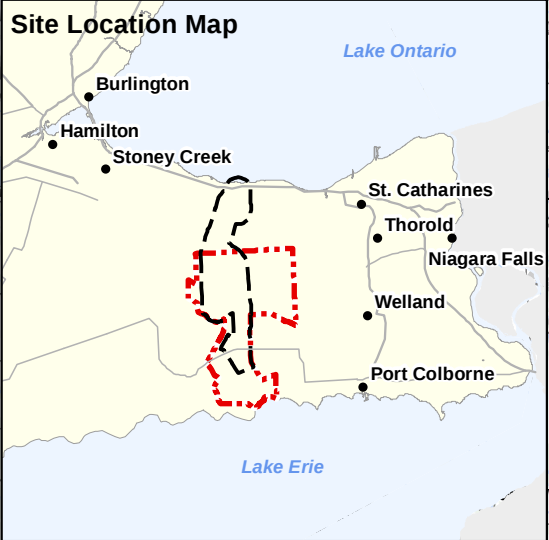
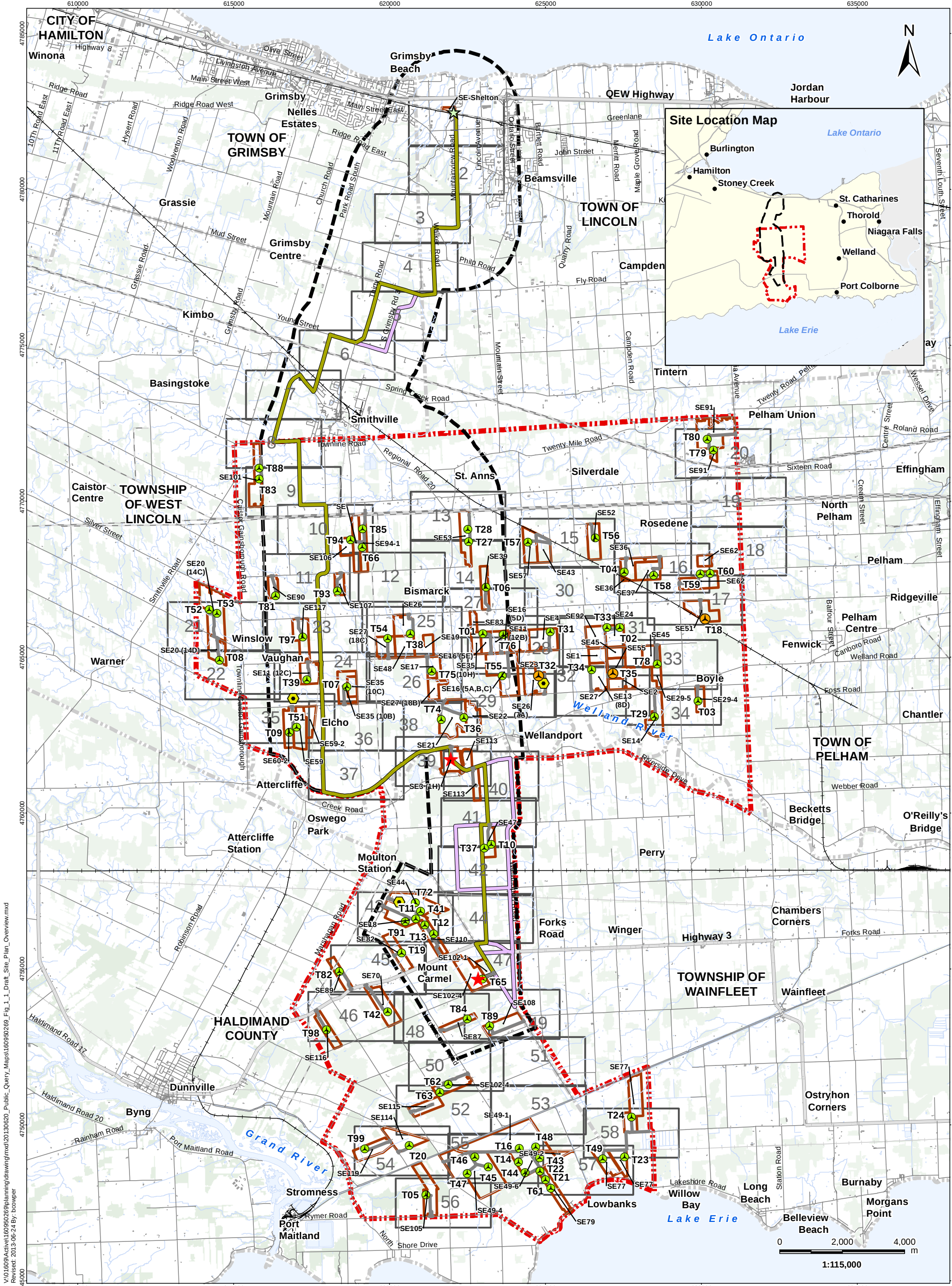




V:\01609\Active\160950269\planning\drawing\mxd\20130620_Public_Query_Maps\160950269_Fig_1_1_Draft_Site_Plan_Overview.mxd
Revised: 2013-06-24 By: bwwgwr



Legend

- Project Study Area
- Interconnector Study Area
- Proposed Turbine Location
- Turbine Relocated
- Potential Access Road
- Transformer Substation
- Tap-in Location
- Existing Met Tower
- Preferred Transmission Line Route
- Alternate Transmission Route
- Road
- Expressway / Highway
- Active Railway
- Abandoned Railway
- Existing Structures
- Existing Transmission Line
- Watercourse
- Waterbody
- Wooded Area
- Municipality Lower Tier

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, 2012.

Client/Project
Niagara Region Wind Corporation
Niagara Region Wind Farm

Figure No.

1

Title

**Draft Site
Plan Overview
Revised**

June 2013
160950269



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Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160950269

Project Name: NRWC

Date: June 6, 2012

Field Personnel: N. Leana

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25</u>	<u>0-2</u>	<u>0-75</u>	<u>Ø</u>	<u>Ø</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?

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

- RTHA (OB)
 - KILL
 - Gull sp.

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 SITE: SE SURVEYOR(S): NA DATE: June 6 / 12 UTMZ: UTMN: COMMUNITY DESCRIPTION & CLASSIFICATION START: END:

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY TERRESTRIAL WETLAND AQUATIC SITE OPEN WATER SHALLOW WATER SURFICIAL DEP. BEDROCK

TAND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE CANOPY SUB-CANOPY UNDERSTOREY GRD. LAYER 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>60%

TAND COMPOSITION: BA: SIZE CLASS ANALYSIS: STANDING SNAGS: DEADFALL/LOGS: 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 DISTURE: DEPTH OF ORGANICS: HOMOGENEOUS / VARIABLE DEPTH TO BEDROCK: COMMUNITY CLASSIFICATION: COMMUNITY CLASS: CODE: COMMUNITY SERIES: CODE: COSITE: CODE: VEGETATION TYPE: D-E old field meadow type CODE: CUMI-1 INCLUSION CODE: COMPLEX CODE: Evidence of Disturbance / Notes:

ELC SITE: POLYGON: DATE: SE 101; Tile 4; Poly 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

SPECIES CODE	LAYER				COLL.	SPECIES CODE	LAYER				COLL.
	1	2	3	4			1	2	3	4	
BROILER				A							
TERSE				O							
DAISY				O							
FOXTAIL				O							
ASTOR SP				A							
HAWTH ORN			R								
POASP				O							
ORCHARD GRASS				A							
REED CANARY				A							

Page ___ of ___ 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
Date: June 6, 2012

Project Name: NRWC
Field Personnel: N. Leva

Weather Conditions:	TEMP (°C): <u>25</u>	WIND: <u>0-2</u>	CLOUD: <u>0-75</u>	PPT: <u>0</u>	PPT (in last 24 hrs): <u>0</u>
---------------------	-------------------------	---------------------	-----------------------	------------------	-----------------------------------

ELC Polygon: # 2 Assessment Type: ☒ Visual; roadside, no access / ☐ Physical; walk through feature - on residential property
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 SITE: S D POLYGON: SURVEYOR(S): DATE: 7 6/12 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: INCLUSION COMPLEX Evidence of Disturbance / Notes:

ELC SITE: POLYGON: DATE: SE101, Tile 4; Poly 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: Nataheana (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 6

Field Personnel:

N. Leana

Weather Conditions:

TEMP (°C):

25

WIND:

0-2

CLOUD:

0-75

PPT:

Ø

PPT (in last 24 hrs):

Ø

ELC Polygon: # 3

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

NO property access

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: S 1 POLYGON: 4
COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): N DATE: UTMZ: UTMN:
START: END:

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 GRAMINOID FORB MARSH
TABLELAND LICHEN SWAMP
ROLL UPLAND BRYOPHYTE FEN
CLIFF DECIDUOUS BOG
BASIC BEDRK. 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
1 CANOPY / / >>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
2 SUB-CANOPY / /
3 UNDERSTOREY 4 4 TYPHANGU > reed canopy > Salix sp.
4 GRD. LAYER 5-7 1 reed canopy > loose pine & milkweed
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%

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
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

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: Cattail min. shallow water MAS 2-1
INCLUSION CODE:
COMPLEX CODE:
Evidence of Disturbance / Notes:

-Small areas of pooling water

ELC SITE: POLYGON:
COMMUNITY DESCRIPTION & CLASSIFICATION DATE: SE 101; Tile 4; Poly 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
SPECIES CODE LAYER COLL. SPECIES CODE LAYER COLL.
TYPHANGU D
SALIX SP A
Reed canopy A A
Milkweed O
Tall pine O

Page 1 of 1
Signature: Natcheara (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:

NRINC

Date:

June 6

Field Personnel:

N. Hara

Weather Conditions:

TEMP (°C):

25

WIND:

0-2

CLOUD:

0-75%

PPT:

0

PPT (in last 24 hrs):

0

ELC Polygon: #

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)

Den observed - entrance facing onto MAS - Den in CUM1-1 community

Pic # 70 UTM 17T 0615730, 4771185

ELC SITE: POLYGON: COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): N DATE: June 12 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: RUNDANCE CODES: COMM. AGE: PIONEER YOUNG MID-AGE MATURE OLD GROWTH

SOIL ANALYSIS: EXTURE: DEPTH TO MOTTLES/GLEY DISTURE: DEPTH OF ORGANICS: HOMOGENEOUS / VARIABLE DEPTH TO BEDROCK: COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: CODE: POSITE: CODE: VEGETATION TYPE: Dogwood mixed al thicket SW CODE: SWT2-13* INCLUSION CODE: COMPLEX CODE:

idence of Disturbance / Notes: Assessed from property lines.

ELC SITE: POLYGON: COMMUNITY DESCRIPTION & CLASSIFICATION DATE: SE101; Tile 4; Poly 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 SPECIES CODE LAYER COLL.

