ELC Polygon: #65-2 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

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

Bat Roosting Features:

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

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

Stick Nests:

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

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

Seeps/Springs/Vernal Pools:

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

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

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

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

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Coll. Tile 65; Poly 4

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: July 12, 2012 Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	10%	none	none

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 65- 4

START TIME:

END TIME:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY	4	4	Buttonbush > riverbank grape > virginia creeper
4	GRD. LAYER	5-7	2	Reed canary grass > Duckweed

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% N/O=not observed

STANDING SNAGS:	0	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	YOUNG	✓	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Buttonbush thicket Swamp CODE: SWT2-4

COMPLEX CODE:

Evidence of Disturbance / Notes:

Large OA in center Full of Duckweed

green heron
common moorhen?

Huge thicket of Buttonbush
Surrounding + in OA

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

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

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
SHRUBS:							
Buttonbush			D				
riverbank grape			O				
virginia creeper			O				
indian hemp			O				
GROUND:							
Reed canary grass				A			
Duckweed				A			

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: # 654 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

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

Bat Roosting Features:

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

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

Stick Nests:

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

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

Seeps/Springs/Vernal Pools:

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

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

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

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

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Coll. Tile 65; Poly 5

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160950269 Project Name: NHWC

Date: July 12, 2012 Field Personnel: C. Pagette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	10%	none	none

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: CS-S

START TIME:

END TIME:

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	white elm
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	5-7	4	Cattails > Reed canary grass > goldenrods > milkweed

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% N/O=not observed

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
		✓			

VEGETATION TYPE: Cattail Shallow Marsh CODE: MAS2-1

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
white elm	R						
SHRUBS:							
GROUND:							
cattails	D						
goldenrods				O			
milkweed				O			
Reed canary grass				O			

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: # 65-5 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

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

Bat Roosting Features:

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

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

Stick Nests:

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

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

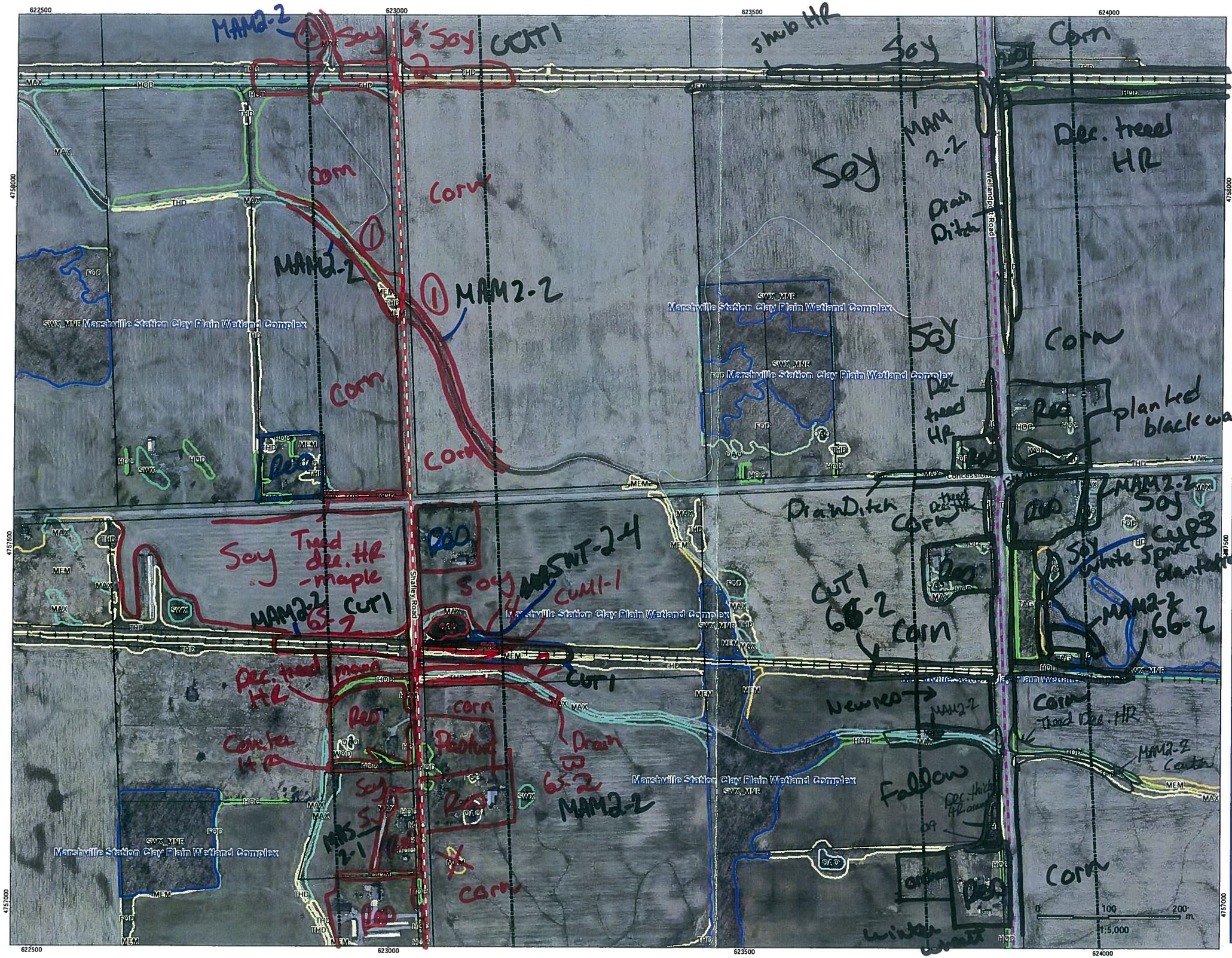
Seeps/Springs/Vernal Pools:

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

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

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

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

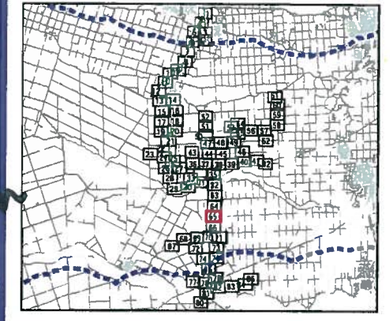


Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer

Turbines in Signed Lands
- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands
- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Proposed Collector Cable
- Alternate Collector Cable Route
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary



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, 2012.

Stantec

June, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
65

Title
Proposed Collector Route
Map 65

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_17_ELC_Collector_Map_Book_20120613.mxd
Revised: 2012-06-14 By: bcowper

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Coll. Tile 66; Poly 6

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160956269 Project Name: NRWC

Date: July 12, 2017 Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	10%	none	none

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 66-6

START TIME:

END TIME:

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

STAND DESCRIPTION:

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

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

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

STANDING SNAGS:	N	<10	N	10 – 24	M	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	✓ YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: phrag shallow marsh — CODE: MAS1-10

COMPLEX — CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
white elm	O						
SHRUBS:							
GROUND:							
phragmites				D			
goldenrod sp				O			

Signature: _____ (Field Personnel)

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

Signature: _____ (Project Manager)

ELC Polygon: #66 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

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

Bat Roosting Features:

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

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

Stick Nests:

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

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

Seeps/Springs/Vernal Pools:

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

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

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

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

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Coll. Tile 66; Poly 6

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: July 12, 2012 Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	10%	none	none

POLYGON DESCRIPTION

ELC – COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 66-7

START TIME:

END TIME:

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	poplar sp.
2	SUB-CANOPY			
3	UNDERSTOREY	4	3	Sumac > riverbank grape > willow sp. > sp.
4	GRD. LAYER	5-7	4	goldenrod sp. > reed canary grass > milkweed

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% N/O=not observed

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:		PIONEER		YOUNG	✓	MID-AGE		MATURE		OLD GROWTH

VEGETATION TYPE: Cultural meadow CODE: CUM1-1

COMPLEX: Meadow marsh CODE: MAM2-2

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 N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
poplar sp.	R						
SHRUBS:							
Sumac			O				
willow sp. sp.			R-O				
riverbank grape			O				
GROUND:							
golden rod sp.				D			
milkweed				O			
phragmites				O			
cow vetch				O			
Reed canary grass				O			

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: # 66-7 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Coll. Tile 66; Poly 8

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: July 12, 2012 Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	10%	none	none

POLYGON DESCRIPTION

ELC – COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 66-8

START TIME:

END TIME:

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			green ash = white ash > white elm > cottonwood
2	SUB-CANOPY			
3	UNDERSTOREY			riverbank grape > virginia creeper
4	GRD. LAYER			goldenrod sp > queen anne's lace > chicory

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% N/O=not observed

STANDING SNAGS:	R	<10	R	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	YOUNG	✓ MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Ash Cultural woodland CODE: CUW1-4

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
white elm	O-A						
white ash	A						
E. cottonwood	A						
green ash	A						
SHRUBS:							
riverbank grape			A				
virginia creeper			O				
GROUND:							
goldenrod sp				A			
queen anne's lace				O			
chicory				O			

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: #66-8 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

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

Bat Roosting Features:

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

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

Stick Nests:

