

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

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

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:	<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	a=	G=
----------	-----------------------	----	----

MOISTURE:	DEPTH OF ORGANICS:	(cm)
-----------	--------------------	------

HOMOGENECUS / VARIABLE	DEPTH TO BEDROCK:	(cm)
------------------------	-------------------	------

COMMUNITY CLASSIFICATION:

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

COMMUNITY SERIES:	CODE:
-------------------	-------

ECOSITE:	CODE:
----------	-------

VEGETATION TYPE: CODE: FAD1-E

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

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

Evidence of Disturbance / Notes:

Red maple swamp with pockets of sugar maple beech FOD and ~~white swamp~~ swamp with buttonbush and ~~11ex~~ with ~1/4 foot water

ELC SITE:
COMMUNITY DESCRIPTION & CLASSIFICATION POLYGON:
DATE: SESU; T.1E F-16; Poly A
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 11 CERTIFICATE

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature: _____

Project No. 5226

POLYGON DESCRIPTION

STAND DESCRIPTION:

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%		

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

Evidence of Disturbance / Notes:

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

iProject Manager

STARTER

160950269

Date: Oct 26, 2011

Project Name: NRWC

Field Personnel: N. Cheriton

TEMP (°C):

10

WIND:

2

CLOUD:

100

PPT:

Pain

PPT (in last 24 hrs):

rain

Visual Assessment: ☐ Roadside, no access

Physical Assessment: ☒ - Walk through feature

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

Reptile Hibernacula Features: Contains potential reptile hibernacula features?

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

bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrow(s)

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UNIDENTIFIED FEATURES IDENTIFIED			
UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Hibernacula Features: Contains potential bat hibernacula features?

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

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

POTENTIAL BAT HIBERNACULA / ROOSTING FEATURE(S) IDENTIFIED

ROOSTING FEATURE(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	DBH	Photo No.	Spp. Observed Using Feature

Presence of 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.	Photo No.	Height/ Placement	Nest Size	Spp. Observed Using Feature

Presence of Seeps/Springs/Vernal Pools: Contains seeps/springs/vernal pools?

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

DEEP / 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?
pool throughout feature		30 x 30 m	up to 2 ft		yes	yes

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

[illegible]

Abbreviations: D=diagnostic; F=forecasting; E=evaluation; H=health; I=information; M=management; N=national; O=observational; P=policy; R=research; S=social; T=technology; U=university; V=voluntary; W=work; Y=youth.

7. _____ of _____

Signature:

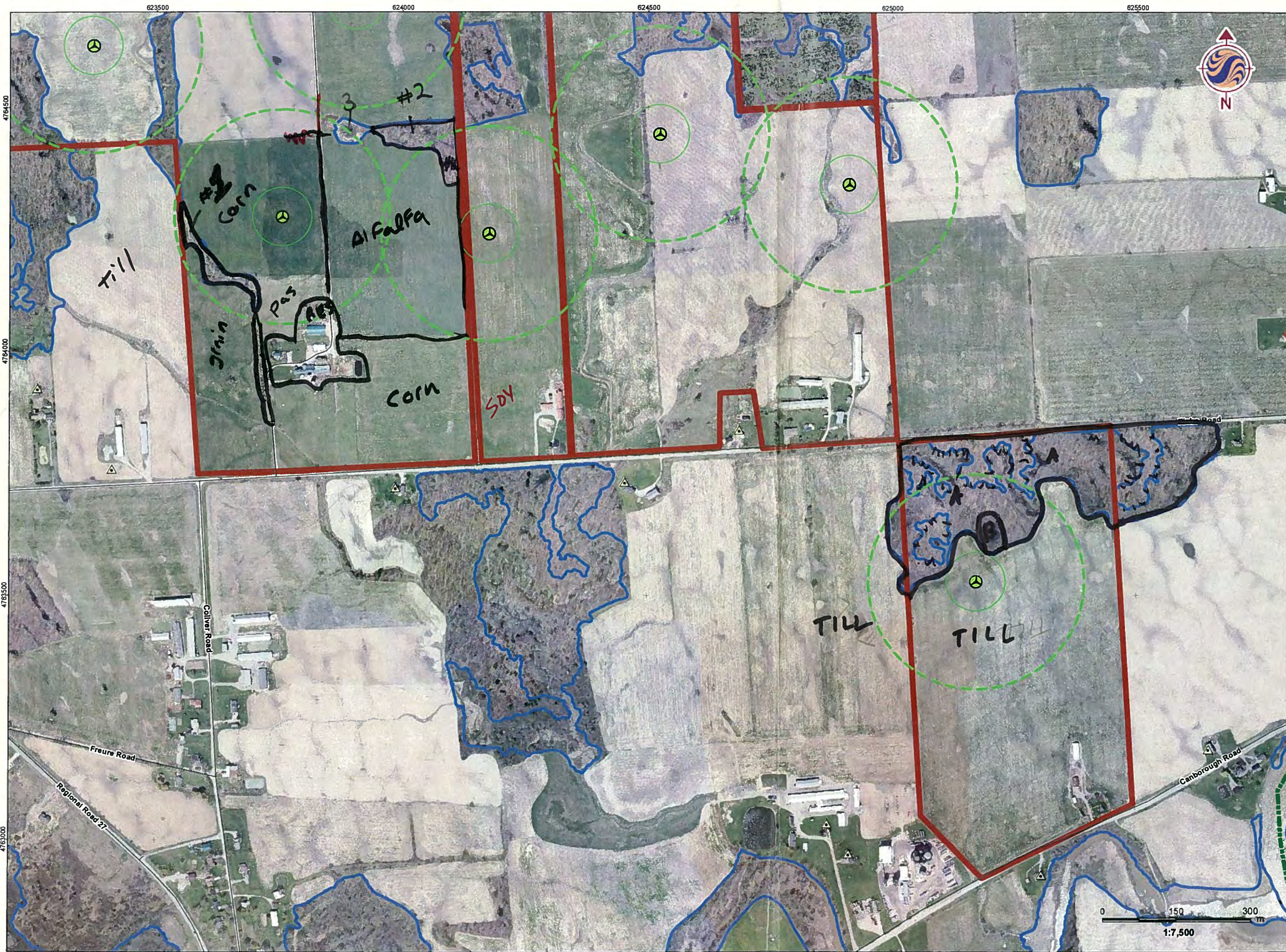
(Field Personnel)

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

Signature:

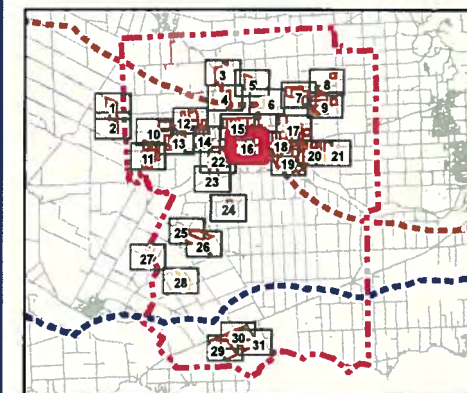
(Project Manager)

REV. 2011-06-10



Legend

- Preliminary Study Area
- Signed Project Sites
- Potential Signed Property
- Road
- Railway
- Municipality Lower Tier
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Turbines on Developable Land and 120m Diameter
- 160m Buffer of Turbine



Notes

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



Stantec

August, 2011
160950269

Client/Project
Niagara Region Wind Corporation

Figure No.
F-16

Title

Field Map 16

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Niagara wind</i>		POLYGON: <i>16-G</i>	
	SURVEYOR(S): <i>C. Payette</i>		DATE: <i>Nov 3, 2011</i>	
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	2	Ashsp > Staghorn > Sunwash > Sugar maple
2	SUB-CANOPY			
3	UNDERSTOREY	4	3	gray dogwood > red raspberry > Silky dogwood
4	GRD. LAYER	5-7	3	Aster > opt. clematis > P. > P. canopy 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:		B	<10	O	10 - 24	N	25 - 50	N	>50
STANDING SNAGS:		N	<10	R	10 - 24	N	25 - 50	N	>50
DEADFALL/LOGS:		O	<10	R	10 - 24	N	25 - 50	N	>50
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT	
COMM. AGE:		PIONEER	YOUNG	✓	MID-AGE	MATURE	OLD GROWTH		

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: Gray dogwood thicket swamp		CODE: SWT2-9
☒	INCLUSION forb mineral meadow marsh	CODE: MAM2-10
	COMPLEX	CODE:

Evidence of Disturbance / Notes:

Mostly Dry - Slopes so some water at
N west corner a couple cm's.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Niagara wind</i>
	POLYGON: <i>16-G</i>
	DATE: <i>Nov 3, 2011</i>
	SURVEYOR(S): <i>C. Parille</i>

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

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

[illegible]

Page of

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature:

(Project Manager)



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

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: _____

Project Name: Niagara wind

Date: Nov 3, 2011

Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>9</u>	<u>4</u>	<u>100</u>	<u>None</u>	<u>None</u>

ELC Polygon: #6-G 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
<u>17T 0624553 4765899</u>	<u>Pile of old concrete blocks on side of hill</u>	<u>14</u>	<u>No - its November</u>

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

POLYGON DESCRIPTION

STAND DESCRIPTION:

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

SOIL ANALYSIS:

COMMUNITY CLASSIFICATION:

Evidence of Disturbance / Notes:

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 5 of 5

Signature:

(Field Personnel)

Quality Control: This form is complete & legible

Signature:

(Project Manager)

**Stantec**

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

Woodland & Wildlife Habitat Assessment Form

Project Number: _____

Project Name: Niagara windDate: Nov 3, 2011Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>9</u>	<u>4</u>	<u>100</u>	<u>None</u>	<u>None</u>

ELC Polygon: #16-f Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

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

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

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

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

Contains potential bat hibernacula features?