Page ___ of ___ Signature: Nataheara (Field Personnel) Quality Control: This form is complete & legible. Signature: (Project Manager)

**Stantec**

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Fax: (519) 836-2493

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269Project Name: NRWCDate: June 6, 2012Field Personnel: N. Leawa

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25</u>	<u>0-2</u>	<u>0-75%</u>	<u>0</u>	<u>0</u>

ELC Polygon: # 5 Assessment Type: ☒ Visual; roadside, no access / ☐ Physical; 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 SITE: POLYGON: COMMUNITY DESCRIPTION & CLASSIFICATION SURVEYOR(S): DATE: Tu 6 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: STANDING 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 SURVEYOR(S): DATE: SE 01; Tile 4; Poly 6

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) Quality Control: This form is complete & legible.

Assessed from property boundary



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Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 6, 2012

Field Personnel: N. Leava

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	0-2	0-75%	0	0

ELC Polygon: # 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
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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

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

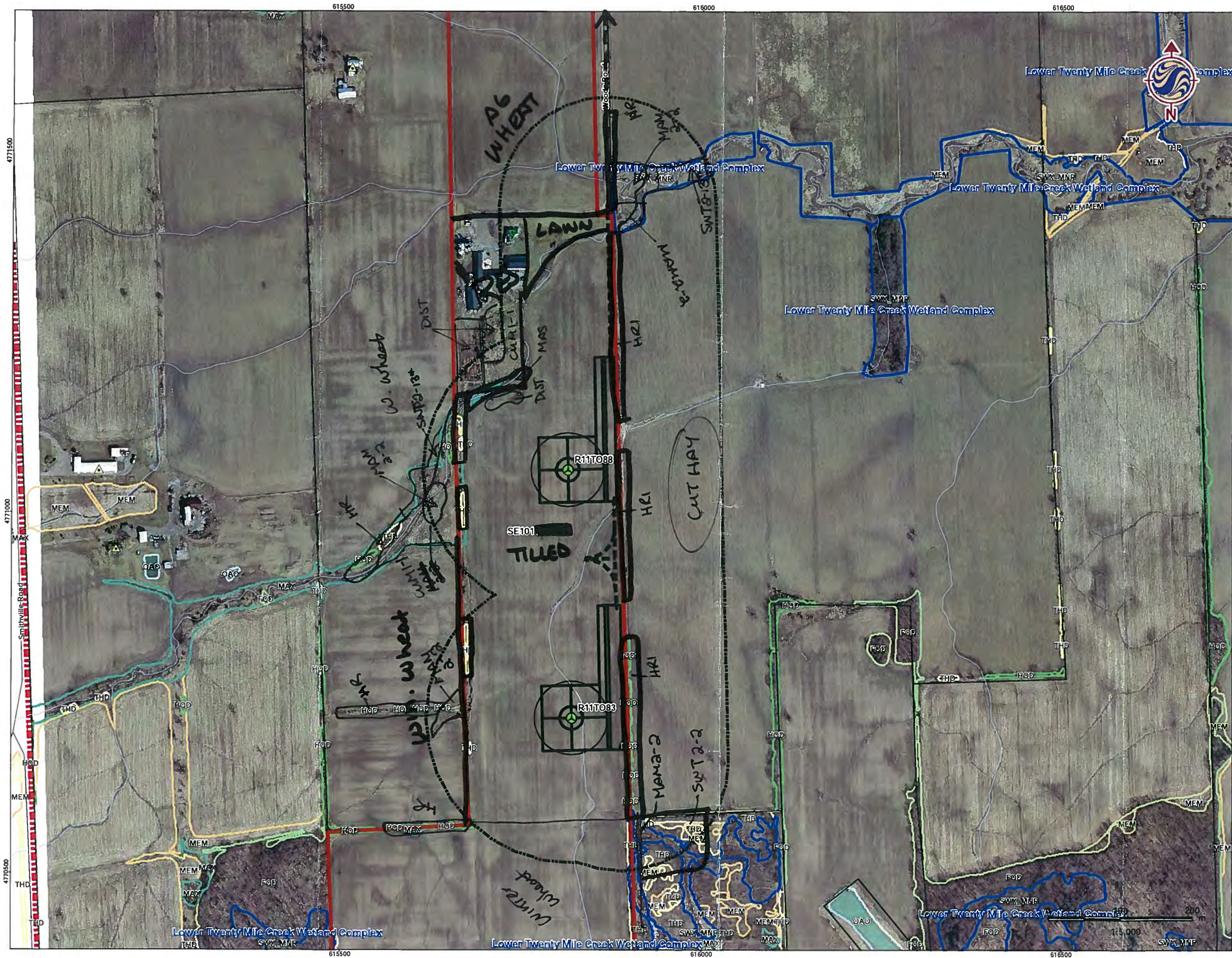
☐-Y* / ☐-N / ☐-Unknown, no access (*if yes, describe in table below)

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?

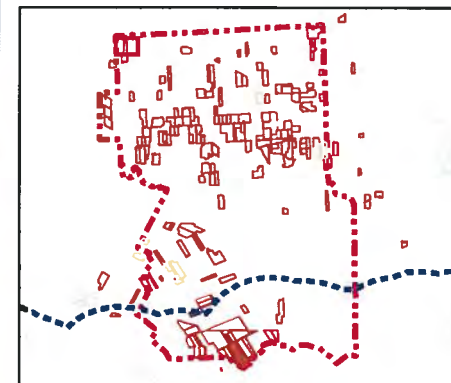
SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)

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



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.



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May, 2012
160950269

Client/Project

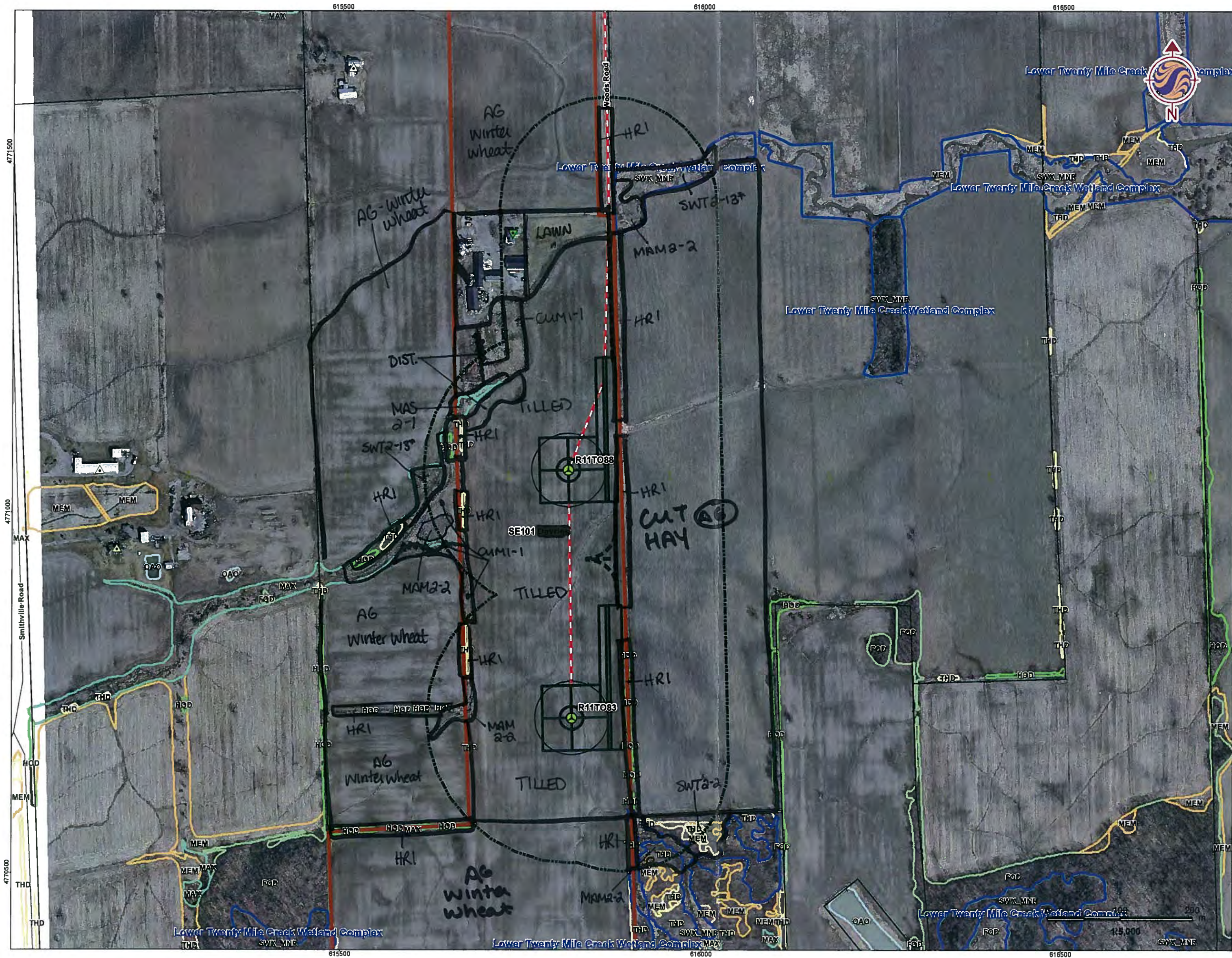
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.

4

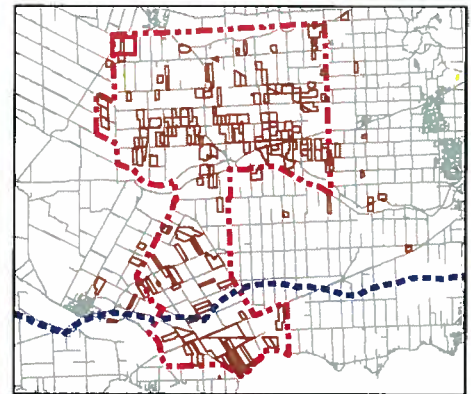
Title

Property with Turbine
SE101



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

- 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

June, 2012
160950269

Client/Project

Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.

