>4</u>	CLOUD: <u>60-40%</u>	PPT: <u>—</u>	PPT (in last 24 hrs): <u>—</u>
---------------------	-------------------------	-------------------	-------------------------	------------------	-----------------------------------

ELC Polygon: # 1 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☒-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

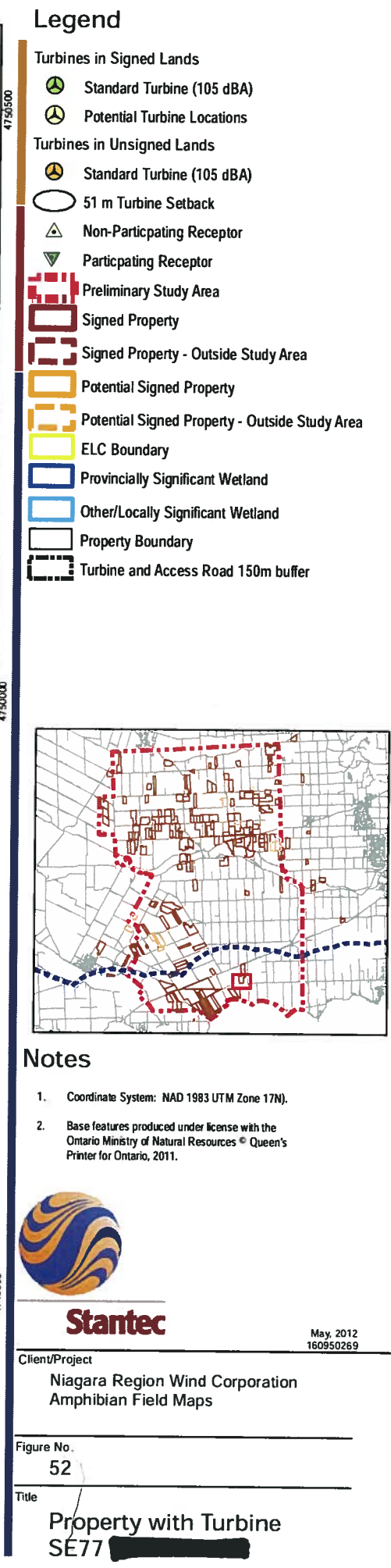
SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
<u>throughout</u>	<u>pools</u>		<u>dry</u>		☒	☒

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=seat; SI=other sign; TK=track; VO=vocalization



May, 2012
160950269

ELC	SITE: SE 79		POLYGON: 54-1	
	SURVEYOR(S): NC, KW		DATE: May 24, 2012	
COMMUNITY DESCRIPTION & CLASSIFICATION	START: 10:30	END: 10:45	UTM Z:	UTM N:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALLUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	—	—	
2	SUB-CANOPY	—	—	
3	UNDERSTOREY	3	3	SPIALBA = GRAY DOGWOOD
4	GRD. LAYER	4-7	4	GRASSES > SOLIDAGO CANA or ALTI > SYMNOVA

HT CODES: 1=≥25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
--------------------	-----

SIZE CLASS ANALYSIS:	A	<10	R	10 - 24	N	25 - 50	N	>50
STANDING SNAGS:	R	<10	N	10 - 24	R	25 - 50	N	>50
DEADFALL/LOGS:	R	<10	N	10 - 24	N	25 - 50	N	>50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
------------	---------	-------	---------	--------	------------

SOIL ANALYSIS:

TEXTURE: clay /	DEPTH TO MOTTLES/GLEY	g = 35 cm	g = 35 cm
MOISTURE: 5	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE: cum1-1
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

Typha ditch runs through

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature

(Project Manager)



Stantec Consulting Ltd.
1 - 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 24/05/2012

Field Personnel: N. Charlton, R. Walpole

Weather Conditions:	TEMP (°C): <u>32</u>	WIND: <u>0-1</u>	CLOUD: <u>10</u>	PPT: <u>—</u>	PPT (in last 24 hrs): <u>—</u>
---------------------	-------------------------	---------------------	---------------------	------------------	-----------------------------------

ELC Polygon: #54-1 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; EY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

SE 79; TIR 54; Poly 8

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE 79		POLYGON: 54-8	
	SURVEYOR(S): NC, KW		DATE: 24/05/2012	
	START: 3:00	END: 3:30	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
		☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
SITE	☐ CARB. BEDRK.	☐ CREVICE / CAVE	COVER	☐ MIXED	☐ MEADOW
☐ OPEN WATER		☐ ALVAR	☐ OPEN		☐ PRAIRIE
☐ SHALLOW WATER		☐ ROCKLAND	☐ SHRUB		☐ THICKET
☒ SURFICIAL DEP.		☐ BEACH / BAR	☐ TREE		☐ SAVANNAH
☐ BEDROCK		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY			
2 SUB-CANOPY			
3 UNDERSTOREY			
4 GRD. LAYER		4	GA AR F DA

HT CODES: 1=>25m 2=10<HT<25m 3=2<HT<10m 4=1<HT<2m 5=0.5<HT<1m 6=0.2<HT<0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR<10% 2=10<CVR<25% 3=25<CVR<60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	<10	10 - 24	25 - 50	>50
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STANDING SNAGS:	<10	10 - 24	25 - 50	>50
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DEADFALL/LOGS:	<10	10 - 24	25 - 50	>50
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ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
------------	---------	-------	---------	--------	------------

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE: 100M1-1
INCLUSION	CODE:
COMPLEX	CODE:

Evidence of Disturbance / Notes:

ALONG ATV TRAIL

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

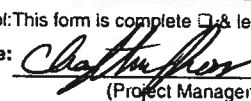
SPECIES CODE	LAYER				COLL.	SPECIES CODE	LAYER				COLL.	
	1	2	3	4			1	2	3	4		
						PHAARUN					A	
						DACGLOW					A-0	
						ARTTRIF					0	
						POAPRAT					A	
						HESMAT					R-0	
						ARCMINU					0	
						SCHARUN					0	✓
						SOLIDAGO					0	
						DAUCAIRU					0	
						PLARUGE					0	

Page ___ of ___

Signature:


 (Field Personnel)
Quality Control: This form is complete ☐ & legible ☐.

Signature:


 (Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 24/05/2012

Field Personnel: K. Walpole, N. Charlton

Weather Conditions:	TEMP (°C): <u>32</u>	WIND: <u>0-1</u>	CLOUD: <u>10</u>	PPT: <u>—</u>	PPT (in last 24 hrs): <u>—</u>
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ELC Polygon: #54-8 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

GRFR
BULL FROG } in ditch adjacent

CA=carcass; DP=distinctive parts; FE=feeding evidence; I-Y=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC	SITE: <i>Niagara-</i>		SE79	POLYGON: <i>54-7</i>
	SURVEYOR(S): <i>NC, KW</i>		DATE: <i>24/05/2012</i>	UTME:
COMMUNITY DESCRIPTION & CLASSIFICATION	START: <i>2:30</i>	END: <i>3:00</i>	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☒ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	FRAPENN > ULMRUBR >> PDPTRM
2	SUB-CANOPY	3	3	FRAPENN > ULMRUBR
3	UNDERSTOREY	4	3	RUBIDAE > ROJA SP > LINBENZ
4	GRD. LAYER	5-7	4	PARINSE > SOLRUGO > IMPCAPE = CIRLUTE

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	<10	10 - 24	25 - 50	>50
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STANDING SNAGS:		<10		10 - 24		25 - 50		>50
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DEADFALL/LOGS:	<10	10 - 24	25 - 50	>50
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ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH
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SOIL ANALYSIS:

TEXTURE: clay dominated	DEPTH TO MOTTLES/GLEY	g= 25 cm	G=
MOISTURE: 5	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>Fresh-Moist Lowland Ash deciduous Forest</i>		CODE: <i>FOD7-2</i>
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☐ & legible ☒.

Signature

(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Project Name: NRW

Field Personnel: K. Walpole, N. Charlton

PPT (in last 24 hrs):

10

REV: 2011-07-18

ELC	SITE: 5 Niagara		POLYGON: 54-2	
	SURVEYOR(S): NC, KW		DATE: 24/05/2012	
COMMUNITY DESCRIPTION & CLASSIFICATION	START: 11:00	END: 11:30	UTMZ:	UTME:
				UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☒ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	ALERUBR >>> ULMAUER
2	SUB-CANOPY	3	4	ALERUBR > VIBRAFIT
3	UNDERSTOREY	4	2	VIBRAFIT > VIBLNT
4	GRD. LAYER	5-7	4	SOLRUGO > collected sedge > Sedges > P. AARUN

HT CODES: 1= $25m$ 2= $10 < HT \leq 25m$ 3= $2 < HT \leq 10m$ 4= $1 < HT \leq 2m$ 5= $0.5 < HT \leq 1m$ 6= $0.2 < HT \leq 0.5m$ 7= $HT < 0.2m$

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	0	<10	A	10 - 24	0	25 - 50	N	>50
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STANDING SNAGS:		<10	2	10 - 24		25 - 50		>50
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DEADFALL/LOGS:	A	<10	R	10-24	N	25-50	N	>50
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ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	☐ PIONEER	☐ YOUNG	☒ MID-AGE	☐ MATURE	☐ OLD GROWTH
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SOIL ANALYSIS:

TEXTURE: <i>Clay dominated</i>	DEPTH TO MOTTLES/GLEY	<i>g = 20 cm</i>	<i>G = 20 cm</i>
MOISTURE: <i>6</i>	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: Red maple mineral deciduous		CODE: SWD3-1
☐	INCLUSION gray dot wood mineral thicket swamp	CODE: SWT2-9
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

- inclusion of SWT

→ almost equal proportions?

Common: BROADWING, GRAY DOGWOOD, SPANCO

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE79
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature

(Project Manager)



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Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 24/05/2012

Field Personnel: NC, K.W

Weather Conditions:	TEMP (°C): <u>32</u>	WIND: <u>0-1</u>	CLOUD: <u>10</u>	PPT: <u>—</u>	PPT (in last 24 hrs): <u>—</u>
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ELC Polygon: #54-2 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge-abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive pair; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE79		POLYGON: 54-5	
	SURVEYOR(S): NC, KW		DATE: 24/05/2012	
COMMUNITY DESCRIPTION & CLASSIFICATION	START: 12:30	END: 1:30	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☒ NATURAL	☐ PLANKTON ☐ SUBMERGED	☐ LAKE ☐ POND
☒ WETLAND	☒ MINERAL SOIL	☒ BOTTOMLAND	☐ CULTURAL	☐ FLOATING-LVD. ☐ GRAMINOID	☐ RIVER ☐ STREAM
☐ AQUATIC	☐ PARENT MIN.	☐ TERRACE ☐ VALLEY SLOPE		☐ FORB ☐ LICHEN	☐ MARSH ☒ SWMAP
	☐ ACIDIC BEDRK.	☐ TABLELAND ☐ ROLL. UPLAND		☐ BRYOPHYTE ☒ DECIDUOUS	☐ FEN ☐ BOG
SITE	☐ BASIC BEDRK.	☐ CLIFF ☐ TALUS	COVER	☐ CONIFEROUS ☐ MIXED	☐ BARREN ☐ MEADOW
☐ OPEN WATER	☐ CARB. BEDRK.	☐ CREVICE / CAVE ☐ ALVAR	☐ OPEN ☐ SHRUB		☐ PRAIRIE ☐ THICKET
☐ SHALLOW WATER		☐ ROCKLAND ☐ BEACH / BAR	☒ TREED		☐ SAVANNAH ☐ WOODLAND
☒ SURFICIAL DEP.		☐ SAND DUNE ☐ BLUFF			☐ FOREST ☐ PLANTATION
☐ BEDROCK					

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	FRAPPEN >> ACERUBR >> GUERUBR
2	SUB-CANOPY	3	3	FRAPPEN > ACERUBR > ILMAMER
3	UNDERSTOREY	4	3	GRAYDOGWOOD > LINBENZ
4	GRD. LAYER	5-7	4	IMP SP > SOLRUGO > CAREX SPP > GRASSES

HT CODES: 1=25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤80% 4=CVR>80%

STAND COMPOSITION:

SIZE CLASS ANALYSIS:										A	<10	A	10 - 24	A	25 - 50	R	>50
STANDING SNAGS:										O	<10	O	10 - 24	R	25 - 50	N	>50
DEADFALL LOGS:										A	<10	O	10 - 24	R	25 - 50	N	>50
ABUNDANCE CODES:										N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT	
COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH							

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>Greenash mineral deciduous swamp</i>		CODE: <i>SWD 2-2(a)</i>
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

- shallow pools throughout - w/ frogs + tadpoles
- this card describes only this as well

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature: [Signature]
(Field Personnel)

Quality Control: This form is complete ☐ & legible ☒.

Signature: Chris H. [Signature]
(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Project Name: NRWC

Field Personnel: N. Charlton, K. Walpole

PPT (in last 24 hrs):

10

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (*indicate on map*)

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☒-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>Niag</u>		POLYGON: <u>54 6</u>	
	SURVEYOR(S): <u>AK</u>		DATE: <u>4/1</u>	UTME:
	START: <u>3</u>	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☒ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BAREEN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			FRAPENN A RUBR R
2	SUB-CANOPY		24	FRAPEN A ERUBR PIALBA Graydog
3	UNDERSTOREY	1	4	PIALBA Graydog 1 RUB DA
4	GRD. LAYER		4	CAR RA R 0 PHAAR N

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:							BA:	
SIZE CLASS ANALYSIS:	A	<10	A	10 - 24	R	25 - 50	N	>50
STANDING SNAGS:		<10		10 - 24	R	25 - 50	N	>50
DEADFALL/LOGS:	A	<10		10 - 24	R	25 - 50	N	>50
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT								
COMM. AGE:	PIONEER	X YOUNG	X MID-AGE	MATURE	OLD GROWTH			

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:	(cm)	
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	(cm)	

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE: SWD2-2(b)
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature

(Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWL

Date: 24/05/2012

Field Personnel: K. Walpole, W. Chariton

Weather Conditions:	TEMP (°C): <u>32</u>	WIND: <u>0-1</u>	CLOUD: <u>10</u>	PPT: <u>—</u>	PPT (in last 24 hrs): <u>—</u>
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ELC Polygon: #54-6 Assessment Type: ☐ Visual; roadside, no access / ☒ Physical; walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; EY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: Niagara		SE79	POLYGON: 54-9	
	SURVEYOR(S): NC, KW	DATE: 24/05/2012	UTME:		
	START: 4:00	END: 4:30	UTMZ:		UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☒ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	FRAPENN > ULMAMER > PIPDEL
2	SUB-CANOPY	2	3	
3	UNDERSTOREY	4	3	Graydog wood > VIBRAFI > SPIALBA
4	GRD. LAYER	5-7	4	CAREX SPP = PHAARUN = PARINSE > SOLRNGO

HT CODES: 1=25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:		A	<10	A	10 - 24	O	25 - 50	R	>50		
STANDING SNAGS:		O	<10	O	10 - 24	R	25 - 50	N	>50		
DEADFALL/LOGS:		O	<10	O	10 - 24	N	25 - 50	N	>50		
ABUNDANCE CODES:			N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT		
COMM. AGE:		PIONEER	☒ YOUNG		MID-AGE		MATURE		OLD GROWTH		

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>Green ash mineral deciduous swamp</i>		CODE: <i>SWD2-2 (C)</i>
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

almost
CORNU (WT)

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

% tree cover = ~35%

Quality Control: This form is complete ☐ & legible ☐.

Signature:

(Project Manager)



Stantec Consulting Ltd.
1 - 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number:

160950269

Project Name:

NRWC

Date:

24/05/2012

Field Personnel:

R. Walpole, N. Charlton

Weather Conditions:

TEMP (°C):

32

WIND:

0-1

CLOUD:

10

PPT:

—

PPT (in last 24 hrs):

—

ELC Polygon: #

Assessment Type: ☐ Visual; roadside, no access / ☒ Physical; walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC	SITE: SE79		POLYGON: 54-2	
	SURVEILLANCE(S): NC, RW		DATE: 24/05/2012	
COMMUNITY DESCRIPTION & CLASSIFICATION	START: 12:00	END: 12:30	UTMZ:	UTME:
				UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☒ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☒ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☐ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	4	G. DOGWOOD > SPIALBA
2	SUB-CANOPY	4	4	SPIALBA > G. DOGWOOD
3	UNDERSTOREY	—	—	
4	GRD. LAYER	5-7	3	CAREX SP > GEUM SP > SOLRUGO

HT CODES: 1= $\geq 25m$ 2= $10 < HT \leq 25m$ 3= $2 < HT \leq 10m$ 4= $1 < HT \leq 2m$ 5= $0.5 < HT \leq 1m$ 6= $0.2 < HT \leq 0.5m$ 7= $HT < 0.2m$

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤80% 4=CVR>80%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	A	<10	B	10 - 24	C	25 - 50	D	>50
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STANDING SNAGS:	0	<10	R	10 - 24	M	25 - 50	N	>50
-----------------	---	-----	---	---------	---	---------	---	-----

DEADFALL/LOGS:	0	<10	R	10-24	N	25-50	N	>50
----------------	---	-----	---	-------	---	-------	---	-----

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	☒ PIONEER	☒ YOUNG	☐ MID-AGE	☐ MATURE	☐ OLD GROWTH
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SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
----------	-----------------------	----	----

MOISTURE:	DEPTH OF ORGANICS:	(cm)
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HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	(cm)
------------------------	-------------------	------

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
Gray dogwood mineral thickets swamp	SWT 2-9

	INCLUSION		CODE:
	COMPLEX		CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☐.

Signature:

(Project Manager)

Ribes - gland both sides, no prickles



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Canada N1G 4P5
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Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 24/05/2012

Field Personnel: K. Walpole, N. Charlton

Weather Conditions:	TEMP (°C): <u>32</u>	WIND: <u>0-1</u>	CLOUD: <u>10</u>	PPT: <u>—</u>	PPT (in last 24 hrs): <u>—</u>
---------------------	-------------------------	---------------------	---------------------	------------------	-----------------------------------

ELC Polygon: #54-4 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HQ=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE79		POLYGON: 54-3	
	SURVEYOR(S): NC, RW		DATE: May 24	
	START: 11:30	END: 12:00	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☒ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	2	ALERUBR
2	SUB-CANOPY	3	4	GRAYDOGWOOD > SPIALBA
3	UNDERSTOREY	4	4	SPIALBA = GRAYDOGWOOD > VIBRAFI > PRUSERD
4	GRD. LAYER	5-7	4	GRASSES > SPIALBA = GRAYDOGWOOD > SOLIDAGO

HT CODES: 1>=25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:		A	<10	O	10 - 24	N	25 - 50	N	>50		
STANDING SNAGS:		O	<10	R	10 - 24	N	25 - 50	N	>50		
DEADFALL/LOGS:		R	<10	O	10 - 24	N	25 - 50	N	>50		
ABUNDANCE CODES:			N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT		
COMM. AGE:		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH	

SOIL ANALYSIS:

TEXTURE: clay dom. nitel	DEPTH TO MOTTLES/GLEY	g= 20 cm	G= 20 cm
MOISTURE: 6	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>Gray dogwood cultural thicket</i>		CODE: <i>CUT1-4</i>
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

- some old tracks run through - where most meadow veg is

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

Signature: *Chetan Soni*
(Project Manager)



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1 - 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950261

Project Name: NRWC

Date: 24/05/2012

Field Personnel: N.C., K.W.

