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Tel: (519) 836-6050
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# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC -ELC

Date: 06 June 2012 Field Personnel: A. Ducharme

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | ~23 | ~15 km/h | part | none | ~1mm |

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

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

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

**STICK NEST(S) IDENTIFIED**

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

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| entire feature | | ~1 m | 10-20 cm | | Emergent | No. |

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

Small wetland feature between 2 fields (drainage ditch).

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

SE16; Tile 20; Poly 6A

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC - SE16 (SE) | | POLYGON: 6A | |
|---|---|---|---|---|
| | SURVEYOR(S): A. Ducharme | DATE: 06 June 2012 | UTME: | |
| | START: 13:30 | END: 13:45 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 3 | 2 | SALNIGR |
| 2 | SUB-CANOPY | — | — | |
| 3 | UNDERSTOREY | 4-5 | 3 | PHAARUN > SALNIGR |
| 4 | GRD. LAYER | 6-7 | 2 | PONCORD > PHAARUN > grasses |

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

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

| STAND COMPOSITION: | | | | | | | BA: |
|---|---|---|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | O | <10 | N | 10 – 24 | N | 25 – 50 | N >50 |
| STANDING SNAGS: | N | <10 | N | 10 – 24 | N | 25 – 50 | N >50 |
| DEADFALL/LOGS: | N | <10 | N | 10 – 24 | N | 25 – 50 | N >50 |

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

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

## SOIL ANALYSIS: (not completed)

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

## COMMUNITY CLASSIFICATION:

| | | | |
|---|---|---|---|
| COMMUNITY CLASS: Swamp | | CODE: | |
| COMMUNITY SERIES: | | CODE: | |
| ECOSITE: | | CODE: | (N. Charlton) |
| VEGETATION TYPE: Willow Mineral Deciduous Swamp | (N. Charlton) | CODE: SWD4-1 | |
| INCLUSION | | CODE: | |
| COMPLEX | | CODE: | |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC - SE16 (SE) |
|---|---|
| | POLYGON: 6A |
| | DATE: 06 June 2012 |
| | SURVEYOR(S): A. Ducharme |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SALNIGR | D | — | R | N | | | | | | | |
| PHAARUN | N | — | D | A | | | | | | | |
| PONCORD | N | — | N | D | | | | | | | |
| | | | | | | | | | | | |
| grasses | N | — | N | O | | | | | | | |

Page 1 of 2

Signature: (Field Personnel)

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

Signature: (Project Manager)

N. Charlton added codes on request

SE16, Tile 20, Poly 6B

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC – SE16 (SE) | | POLYGON: 6B | |
|---|---|---|---|---|
| | SURVEYOR(S): A. Ducharme | DATE: 06 June 2012 | UTME: | |
| | START: 13:45 | END: 14:00 | UTMZ: | UTMN: |

**POLYGON DESCRIPTION**

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

**STAND DESCRIPTION:**

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 3 | 1 | QUEBICO=QUEMUEH |
| 2 | SUB-CANOPY | – | – | — |
| 3 | UNDERSTOREY | 5 | 4 | TYPLATI>PHAARUN>DIPFULL |
| 4 | GRD. LAYER | 6-7 | 2 | PHAARUN>TYPLATI>DIPFULL |

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

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

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

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

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

**SOIL ANALYSIS:** (not computed)

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

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: Swamp white oak mineral deciduous swamp | | CODE: SWD1-1 N.Charlton |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

**Evidence of Disturbance / Notes:**

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC – SE16 (SE) |
|---|---|
| | POLYGON: 6B |
| | DATE: 06 June 2012 |
| | SURVEYOR(S): A. Ducharme |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPLATI | – | – | D | O | | | | | | | |
| DIPFULL | – | – | A | O | | | | | | | |
| PHAARUN | – | – | A | A | | | | | | | |
| QUEBICO | R | – | N | N | | | | | | | |
| QUEMUEH | R | – | N | N | | | | | | | |
| QUEMACR | R | – | R | R | | | | | | | |

Page 2 of 2

Signature: (Field Personnel)

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

Signature: (Project Manager)

N. Charlton added/chose codes on request

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# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC - ELC

Date: 06 June 2012 Field Personnel: A. Ducharme

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | ~23 | ~20 km/h | part | none | ~1 mm |

**ELC Polygon:** #6 **Assessment Type:** ☐-Visual; no access / ☑-Walk through feature

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| See figure. | | ~5m | ~0.5m | | Emergent | yes. |

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

- Small swamp located in the middle of a farmer's field.
- Frogs present.

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

SE16 ; Tile 20 ; Poly 7B

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: NRWC - SE16 (SD) | | POLYGON: 7B | |
| SURVEYOR(S): A. Ducharme | DATE: 06 June 2012 | | UTME: |
| START: 15:00 | END: 16:00 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 3 | 3 | SALNIGR > QUEBICO > QUEMACR |
| 2 | SUB-CANOPY | – | – | |
| 3 | UNDERSTOREY | 5 | 4 | PHAARUN > TYPLATI > DIPFULL |
| 4 | GRD. LAYER | C-7 | 2 | PHAARUN > TYPLATI > DIPFULL |

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

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

| STAND COMPOSITION: | | | | | | | | BA: |
|---|---|---|---|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | O | <10 | N | 10 – 24 | N | 25 – 50 | N | >50 |
| STANDING SNAGS: | N | <10 | N | 10 – 24 | N | 25 – 50 | N | >50 |
| DEADFALL/LOGS: | R | <10 | N | 10 – 24 | N | 25 – 50 | N | >50 |

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

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

## SOIL ANALYSIS: (not completed)

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | willow mineral deciduous swamp | CODE: SWD4-1 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: | NRWC - SE16 (SD) |
| POLYGON: | 7B |
| DATE: | 06 June 2012 |
| SURVEYOR(S): | A. Ducharme |

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

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

| SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. | SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SALNIGR | A | – | R | N | | | | | | | |
| QUEBICO | O | – | R | N | | | | | | | |
| QUEMACR | O | – | O | R | | | | | | | |
| PHAARUN | N | – | D | A | | | | | | | |
| DIPFULL | N | – | O | R | | | | | | | |
| TYPLATI | N | – | A | O | | | | | | | |
| CONMAJA | N | – | N | R | | | | | | | |

Page 2 of 2

Signature: (Field Personnel)

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

Signature: (Project Manager)

Veg code added by N. Charlton on request

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# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC - ELC

Date: 06 June 2012 Field Personnel: A. Ducharme

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | ~23 | ~20 km/h | part | none | ~1 mm |

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| See figure | Vernal Pool / Swamp | ~5m | 20-50 cm | | Emergent | Shrubs |

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

- Swamp at 7A with standing water.
- lots of debris (scrap metal, etc.)

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

SE16 ; Tile 20 ; Poly 7A

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC - SE16 (SD) | | POLYGON: 7A |
|---|---|---|---|
| | SURVEYOR(S): A. Ducharme | DATE: 06 June 2012 | UTME: |
| | START: 14:00 | END: 15:00 | UTMZ: / UTMN: |

**POLYGON DESCRIPTION**

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

**STAND DESCRIPTION:**

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ACESACC > ACESASA > QUEALBA = QUERUBR |
| 2 | SUB-CANOPY | 3 | 3 | ACESACC = ACESASA > QUEALBA = QUERUBR |
| 3 | UNDERSTOREY | 4-5 | 3 | CRASUCC > QUEALBA = QUERUBR > ACER |
| 4 | GRD. LAYER | 6-7 | 3 | ALLPETI > IMPCAPE = PHAARUN |

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

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

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

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

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

**SOIL ANALYSIS:** (not completed)

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

**COMMUNITY CLASSIFICATION:**

| | | | |
|---|---|---|---|
| COMMUNITY CLASS: | Forest / Swamp | CODE: | FO / SW |
| COMMUNITY SERIES: | Deciduous Forest / Swamp | CODE: | FOD / SWX |
| ECOSITE: | | CODE: | |
| VEGETATION TYPE: | Dry - Moist - wet | CODE: | FOD6-5 |
| INCLUSION | | CODE: | SWD3-2 |
| COMPLEX | | CODE: | |

**Evidence of Disturbance / Notes:**

Mostly dry-moist FOD, only wet in centre.

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC - SE16 (SD) |
|---|---|
| | POLYGON: 7A |
| | DATE: 06 June 2012 |
| | SURVEYOR(S): A. Ducharme |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACESACC | D | A | O | R | |
| ACESASA | A | A | O | R | |
| QUEALBA | A | O | A | O | |
| QUERUBR | A | O | A | O | |
| CAROVAT | O | O | O | N | |
| ULMAMER | O | O | R | N | |
| CRASUCC | N | R | D | O | |
| RHUTYPH | N | O | O | R | |
| RUBIDAE | N | N | N | O | |
| IMPCAPE | N | N | N | A | |
| ALLPETI | N | N | N | D | |
| POD PELT | N | N | N | R | |
| PETFRIG | N | N | N | O | |
| RUMEX spp. | N | N | N | R | |
| PHAARUN | N | N | O | A | |
| PARQUIN | N | N | N | O | |
| LEUVULG | N | N | N | R | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|

Page 1 of 2

Signature: (Field Personnel)

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

Signature: (Project Manager)

Veg codes chosen by N. Charlton on request

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

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC -ELC

Date: 06 June 2012 Field Personnel: A. Ducharme

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | ~23 | ~30km/h | cloudy | <1 mm | ~1mm |

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

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

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

**STICK NEST(S) IDENTIFIED**

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

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| see map | Swamp | 2-6m | 20-40 cm | | Emergent | yes -shrubs |

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

- several low-lying swamp pools within forest.
- frogs present

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

SE 16; Tile 20; Poly 8A

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: NRWC - SE16 (SD) | | POLYGON: 8A | |
| SURVEYOR(S): A. Ducharme | DATE: 06 June 2012 | UTME: | |
| START: 16:00 | END: 17:00 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | QUEALBA=QUERUBR>ULMAMER=ACESASA |
| 2 | SUB-CANOPY | 3 | 3 | QUEALBA-QUERUBR>CRASUCC>ULMAMER |
| 3 | UNDERSTOREY | 4-5 | 2 | CRASUCC>>ACESASA |
| 4 | GRD. LAYER | 6-7 | 3 | IMPCAPE>CRASUCC=FRAAMER=ACESASA |

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

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

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

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

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

## SOIL ANALYSIS: (not completed)

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

## COMMUNITY CLASSIFICATION:

| | | | |
|---|---|---|---|
| COMMUNITY CLASS: | | CODE: | |
| COMMUNITY SERIES: | | CODE: | |
| ECOSITE: | | CODE: | |
| VEGETATION TYPE: F-M Oak-Sugar maple deciduous forest | | CODE: FOD9-1 | |
| INCLUSION | | CODE: | |
| COMPLEX | | CODE: | |

**Evidence of Disturbance / Notes:**

A few white oaks >50 cm DBH (near hunting post)

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: NRWC - SE16 (SD) | |
| POLYGON: 8A | |
| DATE: 06 June 2012 | |
| SURVEYOR(S): A. Ducharme | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| QUERUBR | D | A | O | R | |
| QUEALBA | D | A | O | R | |
| ULMAMER | A | O | O | N | |
| CRASUCC | N | O | D | O | |
| FRAAMER | R | O | O | O | |
| ACESASA | A | D | A | O | |
| POPTREM | R | O | R | N | |
| MORRUBR | N | N | R | R | |
| QUEBCO | O | O | R | R | |
| RUBIDAE | N | N | N | R | |
| ALLPETI | N | N | N | O | |
| IMPCAPE | N | N | N | A | |
| PARQUIN | N | N | N | O | |
| ACESYRI | N | N | N | O | |
| TOXRADI | N | N | N | O | |
| MITREPE | N | N | N | R | |
| MAICANA | N | N | N | O | |
| POLBIFL | N | N | N | O | |
| MAIRACE | N | N | N | R | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| PHAARUN | N | N | N | O | |
| ONOSENS | N | N | N | R | |
| spiky sedges | N | N | N | O | |
| mosses | N | N | N | O | |

Page 1 of 2

Signature: (Field Personnel)

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

Signature: (Project Manager)

Veg code chosen by N. Charlton on request

SE16 ; Tile 20 ; Poly 8B

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: NRWC-SE16 (SD) | | POLYGON: 8B | |
| SURVEYOR(S): A. Ducharme | DATE: 06 June 2012 | | UTME: |
| START: 17:00 | END: 18:00 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 1-2 | 4 | ACESASA = QUEALBA > FAGGRAN |
| 2 | SUB-CANOPY | 3 | 3 | CRASUCC >> ACESASA = QUEALBA |
| 3 | UNDERSTOREY | 4-5 | 3 | ACESASA > CRASUCC = QUEALBA = FAGGRAN |
| 4 | GRD. LAYER | 6-7 | 3 | ACESASA = RUBIDAE = TOXRADI |

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

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

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

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

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

## SOIL ANALYSIS: (not completed)

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

## COMMUNITY CLASSIFICATION:

| | | | |
|---|---|---|---|
| COMMUNITY CLASS: forest | | CODE: | FO |
| COMMUNITY SERIES: Deciduous forest | | CODE: | FOD |
| ECOSITE: | | CODE: | |
| VEGETATION TYPE: D-F Sugar maple-oak-beech deciduous forest | | CODE: | FOD5-11* |
| INCLUSION | | CODE: | |
| COMPLEX | | CODE: | |

Evidence of Disturbance / Notes:

Large Sugar maple >50cm DBH UTM: 17T 0623760 4765674

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: NRWC-SE16 (SD) | |
| POLYGON: 8B | |
| DATE: 06 June 2012 | |
| SURVEYOR(S): A. Ducharme | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| QUEALBA | A | A | O | R | | | | | | | |
| ACESASA | A | A | A | O | | | | | | | |
| CAROVAT | R | O | R | N | | | | | | | |
| CRASUCC | N | D | O | N | | | | | | | |
| FAGGRAN | O | O | O | N | | | | | | | |
| PINSTRO | N | R | N | N | | | | | | | |
| QUEMACR | R | R | N | N | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| GALTRIF | N | N | N | R | | | | | | | |
| RUBIDAE | N | N | N | O | | | | | | | |
| IMPCAPE | N | N | N | A | | | | | | | |
| TOXRADI | N | N | N | O | | | | | | | |
| POLPURE | N | N | N | O | | | | | | | |
| PETFRIG | N | N | N | R | | | | | | | |
| POD PELT | N | N | N | R | | | | | | | |
| VICCRAC | N | N | N | O | | | | | | | |
| | | | | | | | | | | | |
| Potentillasp. | N | N | N | R | | | | | | | |

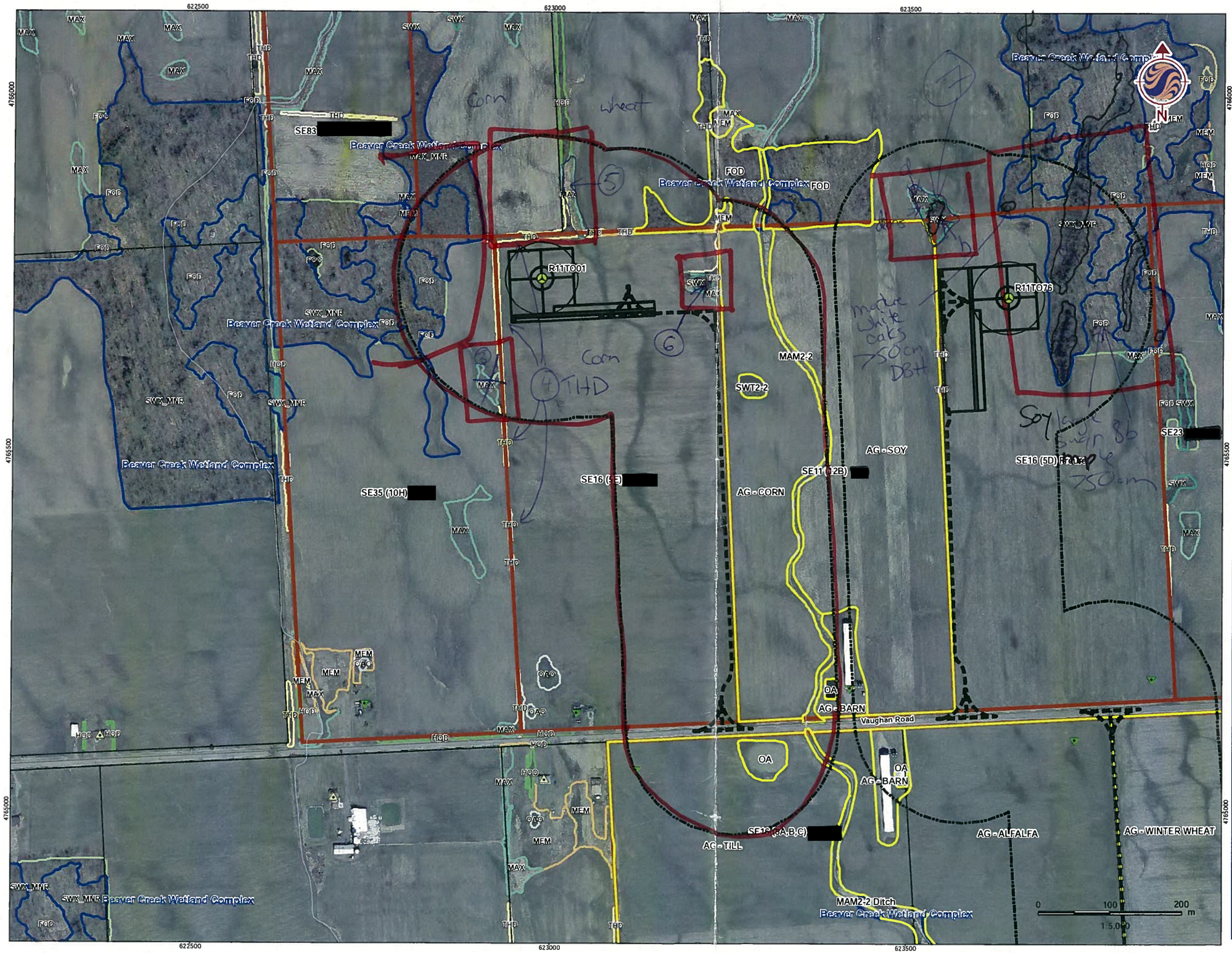
Page 2 of 2

Signature: (Field Personnel)