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

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

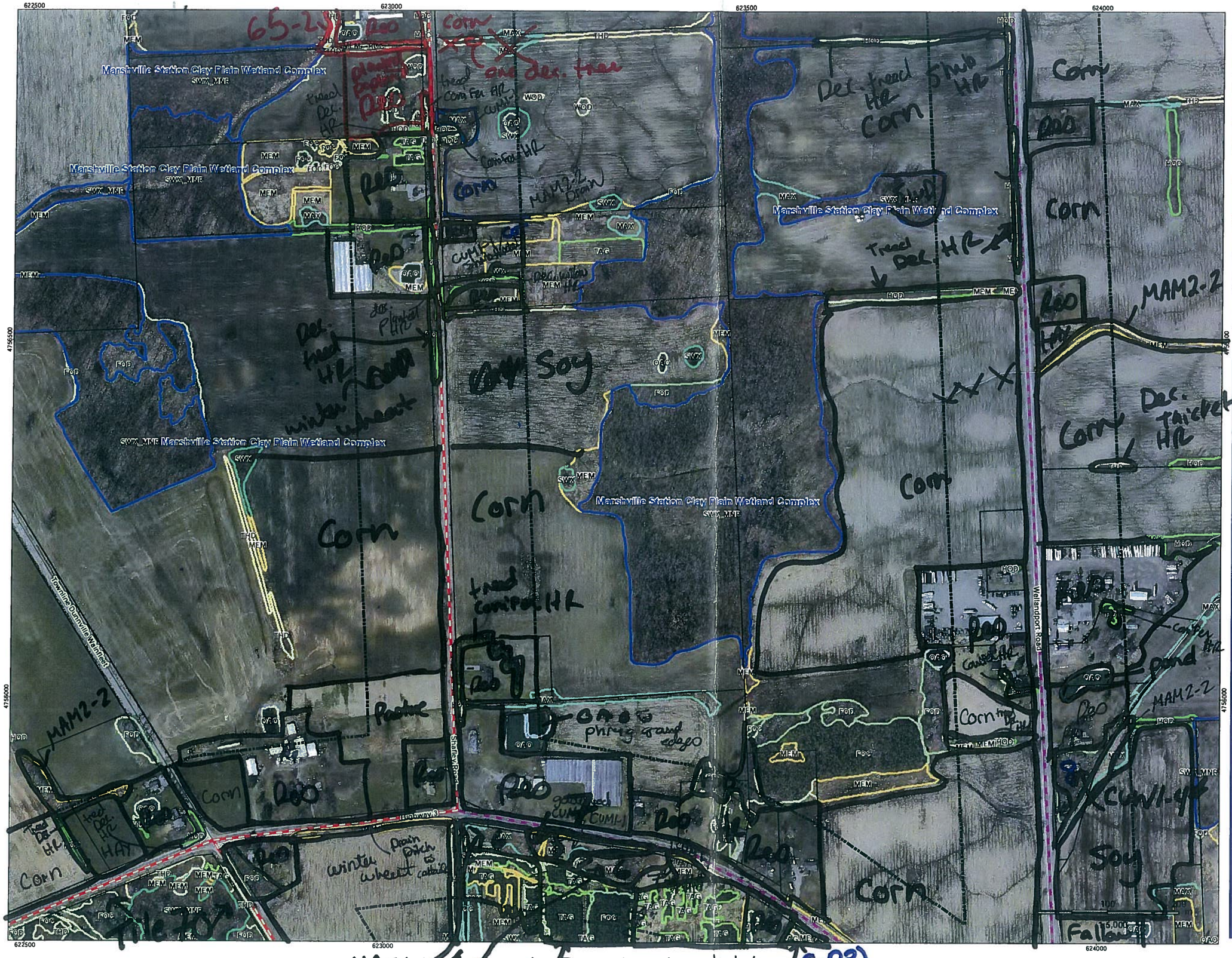
Seeps/Springs/Vernal Pools:

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

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

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

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



Legend

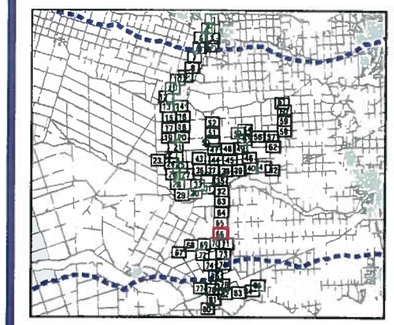
- Proposed T Line Route
- Proposed Collector 120m Buffer

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Proposed Collector Cable
- Alternate Collector Cable Route
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary



Notes

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160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
66

Title
Proposed Collector Route
Map 66

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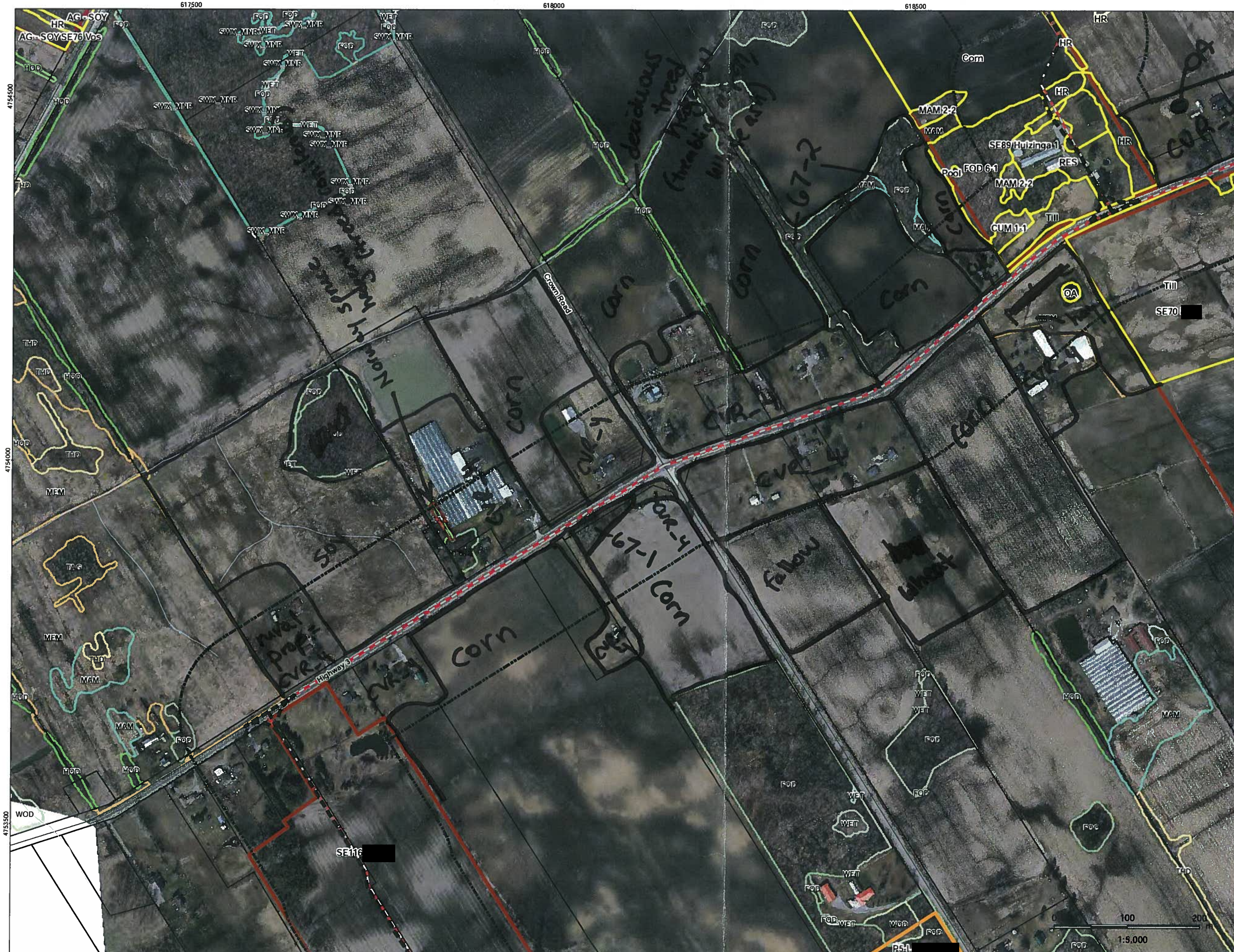
Revised: 2012-06-14 By: bcowper



Legend

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- Proposed Collector 120m Buffer

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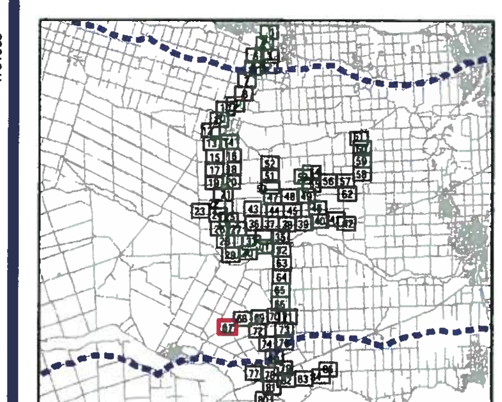

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Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
67

Title
Proposed Collector Route
Map 67

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Revised: 2012-06-14 By: bcowper

619000 619500 620000

4755000 4754500

R11TS10a

SE82

SE89

SE70

SE70

SE

Hutchinson Road

Highway 3

Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer

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Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
68

Title
Proposed Collector Route
Map 68

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Revised: 2012-06-14 By: bcowper

4 = CUR_4 - Rural Property

620500 621000 621500 622000

4755500 4755000 4754500

SE82 [redacted]

SE110 Vanderknyff

Planted SE13 [redacted]

SE102 [redacted]

SE102 [redacted]

Highway 3

Mount Carmel

Hutchinson Road

Ellsworth Drain Woodlots

Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer

Turbines in Signed Lands
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Notes

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Amphibian Field Maps

Figure No.
69

Title
Proposed Collector Route
Map 69

V:\160950269\active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_17_ELC_Collector_Map_Book_20120613.mxd
Revised: 2012-06-14 By: bcowper

Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer

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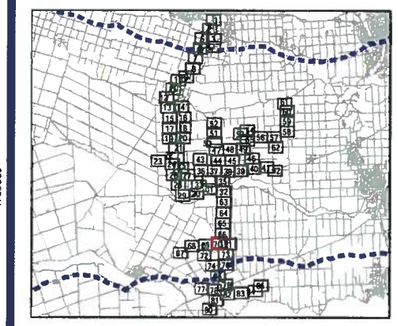