Weather Conditions:	TEMP (°C): <u>32</u>	WIND: <u>0-1</u>	CLOUD: <u>10</u>	PPT: <u>—</u>	PPT (in last 24 hrs): <u>—</u>
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ELC Polygon: #54-3 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC	SITE: <u>Niagara - SE79</u>		POLYGON: <u>54-A</u>	
	SURVEYOR(S): <u>NC</u>	DATE: <u>May 24, 2012</u>	UTME:	
COMMUNITY DESCRIPTION & CLASSIFICATION	START:	END:	UTMZ:	UTMN:

OLYGNON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☐ NATURAL	☐ PLANKTON ☐ SUBMERGED	☐ LAKE ☐ POND
WETLAND	☒ MINERAL SOIL	☐ BOTTOMLAND	☒ CULTURAL	☐ FLOATING-LVD.	☐ RIVER
AQUATIC	☐ PARENT MIN.	☐ TERRACE ☐ VALLEY SLOPE		☐ GRAMINOID ☒ FORB	☐ STREAM ☐ MARSH
	☐ ACIDIC BEDRK.	☐ TABLELAND ☐ ROLL. UPLAND		☐ LICHEN ☐ BRYOPHYTE	☐ SWAMP ☐ FEN
	☐ BASIC BEDRK.	☐ CLIFF ☐ TALUS		☐ DECIDUOUS ☐ CONIFEROUS	☐ BOG ☐ BARREN
SITE		☐ CREVICE / CAVE	COVER	☐ MIXED	☐ MEADOW
OPEN WATER SHALLOW WATER SURFICIAL DEP. BEDROCK	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ OPEN ☐ SHRUB ☐ TREED		☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

TAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY			
SUB-CANOPY			
UNDERSTOREY			
GRD. LAYER	6-7	3	TAROFFI > SOLIDAGO SP > TRIBEVE

CODES: 1= $\geq 25m$ 2= $10 < HT \leq 25m$ 3= $2 < HT \leq 10m$ 4= $1 < HT \leq 2m$ 5= $0.5 < HT \leq 1m$ 6= $0.2 < HT \leq 0.5m$ 7= $HT < 0.2m$

/R CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

LAND COMPOSITION:

LAND COMPOSITION:	BA:
-------------------	-----

ZE CLASS ANALYSIS:

STANDING SNAGS:	<10	10 - 24	25 - 50	>50

HEADFALL/LOGS:	<10	10 - 24	25 - 50	>50
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ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE: ☒ PIONEER ☐ YOUNG ☐ MID-AGE ☐ MATURE ☐ OLD GROWTH

OIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
COSITE:	CODE:
VEGETATION TYPE:	CODE:

INCLUSION		CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

Fallow field - old corn stalks visible + lots of bare soil

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☐.

Signature:

Signature: *Chapman*
(Project Manager)



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Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: _____

Field Personnel: N. Charlton, K. Walpole

Weather Conditions:	TEMP (°C): <u>32</u>	WIND: <u>0-1</u>	CLOUD: <u>10</u>	PPT: <u>—</u>	PPT (in last 24 hrs): <u>—</u>
---------------------	-------------------------	---------------------	---------------------	------------------	-----------------------------------

ELC Polygon: #54-A Assessment Type: ☐ Visual; no access / ☒ Walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: Niagara -		SE79	POLYGON: 54-B	
	SURVEYOR(S): NC, KW		DATE: 24/05/2012	UTME:	
	START: 4:30	END: 5:00	UTMZ:		UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☐ NATURAL	☐ PLANKTON ☐ SUBMERGED	☐ LAKE ☐ POND
WETLAND	☐ MINERAL SOIL	☐ BOTTOMLAND ☐ TERRACE	☐ CULTURAL	☐ FLOATING-LVD. ☐ GRAMINOID	☐ RIVER ☐ STREAM
AQUATIC	☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK.	☐ VALLEY SLOPE ☐ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE		☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS	☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	COVER	☐ MIXED	☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION
OPEN WATER SHALLOW WATER SURFICIAL DEP. BEDROCK			☐ OPEN ☐ SHRUB ☐ TREED		

TAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
	CANOPY			
	SUB-CANOPY			
	UNDERSTOREY			
	GRD. LAYER	6-7	4	Dead grass >> TAROFF1 > TRIPEPE

VR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

TAND COMPOSITION:		BA:
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SIZE CLASS ANALYSIS:		<10	10 - 24	25 - 50	>50
STANDING SNAGS:		<10	10 - 24	25 - 50	>50
HEADFALL/LOGS:		<10	10 - 24	25 - 50	>50

ABUNDANCE CODES: **N=NONE** **R=RARE** **O=OCCASIONAL** **A=ABUNDANT**

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
------------	---------	-------	---------	--------	------------

OIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:			CODE:
COMMUNITY SERIES:			CODE:
COSITE:			CODE:
VEGETATION TYPE:			CODE:
INCLUSION			CODE:
COMPLEX			CODE:

Evidence of Disturbance / Notes:

Fallow field - lots of bare ground - was recently cultivated

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☐.

Signature:

(Project Manager)



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1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: 160950269

Date: 24/05/2012

Field Personnel: N. Charlton, K. Walpole

Weather Conditions:	TEMP (°C): <u>32</u>	WIND: <u>0-1</u>	CLOUD: <u>10</u>	PPT: <u>—</u>	PPT (in last 24 hrs): <u>—</u>
---------------------	-------------------------	---------------------	---------------------	------------------	-----------------------------------

ELC Polygon: #54-B Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

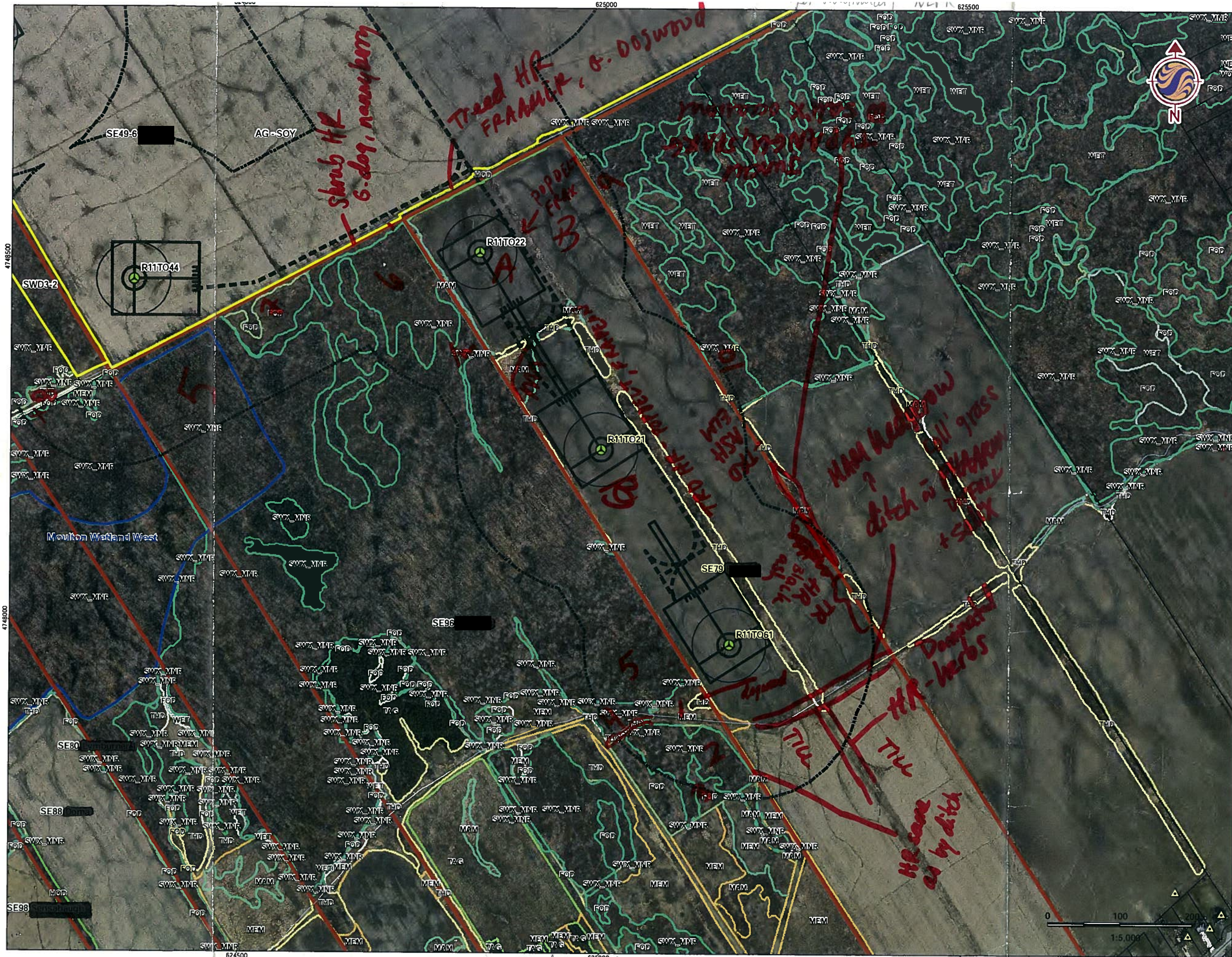
SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

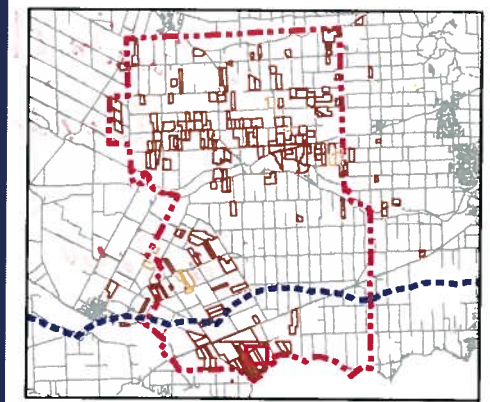
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CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization



Legend

- Turbines in Signed Lands
 - Standard Turbine (105 dBA)
 - Potential Turbine Locations
- Turbines in Unsigned Lands
 - Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Participating Receptor
- Participating Receptor
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



Notes

- Coordinate System: NAD 1983 UTM Zone 17N.
- Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.



Stantec

May 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
54

Title
Property with Turbine
SE79

A: TAROFF1 — A
SOLIDAGO — A
TRIPEPE — A
PAUCARO — A
Melilotus sp.
Alfalfa
HYP PERF
CINQUEFOIL

left fallow from corn

B - dead Poa-like grass
w white clover
dandelion
(Fallow)

#10 - just like #5

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE82		POLYGON: 5	
	SURVEYOR(S): L. Robson	DATE: May 25 2012	UTME:	
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☒ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☒ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND	☐ OPEN		☐ THICKET
		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
		☐ SAND DUNE	☒ TREED		☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)			
LAYER	HT	CVR	
1 CANOPY	1	2	Manitoba maple = American Elm > white ash
2 SUB-CANOPY	2	2	manitoba maple > american Elm > green ash
3 UNDERSTOREY	3-4	4	grey dogwood >> green ash > Stephandra sumac > gl
4 GRD. LAYER	~7	4	goldenrod sp > riverbank grape >> garlic mustard

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:		A	<10	O	10 – 24	O	25 – 50	N	>50		
STANDING SNAGS:		N	<10	N	10 – 24	R	25 – 50	N	>50		
DEADFALL/LOGS:			<10	O	10 – 24	N	25 – 50	N	>50		
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT			
COMM. AGE:		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH	

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g= 42	G= 78
MOISTURE:	DEPTH OF ORGANICS:	< 1	(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	> 82	(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE: Grey dogwood thicket w/in		CODE: cut 1-2
VEGETATION TYPE: nashitoba maple & elm h. hedgerow		CODE:
	INCLUSION	CODE:
	COMPLEX	CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

Laura Robson
(Field Personnel)

Quality Control: This form is complete ☒ & legible ☐.

Signature:

(Project Manager)



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Canada N1G 4P5
Tel: (519) 836-6050
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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 - SE82 Zicari

Project Name: NRWC

Date: May 25, 2012

Field Personnel: L Robson

Weather Conditions:	TEMP (°C): <u>25</u>	WIND: <u>5</u>	CLOUD: <u>70%</u>	PPT: <u>None</u>	PPT (in last 24 hrs): <u>None</u>
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ELC Polygon: # _____ Assessment Type: ☐ Visual; no access / ☒ Walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization



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Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 - SC82 Zircov

Project Name: AIRWC

Date: May 25, 2012

Field Personnel: L. Roberson

Weather Conditions:	TEMP (°C): 25	WIND: 5	CLOUD: 60%	PPT: None	PPT (in last 24 hrs): None
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ELC Polygon: # 4 Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☒-Partial, walk through polygon (*indicate on map*)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature
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Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities
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Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature
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Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE82		POLYGON: 4	
	SURVEYOR(S): L Robson		DATE: May 25, 2012	
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☒ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☒ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR	☐ OPEN		☐ PRAIRIE
		☐ ROCKLAND	☐ SHRUB		☐ THICKET
		☐ BEACH / BAR	☒ TREED		☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	3	cedarwood
2	SUB-CANOPY	2	2	cedarwood >>> manitoba maple
3	UNDERSTOREY	3	1	manitoba maples silver maple
4	GRD. LAYER	4-7	4	grass sp > goldenrod sp >> dandelion

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	7	<10	A	10 - 24	B	25 - 50	N	>50
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STANDING SNAGS:	<10	R-10-24	25-50	>50
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DEADFALL/LOGS:	2	<10	0	10 - 24	2	25 - 50	2	>50
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ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	☐ PIONEER	☐ YOUNG	☐ MID-AGE	☐ MATURE	☐ OLD GROWTH
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SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
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MOISTURE:	DEPTH OF ORGANICS:	(cm)
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HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	(cm)
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COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
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COMMUNITY SERIES:	CODE:
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ECOSITE:	plante mod. heliophiles	CODE:
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VEGETATION TYPE:	CODE:
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INCLUSION		CODE
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[illegible]

	COMPLEX	CODE:
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Evidence of Disturbance / Notes: photo 24

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

Laura Nobles
(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

Re. The Hon
(Project Manager)



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Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 - SE82 Zicori

Project Name: NRWC

Date: May 25, 2012

Field Personnel: L Robson

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25</u>	<u>5</u>	<u>40</u>	<u>none</u>	<u>none</u>

ELC Polygon: # 3 Assessment Type: ☒ Visual; no access / ☐ Walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE82		POLYGON: 3	
	SURVEYOR(S): L Robson	DATE: May 25, 2012	UTME:	
	START: 1	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☒ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR	☐ OPEN		☐ PRAIRIE
		☐ ROCKLAND	☐ SHRUB		☐ THICKET
		☐ BEACH / BAR	☐ TREED		☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

			SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
LAYER	HT	CVR	
1 CANOPY	—	—	
2 SUB-CANOPY	—	—	
3 UNDERSTOREY	4	1	willow sp
4 GRD. LAYER	5-7	4	Grass sp = Anadenanod sp? Anoretail

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT≤0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	☒	<10	☐	10 – 24	☐	25 – 50	☐	>50
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STANDING SNAGS:		<10		10 - 24		25 - 50		>50
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DEADFALL/LOGS:		<10		10 - 24		25 - 50		>50
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ABUNDANCE CODES: **N=NONE** **R=RARE** **O=OCCASIONAL** **A=ABUNDANT**

COMM. AGE:	☒ PIONEER	☐ YOUNG	☐ MID-AGE	☐ MATURE	☐ OLD GROWTH
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SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE: <i>old field meadow</i>		CODE: <i>cum 1-1</i>
VEGETATION TYPE:		CODE:
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

photo 23 - can't see if there is a pond
behind meadow

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

Laura Bokor
(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

Chang Shu-hong
(Project Manager)



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Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 - SE82 Zicari

Project Name: NRWC

Date: May 25, 2012

Field Personnel: L Robson

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25</u>	<u>5</u>	<u>20%</u>	<u>none</u>	<u>none</u>

ELC Polygon: # 2 Assessment Type: ☐-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☒-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
<u>17T 0620239</u> <u>4755595</u>	<u>Pond in Centre of feature</u>	<u>20 m</u>	<u>2-40 cm</u>	<u>22</u>	<u>yes</u>	<u>yes</u>

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

Green frog observed in pond

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON: 2	
	SURVEYOR(S):		DATE:	UTME:
	START:	END:	UTMZ:	UTMN:

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☒ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND	☐ OPEN		☐ THICKET
		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
		☐ SAND DUNE	☒ TREED		☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	2	Willow Sp > green Ash = Cottonwood
2	SUB-CANOPY	2	2	American Elm > Black Ash
3	UNDERSTOREY	3	3	grey dogwood > American Elm
4	GRD. LAYER	4	4	Red tanoak grass > Redstraw > Everbark

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	A	<10	E	10 - 24	O	25 - 50	N	>50
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STANDING SNAGS:	N	<10	R	10 - 24	N	25 - 50	N	>50
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DEADFALL/LOGS:	A	<10	A	10 - 24	O	25 - 50	N	>50
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ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
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TEXTURE: sand ay loam	DEPTH TO MOTTLES/GLEY	g= 38	G= 44
MOISTURE: 5 moist	DEPTH OF ORGANICS:	41	(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	778	(cm)

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE: Gray Dogwood mineral thicket swamp		CODE: SWT 2-9
VEGETATION TYPE:		CODE:
	INCLUSION	CODE:
	COMPLEX	CODE:

* sure how to depict cultural nature of feature - v. small, in middle of field.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

[illegible]

Signature: Laura Proctor
(Field Personnel)

Signature: Charles J. Moor
(Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 - 5582 Zicari

Project Name: W.R. NRWC

Date: May 25, 2012

Field Personnel: L. Robson

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25</u>	<u>4</u>	<u>20%</u>	<u>None</u>	<u>None</u>

ELC Polygon: # 1 Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE82		POLYGON: 1	
	SURVEYOR(S): L Hobson		DATE: May 25, 2012	
	START:	END:	UTMZ:	UTMN:

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	3	American Elm > White Ash >>> white oak
2	SUB-CANOPY	2	3	American Elm > white Ash > Manitoba maple
3	UNDERSTOREY	3	3	Grey Dogwood = white Ash > American Elm
	GRD. LAYER	4-7	4	Goldenrod spp = reed canopy grass > other grasses

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	☐	<10	☐	10 - 24	☐	25 - 50	☒	>50
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STANDING SNAGS:	N	<10	0	10 - 24	0	25 - 50	N	>50
------------------------	---	-----	---	---------	---	---------	---	-----

DEADFALL/LOGS:	A	<10	D	10 - 24	N	25 - 50	N	>50
----------------	---	-----	---	---------	---	---------	---	-----

ABUNDANCE CODES: **N=NONE** **R=RARE** **O=OCCASIONAL** **A=ABUNDANT**

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
------------	---------	-------	---------	--------	------------

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASS:			CODE:
COMMUNITY SERIES:			CODE:
ECOSITE: American Elm - White Ash Deciduous			CODE:
VEGETATION TYPE: Hedgerow			CODE:
	INCLUSION		CODE:
	COMPLEX		CODE:

- some gaps in canopy exist

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

[illegible]

Signature: Kavira Rokson
(Field Personnel)

Signature: David A. Hoot
(Project Manager)

SE 82

Polygon 2

Soils

organic 21 cm

sandy loam

22 cm

Sandy
clay
loam

- mottles @ 38 cm

- gley @ 44 cm

- 47 cm

dirty
clay

78 cm

moist (5)

SE 82

Polygon 4

Soils

organic < 1 cm

vf sandy loam

- 28 cm

- mottles @ 42 cm

clay loam

- gley at 78 cm

82 cm

moist (5)



Legend

- Turbines in Signed Lands
 - Standard Turbine (105 dBA)
 - Potential Turbine Locations
- Turbines in Unsigned Lands
 - Standard Turbine (105 dBA)
 - 51 m Turbine Setback
- Receptors
 - Non-Participating Receptor
 - Participating Receptor
- Study Area and Property
 - Preliminary Study Area
 - Signed Property
 - Signed Property - Outside Study Area
 - Potential Signed Property
 - Potential Signed Property - Outside Study Area
- Wetlands and Boundaries
 - ELC Boundary
 - Provincially Significant Wetland
 - Other/Locally Significant Wetland
 - Property Boundary
 - Turbine and Access Road 150m buffer



Notes

- Coordinate System: NAD 1983 UTM Zone 17N).
- Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.