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

Signature: (Project Manager)

Veg code chosen by N. Charlton on request




## Legend

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

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

## Notes

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

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
20

Title
Property with Turbine
SE16 (5E) [redacted]

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcomper

SE22; Tile 25; Poly 1

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: Fig 25 SE22 | | POLYGON: 1 | |
| SURVEYOR(S): D. Graham | DATE: May 30, 2012 | UTME: 622463 | |
| START: 2:00 | END: 2:15 | UTMZ: | UTMN: 4763250 |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 15 | 70% | Shagbark hickory > Quercus > Bur oak |
| 2 | SUB-CANOPY | 5 | 10% | Shagbark hickory |
| 3 | UNDERSTOREY | 1-3 | 10% | Crataegus sp > Pruvirg |
| 4 | GRD. LAYER | | 100 | Dacglom > Broimer > L. Stichwort > Galmoll |

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

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

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | A <10 | A 10 – 24 | O 25 – 50 | N >50 |
| STANDING SNAGS: | N <10 | N 10 – 24 | N 25 – 50 | N >50 |
| DEADFALL/LOGS: | N <10 | N 10 – 24 | N 25 – 50 | N >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | CODE: | |
| COMMUNITY SERIES: | CODE: | FOD2 |
| ECOSITE: | CODE: | |
| VEGETATION TYPE: Dry-Fresh Oak-Hickory Deciduous Forest | CODE: | FOD2-2 |
| INCLUSION | CODE: | |
| COMPLEX | CODE: | |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: Fig 25 SE22 | |
| POLYGON: 1 | |
| DATE: May 30, 2012 | |
| SURVEYOR(S): D. Graham | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Shagbark hickory | D | | | | |
| Quercubr. | O | | O | | |
| Fra penn | | | O | | |
| Bur oak | R | | | | |
| Crataegus sp | | | A | | |
| Pruvirg | | | A | | |
| Ras biflor | | | | O | |
| Vibraf | | | | R | |
| Rubidaq | | | | O | |
| Thicket Creeper | | | | O | |
| Xanamer | | | | O | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Lesser Stichwort | | | | A | |
| Broimer | | | | A | |
| Galmoll | | | | O | |
| Japanese brome | | | | O | |
| Dacglom | | | | A | |
| Slender vetch | | | | O | |
| Solcana | | | | O | |
| Allaff | | | | R | |
| Geum sp | | | | R | |
| Poa prat | | | | O | |
| Common Fleabane | | | | R | |
| Rumcri s | | | | | |
| Daucaro | | | | | |

Page 1 of 6

Signature: Don Graham (Field Personnel)

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

Signature: Kirk Grant (Project Manager)

**Stantec Consulting Ltd.**
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Tel: (519) 836-6050
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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: May 30, 2012 Field Personnel: D. Graham

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

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE22; Tile 25; Poly 2

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: Fig 25 SE22 | | POLYGON: 2 | |
| SURVEYOR(S): D. Graham | DATE: May 30, 2012 | UTME: 622453 | |
| START: 2^15 | END: 2^30 | UTMZ: | UTMN: 4763254 |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | None |
| 2 | SUB-CANOPY | | | None |
| 3 | UNDERSTOREY | 1-2 | 20% | Silky dogwood > Craetagus sp > Rub.dac = Privet |
| 4 | GRD. LAYER | | 100% | Breimer > Galmoll = Japanese brome > Slender vetch |

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

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

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

| SIZE CLASS ANALYSIS: | | <10 | | 10 – 24 | | 25 – 50 | | >50 |
|---|---|---|---|---|---|---|---|---|
| STANDING SNAGS: | | <10 | | 10 – 24 | | 25 – 50 | | >50 |
| DEADFALL/LOGS: | | <10 | | 10 – 24 | | 25 – 50 | | >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | |
|---|---|
| COMMUNITY CLASS: | CODE: |
| COMMUNITY SERIES: | CODE: |
| ECOSITE: | CODE: |
| VEGETATION TYPE: | CODE: Pasture. |
| ☐ INCLUSION | CODE: |
| ☐ COMPLEX | CODE: |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: Fig 25 SE22 | |
| POLYGON: 2 | |
| DATE: May 30, 2012 | |
| SURVEYOR(S): D. Graham | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fragem | | | | | | Japanese brome | | | | A | |
| | | | | | | Gal moll | | | | A | |
| | | | | | | Slender vetch | | | | O | |
| | | | | | | Lesser stitchwort | | | | O | |
| | | | | | | Breimer | | | | A | |
| | | | | | | Common Cinquefoil | | | | O | |
| | | | | | | Fraviss | | | | O | |
| | | | | | | Verpff | | | | R | |
| | | | | | | Astnove | | | | R | |
| | | | | | | Solcan | | | | O | |
| | | | | | | Wild geranium | | | | R | |
| | | | | | | Poa pratensis | | | | O | |
| | | | | | | Daucaro | | | | R | |
| | | | | | | C. winter cress | | | | O | |
| Privet | | | | R | | | | | | | |
| Craetagus | | | | | | | | | | | |
| Rubdac | | | | | | | | | | | |
| Silky dogwood | | | | | | | | | | | |

Page 2 of 6

Signature: Don Graham (Field Personnel)

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

Signature: (Project Manager)

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Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: May 30, 2012 Field Personnel: D.G

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

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE22; Tile 25; Poly 3

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: Fig 25 SE22 | | POLYGON: 3 | |
| SURVEYOR(S): D. Graham | DATE: May 30, 2012 | UTME: 622450 | |
| START: 230 | END: 245 | UTMZ: | UTMN: 4763223 |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☑ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☑ SURFICIAL DEP. | ☐ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | |
| 2 | SUB-CANOPY | | | None |
| 3 | UNDERSTOREY | | | |
| 4 | GRD. LAYER | 1-15 | 100% | Phaarun >> Solgram > Swamp milkweed > Poaprat |

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

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

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | <10 | 10 – 24 | 25 – 50 | >50 |
| STANDING SNAGS: | <10 | 10 – 24 | 25 – 50 | >50 |
| DEADFALL/LOGS: | <10 | 10 – 24 | 25 – 50 | >50 |

No trees

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: Reed Canary Grass Graminoid Mineral Meadow Marsh | | CODE: MAM2-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: | Fig 25 SE22 |
| POLYGON: | 3 |
| DATE: | May 30, 2012 |
| SURVEYOR(S): | D. Graham |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Phaarun | | | | D | |
| Poaprat | | | | R | |
| Swamp milkweed | | | | R | |
| Small water plantain | | | | R | |
| Solgram | | | | O | |
| Bidaff | | | | O | |

Page 3 of 6

Signature: Dave Graham (Field Personnel)

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

Signature: (Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: _____ Project Name: NRWL

Date: May 30, 2012 Field Personnel: D.G.

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

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE22; Tile 25; Poly 4

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: Fig 25 SE 22 | | POLYGON: 4 | |
| SURVEYOR(S): D. Graham | DATE: May 30, 2012 | UTME: | |
| START: 2:05 | END: 3:00 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☑ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 15 | 50% | Shagbark hickory > bur oak > A. elm > red oak |
| 2 | SUB-CANOPY | 5-8 | 10% | Ironwood > Shagbark |
| 3 | UNDERSTOREY | 2-5 | 10% | Xanamer >> hentata > Craetagus sp |
| 4 | GRD. LAYER | | | Dacglom > Poa prat > Solcana > Cleaver |

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

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

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | R <10 | A 10 – 24 | O 25 – 50 | R >50 |
| STANDING SNAGS: | <10 | 10 – 24 | 25 – 50 | >50 |
| DEADFALL/LOGS: | A <10 | 10 – 24 | 25 – 50 | >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: Cultural Woodland | | CODE: CUW |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: Fig 25 SE 22 | |
| POLYGON: 4 | |
| DATE: May 30, 2012 | |
| SURVEYOR(S): D. Graham | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Bur oak | O | | | | |
| Fraspenn | R | | | | |
| Apple | R | | | | |
| Ironwood | | | | | |
| Quesubr | O | | | | |
| White Oak. | O | | | | |
| Liliamer | O | O | | | |
| Shagbark hickory | D | O | O | | |
| A. elm | O | O | | | |
| Serviceberry sp | | R | | | |
| Xanamer | | | A | | |
| Craetagus sp | | | R | | |
| Rubidae | | | | O | |
| Rubocci | | | | R | |
| Lentatan | | | O | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ~~Bur oak~~ | | | | | |
| ~~Fraspenn~~ | | | | | |
| All dif. | | | | R | |
| Poa prat | | | | A | |
| Cleaver | | | | O | |
| Imp cape | | | | R | |
| Commun (Inquestal) | | | | O | |
| Solcana | | | | A | |
| Darcaro | | | | O | |
| Woodgeum | | | | O | |
| Japanese brome | | | | R | |
| C. St. Johns wort | | | | R | |
| Dacglom | | | | A | |
| C. bindweed | | | | O | |
| Slender vetch | | | | O | |
| Ranacri | | | | O | |
| L. stitchwort | | | | O | |

Page 4 of 6

Signature: Dan Graham (Field Personnel)

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

Signature: (Project Manager)

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Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: May 30, 2012 Field Personnel: D.G.

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

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

West of SE21 ; Tile 25 ; Poly 5

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | | |
|---|---|---|---|---|
| SITE: F.g 25 | | | POLYGON: 5 | |
| SURVEYOR(S): D. Graham | DATE: May 30 2012 | | UTME: | |
| START: 300 | END: 315 | | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☑ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 8-15 | 50% | Bur oak = Shagbark hickory > Ash sp |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | | | |
| 4 | GRD. LAYER | | | |

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

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

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

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: Cultural Woodland | | CODE: CUW |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes: ~~Evaluat~~ Evaluated remotely (≈ 100 m from feature

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

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Burook | | | | | | | | | | | |
| Shagbark hickory | | | | | | | | | | | |
| Ash sp | | | | | | | | | | | |

Page 5 of 6

Signature: Don Graham (Field Personnel)

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

Signature: (Project Manager)

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

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: May 30, 2012 Field Personnel: D. G

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

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

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

## Reptile / Bat Hibernacula Features:

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE21 ; Tile 25 ; Poly 6

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: Fig25 SE21 | | POLYGON: ~~3~~ 6 | |
| SURVEYOR(S): V. Graham | DATE: May 30 2012 | UTME: 621894 | |
| START: 315 | END: 325 | UTMZ: | UTMN: 4763534 |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 6-8 | 30% | Ulmamer = Prusero > Fraamer > Craetagus |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | 1-3 | 70% | Corrace > Rubidae >> Lontata > Provirg |
| 4 | GRD. LAYER | | 90% | Poaprat > Solcana |

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

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

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | A <10 | A 10 – 24 | M 25 – 50 | N >50 |
| STANDING SNAGS: | <10 | 10 – 24 | 25 – 50 | >50 |
| DEADFALL/LOGS: | <10 | 10 – 24 | 25 – 50 | >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | Cultural Woodland | CODE: CVW |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

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

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Prusero | A | | | | |
| Ulmamer | A | | | | |
| Fraamer | A | | | | |
| Ostvirg | | | O | | |
| Bur oak | O | | | | |
| Corrace | ~~O~~ | | D | | |
| Rubidae | | | ~~O~~ | A | |
| Lontata | | | O | | |
| Prusero | | | O | | |
| Craetagus | | | R | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Phaarun | | | | | |
| Vicerac | | | | | |
| Poa prat. | | | | D | |
| Dipsylv | | | | | |
| Solcana | | | | A | |
| Alloffi | | | | | |
| Solduc | | | | | |
| Cirvulg | | | | | |
| Astnove | | | | | |
| Rumcris | | | | | |
| Daucara | | | | | |
| C. winter cress | | | | | |
| Yellow glum. | | | | | |
| Pot rect | | | | | |

Page 6 of 6

Signature: Don Graham (Field Personnel)

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

Signature: (Project Manager)

**Stantec Consulting Ltd.**
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Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: May 30, 2012 Field Personnel: D.G.

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

**ELC Polygon:** # 6 **Assessment Type:** ☐-Visual; no access / ☑-Walk through feature

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

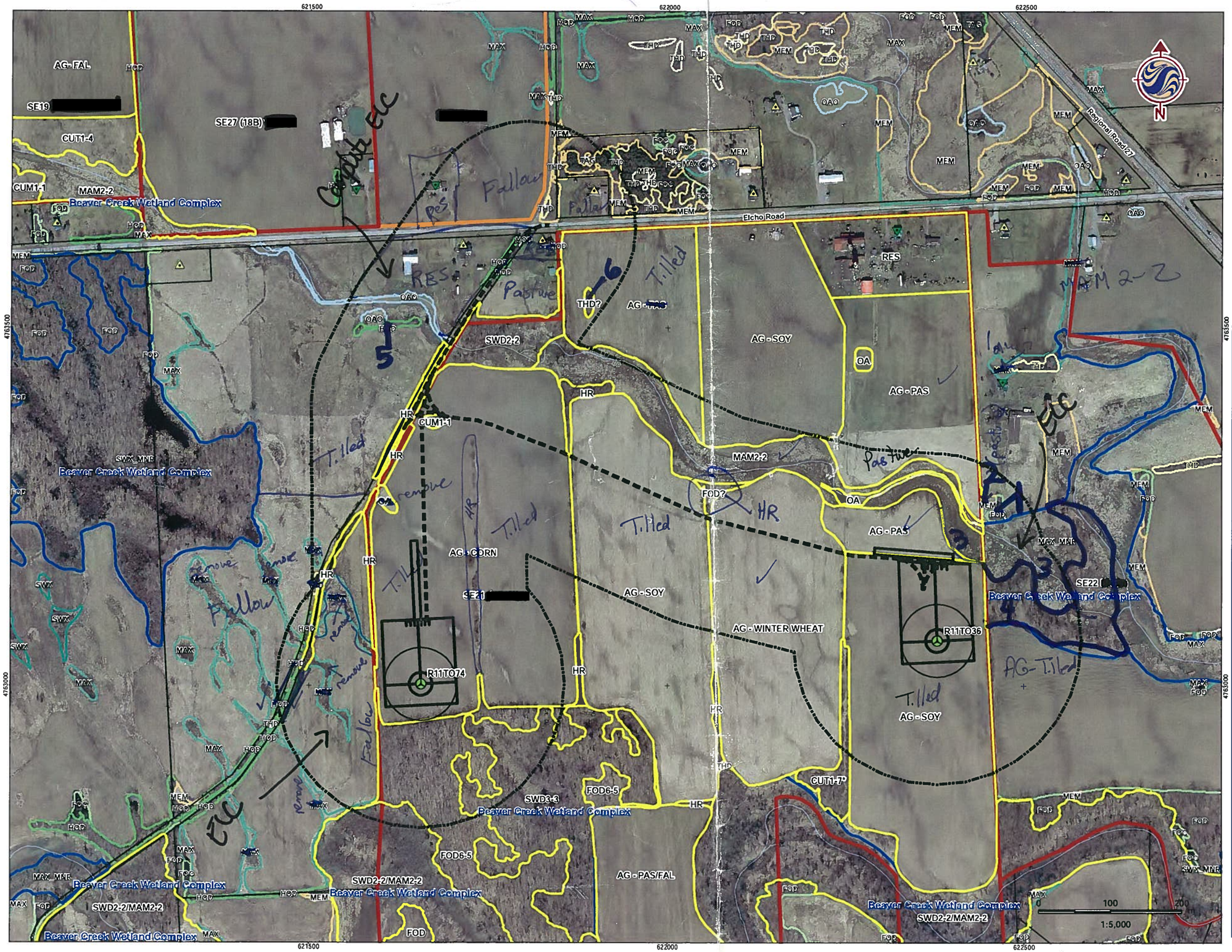
Contains seeps/springs/vernal pools?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

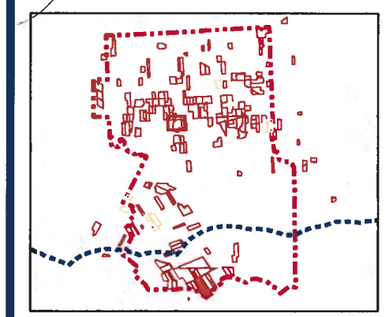
CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization




## Legend

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

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



## Notes

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

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
25

Title
Property with Turbine
SE21 [redacted]

0 100 200
1:5,000

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Revised: 2012-05-23 By: bcowper

SE92; Tile 26; Poly A Fig 26 SE 92

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
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Tel: (519) 836-6050
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Stantec

# Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 | Project Name: NRWC

Date: June 8 2012 | Field Personnel: C. Pouyette

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 29 | 2 | 40% | none | none |

## ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: A

START TIME: 12:30

END TIME: 12:45

### 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 | 2 | greenash > American elm > crack willow |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | 3.4 | 2 | gray dogwood > Hawthorn > riverbank grape |
| 4 | GRD. LAYER | 5-7 | 4 | Reed canary grass > grass sp > Common 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: | <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 Mineral meadow Marsh — CODE: MAM2-2

COMPLEX: — CODE:

Evidence of Disturbance / Notes:

photos 9, 10, 11

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: | | | | | | | |
| greenash | A | | | | | | |
| American elm | O | | | | | | |
| Crack willow | R.O | | | | | | |
| SHRUBS: | | | | | | | |
| Apple sp | | | R | | | | |
| gray dogwood | | | A | | | | |
| Hawthorn | | | O | | | | |
| riverbank grape | | | O | | | | |
| GROUND: | | | | | | | |
| Reed Canary grass | | | | D | | | |
| Common milkweed | | | | O | | | |
| grass sp | | | | O | | | |

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

Signature: (Field Personnel)

Signature: (Project Manager)

SE24', Tile 26', Poly B

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: | | POLYGON: | |
| SURVEYOR(S): | DATE: | | UTME: |
| START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☑ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | Shagbark hickory > Swampmaple > Red oak > Sugarmaple |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | | | Red raspberry > blue beech > hawthorn |
| 4 | GRD. LAYER | | | Strawberry > Poison ivy > May apple |

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

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤50% 4=CVR>50%

## STAND COMPOSITION:

BA:

| SIZE CLASS ANALYSIS: | | <10 | | 10 – 24 | | 25 – 50 | | >50 |
|---|---|---|---|---|---|---|---|---|
| STANDING SNAGS: | | <10 | | 10 – 24 | | 25 – 50 | ✓ | >50 |
| DEADFALL/LOGS: | | <10 | | 10 – 24 | | 25 – 50 | | >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | T M Sugarmaple wood Dec forest | CODE: |
| ✓ INCLUSION | Red May Hawthorn | CODE: MAH22 |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | NRWC |
| POLYGON: | B SE24 |
| DATE: | June 8, 2012 |
| SURVEYOR(S): | C. Pargetter |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Bur oak | O | | | | |
| Bitternut hickory | | | | | |
| green ash | O | | | | |
| Red oak | O-A | | | | |
| Chokecherry | | | | | |
| Blackcherry | R-O | | | | |
| Shagbark hickory | A | | | | |
| Sugarmaple | O | | | | |
| American elm | O | | | | |
| American basswood | O | | | | |
| Swampmaple | O-A | | | | |
| Ironwood | R | | | | |
| Red raspberry | | | A | | |
| running strawberry | | | | O | |
| Poison ivy | | | | O-A | |
| Blue beech | | | O | | |
| Meadowsweet | | | O | | |
| Rose sp | | | R-O | | |
| Hawthorn sp | | | O | | |
| Apple sp. | | | R-O | | |
| gray dogwood | | | R | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Red raspberry | | | | O | |
| May apple | | | | O-A | |
| Sedge sp | | | | R-O | |
| woodnettle | | | | O | |
| strawberry | | | | A | |
| Cinquefoil sp | | | | A | ✓ |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

SE24; Tile 26; Poly C

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

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☐ SURFICIAL DEP. | ☐ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | g cod > trembling aspen b o l |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | | | Meadows + white eldorberry |
| 4 | GRD. LAYER | | | Head canary grass > Broad leaved sedge |

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

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤50% 4=CVR>50%

STAND COMPOSITION: BA:

| | | | | |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | <10 | 10 – 24 | 25 – 50 | >50 |
| STANDING SNAGS: | <10 | 10 – 24 | 25 – 50 | >50 |
| DEADFALL/LOGS: | <10 | 10 – 24 | 25 – 50 | >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| COSITE: | | CODE: |
| VEGETATION TYPE: | greenash mineral meadow mineral | CODE: SWD2-2 |
| INCLUSION | Broadleaved Sedge Meadow Marsh | CODE: MAM2-6 |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes: very thick HR in front of swamp, can see a lot of standing snags. photos

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC |
|---|---|
| | POLYGON: C SE24 |
| | DATE: June 8, 2012 |
| | SURVEYOR(S): C. Payne |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| green ash | O | | | | |
| chokecherry | R | | | | |
| Buckthorn | R | | | | |
| trembling aspen | O | | | | |
| Blue beech | | | O | | |
| Poison ivy | | | R | | |
| running strawberry | | | R | | |
| Red osier dogwood | | | O | | |
| fowl mannagrass | | | O | | |
| gooseberry spp | | | R | | |
| Meadow sweet | | | O-A | | |
| white eldorberry | | | O-A | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Broadleaved sedge | | | | A | ✓ |
| Tussock sedge | | | | A | |
| wild strawberry | | | | O | |
| Grass sp | | | | O | |
| sedge sp | | | | R | |
| garlic mustard | | | | | |
| golden rod sp | | | | R | |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 8, 2012 Field Personnel: C. Paquette

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 29 | 3-4 | 30% | none | none |

**ELC Polygon: #** C **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? |
|---|---|---|---|---|---|---|
| | | | | | | |

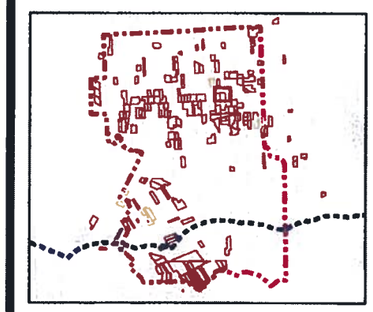
**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

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

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

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



## Notes

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

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
26

Title
Property with Turbine
SE24[redacted]

\\N0160950\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcooper

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: 26 (7A) (Niagara) | | POLYGON: 27-1 | |
| SURVEYOR(S): NC | DATE: June 8, 2012 | UTME: | |
| START: 11:45 | END: 12 5 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☒ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☒ SURFICIAL DEP. | ☐ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

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

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

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

## STAND COMPOSITION:

BA:

| | | | | |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | <10 | 10 – 24 | 25 – 50 | >50 |
| STANDING SNAGS: | <10 | 10 – 24 | 25 – 50 | >50 |
| DEADFALL/LOGS: | <10 | 10 – 24 | 25 – 50 | >50 |

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

| DOMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| SITE: | | CODE: |
| VEGETATION TYPE: reed canary grass meadow RS | | CODE: |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | |
| POLYGON: | |
| DATE: | SE 26(7A); Tile 27; Poly 1 |
| SURVEYOR(S): | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACER GU | R | | | | |
| FRAP NN | D | | | | |
| CAROVAT | A | | | | |
| ULM | R | | | | ✓ |
| Gray dogwood | | | | | |

CUW

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| PHAARUN | | | | D | ✓ |
| SYMNOVA | | | | R | |
| SOLIDAGO | | | | R-O | |
| VICCPAC | | | | R-O | |
| LEUVULG | | | | O | |
| DIPFULL | | | | O | |
| GEUM | | | | R | |
| ALLPET | | | | O | |
| ~~HYACAR~~ | | | | | |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

W

W:\resource\Internal Info and Teams\FIELD FORMS\Vegetation\ELC\elc-woodland-wildlife-habitat-form-draft-1.PDF

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 8, 2012

Field Personnel: N. Charlton

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 25 | 2 | 70 | — | — |

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: 26(7A) (Niagara) | | POLYGON: 27-2 | |
| SURVEYOR(S): NC | DATE: June 8, 2012 | UTME: | |
| START: 12:15 | END: 12:45 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☐ SURFICIAL DEP. | ☐ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 3 | 3 | SALIX > FRAPENN |
| 2 | SUB-CANOPY | 4 | 3 | SAMCANA > RUBIDAE |
| 3 | UNDERSTOREY | | | |
| 4 | GRD. LAYER | 5-7 | 4 | LEMMINO > PHAARUN > IMPATIENS |

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

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

## STAND COMPOSITION:

BA:

| | | | | |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | <10 | 10 – 24 | 25 – 50 | >50 |
| STANDING SNAGS: | <10 | 10 – 24 | 25 – 50 | >50 |
| DEADFALL/LOGS: | <10 | 10 – 24 | 25 – 50 | >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| TOPOSITE: | | CODE: |
| VEGETATION TYPE: willow mixed dead swamp | | CODE: SWD4-1 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

middle contains small pool with duckweed

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | |
| POLYGON: | |
| DATE: | SE 26 (7A); Tile 27; Poly 2 |
| SURVEYOR(S): | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| SALIX | A | | | | |
| FRAPENN | R | | | | |
| ULM | R | | | | ✓ |
| QUEBICO | | R | | | |
| RUBIDAE | | | A | | |
| SAMCANA | | A | A | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| PHAARUN | | | | A | |
| ALIPLANT | | | | O | |
| SOLDULC | | | | R | |
| LEMMINO | | | | A | |
| IMPATIENS | | | | O | |
| CAREX (clump) | | | | R | ✓ |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

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Guelph, ON
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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 8

Field Personnel: N. Charlton

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 25 | 2 | 70% | — | — |

ELC Polygon: #

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

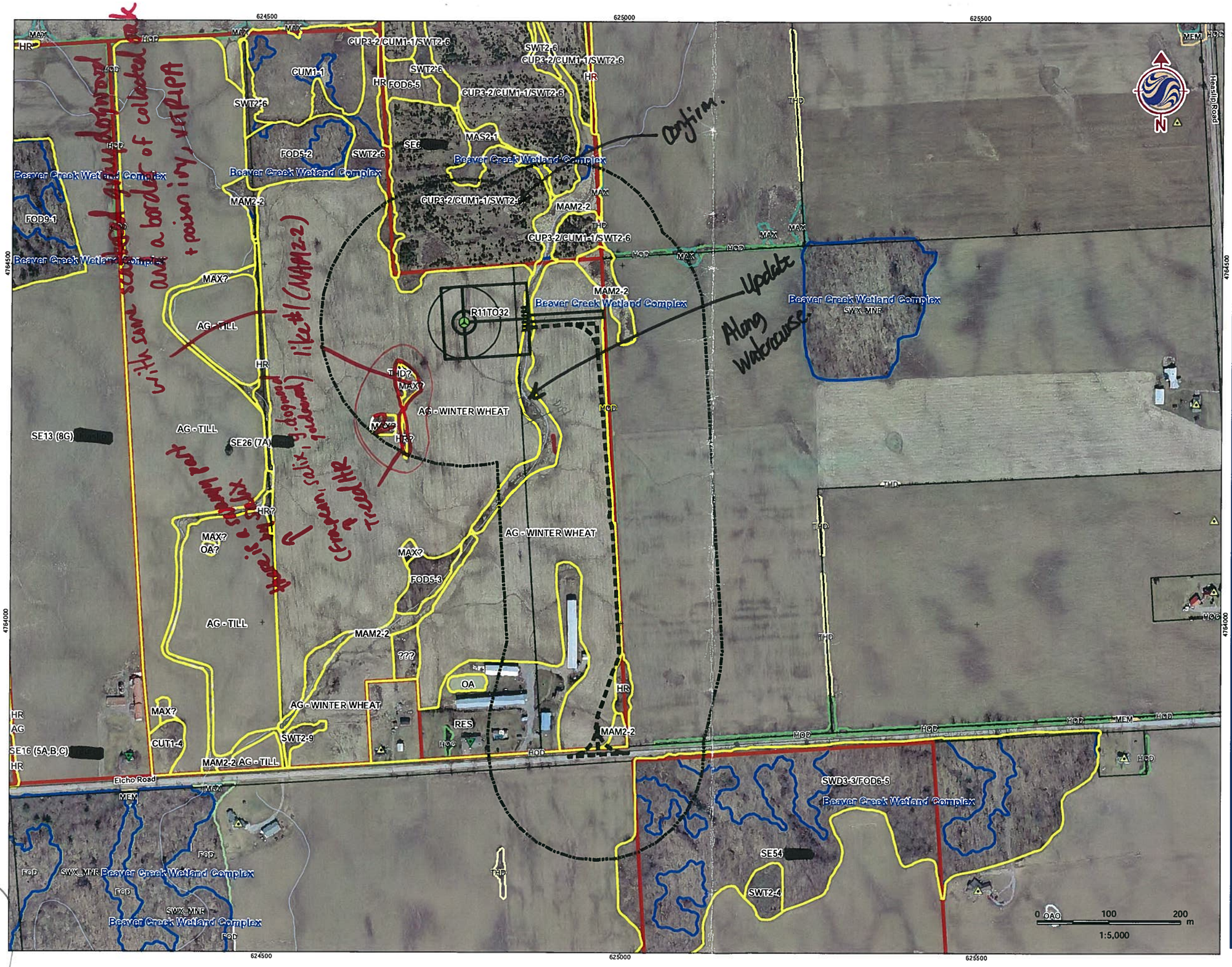
**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

Shannon




## Legend

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

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

## Notes

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

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
27

Title
Property with Turbine
SE26 (7A) [redacted]

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: jcowper

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: SE26 (Niagara) | | POLYGON: 28-2 | |
| SURVEYOR(S): NC | DATE: June 8, 2012 | UTME: | |
| START: 4:30 | END: 5:00 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☑ OPEN |
| ☑ SHALLOW WATER | ☐ SHRUB |
| ☐ SURFICIAL DEP. | ☐ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| CANOPY | | | |
| SUB-CANOPY | | | |
| UNDERSTOREY | 4-3 | 2 | ILEVERT > VACCORY > SAMCANA |
| GRD. LAYER | 5-7 | 4 | CXPERACE >> 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≤50% 4=CVR>50%

STAND COMPOSITION: silty clay BA:

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

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

| DOMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | |
| COMMUNITY SERIES: | | CODE: |
| COMPLEX: | | CODE: |
| VEGETATION TYPE: broad leaved sedge hal | | CODE: |
| | | CODE: MAS 4 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | |
| POLYGON: | |
| DATE: | SE 26; Tile 28; Poly 2 |
| SURVEYOR(S): | |

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

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

| SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|
| ACERUBF | A | | | | |
| FRAPENN | O | | | | |
| VACCORY | | | O | | |
| SAMCANA | | | O | | |
| RUBCANA | | | O | | |
| SPIALBA | | | O | | |
| ILEVERT | | | A | | |

| SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|
| Carex/Cyper | | | | D | |
| ~~[illegible]~~ | | | | | |
| PHAARUN | | | | A-O | |
| LYCUNIF | | | | OR | |
| LYTSALI | | | | OR | |
| IMPCAPE | | | | O | |
| ~~[illegible]~~ | | | | | |

Page ___ of ___

Signature:

(Field Personnel)

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

Signature:

(Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 08/06/2012

Field Personnel: N. Cherton

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 25 | 2 | 70 | — | — |

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

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

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

**STICK NEST(S) IDENTIFIED**

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

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| entire | pool | 10 x 30 m | 20-40cm | | yes (graminoid) | ✓ |

**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

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: SE 26 (Niagara) | | POLYGON: 28-3 | |
| SURVEYOR(S): NC | DATE: 08/06/2012 | UTME: | |
| START: 4:15 | END: 4:30 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☑ OPEN |
| ☑ SHALLOW WATER | ☐ SHRUB |
| ☐ SURFICIAL DEP. | ☐ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| CANOPY | 2 | 2 | QUEBICO >> FRAPENN |
| SUB-CANOPY | | | |
| UNDERSTOREY | 4 | 2 | SPIALBA |
| GRD. LAYER | 5-7 | | CYPERACE > PHAARUN > GLYCERIA |

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

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

## STAND COMPOSITION:

BA:

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

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

| DOMM. AGE: | PIONEER | YOUNG | MID-AGE | ☒ MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| COMPLEX: | | CODE: |
| VEGETATION TYPE: broad leaved sedge mineral shallow marsh | | CODE: MAS |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes: GRFR - heard

open water 5x10 m

thin ring of SWD (1 tree/2 trees)

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | |
| POLYGON: | |
| DATE: | SE 26; Tile 28; Poly 3 |
| SURVEYOR(S): | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| QUEBICO | A | | | | |
| ULMAMER | R | O | | | |
| FRAPENN | R | | | | |
| SPIALBA | | | | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| CYPERACE | | | | A | |
| PHAARUN | | | | A-O | |
| GLY SP | | | | O | |
| ALLPLANT | | | | | |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 08/06/2012

Field Personnel: N. Charlton

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 25 | 2 | 70 | — | — |

ELC Polygon: #28-3 **Assessment Type:** ☐-Visual; roadside, no access / ☑-Physical; walk through feature

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| entire polygon | pool | 5x10 m | 60 cm | | at edges in shallow water | ✓ |