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Amphibian Field Maps

Figure No.
70

Title
Proposed Collector Route
Map 70

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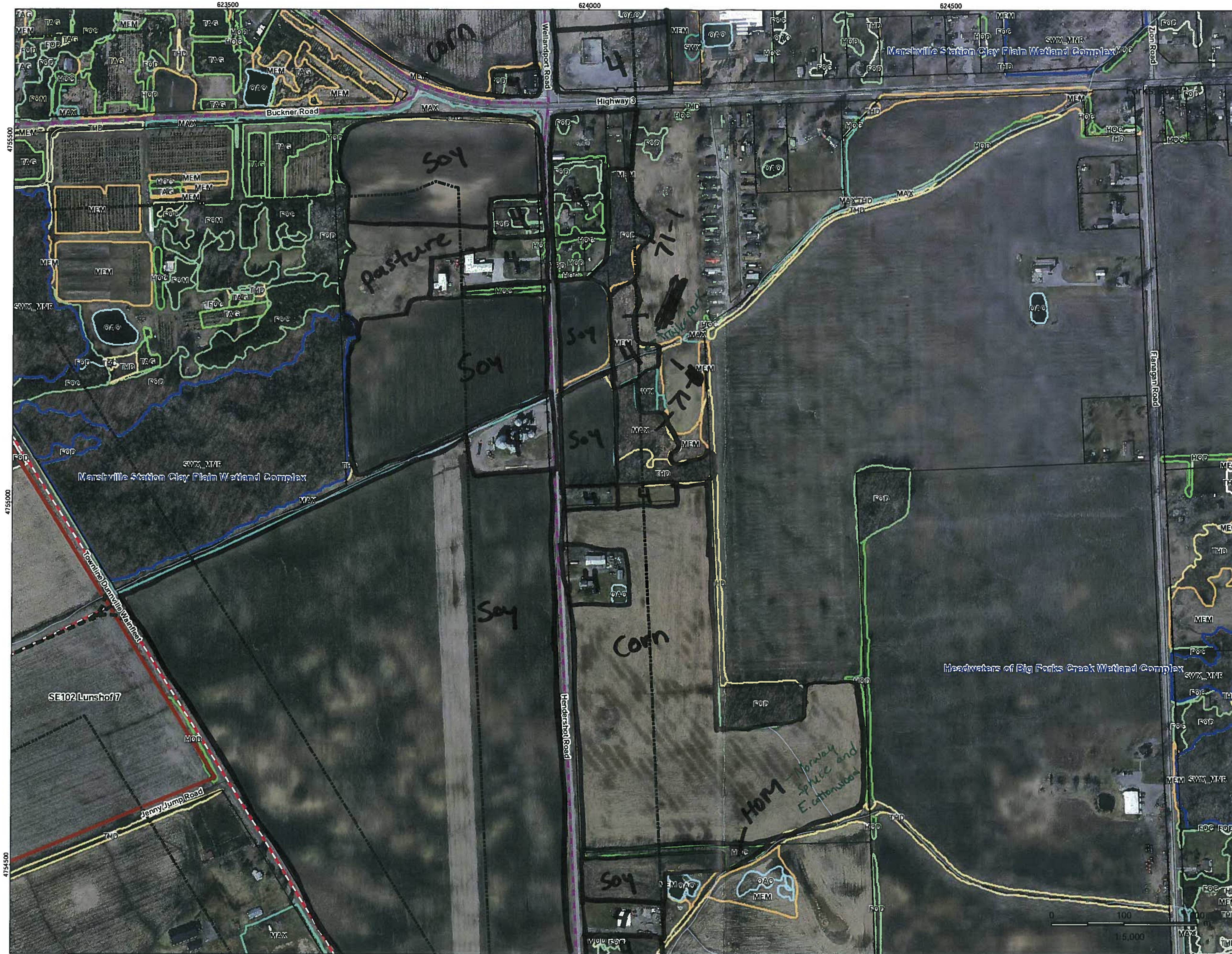
Revised: 2012-06-14 By: bcowper



Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer
- Turbines in Signed Lands
  - Standard Turbine (105 dBA)
  - Potential Turbine Locations
- Turbines in Unsigned Lands
  - Standard Turbine (105 dBA)
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Figure No.
71

Title
Proposed Collector Route
Map 71

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Revised: 2012-06-14 By: bcowper

620500 621000 621500

4754000 4753500

Richinson Road

Jenny Jump Road

East of Dunnville Woodlots

SE70 Farr

SE87 [redacted]

0 200 400 m

1:5,000

Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer

Turbines in Signed Lands

- Standard Turbine (105 dBA)
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t60950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
72

Title
Proposed Collector Route
Map 72

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Revised: 2012-06-14 By: bcowper

Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer

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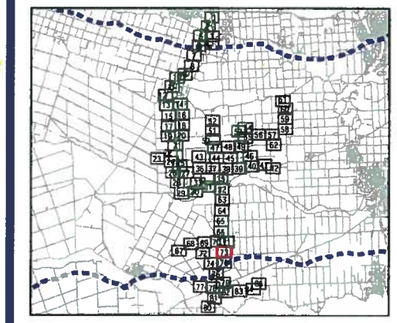

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Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
73

Title
Proposed Collector Route
Map 73

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_FieldmapsI160950269_Release_17_ELC_Collector_Map_Book_20120613.mxd
Revised: 2012-06-14 By: bcowper

Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer
- Turbines in Signed Lands
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  - Potential Turbine Locations
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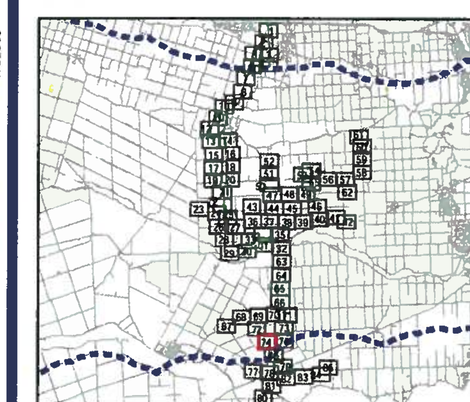

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Amphibian Field Maps

Figure No.
74

Title
Proposed Collector Route
Map 74

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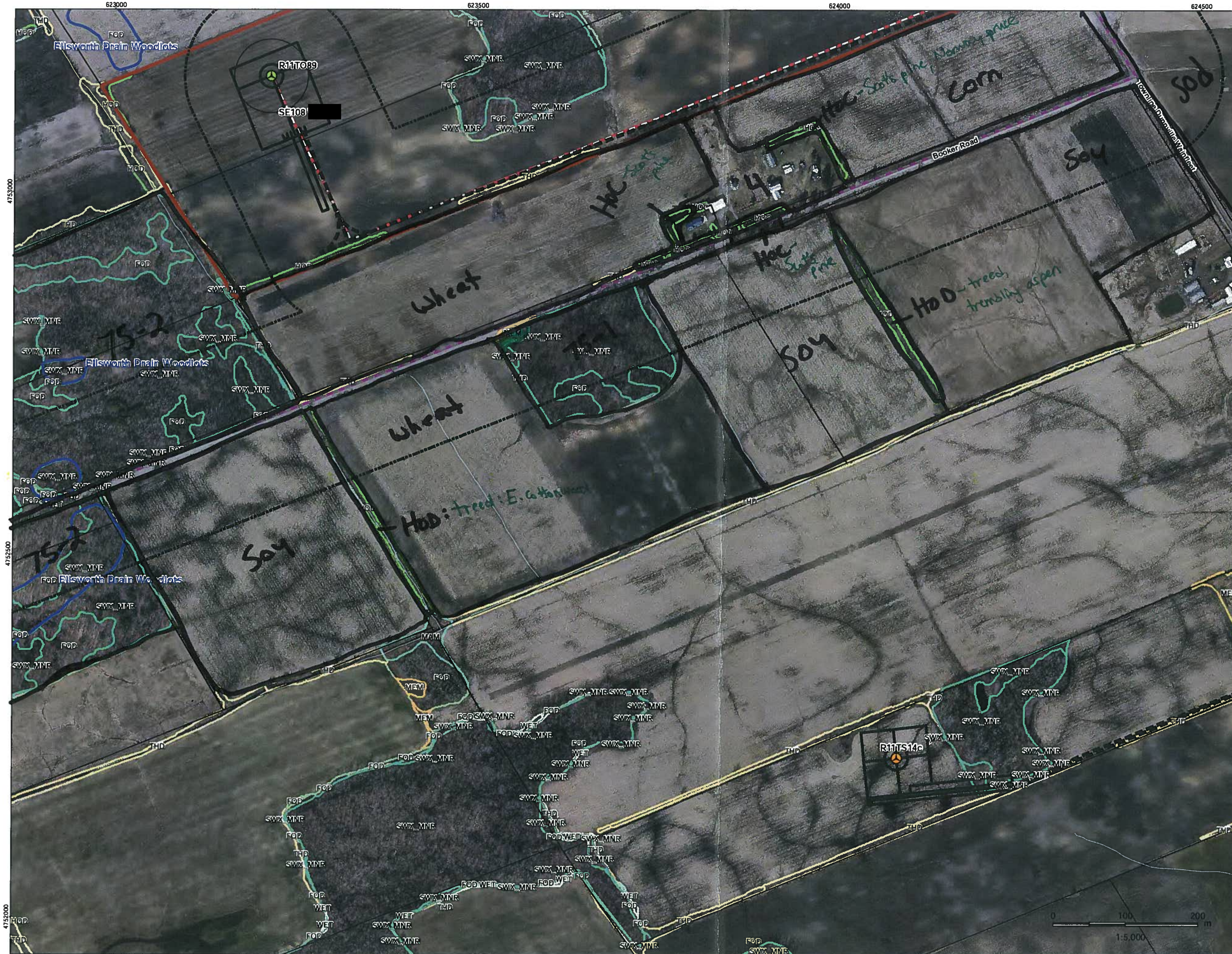
Revised: 2012-06-14 By: bcowper



Legend

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- Proposed Collector 120m Buffer

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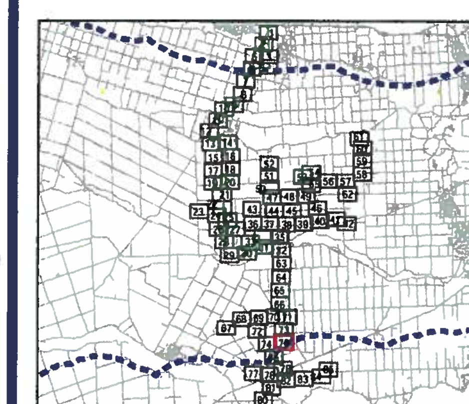

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Amphibian Field Maps

Figure No.
75

Title
Proposed Collector Route
Map 75

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Revised: 2012-06-14 By: bcowper

Legend

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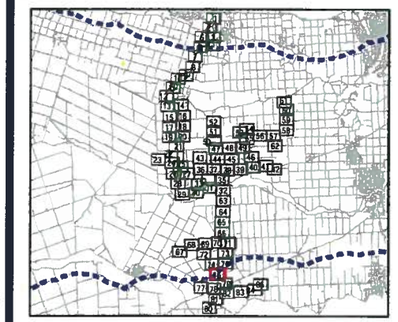

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160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
76

Title
Proposed Collector Route
Map 76

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Revised: 2012-06-14 By: bcowper

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

Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 1609 50269 Project Name: Niagara Region Wind Farm