Stantec

May 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
55

Title
Property with Turbine
SE82



Stantec Consulting Ltd.
1 - 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950159

Project Name: NRWC **SEB2**

Date: Aug 27/12

Field Personnel: M. ROSS

Weather Conditions:	TEMP (°C): <u>25°</u>	WIND: <u>3-4</u>	CLOUD: <u>100</u>	PPT: <u>Rain</u>	PPT (in last 24 hrs): <u>None</u>
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ELC Polygon: # 5 Assessment Type: ☒ Visual; roadside, no access / ☐ Physical; walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐ Y* / ☐ N / ☒ Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐ Y* / ☐ N / ☒ Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐ Y* / ☐ N / ☒ Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐ Y* / ☐ N / ☒ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐ Y* / ☐ N / ☒ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

NOCA
HOLA

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=seat; SI=other sign; TK=track; VO=vocalization

SE87; Tile 56; Poly 2

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: N182000	POLYGON: 2		
	SURVEYOR(S): ST	DATE: JUNE 8-12	UTME:	
	START: 6:26	END: 6:31	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
		☒ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☒ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	2	1	POPDELT > BETPAPY
2 SUB-CANOPY			
3 UNDERSTOREY	3-4	4	SALIX
4 GRD. LAYER	5-7	4	PHALARUN >> VITRIPA > CORSTOL

HT CODES: 1=25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:

SIZE CLASS ANALYSIS:	BA:
☒ <10	☒ 10-24
☒ 10-24	☒ 25-50
☒ 25-50	☒ >50

STANDING SNAGS: ☒ <10 ☒ 10-24 ☒ 25-50 ☒ >50DEADFALL LOGS: ☒ <10 ☒ 10-24 ☒ 25-50 ☒ >50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE: ☒ PIONEER ☒ YOUNG ☒ MID-AGE ☒ MATURE ☒ OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
SALIX thicket swamp	
SWT2-2	
INCLUSION	CODE:
COMPLEX	CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE87
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

SPECIES CODE	LAYER				COLL.
	1	2	3	4	
POPDELT	R				
BETPAPY	R				
PHALARUN				A	
VITRIPA				O	
SPI ALBA				R	
CORSTOL				R	
SALIX SPA			D		

Page ___ of ___

Signature: 

(Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.Signature: 

(Project Manager)

PIC 20



Woodland & Wildlife Habitat Assessment Form

Project Name: NRWC

Field Personnel: J. Leslie

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	3	40%	0	0

ELC Polygon: #56-2 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (*indicate on map*)

Reptile / Bat Hibernacula Features:	Contains potential reptile hibernacula features? ☐ -Y* / ☐ -N / ☐ -Unknown, no access (<i>*if yes, describe in table below</i>) [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
	Contains potential bat hibernacula features? ☐ -Y* / ☐ -N / ☐ -Unknown, no access (<i>*if yes, describe in table below</i>) [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☐-N / ☐-Unknown, no access (**if yes, describe in table below*)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains/large stick nests?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

SE87; Tile 56, Poly 3

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: N186AA	POLYGON: 3		
	SURVEYOR(S): JAL	DATE: JUNE 8-12	UTME:	
	START: 6:37	END: 6:50 PM	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
		☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☒ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY			
2 SUB-CANOPY			
3 UNDERSTOREY			
4 GRD. LAYER	4-7	4	SALIX > VIB LENT

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
--------------------	-----

SIZE CLASS ANALYSIS:	☒ <10	☒ 10-24	☒ 25-50	☒ >50
----------------------	---	---	---	---

STANDING SNAGS:	☒ <10	☒ 10-24	☒ 25-50	☒ >50
-----------------	---	---	---	---

DEADFALL LOGS:	☒ <10	☒ 10-24	☒ 25-50	☒ >50
----------------	---	---	---	---

ABUNDANCE CODES:	N=NONE	R=RARE	O=OCCASIONAL	A=ABUNDANT
------------------	--------	--------	--------------	------------

COMM. AGE:	☒ PIONEER	☒ YOUNG	☒ MID-AGE	☒ MATURE	☒ OLD GROWTH
------------	---	---	---	--	--

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: SALIX swamp thicket	CODE: SWT2-2
INCLUSION	CODE:
COMPLEX	CODE:

Evidence of Disturbance / Notes:

- NO H₂O ; APPEARS DRY
- HERBS ID, NOT OBVIOUS FROM EDGE
- POSSIBLE ABUNDANCE OF P. LONGESTRIKE

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE871
	POLYGON:
	DATE:
	SURVEYOR(S):

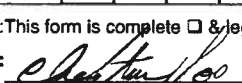
LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

SPECIES CODE	LAYER				COLL.
	1	2	3	4	
SOLIDAGO				0	
P. LONGESTRIKE				0	TS
POACEAE SPP.				0	
SPI ALBA				R	0
VIB LENT				O	
SALIX				A	

Page ____ of ____

Signature: 

(Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.Signature: 

(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Field Personnel: J. LESLIE

☒

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (*indicate on map*)

[i.e. karst topography, abandoned mines or caves]

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>NIAGARA</u>		POLYGON: <u>4</u>	
	SURVEYOR(S): <u>JTL</u>		DATE: <u>JUNE 8-12</u>	UTME:
	START: <u>7:00</u>	END: <u>7:08</u>	<u>PM</u>	UTMZ: <u></u> UTMN: <u></u>

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☐ NATURAL	☐ PLANKTON ☐ SUBMERGED	☐ LAKE ☐ POND
☒ WETLAND	☒ MINERAL SOIL	☐ BOTTOMLAND ☐ TERRACE	☐ CULTURAL	☒ FLOATING-LVD. ☒ GRAMINOID	☐ RIVER ☐ STREAM
☐ AQUATIC	☐ PARENT MIN.	☒ VALLEY SLOPE ☒ TABLELAND		☐ FORB ☐ LICHEN	☒ MARSH ☐ SWAMP
	☐ ACIDIC BEDRK.	☐ ROLL. UPLAND ☐ CLIFF		☐ BRYOPHYTE ☐ DECIDUOUS	☐ FEN ☐ BOG
	☐ BASIC BEDRK.	☐ TALUS ☐ CREVICE / CAVE		☐ CONIFEROUS	☐ BARREN ☐ MEADOW
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	COVER	☐ MIXED	☐ PRAIRIE ☐ THICKET
☐ OPEN WATER		☐ BEACH / BAR	☒ OPEN ☐ SHRUB		☐ SAVANNAH
☐ SHALLOW WATER		☐ SAND DUNE	☐ TREED		☐ WOODLAND
☒ SURFICIAL DEP.		☐ BLUFF			☐ FOREST
☐ BEDROCK					☐ PLANTATION

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	4	4	PHANUS

STAND COMPOSITION: BA:

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

SOIL ANALYSIS:			
TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>Phragmites marshall meadow marsh</i>		CODE: <i>MA2-11*</i>
INCLUSION		CODE:
COMPLEX		CODE:

Notes:
- EDGE ASSESSMENT - UNKNOWN 15
H₂O PRESENT.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE87
	POLYGON:
	DATE:
	SURVEYOR(S):

[illegible]

pic 23

Signature: 
(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Project Name: NRW

Field Personnel: J. Leslie

PPT (in last 24 hrs):

✗

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (*indicate on map*)

[i.e. karst topography, abandoned mines or caves]

Spp. Observed Using Feature

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

Height and Type of Cavities

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

Spp. Observed Using Feature

☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)

Shrubs/ Logs at Edge Present?

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

REV: 2011-07-18

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NIAGARA - KELLY 2		POLYGON: 5	
	SURVEYOR(S): JTV		DATE: JUNE 11-12	UTME:
	START: 10:50	END: 11:02 AM	UTMZ:	UTMN:

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☐ NATURAL	☐ PLANKTON ☐ SUBMERGED	☐ LAKE ☐ POND
☐ WETLAND	☐ MINERAL SOIL	☐ BOTTOMLAND ☐ TERRACE	☐ CULTURAL	☐ FLOATING-LVD. ☐ GRAMINOID	☐ RIVER ☐ STREAM
☐ AQUATIC	☐ PARENT MIN.	☐ VALLEY SLOPE ☐ TABLELAND		☐ FORB ☐ LICHEN	☐ MARSH ☐ SWAMP
	☐ ACIDIC BEDRK.	☐ ROLL. UPLAND ☐ CLIFF		☐ BRYOPHYTE ☐ DECIDUOUS	☐ FEN ☐ BOG
	☐ BASIC BEDRK.	☐ TALUS ☐ CREVICE / CAVE		☐ CONIFEROUS	☐ BARREN ☐ MEADOW
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	COVER	☐ MIXED	☐ PRAIRIE ☐ THICKET
☐ OPEN WATER		☐ BEACH / BAR	☐ OPEN ☐ SHRUB		☐ SAVANNAH
☐ SHALLOW WATER		☐ SAND DUNE	☐ TREED		☐ WOODLAND
☐ SURFICIAL DEP.		☐ BLUFF			☐ FOREST
☐ BEDROCK					☐ PLANTATION

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	2	3	FRAPENN > POPDEL > ULMAMER = PINSYLV
2 SUB-CANOPY	3	3	FRAPENN > POPDEL > PINSYLV
3 UNDERSTOREY	4	4	FRAPENN > LONTART > RHUTYPH
4 GRD. LAYER	5-7	4	SOLIDAGO > Grass spp > DAUCARO

SVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	A	<10	O	10 - 24	O	25 - 50	N	>50
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STANDING SNAGS:	☒ ≤ 10	☒ 10 - 24	☒ 25 - 50	☒ > 50
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HEADFALL LOGS:	☒ <10	☒ 10 - 24	☒ 25 - 50	☒ >50
----------------	---	---	---	---

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	☐	PIONEER	☐	YOUNG	☒	MID-AGE	☐	MATURE	☐	OLD GROWTH
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SOIL ANALYSIS:

MOISTURE:	DEPTH OF ORGANICS:	(cm)
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COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
------------------	-------

COSITE:	CODE:
---------	-------

INCLUSION	CODE:
-----------	-------

COMPLEX	CODE:
Evidence of Disturbance / Notes:	

- ROADSIDE ASSESSMENT

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>SE87</u>
	POLYGON:
	DATE:
	SURVEYOR(S):

[illegible]

Signature: 
(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Project Name: NRW C

Field Personnel: J. Leslie

PPT (in last 24 hrs):

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (*indicate on map*)

[i.e. karst topography, abandoned mines or caves]

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

REV: 2011-07-18

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>NIAGARA</u>		POLYGON: <u>6</u>	
	SURVEYOR(S): <u>STR</u>		DATE: <u>JUNE 11-12</u>	UTME:
	START: <u>11:07</u>	END: <u>12:16</u>	UTMZ: <u>AM</u>	UTMN:

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☒ NATURAL	☐ PLANKTON ☐ SUBMERGED	☐ LAKE ☐ POND
☒ WETLAND	☒ MINERAL SOIL	☐ BOTTOMLAND ☐ TERRACE	☐ CULTURAL	☐ FLOATING-LVD. ☒ GRAMINOID	☐ RIVER ☐ STREAM
☐ AQUATIC	☐ PARENT MIN.	☒ VALLEY SLOPE ☒ TABLELAND		☐ FORB ☐ LICHEN	☐ MARSH ☒ SWAMP
	☐ ACIDIC BEDRK.	☐ ROLL. UPLAND ☐ CLIFF		☐ BRYOPHYTE ☐ DECIDUOUS	☐ FEN ☐ BOG
	☐ BASIC BEDRK.	☐ TALUS ☐ CREVICE / CAVE		☐ CONIFEROUS ☐ MIXED	☐ BARREN ☒ MEADOW
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	COVER		☒ PRAIRIE ☐ THICKET
☐ OPEN WATER		☐ BEACH / BAR	☐ OPEN ☐ SHRUB ☐ TREED		☐ SAVANNAH ☐ WOODLAND
☐ SHALLOW WATER		☐ SAND DUNE ☐ BLUFF			☐ FOREST ☐ PLANTATION
☒ SURFICIAL DEP.					
☐ BEDROCK					

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	KLALAN > POBELT
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	4-7	4	PUAPUR >> CORSTOL

VR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

SIZE CLASS ANALYSIS:		<u>R</u>	<10	<u>R</u>	10 - 24	<u>R</u>	25 - 50	<u>N</u>	>50
STANDING SNAGS:		<u>N</u>	<10	<u>N</u>	10 - 24	<u>N</u>	25 - 50	<u>N</u>	>50
DEADFALL/LOGS:		<u>N</u>	<10	<u>N</u>	10 - 24	<u>N</u>	25 - 50	<u>N</u>	>50
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT	
COMM. AGE:		<u> </u>	PIONEER	<u> </u>	YOUNG	<u> </u>	MID-AGE	<u> </u>	MATURE
		<u> </u>		<u> </u>		<u> </u>		<u> </u>	OLD GROWTH

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:	(cm)	
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	(cm)	

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>reed canary grass in neutral meadow</i>		CODE: <i>MAM2-2</i>
INCLUSION		CODE:
COMPLEX		CODE:

- EDGE ASSESSMENT
- SOIL APPEARS SATURATED BUT W/ A
SUGAR / ACCUMULATION.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE 7	
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

[illegible]

W:\resource\Internal Info and Teams\FIELD FORMS\Vegetation\ELC\elc-woodland-wildlife-habitat-form.docx / (DERIVED FROM LEE ET AL., 1998)



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1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160950269

Project Name: NRWC

Date: June 11-12

Field Personnel: J. Leslie

Weather Conditions:	TEMP (°C): <u>28</u>	WIND: <u>2-3</u>	CLOUD: <u>100%</u>	PPT: <u>0</u>	PPT (in last 24 hrs): <u>RAV</u>
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ELC Polygon: #56-6 Assessment Type: ☒ Visual; no access / ☐ Walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED						
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature	

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

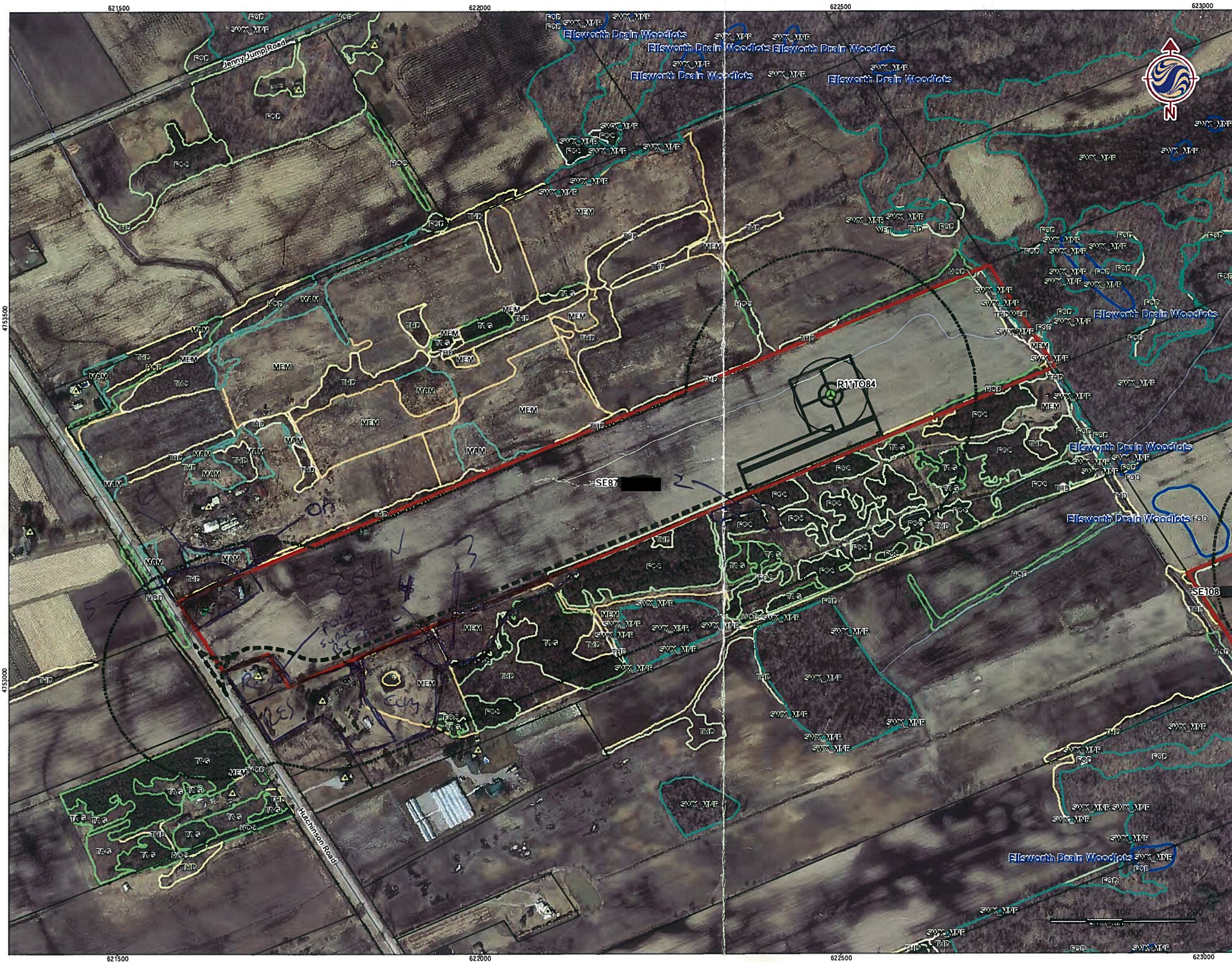
SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED							
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?	

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

(1) Bullfrogs - VO, likely from adjacent pond.

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

REV: 2011-07-18



Legend

- Turbines in Signed Lands
 - Standard Turbine (105 dBA)
 - Potential Turbine Locations
- Turbines in Unsigned Lands
 - Standard Turbine (105 dBA)
 - 51 m Turbine Setback
 - Non-Participating Receptor
 - Participating Receptor
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



Notes

- Coordinate System: NAD 1983 UTM Zone 17N).
- Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.



Stantec

May 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
56

Title
Property with Turbine
SE87

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE-88		POLYGON: 40-1	
	SURVEYOR(S): NC	DATE: 24/05/2012	UTME:	
	START: 5:30	END: 6:00	UTMZ:	UTMN:

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC		☒ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ PARENT MIN.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ ACIDIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
		☐ TABLELAND		☐ LICHEN	☒ SWMAP
	☐ BASIC BEDRK.	☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
	☐ CARB. BEDRK.	☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☐ WATER		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☒ SURFICIAL DEP.		☐ BLUFF			☐ FOREST
☐ BEDROCK					☐ PLANTATION

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	FRAPENN >> ACERUBR > ULMAMER
2	SUB-CANOPY	3	3	FRAPENN > ULMAMER > LINBENZ
3	UNDERSTOREY	4	3	LINBENZ
4	GRD. LAYER	5-7	4	Sedges > Sensfern > IMPCAPE

STAND COMPOSITION:	BA:
--------------------	-----

ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT		
COMM. AGE:		PIONEER		YOUNG	☒	MID-AGE		MATURE		OLD GROWTH

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>green ash mineral deciduous swamp</i>		CODE: <i>SWD2-2</i>
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

shallow pools throughout w tadpoles

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

[illegible]

Signature: [Signature]
(Field Personnel)

Signature: Mataheana
(Project Manager)



Stantec Consulting Ltd.
1 - 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRW

Date:

Field Personnel: N. Char Hon, R. Walpole

Weather Conditions:

TEMP (°C):

32

WIND:

0-1

CLOUD:

10

PPT:

PPT (in last 24 hrs):

✓

ELC Polygon: #40-1 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (*indicate on map*)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains/potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities
-----	---------	-----------	-----	-----------	-------------------	-----------------	-----------------------------

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☒-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

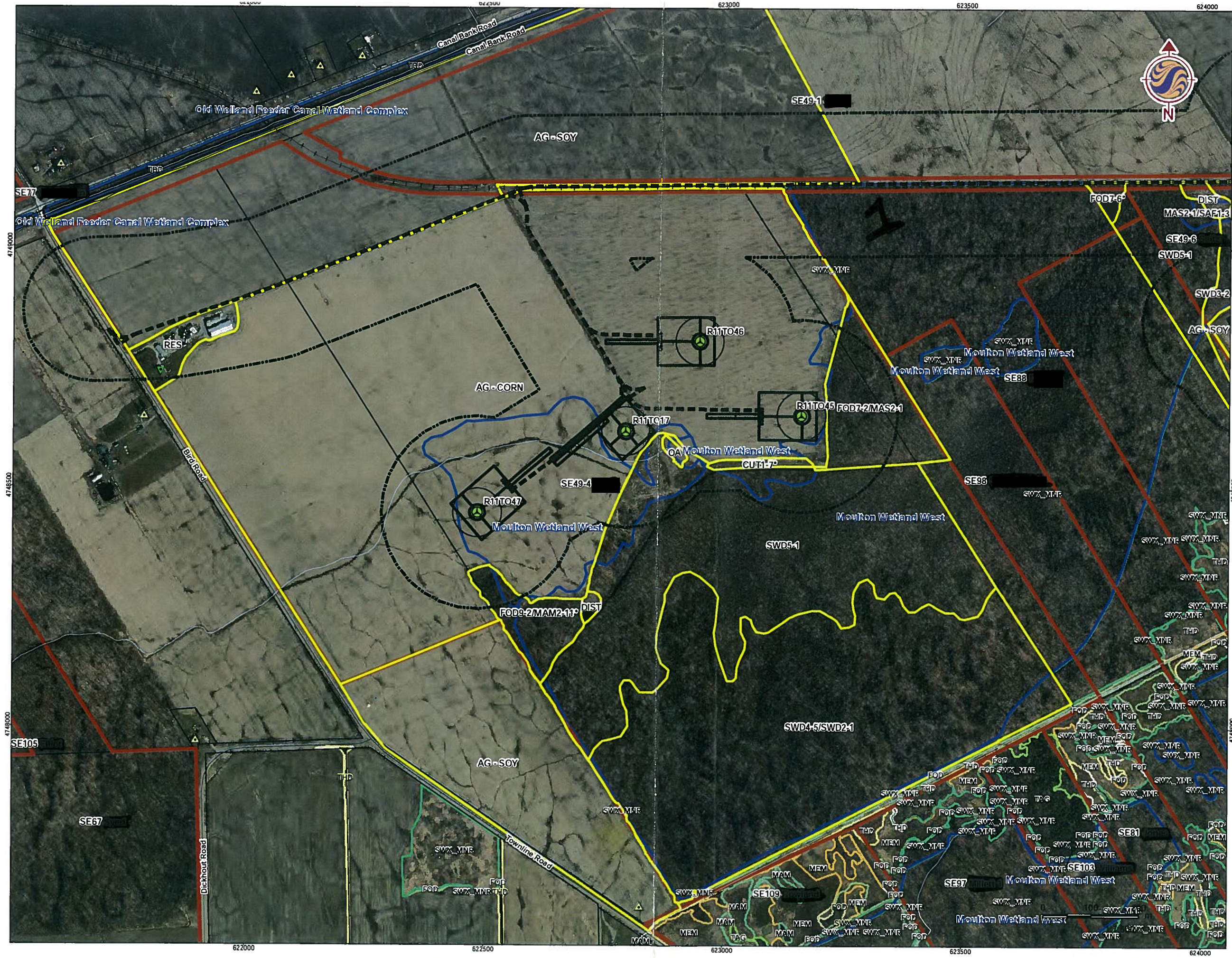
SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
throughout	pool		60 cm		✓	✓