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

GRFR - VO

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

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: SE 26 (Niagara) | | POLYGON: 28-4 | |
| SURVEYOR(S): NC | | DATE: June 8, 2012 | TIME: |
| START: 4:00 | END: 4:15 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☑ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| CANOPY | 2 | 3 | QUERUBR >> TILAMER > ACESASA |
| SUB-CANOPY | 3 | 2 | ULMAMER > ACEFREE |
| UNDERSTOREY | 4 | 3 | RUBUS SPP > CRATAEGUS > G. dogwood |
| GRD. LAYER | 5-7 | 4 | RUBIDAE > SOLIDAGO > POA COMP |

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

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

## STAND COMPOSITION:

BA:

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

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

| DOMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS: silty clay

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= 1 scoop | G= 1 scoop |
| MOISTURE: 6 | DEPTH OF ORGANICS: | | (cm) |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | | (cm) |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| TOPOSITE: | | CODE: |
| VEGETATION TYPE: Fr h s Red bas | | CODE: * |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes: open canopy (<60)

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | |
| POLYGON: | |
| DATE: | SE 26 ; Tile 28 ; Poly 4 |
| SURVEYOR(S): | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACESASA | R | | O | | |
| TILAMER | O | | | O | |
| OSTVIRG | R | | | | |
| CRATAEGUS | | A | | | |
| ~~[illegible]~~ | | | | | |
| QUERUBR | A | | | | |
| ULMAMER | | O | O | O | |
| ACEFREE | | D | | | |
| RUBCANA | | | A | A | |
| G. dogwood | | | | | |
| RUBIDAE | | | A | A | |
| PRUVIV | | | | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| LYSCILI | | | | R | |
| GEUM | | | | A | |
| PHAARUN | | | | O | |
| POACOMP | | | | A | |
| SOLIDAGO C/A | | | | A | |
| LIMPAPE | | | | R | |
| POTRECT | | | | R | |
| GERROBE | | | | O | |
| ARCMINU | | | | R | |

Page ___ of ___

Signature:

Field Personnel)

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

Signature:

(Project Manager)

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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: June 8, 2012

Field Personnel: N. Charlton

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 25 | 2 | 70 | — | — |

**ELC Polygon:** # 29-4 **Assessment Type:** ☐-Visual; roadside, no access / ☑-Physical; walk through feature

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: SE 26
POLYGON: 28-5
SURVEYOR(S): NC
DATE: June 9, 2012
START: 3:45
END: 4:00
UTME:
UTMZ:
UTMN:

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| CANOPY | 2 | 3 | FRAPENN > QUEBICO = ACEFREE > ULMAMER |
| SUB-CANOPY | 3 | 2 | FRAPENN > ACEFREE > QUEBICO = ULMAMER |
| UNDERSTOREY | 4 | 2 | RUBUS SPP > CORNW > SPIALBA |
| GRD. LAYER | 6-7 | 4 | IMPCAPE > CAREX SPP > CYPERACE SP |

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

## STAND COMPOSITION:

BA:

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

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

| DOMM. AGE: | | PIONEER | | YOUNG | | MID-AGE | X | MATURE | | OLD GROWTH |
|---|---|---|---|---|---|---|---|---|---|---|

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| TOPOSITE: | | CODE: |
| VEGETATION TYPE: | Greenash mineral deciduous p | CODE: SWD2-2 |
| INCLUSION | buckthorn brush, thicket swamp | CODE: SWT2 4 |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:
POLYGON:
DATE: SE 26; Tile 28; Poly 5
SURVEYOR(S):

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

| | SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|---|
| | ACEFREE | A | A | | | |
| | QUEBICO | O | O | | | |
| | FRAPENN | A | A | | | |
| | ULMAMER | O | O | | | |
| | RIBES | | | | | |
| | SPI ALBA | | | | | |
| | G. dogwood | | | | | |
| | RUBCANA | | | | | |
| | RUBIDAE | | | | | |
| I | ILEVERT | | O | | | |
| I | CEPOCCI | | A | | | |
| I | SPIALBA | | O | | | |

| SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|
| IMPCAPE | | | | A | |
| LYSCILI | | | | O | |
| CYPERACE SP | | | | A | |
| PHAARUN | | | | O | |
| GLY SPRI | | | | O | |
| CAREX SPP | | | | A | |
| SIUSLAV | | | | R | |
| POPPELT | | | | R | |
| RUBHISP | | | | R | |
| MAICANA | | | | O | |
| VITRIPA | | | | | |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 08/06/2012

Field Personnel: N. Charlton

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 25 | 2 | 70 | — | — |

ELC Polygon: #28-5 Assessment Type: ☐-Visual; roadside, no access / ☑-Physical; walk through feature

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

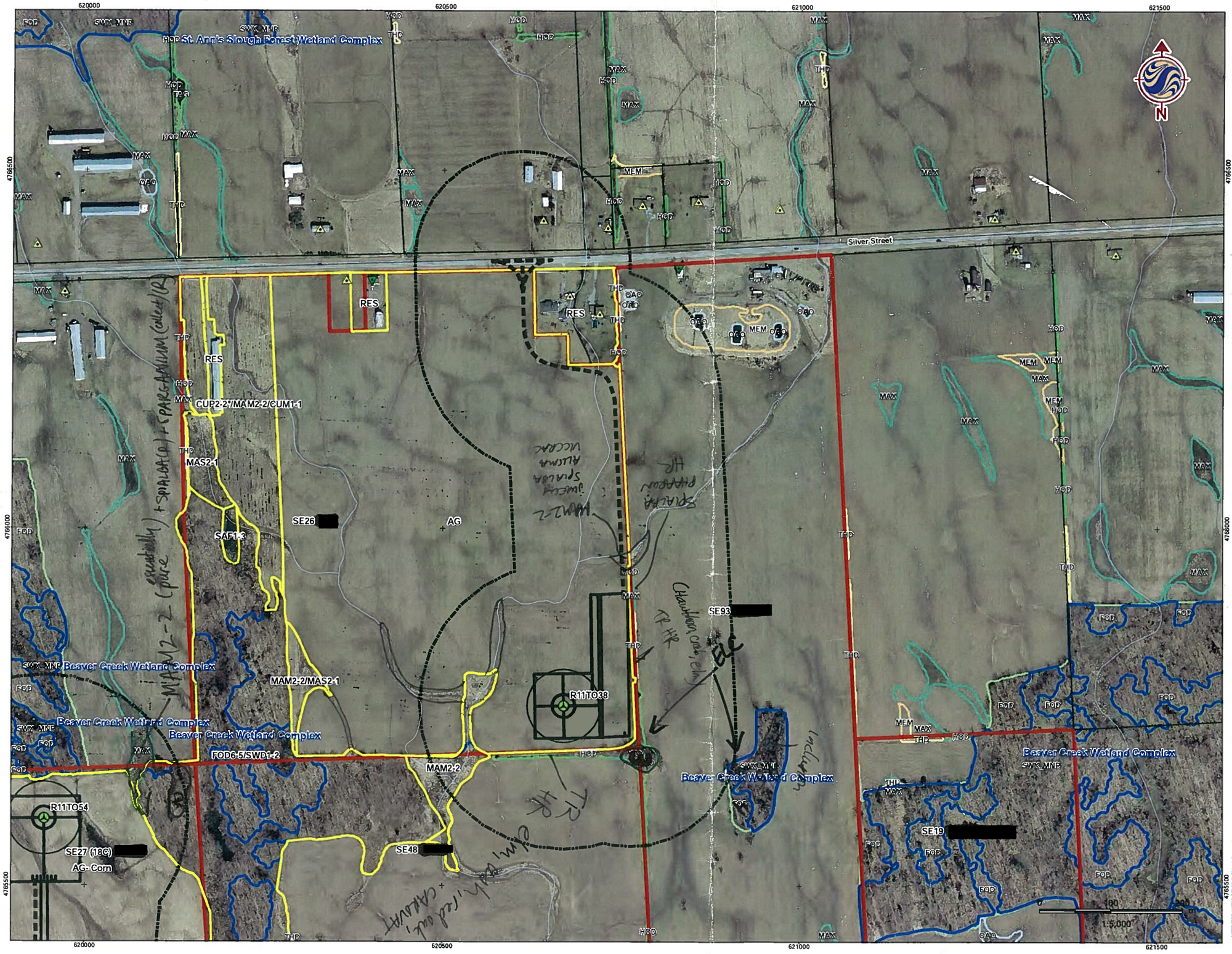
Contains seeps/springs/vernal pools?
☑-Y* / ☐-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| throughout/inclusion | pool 5 | 50x10m | >60 deepest | | few | ✓ |

**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




## Legend

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

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

## Notes

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

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
28

Title
Property with Turbine
SE26 [redacted]

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Rewised: 2012-05-23 By: bcowper

# ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | SE 27/18C |
| POLYGON: | 29-2 |
| SURVEYOR(S): | NC |
| DATE: | 08/06/2012 |
| START: | 3:30 |
| END: | 3:45 |
| UTMZ: | |
| UTME: | |
| UTMN: | |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☑ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 3 | QUERUBR ACESASA > CARO AT |
| 2 | SUB-CANOPY | 3 | 3 | A A CA VAT > FRAX P |
| 3 | UNDERSTOREY | 4 | 3 | RUBU P VIBLENT > ROSA P |
| 4 | GRD. LAYER | 5-7 | 4 | OLI > POA SP > P U P V P |

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

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

## STAND COMPOSITION:

BA:

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

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

DOMIN. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | | |
| MOISTURE: | DEPTH OF ORGANICS: | | (cm) |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | | (cm) |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| SITE: | | CODE: |
| VEGETATION TYPE: Fresh, Mo + Sugar Maple + | | CODE: FOD9-1 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

Edge

# ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | |
| POLYGON: | SE27; Tile 29; Poly 2 |
| DATE: | |
| SURVEYOR(S): | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ULMAMER | R-O | | | | |
| CAROVAT | O | A | | | |
| QUERUBR | A | | | | |
| PINSTRA | R | | | | |
| FRAX SP | D | O | | | |
| ACESASA | A | A | | | |
| VIBLENT | | | O | | |
| ROSA SP | | | O | | |
| RUBUSPP | | | A | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| SOLIDAGO C/A | | | | A | |
| POA SP | | | | O | |
| GEUM | | | | R | |
| POISON IVY | | | | O | |
| SYMPHYO SP | | | | O | |
| RANACULI | | | | | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is completed & legible ☑

Signature: (Project Manager)

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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 08/06/2012

Field Personnel: N. Charlton

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 25 | 2 | 70 | — | — |

ELC Polygon: #29-2 Assessment Type: ☑-Visual; roadside, no access / ☐-Physical; walk through feature

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

# ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | SE 27 (18C) |
| POLYGON: | 29-3 |
| SURVEYOR(S): | NC |
| DATE: | June 8, 2012 |
| START: | 3:30 |
| END: | 3:45 |
| UTMZ: | |
| UTMN: | |
| UTME: | |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 3 | FRAPENN = ACEFREE > QUEBICO > ULMAMER |
| 2 | SUB-CANOPY | 3 | 3 | FRAPENN = ACEFREE > ULMAMER > QUEBICO |
| 3 | UNDERSTOREY | 4 | 3 | SPIALBA > ILEVERT = VACCORY |
| 4 | GRD. LAYER | 5-7 | 4 | CAREX SPP > LEMMINO > IMPATIENS > LYCUNIF |

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

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤50% 4=CVR>50%

## STAND COMPOSITION:

BA:

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

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

DOMIN. AGE: PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | m | m |
| MOISTURE: | DEPTH OF ORGANICS: | | (cm) |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | | (cm) |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| TOPOSITE: | | CODE: |
| VEGETATION TYPE: Green ash mineral dec | | CODE: SWD2 2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

trees just over 25% in MAS pockets generally
wetter = ACE FREE SWD. DRIER = SWD2-2

# ELC
COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | |
| POLYGON: | SE 27; Tile 29; Poly 3 |
| DATE: | |
| SURVEYOR(S): | |

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACEFREE | A | A | | | |
| ULMAMER | O | O | | | |
| FRAX SP | A | A | | | |
| QUEBICO | D | D | | | |
| SPIALBA | | A | | | |
| ILEVERT | | O | | | |
| VACCORY | | O | | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| LEMMINO | | | | A | |
| CYPERACE | | | | A | |
| LYCUNIF | | | | D | |
| IMPCAPE | | | | O | |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

W:\nature\Natural Info and Teams\FIELD FORMS\Vegetation\ELC\Data-entry\Sand-shifts\Archive\Form_Data_Entry_ELC.xlsm

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 08/06/2012

Field Personnel: N. Charlton

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 25 | 2 | 70 | — | — |

ELC Polygon: #29-3 Assessment Type: ☑-Visual; roadside, no access / ☐-Physical; walk through feature

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

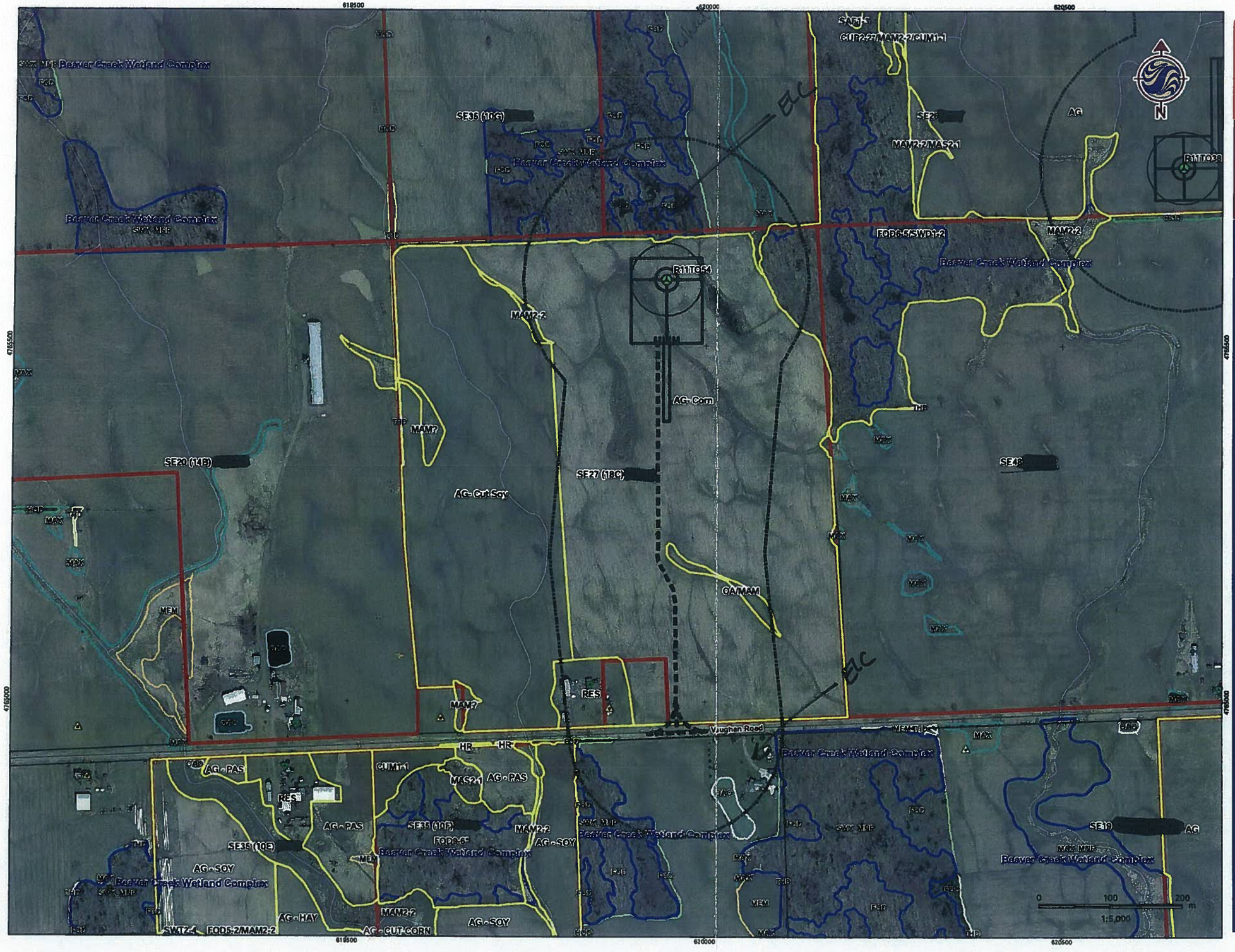
Contains seeps/springs/vernal pools?
☑-Y* / ☐-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| throughout | pools | min. 30 x 10 m | >60 cm | | ✓ | ✓ |

**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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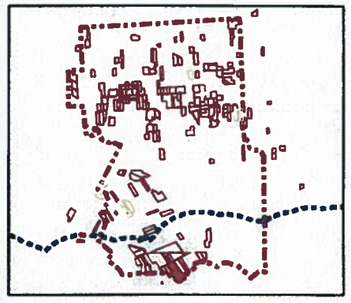
Revised: 2012-05-23 By: bcowper

## Legend

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

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

*ELC All SE48 Rec as well.