1

Title

**Property with Turbine
SE101**

Slightly wider disturbed area beside driveway & roadside ditch

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

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			COVER		
☐ OPEN WATER	☐ CARB. BEDRK.	☐ ALVAR	☒ OPEN		☐ PRAIRIE
☐ SHALLOW WATER		☐ ROCKLAND	☐ SHRUB		☐ THICKET
☒ SURFICIAL DEP.		☐ BEACH / BAR	☐ TREED		☐ SAVANNAH
☐ BEDROCK		☐ SAND DUNE ☐ BLUFF			☐ WOODLAND ☐ FOREST ☐ PLANTATION

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1	2	green ash = trembling aspen
2	SUB-CANOPY			
3	UNDERSTOREY	4	3	staghorn sumac > grey dogwood > raspberry = river
4	GRD. LAYER	5-7	4	goldenrod sp >> reed canary grass > garlic

STAND COMPOSITION: BA:

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

COMM. AGE:	☒ PIONEER	☐ YOUNG	☐ MID-AGE	☐ MATURE	☐ OLD GROWTH
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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: Dry to moist old field meadow		CODE: cum1-1
INCLUSION		CODE:
COMPLEX		CODE:

Polygon is v. small cultural meadow
on either side of drainage ditch where
it meets roadside ditch. - v. disturbed; not habitat ^{water}

[illegible]

Signature: Chas. H. Ross
(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: L Robson

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	27	4	<10%	none	none

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

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

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

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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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: <u>SE102</u>		POLYGON: <u>1</u>	
	SURVEYOR(S): <u>CRobleson</u>		DATE: <u>May 24, 2012</u>	UTME:
	START:	END:	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 ☐ MIXED	☐ BARREN ☐ MEADOW
SITE			COVER		
☐ OPEN WATER	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	☐ OPEN ☐ SHRUB		☐ PRAIRIE ☐ THICKET
☐ SHALLOW WATER		☐ BEACH / BAR ☐ SAND DUNE	☒ TREED		☐ SAVANNAH ☐ 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	1	4	Sugar maple > red oak > Green/white Ash
2	SUB-CANOPY	2	3	Sugar maple > green/white ash > American Elm
3	UNDERSTOREY	3	3	Grey Dogwood > trembling Aspen > holly berry
4	GRD. LAYER			

STAND COMPOSITION: BA: 100%

SIZE CLASS ANALYSIS:

Size Class	Frequency	Relative Frequency	Cumulative Frequency
<10	20	0.2	0.2
10 - 24	0	0.0	0.2
25 - 50	1	0.1	0.3
>50	2	0.2	0.5

DEADFALL/LOGS:	Unknown	<10	10 - 24	25 - 50	>50
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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:
COSITE:	CODE:
VEGETATION TYPE: Dry - Fresh Sugar maple oa deciduous fr	CODE: FUD 5-3

INCLUSION	CODE:
COMPLEX	CODE:

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

[illegible]

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

Signature: *[Signature]*
(Project Manager)



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Woodland & Wildlife
Habitat Assessment Form

Project Number:	SE102		Project Name:	NRWC	
Date:	May 24, 2012		Field Personnel:	L Robson	
Weather Conditions:	TEMP (°C): 27	WIND: 4	CLOUD: 100%	PPT: None	PPT (in last 24 hrs): None

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: SE102		POLYGON: 2	
	SURVEYOR(S): L. Robson		DATE: May 24 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
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	4	Red Maple > Green Ash < Sugar maple > Red
2	SUB-CANOPY	2	2	Red maple > Green Ash > American E
3	UNDERSTOREY	4	3	Spicebush >> Red maple
4	GRD. LAYER	5-7	3	spicebush > jewel weed > garlic musta

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

TEXTURE: <i>fine sand</i>	DEPTH TO MOTTLES/GLEY	g=	G= <i>0cm</i>
MOISTURE: <i>7</i>	DEPTH OF ORGANICS:	<i>36</i>	(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	<i>740</i>	(cm)

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE: Red Maple Mineral Deciduous	CODE: SWD3-1
VEGETATION TYPE: Swamp w/ Spicebush	CODE:

Evidence of Disturbance / Notes:

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

[illegible]

Signature: Chen Hui
(Project Manager)



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Woodland & Wildlife
Habitat Assessment Form

Project Number:	SE102	Project Name:	NRWC		
Date:	May 24, 2012	Field Personnel:	L Robson		
Weather Conditions:	TEMP (°C): 27	WIND: 4	CLOUD: 40%	PPT: None	PPT (in last 24 hrs): None

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?
17 T 0623135	1-long pool	4 m	2-10 cm	16	NO	yes
47549 89	thought - UTM for separate small pond					

SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)
- water is pooled throughout polygon in one long branching depression - 2 Northern Leopard frogs seen in pool - red-tailed hawk heard & seen over polygon.

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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Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC SE102

Date: June 8, 2012

Field Personnel: J. Leslie

Weather Conditions:	TEMP (°C): <u>25</u>	WIND: <u>2-3</u>	CLOUD: <u>50%</u>	PPT: <u>☔</u>	PPT (in last 24 hrs): <u>RAIN</u>
---------------------	-------------------------	---------------------	----------------------	------------------	--------------------------------------

ELC Polygon: #5-1 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/potential 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: N AGARD		POLYGON: 2	
	SURVEYOR(S): JTL		DATE: JUNE 8-12	UTME:
	START: 2:00	END: 2:30	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 ☐ MIXED	☐ BARREN ☐ MEADOW
SITE			COVER		
☐ OPEN WATER	☐ CARB. BEDRK.	☐ ALVAR	☐ OPEN		☐ PRAIRIE
☐ SHALLOW WATER		☐ ROCKLAND ☐ BEACH / BAR	☐ SHRUB		☐ THICKET
☐ SURFICIAL DEP.		☐ SAND DUNE	☐ TREED		☐ SAVANNAH
☐ BEDROCK		☐ BLUFF			☐ WOODLAND ☐ FOREST ☐ PLANTATION

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACEFREE > BETPAPY = PODDEL
2	SUB-CANOPY	3	4	ACEFREE >> FRAPENN = PRUSERO = BETPAPY
3	UNDERSTOREY	3	3	
4	GRD. LAYER	4-7	4	FRAPENN = CIRLUTO. > V. CREEPER

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

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

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

TEXTURE: med. S	DEPTH TO MOTTLES/GLEY	g= 55cm	G= 780
MOISTURE: 3	DEPTH OF ORGANICS:	8	(cm)
HOMOGENEOUS/ VARIABLE	DEPTH TO BEDROCK:	7120	(cm)

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: F-M LOWLAND DECID. FOREST	CODE: F0D7

INCLUSION		CODE:
COMPLEX		CODE:

- NO CLAY @ 80cm DEPTH
- UNDERSTORY MUCH LESS DENSE THAN POLY I
- BASE LAC CLIC WAS INFLUENCED RANDOMLY

 ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>SE 102</u>
	POLYGON:
	DATE:
	SURVEYOR(S):

[illegible]

(Field Personnel)


(Project Manager)



Woodland & Wildlife Habitat Assessment Form

Project Name: NANC SE102
Field Personnel: STL

ELC Polygon: #5-2 Assessment Type: ☐-Visual; no access / ☒-Walk through feature
Extent of Physical Investigation of Feature: ☒-Entire / ☐-Partial, walk through polygon (indicate on map)

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

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

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?

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

SE102; Tile 5; Poly 3

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NIAGARA	POLYGON: 3		
	SURVEYOR(S): Jm	DATE: JUNE 8-12	UTME:	
	START: 2:45	END: 3:10	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

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	2	4	FRAPENN >> ACEFREE > ULMAMER
2 SUB-CANOPY	3	3	FRAPENN > ACEFREE
3 UNDERSTOREY	4	2	FRAPENN > LINRENZ
4 GRD. LAYER	5-7	4	GLYSTRI > CARLACU > ONSENS > BIDENT

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:	10-24	25-50	>50
----------------------	-------	-------	-----

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

DEADFALL/LOGS:	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: SIC	DEPTH TO MOTTLES/GLEY: g= ~25cm	G= 25cm
MOISTURE: 6	DEPTH OF ORGANICS: 20cm	(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK: >120	(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: Green Ash Mineral Deciduous	CODE: SWD2-2
INCLUSION:	CODE:
COMPLEX:	CODE:

Evidence of Disturbance / Notes:

- NO H₂O

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE102
	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	
FRAPENN	D	O	O		
ACEFREE	R	O	R		
ULMAMER	R		R		
CARLACU					
GLYSTRI					
BIDENT SP.					
DRY CAST					
FALSE NETTLE					
ONSENS					
MARSH FERN					
SPICEBUSH					

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: 160950269
Date: June 8, 2012

Project Name: NRWC SE102
Field Personnel: J. Leslie

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	2-3	50%	Ø	25mm

ELC Polygon: #5-3 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?
621499, 4751313	V POOL	15 x 15 m	Ø	#8	GENERALLY NO	LOGS, SOME SHRUBS

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

- APPEARS TO HAVE SURFACE H2O DURING EARLY / MID SPRING BUT STAINING SUGGEST IT'S TYPICALLY < 15cm IN DEEPEST AREAS
- GROUND H2O WAS ABOUT 15cm BELOW SURFACE DURING SURVEY

ELC COMMUNITY DESCRIPTION AND CLASSIFICATION	SITE: <i>Niagara</i>		POLYGON: <i>4-1</i>	
	SURVEYOR(S): <i>Katherine S</i>		DATE: <i>Aug 27, 2012</i>	
	START: <i>1430</i>	END: <i>1540</i>	UTM2:	UTM1N:

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-L.V.D.	☐ 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		☐ 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)
CANOPY	2	4	Red maple > Green ash = Sugar maple
SUB-CANOPY	3	2	White Elm = red maple > silver maple
UNDERSTOREY	4	4	Spice bush >> riverbank grape = virginia creeper
GRD. LAYER	5	3	Garlic mustard > Canada goldenrod > bracken

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<80% 4=CVR>80%

ZE CLASS ANALYSIS:										A	<10	H	10 - 24	O	25 - 50	N	>50		
ANDING SNAGS:										O	<10	O	10 - 24	R	25 - 50	N	>50		
ADFALL LOGS:										A	<10	O	10 - 24	R	25 - 50	N	>50		
UNDANCE CODES:										N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT			
MM. AGE:										PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH	

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

IMMUNITY CLASS:	CODE:
IMMUNITY SERIES:	CODE:
OSITE:	CODE:
GETATION TYPE: Red maple deciduous swamp	CODE: SWD3-1

idence of Disturbance / Notes:

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

[illegible]

Signature: Kathleen Stone
(Field Personnel)

Signature: Nick Chalk
(Project Manager)



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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: 160950269

Project Name: Niagara

Date: Aug 27, 2012

Field Personnel: Katherine S

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	27	2	100%	rain	rain

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

POTENTIAL HABITAT FEATURES 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

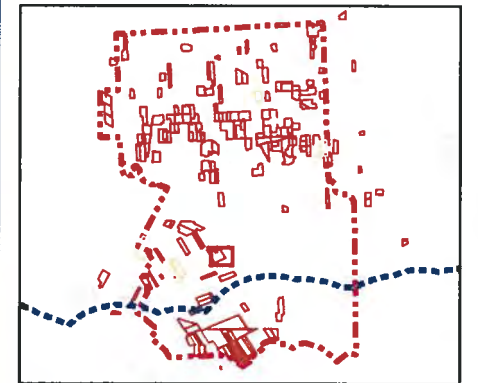
REV: 2011-07-18

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Revised: 2012-05-18 By: bawper



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.