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	3	100	none	heavy rain

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 67-1

START TIME: 10:00

END TIME: 10:17

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY	2	3	E. Cottonwood > Tremb. Aspen > White elm
SUB-CANOPY	3	3	Staghorn Sumac >> Riverbank grape
UNDERSTOREY			
GRD. LAYER	6	4	Goldenrod sp > Burdock

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% N/O=not observed

STANDING SNAGS:	R	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

VEGETATION TYPE: Fresh-moist Cottonwood Deciduous Forest CODE: FOD8-3 *

COMPLEX CODE:

Evidence of Disturbance / Notes:

- can see almost entire polygon canopy from road, potentially <0.5ha, but close

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

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Trembling aspen	O					—	
E. Cottonwood	A				—		
Freeman's maple	R					—	
Manitoba maple	R					—	
White elm	O				—		
SHRUBS:							
Staghorn Sumac		O	A		—		
Riverbank grape			A		—		
GROUND:							
Goldenrod sp.				D	—		
Burdock				O	—		

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 67-1 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

Warbling Vireo (S)
Red-winged Blackbird (H)

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	27	3	100	none	heavy rain

POLYGON DESCRIPTION

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 67-2

START TIME: 10:32

END TIME: 10:49

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

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
CANOPY	2	4	White elm > Trem Aspen > Green ash
SUB-CANOPY	3	3	White elm > Green ash
UNDERSTOREY	4	1	Riverbank grape > White elder
GRD. LAYER	5	1	Goldenrod spp

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% N/O=not observed

STANDING SNAGS:	O	<10	R	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	X	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Fresh-moist white elm lowland Deciduous forest CODE: FOD7-1

COMPLEX CODE:

Evidence of Disturbance / Notes:

Old hedgerow that has expanded / naturalized around drain at edges of field

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

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Green ash	O	O				–	
Trembling aspen	A					–	
White elm	A	A				✓	
SHRUBS:							
Riverbank grape			A			–	
White elderberry		R				✓	
GROUND:							
Goldenrod spp				A		✓	

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 67-2 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

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

Bat Roosting Features:

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

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

Stick Nests:

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

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

Seeps/Springs/Vernal Pools:

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

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

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

Mourning dove (S)
Chipping Sparrow (S)

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	90	none	heavy rain

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 68-1

START TIME: 11:07

END TIME: 11:18

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	Black walnut > White ash = Sugar maple
2	SUB-CANOPY			none
3	UNDERSTOREY			none
4	GRD. LAYER	6	4	grass spp > Calico aster

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% N/O=not observed

STANDING SNAGS:								
	O	<10	O	10 – 24	O	25 – 50	R	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
		X			

VEGETATION TYPE: Black walnut deciduous plantation CODE: CUP1-3

COMPLEX CODE:

Evidence of Disturbance / Notes:

Old silo in middle, very open understorey, cultural woodland

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

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
White elm	O					✓	
Staghorn Sumac		O				✓	
White ash	O					✓	
Black walnut	O					✓	
E. Cottonwood	O					✓	
SHRUBS:							
Riverbank grape			A			✓	
GROUND:							
Common milkweed				R			
Calico aster				O			
Grasses				D			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 68-1 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

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

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Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara region WF

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	35	3	80	none	heavy rain

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 68-2

START TIME: 11:23

END TIME: 11:32

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	Norway Spruce
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	5	4	reed canary grass > narrow-leaved cattail

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% N/O=not observed

STANDING SNAGS:	☐ <10	☐ 10 – 24	☐ 25 – 50	☐ >50

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

STAND MATURITY:	☐ PIONEER	☒ YOUNG	☐ MID-AGE	☐ MATURE	☐ OLD GROWTH

VEGETATION TYPE: Reed Canary grass Mineral Meadow Marsh CODE: MAM2-2

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Norway spruce		R					
SHRUBS:							
GROUND:							
narrow-leaved cattail				A			
purple loosestrife				O			
goldenrod sp.				O			
Scirpus sp.				O			
reed canary grass				A			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 68-2 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

Bat Roosting Features:

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

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

Stick Nests:

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

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

Seeps/Springs/Vernal Pools:

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

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

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

red-winged blackbird (S)
chipping sparrow (S)
house sparrow (S)
barn swallow (F) - foraging
Savannah Sparrow (S)

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2013 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	75	none	heavy rain

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 68-3

START TIME: 11:49

END TIME: 11:58

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	T. Aspen
2	SUB-CANOPY	3	1	T. Aspen
3	UNDERSTOREY	4	3	T. Aspen > Willow sp.
4	GRD. LAYER	6	3	Goldenrod sp > Phragmites

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% N/O=not observed

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	X	PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

VEGETATION TYPE: Dry-fresh Poplar Deciduous Forest CODE: FOD3-1

Inclusion COMPLEX: Common reed Graminoid Mineral Meadow Marsh CODE: MAM2-11 *

See green on map for inclusions

Evidence of Disturbance / Notes:

trails (ATV) throughout

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

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Trembling aspen	O	A	D				
SHRUBS:							
Willow sp.							
GROUND:							
Phragmites				O			
Narrow-leaved cattail				O			
Goldenrod sp.				A			
Common dandelion				O			
Common fleabane				R			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: #68-3 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

Song Sparrow (S)
red-winged black bird (S)
Barn swallow (H) - foraging
Black-capped chickadee (H)
Chipping Sparrow (S)
C. Grackle (H)

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	60	none	heavy rain

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 69-1

START TIME: 12:15

END TIME: 12:30

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	Trembling aspen
2	SUB-CANOPY	3	1	T. Aspen > Freeman's maple > white elm
3	UNDERSTOREY	4	1	Willow sp > riverbank grape
4	GRD. LAYER	5	4	Cattail > red canary grass > goldenrod sp.

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

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

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50
ABUNDANCE CODES:	N=NONE	R=RARE	O=OCCASIONAL	A=ABUNDANT	N/O=Not observed			

STAND MATURITY:	PIONEER		X YOUNG		MID-AGE		MATURE		OLD GROWTH

VEGETATION TYPE: Cattail Mineral Shallow Marsh CODE: MAS2-1

COMPLEX: Inclusion Fresh-Moist Poplar Deciduous Forest CODE: FOD8-1

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤6 m	>6 m	COLL.
TREES:							
Trembling aspen	O	A					
Freeman's maple		O					
White elm		R					
SHRUBS:							
Willow sp.			A				
Riverbank grape			A				
GROUND:							
Narrow-leaved cattail			A				
Reed canary grass			A				
Goldenrod sp.			A				
Scirpus sp.			R				
Common dandelion			R				

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 69-1 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

Red-winged blackbird (S)
Mourning Dove (S)

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	40	none	heavy rain

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 69-2

START TIME: 13:10

END TIME: 13:20

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	N. Spruce > Weeping willow > White ash
2	SUB-CANOPY	3	2	Staghorn sumac > Weping willow
3	UNDERSTOREY	4	3	Staghorn sumac > riverbank grape
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% N/O=not observed

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	X	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Sumac Cultural Thicket CODE: CUT1-11

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
Staghorn Sumac		A					
Weeping willow	D	O					
Norway spruce	O						
White ash	R						
SHRUBS:							
Staghorn Sumac			A				
Riverbank grape			R				
GROUND:							

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 69-2 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	40	none	heavy rain

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 69-3

START TIME: 13:26

END TIME: 13:38

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	Freeman's maple > E. cottonwood > Sugar maple > white pine
2	SUB-CANOPY	3	3	Trembling aspen > Norway spruce > Staghorn sumac
3	UNDERSTOREY	4	2	White Spruce > Staghorn Sumac
4	GRD. LAYER	5	3	Goldenrod > riverbank grape

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% N/O=not observed

STANDING SNAGS:	N/O	<10	O	10 – 24	N/O	25 – 50	N/O	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
		X			

VEGETATION TYPE: Dry-fresh White Pine – Sugar maple Mixed Forest CODE: FOM2-2

COMPLEX Norway spruce Coniferous Plantation CODE: CUP3-9

Inclusion

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Trembling aspen	O						
Black walnut	R						
Freeman's maple	D						
E. Cottonwood	O						
White spruce (roadside)	R						
Sugar maple	A						
White pine	O						
Norway Spruce	O						
SHRUBS:							
Riverbank grape			A				
Staghorn sumac		A					
GROUND:							
Goldenrod Sp.				A			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 69-3 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	40	none	heavy rain

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 69-4

START TIME: 13:10

END TIME: 13:18

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	E. Cottonwood > Sugar maple
2	SUB-CANOPY	3	3	Sugar maple > trem aspen > Scots pine
3	UNDERSTOREY	4	3	Raspberry > Hawthorn
4	GRD. LAYER	5	3	Goldenrod > Reed canary 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% N/O=not observed

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	X	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Dry-fresh Sugar Maple – White Birch – Poplar Deciduous Forest CODE: FOD5-10

COMPLEX Inclusion White spruce Coniferous plantation CODE: CUP3-8

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 N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
White spruce (planted)		O					
Scot's pine (planted)		O					
Trembling aspen		O					
E. Cottonwood	O						
Sugar maple		O					
SHRUBS:							
Wild red raspberry			A				
Staghorn Sumac			R				
Riverbank grape			O				
Hawthorn sp.			A				
GROUND:							
Phragmites			O				
Goldenrod sp.			A				
Reed canary grass			A				

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 69-4 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	30	none	heavy rain

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 69-5

START TIME: 13:49

END TIME: 14:00

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			Scots pine > Sugar maple > White elm
2	SUB-CANOPY	3	2	
3	UNDERSTOREY	4	2	White elm > Staghorn sumac > riverbank grape
4	GRD. LAYER	5	3	reed canary grass > goldenrod > calico aster

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% N/O=not observed

STANDING SNAGS:	R	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:		PIONEER	X	YOUNG		MID-AGE		MATURE		OLD GROWTH

VEGETATION TYPE: Sumac Cultural Thicket CODE: CUT1-1

COMPLEX CODE:

Evidence of Disturbance / Notes:

Thicket along drain

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

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

SPECIES CODE	LAYER				DISTANCE FROM RD.		COLL.
	1	2	3	4	≤5 m	>5 m	
TREES:							
Scots pine		O					
White elm		O	A				
Manitoba maple		R					
Sugar maple		O					
SHRUBS:							
Staghorn sumac		A	A				
Riverbank grape		R	A				
willow sp.		O	O				
GROUND:							
Reed canary grass				A			
Goldenrod sp.				A			
Wild carrot				O			
Calico aster				O			
Burdock				R			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 69-S **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St.James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	30	none	heavy rain