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

V:\01609\Amphibian Field Maps\Planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bowerp



Legend

Turbines in Signed Lands

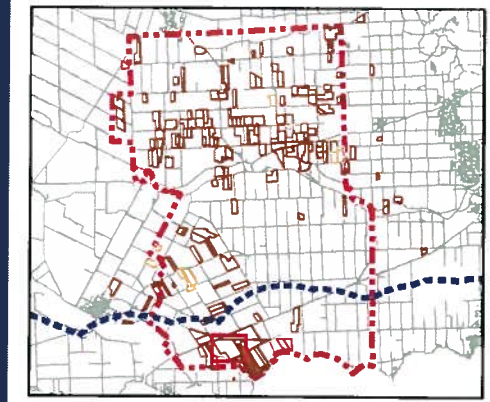
- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Participating Receptor
- Participating Receptor

Property and Study Area

- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



- ### Notes
- Coordinate System: NAD 1983 UTM Zone 17N).
 - Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
40

Title
Property with Turbine
SE49-4

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):		DATE:	UTME:
	START:	END:	UTMZ:	UTMN:

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☒ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☒ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☐ FOREST
					☐ PLANTATION

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1-2	3	Sugarmayple > Norway spruce
2	SUB-CANOPY			
3	UNDERSTOREY	3-4	4	Personna > riverbank grape > raspberry sp.
4	GRD. LAYER	5-7	4	goldenrod sp > Dandelion > garlic mustard > aron sp

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	R	<10	R	10-24	A	25-50	N	>50
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STANDING SNAGS:	N	<10	N	10 - 24	N	25 - 50	N	>50
-----------------	---	-----	---	---------	---	---------	---	-----

DEADFALL/LOGS:	0	<10	2	10-24	N	25-50	N	>50
ABUNDANCE CODES:	N-NONE	R-RARE	C-OCASIONAL	A-ABUNDANT				

ABUNDANCE CODES:		N=NONE	R=RARE	O=OCCASIONAL	A=ABUNDANT
COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

SOIL ANALYSIS:	FOREST	YOUNG	MID-AGE	MATURE	OLD GROWTH

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>Hedgecraw - sugar maple</i>		CODE: <i>HR</i>
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

photo 23

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE89	1
	POLYGON: 1 - Hedge row	
	DATE: May 24, 2012	
	SURVEYOR(S): C. P. H. 1. Robson	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Signature:

(Field Personnel)

Signature:

(Project Manager)



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Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Woodland & Wildlife Habitat Assessment Form

Project Name: NRWC

Field Personnel: C. Payette, L. Robson

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	26	2-3	0	None	None

ELC Polygon: # Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (*indicate on map*)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature
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Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)**STICK NEST(S) IDENTIFIED**

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature
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Seeps/Springs/Vernal Pools:

Contains/seeps/springs/vernal pools?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):		DATE:	UTME:
	START:	END:	UTMZ:	UTMN:

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GHAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR	☐ OPEN		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ SHRUB		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ TREED		☐ SAVANNAH
☐ SURFICIAL DEP.		☐ SAND DUNE			☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☐ FOREST
					☐ PLANTATION

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)		
1	CANOPY					
2	SUB-CANOPY					
3	UNDERSTOREY			4-5	3	raspberry > Poison Ivy > grey dogwood
4	GRD. LAYER			6-7	4	goldenrods > Sensitive Fern > white mustard

STAND COMPOSITION: BA:

SIZE CLASS ANALYSIS:				
	<10	10 - 24	25 - 50	>50

STANDING SNAGS:	<10	10 - 24	25 - 50	>50
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ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>cultural meadow-old field type</i>		CODE: <i>CUML-1(a)</i>
☒	INCLUSION	CODE:
☐	COMPLEX	CODE:

photo 21-22

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>NRWC</u>	
	POLYGON: <u>SE89</u>	<u>#2</u>
	DATE: <u>May 24, 2012</u>	
	SURVEYOR(S): <u>C. Pante</u>	<u>L. Bohman</u>

[illegible]

(Field Personnel)

(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Field Personnel: C. Page He, L. Robson

REV: 2011-07-18

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):		DATE:	UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☒ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☒ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION
SITE			COVER		
☐ OPEN WATER			☐ OPEN		
☐ SHALLOW WATER			☐ SHRUB		
☒ SURFICIAL DEP.			☒ TREED		
☐ BEDROCK					

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	Manitoba maple > Ash (white) > Scots pine > white elm
2	SUB-CANOPY			
3	UNDERSTOREY			Staghorn Sumac > Black raspberry > Virginia creeper
4	GRD. LAYER			Jewelmoss > mosses > woodworts > geraniums & sand

HT CODES: 1= $\geq 25m$ 2= $10 < HT \leq 25m$ 3= $2 < HT \leq 10m$ 4= $1 < HT \leq 2m$ 5= $0.5 < HT \leq 1m$ 6= $0.2 < HT \leq 0.5m$ 7= $HT < 0.2m$

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	O	<10	A	10 - 24	R	25 - 50	N	>50
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STANDING SNAGS:	2	<10	2	10 - 24	N	25 - 50	N	>50
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DEADFALL/LOGS:	0	<10	2	10 - 24	2	25 - 50	N	>50
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ABUNDANCE CODES: N=NONE R=RARE ~~O~~=OCCASIONAL A=ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
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SOIL ANALYSIS:			
TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: SW Manitoba Maple cultural woodlnd		CODE: CW1-3
INCLUSION		CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes: photo #24

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:
POLYGON: SE89 #3
DATE: May 24, 2012
SURVEYOR(S): C. Paurte, L. Robson

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

(Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: May 24, 2012

Field Personnel: C. Paylte, L. Rolosch

Weather Conditions:	TEMP (°C): <u>28</u>	WIND: <u>2</u>	CLOUD: <u>0</u>	PPT: <u>None</u>	PPT (in last 24 hrs): <u>None</u>
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ELC Polygon: # 3 Assessment Type: ☐ Visual; no access / ☒ Walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

SE89, THE OT, 10147

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):		DATE:	UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☒ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
		☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
SITE	☐ CARB. BEDRK.	☐ CREVICE / CAVE	COVER	☐ MIXED	☐ MEADOW
☐ OPEN WATER		☐ ALVAR	☐ OPEN		☐ PRAIRIE
☐ SHALLOW WATER		☐ ROCKLAND	☐ SHRUB		☐ THICKET
☒ SURFICIAL DEP.		☐ BEACH / BAR	☐ TREED		☐ SAVANNAH
☐ BEDROCK		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY			red maple
2 SUB-CANOPY			
3 UNDERSTOREY			white elm, green ash
4 GRD. LAYER			Red Canopy grass, Sensitive Fern, Tawny Wood, Horse Tail sp.

HT CODES: 1=>25m 2=10<HT<25m 3=2<HT<10m 4=1<HT<2m 5=0.5<HT<1m 6=0.2<HT<0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR<10% 2=10<CVR<25% 3=25<CVR<60% 4=CVR>60%

STAND COMPOSITION:					BA:
SIZE CLASS ANALYSIS:	<10	10-24	25-50	>50	
STANDING SNAGS:	<10	10-24	25-50	>50	
DEADFALL/LOGS:	<10	10-24	25-50	>50	
ABUNDANCE CODES:	N=NONE	R=RARE	O=OCCASIONAL	A=ABUNDANT	
COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Evidence of Disturbance / Notes: AUTO Photo 27

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NRWC	
	POLYGON: SE89 4	
	DATE: May 24, 2012	
	SURVEYOR(S): C. Payette, L. Robson	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

SPECIES CODE	LAYER				COLL.	SPECIES CODE	LAYER				COLL.
	1	2	3	4			1	2	3	4	
red maple	R					Red Canopy grass					O
white elm			R			Sensitive Fern					A
green ash			R			Tawny Wood					A
						goldenrod sp					O
						horse tail					O
						litter nightshade					R-O
						Sedge sp					R-O

Page ____ of ____

Signature:



(Field Personnel)
Quality Control: This form is complete ☐ & legible ☐.

Signature:



(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Field Personnel: C. Payette, L. Robson

REV: 2011-07-18

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):		DATE:	UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☒ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☒ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION
SITE			COVER		
☐ OPEN WATER			☐ OPEN		
☐ SHALLOW WATER			☐ SHRUB		
☒ SURFICIAL DEP.			☒ TREED		
☐ BEDROCK					

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	Sugar maple > white ash > Scots pine
2	SUB-CANOPY			
3	UNDERSTOREY			Poisoning > raspberry > Virginia creeper > ribwort
4	GRD. LAYER			galic mustard > wood nettle > tamed weed.

HT CODES: 1=>25m 2=10<HT<25m 3=2<HT<10m 4=1<HT<2m 5=0.5<HT<1m 6=0.2<HT<0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	4	<10	7	10-24	17	25-50	11	>50
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STANDING SNAGS:	N	<10	10 - 24	25 - 50	>50
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DEADFALL/LOGS:	A	<10	A	10 - 24	C	25 - 50	N	>50
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ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
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SOIL ANALYSIS:

TEXTURE: <i>V. Fine Sand</i>	DEPTH TO MOTTLES/GLEY	<i>g = 27-71cm</i>	<i>G = /</i>
MOISTURE:	DEPTH OF ORGANICS: <i>2cm</i>		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	<i>7120cm</i>	(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: F-M Saguaro-landmark Dec.		CODE: FODG-1
☒	INCLUSION	CODE: F
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

ph. 25-26 ~~Appears~~ to be in rows.
Rusty old metal / fencing etc hear barn.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>NPWC</u>	
	POLYGON: <u>SE89</u>	<u>#5</u>
	DATE: <u>May 24, 2012</u>	
	SURVEYOR(S): <u>C. Payette, L.R. Brown</u>	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page 1 of 1

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

(Project Manager)



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Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: May 24, 2012

Field Personnel: C. Payette, L. Robson

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>28</u>	<u>2</u>	<u>0</u>	<u>None</u>	<u>None</u>

ELC Polygon: # 5 Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☒-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
<u>1740618547 4754100</u>	<u>1-vernal pool</u>	<u>3m x 8m</u>	<u>5-30cm</u>	<u>28</u>	<u>no</u>	<u>yes - logs, twigs, stumps</u>

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: May 24, 2012

Field Personnel: C. Payette, L. Robson

Weather Conditions:	TEMP (°C): <u>28</u>	WIND: <u>2</u>	CLOUD: <u>0</u>	PPT: <u>None</u>	PPT (in last 24 hrs): <u>None</u>
---------------------	-------------------------	-------------------	--------------------	---------------------	--------------------------------------

ELC Polygon: # _____ Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

**Stantec**

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 1 – 70 Southgate Drive
 Guelph, ON
 Canada N1G 4P5
 Tel: (519) 836-6050
 Fax: (519) 836-2493

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269Project Name: WRWCDate: May 24, 2012Field Personnel: C. Payette, C. Robson

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>28</u>	<u>2</u>	<u>0</u>	<u>none</u>	<u>None</u>

ELC Polygon: # 7 Assessment Type: ☐-Visual; no access / ☒-Walk through featureExtent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)**Reptile / Bat Hibernacula Features:**

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)**STICK NEST(S) IDENTIFIED**

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON: 8	
	SURVEYOR(S):		DATE: aug	UTME:
	START:	END:	UTMZ:	UTMN:

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE			COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ALVAR	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ ROCKLAND	☒ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ BEACH / BAR	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ SAND DUNE			☐ FOREST
		☐ BLUFF			☐ PLANTATION

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	3	Green Ash > American Elm > Shagbark Hick
2	SUB-CANOPY	2-3	1	Green Ash > Common Buckthorn
3	UNDERSTOREY	3	2	Grey Dogwood
4	GRD. LAYER	5-7	4	Garlic Mustard >> Goldenrod s > Reed can

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:			<10		10 - 24		25 - 50		>50		
STANDING SNAGS:			<10		10 - 24		25 - 50		>50		
DEADFALL/LOGS:			<10		10 - 24		25 - 50		>50		
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT			
COMM. AGE:		PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH					

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>HR</i>		CODE:
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

ELC
COMMUNITY DESCRIPTION & CLASSIFICATION
 SITE: _____
 POLYGON: _____
 DATE: Aug 1 1961
 SURVEYOR(S): G V B I

[illegible]

(Field Personnel)

Signature: Chaitin
(Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: May 24, 2012

Field Personnel: C Payette, L Robson

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>28</u>	<u>2</u>	<u>0</u>	<u>none</u>	<u>none</u>

ELC Polygon: # 9 Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE 89		POLYGON: 9	
	SURVEYOR(S): C Payette & L Robson		DATE: May 24, 2012	
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☒ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☒ BOTTOMLAND		☒ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☒ GRAMINOID	☒ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☒ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☒ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☐ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY	4	2	manitoba maple > tremble, ASPEN > green AS
4	GRD. LAYER	5-7	4	Phragmites > goldenrod > reed canopy moss

HT CODES: 1= $\geq 25m$ 2= $10 < HT \leq 25m$ 3= $2 < HT \leq 10m$ 4= $1 < HT \leq 2m$ 5= $0.5 < HT \leq 1m$ 6= $0.2 < HT \leq 0.5m$ 7= $HT \leq 0.2m$

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:			<10		10 - 24		25 - 50		>50		
STANDING SNAGS:			<10		10 - 24		25 - 50		>50		
DEADFALL/LOGS:			<10		10 - 24		25 - 50		>50		
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT			
COMM. AGE:		PIONEER	☒ YOUNG	MID-AGE		MATURE		OLD GROWTH			

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
dd Field cultural meadow		CUM1-1 (C)
INCLUSION	Red canopy meadow	CODE: MAM2-2
COMPLEX		CODE:

Evidence of Disturbance / Notes:

e of Disturbance / Notes:

- lots of cut down tree roo piles (burned)
- all roots surviving is gone
- shrub to grassland

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]Page of

Signature:

Quality Control: This form is complete ☒ & legible ☒.

Signature:

Project Manager

photo #: 29-30



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1 – 70 Southgate Drive
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Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: May 24, 2012

Field Personnel: C Payette, L Robson

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>28</u>	<u>2</u>	<u>0</u>	<u>none</u>	<u>none</u>

ELC Polygon: # 9 Assessment Type: ☐-Visual; no access / ☐-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SC 89		POLYGON: 10	
	SURVEYOR(S): L. Robson, C. Payette		DATE: May 24, 2012	UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND	☐ OPEN		☐ THICKET
		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
		☐ SAND DUNE	☐ TREED		☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	2	2	green ash > trembling aspen
2 SUB-CANOPY	3	1	shamblow maple
3 UNDERSTOREY	4	2	trembling aspen > Stebbins Sumac
4 GRD. LAYER	5-7	4	Red-candied grass > cattails > Sedge sp. - > goldenrod sp.

HT CODES: 1=25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:

SIZE CLASS ANALYSIS:		A	<10	O	10 - 24	N	25 - 50	N	>50
STANDING SNAGS:		N	<10	N	10 - 24	N	25 - 50	N	>50
DEADFALL/LOGS:		O	<10	R	10 - 24	R	25 - 50	N	>50
ABUNDANCE CODES:		N=NONE R=RARE O=OCCASIONAL A=ABUNDANT							
COMM. AGE:		PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH			

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
reed (many weedy) marsh	MAM2-2
INCLUSION	CODE:
COMPLEX	CODE:

Evidence of Disturbance / Notes:

photo# : 31

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature:

(Project Manager)



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Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: May 24, 2012

Field Personnel: C. Payette, L. Robson

Weather Conditions:	TEMP (°C): <u>28</u>	WIND: <u>2</u>	CLOUD: <u>0</u>	PPT: <u>None</u>	PPT (in last 24 hrs): <u>None</u>
---------------------	-------------------------	-------------------	--------------------	---------------------	--------------------------------------

ELC Polygon: # 10 Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

Soils Station 5-1 SE89

Sandy loam

15cm

fine sand

mottled

76cm
79cm

stopped at
but continues.

hogleg.

Soil Station 5-2 SE89

Loamy sand.

12 cm

very fine sand

27 cm

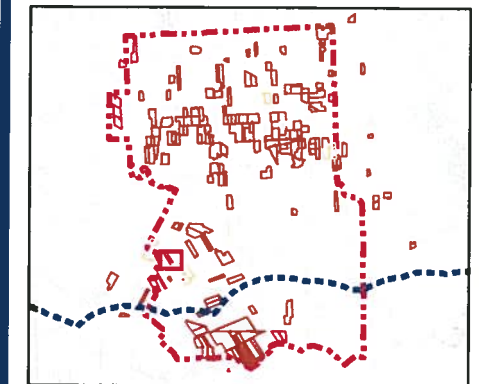
v. fine sand

72 cm water table



Legend

- Turbines in Signed Lands
 - Standard Turbine (105 dBA)
 - Potential Turbine Locations
- Turbines in Unsigned Lands
 - Standard Turbine (105 dBA)
 - 51 m Turbine Setback
 - Non-Participating Receptor
 - Participating Receptor
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



Notes

- Coordinate System: NAD 1983 UTM Zone 17N.
- Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.



Stantec

May, 2012
160950269

Client/Project

Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.

57

Title

Property with Turbine
SE89

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):		DATE:	UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR	COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☐ SURFICIAL DEP.		☐ SAND DUNE	☐ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	Sugar maple > Red oak > Bur oak > hophornbeam
2	SUB-CANOPY	3		Ironwood with elm
3	UNDERSTOREY	4	2	white blue-beech > white holly
4	GRD. LAYER	5 ft	2	grass sp

HT CODES: 1>=25m 2=10+HT<25m 3=2+HT<10m 4=1+HT<2m 5=0.5+HT<1m 6=0.2+HT<0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%-CVR<10% 2=10%-CVR<25% 3=25%-CVR<50% 4=CVR>50%

STAND COMPOSITION:

SIZE CLASS ANALYSIS:	A	<10	A	10 - 24	L	25 - 50	N	>50
STANDING SNAGS:	R	<10	R	10 - 24	N	25 - 50	N	>50
DEADFALL LOGS:	A	<10	A	10 - 24	R	25 - 50	N	>50
ABUNDANCE CODES:	N=NONE R=RARE O=OCCASIONAL A=ABUNDANT							
COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH			

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	g=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: D-F Sugar maple - Ironwood	CODE: F0DS-ψ
INCLUSION	CODE:
COMPLEX	CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>NRWC</i>
	POLYGON: <i>A (70)</i>
	DATE: <i>August 27, 2012</i>
	SURVEYOR(S): <i>C. Pearce</i>

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

and coral, leaves & young trees

Quality Control: This form is complete ☐ & legible ☐.