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

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

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

Contains large stick nests?

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

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

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

--

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

ELC	SITE: <i>Niagara wind</i>		POLYGON: <i>16-E</i>	
	SURVEYOR(S): <i>C. Payette</i>		DATE: <i>Nov 3, 2011</i>	
COMMUNITY DESCRIPTION & CLASSIFICATION	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3		Shagbark h y AS sp
2	SUB-CANOPY			
3	UNDERSTOREY	4	3	grey dogwood > ash sp H sp
4	GRD. LAYER	5-7	6	Red-capped y grass goldenrod catnip sp

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

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:		R	<10	R	10 - 24		25 - 50		>50		
DEADFALL/LOGS:		0	<10	R	10 - 24		25 - 50		>50		
ABUNDANCE CODES:			N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT		
COMM. AGE:		PIONEER	YOUNG		MID-AGE		MATURE		OLD GROWTH		

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE:
Reed & sedge		Madaw Marsh
INCLUSION		CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

garbage in there.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>16-E Naagwa wind</i>
	POLYGON: <i>16-E</i>
	DATE: <i>Nov 3, 2011</i>
	SURVEYOR(S): <i>C. Payette</i>

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

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

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

Signature:

(Project Manager)

**Stantec**

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

Woodland & Wildlife Habitat Assessment Form

Project Number: _____

Project Name: Niagara WindDate: Nov 3, 2011Field Personnel: C. Payette

Weather Conditions:

TEMP (°C):

9

WIND:

4

CLOUD:

100

PPT:

None

PPT (in last 24 hrs):

NoneELC Polygon: # 16-EAssessment Type: ☒ Visual; roadside, no access / ☐ Physical; walk through feature

- fenced off but small enough to see most of it

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=seat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Macarawind</i>		POLYGON: <i>16-C</i>	
	SURVEYOR(S): <i>C. Payette</i>	DATE: <i>Nov 3, 2011</i>	UTME:	
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

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

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

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
Dry-Fresh Sugar maple-oak deciduous forest	F0DS-3
INCLUSION	CODE: SW02-2
COMPLEX	CODE:

Evidence of Disturbance / Notes:

Dry except for inclusion which had

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: Niagara Wind
	POLYGON: J 16-C
	DATE: Nov 3, 2011
	SURVEYOR(S): C. Payette

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)

maybe a couple cm of water.

**Stantec**

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

Woodland & Wildlife Habitat Assessment Form

Project Number: _____

Project Name: Niagara windDate: Nov 3, 2011Field Personnel: C. P. H.

Weather Conditions:

TEMP (°C):

9

WIND:

4

CLOUD:

100

PPT:

None

PPT (in last 24 hrs):

NoneELC Polygon: #16-C 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=seat; SI=other sign; TK=track; VO=vocalization

BT HA - calling, scanning HAWO

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Magnum wind</i>
	POLYGON: <i>16-B</i>
	DATE: <i>Nov 3, 2011</i>
	SURVEYOR(S): <i>C. Dwyer</i>

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

[illegible]

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY		2	Asp. sp. > Shagbark hickory > white elm
2 SUB-CANOPY			
3 UNDERSTOREY			
4 GRD. LAYER		4	Reed, narrow grass >> Aster, sp. > dandelion red clover

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

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

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:		CODE:
<i>unweel</i> <i>Reed canary Meadow Marsh, type</i>		<i>MAM2-2</i>
<i>✓</i>	INCLUSION	CODE:
	<i>Fresh-Moist Shagbark hickory Dec.</i>	<i>FoD9-4</i>
	COMPLEX	CODE:

Big
thorn
Shallup
milk
red

Page ____ of ____

Signature:

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

Signature:

(Project Manager)

Drainage Ditch Shallow Stream through center 0.25m

**Stantec**

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

Woodland & Wildlife Habitat Assessment Form

Project Number: _____

Project Name: Ningqua WindDate: Nov 3, 2011Field Personnel: C. Dayle

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	10	4	100	None	None

ELC Polygon: #16B 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
<u>17+0624784 4764122</u>	<u>As</u>	<u>Ash</u>	<u>100</u>			<u>10</u>	

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

STICK NEST(S) IDENTIFIED

UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature
<u>17+0624784 4764122</u>	<u>(X)</u>	<u>Ash</u>	<u>20cm</u> <u>across</u>	<u>139-140</u>	<u>No</u>

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=seat; SI=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Macapua Wind</i>		POLYGON: <i>16-a</i>	
	SURVEYOR(S): <i>C. Payne</i>		DATE: <i>Nov 3, 2011</i>	UTME:
	START:	END:	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	2	willow sp
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	4-7	4	Bent grass > N.L. meadow sweet > Aster sp

HT CODES: 1= $z > 25m$ 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:		O	<10	R	10 - 24	N	25 - 50	M	>50
STANDING SNAGS:		R	<10	R	10 - 24	N	25 - 50	N	>50
DEADFALL/LOGS:		O	<10	R	10 - 24	N	25 - 50	N	>50
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT	
COMM. AGE:		PIONEER	YOUNG	MID-AGE		MATURE		OLD GROWTH	

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>Breed Canary Grass Mineral Meadowmark</i>		CODE: <i>MAM2-2</i>
INCLUSION		CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

lots of water-Depth around 0.5 m.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>magnum Wind</i>
	POLYGON: <i>16-a</i>
	DATE: <i>Nov 3, 2011</i>
	SURVEYOR(S): <i>C. Davis</i>

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

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

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature:

(Project Manager)

**Stantec**

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

Woodland & Wildlife Habitat Assessment Form

Project Number: _____

Project Name: Niagara WindDate: Nov 2, 2011Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>12</u>	<u>None</u>	<u>100</u>	<u>None</u>	<u>None</u>

ELC Polygon: # 16-A 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

Used for Species list.

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Niagara wind</i>		POLYGON: <i>16-D</i>	
	SURVEYOR(S): <i>C. Payette</i>	DATE: <i>Nov 3, 2011</i>	UTME:	
	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 ☐ SWMAP
	☐ ACIDIC BEDRK.	☐ ROLL. UPLAND ☐ CLIFF		☐ BRYOPHYTE ☐ DECIDUOUS	☐ FEN ☐ BOG
	☐ BASIC BEDRK.	☐ TALUS ☐ CREVICE / CAVE		☐ CONIFEROUS ☐ MIXED	☐ BARREN ☐ MEADOW
SITE	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	COVER		☐ PRAIRIE ☐ THICKET
☐ OPEN WATER		☐ BEACH / BAR	☐ OPEN ☐ SHRUB ☐ TREED		☐ SAVANNAH ☐ WOODLAND
☐ SHALLOW WATER		☐ SAND DUNE ☐ BLUFF			☐ FOREST ☐ PLANTATION
☐ SURFICIAL DEP.					
☐ BEDROCK					

STAND DESCRIPTION:

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

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

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

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

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

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

Evidence of Disturbance / Notes:

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Magena Wind</i>
	POLYGON: <i>16-D</i>
	DATE: <i>Nov 3, 2011</i>
	SURVEYOR(S): <i>C. Burt</i>

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

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

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

Signature:

(Project Manager)

Evidence of Disturbance / Notes: Three islands of wetland in the middle of a field.

water - including Dickweed/cattail Pond in center of some creek willow in ^{larger} circular Sooty on west end of area.