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 70-1

START TIME: 14:05

END TIME: 14:15

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	Trembling aspen > Scot's pine
2	SUB-CANOPY	3	3	White spruce > trembling aspen > Scot's pine
3	UNDERSTOREY	4	2	Staghorn Sumac > riverbank grape
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% N/O=not observed

STANDING SNAGS:	N/O	<10	N/O	10 – 24	N/O	25 – 50	N/O	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
		X			

VEGETATION TYPE: Fresh-moist Poplar Mixed Forest CODE: FOM8-1

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
White Spruce		A					
Scot's pine	6	O					
Trembling aspen	O	O					
Red oak		R					
White pine	O	O					
SHRUBS:							
Staghorn Sumac			O				
Riverbank grape			O				
GROUND:							

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 70-1 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

Rock pigeon (H)
Am. crow (H)

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

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Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	30	none	heavy rain

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 70-2

START TIME: 14:21

END TIME: 14:36

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	1	Trem aspen > white elm > green ash
2	SUB-CANOPY	3	2	Trem aspen > white elm > Scot's pine
3	UNDERSTOREY	4	2	C. Buckthorn
4	GRD. LAYER	5	2	Phragmites

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% N/O=not observed

STANDING SNAGS:	A	<10	O	10 – 24	R	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	YOUNG	X MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: White birch-poplar Mineral Deciduous Swamp CODE: SWD4-3

COMPLEX CODE:

Evidence of Disturbance / Notes:

Difficult to see into this polygon due to roadside veg

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

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

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
Trembling aspen	A	A					
Scot's pine		R					
White elm	R	O	O				
Green ash		O					
SHRUBS:							
Staghorn sumac (roadside)			R				
C. Buckthorn			O				
GROUND:							
Phragmites			O				

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 70-2 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

Song sparrow (S)
Red-eyed Vireo (S)
Gry catbird (S)
Am goldfinch (S)
N. Cardinal (S)
Warbling Vireo (S)

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

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Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St. Jones

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	30	none	heavy rain

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 70-3

START TIME: 14:42

END TIME: 14:49

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	Trem aspen > white elm > Freeman's maple
2	SUB-CANOPY	3	3	Trem aspen > staghorn sumac
3	UNDERSTOREY	4	3	Trem aspen > riverbank grape
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% N/O=not observed

STANDING SNAGS:	N/O	<10	N/O	10 – 24	N/O	25 – 50	N/O	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH
		X			

VEGETATION TYPE: Fresh-moist Poplar Deciduous Forest CODE: FOD8-1

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
Trembling aspen	D	A					
White elm		O					
Freeman's maple		R					
SHRUBS:							
Riverbank grape							
Staghorn sumac							
GROUND:							

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 70-3 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	27	1	10	none	none

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 70-4

START TIME: 9:44

END TIME: 9:56

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	4	Scot's pine >> White pine = red oak
2	SUB-CANOPY	4	2	Staghorn sumac > trem. aspen
3	UNDERSTOREY	3 4	1	Staghorn sumac > riverbank grape
4	GRD. LAYER	5	2	Goldenrod sp. > wild asparagus

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% N/O=not observed

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	X	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Scotch Pine Cultural plantation CODE: CUP3-3

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Scot's Pine	D						
Red oak	O	O					
White pine	O						
Trembling aspen	R	O					
Tamarack	R						
SHRUBS:							
Riverbank grape			O				
Staghorn Sumac			A				
GROUND:							
Goldenrod sp.				A			
Wild asparagus				R			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 70-4 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

Song Sparrow (S)
Cedar Waxwing (H)
Morning Dove (S)
Chipping Sparrow (S)
Yellow-rumped warbler (S)
Red-eyed Vireo (S)
N. Flicker (H)
White-tailed deer + fawn (OO)

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

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Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	32	1	15	none	none

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 71-1

START TIME: 10:28

END TIME: 10:36

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	Trem aspen >> ash sp.
2	SUB-CANOPY	3	2	Ash sp.
3	UNDERSTOREY	4	1	Riverbank grape
4	GRD. LAYER	5	1	Goldenrod sp.

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

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

STANDING SNAGS:	N/O <10	N/O 10 – 24	N/O 25 – 50	N/O >50

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

STAND MATURITY:	PIONEER	X YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Fresh-Moist Poplar Deciduous Forest CODE: FOD 8-1

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Trembling aspen	A						
Ash sp.	O	A					
SHRUBS:							
Staghorn sumac (edge)		O					
Riverbank grape			O				
GROUND:							
Goldenrod sp. (edge)				O			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 71-3 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

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

STICK NEST(S) IDENTIFIED

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

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160 950 269 Project Name: Niagara Region WC

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	1	80	none	none

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 72-1

START TIME: 15:19

END TIME: 15:26

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	6	4	Goldenrod Sp > Fleabane > reed canary 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% N/O=not observed

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	X	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Dry-Moist Old Field Meadow CODE: CUM1-1

~~COMPLEX~~ Inclusion: Cattail Mineral Shallow Marsh CODE: MAS2-1

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Scot's pine	R	R					
Black locust		R					
SHRUBS:							
Trembling aspen			R				
GROUND:							
Broad-leaved cattail				O			
Reed canary grass				A			
Common milkweed				O			
Goldenrod sp.				D			
Phragmites				R			
Common Fleabane				A			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 72-1 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WC

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	1	100	none	none

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 72-2

START TIME: 15:29

END TIME: 15:44

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	white ash > red oak > white oak = trem. aspen
2	SUB-CANOPY	3	3	white ash > red oak > trem. aspen
3	UNDERSTOREY	4	1	riverbank grape
4	GRD. LAYER	5		

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% N/O=not observed

STANDING SNAGS:	O	<10	N/O	10 – 24	N/O	25 – 50	N/O	>50

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

STAND MATURITY:		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

VEGETATION TYPE: Dry-Fresh White Ash Deciduous Forest Type — CODE: FOD 4-2

COMPLEX — CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Trembling aspen	O	O					
Red oak	O	O					
White ash	A	A					
White oak	O						
Black walnut	R	R	R				
Manitoba maple	R						
SHRUBS:							
Riverbank grape			A				
GROUND:							

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: #72-2 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WC

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	1	20	none	none

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 73-1

START TIME: 10:49

END TIME: 10:53

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	4	Scot's pine >> trem. aspen > red oak
2	SUB-CANOPY	3	2	white spruce > white ash
3	UNDERSTOREY	4	1	Riverbank grape
4	GRD. LAYER	5	1	Goldenrod sp > C. milkweed

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% N/O=not observed

STANDING SNAGS:	A	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	X	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Scotch Pine coniferous plantation CODE: CUP3-3

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Scot's pine	D						
Red oak	O						
White spruce		O					
Balsam poplar	R						
Trembling aspen	O		R				
White ash	O	O					
White pine		R					
Red cedar		R					
Freeman's maple		R					
SHRUBS:							
Riverbank grape			A				
GROUND:							
Goldenrod sp.				A			
Common milkweed				R			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 73-1 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WF

Date: July 4, 2012 Field Personnel: Kathrine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	1	15	none	none

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 73-2

START TIME: 11:06

END TIME: 11:12

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER	6	4	Grasses >> Calico aster = wheat

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% N/O=not observed

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	X	PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

VEGETATION TYPE: Cultural Meadow Old Field CODE: CUM1-1

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Trembling aspen		R					
SHRUBS:							
GROUND:							
Wild carrot				O			
Calico aster				A			
Wheat				A			
Chicory				R			
Common ragweed				R			
Grasses				D			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 73-2 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

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

STICK NEST(S) IDENTIFIED

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

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WL

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	1	45	none	none

POLYGON DESCRIPTION

ELC – COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 74-1

START TIME: 14:15

END TIME: 14:20

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	Black locust >> trem. aspen
2	SUB-CANOPY	3	2	Black locust > red cedar
3	UNDERSTOREY	4	1	Riverbank grape
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% N/O=not observed

STANDING SNAGS:	☐ <10	☐ 10 – 24	☐ 25 – 50	☐ >50

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

STAND MATURITY:	☐ PIONEER	☒ YOUNG	☐ MID-AGE	☐ MATURE	☐ OLD GROWTH

VEGETATION TYPE: Dry-Fresh Black Locust Deciduous Forest Type — CODE: FODM4-4*

COMPLEX: — CODE:

Evidence of Disturbance / Notes:

- more of a woodland, cover-wise
- black locust planted along edges; regeneration in center of polygon

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

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

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
Black locust	D	D					
Trembling aspen	O						
White pine	R						
Red cedar		R					
E. Cottonwood		R					
SHRUBS:							
Riverbank grape			A				
GROUND:							

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 74-1 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WC

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	1	60	none	none

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 74-2

START TIME: 14:56

END TIME: 15:03

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	3	1	Black locust > weeping willow
2	SUB-CANOPY	4	1	Black locust > Staghorn sumac
3	UNDERSTOREY	5	1	Riverbank grape > Ash sp.
4	GRD. LAYER	6	4	Reed canary grass >> goldenrod sp

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

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

STANDING SNAGS:	☐ 0	☐ <10	☐ 10 – 24	☐ 25 – 50	☐ >50

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

STAND MATURITY:	☒ PIONEER	☒ YOUNG	☐ MID-AGE	☐ MATURE	☐ OLD GROWTH

VEGETATION TYPE: Mineral Cultural Meadow CODE: CUM1

~~COMPLEX~~ Inclusion: Sumac Cultural Thicket CODE: CUT1-1

Evidence of Disturbance / Notes:

Old farm equipment spread throughout field, old abandoned agricultural field

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

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

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
Common apple		R					
Black locust	O	O					
Weeping willow	R						
SHRUBS:							
Staghorn sumac		O					
Ash sp.			O				
Riverbank grape			O				
Common blackberry			R				
GROUND:							
Reed canary grass				D			
Common ragweed				D			
Goldenrod sp.				A			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 74-2 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

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

Bat Roosting Features:

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

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

Stick Nests:

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

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

Seeps/Springs/Vernal Pools:

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

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

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

Am. Robin (H)