Signature:

(Project Manager)



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1 - 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: Aug 28, 2012

Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>22</u>	<u>3</u>	<u>100%</u>	<u>heavy rain</u>	<u>rain</u>

ELC Polygon: # 70-A Assessment Type: ☒ Visual; roadside, no access / ☐ Physical; walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☐-N / ☒ Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☐-N / ☒ Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☐-N / ☒ Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☐-N / ☒ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☐-N / ☒ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HQ=household; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):		DATE:	UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☒ BOTTOMLAND		☐ FLOATING-LYD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☒ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND	☐ OPEN		☐ THICKET
		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
		☐ SAND DUNE	☐ TREED		☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY	3-4	4	Butenbush >> NL meadowweet
4	GRD. LAYER	5-7	4	labelbark Sedge > Spinnifweed > 19 aug

HT CODES: 1=25m 2=10+HT≤25m 3=2+HT≤10m 4=HT≤2m 5=0.5+HT≤1m 6=0.2+HT≤0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10%<CVR≤25% 3=25%<CVR≤50% 4=CVR>50%

STAND COMPOSITION:

SIZE CLASS ANALYSIS:		A	<10	R	10 - 24	N	25 - 50	M	>50
STANDING SNAGS:		A	<10	R	10 - 24	N	25 - 50	M	>50
DEADFALL LOGS:		A	<10	R	10 - 24	N	25 - 50	M	>50
ABUNDANCE CODES:		N=NONE R=RARE O=OCCASIONAL A=ABUNDANT							
COMM. AGE:		PIONEER	YOUNG	MID-AGE		MATURE		OLD GROWTH	

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	p=	q=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: Buttonbush Mineral thicket Swamp		CODE: SWT-2-4
INCLUSION	CODE:	
COMPLEX	CODE:	

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>NRWC</u>
	POLYGON: <u>B(70)</u>
	DATE: <u>August 28, 2012</u>
	SURVEYOR(S): <u>C. Paulte</u>

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(FBI Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature:

(Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: August 28, 2012

Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>22</u>	<u>3</u>	<u>100%</u>	<u>heavy rain</u>	<u>rain</u>

ELC Polygon: #70-B Assessment Type: ☒ Visual; roadside, no access / ☐ Physical; walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐ Y* / ☐ N / ☒ Unknown, no access ("If yes, describe in table below")
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐ Y* / ☐ N / ☒ Unknown, no access ("If yes, describe in table below")
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐ Y* / ☐ N / ☒ Unknown, no access ("If yes, describe in table below")
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐ Y* / ☐ N / ☒ Unknown, no access ("If yes, describe in table below")

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐ Y* / ☐ N / ☒ Unknown, no access ("If yes, describe in table below")

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; EY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=silver sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:		POLYGON:	
	SURVEYOR(S):		DATE:	UTME:
	START:	END:	UTM2:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ UCHEN	☐ SWAMP
		☐ ROLL UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND	☐ OPEN		☐ THICKET
		☐ BEACH / BAR	☒ SHRUB		☐ SAVANNAH
		☐ SAND DUNE	☐ TREED		☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	Bureau > Red oak
2	SUB-CANOPY	4	4	NL meadow Sweet > gray dogwood
3	UNDERSTOREY	3-4	4	Reed canary grass
4	GRD. LAYER			Star tailed h

HT CODES: 1=25m 2=10+HT25m 3=2+HT10m 4=1+HT2m 5=0.5+HT1m 6=0.2+HT0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR<10% 2=10%<CVR<25% 3=25%<CVR<50% 4=CVR>50%

STAND COMPOSITION:								BA:	
SIZE CLASS ANALYSIS:		A	<10	L	10-24	N	25-50	N	>50
STANDING SNAGS:		A	<10	L	10-24	N	25-50	N	>50
DEADFALL LOGS:		O	<10	O	10-24	N	25-50	N	>50
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT	
COMM. AGE:		PIONEER	YOUNG	✓ MID-AGE		MATURE		OLD GROWTH	

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	g=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: meadow sweet mineral thicket swamp.		CODE: SWT 2-6
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NKWC
	POLYGON: C
	DATE: Aug 28, 2012
	SURVEYOR(S): C. Russell

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature:

(Project Manager)



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Canada N1G 4P5
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Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950289

Project Name: NRWC

Date: Aug 28, 2012

Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>22</u>	<u>3</u>	<u>100%</u>	<u>heavy rain</u>	<u>rain</u>

ELC Polygon: # 70C Assessment Type: ☒ Visual; roadside, no access / ☐ Physical; walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐ Y* / ☐ N / ☐ Unknown, no access (*If yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐ Y* / ☐ N / ☐ Unknown, no access (*If yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐ Y* / ☐ N / ☐ Unknown, no access (*If yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐ Y* / ☐ N / ☐ Unknown, no access (*If yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐ Y* / ☐ N / ☐ Unknown, no access (*If yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carens; DP=distinctive parts; FI=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=silver sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NIAGARA		POLYGON: 11	
	SURVEYOR(S): JN	DATE: JUNE 4-11	UTME:	
	START: 4:07	END: 4:16	UTMZ:	UTMN:

OLYGN DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
WETLAND	☐ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

TAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY			
SUB-CANOPY			
UNDERSTOREY			
GRD. LAYER	4-7	4	Plumellus, TENSEL, VERVAIR

Γ CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m
/R CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

TAND COMPOSITION:							BA:				
ZE CLASS ANALYSIS:			<10		10 - 24		25 - 50		>50		
TANDING SNAGS:			<10		10 - 24		25 - 50		>50		
EADFALL/LOGS:			<10		10 - 24		25 - 50		>50		
UNDANCE CODES:			N=NONE	R=RARE	O=OCCASIONAL	A=ABUNDANT					
MM. AGE:			PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

OIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
COSITE:		CODE:
VEGETATION TYPE: REED CANARY GRASS MINERAL MEADOW		CODE: MAM2-2
INCLUSION	MARSH	CODE:
COMPLEX		CODE:

evidence of Disturbance / Notes:

- A VERY NARROW community / DRAIN
- PIC 78-79 - SURFACE H₂O ONLY

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>SEAL</u>
	POLYGON: _____
	DATE: _____
	SURVEYOR(S): _____

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature:

(Project Manager)

- NO ACCESS



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Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 65950269

Project Name: N. A. G. A. L. A. S. E. 91

Date: JUNE 4-12

Field Personnel: JL

Weather Conditions:	TEMP (°C): <u>SEE POLY #7</u>	WIND: <u>#7</u>	CLOUD:	PPT:	PPT (in last 24 hrs):
---------------------	----------------------------------	--------------------	--------	------	-----------------------

ELC Polygon: # 11 Assessment Type: ☒ Visual; no access / ☐ Walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

NO ACCESS

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NIAGARA		POLYGON: 59-1	
	SURVEYOR(S): JN	DATE: JUNE 04-12	UTME:	
	START: 10:55	END: 11:04	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ ROLL. UPLAND	☒ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ BASIC BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWMAP
	☐ CARB. BEDRK.	☐ CLIFF		☐ BRYOPHYTE	☐ FEN
SITE		☐ TALUS	COVER	☒ DECIDUOUS	☐ BOG
☐ OPEN WATER		☐ CREVICE / CAVE	☐ OPEN	☐ CONIFEROUS	☐ BARREN
☐ SHALLOW WATER		☐ ALVAR	☐ SHRUB	☐ MIXED	☐ MEADOW
☒ SURFICIAL DEP.		☐ ROCKLAND	☒ TREED		☐ PRAIRIE
☐ BEDROCK		☐ BEACH / BAR			☐ THICKET
		☐ SAND DUNE			☐ SAVANNAH
		☐ BLUFF			☐ WOODLAND
					☒ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1-2	4	BUE RUBR > ACESASA > JUANICA
2	SUB-CANOPY			
3	UNDERSTOREY			N/A
4	GRD. LAYER			

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:		☐	<10	☒	10 - 24	☐	25 - 50	☒	>50		
STANDING SNAGS:		☒	<10	☒	10 - 24	☒	25 - 50	☒	>50		
DEADFALL/LOGS:		☒	<10	☒	10 - 24	☒	25 - 50	☒	>50		
ABUNDANCE CODES:			N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT		
COMM. AGE:		☐	PIONEER	☐	YOUNG	☐	MID-AGE	☒	MATURE	☐	OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:	(cm)	
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	(cm)	

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: D-F SUGAR MAPLE - OAK DECID.		CODE: F005-3
INCLUSION	FOREST	CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

- ROADSIDE ASSESSMENT
- TOPOGRAPHY LIMITS VIEW
- COULD NOT SEE ANY SNAIL FROM ROADSIDE

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE-91
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☐ & legible ☐

Signature:

(Project Manager)



Stantec Consulting Ltd.
1 - 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269

Project Name: NINGARA SE91

Date: June 04-12

Field Personnel: ST

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>16°C</u>	<u>2</u>	<u>100%</u>	<u>Ø</u>	<u>RAIN</u>

ELC Polygon: # 591 Assessment Type: ☒ Visual; roadside, no access / ☐ Physical; walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☒ Unknown, no access (*if yes, describe in table below)
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☒ Unknown, no access (*if yes, describe in table below)
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☐-N / ☒ Unknown, no access (*if yes, describe in table below)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☐-N / ☒ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☒ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA = carcass; DP = distinctive parts; FE = feeding evidence; FY = eggs/nest; HD = house/den; OB = observed; SC = scat; SI = other sign; TK = track; VO = vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>NIAGARA</u>		POLYGON: <u>2</u>	
	SURVEYOR(S): <u>JR</u>		DATE: <u>JUNE 01-12</u>	UTME:
	START: <u>11:08</u>	END: <u>11:24</u>	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☒ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☒ VALLEY SLOPE		☐ FORB	☒ MARSH
	☐ CARB. BEDRK.	☒ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE			COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ALVAR	☒ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ ROCKLAND	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ BEACH / BAR	☐ TREED		☐ WOODLAND
☐ BEDROCK		☐ SAND DUNE			☐ FOREST
		☐ BLUFF			☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	4-7	4	PHALANST 77 PHALANST 77 PHALANST 77

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:		☒	<10	☒	10 - 24	☒	25 - 50	☒	>50		
STANDING SNAGS:		☒	<10	☒	10 - 24	☒	25 - 50	☒	>50		
DEADFALL/LOGS:		☒	<10	☒	10 - 24	☒	25 - 50	☒	>50		
ABUNDANCE CODES:			N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT		
COMM. AGE:		☐	PIONEER	☐	YOUNG	☐	MID-AGE	☐	MATURE	☐	OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: COMMON REED MIRANDA MEADOW		CODE: MAM2-11*
☐	INCLUSION	MARSH CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

pic #3

- SURFACE H_2O PRESENT
ALTHOUGH LIMITED TO 'PERIMETER' DEPTH $< 15\text{cm}$

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>SE91-</u>
	POLYGON: _____
	DATE: _____
	SURVEYOR(S): _____

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

(Project Manager)



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1 - 70 Southgate Drive
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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269

Project Name: NIAGARA SE91

Date: JUNE 4-12

Field Personnel: JSR

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>50s 10-160m 2</u>				

ELC Polygon: # 2 Assessment Type: ☐ Visual; no access / ☒ Walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☒ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED						
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature	

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

RWB0 - VO/OB

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>NINGARA</u>		POLYGON: <u>3</u>	
	SURVEYOR(S): <u>STV</u>		DATE: <u>JUNE 4-12</u>	
	START: <u>11:25</u>	END: <u>11:50</u>	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☐ NATURAL	☐ PLANKTON ☐ SUBMERGED	☐ LAKE ☐ POND
☐ WETLAND	☒ MINERAL SOIL	☐ BOTTOMLAND ☐ TERRACE	☒ CULTURAL	☐ FLOATING-LVD. ☐ GRAMINOID	☐ RIVER ☐ STREAM
☐ AQUATIC	☐ PARENT MIN.	☒ VALLEY SLOPE ☐ TABLELAND		☐ FORB ☐ LICHEN	☐ MARSH ☐ SWAMP
	☐ ACIDIC BEDRK.	☐ ROLL. UPLAND ☐ CLIFF		☐ BRYOPHYTE ☒ DECIDUOUS	☐ FEN ☐ BOG
	☐ BASIC BEDRK.	☐ TALUS ☐ CREVICE / CAVE		☐ CONIFEROUS ☐ MIXED	☐ BARREN ☐ MEADOW
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	COVER		☐ PRAIRIE ☐ THICKET
☐ OPEN WATER		☐ BEACH / BAR ☐ SAND DUNE	☐ OPEN ☐ SHRUB		☐ SAVANNAH ☒ WOODLAND
☒ SHALLOW WATER		☐ BLUFF	☒ TREED		☐ FOREST ☐ PLANTATION
☒ SURFICIAL DEP.					
☐ BEDROCK					

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	FRAMER > HICKORY > TILAMER
2	SUB-CANOPY	3	4	FLAMER = CRATAEGUS > JUVENILE
3	UNDERSTOREY	4	4	CRATAEGUS > JUVENILE = FRAMER
4	GRD. LAYER	5-7	4	SOLIDAGO = KNAUTHIA = PSACALAE

HT CODES: 1= $\geq 25m$ 2= $10 < HT \leq 25m$ 3= $2 < HT \leq 10m$ 4= $1 < HT \leq 2m$ 5= $0.5 < HT \leq 1m$ 6= $0.2 < HT \leq 0.5m$ 7= $HT < 0.2m$

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:

SIZE CLASS ANALYSIS:		A	<10	O	10 - 24	R	25 - 50	N	>50
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STANDING SNAGS:

DEADFALL/LOGS:	N	<10	R	10-24	N	25-50	N	>50
----------------	---	-----	---	-------	---	-------	---	-----

ABUNDANCE CODES:

COMM. AGE:

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
ASH CULTURAL WOODLAND		CUN1-34
INCLUSION		CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>SE 91</u>
	POLYGON: _____
	DATE: _____
	SURVEYOR(S): _____

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature:

(Project Manager)



Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269

Project Name: NIAGARA SE91

Date: JUNE 4-12

Field Personnel: SM

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>FEW</u>	<u>PO-46-50</u>	<u>2</u>		

ELC Polygon: # 3 Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>NIAGARA</u>		POLYGON: <u>4</u>	
	SURVEYOR(S): <u>376</u>		DATE: <u>JUNE 04-12</u>	
	START: <u>12:02</u>	END: <u>12:18</u>	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☒ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☒ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BAREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☒ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	QUERUBR > ALCESA = F. AMER
2	SUB-CANOPY	3	3	ALCESA = QUERUBR = QUERUBR
3	UNDERSTOREY	4-5	3	PPVIRG > CORACE
4	GRD. LAYER	6-7	4	COLMACU = ALLPELO > HYDROPHYLLUM

-IT CODES: 1= $\geq 25m$ 2= $10 < HT \leq 25m$ 3= $2 < HT \leq 10m$ 4= $1 < HT \leq 2m$ 5= $0.5 < HT \leq 1m$ 6= $0.2 < HT \leq 0.5m$ 7= $HT < 0.2m$

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:

STAND COMPOSITION:	BA:
--------------------	-----

SIZE CLASS ANALYSIS:

SIZE CLASS ANALYSIS:	A	<10	A	10-24	A	25-50	N	>50
----------------------	---	-----	---	-------	---	-------	---	-----

STANDING SNAGS:

STANDING SNAGS:	☒	<10	☐	10 - 24	☐	25 - 50	☒	>50
-----------------	-------------------------------------	-----	--------------------------	---------	--------------------------	---------	-------------------------------------	-----

DEADFALL/LOGS:

DEADFALL/LOGS:	R	<10	R	10 - 24	R	25 - 50	N	>50
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ABUNDANCE CODES:

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:

COMM. AGE:	☐ PIONEER	☐ YOUNG	☒ MID-AGE	☐ MATURE	☐ OLD GROWTH
------------	----------------------------------	--------------------------------	---	---------------------------------	-------------------------------------

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
P-F SUGAR MAPLE - OAK DECID. FOREST		FOD5-3
INCLUSION		CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

A

A 725'1.

7 Pic #122

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>SE91-</u>
	POLYGON: _____
	DATE: _____
	SURVEYOR(S): _____

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

(Project Manager)



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1 – 70 Southgate Drive
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Tel: (519) 836-6050
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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269

Project Name: Niagara SE91

Date: JUNE 4-12

Field Personnel: JR

Weather Conditions:	TEMP (°C): <u>SEE POUTON 2</u>	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
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ELC Polygon: # 4 Assessment Type: ☐-Visual; no access / ☒Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☒Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED						
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature	

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>Niagara</u>		POLYGON: <u>5</u>	
	SURVEYOR(S): <u>JR</u>	DATE: <u>JUN 4-12</u>	UTME:	
	START: <u>12:20</u>	END: <u>12:29</u>	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☐ NATURAL	☐ PLANKTON ☐ SUBMERGED	☐ LAKE ☐ POND
☐ WETLAND	☒ MINERAL SOIL	☐ BOTTOMLAND ☐ TERRACE	☒ CULTURAL	☐ FLOATING-LVD. ☐ GRAMINOID	☐ RIVER ☐ STREAM
☐ AQUATIC	☐ PARENT MIN.	☐ VALLEY SLOPE ☒ TABLELAND		☐ FORB ☐ LICHEN	☐ MARSH ☐ SWAMP
	☐ ACIDIC BEDRK.	☐ ROLL. UPLAND ☐ CLIFF		☒ BRYOPHYTE ☒ DECIDUOUS	☐ FEN ☐ BOG
	☐ BASIC BEDRK.	☐ TALUS ☐ CREVICE / CAVE		☒ CONIFEROUS ☐ MIXED	☐ BARREN ☐ MEADOW
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	COVER		☒ PRAIRIE ☒ THICKET
☐ OPEN WATER		☐ BEACH / BAR ☐ SAND DUNE	☐ OPEN ☒ SHRUB		☐ SAVANNAH ☐ WOODLAND
☐ SHALLOW WATER		☐ BLUFF	☐ TREED		☐ FOREST ☐ PLANTATION
☒ SURFICIAL DEP.					
☐ BEDROCK					

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	2-IGNIA > FRAMON
2	SUB-CANOPY			
3	UNDERSTOREY	4	4	CORRACE
4	GRD. LAYER	5-7	4	SOLOA > RESCUE > PHAARUN

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT≤0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:

SIZE CLASS ANALYSIS:	<u>R</u>	<10	<u>R</u>	10-24	<u>✓</u>	25-50	<u>✓</u>	>50
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STANDING SNAGS:

STANDING SNAGS:	✓	<10	✓	10 - 24	✓	25 - 50	✓	>50
-----------------	---	-----	---	---------	---	---------	---	-----

DEADFALL/LOGS:

DEADFALL/LOGS:	✓	<10	✓	10 - 24	✓	25 - 50	✓	>50
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ABUNDANCE CODES:

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:

COMM. AGE:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
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SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
GRAY DOGWOOD CULTURAL	CUT1-4

INCLUSION	THICKET	CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	SE 91 -
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

(Project Manager)



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Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269

Project Name: NIAGARA SE91

Date: JUNE 04-12

Field Personnel: JTL

Weather Conditions:	TEMP (°C): <u>55</u>	WIND: <u>POULSON 2</u>	CLOUD:	PPT:	PPT (in last 24 hrs):
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ELC Polygon: # 5 Assessment Type: ☐-Visual; no access ☒-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire ☒-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED						
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature	

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED							
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?	

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION AND CLASSIFICATION	SITE: NIAGARA		POLYGON:	
	SURVEYOR(S): JTB		DATE: JUNE 4-12	
	START:	END:	UTMZ:	UTME:
				UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☐ NATURAL	☐ PLANKTON ☐ SUBMERGED	☐ LAKE ☐ POND
☐ WETLAND	☒ MINERAL SOIL	☐ BOTTOMLAND ☐ TERRACE	☒ CULTURAL	☐ FLOATING-LVD. ☒ GRAMINOID	☐ RIVER ☐ STREAM
☐ AQUATIC	☐ PARENT MIN. ☐ ACIDIC BEDRK. ☐ BASIC BEDRK.	☐ VALLEY SLOPE ☒ TABLELAND ☐ ROLL UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE		☒ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS	☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN
SITE			COVER	☐ MIXED	☒ MEADOW
☐ OPEN WATER	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ OPEN ☐ SHRUB ☐ TREED		☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION
☐ SHALLOW WATER					
☒ SURFICIAL DEP.					
☐ BEDROCK					

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	J & G R I A R
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	4-7	4	B R I N J A R > P O A P A T = S O L I O A G O = F L A Y A R C

IT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:

SIZE CLASS ANALYSIS:		☒ $\emptyset$ <10	☒ R 10 - 24	☒ N 25 - 50	☒ N >50
STANDING SNAGS:		☒ N <10	☒ N 10 - 24	☒ N 25 - 50	☒ N >50
DEADFALL/LOGS:		☒ N <10	☒ N 10 - 24	☒ N 25 - 50	☒ N >50
ABUNDANCE CODES:		N=NONE	R=RARE	O=OCCASIONAL	A=ABUNDANT
COMM. AGE:	☐ PIONEER	☐ YOUNG	☐ MID-AGE	☐ MATURE	☐ OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
MINORAL CUSCUMBA		CUMI
INCLUSION	MEADOW	CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>3E91-</u>
	POLYGON: _____
	DATE: _____
	SURVEYOR(S): _____

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

(Project Manager)



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Canada N1G 4P5
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Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269

Project Name: NIAGARA SE91

Date: JUNE 4-12

Field Personnel: JO

Weather Conditions:	TEMP (°C): <u>SEV</u>	WIND: <u>POU. 1</u>	CLOUD:	PPT:	PPT (in last 24 hrs):
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ELC Polygon: # 1 Assessment Type: ☐ Visual; no access / ☒ Walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NIAGARA		POLYGON: 6	
	SURVEYOR(S): JTL		DATE: JUNE 04-12	
	START: 12:32		UTME:	
	END: 12:41		UTMZ:	
			UTMN:	

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☒ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR			☐ PRAIRIE
☐ OPEN WATER		☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☒ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	HICKORY > OVERBL > ALCESA
2	SUB-CANOPY	3	3	ALCESA = HICKORY > OVERBL
3	UNDERSTOREY	4	3	CORPCE > SAPLINGS
4	GRD. LAYER	5-7	4	AUPEPI = SOLIDAGO > AVENS

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:

SIZE CLASS ANALYSIS:		☒ <10	☒ 10 - 24	☒ 25 - 50	☒ >50
STANDING SNAGS:		☒ <10	☒ 10 - 24	☒ 25 - 50	☒ >50
DEADFALL/LOGS:		☒ <10	☒ 10 - 24	☒ 25 - 50	☒ >50
ABUNDANCE CODES:		N=NONE	R=RARE	O=OCCASIONAL	A=ABUNDANT
COMM. AGE:		☒ PIONEER	☒ YOUNG	☒ MID-AGE	☒ MATURE
					☒ OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: D-F OAK-MAPLE-HICKORY DECID.		CODE: FDR2
INCLUSION	FOREST	
COMPLEX		
		CODE:

Evidence of Disturbance / Notes:

- DRY DRAIN FEATURE EXTENDS THROUGH - SOURCE IS A6 DRAIN

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>SE91-</u>
	POLYGON: _____
	DATE: _____
	SURVEYOR(S): _____

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is ☒ complete ☐ & legible ☐.