## Notes

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

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
29

Title
Property with Turbine
SE27 (18C) [redacted]

SE35(10B); Tile 31; Poly 1

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC – SE35 (10B) | | POLYGON: 1 | |
|---|---|---|---|---|
| | SURVEYOR(S): A. Ducharme | DATE: 06 June 2012 | | UTME: |
| | START: 9:30 | END: 11:00 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ACESASA > CAROVAT > QUERUBR > QUEALBA |
| 2 | SUB-CANOPY | 3 | 3 | ACESASA > CAROVAT > QUERUBR = ULMAMER = TILAMER |
| 3 | UNDERSTOREY | 4-5 | 3 | ACESASA > CAROVAT > ULMAMER = (Hawthorn?) |
| 4 | GRD. LAYER | 6-7 | 4 | ALLPETI > SOL CANA > GALTRIE |

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

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

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

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

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

## SOIL ANALYSIS: (not completed)

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

## COMMUNITY CLASSIFICATION:

| | | | |
|---|---|---|---|
| COMMUNITY CLASS: | Forest | CODE: | FO |
| COMMUNITY SERIES: | Deciduous Forest | CODE: | FOD |
| ECOSITE: | Fresh – Moist Deciduous Forest | CODE: | FOD6 |
| VEGETATION TYPE: | F-M Sugar Maple-hardwood deciduous forest | CODE: | FOD6-5 |
| INCLUSION | | CODE: | |
| COMPLEX | | CODE: | |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC – SE35 (10B) – Krick Rd / Elcho Rd |
|---|---|
| | POLYGON: 1 |
| | DATE: 06 June 2012 |
| | SURVEYOR(S): A. Ducharme |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACESASA | D | D | D | O | |
| CAROVAT | A | A | A | O | |
| QUERUBR | O | O | N | N | |
| QUEALBA | O | R | N | N | |
| ULMAMER | O | O | O | N | |
| TILAMER | O | O | R | N | |
| CRASUCC | N | N | O | R | |
| FRAAMER | N | R | O | R | |
| PRUSERO | N | N | R | N | |
| ALLPETI | N | N | N | D | |
| RUBIDAE | N | N | R | R | |
| IMPCAPE | N | N | N | R | |
| GALTRIE | N | N | N | A | |
| LEUVULG | N | N | N | O | |
| PETFRIG | N | N | N | R | |
| GERMACU | N | N | N | R | |
| GERROBE | N | N | N | R | |
| SOLCANA | N | N | N | A | |
| VIORENI | N | N | N | R | |
| Potentilla sp. | N | N | N | R | |
| Sedges | | | | | |
| Mosses | | | | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|

Page 1 of 1

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐

Signature: (Project Manager)

Veg code chosen by N. Charlton on request

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Guelph, ON
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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC – ELC

Date: 06 June 2012 Field Personnel: A. Ducharme

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | ~ 23 | ~15 km/h | part | none | ~1 mm |

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

- large fungi present on tree base
- woodpecker evidence (holes in trees)
- Catbird (audible "waa, waa")

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

SE 35(10B) ; Tile 31 ; Poly 2A

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC - SE35 (10B) | | POLYGON: 2A | |
|---|---|---|---|---|
| | SURVEYOR(S): A. Ducharme | DATE: 06 June 2012 | | UTME: |
| | START: 11:00 | END: 12:00 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ACESASA = QUEALBA > QUERUBR |
| 2 | SUB-CANOPY | 3 | 2 | ACESASA > QUERUBR = QUEALBA |
| 3 | UNDERSTOREY | 4-5 | 4 | CARASUCC > ACESASA = QUEALBA |
| 4 | GRD. LAYER | 6-7 | 1 | IMPCAPE > ACESASA ≥ QUEALBA |

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

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

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

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

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

## SOIL ANALYSIS: (not computed)

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: F-M Sugar Maple - Hardwood Deciduous Forest | | CODE: FOD6-5 (N Charlton) |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC - SE35 (10B) - Krick Rd./Elcho Rd. |
|---|---|
| | POLYGON: 2A |
| | DATE: 06 June 2012 |
| | SURVEYOR(S): A. Ducharme |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| QUEALBA | A | O | R | R | | | | | | | |
| QUERUBR | O | O | R | R | | | | | | | |
| ACESASA | A | A | R | O | | | | | | | |
| CAROVAT | O | O | R | N | | | | | | | |
| CRASUCC | N | N | A | N | | | | | | | |
| IMPCAPE | N | N | N | A | | | | | | | |

Page 1 of 2

Signature: (Field Personnel)

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

Signature: (Project Manager)

Veg code chosen by N. Charlton on request

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

SE35(10B); Tile 31; Poly 2B

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC – SE35 (10B) | | POLYGON: 2B | |
|---|---|---|---|---|
| | SURVEYOR(S): A. Ducharme | DATE: 06 June 2012 | | UTME: |
| | START: 11:00 | END: 12:00 | UTMZ: | UTMN: |

**POLYGON DESCRIPTION**

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

**STAND DESCRIPTION:**

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ACESASA > CAROVAT > QUERUBR > QUEALBA |
| 2 | SUB-CANOPY | 3 | 3 | ACESASA > CAROVAT > QUERUBR = ULMAMER |
| 3 | UNDERSTOREY | 4-5 | 3 | ACESASA = CAROVAT = ULMAMER |
| 4 | GRD. LAYER | 6-7 | 3 | ACESASA > DIPFULL > LEUVULG |

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

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

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

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

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

**SOIL ANALYSIS:** (not completed)

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

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | | CODE: FOD6-5 (N. Charlton) |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

**Evidence of Disturbance / Notes:**

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC – SE35 (10B) – Krick Rd / Elcho Rd |
|---|---|
| | POLYGON: 2B |
| | DATE: 06 June 2012 |
| | SURVEYOR(S): A. Ducharme |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ACESASA | D | D | O | O | | | | | | | |
| CAROVAT | A | A | O | R | | | | | | | |
| QUERUBR | A | A | R | R | | | | | | | |
| QUEALBA | A | A | R | R | | | | | | | |
| ULMAMER | A | A | O | R | | | | | | | |
| QUEPALU | | | | | | | | | | | |
| FAGGRAN | | | | | | | | | | | |
| | | | | | | | | | | | |
| SOLCANA | N | N | N | R | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| other fern | N | N | N | R | | | | | | | |
| | | | | | | | | | | | |
| DIPFULL | N | N | N | O | | | | | | | |
| LEUVULG | N | N | N | O | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Sedges | N | N | N | O | | | | | | | |
| grasses | N | N | N | O | | | | | | | |

Page 2 of 2

Signature: (Field Personnel)

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

Signature: (Project Manager)

Veg code chosen by N. Charlton on request

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

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 | Project Name: NRWC-ELC

Date: 06 June 2012 | Field Personnel: A. Ducharme

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | ~23 | ~15 km/h | part | none | ~1 mm |

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

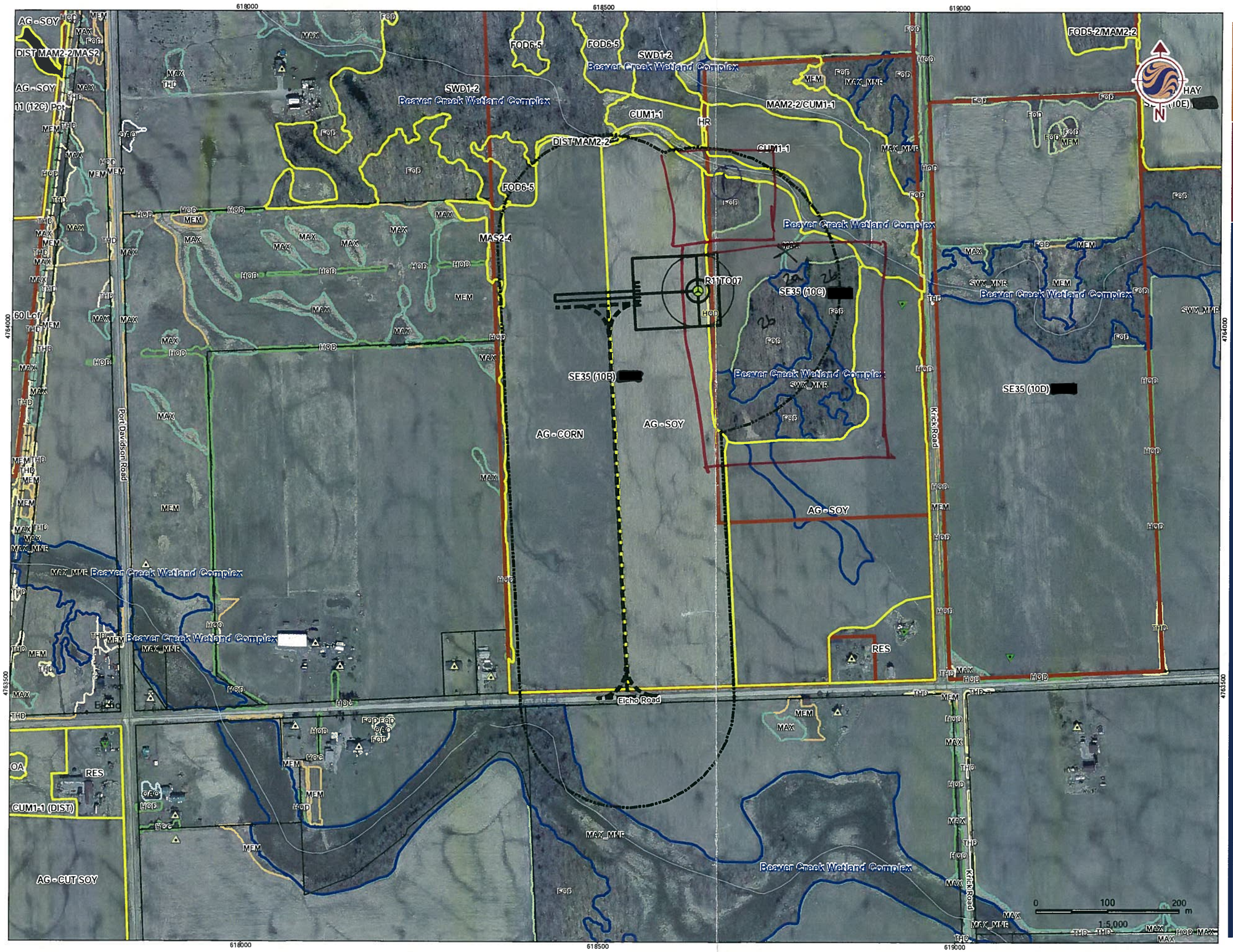
**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| visible on aerial photo. | ~3 | 2-8m | ~0.2-0.5m | | emergent | yes |

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

A few locations with pooled water present within wetland complex. (2A) ~2-8 m diameter with sparse emergent vegetation - shrubs mainly.

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




## Legend

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

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

## Notes

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

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
31

Title
Property with Turbine
SE35 (10B) Krick

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcowper

SE 35; Tile 37; Poly 1-1 ROADSIDE

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | | |
|---|---|---|---|---|
| SITE: NRWC SE 35(DB) | | POLYGON: 1-1 | | |
| SURVEYOR(S): NAL | DATE: JUNE 5/12 | | UTME: | |
| START: 11:00 | END: 1:30 | UTMZ: | UTMN: | |

**POLYGON DESCRIPTION**

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

**STAND DESCRIPTION:**

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

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

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

**STAND COMPOSITION:** BA:

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

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

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

**SOIL ANALYSIS:**

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

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| COSITE: | | CODE: |
| VEGETATION TYPE: Green Ash Mineral Deciduous Swamp Type | | CODE: SWD 2-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: MAM / MAS |

**Evidence of Disturbance / Notes:**

- This community was assessed along ELCO Road – appears to have MAM/MAS throughout community; was not delineated due to no property access & adequate walkthrough.

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

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| W. Oak | R | R | | | | Garlic Mustard | | | | R | |
| FRAPENS | A | A | O | | | Reed Canary | | | | O | |
| A. ELM | R | R | | | | BROMEGRASS | | | | O | |
| | | | | | | G. Ragweed | | | | R | |
| ALT. DOGWOOD | | | O-A | | | | | | | | |

Page ___ of ___

Signature: Natalie Ra (Field Personnel)

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

Signature: (Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 5, 2012 Field Personnel: N. Heawa

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

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE 00, TIE 01, Poly 1-2

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC SE 35(10B) | | POLYGON: 1-2 | |
|---|---|---|---|---|
| | SURVEYOR(S): NAL | DATE: JUNE 5, 2012 | UTME: | |
| | START: 11:00 | END: 1:30 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☑ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

HEDGEROW

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 3 | / | |
| 2 | SUB-CANOPY | 4 | / | VARIABLE |
| 3 | UNDERSTOREY | 5 | / | |
| 4 | GRD. LAYER | 6-7 | / | |

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

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

| STAND COMPOSITION: | | | | | | | | BA: |
|---|---|---|---|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | O | <10 | O | 10 – 24 | N | 25 – 50 | N | >50 |
| STANDING SNAGS: | N | <10 | N | 10 – 24 | N | 25 – 50 | N | >50 |
| DEADFALL/LOGS: | N | <10 | N | 10 – 24 | N | 25 – 50 | N | >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | | |
|---|---|---|---|
| COMMUNITY CLASS: | | CODE: | |
| COMMUNITY SERIES: | | CODE: | |
| ECOSITE: | | CODE: | |
| VEGETATION TYPE: Hedgerow | | CODE: | HR1 |
| INCLUSION | | CODE: | MAM |
| COMPLEX | | CODE: | |

**Evidence of Disturbance / Notes:**

- Hedgerow runs along elco road & up along west side of property
- small MAM inclusion along elco road, along hedgerow drainage

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

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRA PENS | | | | | | Swamp milkweed | | | | | |
| Choke Cherry | | | | | | Phil. Fleabane | | | | | |
| AM. ELM | | | | | | Reed canary | | | | | |
| W. oak | | | | | | SOLIDAGO sp. | | | | | |
| | | | | | | DOCK sp. | | | | | |
| | | | | | | BRO INTR | | | | | |
| | | | | | | DAUCARO | | | | | |
| | | | | | | DAISY | | | | | |
| | | | | | | WILLOWHERB | | | | | |
| | | | | | | MINT sp. | | | | | |
| | | | | | | BETREFOIL | | | | | |
| ALT DOGWOOD | | | | | | | | | | | |
| Buckthorn | | | | | | | | | | | |

Page ___ of ___

Signature: Natasheara (Field Personnel)

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

Signature: (Project Manager)

**Stantec Consulting Ltd.**
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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: JUNE 5, 2012 Field Personnel: N. LEAHA

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

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

MDDO
RWBL

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

SE 35, TWP 01, Poly 1-3

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: NRWC SE35(10B) | | POLYGON: 1-3 | |
| SURVEYOR(S): NAL | DATE: JUNE 5, 2012 | UTME: | |
| START: 11:00 | END: 1:30 | UTMZ: | UTMN: |

**POLYGON DESCRIPTION**

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☒ SURFICIAL DEP. | ☒ TREED |
| ☐ BEDROCK | |

**STAND DESCRIPTION:**

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ACESASA = FRAAMER > ULMAMER > Hickory |
| 2 | SUB-CANOPY | 3 | 3 | ACESASA = FRAAMER > ULMAMER > Hickory |
| 3 | UNDERSTOREY | 4 | 3 | HAWTHORN >> rasp |
| 4 | GRD. LAYER | 5-7 | 4 | GRASSES |

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

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

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

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

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

**SOIL ANALYSIS:**

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

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: DRY-FRESH SUGAR MAPLE WHITE ASH D.FO.2011 | | CODE: FOD 5-8 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

**Evidence of Disturbance / Notes:**

*assessed from Property line; species composition may reflect edge effect

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

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

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

| SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|
| ULMAMER | O | O | | | |
| Shag. Hickory | O | O | | | |
| HAWTHORN | | R | A | | |
| FRAAMER | O-A | O-A | | | |
| ACESASA | O-A | O-A | | | |
| R oak | R | R | | | |
| BASSWOOD | R | R | | | |
| Choke Cherry | | R | | | |
| Dogwoods | | | | | |

| SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|
| Orchardgrass | | | | O | |
| rasp. | | | O | | |
| rose sp | | | R | | |
| Solidago sp | | | | O | |

Page ___ of ___

Signature: Natasheea (Field Personnel)

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

Signature: (Project Manager)

**Stantec Consulting Ltd.**
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Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 5, 2012 Field Personnel: N. Leave

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 1 | 60% | Ø | Rain. |

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE 35; T.1E 31.; Poly 1-4

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC SE35(108) | | POLYGON: 1-4 | |
|---|---|---|---|---|
| | SURVEYOR(S): NAL | DATE: June 5, 2012 | | UTME: |
| | START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

HR

## STAND DESCRIPTION:

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

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

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

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | <10 | 10 – 24 | 25 – 50 | >50 |
| STANDING SNAGS: | <10 | 10 – 24 | 25 – 50 | >50 |
| DEADFALL/LOGS: | <10 | 10 – 24 | 25 – 50 | >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | Hedgerow | CODE: HR2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

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

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hawthorn | | | | | | Daisy | | | | | |
| Dogwood | | | | | | Solidago | | | | | |
| Elm | | | | | | rose sp | | | | | |
| Alder | | | | | | crown vetch | | | | | |

Page ___ of ___

Signature: Natasha (Field Personnel)

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

Signature: (Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 5 2012 Field Personnel: N. Leaver

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 1 | 60% | Ø | rain |

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE 35; Tile 81; Poly 1-5 ROADSIDE

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: NRWC SE35(10B) | | POLYGON: 1-5 | |
| SURVEYOR(S): NAL | DATE: June 5, 2012 | UTME: | |
| START: | END: | UTMZ: | UTMN: |

**POLYGON DESCRIPTION**

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

**STAND DESCRIPTION:**

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ULMAMER = Hickory = oak = FRAPENS |
| 2 | SUB-CANOPY | 3 | / | ASSESSED FROM SIDE; Could not |
| 3 | UNDERSTOREY | 4 | / | ASSESS % cover |
| 4 | GRD. LAYER | 5-7 | / | |

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

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

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

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

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

**SOIL ANALYSIS:**

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

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: F-M Hickory-ASH-OAK-ELM Dec. F. Type | | CODE: FOD9-6* |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

**Evidence of Disturbance / Notes:**

Community assed from border of Ag field - Edge species dominated cover & inside of community difficult to observe - No inside ground cover was observed

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

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Shagbark hic | O | | | | | | | | | | |
| FRAPENS | O | | | | | | | | | | |
| Bur oak. | O | | | | | | | | | | |
| Cherry | | R | R | | | | | | | | |
| A. ELM | O | | | | | | | | | | |
| W. PINE | R | | | | | | | | | | |
| Hawthorn | | O | | | | | | | | | |
| Buckthorn | | O | | | | | | | | | |
| A. Dogwood | | | O | | | | | | | | |

Page ___ of ___

Signature: Natasheava (Field Personnel)

Quality Control: This form is completed & legible ☐.