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WC

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	1	35	none	none

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 75-1

START TIME: 11:30

END TIME: 11:42

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	Red maple > G. ash > Am. elm > Trem. aspen
2	SUB-CANOPY	3	3	Red maple > G. ash > Am. elm > Trem. aspen
3	UNDERSTOREY	4	2	Am. elm > C. buckthorn > Riverbank grape
4	GRD. LAYER	5	2	Goldenrod >> Sensitive fern

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% N/O=not observed

STANDING SNAGS:	R	<10	R	10 – 24	N/O	25 – 50	N/O	>50

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

STAND MATURITY:		PIONEER		YOUNG	X	MID-AGE		MATURE		OLD GROWTH

VEGETATION TYPE: Red maple mineral deciduous swamp CODE: SWD3-1

~~COMPLEX~~ Inclusion: Dry-moist old field meadow CODE: CUM1-1

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Green ash	A	A					
Am. elm	O	O	O				
Red maple	A	A					
Trembling aspen	O						
Pin Oak	R						
SHRUBS:							
Common buckthorn			O				
Riverbank grape			O				
Staghorn Sumac			R				
GROUND:							
Goldenrod sp.				O			
Sensitive Fern				R			
Calico aster				R			
Common ragweed				R			
Red clover				R			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 754 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

Song sparrow (S)
E. Wood Pewee (S)
Am. Crow (H)
Mourning Dove (S)
Yellow-bellied sapsucker (H)
Black-capped chickadee (H)
Red-tailed Hawk - Flyover
Blue Jay (H)
Baltimore oriole (H)
Red-winged blackbird (H)
Rose-breasted grosbeak (S)
Downy woodpecker (H)

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WC

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	1	15	none	none

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 75-2

START TIME: 11:55

END TIME: 12:10

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	Sugar maple >> am beech > am. elm
2	SUB-CANOPY	3	2	Sugar maple > am. elm
3	UNDERSTOREY	4	2	Spice bush > > Virginia creeper
4	GRD. LAYER	5	3	Wild lily-of-the valley > False solomon's seal

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% N/O=not observed

STANDING SNAGS:								
	O	<10	O	10 – 24	R	25 – 50	N/O	>50

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

STAND MATURITY:	PIONEER	YOUNG	X MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Dry-Fresh Sugar maple - Beech Deciduous Forest CODE: FOD 5-2

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DISTANCE FROM RD. ≤5 m	DISTANCE FROM RD. >5 m	COLL.
TREES:							
Sugar maple	D	A	A				
Am. beech	O						
Am. elm	O	O					
Trembling aspen	R						
E. Hemlock	R						
Yellow birch		O					
Black cherry		O					
White ash	O						
SHRUBS:							
Spice bush			A				
Virginia Creeper			O				
Alleghany blackberry			R				
GROUND:							
White trillium				O			
Wild lily-of-the-valley				A			
Ostrich fern				O			
False solomon's seal				O			
Tall white lettuce				R			

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 75-2 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

Red-eyed vireo (S)
Yellow-bellied sapsucker (H)
Am Crow (H)
Ovenbird (S)

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

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Stantec

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: Niagara Region WC

Date: July 4, 2012 Field Personnel: Katherine St James

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	1	45	none	none

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 76-1

START TIME: 14:35

END TIME: 14:40

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	Trem aspen >> Freeman's maple > Green ash
2	SUB-CANOPY	3	3	Trem aspen > Green Ash
3	UNDERSTOREY	4	1	Riverbank grape
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% N/O=not observed

STANDING SNAGS:	N/O <10	N/O 10 – 24	N/O 25 – 50	N/O >50

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

STAND MATURITY:	PIONEER	X YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Poplar Mineral Deciduous Swamp CODE: SWD4-1B

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Trembling aspen	A	A					
Green ash	O	A					
Freeman's maple	A						
Red maple	O						
SHRUBS:							
Staghorn sumac (edges)			A				
Riverbank grape			O				
Willow sp.							
GROUND:							

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

Signature: _____ (Field Personnel)

Signature: _____ (Project Manager)

ELC Polygon: # 76-1 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

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

619500 620000 620500

4778000 4777500 4777000

Sobie Road East

Thirty Road

Mud Street

SWT FOD MEM MAX SWX_MNRL THD HOD

SWX_MNRL-MEM

SWX_MNRL-Spring Creek Woodlots

MAX_MNRL-Spring Creek Woodlots

Spring Creek Woodlots

7-1 7-3 7-4 7-5 7-6

Soybeans

no hedgerow

hedgerow grasses and deciduous mature trees

Corn

hedgerow Cedar trees and some deciduous

difficult to see looks like FOD

marsh veg similar to 7-4 with some large trees 250 cm DBH

*Roadside ditches dominated by TYPLAT along Thirty Rd.

Legend

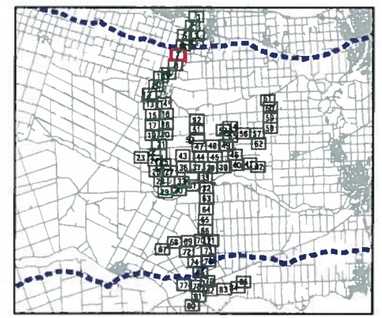
- Proposed T Line Route
- Proposed Collector 120m Buffer

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Proposed Collector Cable
- Alternate Collector Cable Route
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary



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, 2012.

Stantec

June, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
7

Title
Proposed Collector Route
Map 7

V:\01608\active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_17_ELC_Collector_Map_Book_20120613.mxd
Revised: 2012-06-14 By: bcowper

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Coll. Tile 77; Poly 1

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160950269 Project Name: NRWC

Date: July 13, 2012 Field Personnel: C. Paquette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	29	3	10%	None	None

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 77-1

START TIME:

END TIME:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2-3	3	E. cottonwood > trembling aspen > white birch
2	SUB-CANOPY			
3	UNDERSTOREY	3-4	3	E. cottonwood > trembling aspen > Staghorn Sumac
4	GRD. LAYER	5-7	3	goldenrod sp > common milkweed > queen anne's lace

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% N/O=not observed

STANDING SNAGS:	R <10	M 10 – 24	M 25 – 50	M >50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: poplar cultural woodland CODE: CUW1-4

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
trembling aspen	R-O		O	O			
white birch	R-O						
E. cottonwood	O		A	A			
SHRUBS:							
Staghorn Sumac			O				
GROUND:							
goldenrod sp				A			
Common milkweed				A			
queen anne's lace				O			
grass sp				O			

Signature: (Field Personnel)

Quality Control This form is complete ☐ & legible ☐.

Signature: (Project Manager)

ELC Polygon: #77-1 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Coll. Tile 78; Poly 2

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160950269 Project Name: NRWC

Date: July 13, 2012 Field Personnel: C. Paquette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	29	3	10%	None	None

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 78-2

START TIME:

END TIME:

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2-3	3	greenash > black walnut
2	SUB-CANOPY			
3	UNDERSTOREY	4	3	riverbank grape > Staghorn Sumac > Vig. creeper
4	GRD. LAYER	5-7	3	goldenrod > Fox Sedge > queen anne's lace

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% N/O=not observed

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE ✓	MATURE	OLD GROWTH

VEGETATION TYPE: greenash cultural woodland — CODE: CUW1-S4

COMPLEX — CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
greenash	A						
Black walnut	O						
SHRUBS:							
Staghorn Sumac			O				
riverbank grape			A				
Virginia creeper			O				
GROUND:							
Fox Sedge				A			
goldenrod				A			
queen anne lace				O			

Signature: _____ (Field Personnel)

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

Signature: _____ (Project Manager)

ELC Polygon: #78-2 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Fax: (519) 836-2493

Coll. Tile 80; Poly 3

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160960709 Project Name: NRWC

Date: July 13, 2012 Field Personnel: C. Paquette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	29	3	10%	None	None

POLYGON DESCRIPTION

ELC – COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 80-3

START TIME:

END TIME:

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2-3	3	green ash > white elm
2	SUB-CANOPY			
3	UNDERSTOREY	4	2	green ash = Staghorn Sumac > riverbank grape
4	GRD. LAYER	5-7	3	Reed canary grass > goldenrod sp > wild teasel

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

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

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER		YOUNG	✓	MID-AGE		MATURE		OLD GROWTH

VEGETATION TYPE: wet green ash cultural woodland CODE: CUW1-4

COMPLEX: Sumac cultural thicket / cultural meadow CODE: CUT1-1 / CUM1-1

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
green ash	A		A				
white elm	O						
SHRUBS:							
Staghorn Sumac			A				
Red osier dogwood			O				
riverbank grape			A				
Buttonbush			R				
GROUND:							
Reed canary grass				A			
goldenrod sp				A			
wild teasel				O			
green ash seedlings				O			

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: #80-3 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Fax: (519) 836-2493

Coll. Tile 80; Poly 4

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160950269 Project Name: NRWC

Date: July 13, 2012 Field Personnel: C. Payette

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	33	3	10%	None	None

POLYGON DESCRIPTION

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 80-4

START TIME:

END TIME:

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	green ash > Silver maple > Bur oak > white elm
2	SUB-CANOPY			
3	UNDERSTOREY	3-4	3	riverbank grape > elderberry sp.
4	GRD. LAYER	5-7	3	goldenrod sp.

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

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

STANDING SNAGS:	N	<10	N	10 – 24	N	25 – 50	N	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	✓ MATURE	OLD GROWTH

VEGETATION TYPE: green ash - mineral Dec Swamp CODE: SWD2-2

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
green ash	D		A				
white elm	C						
Bur oak	C						
Silver maple	C						
SHRUBS:							
riverbank grape			C				
elderberry sp			R				
apple			R				
Staghorn Sumac			R				
GROUND:							
goldenrod sp				A			

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: #80-4 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

620000 620500 621000 621500

4750000

4749500

4749000

Bird Road

Immanuel Road

Canal Bank Road

HR

SE114

SE119

SE77

CUM 1-1

R11TO20

SWD 2-2

FOD 7-2

TIII

Corn

DONE

Old Welland Feeder Canal Wetland Complex

Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Proposed Collector Cable
- Alternate Collector Cable Route
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary

VIA - ELC done

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, 2012.