Signature:

(Project Manager)



Stanter Consulting Ltd.
1 - 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stanter

Woodland & Wildlife Habitat Assessment Form

Project Number: 60650269

Project Name: NIAGARA SE91

Date: JUNE 4-12

Field Personnel: JTL

Weather Conditions:	TEMP (°C): <u>25</u>	WIND: <u>POU 2</u>	CLOUD:	PPT:	PPT (in last 24 hrs):
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ELC Polygon: # 6 Assessment Type: ☐ Visual; no access / ☒ Walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☒ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

RTHA - OB

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NIAGARA		POLYGON: 7	
	SURVEYOR(S): JTL		DATE: JUNE 4-12	UTME:
	START: 12:51	END: 1:16	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☒ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL. UPLAND		☒ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BAREEN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND	☐ OPEN		☐ THICKET
		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
		☐ SAND DUNE	☒ TREED		☐ WOODLAND
		☐ BLUFF			☒ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	4	HICKORY > ACESASA > OVERBURL > TILAMSK
2	SUB-CANOPY	2	3	HICKORY = ACESASA > OVERBURL
3	UNDERSTOREY	3-4	4	ACESASA > HICKORY > FRAMSK
4	GRD. LAYER	5-7	4	CAREX spp >> GEUMCNA > GEUMACU = P. STREPT

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	A	<10	A	10-24	A	25-50	N	>50
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STANDING SNAGS:	R	<10	R	10 - 24	R	25 - 50	N	>50
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DEADFALL/LOGS:	☒ <10	☐ 10 - 24	☐ 25 - 50	☒ >50
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ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	☐ PIONEER	☐ YOUNG	☐ MID-AGE	☒ MATURE	☐ OLD GROWTH
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SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
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MOISTURE:	DEPTH OF ORGANICS:	(cm)
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HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	(cm)
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COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
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COMMUNITY SERIES:	CODE:
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ECOSITE:	CODE:
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VEGETATION TYPE:	CODE:
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F-M OAK - MAPLE - HICKORY DECID.	1-00-
----------------------------------	-------

INCLUSION	FOREST	CODE:
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	COMPLEX	CODE:
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Evidence of Disturbance / Notes:

- OLD TRACTOR PATHS WITHIN
- RELATIVELY FEW MOIST PACKETS

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:	SE91-
	POLYGON:	
	DATE:	
	SURVEYOR(S):	

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is ☒ complete ☐ & legible ☐.

Signature:

(Project Manager)

pic 24



Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269

Project Name: Niagara SE91

Date: June 24-12

Field Personnel: JTL

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>18°</u>	<u>2</u>	<u>80%</u>	<u>Ø</u>	<u>RAIN</u>

ELC Polygon: # 7 Assessment Type: ☐ Visual; no access / ☒ Walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☒ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐ -Y* / ☐ -N / ☒ Unknown, no access (*if yes, describe in table below)
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐ -Y* / ☒ -N / ☐ Unknown, no access (*if yes, describe in table below)
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐ -Y* / ☐ -N / ☒ Unknown, no access (*if yes, describe in table below)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐ -Y* / ☐ -N / ☒ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐ -Y* / ☐ -N / ☒ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

NO SIG. FEATURE/ OBS WITHIN 150M AREA OF INVESTIGATION

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION AND CLASSIFICATION	SITE: <u>NIAGARA</u>		POLYGON: <u>8</u>	
	SURVEYOR(S): <u>STL</u>		DATE: <u>JUNE 4-12</u>	
	START: <u>1:30</u>	END: <u>1:52</u>	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☒ NATURAL	☐ PLANKTON ☐ SUBMERGED	☐ LAKE ☐ POND
☐ WETLAND	☒ MINERAL SOIL	☐ BOTTOMLAND ☐ TERRACE	☐ CULTURAL	☐ FLOATING-LVD. ☐ GRAMINOID	☐ RIVER ☐ STREAM
☐ AQUATIC	☐ PARENT MIN. ☐ ACIDIC BEDRK.	☐ VALLEY SLOPE ☒ TABLELAND ☐ ROLL, UPLAND		☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☒ DECIDUOUS ☐ CONIFEROUS	☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG
	☐ BASIC BEDRK.	☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE		☐ MIXED	☐ BARREN ☐ MEADOW
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	COVER		☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☒ FOREST ☐ PLANTATION
☐ OPEN WATER			☐ OPEN ☐ SHRUB ☒ TREED		
☐ SHALLOW WATER					
☒ SURFICIAL DEP.					
☐ BEDROCK					

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACESASA > SHAGHIL >> QUEMACR
2	SUB-CANOPY	3	3	ACESASA > SHAGHIL >> QUEMACR
3	UNDERSTOREY	4-5	4	CORPAC > ACESASA > PRUVIRA
4	GRD. LAYER	6-7	4	ALL PETI > CIRLUITE = VENDORFI

IT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:

SIZE CLASS ANALYSIS:		O	<10	A	10 - 24	A	25 - 50	N	>50
STANDING SNAGS:		R	<10	O	10 - 24	R	25 - 50	N	>50
DEADFALL/LOGS:		R	<10	R	10 - 24	R	25 - 50	N	>50
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT	
COMM. AGE:		PIONEER	YOUNG	X MID-AGE		MATURE		OLD GROWTH	

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: F-M SUGAR MAPLE - HARDWOOD DECID.		CODE: FOO 6-5
INCLUSION	FOREST CODE:	
COMPLEX	CODE:	

Evidence of Disturbance / Notes:

✓/ VERNAL POOLS

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>SE91-</u>
	POLYGON: _____
	DATE: _____
	SURVEYOR(S): _____

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

(Project Manager)

PIC 25-26; 27 shows break in HR.



Stantec Consulting Ltd.
1 - 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NIAKALA SE91

Date: JUNE 4-02

Field Personnel: JTL

Weather Conditions: TEMP (°C): SEE POLY. 7 WIND: CLOUD: PPT: PPT (in last 24 hrs):

ELC Polygon: # 8 Assessment Type: ☐ Visual; no access / ☒ Walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐ -Y* / ☒ -N / ☐ -Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☒ -Y* / ☐ -N / ☐ -Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
630068, 4371215	V. pool	10x6m	35cm		YES	YES
630149, 4371217	V. pool	15x12m	30cm	25	YES	YES

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

- PART OF PSW BUT APPEARS TO BE MORE OF A FOD W/ POCKETS OF VERNAL POOL HABITAT (BUTTBUSH SWT)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>NIAGARA</u>		POLYGON: <u>9</u>	
	SURVEYOR(S): <u>JD</u>		DATE: <u>JUNE 4-12</u>	UTME:
	START: <u>1:55</u>	END: <u>2:35</u>	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☒ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☒ TABLELAND		☐ LICHEN	☐ SWAMP
		☐ ROLL UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE		☐ ALVAR			☐ PRAIRIE
☐ OPEN WATER	☐ CARB. BEDRK.	☐ ROCKLAND	☐ OPEN		☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR	☐ SHRUB		☐ SAVANNAH
☒ SURFICIAL DEP.		☐ SAND DUNE	☒ TREED		☐ WOODLAND
☐ BEDROCK		☐ BLUFF			☒ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1-2	4	ACESASA > OVERLUB > FAGGRAN
2	SUB-CANOPY	3	3	ACESASA > FAGGRAN > OVERLUB
3	UNDERSTOREY	4	4	ACESASA > OSTUIR > RUBCAM
4	GRD. LAYER	5-7	4	ACESASA > F.S.SEM = W.DILLIVAN

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT≤0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
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SIZE CLASS ANALYSIS:	A	<10	A	10 - 24	A	25 - 50	R	>50
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STANDING SNAGS:	R <10	0 10-24	R 25-50	N >50
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DEADFALL/LOGS:	☒	<10	☐	10 - 24	☒	25 - 50	☒	>50
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ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE:	PIONEER	YOUNG	MID-AGE	☒ MATURE	OLD GROWTH
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SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
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MOISTURE:	DEPTH OF ORGANICS:	(cm)
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HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	(cm)
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COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
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COMMUNITY SERIES:	CODE:
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ECOSITE:	CODE:
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VEGETATION TYPE: F.M. SUGAR MAPLE - HARDWOOD DECID CODE: FOD 6-5

INCLUSION	FOREST	CODE:
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[illegible]

COMPLEX	
Evidence of Disturbance / Notes:	

pic 71

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>SE91-</u>
	POLYGON: _____
	DATE: _____
	SURVEYOR(S): _____

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]64
To
70

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is ☒ complete ☐ & legible ☐.

Signature:

(Project Manager)

→ TRAILING: LVS ~ 7cm long. PICS 48-53



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Canada N1G 4P5
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Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269

Project Name: NIAKARA SE91

Date: JUNE 4-12

Field Personnel: JTL

Weather Conditions:	TEMP (°C): <u>55</u>	WIND: <u>W 7</u>	CLOUD:	PPT:	PPT (in last 24 hrs):
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ELC Polygon: # 9 Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☒-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☒-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
<u>630361, 4771910</u>	<u>V. pool</u>	<u>5x12</u>	<u>20cm</u>	<u>72</u>	<u>NO</u>	<u>LOGS</u>

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

ASIDE FROM VERNAL POOL, NO SIG. FEATURES OBS. IN 150M AREA.

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NIAGARA		POLYGON: 510	
	SURVEYOR(S): STL		DATE: JUNE 4-12	
	START: 2:35	END: 3:12	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☐ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☒ WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☒ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☒ TABLELAND		☐ LICHEN	☒ SWAMP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☒ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
SITE			COVER		☐ PRAIRIE
☐ OPEN WATER		☐ ALVAR	☐ OPEN		☐ THICKET
☐ SHALLOW		☐ ROCKLAND	☐ SHRUB		☐ SAVANNAH
☒ WATER		☐ BEACH / BAR	☒ TREED		☐ WOODLAND
☒ SURFICIAL DEP.		☐ SAND DUNE			☐ FOREST
☐ BEDROCK		☐ BLUFF			☐ PLANTATION

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	2	4	ACEFRAE > HICKORY > FRAPER > ACESASA
2 SUB-CANOPY	3	3	ACEFRAE > HICKORY = ACESALA > FRAPER
3 UNDERSTOREY	4	3	ACEFRAE > ACESASA > SAMCAN
4 GRD. LAYER	5x	4	IMPATIS > SEALEX SPP > GLYSIR = OROSS

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT≤0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION:	BA:
--------------------	-----

SIZE CLASS ANALYSIS:	0	<10	10-24	25-50	>50
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STANDING SNAGS:	N	<10	R	10 - 24	O	25 - 50	Z	>50
BEADEN LAKE	1	10						

DEADFALL/LOGS:	N	<10	O	10 - 24	O	25 - 50	U
ABUNDANCE CODES:	N=NONE	R=RARE	O=OCCASIONAL	A=ABUNDANT			

COMM. AGE:	☐ PIONEER	☐ YOUNG	☐ MID-AGE	☒ MATURE	☐ OLD GROWTH
------------	----------------------------------	--------------------------------	----------------------------------	--	-------------------------------------

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
----------	-----------------------	----	----

MOISTURE:	DEPTH OF ORGANICS:	(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:

COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:

VEGETATION TYPE:	CODE:
SWAMP MAPLE MINERAL Decid	SIND 3-3

INCLUSION	SWAMP	CODE:
-----------	-------	-------

COMPLEX	CODE:
----------------	--------------

Evidence of Disturbance / Notes:

- SOME POCKETS OF DEEP ORGANIC SATURATED SOIL

ELC SITE: SE91-

COMMUNITY POLYGON: _____

DESCRIPTION & DATE: _____

CLASSIFICATION SURVEYOR(S): _____

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

PIC 28

Quality Control: This form is ~~complete~~ ☒ & legible ☒.

Signature:

(Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269

Project Name: NIAGARA SE91

Date: JUNE 4-12

Field Personnel: JTL

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>SE</u>	<u>POV. 7</u>			

ELC Polygon: # 10 Assessment Type: ☐-Visual; no access / ☒-Walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☒-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)
 [i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
 Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)
 [i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)
 [i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED						
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature	

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☒-Unknown, no access (*if yes, describe in table below)

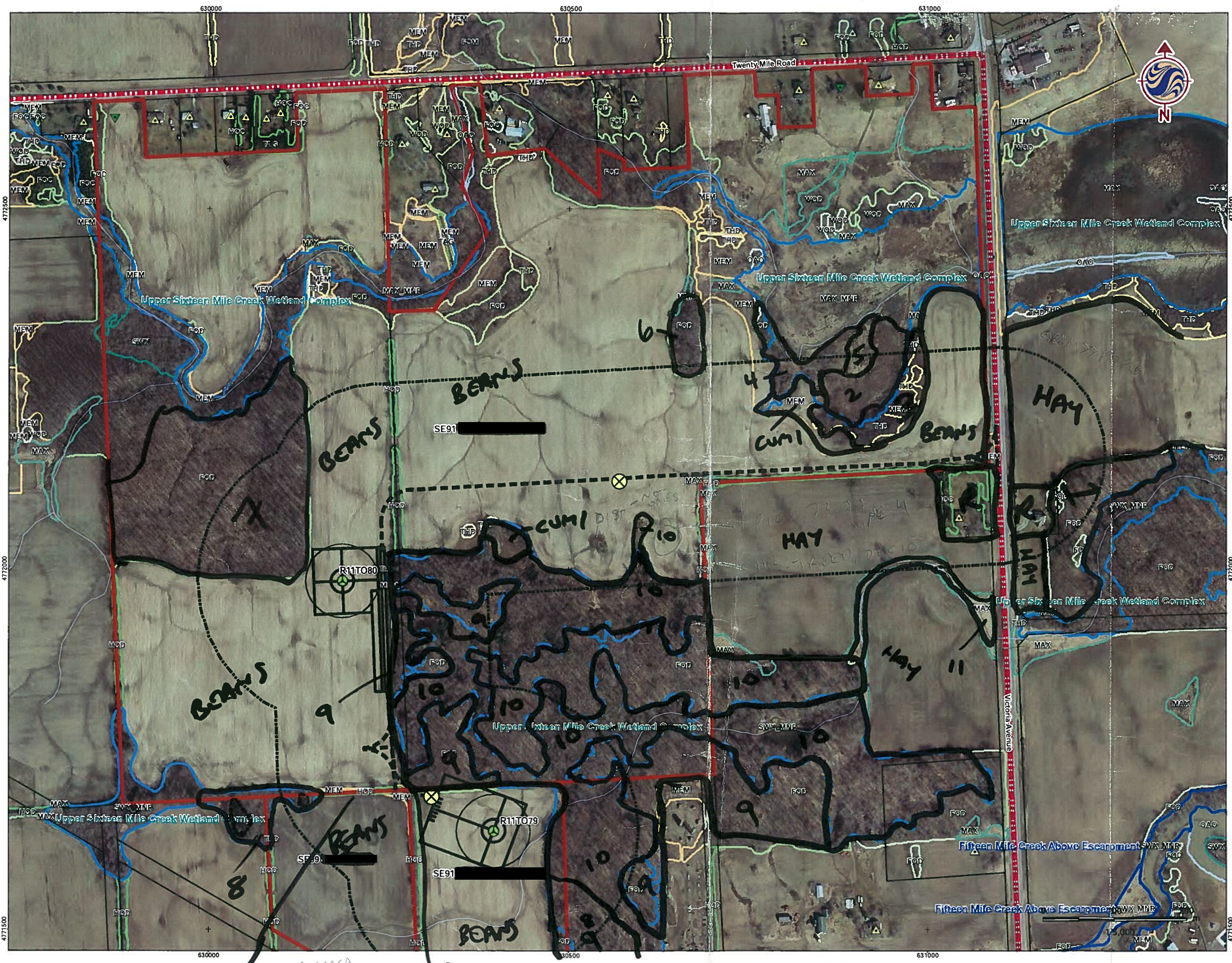
SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED							
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?	

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

- NO SIG. FEATURES OBS. IN 150M. AREA.

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

V:\01609\Active\160950269\planning\drawing\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcowper



Legend

Turbines in Signed Lands

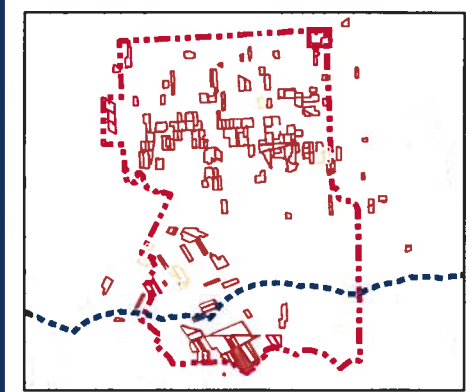
- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Participating Receptor
- Participating Receptor

Other Features

- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



- ### Notes
- Coordinate System: NAD 1983 UTM Zone 17N).
 - Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

May, 2012
160950269

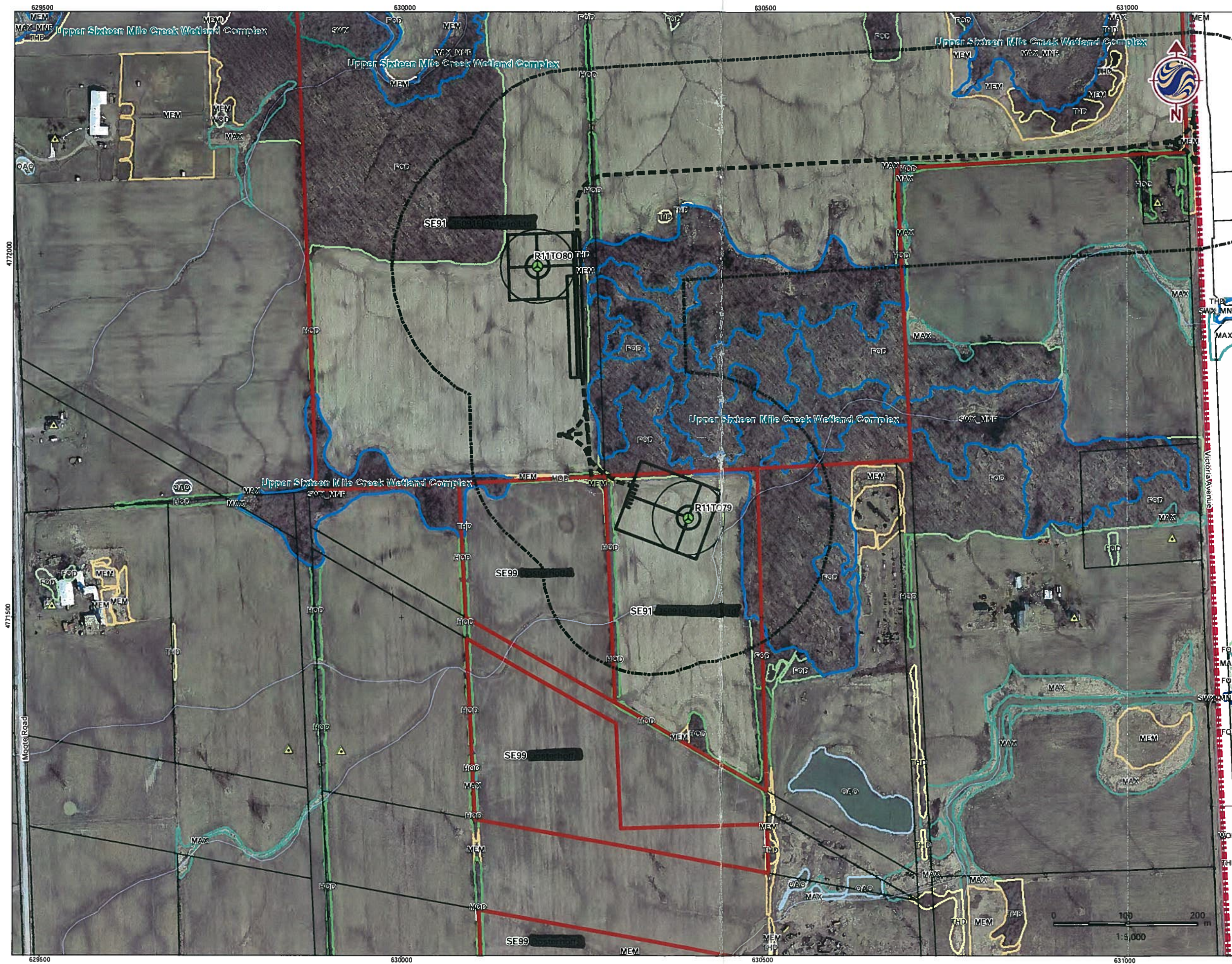
Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
59

Title
Property with Turbine
SE91

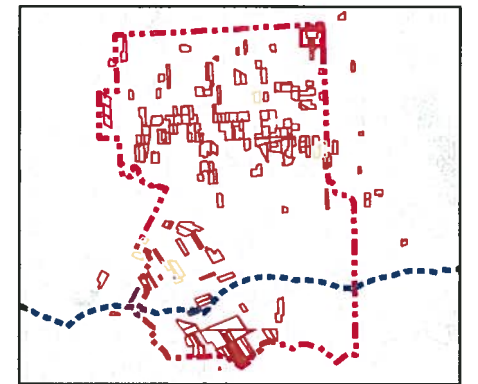
HR - ACESASA
- QUEMACK
- HAK HICK
BRENN IN
- SEE PIC
HR ~ 7M
WIDE

V:\01009\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmap\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: dcomper



Legend

- Turbines in Signed Lands
 - Standard Turbine (105 dBA)
 - Potential Turbine Locations
- Turbines in Unsigned Lands
 - Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Participating Receptor
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- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



Notes

- Coordinate System: NAD 1983 UTM Zone 17N).
- Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.