Signature: (Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NLWC

Date: June 5, 2012 Field Personnel: N. Leaua

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 1 | 60% | Ø | rain |

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

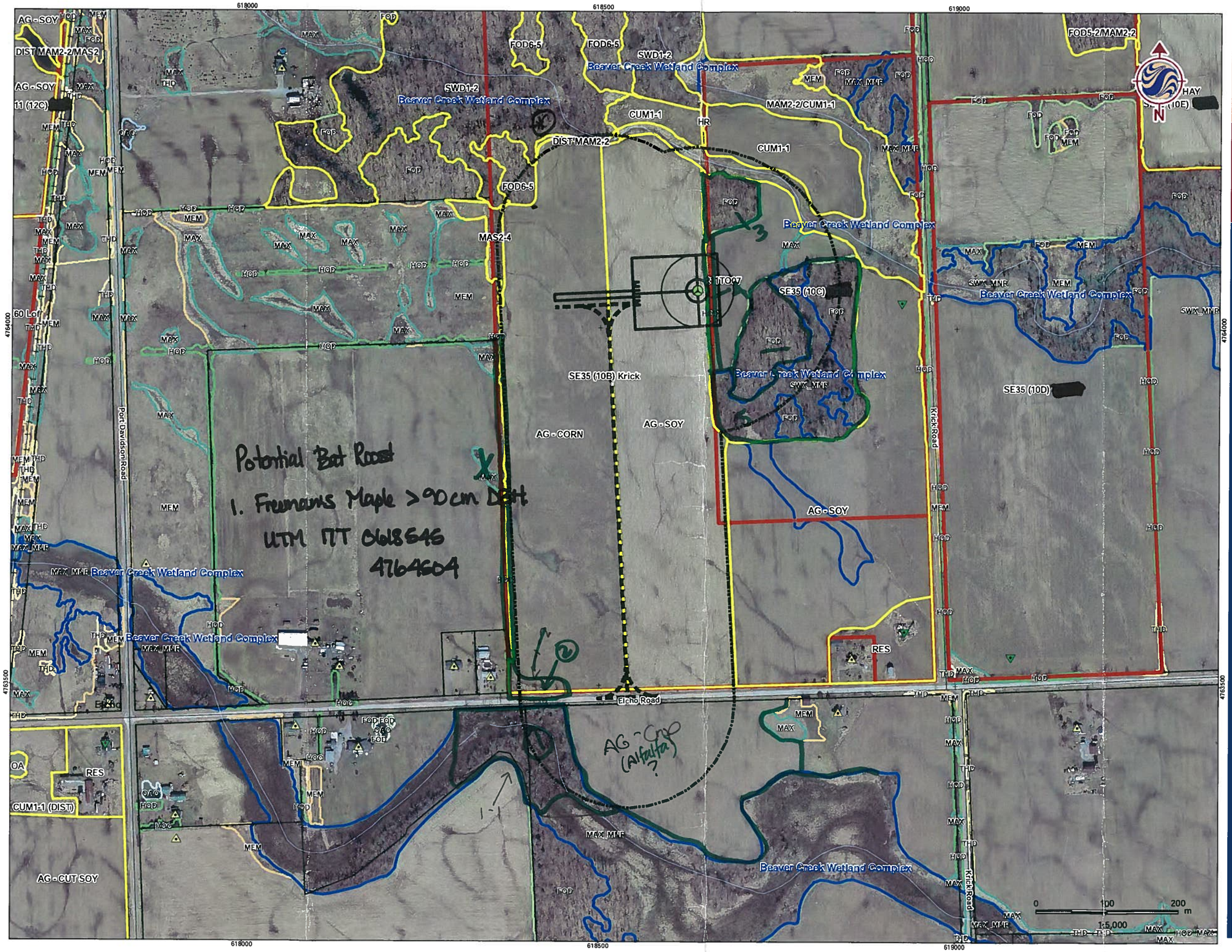
Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

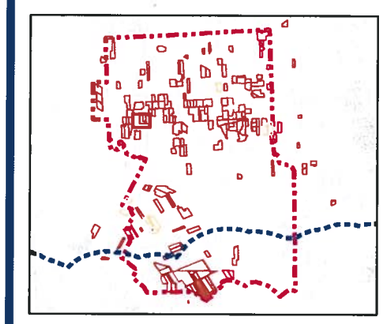
CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization




## Legend

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

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



## Notes

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

Stantec

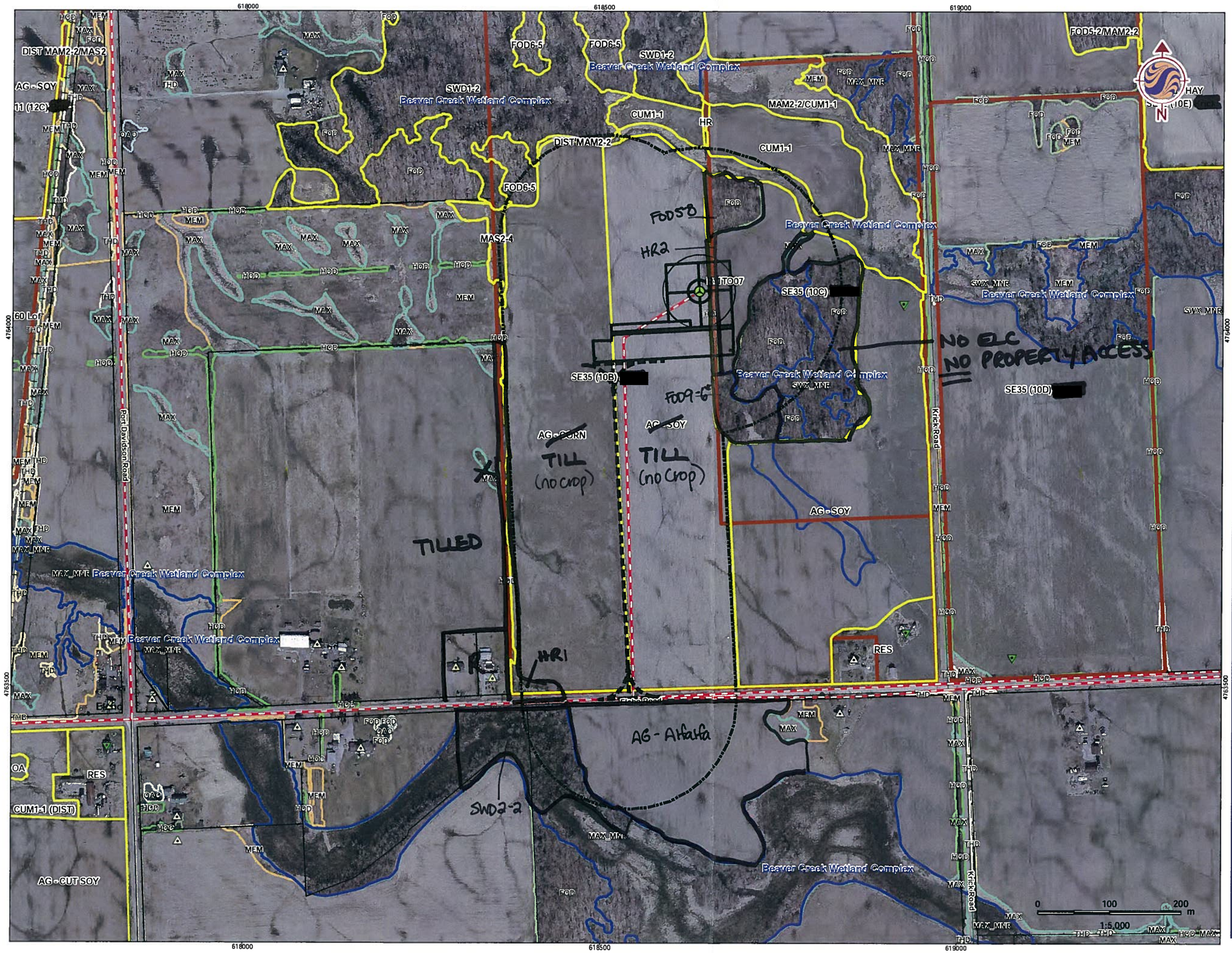
May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
31

Title
Property with Turbine
SE35 (10B) [redacted]

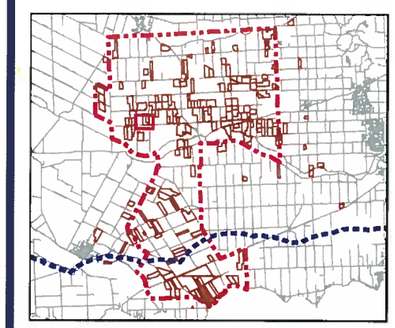
V:\01609\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcowper




## Legend

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

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



## Notes

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

Stantec

June, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
32

Title
Property with Turbine
SE35 (10B) [redacted]

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-06-27 By: bcowper

SE 35; Tile 37; Poly 1-1 ROADSIDE

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | | |
|---|---|---|---|---|
| SITE: NRWC SE 35(DB) | | POLYGON: 1-1 | | |
| SURVEYOR(S): NAL | DATE: JUNE 5/12 | | UTME: | |
| START: 11:00 | END: 1:30 | UTMZ: | UTMN: | |

**POLYGON DESCRIPTION**

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

**STAND DESCRIPTION:**

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

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

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

**STAND COMPOSITION:** BA:

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

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

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

**SOIL ANALYSIS:**

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

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| COSITE: | | CODE: |
| VEGETATION TYPE: Green Ash Mineral Deciduous Swamp Type | | CODE: SWD 2-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: MAM / MAS |

**Evidence of Disturbance / Notes:**

- This community was assessed along ELCO Road – appears to have MAM/MAS throughout community; was not delineated due to no property access & adequate walkthrough.

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

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| W. Oak | R | R | | | | Garlic Mustard | | | | R | |
| FRAPENS | A | A | O | | | Reed Canary | | | | O | |
| A. ELM | R | R | | | | BROMEGRASS | | | | O | |
| | | | | | | G. Ragweed | | | | R | |
| ALT. DOGWOOD | | | O-A | | | | | | | | |

Page ___ of ___

Signature: Natalie Ra (Field Personnel)

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

Signature: (Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 5, 2012 Field Personnel: N. Heawa

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

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE 00, TIE 01, Poly 1-2

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC SE 35(10B) | | POLYGON: 1-2 | |
|---|---|---|---|---|
| | SURVEYOR(S): NAL | DATE: JUNE 5, 2012 | UTME: | |
| | START: 11:00 | END: 1:30 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☑ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

HEDGEROW

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 3 | / | |
| 2 | SUB-CANOPY | 4 | / | VARIABLE |
| 3 | UNDERSTOREY | 5 | / | |
| 4 | GRD. LAYER | 6-7 | / | |

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

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

| STAND COMPOSITION: | | | | | | | | BA: |
|---|---|---|---|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | O | <10 | O | 10 – 24 | N | 25 – 50 | N | >50 |
| STANDING SNAGS: | N | <10 | N | 10 – 24 | N | 25 – 50 | N | >50 |
| DEADFALL/LOGS: | N | <10 | N | 10 – 24 | N | 25 – 50 | N | >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | | |
|---|---|---|---|
| COMMUNITY CLASS: | | CODE: | |
| COMMUNITY SERIES: | | CODE: | |
| ECOSITE: | | CODE: | |
| VEGETATION TYPE: Hedgerow | | CODE: | HR1 |
| INCLUSION | | CODE: | MAM |
| COMPLEX | | CODE: | |

**Evidence of Disturbance / Notes:**

- Hedgerow runs along elco road & up along west side of property
- small MAM inclusion along elco road, along hedgerow drainage

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

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRA PENS | | | | | | Swamp milkweed | | | | | |
| Choke Cherry | | | | | | Phil. Fleabane | | | | | |
| AM. ELM | | | | | | Reed canary | | | | | |
| W. oak | | | | | | SOLIDAGO sp. | | | | | |
| | | | | | | DOCK sp. | | | | | |
| | | | | | | BRO INTR | | | | | |
| | | | | | | DAUCARO | | | | | |
| | | | | | | DAISY | | | | | |
| | | | | | | WILLOWHERB | | | | | |
| | | | | | | MINT sp. | | | | | |
| | | | | | | BETREFOIL | | | | | |
| ALT DOGWOOD | | | | | | | | | | | |
| Buckthorn | | | | | | | | | | | |

Page ___ of ___

Signature: Natasheara (Field Personnel)

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

Signature: (Project Manager)

**Stantec Consulting Ltd.**
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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: JUNE 5, 2012 Field Personnel: N. LEAHA

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

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

MDDO
RWBL

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

SE 35, TWP 01, Poly 1-3

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: NRWC SE35(10B) | | POLYGON: 1-3 | |
| SURVEYOR(S): NAL | DATE: JUNE 5, 2012 | UTME: | |
| START: 11:00 | END: 1:30 | UTMZ: | UTMN: |

**POLYGON DESCRIPTION**

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☒ SURFICIAL DEP. | ☒ TREED |
| ☐ BEDROCK | |

**STAND DESCRIPTION:**

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ACESASA = FRAAMER > ULMAMER > Hickory |
| 2 | SUB-CANOPY | 3 | 3 | ACESASA = FRAAMER > ULMAMER > Hickory |
| 3 | UNDERSTOREY | 4 | 3 | HAWTHORN >> rasp |
| 4 | GRD. LAYER | 5-7 | 4 | GRASSES |

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

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

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

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

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

**SOIL ANALYSIS:**

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

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: DRY-FRESH SUGAR MAPLE WHITE ASH D.FO.2011 | | CODE: FOD 5-8 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

**Evidence of Disturbance / Notes:**

*assessed from Property line; species composition may reflect edge effect

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

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

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

| SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|
| ULMAMER | O | O | | | |
| Shag. Hickory | O | O | | | |
| HAWTHORN | | R | A | | |
| FRAAMER | O-A | O-A | | | |
| ACESASA | O-A | O-A | | | |
| R oak | R | R | | | |
| BASSWOOD | R | R | | | |
| Choke Cherry | | R | | | |
| Dogwoods | | | | | |

| SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|
| Orchardgrass | | | | O | |
| rasp. | | | O | | |
| rose sp | | | R | | |
| Solidago sp | | | | O | |

Page ___ of ___

Signature: Natasheea (Field Personnel)

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

Signature: (Project Manager)

**Stantec Consulting Ltd.**
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Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 5, 2012 Field Personnel: N. Leave

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 1 | 60% | Ø | Rain. |

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE 35; T.1E 31.; Poly 1-4

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC SE35(108) | | POLYGON: 1-4 | |
|---|---|---|---|---|
| | SURVEYOR(S): NAL | DATE: June 5, 2012 | | UTME: |
| | START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

HR

## STAND DESCRIPTION:

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

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

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

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | <10 | 10 – 24 | 25 – 50 | >50 |
| STANDING SNAGS: | <10 | 10 – 24 | 25 – 50 | >50 |
| DEADFALL/LOGS: | <10 | 10 – 24 | 25 – 50 | >50 |

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | Hedgerow | CODE: HR2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

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

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hawthorn | | | | | | Daisy | | | | | |
| Dogwood | | | | | | Solidago | | | | | |
| Elm | | | | | | rose sp | | | | | |
| Alder | | | | | | crown vetch | | | | | |

Page ___ of ___

Signature: Natasha (Field Personnel)

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

Signature: (Project Manager)

**Stantec Consulting Ltd.**
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Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 5 2012 Field Personnel: N. Leaver

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 1 | 60% | Ø | rain |

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

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

## Reptile / Bat Hibernacula Features:

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

## Stick Nests:

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

**STICK NEST(S) IDENTIFIED**

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

## Seeps/Springs/Vernal Pools:

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE 35; Tile 81; Poly 1-5 ROADSIDE

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: NRWC SE35(10B) | | POLYGON: 1-5 | |
| SURVEYOR(S): NAL | DATE: June 5, 2012 | UTME: | |
| START: | END: | UTMZ: | UTMN: |

**POLYGON DESCRIPTION**

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

**STAND DESCRIPTION:**

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ULMAMER = Hickory = oak = FRAPENS |
| 2 | SUB-CANOPY | 3 | / | ASSESSED FROM SIDE; Could not |
| 3 | UNDERSTOREY | 4 | / | ASSESS % cover |
| 4 | GRD. LAYER | 5-7 | / | |

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

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

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

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

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

**SOIL ANALYSIS:**

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

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: F-M Hickory-ASH-OAK-ELM Dec. F. Type | | CODE: FOD9-6* |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

**Evidence of Disturbance / Notes:**

Community assed from border of Ag field - Edge species dominated cover & inside of community difficult to observe - No inside ground cover was observed

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

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Shagbark hic | O | | | | | | | | | | |
| FRAPENS | O | | | | | | | | | | |
| Bur oak. | O | | | | | | | | | | |
| Cherry | | R | R | | | | | | | | |
| A. ELM | O | | | | | | | | | | |
| W. PINE | R | | | | | | | | | | |
| Hawthorn | | O | | | | | | | | | |
| Buckthorn | | O | | | | | | | | | |
| A. Dogwood | | | O | | | | | | | | |

Page ___ of ___

Signature: Natasheava (Field Personnel)

Quality Control: This form is completed & legible ☐.