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May 2012
160950269

Client/Project
**Niagara Region Wind Corporation
Amphibian Field Maps**

Figure No.
6

Title
**Property with Turbine
SE102**

0 100 200
1:5,000

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Revised: 2012.05.23 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
- 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.



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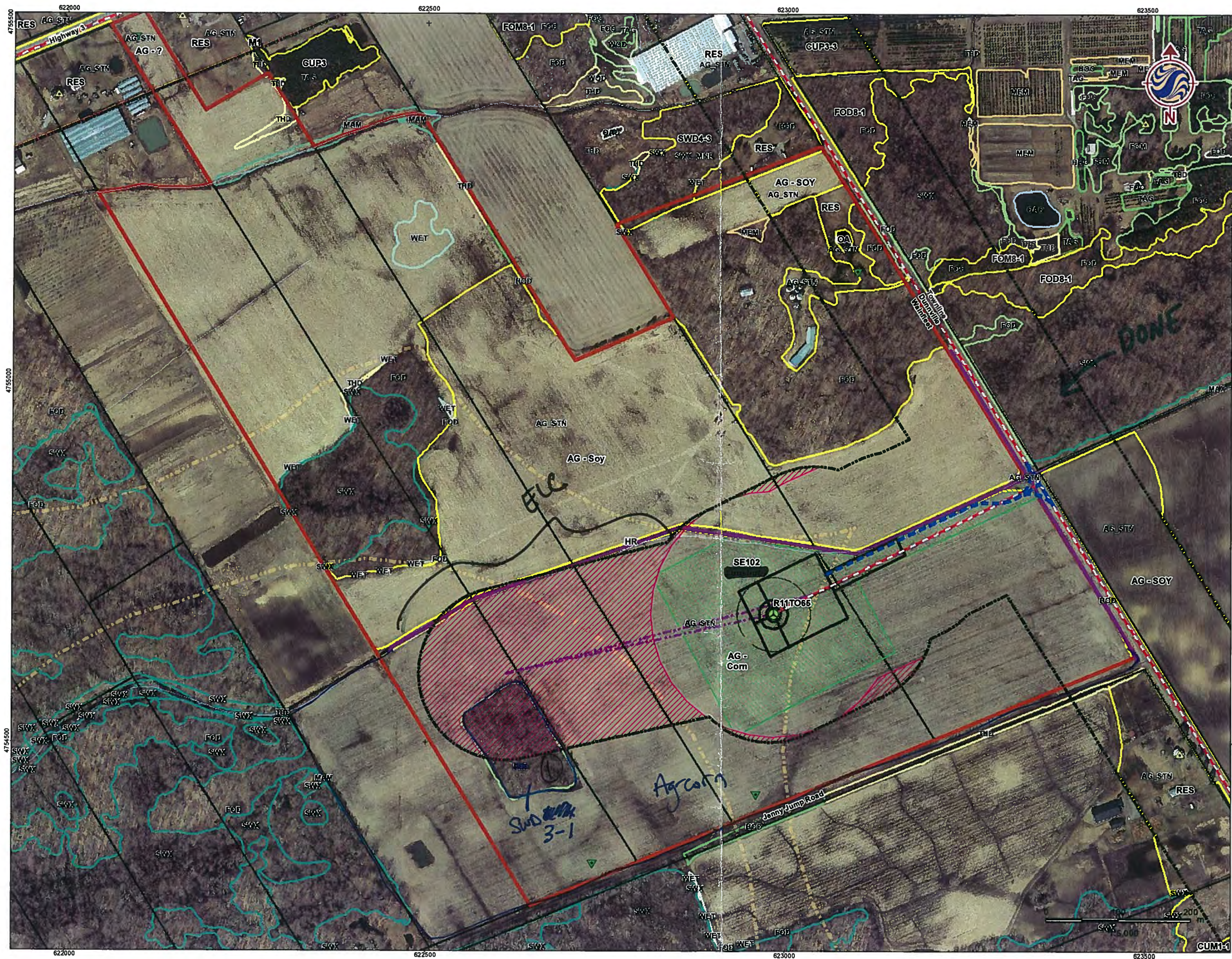
May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
5

Title
Property with Turbine
SE102

V:\01609\active\160950269\planning\drawing\mxd\20120809_NHA_Fieldmap\160950269_Release_20_Waterbody_and_Arch_Field_Map_Book_20120821.mxd
Revised: 2012-08-21 By: sallen



Legend

- Standard Turbine (105 dBA)
- 51m Turbine Setback
- 150m Zone of Investigation
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- Zone of Investigation Comparison (Areas not previously included in terrestrial and waterbody site investigation)
- ELC Boundary
- Property Boundary

Stage 2AA Archaeology

- Completed
- Incomplete
- Ready

Archaeology

- Stage 3 AA Required
- No Stage 3 AA Required
- Waterbody
- Possible Undetected Waterbody

Needs ELC in new hatched area

- ### 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

August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Waterbody Map

Figure No.
4

Title
Property with Turbine
SE102

ELC	SITE: <i>NRWC SE105</i>		POLYGON: <i>A</i>	
	SURVEYOR(S): <i>M. Ross</i>		DATE: <i>May 30/12</i>	UTME:
COMMUNITY DESCRIPTION & CLASSIFICATION	START:	END:	UTMZ:	UTMN:

OLYDON 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 ☐ SWMAP
	☐ ACIDIC BEDRK.	☐ ROLL. UPLAND ☐ CLIFF		☐ BRYOPHYTE ☐ DECIDUOUS	☐ FEN ☐ BOG
	☐ BASIC BEDRK.	☐ TALUS ☐ CREVICE / CAVE	COVER	☐ CONIFEROUS ☐ MIXED	☐ BARREN ☐ MEADOW
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	☐ OPEN ☐ SHRUB ☐ TREED		☐ PRAIRIE ☐ THICKET
OPEN WATER		☐ BEACH / BAR			☐ SAVANNAH
SHALLOW		☐ SAND DUNE			☐ WOODLAND
WATER		☐ BLUFF			☐ FOREST
SURFICIAL DEP. BEDROCK					☐ PLANTATION

LAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
CANOPY	2	4	QUE RUBE > ACE SASA = FRAPENN
SUB-CANOPY	3	3	ACE SASA > FRAPENN > Pop hornbeam > Blue beech
UNDERSTOREY	3-4	3	ACE SASA = AM BEECH = Blue beech = Spice bush
GRD. LAYER	6-7	3	IMP CAPE = large leaved Aster = May apple > PAR VIT

CODES: 1=0-25m 2=10-HT+25m 3=2-HT+10m 4=1-HT+2m 5=0.5-HT+1m 6=0.2-HT+25m 7=HT<0.2m
 R CODES: 0=NONE 1=0%<CVR<10% 2=10%<CVR<25% 3=25%<CVR<50% 4=CVR>50%

AND COMPOSITION:

ZE CLASS ANALYSIS:		A	<10	A	10 - 24	O	25 - 50	R	>50
ENDING SNAGS:		R	<10	O	10 - 24	R	25 - 50	N	>50
ADFALL LOGS:		A	<10	A	10 - 24	R	25 - 50	N	>50
UNDANCE CODES:		N=NONE R=RARE O=OCCASIONAL A=ABUNDANT							
MM. AGE:		PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH			

HL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

IMMUNITY CLASS:		CODE:
IMMUNITY SERIES:		CODE:
OSITE:		CODE:
GETATION TYPE:		CODE:
<i>gr sp</i>		<i>FOD 9</i>
INCLUSION		CODE:
COMPLEX		CODE:

idence 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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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 30/12

Field Personnel: M. Boss

Weather Conditions:	TEMP (°C): <u>21°C</u>	WIND: <u>4 gust to 5</u>	CLOUD: <u>70%</u>	PPT: <u>None</u>	PPT (in last 24 hrs): <u>None</u>
---------------------	---------------------------	-----------------------------	----------------------	---------------------	--------------------------------------

ELC Polygon: # 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

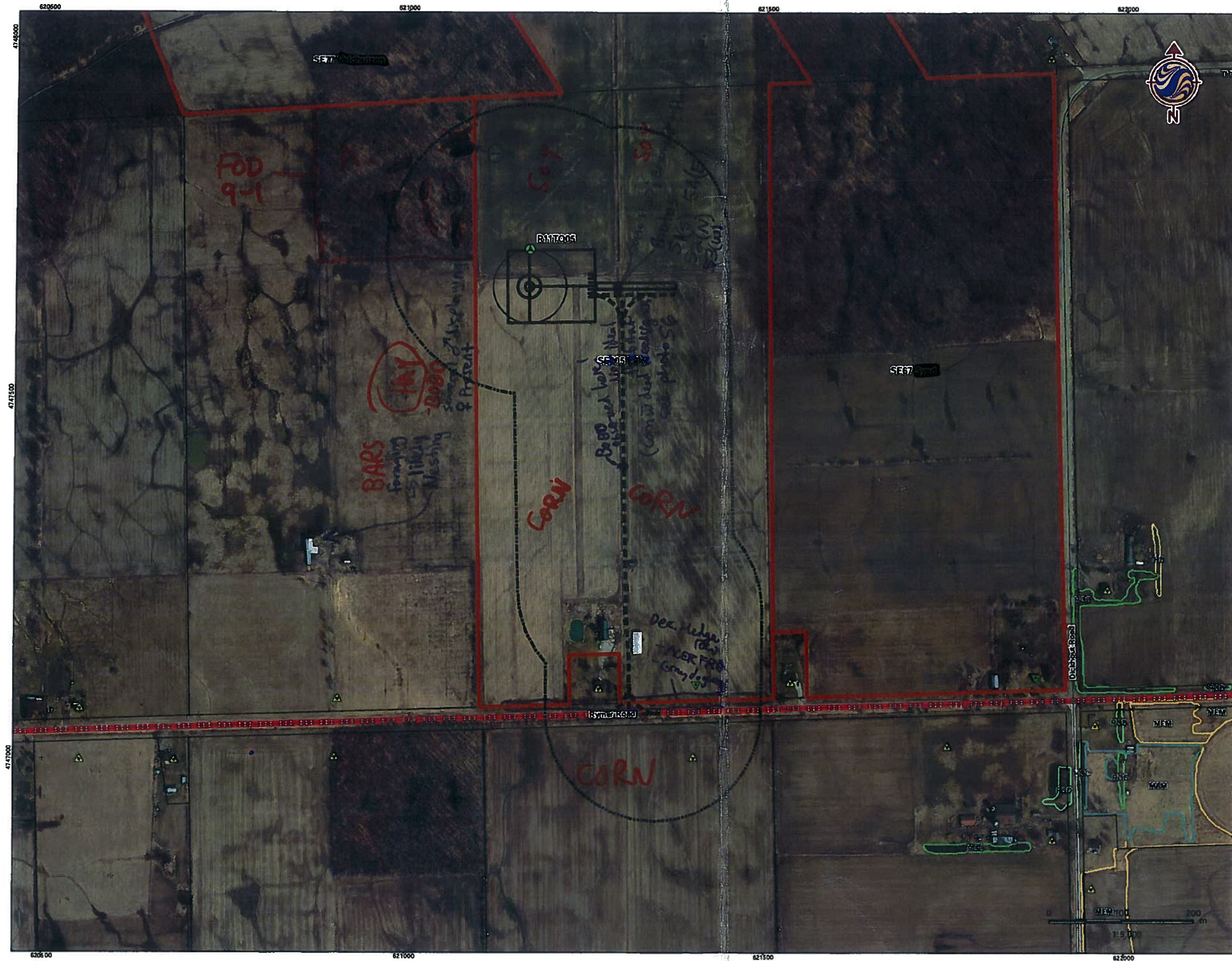
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
621097-4747848	①	25x10M	N/A	SS	Yes	Yes