**Stantec**

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

Woodland & Wildlife Habitat Assessment Form

Project Number: _____

Project Name: Niagara WindDate: Nov 3, 2011Field Personnel: C. Payette

Weather Conditions:	TEMP (°C): <u>9</u>	WIND: <u>4</u>	CLOUD: <u>100</u>	PPT: <u>None</u>	PPT (in last 24 hrs): <u>None</u>
---------------------	------------------------	-------------------	----------------------	---------------------	--------------------------------------

ELC Polygon: #16-D 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)

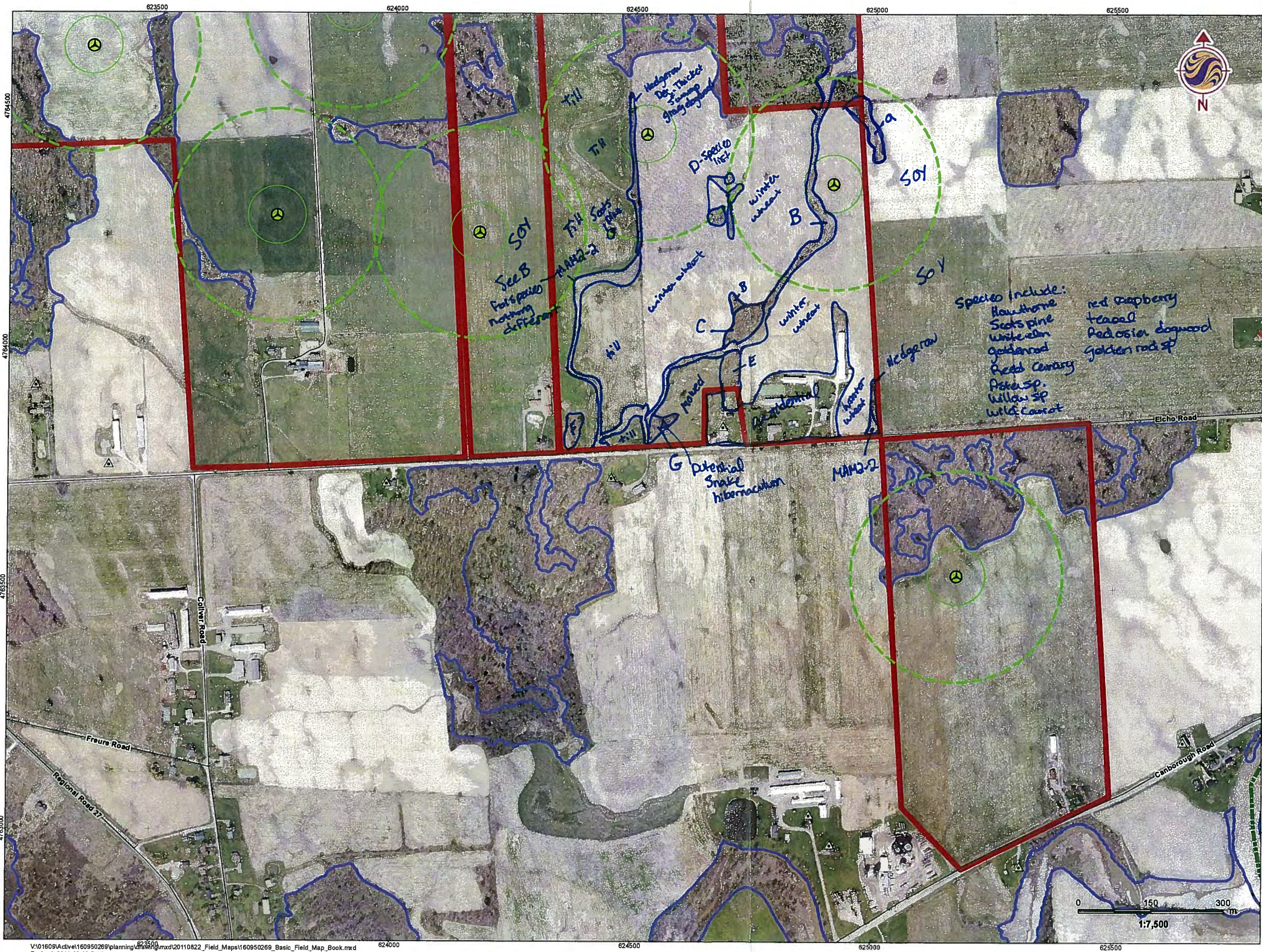
SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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)

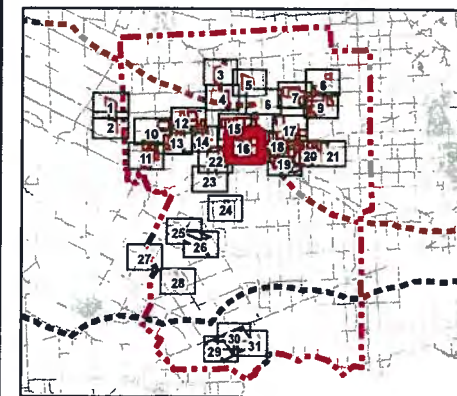
Observation notes area

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



Legend

- Preliminary Study Area
- Signed Project Sites
- Potential Signed Property
- Road
- Railway
- Municipality Lower Tier
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Turbines on Developable Land and 120m Diameter
- 160m Buffer of Turbine



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, 2011
160950269

Client/Project
Niagara Region Wind Corporation

Figure No.
F-16

Title

Field Map 16

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

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	6-7	4	Eleocharis >> Bidens >> Sparanium

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
STANDING SNAGS:				

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: spike rush mineral shallow marsh		CODE: MAS 2-10*
INCLUSION		CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

- was dried out, but species composition and the appearance of the vegetation (lots of the elodea was dead + dried out) indicates it is normally M45.

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

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

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature:

(Project Manager



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

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: Nov 2

Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>12</u>	<u>2</u>	<u>30</u>	<u>none</u>	<u>unknown</u>

ELC Polygon: #17-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?
<u>pool throughout</u>	<u>1 - pool</u>	<u>20 x 20 m</u>	<u>? (seasonal)</u>		<u>yes</u>	<u>no</u>

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

--

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



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

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: A/RWC

Date: Nov 2

Field Personnel: AL Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	12	2	30	none	unknown ✓

ELC Polygon: # 17-0 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?
entire feature	pop	10 x 10	seasonal		yes	yes

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

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



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:

Nov 2, 2011

Field Personnel:

N. Charlton

Weather Conditions:

TEMP (°C):

12

WIND:

2 (breeze)

CLOUD:

30

PPT:

none

PPT (in last 24 hrs):

?

ELC Polygon: #17-1 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
0628507 4764722		ACEFREE	50cm	3+4	none (edge of forest near back of property)

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?
near stick nest	ditch w H ₂ O	2x20m	20cm		yes	young trees

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

leopard frog in/near ditch

CA=circus; DP=distinctive parts; PE=fading evidence; PY=egg/food; HO=household; OB=observed; SC=scar; SL=salt; TK=track; VO=vocalization



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:

Nov 2, 2011

Field Personnel:

N. Charlton

Weather Conditions:

TEMP (°C):

12

WIND:

2

CLOUD:

30

PPT:

none

PPT (in last 24 hrs):

unknown

ELC Polygon: #17-2 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

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

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

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

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

Contains potential bat hibernacula features?

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

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

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

Contains large stick nests?

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

Rare smilax - near buttonbush SWT UTM 0628732 patch of about 7 stems
+ ✓ pics (~3 or 4) 4764956

POLYGON DESCRIPTION

STAND DESCRIPTION:

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%

Evidence of Disturbance / Notes: some water cause some 25% but in

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

(Field Personnel)

(Project Manager)

- incomplete access $\rightarrow$ borders property



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: Nov 2, 2011

Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>12</u>	<u>2</u>	<u>30</u>	<u>none</u>	<u>unknown</u>

ELC Polygon: #17-3 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

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

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

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

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

Contains potential bat hibernacula features?

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

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

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

Contains large stick nests?