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May, 2012
160950269

Client/Project

Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.

60

Title

Property with Turbine
SE91

ELC SITE: POLYGON: COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): DATE: UTMZ: UTMN: START: END:

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

TAND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE

TAND COMPOSITION: SIZE CLASS ANALYSIS: TANDING SNAGS: DEADFALL LOGS: ABUNDANCE CODES: COMM. AGE: OIL ANALYSIS:

COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: POSITE: VEGETATION TYPE: INCLUSION: COMPLEX: Evidence of Disturbance / Notes:

ELC SITE: POLYGON: COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): DATE: SE 94, Tile 60, Poly 1-1

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT SPECIES CODE LAYER COLL

Page 1 of 1 Signature: [Signature] Quality Control: This form is complete & legible [] Signature: [Signature]



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 8, 2012

Field Personnel: N. Leiva

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25°</u>	<u>0-2</u>	<u>50%</u>	<u>Ø</u>	<u>T. Storm</u>

ELC Polygon: # 1-1 Assessment Type: ☐ Visual; roadside, no access / ☒ Physical; walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

--

CA=carcass; DP=distinctive parts; FE=feeding evidence; EY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
1 TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
1 WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
1 AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
	☐ CARB. BEDRK.	☐ TABLELAND		☐ LICHEN	☐ SWMAP
		☐ ROLL. UPLAND		☐ BRYOPHYTE	☐ FEN
		☐ CLIFF		☐ DECIDUOUS	☐ BOG
		☐ TALUS		☐ CONIFEROUS	☐ BARREN
		☐ CREVICE / CAVE		☐ MIXED	☐ MEADOW
		☐ ALVAR			☐ PRAIRIE
		☐ ROCKLAND			☐ THICKET
		☐ BEACH / BAR			☐ SAVANNAH
		☐ SAND DUNE			☐ WOODLAND
		☐ BLUFF			☐ FOREST
					☐ PLANTATION

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	4	
2	SUB-CANOPY	1	1	
3	UNDERSTOREY	5	3	
4	GRD. LAYER	6-7	3	

T CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m
VR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤80% 4=CVR>80%

TAND COMPOSITION:

TAND COMPOSITION:										BA:	
SIZE CLASS ANALYSIS:		☐ <u>0</u>	<10	☐ <u>A</u>	10 - 24	☐ <u>N</u>	25 - 50	☐ <u>N</u>	>50		
TANDING SNAGS:		☐ <u>N</u>	<10	☐ <u>N</u>	10 - 24	☐ <u>N</u>	25 - 50	☐ <u>N</u>	>50		
EADFALL/LOGS:		☐ <u>0</u>	<10	☐ <u>N</u>	10 - 24	☐ <u>N</u>	25 - 50	☐ <u>N</u>	>50		
BUNDANCE CODES:		N=NONE R=RARE O=OCCASIONAL A=ABUNDANT									
OMM. AGE:		☐ <u> </u>	PIONEER	☒ <u> </u>	YOUNG	☐ <u> </u>	MID-AGE	☐ <u> </u>	MATURE	☐ <u> </u>	OLD GROWTH

OIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g=	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	N/A	(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
COSITE:		CODE:
VEGETATION TYPE: <i>Hedge row</i>		CODE: <i>HR 1</i>
INCLUSION		CODE:
COMPLEX		CODE:
Evidence of Disturbance / Notes:		

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE:
	POLYGON:
	DATE: SE 94, Tile 60 & 61, Poly 1-2
	SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

[illegible]

Page ____ of 5

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒.

Signature:

(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Field Personnel: N. Leava

T. Storm

REV. 2011 07 19

ELC SITE: POLYGON: COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): DATE: T UTME: START: END: UTMZ: UTMN:

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

TAND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE

TAND COMPOSITION: SIZE CLASS ANALYSIS: TANDING SNAGS: DEADFALL LOGS: ABUNDANCE CODES: COMM. AGE: OIL ANALYSIS:

COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: COSITE: VEGETATION TYPE: INCLUSION: COMPLEX: Evidence of Disturbance / Notes:

ELC SITE: POLYGON: COMMUNITY DESCRIPTION & CLASSIFICATION DATE: SE 94; Tlk 60 & 61; Poly 1-3 SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

Page 1 of 1 Signature: [Signature] (Field Personnel)

Quality Control: This form is complete & legible. Signature: [Signature] (Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 8, 2012

Field Personnel: N Leava

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25°</u>	<u>0-2</u>	<u>50%</u>	<u>Ø</u>	<u>T. Storms</u>

ELC Polygon: # 1-3 Assessment Type: ☐ Visual; roadside, no access / ☒ Physical; walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐ Y* / ☒ N / ☐ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC SITE: POLYGON: SURVEYOR(S): DATE: UTM: COMMUNITY DESCRIPTION & CLASSIFICATION START: END: UTMZ: UTMN:

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

TAND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE

TAND COMPOSITION: SIZE CLASS ANALYSIS: TANDING SNAGS: DEADFALL/LOGS: ABUNDANCE CODES: COMM. AGE: OIL ANALYSIS:

COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: COSITE: VEGETATION TYPE: INCLUSION: COMPLEX:

Evidence of Disturbance / Notes: Low areas w pooling deeper than 1m -> covered by vegetation ~80% * "Canopy cover" is surrounding shallow aquatic system

ELC SITE: POLYGON: DATE: SE94, T16 60; Poly 1-4 SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

Page ___ of ___ Signature: [Signature] (Field Personnel) Quality Control: This form is complete & legible. Signature: [Signature] (Project Manager)



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Woodland & Wildlife Habitat Assessment Form

Project Number: 160980269

Project Name: NRWC

Date: June 8, 2012

Field Personnel: N Leava

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25°</u>	<u>0-2</u>	<u>50%</u>	<u>Ø</u>	<u>T. Storms</u>

ELC Polygon: # 1-4 Assessment Type: ☐ Visual; roadside, no access / ☒ Physical; walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools? — could not walk entire perimeter of site
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

GRTR } AUD/VO.
GRFR }
WOFR }

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC SITE: POLYGON: COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): DATE: UTM: START: END: UTMZ: UTMN:

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

STAND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE

STAND COMPOSITION: BA: SIZE CLASS ANALYSIS: TANDING SNAGS: DEADFALL/LOGS: BUNDANCE CODES: COMM. AGE: OIL ANALYSIS:

EXTURE: MOISTURE: HOMOGENEOUS / VARIABLE: COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: COSITE: VEGETATION TYPE: INCLUSION: COMPLEX:

vidence of Disturbance / Notes: complex community of various areas of pooling / vernal pools / on throughout this community is dry, with portions upland

ELC SITE: POLYGON: COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): DATE: SE 94; Tile 60; Poly 1-5

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT SPECIES CODE LAYER COLL.

Page of Signature: (Field Personnel) Quality Control: This form is complete & legible. Signature: (Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 8, 2012

Field Personnel: N. Leava

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25°</u>	<u>0-2</u>	<u>50%</u>	<u>0</u>	<u>T. Storms</u>

ELC Polygon: # _____ Assessment Type: ☐ Visual; roadside, no access / ☒ Physical; walk through feature

Extent of Physical Investigation of Feature: ☒ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities
<u>17T 061923B</u> <u>4767822</u>	<u>1</u>	<u>ALCASA</u>	<u>80</u>	<u>71-72</u>	<u>1</u>	<u>>3</u>	<u>5-20m</u>

Stick Nests: Contains large stick nests?
☐ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐ Y* / ☐ N / ☐ Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED							
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?	
<u>17T 0619190, 476781</u>	<u>1 > Vernal Pool</u>	<u>40m x 20m</u>	<u>21m</u>	<u>73</u>	<u>YES</u>	<u>YES</u>	
<u>17T 0619215, 47679, 2</u>	<u>2 > POND</u>	<u>100m x 15m</u>	<u>>1m</u>	<u>74</u>	<u>YES</u>	<u>YES</u>	

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; EY=eggs/nest; HQ=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC SITE: 94 POLYGON: SURVEYOR(S): DATE: UTME: COMMUNITY DESCRIPTION & CLASSIFICATION START: NA END: UTMZ: UTMN:

POLYGON DESCRIPTION

SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

STAND DESCRIPTION:

LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE

IT CODES: 1=25m 2=10<HT<25m 3=2<HT<10m 4=1<HT<2m 5=0.5<HT<1m 6=0.2<HT<0.5m 7=HT<0.2m

STAND COMPOSITION: BA:

SIZE CLASS ANALYSIS: A <10 A 10-24 O 25-50 R >50

STANDING SNAGS: R <10 O 10-24 R 25-50 N >50

HEADFALL/LOGS: O <10 O 10-24 O 25-50 R >50

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

COMM. AGE: PIONEER YOUNG MID-AGE MATURE OLD GROWTH

SOIL ANALYSIS: TEXTURE: clay-loam DEPTH TO MOTTLES/GLEY: NA G= 20

COMMUNITY CLASSIFICATION: COMMUNITY CLASS: CODE: COMMUNITY SERIES: CODE: COSITE: CODE: VEGETATION TYPE: Green Ash Min. Dec Swamp SWD2-2a

Evidence of Disturbance / Notes:

Community surrounds MAS community - various pockets of Saturated soil; Surrounded by upland communities on East Side.

ELC SITE: POLYGON: DATE: SE94; Tile 60; Poly 1-6 SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

SPECIES CODE LAYER COLL SPECIES CODE LAYER COLL

Page ___ of ___

Signature: [Signature] (Field Personnel)

Quality Control: This form is complete & legible.

Signature: [Signature] (Project Manager)



Stantec Consulting Ltd.
1 - 70 Southgate Drive
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Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 8

Field Personnel: N. Leava

Weather Conditions:	TEMP (°C): <u>25°</u>	WIND: <u>0-2</u>	CLOUD: <u>50%</u>	PPT: <u>Ø</u>	PPT (in last 24 hrs): <u>T Storm</u>
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ELC Polygon: # 1-b Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools? - full walk through difficult due to SAM community
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

GRFR-VO

ELC SITE: POLYGON:
COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): DATE: UTME:
START: END: UTMZ: UTMN:

POLYGON DESCRIPTION
SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY
TERRESTRIAL ORGANIC LACUSTRINE NATURAL PLANKTON LAKE
WETLAND MINERAL SOIL RIVERINE SUBMERGED POND
AQUATIC PARENT MIN. BOTTOMLAND CULTURAL FLOATING-LVD. RIVER
TERRACE STREAM
VALLEY SLOPE MARSH
TABLELAND SWAMP
ACIDIC BEDRK. ROLL UPLAND FEN
CLIFF BOG
TALUS BARREN
CREVICE / CAVE MEADOW
ALVAR PRAIRIE
ROCKLAND THICKET
BEACH / BAR SAVANNAH
SAND DUNE WOODLAND
BLUFF FOREST
PLANTATION

STAND DESCRIPTION:
LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE
1 CANOPY
2 SUB-CANOPY
3 UNDERSTOREY
4 GRD. LAYER 57 3 Variable (roadside)
IT CODES: 1=>25m 2=10<HT<25m 3=2<HT<10m 4=1<HT<2m 5=0.5<HT<1m 6=0.2<HT<0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR<10% 2=10<CVR<25% 3=25<CVR<60% 4=CVR>60%

STAND COMPOSITION: BA:
SIZE CLASS ANALYSIS: N <10 N 10-24 N 25-50 N >50
STANDING SNAGS: N <10 N 10-24 N 25-50 N >50
HEADFALL LOGS: N <10 N 10-24 N 25-50 N >50
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT
DOMM. AGE: PIONEER YOUNG MID-AGE MATURE OLD GROWTH

OIL ANALYSIS:
TEXTURE: DEPTH TO MOTTLES/GLEY G=
MOISTURE: DEPTH OF ORGANICS: NA (cm)
HOMOGENEOUS / VARIABLE DEPTH TO BEDROCK: (cm)

COMMUNITY CLASSIFICATION:
COMMUNITY CLASS: CODE:
COMMUNITY SERIES: CODE:
COSITE: CODE:
VEGETATION TYPE: CODE:
INCLUSION CODE:
COMPLEX CODE:

Evidence of Disturbance / Notes:
- due to large areas of pooling water, species (veg) list taken from edge of SWDD-2
- Could not get soil core due to large areas of deep water ~1-2m.

ELC SITE: POLYGON:
COMMUNITY DESCRIPTION & CLASSIFICATION DATE: SE 94; Tile 60 & 61; Poly 1-7 SURVEYOR(S):

Table with 2 main sections for species recording. Each section has columns for Species Code, Layer (1-4), and Coll. The first section contains handwritten entries: Sedge sp, Blue Ins, Grasses, Sens. fern.

Page ___ of ___
Signature: Nataheara (Field Personnel)
Quality Control: This form is complete & legible.
Signature: (Project Manager)



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1 - 70 Southgate Drive
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Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 8

Field Personnel: N. Leava

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25</u>	<u>0-2</u>	<u>50%</u>	<u>0</u>	<u>T. Storms</u>

ELC Polygon: # 1-7 Assessment Type: ☒ Visual; roadside, no access / ☐ Physical; walk through feature

Extent of Physical Investigation of Feature: ☐ Entire / ☐ Partial, walk through polygon (indicate on map)

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests:

Contains large stick nests?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Suh/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

GRFR 3 VO
GRTR 3 VO

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC SITE: SE94 SURVEYOR(S): NA DATE: June POLYGON: UTMZ: UTMN: COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

TAND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE

TAND COMPOSITION: SIZE CLASS ANALYSIS: TANDING SNAGS: DEADFALL LOGS: ABUNDANCE CODES: COMM. AGE: OIL ANALYSIS:

COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: COSITE: VEGETATION TYPE: INCLUSION: COMPLEX: Evidence of Disturbance / Notes:

ELC SITE: SE94, Tile 61; Poly 2-1 SURVEYOR(S): COMMUNITY DESCRIPTION & CLASSIFICATION

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT SPECIES CODE LAYER COLL.

Page 1 of 1 Signature: [Signature] Quality Control: This form is complete [] & legible [] Signature: [Signature]

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
1 TERRESTRIAL	☐ ORGANIC	☐ LAOUSTRINE	☐ NATURAL	☐ PLANTTON	☐ LAKE
1 WETLAND	☒ MINERAL SOIL	☐ RIVERINE	☐ CULTURAL	☐ SUBMERGED	☐ POND
1 AQUATIC	☐ PARENT MIN.	☐ BOTTOMLAND		☐ FLOATING-LVD.	☐ RIVER
	☐ ACIDIC BEDRK.	☐ TERRACE		☐ GRAMINOID	☐ STREAM
	☐ BASIC BEDRK.	☐ VALLEY SLOPE		☐ FORB	☐ MARSH
		☐ TABLELAND		☐ FORB	☐ SWAMP
		☐ ROLL UPLAND		☐ LICHEN	☐ FEN
		☐ CLIFF		☐ BRYOPHYTE	☐ BOG
		☐ TALUS		☐ DECIDUOUS	☐ MEADOW
		☐ CREVICE / CAVE		☐ CONIFEROUS	☐ PRAIRIE
1 OPEN WATER	☐ CARB. BEDRK.	☐ ALVAR	☐ COVER		☐ THICKET
1 SHALLOW		☐ ROCKLAND	☐ OPEN		☐ SAVANNAH
1 WATER		☐ BEACH / BAR	☐ SHRUB		☐ WOOLAND
1 SURFICIAL DEP.		☐ SAND DUNE	☐ TREED		☐ FOREST
1 BEDROCK		☐ BLUFF			☐ PLANTATION

[illegible][illegible]

ELC SITE: SE94 POLYGON: 2-3 SURVEYOR(S): NAL DATE: JUNE 8/12 UTME: START: END: UTMZ: UTMN:

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

TAND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE

TAND COMPOSITION: SIZE CLASS ANALYSIS: TANDING SNAGS: EADFALL/LOGS: ABUNDANCE CODES: COMM. AGE: OIL ANALYSIS:

COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: COSITE: VEGETATION TYPE: INCLUSION: COMPLEX:

idence of Disturbance / Notes: FRAGMENTED due to edged along 2 ag fields - canopy cover ~70%, species mixture variable - transitioning between FDD 3-1 & FDD 1-1

ELC SITE: SE94; Tile 61; Poly 2-3 SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT SPECIES CODE LAYER COLL

Page 1 of 1 Signature: [Signature] Quality Control: This form is complete & legible [X] (Field Personnel) (Project Manager)

ELC SITE: SE94 POLYGON: SURVEYOR(S): NAL DATE: UTMZ: UTMN: COMMUNITY DESCRIPTION & CLASSIFICATION START: END:

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

TAND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE

TAND COMPOSITION: BA: SIZE CLASS ANALYSIS: TANDING SNAGS: DEADFALL LOGS: ABUNDANCE CODES: COMM. AGE: OIL ANALYSIS:

COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: COSITE: VEGETATION TYPE: DRY Fresh Red Oak Deciduous Forest FDD1-1

ELC SITE: SE94; Tile 61; Poly 2-4 POLYGON: SURVEYOR(S): DATE: COMMUNITY DESCRIPTION & CLASSIFICATION

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

Page 1 of 1 Signature: [Signature] (Field Personnel) Quality Control: This form is complete & legible. Signature: [Signature] (Project Manager)



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1 - 70 Southgate Drive
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Canada N1G 4P5
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Stanter

Woodland & Wildlife Habitat Assessment Form

Project Number: _____

Project Name: _____

Date: _____

Field Personnel: _____

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
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ELC Polygon: # _____ Assessment Type: ☐-Visual; roadside, no access / ☐-Physical; walk through feature

Extent of Physical Investigation of Feature: ☐-Entire / ☐-Partial, walk through polygon (*indicate on map*)

Reptile / Bat Hibernacula Features: Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☐-Unknown, no access (**if yes, describe in table below*)
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☐-Unknown, no access (**if yes, describe in table below*)
[i.e. karst topography, abandoned mines or caves]

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features: Contains potential bat roosting features?
☐-Y* / ☐-N / ☐-Unknown, no access (**if yes, describe in table below*)
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED							
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Decay Class (1-5)	No. of Cavities	Height and Type of Cavities

Stick Nests: Contains large stick nests?
☐-Y* / ☐-N / ☐-Unknown, no access (**if yes, describe in table below*)

STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☐-Unknown, no access (**if yes, describe in table below*)

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
17T 069 208, 476 998	Vernal	40 x 40m	Ø	81	NONE	YES

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC SITE: SE94 POLYGON: 2-5 SURVEYOR(S): NAL DATE: JUNE 8 UTME: START: END: UTMZ: UTMN:

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

TAND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE

TAND COMPOSITION: ZE CLASS ANALYSIS: TANDING SNAGS: EADFALL/LOGS: UNDANCE CODES: MM. AGE: OIL ANALYSIS:

COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: OSITE: GETATION TYPE: INCLUSION: COMPLEX:

idence of Disturbance / Notes: Community Assessed from Ag field due to deep water, restricting access into community - Shrub along edge of corn.