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

→ obvious wet areas (open, wet species present) visible from edge and can be seen on air photo; evidence of ephemeral pooling

AMR1
SOSP
CA60 (Flower)
PUMA (foraging overhead)
BLSA Monarchs

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



- ### 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.
7

Title
**Property with Turbine
SE105**

ELC	SITE: NRWC SE106		POLYGON: 1-1	
	SURVEYOR(S): NAL		DATE: June 6, 2012	
COMMUNITY DESCRIPTION & CLASSIFICATION	START:	END:	UTM Z:	UTM N:

LYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
ERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE	☐ NATURAL	☐ PLANKTON	☐ LAKE
ETLAND	☒ MINERAL SOIL	☐ RIVERINE	☒ CULTURAL	☐ SUBMERGED	☐ POND
QUATIC	☐ 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

END DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY	3	4	ULMAMER > DAKS = Cherry > ACER
SUB-CANOPY	4	4	
UNDERSTOREY	5	3	VARIABLE
GRD. LAYER	6-7	3	

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

ND COMPOSITION:

ND COMPOSITION:							BA:		
CLASS ANALYSIS:		A	<10	D	10 - 24	R	25 - 50	N	>50
ENDING SNAGS:		O	<10		10 - 24	N	25 - 50	N	>50
DFALL/LOGS:		O	<10	O	10 - 24	N	25 - 50	N	>50
DANCE CODES:		N=NONE R=RARE O=OCCASIONAL A=ABUNDANT							
IM. AGE:		PIONEER	☒ YOUNG	MID-AGE	MATURE	OLD GROWTH			

L ANALYSIS:

STURE:	DEPTH TO MOTTLES/GLEY	G=	G=
STURE:	DEPTH OF ORGANICS:		(cm)
IOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

AMUNITY CLASSIFICATION:

MUNITY CLASS:		CODE:
MUNITY SERIES:		CODE:
SITE:		CODE:
ETATION TYPE:		CODE:
Hedgerow		HR
INCLUSION		CODE:
COMPLEX		CODE:
ence of Disturbance / Notes		CODE:

ence of Disturbance / Notes:

Office of Disturbance / Notes: (Field Personnel) (Project Manager)
Complex Community - pockets of pooling throughout due to vehicle use. Please see other side for additional comments

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: NRWC

Date: June 6, 2012

Field Personnel: N. Leander

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25</u>	<u>0-2</u>	<u>0-75%</u>	<u>Ø</u>	<u>Ø</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

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? -see notes below: pooling present
☐-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)

-SPPE OB/VO
-GRFR OB/VO
-GRTR OB/VO
* hedgerow community, however, being used internally as an access road to property - use of road w vehicles has caused large areas of pooling due to disturbance. Area is now acting as frog habitat w approx 100 per pool (~15-20 pools). Drainage features on both sides of hedgerow, but dry (no standing/pooling of water)
*Dry community w wet characteristics

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

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

POLYGON DESCRIPTION SYSTEM SUBSTRATE TOPOGRAPHIC FEATURE HISTORY PLANT FORM COMMUNITY

AND DESCRIPTION: LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE CANOPY SUB-CANOPY UNDERSTOREY GRD. LAYER

AND COMPOSITION: CLASS ANALYSIS: ENDING SNAGS: D FALL/LOGS: NDANCE CODES: IM. AGE: L ANALYSIS: TURE: STURE: IOGENEOUS / VARIABLE

COMMUNITY CLASSIFICATION: COMMUNITY CLASS: COMMUNITY SERIES: SITE: ETATION TYPE: INCLUSION: COMPLEX: ence of Disturbance / Notes:

old fence stakes in ground & on ground - Small areas of open ground - NOT 0.5 ha in size, however, mapped due to separateness of Polygon 1 - stands out as own community

ELC SITE: POLYGON: DATE: 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 ___ of ___ Signature: (Field Personnel) Signature: (Project Manager) Quality Control: This form is complete & legible.



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 6, 2012

Field Personnel: N. Leaver

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>25</u>	<u>0-2</u>	<u>0-75%</u>	<u>Ø</u>	<u>Ø</u>

ELC Polygon: # 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? - See notes below
☐ 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 vernal pools present at time of survey. based on surrounding pools in disturbed HR (Poly I), it is likely this area supports vernal pooling in early spring months

ELC COMMUNITY DESCRIPTION & CLASSIFICATION POLYGON DESCRIPTION	SITE: NRWC		(SEIDG)		POLYGON: 1-3	
	SURVEYOR(S): NAL		DATE: June 6, 2012		UTME:	
	START:	END:	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 ☐ MIXED	☐ BARREN ☐ MEADOW
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	COVER		☐ PRAIRIE ☐ THICKET
OPEN WATER		☐ BEACH / BAR	☐ OPEN		☐ SAVANNAH
SHALLOW WATER		☐ SAND DUNE	☐ SHRUB		☐ WOODLAND
SURFICIAL DEP. BEDROCK		☐ BLUFF	☒ TREED		☐ FOREST ☐ PLANTATION

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

CODES: 1=25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.1<HT≤0.5m 7=0.05<HT≤0.1m

AND COMPOSITION:										BA:	
E CLASS ANALYSIS:		<u>0</u>	<10	<u>A</u>	10 - 24	<u>R</u>	25 - 50	<u>N</u>	>50		
ENDING SNAGS:		<u>R</u>	<10	<u>R</u>	10 - 24	<u>N</u>	25 - 50	<u>N</u>	>50		
ADFALL LOGS:		<u>R</u>	<10	<u>R</u>	10 - 24	<u>N</u>	25 - 50	<u>N</u>	>50		
INDANCE CODES:		N=NONE R=RARE O=OCCASIONAL A=ABUNDANT									
MM. AGE:		<u>PIONEER</u>	<u>✓</u> YOUNG	<u>✓</u> MID-AGE	<u>✓</u> MATURE	OLD GROWTH					
IL ANALYSIS:											

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



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 6, 2012

Field Personnel: N. LEIVA

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>22°</u>	<u>0-3</u>	<u>0-60%</u>	<u>0</u>	<u>0</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 trees]

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)

- BCCH
- RTHA

* NOTE: DEAD TREE +
CAVITY - PIC #66

ROADSIDE / Partial walk along HRI

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

[illegible]

Page 1 of 1

Signature: Natchee
(Field Personnel)

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

Signature: [Signature]
(Project Manager)

ng water
unity from edge } appears to be same community at edge of
St Annes Slough wetland complex

W:\resources\internal\info and Teams\FIELD FORMS\vegetation\F...
...
...

- partial walkthrough due to property access - Deep standing water
- Assessed from dog field to partial walkins to community from W:



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950267

Project Name: NRWC

Date: June 6, 2012

Field Personnel: N. Leava

Weather Conditions:

TEMP (°C):

22°

WIND:

0-3

CLOUD:

0-60%

PPT:

0

PPT (in last 24 hrs):

0

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?

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

- See notes 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
GRTR

* Large areas of pooling throughout
Could not walk in for GPS points due to
no property access.

ELC	SITE: NRWC SE106		POLYGON: 1-5	
	SURVEYOR(S): NAL		DATE: June 6, 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	☐ 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

AND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY	1	4	OAK > MAPLES
SUB-CANOPY	2	(NA)	
UNDERSTOREY	3	(NA)	
GRD. LAYER	57	(NA)	VARIOUS

CODES: 1=25m 2=10-25m 3=2-10m 4=1-2m

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
CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤80% 4=CVR>60%

AND COMPOSITION:

END COMPOSITION:										BA:	
E CLASS ANALYSIS:		☒ A	<10	☒ A	10 - 24	☒ R	25 - 50	☒ N	>50		
UNDING SNAGS:		☐ O	<10	☐ O	10 - 24	☐ N	25 - 50	☐ N	>50		
UDFALL/LOGS:		☐ O	<10	☐ O	10 - 24	☐ N	25 - 50	☐ N	>50		
NDANCE CODES:		N=NONE R=RARE O=OCCASIONAL A=ABUNDANT									
AM. AGE:		☐ PIONEER	☐ YOUNG	☒ MID-AGE	☒ MATURE	☐ OLD GROWTH					
I ANALYSIS:											

ANALYSIS:

TURE:	DEPTH TO MOTTLES/GLEY	55	G=
STURE:	DEPTH OF ORGANICS:		
IOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	N/A	(cm)
IMMUNITY CLASSIFICATION:			(cm)

COMMUNITY CLASSIFICATION:

IMUNITY CLASS:		CODE:
IMUNITY SERIES:		CODE:
SITE:		CODE:
ETATION TYPE:		CODE:
-M Oak-Maple Deciduous Forest Type		FOD 9-2
INCLUSION		CODE:
COMPLEX		CODE:
ence of Disturbance / Notes:		CODE:

ence of Disturbance / Notes:

- Partial walkthrough due to property access $\rightarrow$ assessed from ag field
w partial walkins to community from edge

~~ROADSIDE~~

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: Natahoox
(Field Personnel)

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

Signature: Mike Clark
(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

Stantec

Project Number: 160950269

Project Name: NRWC

Date: June 6, 2012

Field Personnel: N. LEBUA

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>22°</u>	<u>0-3</u>	<u>0-60%</u>	<u>0</u>	<u>0</u>

ELC Polygon: # 1-5 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
17T0618425, 4768833	(1)	(NA)	~25	67	5	0	Peeling bark up to 20m

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?
17T0618416, 4768867	POOL	30 x 2m	0.5m	68	YES	NO

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

GRFR

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: NRWC SEID6		POLYGON: 1-b	
	SURVEYOR(S): NAL		DATE: JUNE 6, 2012	
POLYGON DESCRIPTION	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

TAND DESCRIPTION:

AND COMPOSITION:

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

Page of

(Field Personnel

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

(Project Manager)



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Fax: (519) 836-2493

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: JUNE 6, 2012

Field Personnel: N. LEQUA

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>22°</u>	<u>0-3</u>	<u>0-60%</u>	<u>Ø</u>	<u>Ø</u>

ELC Polygon: # 1-6 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; FH=feeding evidence; FY=eggs/nest; HD=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

ELC Polygon: # 1-7 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 ruins 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)

Empty space for species and habitat observations
--

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

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160950269 Project Name: NRWC SE106
Date: June 6, 2012 Field Personnel: N. Leava

TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
<u>22³</u>	<u>0-3</u>	<u>0-60%</u>	<u>0</u>	<u>0</u>

POLYGON DESCRIPTION

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	POLYGON:	TOPOGRAPHIC FEATURE		HISTORY
	1-8	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☒ TABLELAND ☐ ROLL. UPLAND ☐ CLIFF	☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☒ NATURAL ☐ CULTURAL
	START TIME:			
	END TIME:			

TAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY	/	/	
SUB-CANOPY	3	1	ULMAMER?
UNDERSTOREY	4	4	DOGWOOD = SALIX?
GRD. LAYER	NA	NA	Grasses?