Stantec

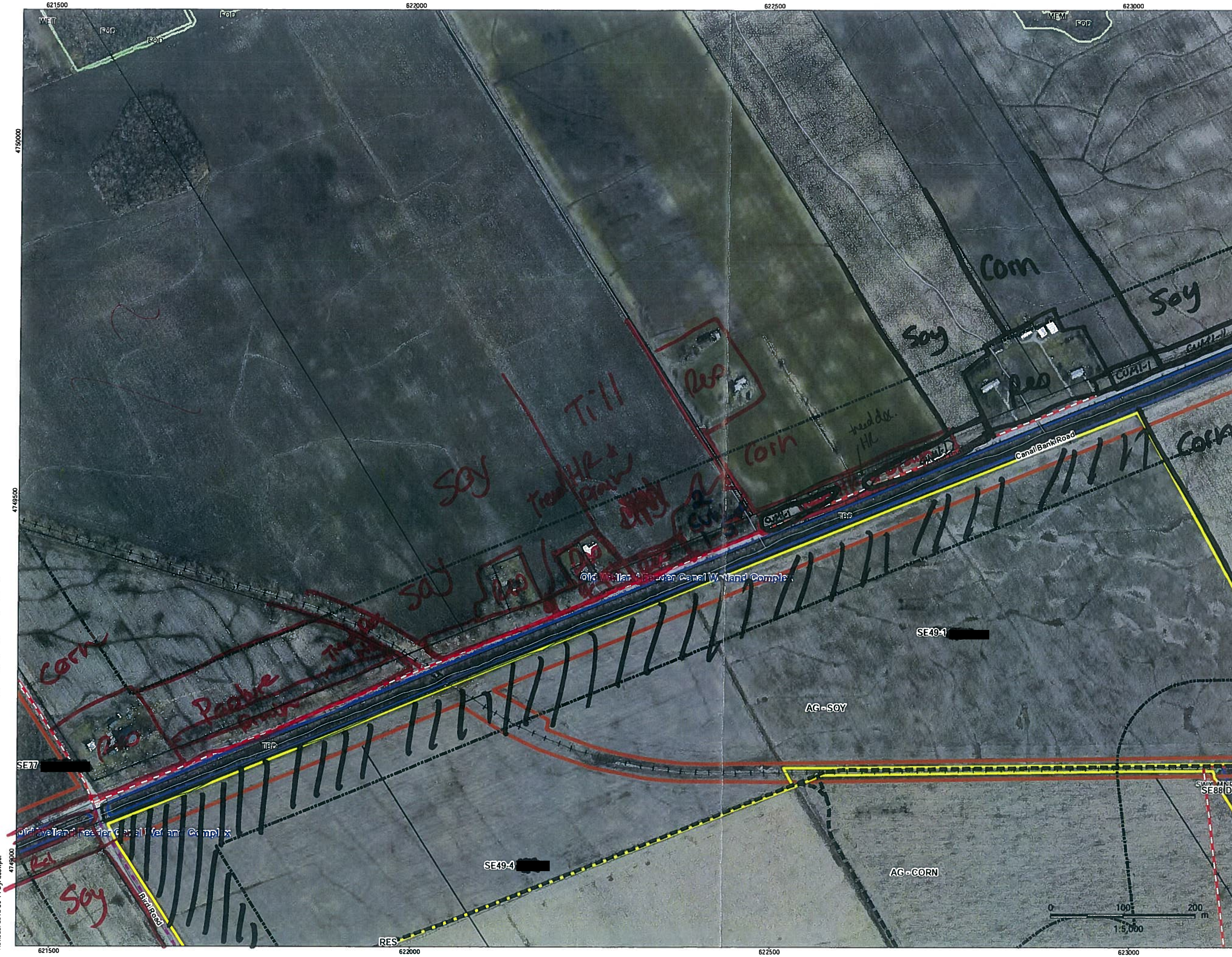
June, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
77

Title
Proposed Collector Route
Map 77

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_17_ELC_Collector_Map_Book_20120613.mxd
Revised: 2012-06-14 By: bcowper



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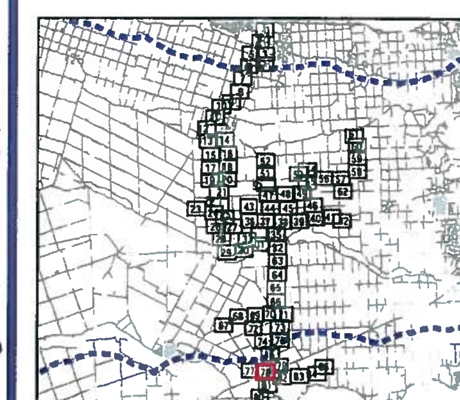
Revised: 2012-06-14 By: bcowper

Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer
- Turbines in Signed Lands
  - Standard Turbine (105 dBA)
  - Potential Turbine Locations
- Turbines in Unsigned Lands
  - Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Proposed Collector Cable
- Alternate Collector Cable Route
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary

ELC done =



Notes

1. Coordinate System: [redacted]D 19[redacted]TM Zone 17N.
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2012.

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June, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
78

Title
Proposed Collector Route
Map 78

Legend

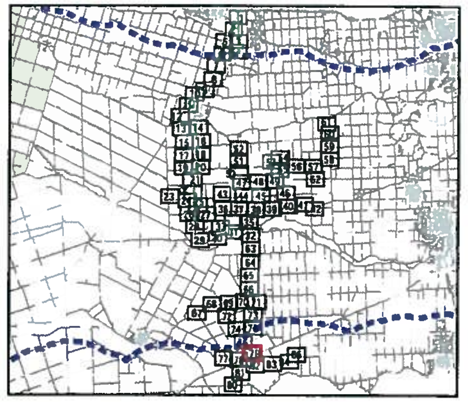
- Proposed T Line Route
- Proposed Collector 120m Buffer

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Proposed Collector Cable
- Alternate Collector Cable Route
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- ELC done



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N.
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June, 2012
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Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
79

Title
Proposed Collector Route
Map 79

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_17_ELC_Collector_Map_Book_20120613.mxd
Revised: 2012-06-14 By: bcowper

Legend

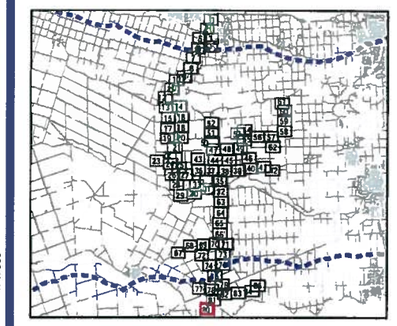
- Proposed T Line Route
- Proposed Collector 120m Buffer

Turbines in Signed Lands

- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Proposed Collector Cable
- Alternate Collector Cable Route
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary



Notes

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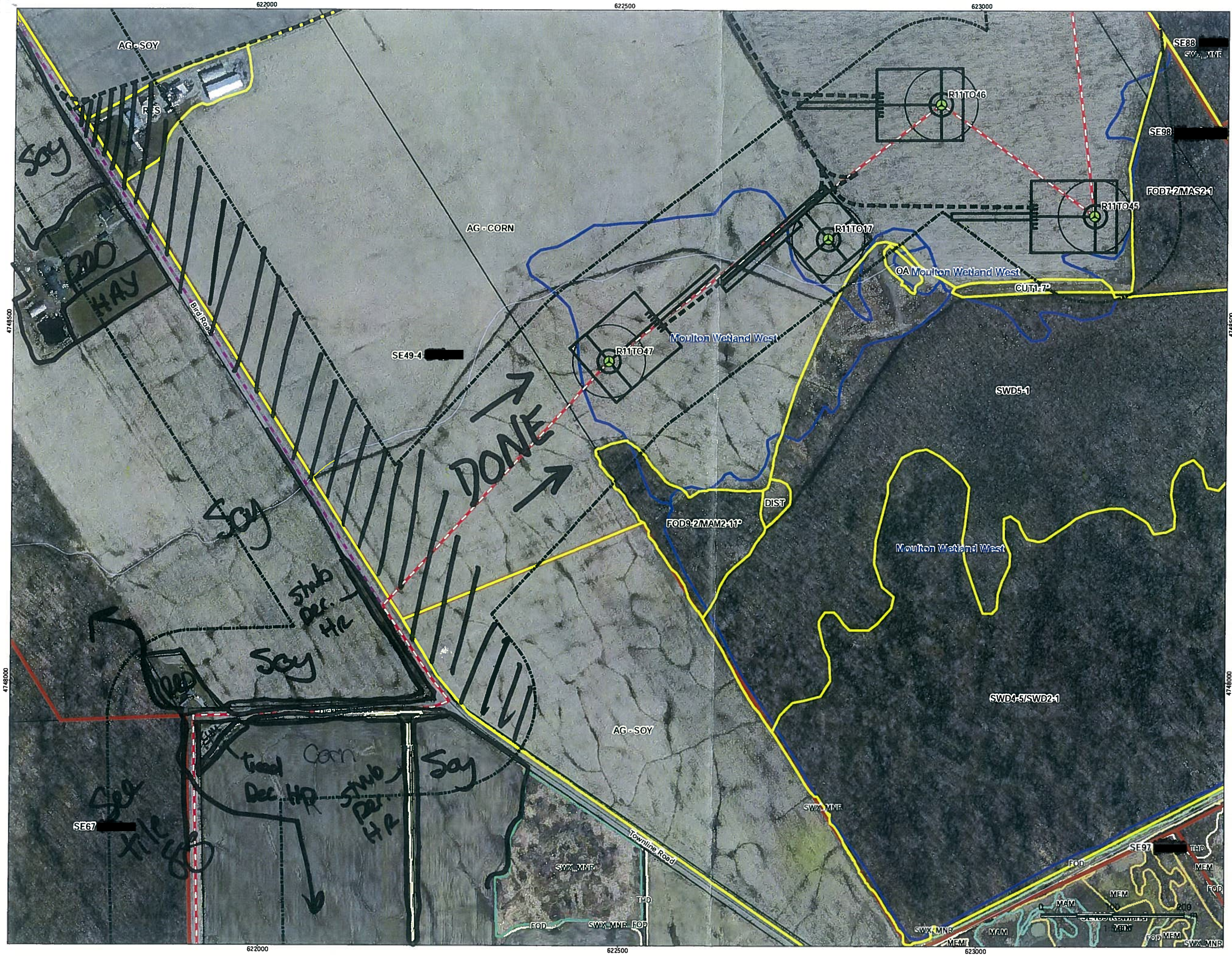
June, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
80