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
<u>entire polygon</u>	<u>pool</u>	<u>150 x 10 m</u>	<u>unknown</u>		<u>yes</u>	<u>yes</u>

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

--

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

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: Niagara		POLYGON: 17-SWT	
	SURVEYOR(S): NE	DATE: Nov 2	UTME:	
	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 ☐ SWMAP
	☐ ACIDIC BEDRK.	☐ ROLL. UPLAND ☐ CLIFF		☐ BRYOPHYTE ☐ DECIDUOUS	☐ FEN ☐ BOG
	☐ BASIC BEDRK.	☐ TALUS ☐ CREVICE / CAVE	COVER	☐ CONIFEROUS	☐ BARREN ☐ MEADOW
SITE				☐ MIXED	☐ PRAIRIE ☐ THICKET
☐ OPEN WATER	☐ CARB. BEDRK.	☐ ALVAR ☐ ROCKLAND	☐ OPEN ☐ SHRUB		☐ SAVANNAH ☐ WOODLAND
☐ SHALLOW WATER		☐ BEACH / BAR ☐ SAND DUNE	☐ TREED		☐ FOREST
☐ SURFICIAL DEP.		☐ BLUFF			☐ PLANTATION
☐ BEDROCK					

STAND DESCRIPTION:

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

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

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

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE:		CODE: SWT2-2
☐	INCLUSION	CODE:
☐	COMPLEX	CODE:

Evidence of Disturbance / Notes:

no access - on adjacent propert

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:

e: Wendy Chen
(Field Personnel)

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

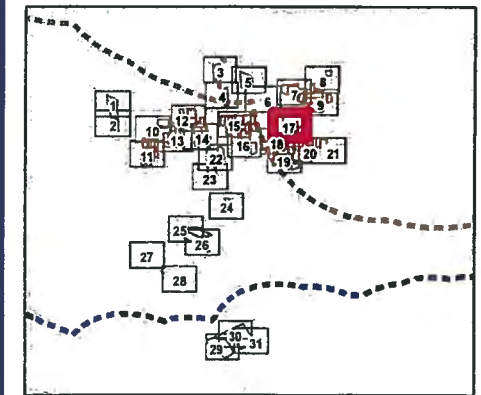
Signature:

End M
(Project Manager)



Legend

- | | | | |
|--|-----------------------------------|--|--|
| | Preliminary Study Area | | Turbines on Developable Land and 101m Diameter |
| | Signed Project Sites | | 170.5m Buffer of Turbine |
| | Potential Signed Property | | Turbines W/ 120m S/B PSW and 101m Diameter |
| | Road | | 170.5m Buffer of Turbine |
| | Railway | | Turbines W/ 120m S/B Woodland and 101m Diameter |
| | Municipality Lower Tier | | 170.5m Buffer of Turbine |
| | Provincially Significant Wetland | | Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter |
| | Other/Locally Significant Wetland | | 170.5m Buffer of Turbine |
| | To Be Determined | | Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter |
| | Open Rock/Shrub Rock Barren | | 170.5m Buffer of Turbine |
| | Shoreline | | Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter |
| | Bluff | | 170.5m Buffer of Turbine |
| | Swamp | | Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter |
| | Marsh | | 170.5m Buffer of Turbine |
| | Bog | | Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter |
| | Wetland | | 170.5m Buffer of Turbine |
| | Meadow | | Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter |
| | Thicket | | 170.5m Buffer of Turbine |
| | Savanna | | Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter |
| | Woodland | | 170.5m Buffer of Turbine |
| | Forest | | Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter |
| | Hedgerow | | 170.5m Buffer of Turbine |
| | Treed Agriculture | | Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter |
| | Open Water | | 170.5m Buffer of Turbine |



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

September, 2011
160950269

Client/Project

Niagara Region Wind Corporation

Figure No.

E-17

Title

ELC Field Map 17

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Niagara</i>		POLYGON: <i>19-1</i>	
	SURVEYOR(S): <i>NC</i>		DATE: <i>Nov 18</i>	
	START: <i>9:00</i>	END: <i>10:00</i>	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	FRAPPEN >> CAROVAT
2	SUB-CANOPY	3	3	FRAPPEN > ACESASA > ULMAMER
3	UNDERSTOREY	4	3	QJTVIRG = ACESASA = FRAPPEN > CARCARO
4	GRD. LAYER	5-7	3	RUBUS SPP > SYMLANC = V.SNUMM

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

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

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

SIZE CLASS ANALYSIS:	A	<10	0	10 - 24	2	25 - 50	N	>50
----------------------	---	-----	---	---------	---	---------	---	-----

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

DEADFALL/LOGS:	0	<10	10	10 - 24	25	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: loamy clay	DEPTH TO MOTTLES/GLEY	g= 37 cm	G=
MOISTURE: 5	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK: 7120		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: Fresh-Moist Ash Lowland Deciduous Forest		CODE: F6D7-2
INCLUSION		CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

- riparian lowland associated w creek
- ground looks scoured in places

Ashwamp/lowland
Spiraea- detwood thicket
bunny

 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)

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: Niagara		POLYGON: 19-2	
	SURVEYOR(S): NC		DATE: Nov 18	
	START: 10:00	END: 10:30	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

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

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

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

STAND COMPOSITION: BA:

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

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

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

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

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

SOIL ANALYSIS:

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

MOISTURE:	DEPTH OF ORGANICS:	(cm)
-----------	--------------------	------

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

COMMUNITY CLASSIFICATION:

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

COMMUNITY SERIES:	CODE:
-------------------	-------

ECOSITE: _____ CODE: _____

VEGETATION TYPE: grassland with CODE: MA17-2

Red Candy grass Mineral meadow marsh	MAH =
--------------------------------------	-------

INCLUSION	Open aquatic	CODE: OA
-----------	--------------	----------

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

Evidence of Disturbance / Notes:

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

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

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

[illegible]

Page of

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature:

(Project Manager)

**Stantec**

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

Woodland & Wildlife Habitat Assessment Form

Project Number:

160950269

Project Name:

NRWC

Date:

Nov 18, 2011

Field Personnel:

N. Charlton

Weather Conditions:

TEMP (°C):

0

WIND:

3

CLOUD:

60%

PPT:

none

PPT (in last 24 hrs):

none

ELC Polygon: #19-2 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=seat; SI=other sign; TK=track; VO=vocalization

**Stantec**

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

Woodland & Wildlife Habitat Assessment Form

Project Number:

160950269

Project Name:

NPAWC

Date:

Nov 18, 2011

Field Personnel:

N. Charlton

Weather Conditions:

TEMP (°C):

0

WIND:

3

CLOUD:

60

PPT:

none

PPT (in last 24 hrs):

none

ELC Polygon: #19-3 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

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

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

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

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

Contains potential bat hibernacula features?

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

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

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

Contains large stick nests?

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

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

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

☐-Y* / ☒-N / ☐-Unknown, no access (*if yes, describe in table below)**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

--

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

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Niagara</i>		POLYGON: <i>19-4</i>	
	SURVEYOR(S): <i>NC</i>	DATE: <i>Nov 18, 2011</i>	UTME:	
	START: <i>11:00</i>	END: <i>12:00</i>	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	ACESAJA > QUERUBR > POPGRAN - TSUCA
2	SUB-CANOPY	3	2	ACESAJA > OSTVIRG > FAGGRAN
3	UNDERSTOREY	4	2	ACESAJA
4	GRD. LAYER	5-7	1	ACESAJA > SYMLANK = GEUM = RUROCCA

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

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

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g= 28	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: <i>Dry-Fresh sugar-maple deciduous exsited</i>	CODE: <i>FOD5</i>
INCLUSION	CODE:
COMPLEX	CODE:

Evidence of Disturbance / Notes:

- confining slope community
- pretty mixed species-wise

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.
	1	2	3	4	
FRAX SP	O				
ULMAMER	R	R-O			
PRUSERO	O				
ACE RUBR	O-R				
POPGRAN	R-O				
QUERUBR	A				
CARCAPO	OR R				
CARDIAT	RO				
ACESASA	A				
OSTVIRG		O	@		
FAGGRAN	R	R			
TJUCANA	O				
TILAMER	R				
VIBRAFI					
RUBACCI					

Page of

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature:

(Project Manager)



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

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: Nov 18

Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C): <u>0</u>	WIND: <u>3</u>	CLOUD: <u>60</u>	PPT: <u>none</u>	PPT (in last 24 hrs): <u>none</u>
---------------------	------------------------	-------------------	---------------------	---------------------	--------------------------------------

ELC Polygon: #19-4 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

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

STICK NEST(S) IDENTIFIED

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

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

--

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

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>Niagara</u>		POLYGON: <u>19-5</u>	
	SURVEYOR(S): <u>NC</u>		DATE: <u>NOV 18, 2011</u>	UTME:
	START: <u>12:00</u>	END: <u>12:30</u>	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

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

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

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

STAND COMPOSITION:

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

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>reed canopy marginal meadow marsh</i>		CODE: <i>MAM 2-2</i>
INCLUSION		CODE:
COMPLEX		CODE:

Evidence of Disturbance / Notes:

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

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

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

[illegible]

Page ____ of ____

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature:

(Project Manager)

**Stantec**

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

Woodland & Wildlife Habitat Assessment Form

Project Number:

160950269

Project Name:

NPWC

Date:

Nov 18, 2011

Field Personnel:

N. Charlton

Weather Conditions:

TEMP (°C):

0

WIND:

3

CLOUD:

60

PPT:

none

PPT (in last 24 hrs):

noneELC Polygon: # 19-5 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=seat; SJ=other sign; TK=track; VO=vocalization