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% N/O=not observed

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

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

TAND MATURITY:	PIONEER	☒ YOUNG	MID-AGE	MATURE	OLD GROWTH
-----------------------	---------	---	---------	--------	------------

VEGETATION TYPE: Mineral Thicket Swamp CODE: SWT 2

COMPLEX	CODE:
----------------	--------------

evidence of Disturbance / Notes:

Due to restricted property access & difficulty in visibility through hedgerow, this community could not be delineated to a species specific community. Mostly shrub, with odd tree $> 8m$.

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

[illegible]

Signature:

Signature: Natalee
(Field Personnel)

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

Signature:

ol: This form is complete ☐ & legible ☐.

re: 
(Project Manager)

ELC Polygon: # 1-8 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*)

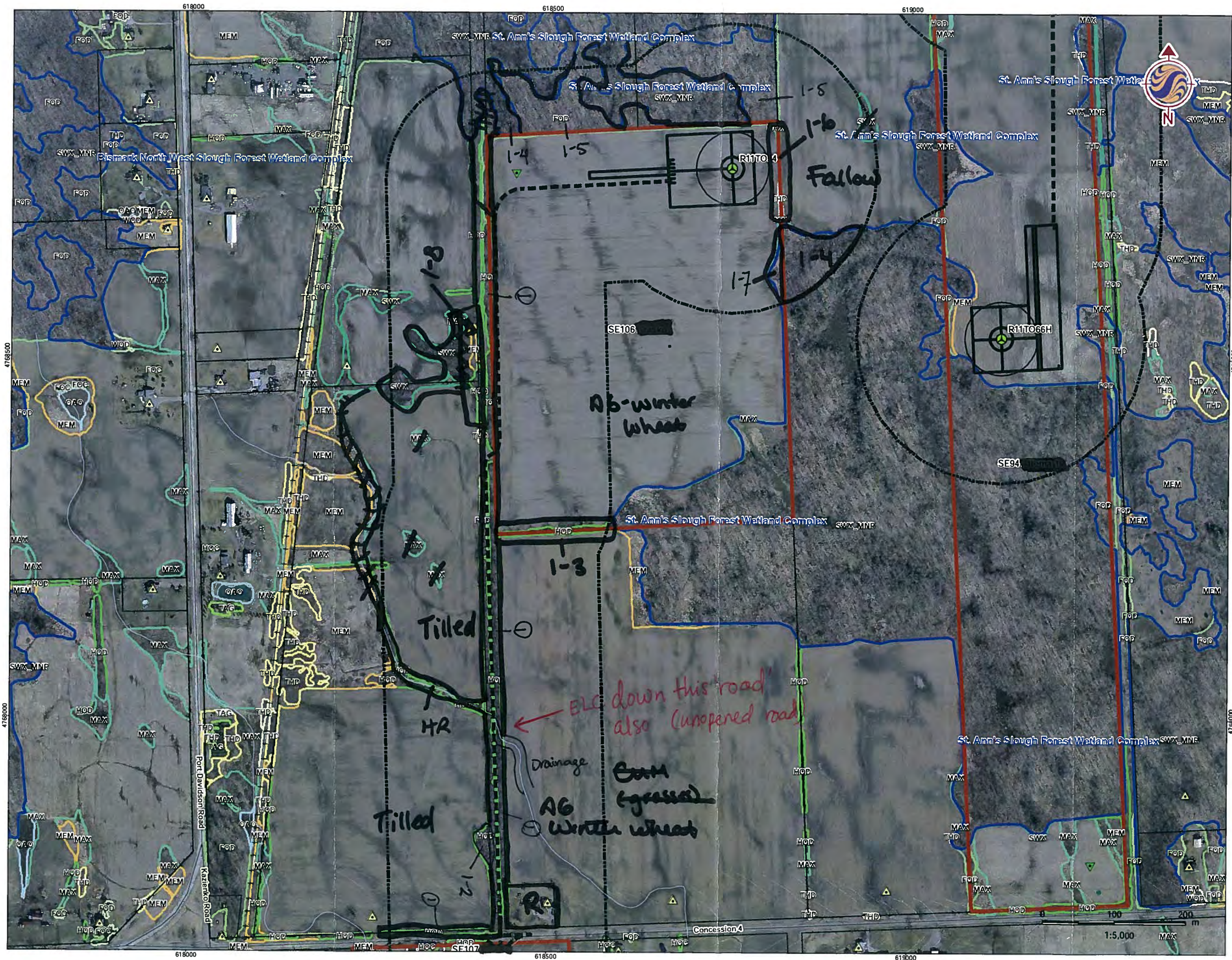
SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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)

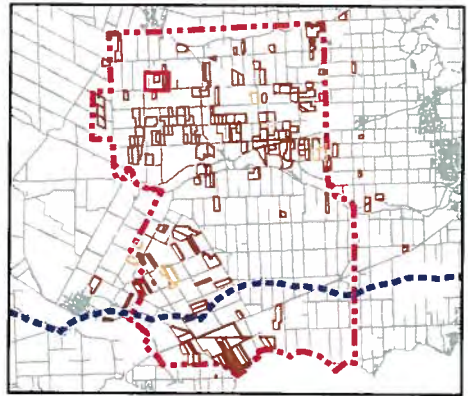
Content for Species & Habitat Observations
--

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.



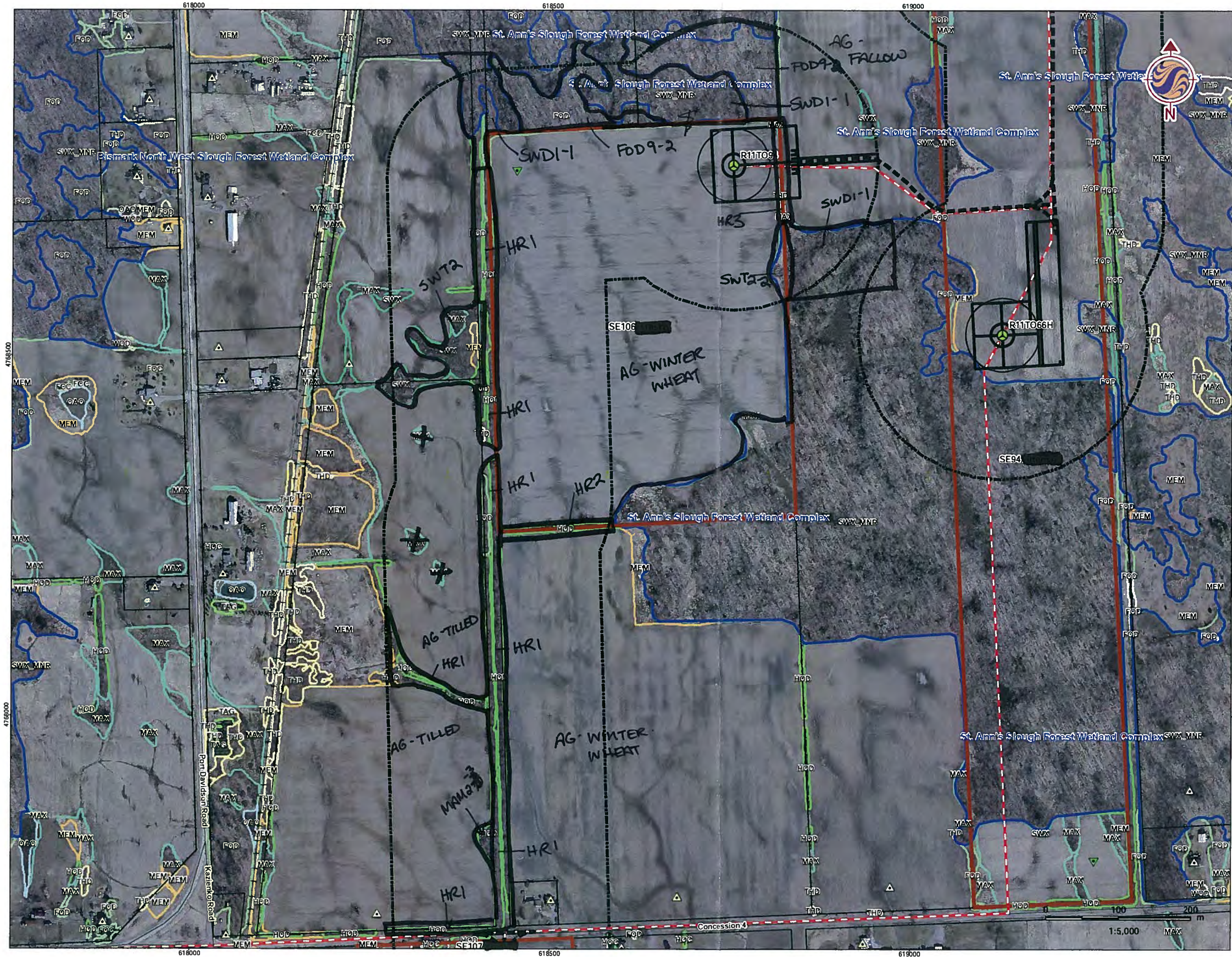
Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

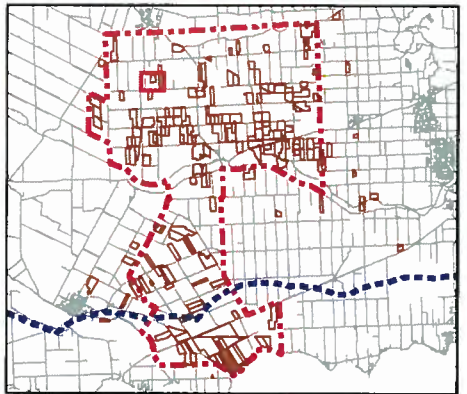
Figure No.
8

Title
Property with Turbine
SE106



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

- 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

June, 2012
160950269

Client/Project

Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.