Signature: (Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NLWC

Date: June 5, 2012 Field Personnel: N. Leaua

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 1 | 60% | Ø | rain |

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

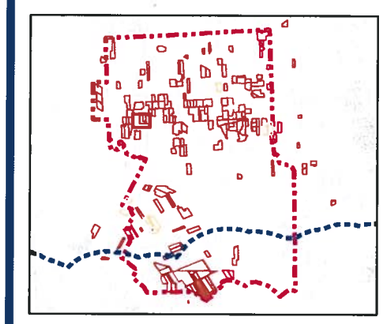
**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

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

## Legend

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

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



## Notes

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

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
31

Title
Property with Turbine
SE35 (10B) [redacted]

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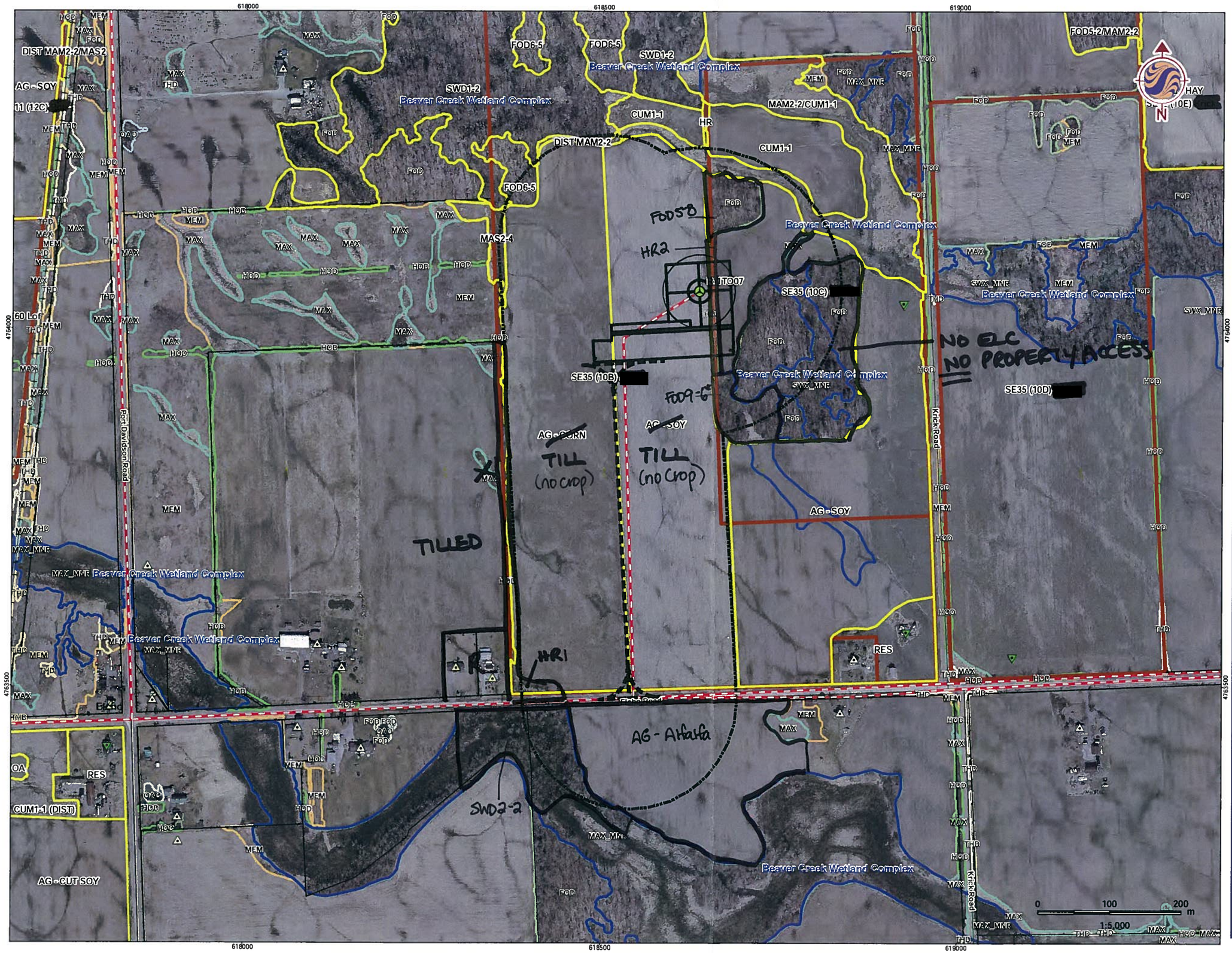
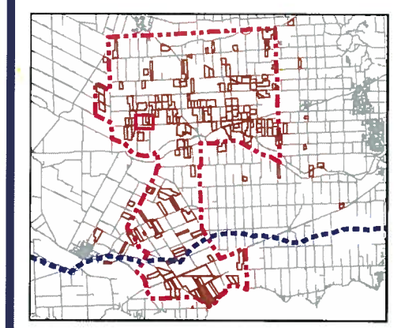
Revised: 2012-05-23 By: bcowper




## Legend

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

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



## Notes

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

Stantec

June, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
32

Title
Property with Turbine
SE35 (10B) [redacted]

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-06-27 By: bcowper

E

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: | | POLYGON: | |
| SURVEYOR(S): | DATE: | UTME: | |
| START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | 3 | 3 | Narrow-leaved meadowsweet > Red-berried elderberry |
| 4 | GRD. LAYER | 4.5 | 4 | Jewelweed > Sedge > Red-osier dogwood > Raspberry |

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

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤50% 4=CVR>50%

## STAND COMPOSITION:

BA:

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

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

DOMM. AGE: PIONEER | ✓ YOUNG | MID-AGE | MATURE | OLD GROWTH

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | |
| COMMUNITY SERIES: | | CODE: |
| COMPOSITE: | | CODE: |
| VEGETATION TYPE: Broad-leaved Sedge Mineral Shallow Marsh | | CODE: MAS2-4 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes: Sedge dominated Marsh, gator shade
- only a couple cm of water in some areas.

D

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: N | |
| POLYGON: D | |
| DATE: August, 202 | |
| SURVEYOR(S): C. Payette, H Hughes | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Red-berried elderberry | | O | | | |
| NL meadowsweet | | A | | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Lady's thumb | | | | | |
| Woodsorrel | | | | O | |
| Northern bur sh | | | | A | |
| Jewelweed | | | | D | |
| Canadian Aster | | | | | |
| Dwarf Fleabane | | | | R,O | |
| Red-osier dogwood | | | | A | |
| Cattail | | | | A | |
| Bluetopgrass | | | | R | |
| Bane Sedge | | | | R | |
| Common cocklebur | | | | R | ✓ |
| Sedge Spp | | | | | ✓ |
| Sedge Spp 2 | | | | | ✓ |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC SE35 (10H)

Date: August 15, 2012

Field Personnel: C. Paghe

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 26 | 2 | 20% | none | none |

ELC Polygon: # D

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE35 (10H) ; Tile 20 ; Poly F

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | |
| POLYGON: | |
| SURVEYOR(S): | |
| DATE: | |
| START: | END: |
| UTME: | |
| UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☐ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| 1 CANOPY | 2 | 3 | American elm > hawthorn > greenash |
| 2 SUB-CANOPY | | | |
| 3 UNDERSTOREY | 3-4 | 2 | grey dogwood > raspberry |
| 4 GRD. LAYER | 5-7 | 3 | garlic mustard > goldenrod > strawberry |

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

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

## STAND COMPOSITION:

| | | | | | | | | BA: |
|---|---|---|---|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | A | <10 | R | 10 – 24 | M | 25 – 50 | N | >50 |
| STANDING SNAGS: | R | <10 | R | 10 – 24 | N | 25 – 50 | N | >50 |
| DEADFALL/LOGS: | O | <10 | R | 10 – 24 | N | 25 – 50 | N | >50 |

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

| DOMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|
| | | ✓ | | | |

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | |
| COMMUNITY SERIES: | | CODE: |
| SITE: | | CODE: |
| VEGETATION TYPE: elm-hawthorne cultural woodland | | CODE: CUW1-3 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes: highly Disturbed regen. field?

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: NKWC | |
| POLYGON: F | |
| DATE: Aug 4 13 | |
| SURVEYOR(S): C. Pay, HC | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| honeylocust | O | | | | |
| American elm | A | | | | |
| Hawthorne | A | | | | |
| Sugar maple | O | | | | |
| Freeman maple | R | | | | |
| greenash | O | | | | |
| raspberry (ideaus) | | | R-O | | |
| grey dogwood | | | O | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| golden rod | | | | O | |
| strawberry | | | | O | |
| moss sp | | | | O | |
| garlic mustard | | | | A | |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

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Guelph, ON
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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160960730

Project Name: NRWC SE 35(10H)

Date: August 15, 2012

Field Personnel: C. Paquette

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 26 | 2 | 20% | none | none |

ELC Polygon: # F

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

**Stick Nests:**

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

**STICK NEST(S) IDENTIFIED**

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

**Seeps/Springs/Vernal Pools:**

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE35 (10H); Tile 20; Feeder Canal

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Fax: (519) 836-2493

Stantec

# Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 | Project Name: NTWC
Date: August 15, 2012 | Field Personnel: C. Payette

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 24 | 1 | 50% | none | none |

## POLYGON DESCRIPTION

**ELC COMMUNITY DESCRIPTION & CLASSIFICATION**

POLYGON: Feeder Canal
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 | | |

## LAND DESCRIPTION:

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| CANOPY | 2 | 3 | green ash >> eastern cottonwood |
| SUB-CANOPY | | | |
| UNDERSTOREY | 3-4 | 3 | riverbank grape > common buckthorn > red osier dogwood |
| GRD. LAYER | 5-7 | 4 | white water lily = Duckweed > Submerged aquatics |

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: water lily - Bullhead lily floating-leaved SA | CODE: SAF1-1
COMPLEX: Duckweed floating leaved Shoaling aquatic | CODE: SAF1-3

Evidence of Disturbance / Notes:
green frogs everywhere.

Some areas Dominated by duckweed
call Duckweed Root Curve

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: | | | | | | | |
| green ash | A | | | | | | |
| eastern cottonwood | R-O | | | | | | |
| SHRUBS: | | | | | | | |
| common buckthorn | | | A | | | | |
| red-osier dogwood | | | O | | | | |
| riverbank grape | | | A | | | | |
| grey dogwood | | | O | | | | |
| Staghorn Sumac | | | O | | | | |
| willows | | | R-O | | | | |
| GROUND: | | | | | | | |
| white water lily | | | | D | | | |
| purple loosestrife | | | | O | | | |
| various submerged aquatic | | | | A | | | |
| Cattail (Common) | | | | O-A | | | |
| Arrowhead | | | | O-A | | | |
| woolly Sedge | | | | O | | | |
| Bur-reed | | | | R-O | | | |
| Swamp milkweed | | | | R-O | | | |
| Duckweed sp. | | | | D | | | |
| Japanese knotweed | | | | R | | | |
| Cattail (NL) | | | | O-A | | | |

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.
Signature: (Project Manager)

SE 35(10H)

**ELC Polygon: #** Feeder Canal **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)**

GOFI, EUST, RWBB
green frogs
evidence of Muskrats (Bank dens)

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

SE35 (10H); Tile 20; Poly C

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Stantec

# Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269
Project Name: NRWC
Date: August 15
Field Personnel: C. Paquette

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 26 | 2 | 20% | none | rain |

## POLYGON DESCRIPTION

**ELC** — COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: C
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) |
|---|---|---|---|
| CANOPY | 2 | 3 | greenash |
| SUB-CANOPY | | | |
| UNDERSTOREY | 3-4 | 3 | gray dogwood |
| GRD. LAYER | n/o | n/o | |

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: Greenash Mineral deciduous swamp — CODE: SWD

COMPLEX — CODE:

Evidence of Disturbance / Notes: GRCA

Potential Batroost tree

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 | | | | | | |
| white birch | O | | | | | | |
| Freeman's maple | O | | | | | | |
| Red oak | R | | | | | | |
| Black Cherry | R | | | | | | |
| SHRUBS: | | | | | | | |
| gray dogwood | | | A | | | | |
| GROUND: | | | | | | | |

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.
Signature: (Project Manager)

SE 35 (10H)

**ELC Polygon:** # C **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 |
|---|---|---|---|---|---|---|---|
| n/a | BAT-1 | Silvermaple | 60cm | 15 | 2 | 2 | 10-15m broken limbs. |
| | | | | | | | |
| | | | | | | | |

**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

SE 35(10H); Tile 20; Poly B

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Fax: (519) 836-2493

Stantec

# Roadside ELC, Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269
Project Name: NRWC
Date: August 15, 2012
Field Personnel: C. Pagette

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 26 | 2 | 20% | none | none |

## ELC COMMUNITY DESCRIPTION & CLASSIFICATION

POLYGON: B
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) |
|---|---|---|---|
| CANOPY | 2 | 4 | Sugar maple > white birch > Red maple = Freeman maple |
| SUB-CANOPY | | | |
| UNDERSTOREY | 3-4 | 3 | Spicebush > blue beech > white elderberry |
| GRD. LAYER | 5-7 | 3 | 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: | 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 |
|---|---|---|---|---|---|

VEGETATION TYPE: F-M Sugar maple - hardwood Dec. Forest — CODE: FOD6-5
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 birch | O | | | | | | |
| Freeman maple | O | | | | | | |
| Sugar maple | A | | | | | | |
| Red maple | O | | | | | | |
| green ash | R-O | | | | | | |
| Red oak | R | | | | | | |
| Black cherry | R-O | | | | | | |
| American elm | R | | | | | | |
| SHRUBS: | | | | | | | |
| Spicebush | | | A | | | | |
| Blue beech | | | O | | | | |
| white elderberry | | | O | | | | |
| GROUND: | | | | | | | |
| Sensitive Fern | | | A | | | | |

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.
Signature: (Project Manager)

SE 35(10H)

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

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

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

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

**STICK NEST(S) IDENTIFIED**

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

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

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

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

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

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

SE 35 (10H); Tile 20; Poly E

SE 35 (10H)

**ELC COMMUNITY DESCRIPTION & CLASSIFICATION**

| | | | |
|---|---|---|---|
| SITE: | | POLYGON: | |
| SURVEYOR(S): | | DATE: | |
| START: | END: | UTMZ: | UTME: / UTMN: |

**POLYGON DESCRIPTION**

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☐ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

**STAND DESCRIPTION:**

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| CANOPY | 2 | 4 | Red oak > Sugar maple > whiteoak > red maple |
| SUB-CANOPY | | | |
| UNDERSTOREY | 3-4 | 2 | Hawthorne sp. |
| GRD. LAYER | 5-7 | 2 | goldenrod sp |

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

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

**STAND COMPOSITION:**

| SIZE CLASS ANALYSIS: | | | | | | | | BA: |
|---|---|---|---|---|---|---|---|---|
| STANDING SNAGS: | O | <10 | A | 10 – 24 | R | 25 – 50 | N | >50 |
| DEADFALL/LOGS: | A | <10 | R | 10 – 24 | N | 25 – 50 | N | >50 |
| ABUNDANCE CODES: | | | O | 10 – 24 | R | 25 – 50 | N | >50 |

N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| DOMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|
| | | | | ✓ | |

**SOIL ANALYSIS:**

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

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | |
| COMMUNITY SERIES: | | CODE: |
| SITE: | | CODE: |
| VEGETATION TYPE: F-M Oak-Sugar Maple Deciduous Forest | | CODE: FOD9-1 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |
| Evidence of Disturbance / Notes: Deer (Scat) | | |

**ELC COMMUNITY DESCRIPTION & CLASSIFICATION**

| | |
|---|---|
| SITE: NRWC | |
| POLYGON: E | |
| DATE: August 6, 2012 | |
| SURVEYOR(S): C. Pagtte | |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Sugarmaple | O | | | | |
| Redoak | A | | | | |
| greenash | RO | | | | |
| Ironwood | O-A | | | | |
| whiteoak | O | | | | |
| Redmaple | O | | | | |
| Americanbeech | R | | | | |
| Pincak | R | | | | |
| Hawthorne | | | R | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| goldenrod sp | | | | O | |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