ELC SITE: POLYGON: DATE: SE94; Tile 61; Poly 2-5 SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

Page of Signature: (Field Personnel) Signature: (Project Manager)

ELC SITE: SE94 POLYGON: 2-6
COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): NAL DATE: JUNE 8/12
START: END: UTMZ: UTMN:

POLYGON DESCRIPTION
SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY
TERRESTRIAL ORGANIC LACUSTRINE NATURAL PLANKTON LAKE
WETLAND MINERAL SOIL RIVERINE CULTURAL SUBMERGED POND
AQUATIC PARENT MIN. TERRACE FLOATING-LVD. RIVER
ACIDIC BEDRK. VALLEY SLOPE GRAMINOID STREAM
TABLELAND FORB MARSH
ROLL UPLAND LICHEN SWAMP
CLIFF BRYOPHYTE FEN
TALUS DECIDUOUS BOG
CREVICE / CAVE CONIFEROUS BARREN
ALVAR MIXED MEADOW
CARB. BEDRK. OPEN PRAIRIE
SHRUB THICKET
TREED SAVANNAH
WOODLAND
FOREST
PLANTATION

TAND DESCRIPTION:
LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE
CANOPY / /
SUB-CANOPY / /
UNDERSTOREY 4-5 4 Timothy
GRD. LAYER 6-7 2 Variable
T CODES: 1=25m 2=10<HT<25m 3=2<HT<10m 4=1<HT<2m 5=0.5<HT<1m 6=0.2<HT<0.5m 7=HT<0.2m
VR CODES: 0=NONE 1=0%<CVR<10% 2=10<CVR<25% 3=25<CVR<60% 4=CVR>60%

TAND COMPOSITION: BA:
SIZE CLASS ANALYSIS: M <10 N 10-24 N 25-50 N >50
STANDING SNAGS: M <10 N 10-24 N 25-50 N >50
DEADFALL/LOGS: M <10 N 10-24 N 25-50 N >50
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT
COMM. AGE: PIONEER YOUNG MID-AGE MATURE OLD GROWTH

OIL ANALYSIS:
TEXTURE: DEPTH TO MOTTLES/GLEY g= G=
MOISTURE: DEPTH OF ORGANICS: (cm)
HOMOGENEOUS / VARIABLE DEPTH TO BEDROCK: (cm)
COMMUNITY CLASSIFICATION:
COMMUNITY CLASS: CODE:
COMMUNITY SERIES: CODE:
COSITE: CODE:
VEGETATION TYPE: CODE:
Dry-Moist old field Meadow Type. CUM-1
INCLUSION CODE:
COMPLEX CODE:

Evidence of Disturbance / Notes:
Small MAMJ-2 packets throughout community

ELC SITE: SE94 POLYGON: 2-6
COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): NAL DATE: JUNE 8/12
START: END: UTMZ: UTMN:

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT
SPECIES CODE LAYER COLL
Timothy D D
Orchardgrass O
Seed canopy O
Clover O
15-FT Tet O
Oxeye Daisy O

Page 1 of 1
Signature: [Signature] (Field Personnel)

Quality Control: This form is complete & legible.
Signature: [Signature] (Project Manager)

ELC SITE: SE94 POLYGON: SURVEYOR(S): DATE: UTME: COMMUNITY DESCRIPTION & CLASSIFICATION START: END: UTMZ: UTMN:

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

TAND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE

TAND COMPOSITION: SIZE CLASS ANALYSIS: TANDING SNAGS: DEADFALL LOGS: ABUNDANCE CODES: COMM. AGE: OIL ANALYSIS:

COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: COSITE: VEGETATION TYPE: Hedgerow. INCLUSION CODE: COMPLEX CODE:

idence of Disturbance / Notes: Community surrounds property borders; mixed in w Dogwood thickets throughout

ELC SITE: SE94; Tile 61; Poly 2-7 POLYGON: SURVEYOR(S): DATE: COMMUNITY DESCRIPTION & CLASSIFICATION

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT SPECIES CODE LAYER COLL

Page 1 of 1 Signature: Natchez (Field Personnel)

Quality Control: This form is complete & legible. Signature: (Project Manager)

Small swamp pocket adj. to road, along HTR

Quality Control: This form is complete ☐ & legible ☐.

Signature: *[Signature]*
(Project Manager)

ELC SITE: S 94 POLYGON: 9
COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): NAL DATE: JUNE 8/12
START: END: UTMZ: UTMN:

POLYGON DESCRIPTION
SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY
TERRESTRIAL ORGANIC LACUSTRINE NATURAL PLANKTON LAKE
WETLAND MINERAL SOIL RIVERINE SUBMERGED POND
AQUATIC PARENT MIN. BOTTOMLAND CULTURAL FLOATING-LVD. RIVER
ACIDIC BEDRK. TERRACE GRAMINOID STREAM
ROLL UPLAND MARSH SWAMP
CLIFF BRYOPHYTE FEN
DECIDUOUS BOG
CONIFEROUS BARREN
MIXED MEADOW
PRAIRIE
THICKET
SAVANNAH
WOODLAND
FOREST
PLANTATION

TAND DESCRIPTION:
LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE
CANOPY 2 1 COMMUNILIA > IRIS = reed canopy = sedge
SUB-CANOPY 1 1
UNDERSTOREY 1 1
GRD. LAYER 5-7 4
T CODES: 1=25m 2=10<HT<25m 3=2<HT<10m 4=1<HT<2m 5=0.5<HT<1m 6=0.2<HT<0.5m 7=HT<0.2m
VR CODES: 0=NONE 1=0%<CVR<10% 2=10<CVR<25% 3=25<CVR<50% 4=CVR>50%

TAND COMPOSITION:
BA:
SIZE CLASS ANALYSIS: R <10 R 10-24 M 25-50 M >50
STANDING SNAGS: M <10 M 10-24 M 25-50 M >50
DEADFALL/LOGS: M <10 M 10-24 M 25-50 M >50
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT
DOMM. AGE: PIONEER YOUNG MID-AGE MATURE OLD GROWTH

SOIL ANALYSIS:
TEXTURE: DEPTH TO MOTTLES/GLEY G= G=
MOISTURE: DEPTH OF ORGANICS: (cm)
HOMOGENEOUS / VARIABLE DEPTH TO BEDROCK: (cm)
COMMUNITY CLASSIFICATION:
COMMUNITY CLASS: CODE:
COMMUNITY SERIES: CODE:
COSITE: CODE:
VEGETATION TYPE: Forb min. shall marsh CODE: MAS 2-9(b)
INCLUSION CODE:
COMPLEX CODE:

Evidence of Disturbance / Notes:
Disturbed community situated on old abandoned road - frogs utilizing habitat - open pockets of water - culturally influenced

ELC SITE: SE 94; Tile 61; Poly 2-9
COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT
SPECIES CODE LAYER COLL
C. amomile 2 A
Y. flourens 0
Reed canopy 0
PRICK. LETTUCE R
Sedge sp. 0
TYPHA sp. R-0
SALIX sp.
DOGWOOD

Page 1 of 1
Signature: Natahoana (Field Personnel)
Signature: (Project Manager)
Quality Control: This form is complete & legible.

ELC SITE: SE94 POLYGON: 2-10
COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): NAL DATE: JUNE 8/2 UTMZ: UTMN:

POLYGON DESCRIPTION
SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY
TERRESTRIAL ORGANIC LACUSTRINE NATURAL PLANKTON LAKE
WETLAND MINERAL SOIL RIVERINE CULTURAL SUBMERGED POND
AQUATIC PARENT MIN. TERRACE FLOATING-LVD. RIVER
ACIDIC BEDRK. VALLEY SLOPE GRAMINOID STREAM
BASIC BEDRK. TABLELAND FORB MARSH
CARB. BEDRK. ROLL UPLAND SWAMP
CLIFF CREVICE / CAVE FEN
ALVAR ROCKLAND BOG
SHALLOW WATER BEACH / BAR BARREN
SURFICIAL DEP. SAND DUNE MEADOW
BEDROCK BLUFF TREED PRAIRIE
THICKET
SAVANNAH
WOODLAND
FOREST
PLANTATION

TAND DESCRIPTION:
LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE
CANOPY / /
SUB-CANOPY / /
UNDERSTOREY 3-4 4 DOGWOODS = W. PINE
GRD. LAYER / /
CODES: 1=>25m 2=10<HT<25m 3=2<HT<10m 4=1<HT<2m 5=0.5<HT<1m 6=0.2<HT<0.5m 7=HT<0.2m
CVR CODES: 0=NONE 1=0%<CVR<10% 2=10<CVR<25% 3=25<CVR<50% 4=CVR>50%

TAND COMPOSITION:
BA:
ZE CLASS ANALYSIS: D <10 R 10-24 N 25-50 N >50
STANDING SNAGS: N <10 N 10-24 N 25-50 N >50
EADFALL LOGS: N <10 N 10-24 N 25-50 N >50
UNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT
MM. AGE: PIONEER YOUNG MID-AGE MATURE OLD GROWTH

IL ANALYSIS:
XTURE: DEPTH TO MOTTLES/GLEY g= G=
ISTURE: DEPTH OF ORGANICS: (cm)
MOGENEOUS / VARIABLE DEPTH TO BEDROCK: (cm)

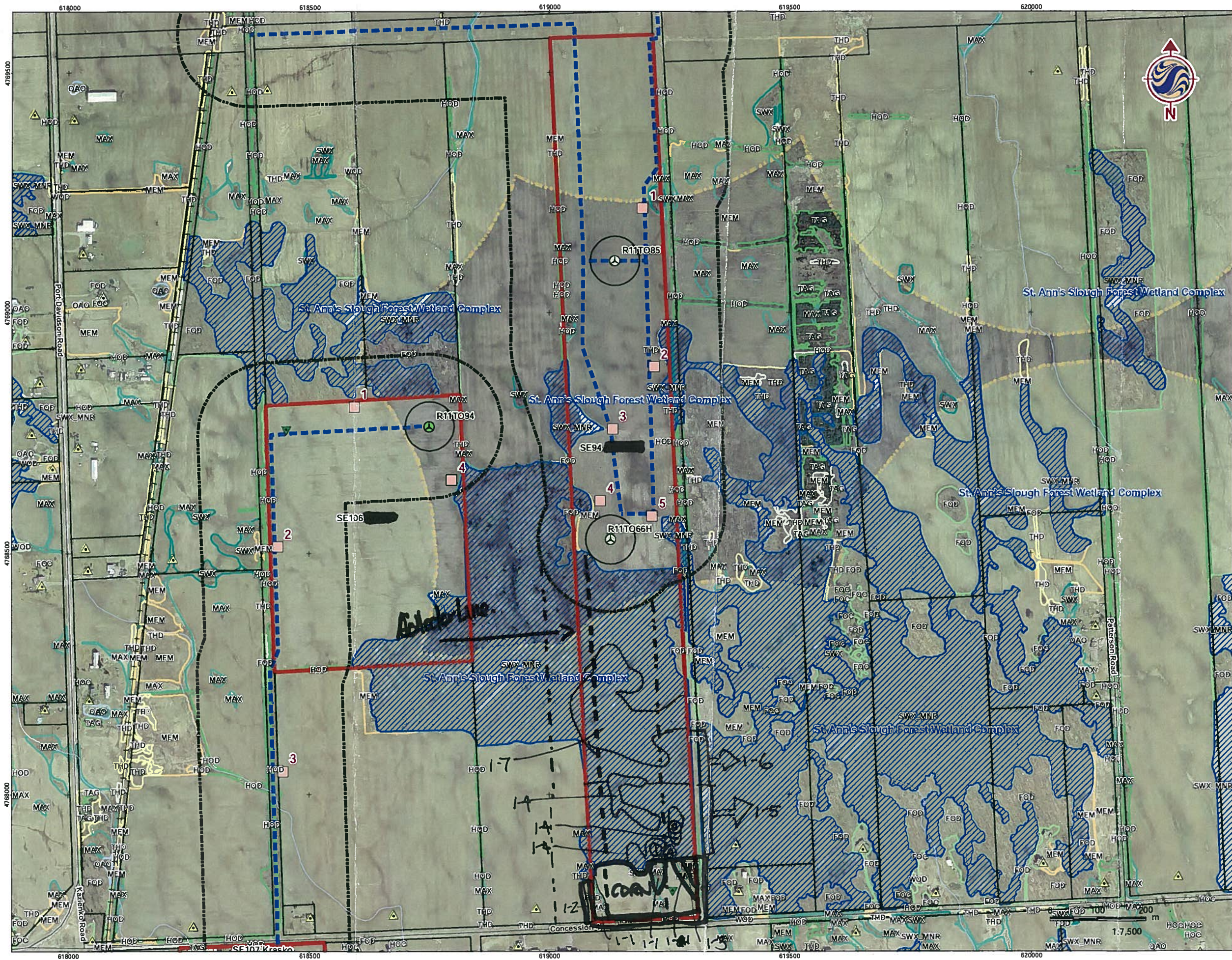
COMMUNITY CLASSIFICATION:
COMMUNITY CLASS: CODE:
COMMUNITY SERIES: CODE:
OSITE: CODE:
GETATION TYPE: DOGWOOD-W. PINE CULTURAL THICKET CODE: CUT 1-7+
INCLUSION CODE:
COMPLEX CODE:
vidence of Disturbance / Notes:

ELC SITE: POLYGON:
COMMUNITY DESCRIPTION & CLASSIFICATION DATE: SE94; Tile 61; Poly 2-10 SURVEYOR(S):

Table with 2 main columns: SPECIES CODE and LAYER. Includes sub-columns for LAYER (1, 2, 3, 4) and COLL. Rows include DOGWOODSP and PINE.

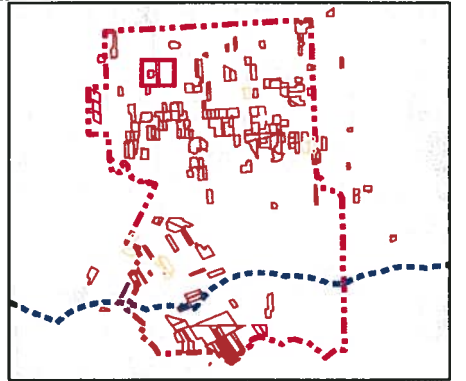
Page ___ of ___
Signature: [Signature] (Field Personnel)
Quality Control: This form is complete & legible.
Signature: [Signature] (Project Manager)

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Revised: 2012-05-03 by bcowper



Legend

- Turbines in Signed Lands
 - Standard Turbine (105 dBA)
 - Potential Turbine Locations
- Turbines in Unsigned Lands
 - Standard Turbine (105 dBA)
 - 51 m Turbine Setback
 - Non-Participating Receptor
 - Participating Receptor
- Proposed Collector Cable
- Potential Access Road
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Sound Level Contours (40 dBA)
- Non-Participating Receptors 550m Setback
- Amphibian Breeding Stations
- Turbine and Access Road 150m buffer



Notes

- Coordinate System: NAD 1983 UTM Zone 17N).
- Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.



Stantec

May 2012
16095269

Client/Project

Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.

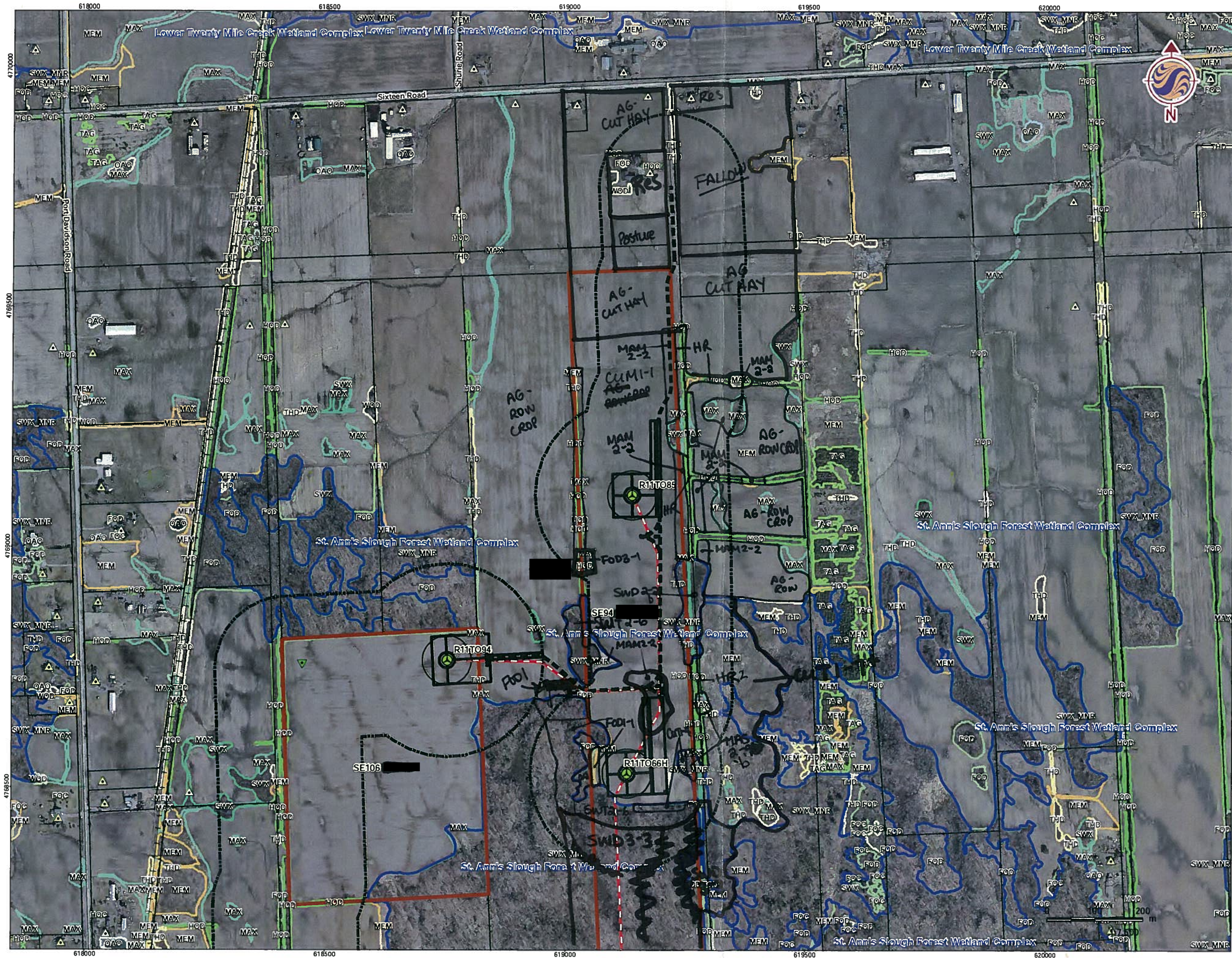
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Title

Property with Turbine
SE94

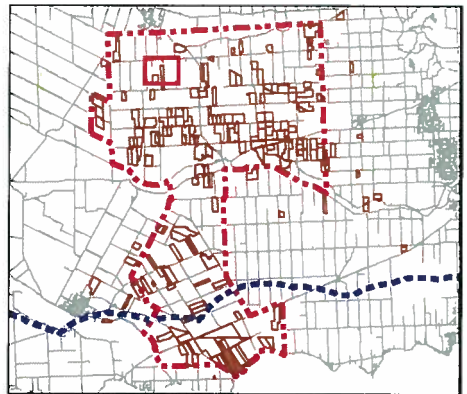
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Revised: 2012-06-27 By: bowper



Legend

- Turbines in Signed Lands
 - Standard Turbine (105 dBA)
 - Potential Turbine Locations
- Turbines in Unsigned Lands
 - Standard Turbine (105 dBA)
 - 51 m Turbine Setback
- Non-Participating Receptor
- Participating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



Notes

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Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
62

Title
Property with Turbine
SE94