5

Title

Property with Turbine
SE106

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: NRWC SR107		POLYGON: 1-1	
	SURVEYOR(S): NAL	DATE: June 6, 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
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	Scots pine >> w. Spruce
2	SUB-CANOPY	/	/	
3	UNDERSTOREY	4	2	A. ELM > DOGWOOD = SUMAC = B. Walnut
4	GRD. LAYER	5-7	3	BROOKER >> Trefoil > Vetch

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:	N	<10	N	10 - 24	N	25 - 50	N	>50
-----------------	---	-----	---	---------	---	---------	---	-----

[illegible]

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

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

SOIL ANALYSIS: 4

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:

VEGETATION TYPE: Scrub Pine (coniferous) Plantation Type CODE: CMP 3-3

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

INCLUSION	CODE:

COMPLEX	CODE:
----------------	--------------

Evidence of Disturbance / Notes:

- Borders residential property - Adjacent to property, pond w 3 bullfrogs, 1 green frog (new)

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: Nataheara
(Field Personnel)

(Field Personnel)

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

Signature

Control: This form is complete ☐ & left
Signature: 
(Project Manager)

(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: June 6/2012

Field Personnel: N. Leana

Weather Conditions:	TEMP (°C): <u>20</u>	WIND: <u>0-2</u>	CLOUD: <u>0%</u>	PPT: <u>Ø</u>	PPT (in last 24 hrs): <u>Ø</u>
---------------------	-------------------------	---------------------	---------------------	------------------	-----------------------------------

ELC Polygon: # 1-1 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)

- 3 BULL (AUD) } pond on other side of Res (OA)
- 1 GRFR (AUD)
- KILL
- RWBL

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: SE107 - NRWC		POLYGON: 1-2	
	SURVEYOR(S): NAL		DATE: June 6	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	3	1		/
2	SUB-CANOPY	4	2		
3	UNDERSTOREY	5	3		
4	GRD. LAYER	6-7	4		

STAND COMPOSITION:	BA:
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COMM. AGE:	PIONEER	☒ YOUNG	MID-AGE	MATURE	OLD GROWTH
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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>Hedgerow</i>		CODE: <i>HRI</i>
	INCLUSION	CODE:
	COMPLEX	CODE:

Boundaries east, north & west sides of property; fragmented, often to areas w/ no trees & grasses only - acts as a very narrow tree line dividing properties (fence along property boundary as well)

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

[illegible]

Signature: Nashara
(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 6, 2012

Field Personnel: N. Leava

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>20</u>	<u>0-2</u>	<u>0%</u>	<u>Ø</u>	<u>Ø</u>

ELC Polygon: # 1-2 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)

RWBL playing in adjacent crown

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: 107 -NRWC		POLYGON: 1-3	
	SURVEYOR(S): NAL		DATE: June 6, 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
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	/	/	
2	SUB-CANOPY	/	/	
3	UNDERSTOREY	4	4	Reed-Canary
4	GRD. LAYER	/	/	

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: reed - Canary grass Mineral Meadow Marsh		CODE: MAM 2-2
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:
located in area of North section of Hedgerow, acting as a drainage feature along road

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

[illegible]

Nataheeva
(Field Personnel)

ol: This form is complete ☐ & legible ☐.

re: 
(Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: _____

Date: June 6, 2012

Field Personnel: _____

Weather Conditions:	TEMP (°C): <u>20°</u>	WIND: <u>0-2</u>	CLOUD: <u>0%</u>	PPT: <u>Ø</u>	PPT (in last 24 hrs): <u>Ø</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

SE107; TIK 9; Poly 1-4

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>SE17</u>	POLYGON: <u>1-4</u>
	SURVEYOR(S): <u>N</u>	DATE: <u>June 6, 2012</u>
	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
SITE		☐ TALUS	COVER	☐ CONIFEROUS	☐ BARREN
☐ OPEN WATER		☐ CREVICE / CAVE	☒ OPEN	☐ MIXED	☐ MEADOW
☐ SHALLOW WATER		☐ ALVAR	☐ SHRUB		☐ PRAIRIE
☐ SURFICIAL DEP.		☐ ROCKLAND	☐ TREE		☐ THICKET
☐ BEDROCK		☐ 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	1	1	
2 SUB-CANOPY	3	4	Salix >> PopTRM
3 UNDERSTOREY	4	4	reed canopy > Salix
4 GRD. LAYER	5-7	23	Poa sp = Sedge sp > Dock

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:	NA	(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
willow mineral Thicket Swamp Type	SWT 2-2
INCLUSION	CODE:
COMPLEX	CODE:

Evidence of Disturbance / Notes:

borders on a wetland at north end of property
- Difficult to walk through due to areas of pooling water

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	
reed canopy			A	A		reed canopy				R	
PopTRM		R				clover				R	
Salix sp.		O-A	O-A			fox tail				R	
						Dock sp				O	
						Poa sp.				O-A	
						Sedge sp				O-A	

Page ____ of ____

Signature:

Nataheana
(Field Personnel)

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

Signature:

Nataheana
(Project Manager)



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Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 6, 2012

Field Personnel: N. Leana

Weather Conditions:	TEMP (°C): <u>20°</u>	WIND: <u>0-2</u>	CLOUD: <u>0%</u>	PPT: <u>0</u>	PPT (in last 24 hrs): <u>0</u>
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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)

- WT Deer (OB)
- GRFR (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 COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE107		POLYGON: 1-5	
	SURVEYOR(S): NAL		DATE: June 6, 2012	
	START:	END:	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	☐ OPEN ☐ SHRUB		☐ SAVANNAH ☐ WOODLAND
☐ SHALLOW WATER		☐ SAND DUNE ☐ 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	1.	3	AFESASA >> AM Beech > Shag Hic = Bl. Chem
2	SUB-CANOPY	2	4	ACESASA >> Beech = Hick = Ironwood
3	UNDERSTOREY	3-4	4	ACESASA >> Ironwood > Beech > Hickory
4	GRD. LAYER	5-7		VARIABLE

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	D	25 - 50	R	>50		
STANDING SNAGS:		D	<10	D	10 - 24	D	25 - 50	N	>50		
DEADFALL/LOGS:		D	<10	D	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: <u>Sandy clay</u>	DEPTH TO MOTTLES/GLEY	g= <u>>120</u>	G= <u>>120</u>
MOISTURE: <u>3</u>	DEPTH OF ORGANICS:		<u>0</u> (cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		<u>>120</u> (cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: Dry-Fresh Sugar Maple Beech Oak Forest	CODE: FODS-2a
INCLUSION	CODE: MAM
COMPLEX	CODE:

Evidence of Disturbance / Notes:

upland community - dry

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

Natahecia (Field Personnel)

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

Signature:

1: This form is complete ☐ & legible ☐.

2: Michael A.
(Project Manager)



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Fax: (519) 836-2493

Woodland & Wildlife Habitat Assessment Form

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	20	0-2	0%	0	0

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

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

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

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

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

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: SE07		POLYGON: 1-6	
	SURVEYOR(S): NAL		DATE: June 6, 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	☐ 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	/	/	
2	SUB-CANOPY	3	4	meadowsweet
3	UNDERSTOREY	4	4	reed canopy > meadowsweet
4	GRD. LAYER	/	/	

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

SIZE CLASS ANALYSIS:	A	<10	A	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			

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

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: meadow/sweet mineral thicket Swamp		CODE: SWT 2-6
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

- community thick thicket - difficult to walk through - no clear area for soil core sample

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

[illegible]

Nataheara
(Field Personnel)

by: This form is complete ☒ & legible ☒.

by: Wale G. G. G.
(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 Name: NLRWC

Field Personnel: N. Leaver

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	20	0-2	0/	0	0

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

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]	COMINT
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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>SE107</u>		POLYGON: <u>1-7</u>	
	SURVEYOR(S): <u>NAL</u>		DATE: <u>June 6, 2012</u>	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	1	2	ACESASA >> AM Beech > oaks
2	SUB-CANOPY	2	4	ACESASA > AM. Beech > Hickory > Ironwood
3	UNDERSTOREY	3-4	4	ACESASA > AM. Beech > Ironwood
4	GRD. LAYER	5-7	3	VARIABLE

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	B	25 - 50	R	>50
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STANDING SNAGS:	0	<10	0	10 - 24	R	25 - 50	N	>50
-----------------	---	-----	---	---------	---	---------	---	-----

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

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

SOIL ANALYSIS:

TEXTURE: <i>Sandy clay</i>	DEPTH TO MOTTLES/GLEY	g= <i>B</i>	G= <i>B</i>
MOISTURE: <i>2</i>	DEPTH OF ORGANICS:		<i>0</i> (cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	<i>> 120</i>	(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: Sugar Maple - Beech deciduous forest	CODE: FOD5-2b
INCLUSION	CODE:
COMPLEX	CODE:

Evidence of Disturbance / Notes:

Evidence of Disturbance / Notes:
 - stick piles throughout community (>10 piles), floor w/so leaf litter cover, stumps throughout community
 - extension of F00 5-2 (1-5 poly) to the east - understory & ground cover changes

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:

NRWC

Date:

June 6, 2012

Field Personnel:

N. Leava

Weather Conditions:

TEMP (°C):

20

WIND:

0-2

CLOUD:

0%

PPT:

0

PPT (in last 24 hrs):

0

ELC Polygon: # 1-7

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
17T 0618387, 4766976	large stick piles	56	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
17T 0618305, 4766969	2	ACESASA	~90	51-55	1	~8	5-10m, open cavity
17T 0618313, 4766990	1	ACESASA	~80	50	2	0	loose bark ~8m

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)

AMRO
KILL
AMCR

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: June 6, 2012

Field Personnel: N. Leawa

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>20</u>	<u>0-2</u>	<u>0%</u>	<u>0</u>	<u>0</u>

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?