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: Niagara		POLYGON: 9-6	
	SURVEYOR(S): NC	DATE: Nov 18, 2011	UTME:	
	START: 12:30	END: 1:00	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)			
LAYER	HT	CVR	
1 CANOPY	2	4	ACESA > QUERUBR > FAG-GRAN -
2 SUB-CANOPY	3	3	ACESA > QSTVIRG > FAG-GRAN
3 UNDERSTOREY	4	3	ACESA > QSTVIRG
4 GRD. LAYER	5-7	3	SVMLAN < > GEUM > RUBIN SP

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

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

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

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

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

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

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

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

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g= 32	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>F-M Sugar Maple-Hardwood Deciduous</i>		CODE: <i>FOP6-5</i>
INCLUSION		CODE:
COMPLEX		CODE: <i>SWD3-1</i>

Evidence of Disturbance / Notes:

Red Maple s amp

- two deer
- raccoons in a beech tree

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

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

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

[illegible]

Page of

Signature:

(Field Personnel)

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

Signature:

(Project Manager)

**Stantec**

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

Woodland & Wildlife Habitat Assessment Form

Project Number:

160950269

Project Name:

NRWC

Date:

Nov 18, 2011

Field Personnel:

N. Charlton

Weather Conditions:

TEMP (°C):

0

WIND:

3

CLOUD:

60

PPT:

none

PPT (in last 24 hrs):

none

ELC Polygon: #19-b

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; HU=house/den; OB=observed; SC=seat; SI=other sign; TK=track; VO=vocalization



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: Nov 3, 2011

Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>10</u>	<u>1</u>	<u>100</u>	<u>none</u>	<u>none</u>

ELC Polygon: # 19-1 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 ^{cm}	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
<u>swamp portion</u>	<u>pool / s - several</u>	<u>largest: 50x50</u>	<u>at least 50-60</u>		<u>yes</u>	<u>yes</u>

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

CA=carcass; DP=distinctive parts; FE=feeding evidence; 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: UTME:
START: END: UTMZ: UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER HT CVR SPECIES IN ORDER OF DECREASING DOMINANCE
1 CANOPY 2 3 ACERUBR=ACFREE>QUEBICO=FRAPENN
2 SUB-CANOPY 3 2 ACER SPP>OSTVIRG>ULMAMER
3 UNDERSTOREY 4 2 CEPOCCI>CORAMOM=ILEVERT=VACCORY
4 GRD. LAYER 5-7 2 CAREX SPP>FERN SPP>BIDENS=RUBUS HISPIDUS

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

STAND COMPOSITION: BA:

SIZE CLASS ANALYSIS: A <10 A 10-24 O 25-50 N >50

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

DEADFALL/LOGS: A <10 A 10-24 O 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:

INCLUSION Maple mineral swamp CODE: SWP3

COMPLEX CODE:

Evidence of Disturbance / Notes: mostly maple + ash -> some oak -> may be increasing

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

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

Table with 2 main sections for species data. Left section: SPECIES CODE, LAYER (1-4), COLL. Right section: SPECIES CODE, LAYER (1-4), COLL. Includes handwritten entries for various species like Acer, Carex, Bidens, etc.

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



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

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: Nov 3, 2011

Field Personnel: N-Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	<u>10</u>	<u>1</u>	<u>100</u>	<u>none</u>	<u>none</u>

ELC Polygon: # 19-2 Assessment Type: ☐-Visual; roadside, no access / ☒-Physical; walk through feature

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

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

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

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

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

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

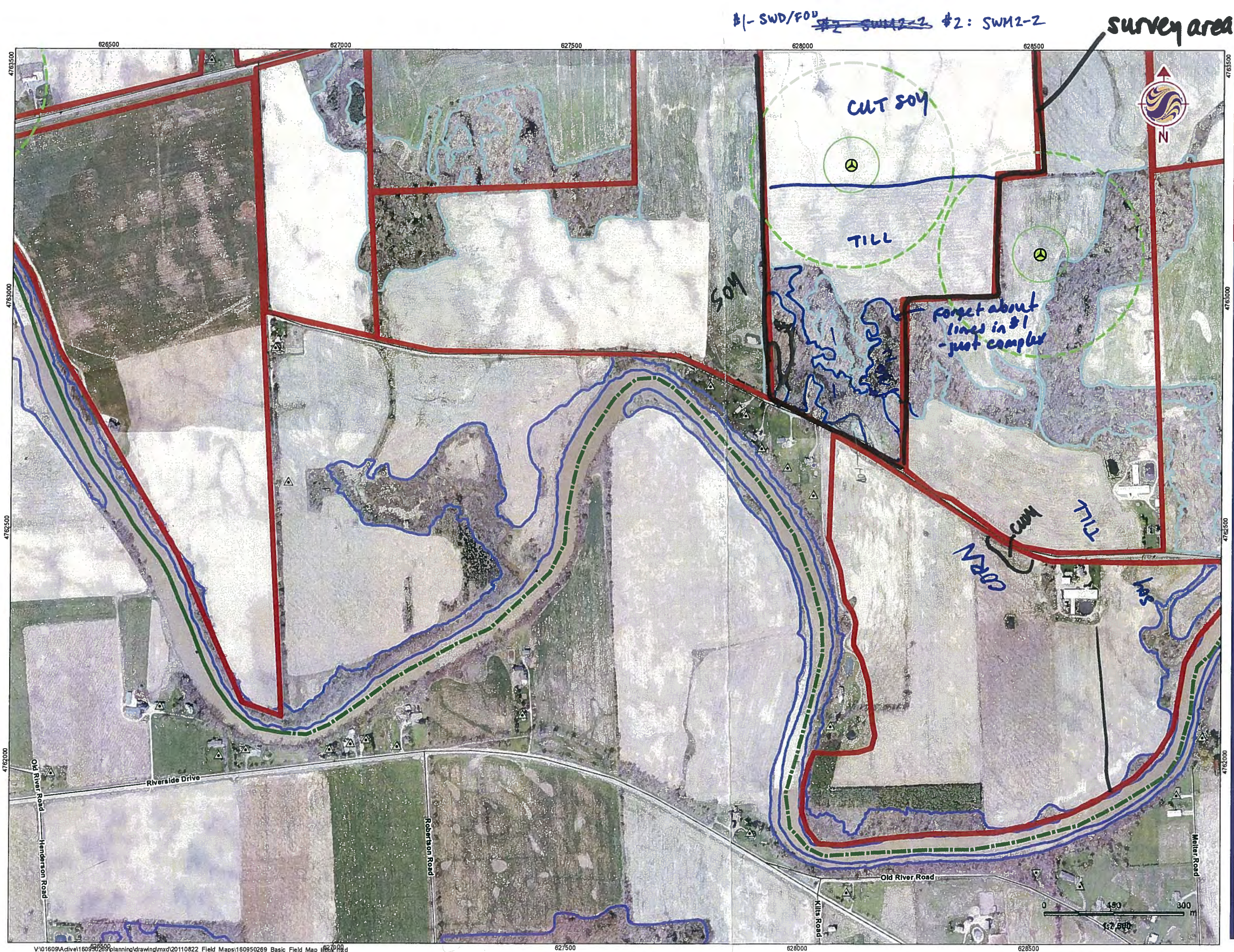
STICK NEST(S) IDENTIFIED					
UTM	Tree ID	Tree Spp.	Nest Size	Photo No.	Spp. Observed Using Feature

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED						
UTM	Feature No. & Type	Feature Size (Diameter)	Water Depth	Photo No.	Sub/Emergent Veg. Spp. Present?	Shrubs/ Logs at Edge Present?
<u>entire community</u>	<u>Pools</u>	<u>20 x 75 m</u>	<u>30 cm</u>		<u>yes</u>	<u>yes</u>

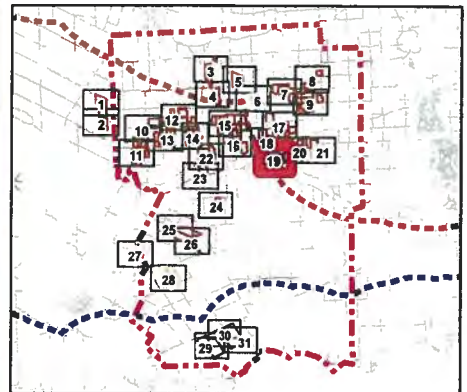
SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)
 - Unknown fern (see map) → keyed to *Botrychium dissectum*
 - lots of scat (probably raccoon-omnivore)

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

- Preliminary Study Area
- Signed Project Sites
- Potential Signed Property
- Road
- Railway
- Municipality Lower Tier
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Turbines on Developable Land and 120m Diameter
- 160m Buffer of Turbine