Title
Proposed Collector Route
Map 80

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_17_ELC_Collector_Map_Book_20120613.mxd
Revised: 2012-06-14 By: bcowper



Legend

- Proposed T Line Route
- Proposed Collector 120m Buffer

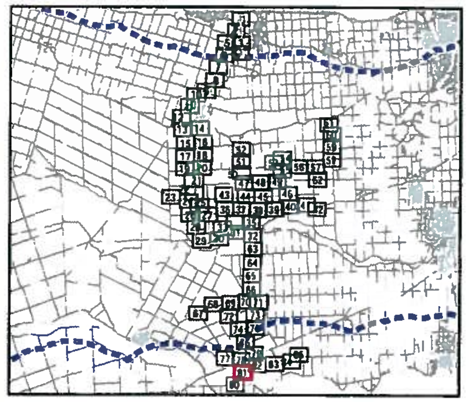
Turbines in Signed Lands

- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Proposed Collector Cable
- Alternate Collector Cable Route
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary

-ELC done



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N.
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June, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
81

Title
Proposed Collector Route
Map 81

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_17_ELC_Collector_Map_Book_20120613.mxd
Revised: 2012-06-14 By: bcowper

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Coll. Tile 86; Poly 1

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160950269 Project Name: NRWC

Date: July 27 Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	3	50	—	rain

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 86-1

START TIME: 11:30

END TIME:

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	2	deciduous trees
2	SUB-CANOPY			
3	UNDERSTOREY	S-3	4	Gray dogwood
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% N/O=not observed

STANDING SNAGS: N/O | <10 | 10 – 24 | 25 – 50 | >50

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

STAND MATURITY: PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH

VEGETATION TYPE: gray dogwood cultural thicket CODE: CULT 1-4

COMPLEX CODE:

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 N/O=Not observed

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
Deciduous trees	A					✓	
SHRUBS:							
red-panicled dogwood			D			✓	
GROUND:							
None visible							

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: #86-1 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

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

Bat Roosting Features:

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

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

Stick Nests:

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

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

Seeps/Springs/Vernal Pools:

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

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

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

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

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Fax: (519) 836-2493

Coll. Tile 86; Poly 2

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: July 27 Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	3	50	—	rain

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 86-2

START TIME: 11:35

END TIME:

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	FRAPENN >> QUEMACR
2	SUB-CANOPY	3	3	FRAPENN > ULMAMER
3	UNDERSTOREY			NONE
4	GRD. LAYER	5-7	4	SOLIDAGO >> PHAARUN > DAUCARO

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% N/O=not observed

STANDING SNAGS:	N/O	<10	10 – 24	25 – 50	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Green Ash cultural woodland CODE: CUW 1-4*

COMPLEX CODE:

Evidence of Disturbance / Notes:

less maintained than 87-8

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

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
FRAPENN	A				✓	✓	
ULMAMER	O				✓	✓	
QUEMACR	O				✓	✓	
ALESASA	R					✓	
SHRUBS:							
GROUND:							
SOLIDAGO				A	✓	✓	
DAUCARO				O-R	✓	✓	
PHAARUN				O-R	—	✓	

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: #86-2 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Tel: (519) 836-6050
Fax: (519) 836-2493

Coll. Tile 86; Poly 3

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: July 27 Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD.	PPT:	PPT (in last 24 hrs):
	25	3	50	—	rain

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 86-3

START TIME: 11:40

END TIME:

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

STAND DESCRIPTION:

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

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

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

STANDING SNAGS: N/O | <10 | 10 – 24 | 25 – 50 | >50

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

STAND MATURITY: PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH

VEGETATION TYPE: european reed mineral meadow marsh CODE: MAM2-11*

COMPLEX CODE:

Evidence of Disturbance / Notes:

– nothing but very edge visible

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

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
SHRUBS:							
GROUND:							
PHRAUST				D		✓	

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: #86-3 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

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

Bat Roosting Features:

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

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

Stick Nests:

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

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

Seeps/Springs/Vernal Pools:

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

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

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

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

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Tel: (519) 836-6050
Fax: (519) 836-2493

Coll. Tile 86; Poly 4

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: July 27 Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	3	50	—	rain

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 86-4

START TIME: 11:50

END TIME:

POLYGON DESCRIPTION

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

STAND DESCRIPTION:

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

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

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

STANDING SNAGS:	N/O	<10	O	10 – 24	R	25 – 50	N/O	>50
ABUNDANCE CODES:	N=NONE		R=RARE		O=OCCASIONAL		A=ABUNDANT	N/O=Not observed

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: American elm cultural woodland CODE: CUW1-5*

COMPLEX CODE:

Evidence of Disturbance / Notes:

tree cover ~ 25%
shrub cover ~ 40%

– likely very moist, could potentially be SWD

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
ULMAMER	A				✓	✓	
FRAPENN	O				✓	✓	
ACESASA	R				✓		
SHRUBS:							
CORNUS (gray)			A		✓	✓	
SPIALBA			R		✓	✓	
GROUND:							
SOLIDAGO				A	✓	✓	
PHAARUN				O	✓	✓	

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: # 86-4 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

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

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

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

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

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

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

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

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

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

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

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Coll. Tile 86; Poly 5

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: July 27 Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	3	50	—	rain

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 86-5

START TIME: 11:53

END TIME:

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	3	QUEMACR/BICO > SALIX = ULMAMER > ACERUBR
2	SUB-CANOPY			
3	UNDERSTOREY	4	3	CEPOCCI > SALIX > SPIALBA
4	GRD. LAYER	5-7	3	CAREX SP > PHAARUN > SOLIDAGO

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

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

STANDING SNAGS:	N/O	<10	10 – 24	25 – 50	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: swamp white oak mineral deciduous swamp CODE: SWD1

COMPLEX CODE:

Evidence of Disturbance / Notes:

photos 1-2

tree cover ~25%-30%

shrubs ~50%

-gets dense past 120 m (closed canopy)

-oak is the most abundant canopy species

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

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
ULMAMER	R-O				✓	✓	
QUEMACR/BICO	A				✓	✓	
ACERUBR	R				✓	✓	
SALIX	R-O				✓	✓	
SHRUBS:							
gray dogwood			O		✓	✓	
SALIX SP			A		✓	✓	
SPIALBA			O		✓	✓	
CEPOCCI			A		✓	✓	
GROUND:							
PHAARUN				O	✓	✓	
CAREX SP				O	✓		
SOLIDAGO				O	✓		

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: # 96-5 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Coll. Tile 86; Poly 6

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: July 27 Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	3	50	—	rain

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 86-6

START TIME: 12:15

END TIME:

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

STAND DESCRIPTION:

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

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

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

STANDING SNAGS:	N/O	<10	10 – 24	25 – 50	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: cattail shallow marsh CODE: MAS2-1

COMPLEX CODE:

Evidence of Disturbance / Notes:

- tree cover close to making it a swamp
- shrub cover close to making it a thicket swamp

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

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
FRAPENN	O					✓	
ULMAMER	A				✓	✓	
ALERUBR	A				✓	✓	
SHRUBS:							
CEPOCCI			O		✓	✓	
SPIALBA			A		✓	✓	
GROUND:							
TYPANGU				A	✓	✓	
PHAARUN				R	✓	✓	

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: #86-6 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Coll. Tile 86; Poly 7

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: July 27 Field Personnel: N. Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	3	50	—	rain

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 86-7

START TIME: 12:20

END TIME:

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

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	2	4	QUERUBR > FRAPENN
2	SUB-CANOPY	3	4	QUERUBR > ACESASA > CAROVAT = ACERUBR
3	UNDERSTOREY	—	—	NOT VISIBLE
4	GRD. LAYER	5-7	3	FORBS > 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% N/O=not observed

STANDING SNAGS:	N/O <10	R 10 – 24	R 25 – 50	N/O >50

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

STAND MATURITY:	PIONEER	YOUNG	X MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: Fresh-moist-oak-maple-hickory deciduous — CODE: FOD9

~~COMPLEX~~ buttonbush — CODE: SWT2-4

Evidence of Disturbance / Notes:

inclusion of SWT2-4 adjacent to Rd; appears dry

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

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
ACESASA		A			✓	✓	
CAROVAT		O-R			✓	✓	
QUERUBR	A	A			✓	✓	
ACERUBR	R	R-O				✓	
FRAPENN	O					✓	
ULMAMER		R			✓		
SHRUBS:							
CRATAEGUS	O				✓		
Gray dogwood	O				✓		
GROUND:							
SOLIDAGO				O	✓	✓	
Grass				O	✓	✓	
PTEAQUI				O	✓		

Signature: (Field Personnel)

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

Signature: (Project Manager)

ELC Polygon: # 86-7 **Assessment Type:** ☑-Visual; no access / ☐-Walk through feature

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

Reptile / Bat Hibernacula Features:

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

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

POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED

UTM	Feature Description	Photo No.	Spp. Observed Using Feature

Bat Roosting Features:

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

POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED

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

Stick Nests:

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

STICK NEST(S) IDENTIFIED

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

Seeps/Springs/Vernal Pools:

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

SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED

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

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

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

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Coll. Tile 86; Poly 8

Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Stantec

Project Number: 160950269 Project Name: NRWC

Date: July 27 Field Personnel: N Charlton

Weather Conditions:	TEMP (°C):	WIND:	CLOUD:	PPT:	PPT (in last 24 hrs):
	25	3	50	—	—

POLYGON DESCRIPTION

ELC — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: 86-8

START TIME: 12:30

END TIME:

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

STAND DESCRIPTION:

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

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% N/O=not observed

STANDING SNAGS:	N/O	<10	10 – 24	25 – 50	>50

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

STAND MATURITY:	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

VEGETATION TYPE: CODE: FOD9

~~COMPLEX~~ CODE: SWT2-4

Evidence of Disturbance / Notes:

– the ash is looking sick
↳ hardly any leaves on many of them

small inclusion of "buttonbush mineral thicket swamp"

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

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

SPECIES CODE	LAYER 1	2	3	4	DISTANCE FROM RD. ≤5 m	>5 m	COLL.
TREES:							
ACERUBR	O						
FRAPENN	A						
PINSTRO	R						
QUERUBR	A	A					
ACESASA	A	A					
SHRUBS:							
GROUND:							
APOANDR				R			
EURMACR				O			
SOLIDA50				O			

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐

Signature: (Project Manager)