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>SE107</u>		POLYGON: <u>1-9</u>	
	SURVEYOR(S): <u>NAL</u>		DATE: <u>June 6, 2012</u>	
	START:	END:	UTMZ:	UTME:

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	1	1	Salix sp.
2	SUB-CANOPY	2	1	Salix sp.
3	UNDERSTOREY	3	1	W. Pine = Scots Pine = Walnut
4	GRD. LAYER	4	4	orchard grass > reed canna grass

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:		<u>R</u>	<10	<u>R</u>	10 - 24	<u>N</u>	25 - 50	<u>R</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		Q=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:	NA	(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: Dry-Moist old field meadow Type		CODE: CUM1-1
INCLUSION		CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

Evidence of Disturbance / Notes:
Community fenced off - could not walk 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 1 of 1

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 6, 2012

Field Personnel: N. Leana

Weather Conditions:	TEMP (°C): <u>20</u>	WIND: <u>0-2</u>	CLOUD: <u>0%</u>	PPT: <u>0</u>	PPT (in last 24 hrs): <u>0</u>
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ELC Polygon: # _____ Assessment Type: ☒ Visual; no access / ☐ Walk through feature - fenced off - on residential property
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: <u>SE107</u>		POLYGON: <u>1-10</u>	
	SURVEYOR(S): <u>NAL</u>		DATE: <u>June 6</u>	
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☒ TERRESTRIAL	☐ ORGANIC	☐ LACUSTRINE ☐ RIVERINE	☒ NATURAL	☐ PLANKTON	☐ LAKE
☐ WETLAND	☒ MINERAL SOIL	☐ BOTTOMLAND ☐ TERRACE	☒ CULTURAL	☐ SUBMERGED	☐ POND
☐ AQUATIC	☐ PARENT MIN.	☐ VALLEY SLOPE ☒ TABLELAND		☐ FLOATING-LVD. ☐ GRAMINOID	☐ RIVER
	☐ ACIDIC BEDRK.	☐ ROLL. UPLAND ☐ CLIFF		☐ FORB ☐ LICHEN	☐ STREAM
	☐ BASIC BEDRK.	☐ TALUS ☐ CREVICE / CAVE		☐ BRYOPHYTE ☒ DECIDUOUS	☐ MARSH
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	COVER	☐ CONIFEROUS ☐ MIXED	☐ SWAMP
☐ OPEN WATER		☐ BEACH / BAR	☐ OPEN		☐ FEN
☐ SHALLOW WATER		☐ SAND DUNE ☐ BLUFF	☐ SHRUB		☐ BOG
☒ SURFICIAL DEP.			☒ TREED		☐ BARREN
☐ BEDROCK					☐ 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	3	4	ALF FREE = FRAPENS
2	SUB-CANOPY	/	/	
3	UNDERSTOREY	/	/	
4	GRD. LAYER	5-7	4	Variable

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:	
SIZE CLASS ANALYSIS:		N	<10	D	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:
Green Ash - Freemans maple Cultural wood		CW1-3*
INCLUSION	CODE:	
COMPLEX	CODE:	

Evidence of Disturbance / Notes:

row community - could not walk through - fenced off.

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: Natcheara
(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature:

ol: This form is complete ☒ & legible ☒.

e: 
(Project Manager)



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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 Name: NRWC

Field Personnel: N. Leavitt

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	20	0-2	0	0	0

ELC Polygon: # _____ Assessment Type: ☒-Visual; no access / ☐-Walk through feature - fenced - walked along borders

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>[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)]</i>
	Contains potential bat hibernacula features? ☐ -Y* / ☒ -N / ☐ -Unknown, no access (<i>*if yes, describe in table below</i>) <i>[i.e. karst topography, abandoned mines or caves]</i>

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>SELOT</u>		POLYGON: <u>1-11</u>	
	SURVEYOR(S): <u>NAL</u>		DATE: <u>June 6</u>	
	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	4	4		PINSTRO > Scots pine
2	SUB-CANOPY	/	/		
3	UNDERSTOREY	/	/		
4	GRD. LAYER	5-7	4		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≤60% 4=CVR>60%

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

SIZE CLASS ANALYSIS:	D	<10	2	10 - 24	2	25 - 50	2	>50
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STANDING SNAGS:	N	<10	N	10 - 24	N	25 - 50	N	>50
------------------------	----------	---------------	----------	----------------	----------	----------------	----------	---------------

DEADFALL/LOGS:	N	<10	N	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
------------	---	--------------------------------	----------------------------------	---------------------------------	-------------------------------------

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: white Pine Conif. Plantation		CODE: cup 3-2
	INCLUSION	CODE:
	COMPLEX	CODE:

Evidence of Disturbance / Notes:

row community - planted in CuMI-1; half early successional

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: NRWC

Date: June 6, 2012

Field Personnel: N. Leaver

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>20°</u>	<u>0-2</u>	<u>0</u>	<u>0</u>	<u>0</u>

ELC Polygon: # _____ Assessment Type: ☐-Visual; no access / ☒-Walk through feature - fenced - walked border of polygon
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

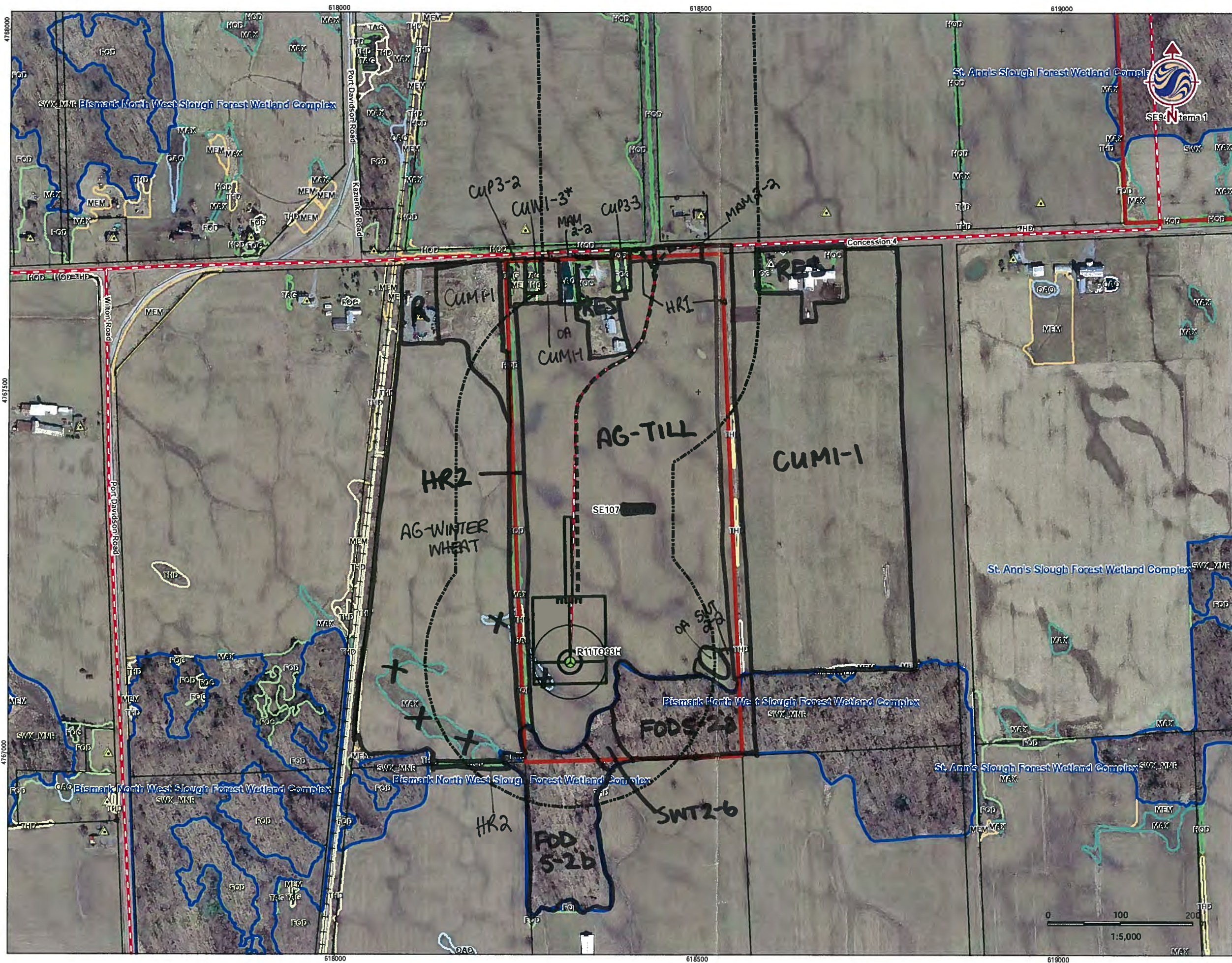
Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)

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)

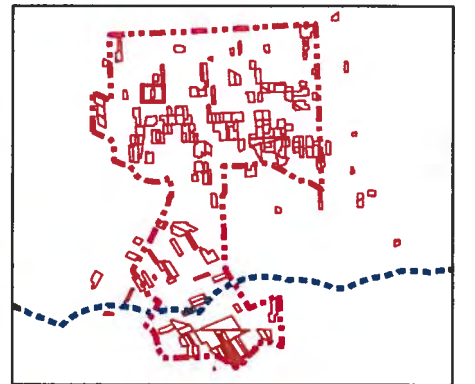
CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scar; SI=other sign; TK=track; VO=vocalization

V:\1609\Active\160950268\planning\drawing\20120423_NHA_Fieldmap\160950268_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-06-27 By: bawpwr



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

- 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

June, 2012
160950269

Client/Project

Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.

6

Title

Property with Turbine
SE107

ELC	SITE: NIAGARA -		POLYGON: 1	
	SURVEYOR(S): JTL		DATE: JUL 5 11 12	
COMMUNITY DESCRIPTION AND CLASSIFICATION	START: 12:30	END: 12:58	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	COVER	CONIFEROUS MIXED	BARREN MEADOW
SITE					
OPEN WATER	CARB. BEDRK.	ALVAR ROCKLAND	OPEN SHRUB		PRAIRIE THICKET
SHALLOW WATER		BEACH / BAR SAND DUNE	TREED		SAVANNAH WOODLAND
SURFICIAL DEP. 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	ACESASA >> POPLAR
2	SUB-CANOPY	3	4	ACESASA >> CANCLO
3	UNDERSTOREY	4-5	3	SPICEBUSH > VIBRNL
4	GRD. LAYER	6-7	4	V CRASSER > 1.1. PTERIS > SP. L. S. etc.

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

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

STAND COMPOSITION:

DATE: _____

SIZE CLASS ANALYSIS:

[illegible]

STANDING SNAGS:

HEADFALL/LOGS:	☐ <10	☐ 10-24	☒ 25-50	☒ >50
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ABUNDANCE CODES:

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: P-F Sugar maple-white birch-poplar deciduous	CODE: FOD5-10
INCLUSION	CODE:
COMPLEX	CODE:

Evidence of Disturbance / Notes:

- SOME SLIGHTLY LOWER TOP AREAS W/ ACER FREE.
- ADJACENT TO A DEEP DRAIN W/
 - 15-20' H-1 0-10'.

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: NRWC

Date: June 11-12

Field Personnel: J. Leslie

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>28</u>	<u>23</u>	<u>100%</u>	<u>0</u>	<u>RAIN</u>

ELC Polygon: #10-1 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