Notes

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



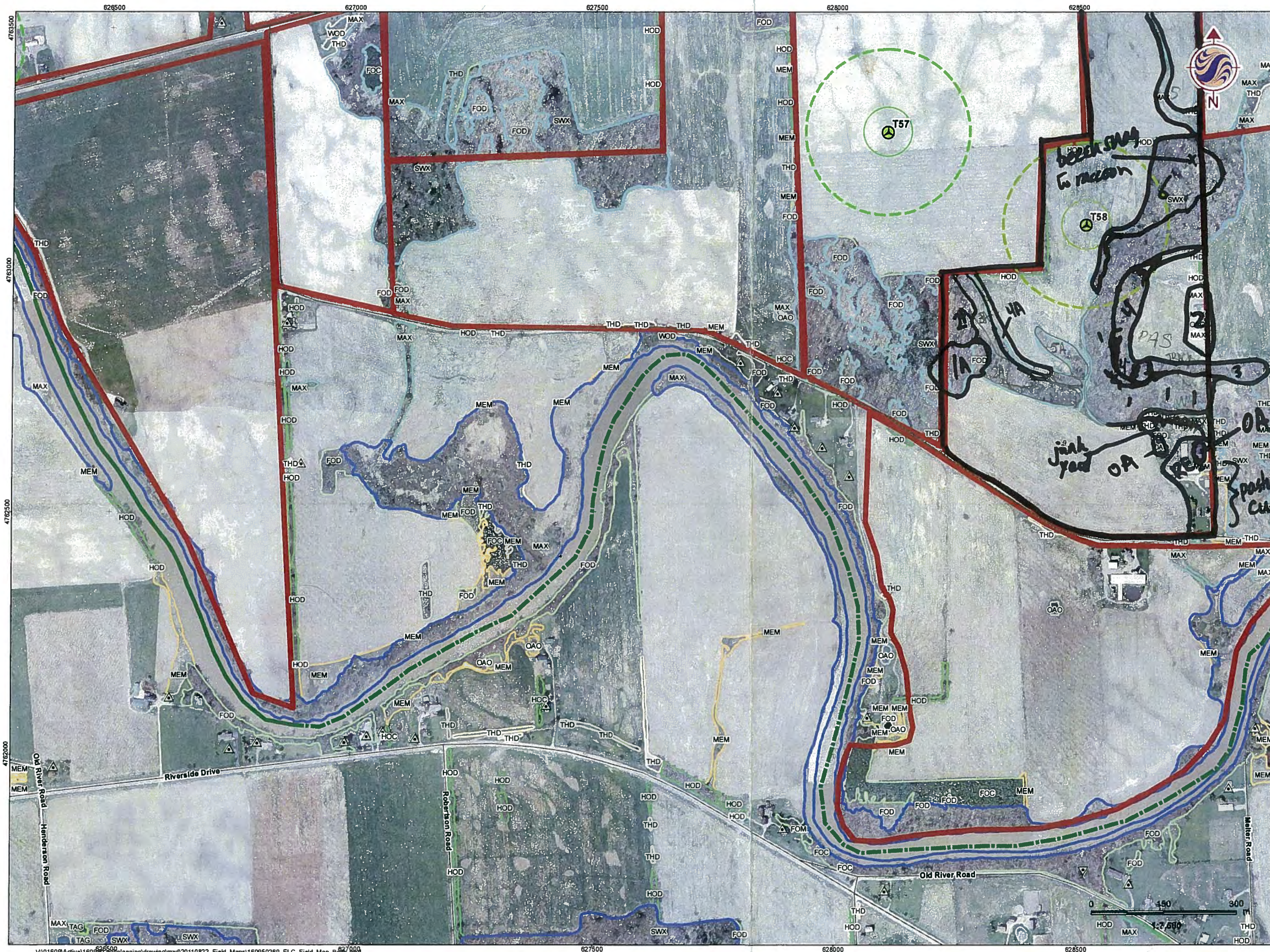
Stantec

August, 2011
160950269

Client/Project
Niagara Region Wind Corporation

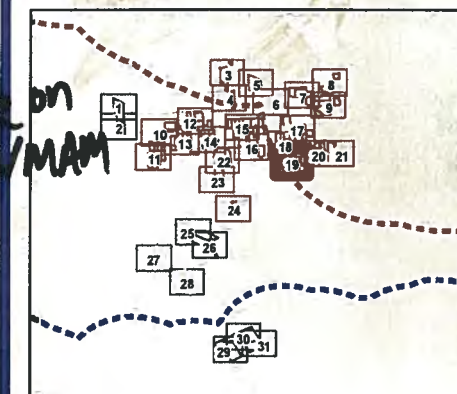
Figure No
F-19

Title
Field Map 19



Legend

- Preliminary Study Area
- Signed Project Sites
- Potential Signed Property
- Road
- Railway
- Municipality Lower Tier
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- To Be Determined
- Open Rock/Shrub Rock Barren
- Shoreline
- Bluff
- Swamp
- Marsh
- Bog
- Wetland
- Meadow
- Thicket
- Savanna
- Woodland
- Forest
- Hedgerow
- Treed Agriculture
- Open Water
- Turbines on Developable Land and 101m Diameter
- 170.5m Buffer of Turbine
- Turbines W/ 120m S/B PSW and 101m Diameter
- 170.5m Buffer of Turbine
- Turbines W/ 120m S/B Woodland and 101m Diameter
- 170.5m Buffer of Turbine
- Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter
- 170.5m Buffer of Turbine



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

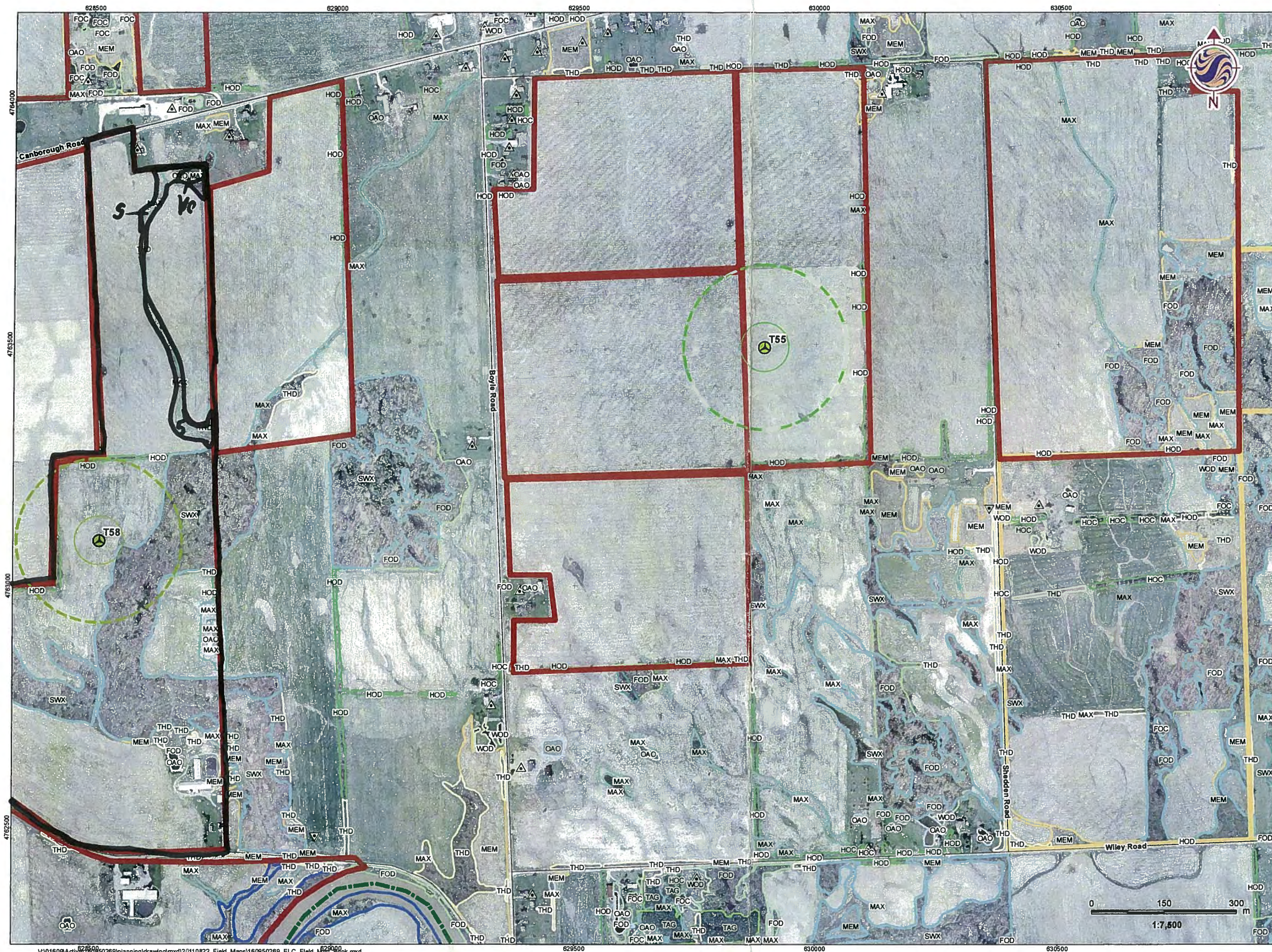
September, 2011
160950269

Client/Project
Niagara Region Wind Corporation

Figure No.
E-19

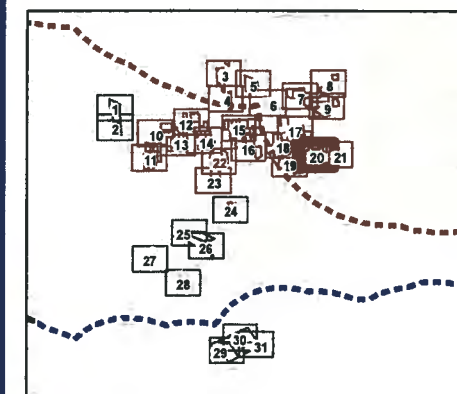
Title

ELC Field Map 19



Legend

- Preliminary Study Area
- Signed Project Sites
- Potential Signed Property
- Road
- Railway
- Municipality Lower Tier
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- To Be Determined
- Open Rock/Shrub Rock Barren
- Shoreline
- Bluff
- Swamp
- Marsh
- Bog
- Wetland
- Meadow
- Thicket
- Savanna
- Woodland
- Forest
- Hedgerow
- Tree Agriculture
- Open Water
- Turbines on Developable Land and 101m Diameter
- 170.5m Buffer of Turbine
- Turbines W/ 120m S/B PSW and 101m Diameter
- 170.5m Buffer of Turbine
- Turbines W/ 120m S/B Woodland and 101m Diameter
- 170.5m Buffer of Turbine
- Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter
- 170.5m Buffer of Turbine



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

September, 2011
160950269

Client/Project
Niagara Region Wind Corporation

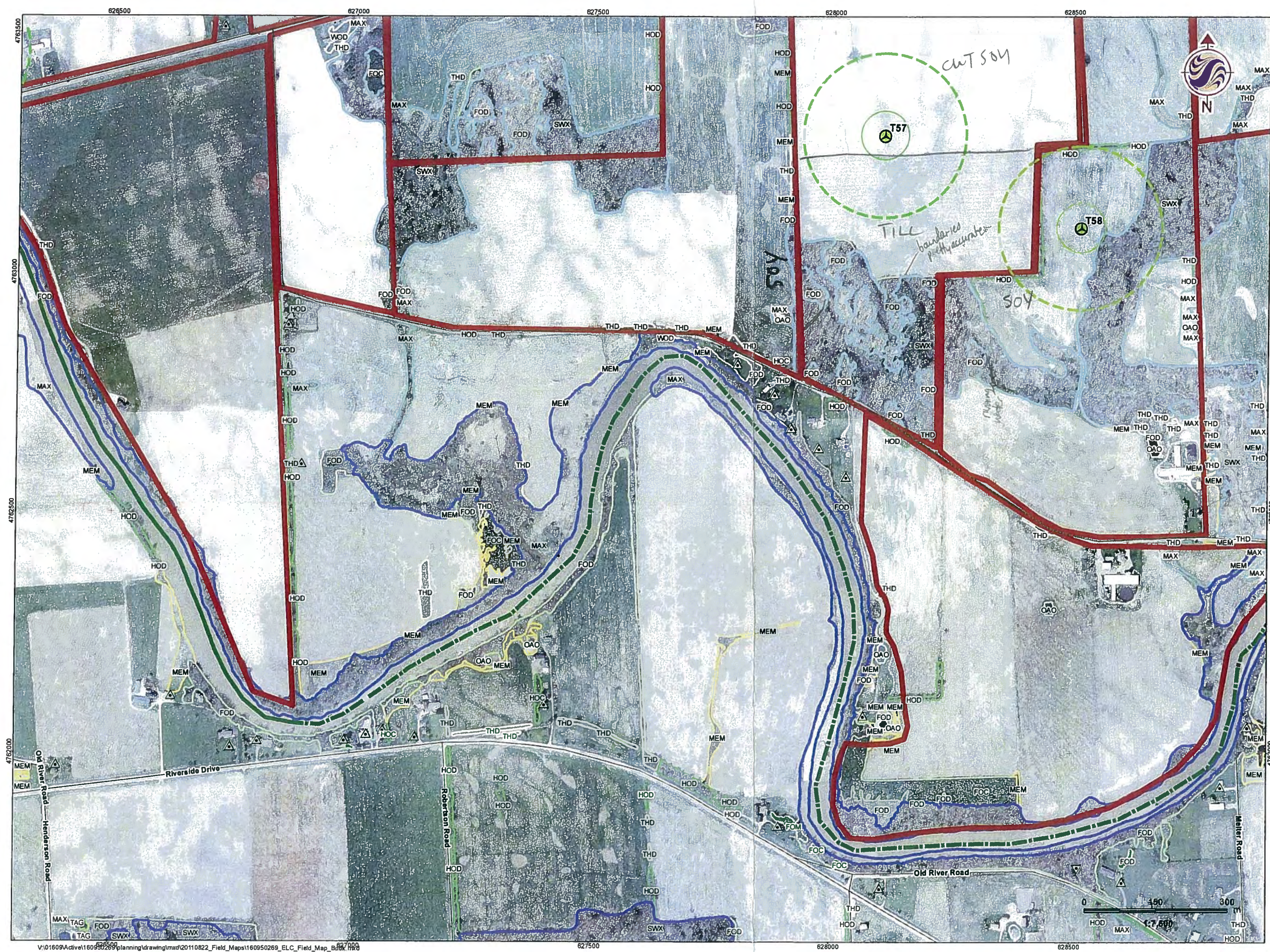
Figure No.
E-20

Title

ELC Field Map 20

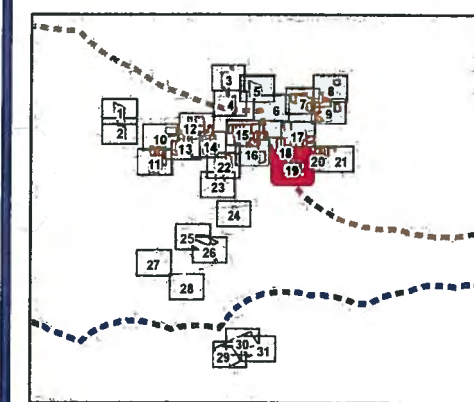
picture of unknown term
in SWM

0628202
4762876



Legend

- Preliminary Study Area
- Signed Project Sites
- Potential Signed Property
- Road
- Railway
- Municipality Lower Tier
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- To Be Determined
- Open Rock/Shrub Rock Barren
- Shoreline
- Bluff
- Swamp
- Marsh
- Bog
- Wetland
- Meadow
- Thicket
- Savanna
- Woodland
- Forest
- Hedgerow
- Treed Agriculture
- Open Water
- Turbines on Developable Land and 101m Diameter
- 170.5m Buffer of Turbine
- Turbines W/ 120m S/B PSW and 101m Diameter
- 170.5m Buffer of Turbine
- Turbines W/ 120m S/B Woodland and 101m Diameter
- 170.5m Buffer of Turbine
- Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter
- 170.5m Buffer of Turbine



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.



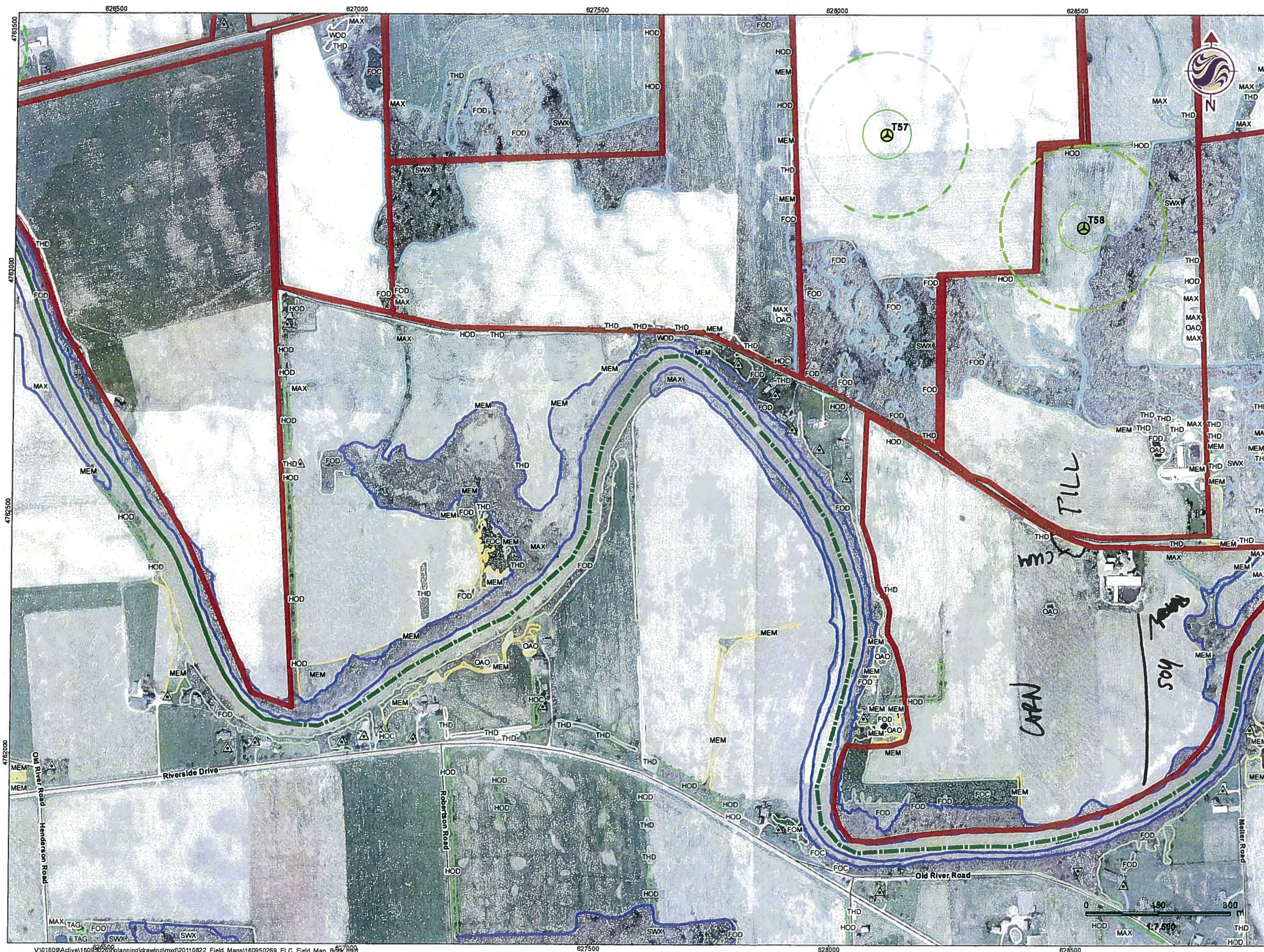
Stantec

September, 2011
160950269

Client/Project
Niagara Region Wind Corporation

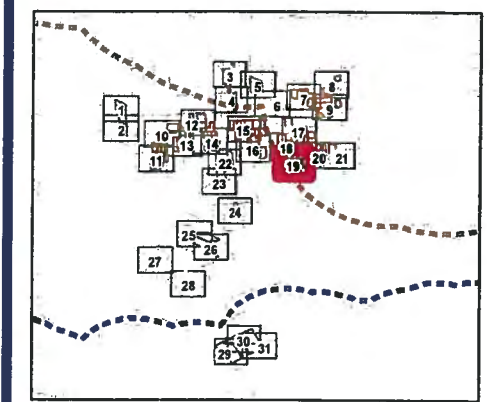
Figure No.
E-19

Title
ELC Field Map 19



Legend

	Preliminary Study Area
	Signed Project Sites
	Potential Signed Property
	Road
	Railway
	Municipality Lower Tier
	Provincially Significant Wetland
	Other/Locally Significant Wetland
	To Be Determined
	Open Rock/Shrub Rock Barren
	Shoreline
	Bluff
	Swamp
	Marsh
	Bog
	Wetland
	Meadow
	Thicket
	Savanna
	Woodland
	Forest
	Hedgerow
	Tree Agriculture
	Open Water
	Turbines on Developable Land and 101m Diameter
	170.5m Buffer of Turbine
	Turbines W/ 120m S/B PSW and 101m Diameter
	170.5m Buffer of Turbine
	Turbines W/ 120m S/B Woodland and 101m Diameter
	170.5m Buffer of Turbine
	Turbines W/ 120m S/B Wood/ Wetland and 101m Diameter
	170.5m Buffer of Turbine



- ### 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

September, 2011
160950269

Client/Project
Niagara Region Wind Corporation

Figure No.
E-19

Title
ELC Field Map 19

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Niyam</i>		POLYGON: <i>15-1</i>	
	SURVEYOR(S): <i>NC</i>	DATE: <i>NOV 21</i>	UTME:	
	START: <i>10:00</i>	END: <i>10:30</i>	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	<i>Salix</i>
2	SUB-CANOPY	4	4	<i>CEROC</i> > <i>ILEVERT</i> = <i>VACCORY</i>
3	UNDERSTOREY			
4	GRD. LAYER	5-7	2	<i>FERNS</i> > <i>CAREX</i> > <i>BIDENS</i>

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	M	25 - 50	N	>50		
STANDING SNAGS:		O	<10	R	10 - 24	N	25 - 50	N	>50		
DEADFALL/LOGS:		2	<10	R	10 - 24	N	25 - 50	N	>50		
ABUNDANCE CODES:		N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT			
COMM. AGE:		PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH					

SOIL ANALYSIS:

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

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:		CODE:
COMMUNITY SERIES:		CODE:
ECOSITE:		CODE:
VEGETATION TYPE: <i>nutthornbrush mineral thickset swamp</i>		CODE: <i>SWT2-4</i>
	INCLUSION	CODE:
	COMPLEX	CODE:

Evidence of Disturbance / Notes:

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

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

[illegible]

Page ____ of ____

Signature: N. D. Smith
(Field Personnel)

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

Signature: A. D. Smith
(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:

Nov 21, 2011

Field Personnel:

N. Charlton

Weather Conditions:

TEMP (°C):

12

WIND:

2

CLOUD:

20

PPT:

none

PPT (in last 24 hrs):

none

ELC Polygon: #15/19-1 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?
	pooled water throughout community				yes	yes

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

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

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <u>Niagara</u>		POLYGON: <u>15-2</u>	
	SURVEYOR(S): <u>NC</u>	DATE: <u>Nov 18 21</u>	UTME:	
	START: <u>10:30</u>	END: <u>11:00</u>	UTMZ:	UTMN:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER		HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	QUERUBR > ALESASA > TILAMER
2	SUB-CANOPY	3	3	QUERUBR > ACESAJA > OSVIRG
3	UNDERSTOREY	4	3	ACESASA > FAGGRAN > RUBUS SP
4	GRD. LAYER	5-7	2	RUBUS > EURMACR > CAREX SP

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

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

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

SIZE CLASS ANALYSIS:	A	<10	A	10 - 24	b-A	25 - 50	R	>50
----------------------	---	-----	---	---------	----------------	---------	---	-----

STANDING SNAGS:	0	<10	0	10 - 24	5	25 - 50	N	>50
-----------------	---	-----	---	---------	---	---------	---	-----

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

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

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

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES/GLEY	g = 1 scoop	G =
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE: F-M Sugar Maple - hardwood deciduous forest	CODE: FOD 6-5
INCLUSION swamp maple	CODE: SWD 3-3
COMPLEX	CODE:

Evidence of Disturbance / Notes:

ce of Disturbance / Notes: Downy woodpecker - frog buried in soil
- piles of metal garbage

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

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

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

[illegible]

Page of

Signature:

(Field Personnel)

Quality Control: This form is complete ☒ & legible ☒

Signature:

(Project Manager)



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

Stantec

Woodland & Wildlife Habitat Assessment Form

Project Number:

160950269

Project Name:

NRWC

Date:

Nov 21, 2011

Field Personnel:

N. Charlton

Weather Conditions:

TEMP (°C):

12

WIND:

2

CLOUD:

20

PPT:

none

PPT (in last 24 hrs):

none

ELC Polygon: #

15/19-2

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

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

Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?

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

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

Contains potential bat hibernacula features?

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

Contains potential bat roosting features?

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

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

Contains large stick nests?

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

- frog was buried in soil (could not see enough to ID)
- downy woodpecker

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

NOV 21



Legend

- Preliminary Study Area
- Road
- Railway
- Municipality Lower Tier
- Provincially Significant Wetland
- Other/Locally Significant Wetland

1: SWT2-4

2: FOD6-5/SWD3-3

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.

November, 2011
160950269

Client/Project
Niagara Region Wind Corporation

Figure No.
E-19

Title
ELC Field Map 19