W:\resource\Internal Info and Teams\FIELD FORMS\

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160960730

Project Name: NFWC SE35(10H)

Date: August 15, 2012

Field Personnel: C. Page HC

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 26 | 2 | 20% | none | none |

ELC Polygon: # E

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

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

**Reptile / Bat Hibernacula Features:**

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

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

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

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

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| n/a | BAT02 | White ash | 80cm | 16 | 1 | 2-3 | broken limbs, flaking bark 15m |

**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:**

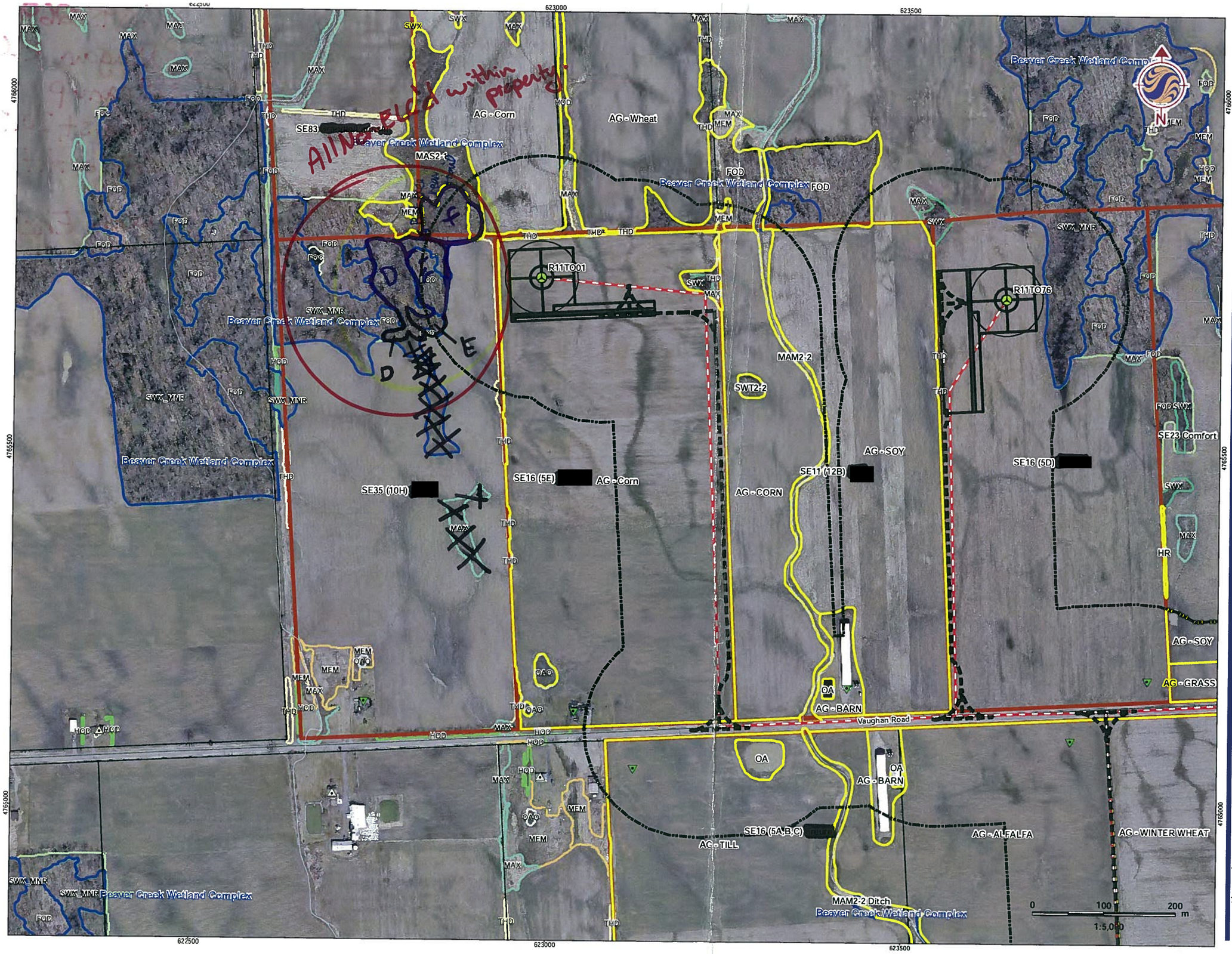
Contains seeps/springs/vernal pools?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**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)**

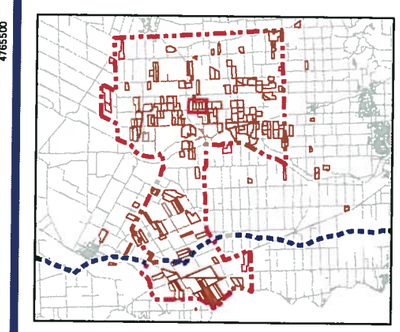
CA=carcass; DP=distinctive parts; FE=feeding evidence; EY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization




## Legend

full woodlot ELC

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



## Notes

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

Stantec

July, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
20

Title
Property with Turbine
SE16 (5E) [redacted]

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NHA_Fieldmaps\160950269_Release_18_ELC_Map_Book_20120716.mxd
Revised: 2012-07-27 By: bcowper

SE 37; Tile 33; Poly 1

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NIAGARA | | POLYGON: 1 | |
|---|---|---|---|---|
| | SURVEYOR(S): JR | DATE: JUNE 5-12 | UTME: | |
| | START: 9:00 | END: 9:15 AM | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☒ SURFICIAL DEP. | ☒ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | FRAPENN > QUEBICO > ACEFREE |
| 2 | SUB-CANOPY | 3 | 4 | FRAPENN > ACEFREE = ULMAMER |
| 3 | UNDERSTOREY | 4 | 4 | CORRACE = FRAPENN > SPIALBA |
| 4 | GRD. LAYER | 5-7 | 4 | Grasses > IMPATIENS = Whiteavens |

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

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

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

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: green ash mineral deciduous swamp | | CODE: SWD2-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

**Evidence of Disturbance / Notes:**

- NO ACCESS

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: SE 37 |
|---|---|
| | POLYGON: |
| | DATE: |
| | SURVEYOR(S): |

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

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

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACEFREE | R-O | O | | | |
| QUEBICO | O | R | | | |
| QUEMAR | R | R | | | |
| FRAPENN | A | O-A | | | |
| ULMAMER | / | O | | | |
| SPI ALBA | | | O | | |
| CORRACE | | | O-A | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| GLYSTRI | | | | O | |
| PHA ARU | | | | O | |
| IMPATIENS | | | | O | |
| CRI PHIL | | | | O | |
| CAR STIP | | | | R | |
| W. AVENS | | | | O | |
| GLY GRAN | | | | R-O | |
| POA SP. | | | | O | |

Page ___ of ___

Signature: (Field Personnel)

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

Signature: (Project Manager)

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

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC SE 37

Date: JUNE 5-12 Field Personnel: J. Leslie

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

**ELC Polygon:** #33-1 **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

SE 37; Tile 33; Poly 2

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | | |
|---|---|---|---|---|
| SITE: NIAGARA | | | POLYGON: 2 | |
| SURVEYOR(S): JR | DATE: JUNE 5-12 | | UTME: | |
| START: 9:18 | END: 9:31 AM | | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

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

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☒ SURFICIAL DEP. | ☒ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 1-2 | 4 | QUERUBR > QUEMACRO > ACEFRAE |
| 2 | SUB-CANOPY | 3 | 3 | QUEMACRO ACEFRAE > SHAGBARK |
| 3 | UNDERSTOREY | 4 | 4 | CORRACE > SAPLINGS |
| 4 | GRD. LAYER | 5-7 | N/A | N/A |

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

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

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

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

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

## SOIL ANALYSIS:

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

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: D-F OAK - HARDWOOD DECIDUOUS FOREST | | CODE: FOD 9-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

- NO ACCESS - COULD NOT SEE GROUND COVER FROM ROAD

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: SE 37 | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. | SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| QUERUBR | A | R | | | | N/A | | | | | |
| ACEFRAE | R-O | O | | | | | | | | | |
| QUEMACRO | O | O | | | | | | | | | |
| SHAGHICK | / | R | | | | | | | | | |
| TILAMER | R | R | | | | | | | | | |
| FRAAMER | / | R | | | | | | | | | |
| CORRACE | | | A | | | | | | | | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269 Project Name: NRWC SE 37

Date: June 5-12 Field Personnel: JTL

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 2 | — | ~~5~~ | ~~5~~ |

**ELC Polygon: #** 2 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

**Extent of Physical Investigation of Feature:** ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## Stick Nests:

Contains large stick nests?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

## Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

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

SE 37, NIC 55, POLY 3

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | | |
|---|---|---|---|---|
| SITE: NIAGARA | | POLYGON: 3 | | |
| SURVEYOR(S): JTL | DATE: JUNE 05-12 | | UTME: | |
| START: 10:04 | END: 10:09 AM | UTMZ: | UTMN: | |

**POLYGON DESCRIPTION**

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| WETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | | ☐ TERRACE | | ☒ GRAMINOID | ☐ STREAM |
| | | ☐ VALLEY SLOPE | | ☐ FORB | ☒ MARSH |
| | ☐ ACIDIC BEDRK. | ☒ TABLELAND | | ☐ LICHEN | ☐ SWMAP |
| | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☐ DECIDUOUS | ☐ BOG |
| | ☐ BASIC BEDRK. | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| SITE | | ☐ CREVICE / CAVE | COVER | ☐ MIXED | ☐ MEADOW |
| OPEN WATER | ☐ CARB. BEDRK. | ☐ ALVAR | ☒ OPEN | | ☐ PRAIRIE |
| SHALLOW WATER | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | ☐ TREED | | ☐ SAVANNAH |
| SURFICIAL DEP. | | ☐ SAND DUNE | | | ☐ WOODLAND |
| BEDROCK | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

**LAND DESCRIPTION:**

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| CANOPY | | | |
| SUB-CANOPY | | | |
| UNDERSTOREY | | | |
| GRD. LAYER | 4-7 | 4 | PHAARUN >> INDIAN HEMP > COR RACE |

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%

**LAND COMPOSITION:** BA:

| | | | | |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |
| STANDING SNAGS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |
| DEADFALL/LOGS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| DOMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

**SOIL ANALYSIS:**

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | | (cm) |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | | (cm) |

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| TOPOSITE: | | CODE: |
| VEGETATION TYPE: FEEDCANARY MINERAL MEADOW MARSH | | CODE: MAM2-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

- DRAIN FEATURE
- NO $H_2O$

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: SE37 | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | PHA ARUN | | | | D | |
| | | | | | | INDIAN HEMP | | | | O | |
| | | | | | | TEASEL | | | | R | |
| SPI ALBA | | | | R | | | | | | | |
| CORRACE | | | | R | | | | | | | |
| SAMCANA | | | | R | | | | | | | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐

Signature: (Project Manager)

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Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269 Project Name: NRWC SE37

Date: JUNE 5-12 Field Personnel: JTL

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 2 | ✓ | ✗ | ✗ |

**ELC Polygon: #** 3 **Assessment Type:** ☐-Visual; roadside, no access / ☒-Physical; walk through feature

**Extent of Physical Investigation of Feature:** ☒-Entire / ☐-Partial, walk through polygon *(indicate on map)*

**Reptile / Bat Hibernacula Features:** Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:** Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

**Stick Nests:** Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

**Seeps/Springs/Vernal Pools:** Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

CA: carcass; DP: distinctive parts; FE: feeding evidence; FY: eggs/nest; HO: house/den; OB: observed; SC: scat; SI: other sign; TK: track; VO: vocalization

SE 37, NE 33, July 4

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | | |
|---|---|---|---|---|
| SITE: NIAGARA | | POLYGON: 4 | | |
| SURVEYOR(S): JTL | DATE: JUNE 5-12 | UTME: | | |
| START: 10:31 | END: 10:47 | UTMZ: | UTMN: | |

**LYGON DESCRIPTION**

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| /ETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| QUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ ACIDIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | | ☒ TABLELAND | | ☐ LICHEN | ☒ SWMAP |
| | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☒ DECIDUOUS | ☐ BOG |
| | ☐ BASIC BEDRK. | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| **SITE** | | ☐ CREVICE / CAVE | **COVER** | ☐ MIXED | ☐ MEADOW |
| PEN WATER | ☐ CARB. BEDRK. | ☐ ALVAR | ☐ OPEN | | ☐ PRAIRIE |
| HALLOW | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| /ATER | | ☐ BEACH / BAR | ☒ TREED | | ☐ SAVANNAH |
| URFICIAL DEP. | | ☐ SAND DUNE | | | ☐ WOODLAND |
| EDROCK | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

**AND DESCRIPTION:**

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| CANOPY | 2 | 3 | ACERRUB >> QUEBICO >> TILAMER |
| SUB-CANOPY | 3 | 3 | ACERRUB > QUEBICO |
| UNDERSTOREY | 4 | 3 | TILAMER > ACERRUB |
| GRD. LAYER | 5-7 | 4 | PHAARUN = CAREX = BIDENS |

CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

R CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

**AND COMPOSITION:** BA:

| | | | | |
|---|---|---|---|---|
| E CLASS ANALYSIS: | O <10 | A 10 – 24 | O 25 – 50 | R >50 |
| ANDING SNAGS: | O <10 | O 10 – 24 | R 25 – 50 | N >50 |
| ADFALL/LOGS: | O <10 | O 10 – 24 | R 25 – 50 | N >50 |

UNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| MM. AGE: | PIONEER | YOUNG | MID-AGE | ✓ MATURE | OLD GROWTH |
|---|---|---|---|---|---|

**IL ANALYSIS:**

| | | | |
|---|---|---|---|
| XTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| ISTURE: | DEPTH OF ORGANICS: | (cm) | |
| MOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

**OMMUNITY CLASSIFICATION:**

| | |
|---|---|
| MMUNITY CLASS: | CODE: |
| MMUNITY SERIES: | CODE: |
| OSITE: | CODE: |
| GETATION TYPE: SWAMP MAPLE MINERAL DECID. SWAMP | CODE: SWD 3-3 |
| INCLUSION | CODE: |
| COMPLEX | CODE: |

**idence of Disturbance / Notes:**

- CONTAINS A SMALL BURREED MAT → PIC 1
W/ H2O ~ 15cm

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: SE37 | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACERRUB | A | O | O | | |
| QUE BICO | O | R | / | | |
| TILAMER | R | R-O | O | | |
| CAR CARO | / | R | / | | |
| SPIALBA | | | R | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| GLYGRAN | | | | R | |
| PHAARUN | | | | O | |
| BIDENS SP. | | | | O | |
| ALI PLA-AQU | | | | R | |
| SIN SUAV | | | | R | |
| SOL DULC | | | | O | |
| BURREED | | | | R | |
| CAREX SP | | | | O | |
| FALSE NETTLE | | | | R | |
| IMPATIENS | | | | R-O | |
| TALL B. RUE | | | | R | |
| CALTHA PALUS. | | | | R | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐

Signature: (Project Manager)

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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 60950269 Project Name: NRVRC SE 37

Date: JUNE 5-12 Field Personnel: JR

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 2 | — | Ø | Ø |

**ELC Polygon: #** 4 **Assessment Type:** ☐-Visual; roadside, no access / ☒-Physical; walk through feature

**Extent of Physical Investigation of Feature:** ☐-Entire / ☒-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## Stick Nests:

Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

## Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

CA: carcass; DP: distinctive parts; FE: feeding evidence; EY: egg/nest; HO: house/den; OB: observed; SC: scat; SI: other sign; TK: track; VO: vocalization

SE 37, THE 33, POLY 5

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | | |
|---|---|---|---|---|
| SITE: NIAGARA | | POLYGON: 5 | | |
| SURVEYOR(S): JTL | DATE: JUNE 5-12 | | UTME: | |
| START: 10:14 | END: 10:30 | UTMZ: | UTMN: | |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☑ NATURAL | ☐ PLANKTON | ☐ LAKE |
| | | ☐ RIVERINE | | ☐ SUBMERGED | ☐ POND |
| ☐ WETLAND | ☑ MINERAL SOIL | ☐ BOTTOMLAND | ☐ CULTURAL | ☐ FLOATING-LVD. | ☐ RIVER |
| | | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | | ☑ TABLELAND | | ☐ LICHEN | ☐ SWMAP |
| | ☐ ACIDIC BEDRK. | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☑ DECIDUOUS | ☐ BOG |
| | ☐ BASIC BEDRK. | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| SITE | | ☐ CREVICE / CAVE | COVER | ☐ MIXED | ☐ MEADOW |
| ☐ OPEN WATER | ☐ CARB. BEDRK. | ☐ ALVAR | ☐ OPEN | | ☐ PRAIRIE |
| ☐ SHALLOW WATER | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| ☐ SURFICIAL DEP. | | ☐ BEACH / BAR | ☑ TREED | | ☐ SAVANNAH |
| ☐ BEDROCK | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☑ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| CANOPY | 2 | 4 | ACESASA > FAGGRAN >> QUERUBR |
| SUB-CANOPY | 3 | 3 | FAGGRAN > ACESASA > OSTVIRG |
| UNDERSTOREY | 4 | 4 | FAGGRAN > ACESASA |
| GRD. LAYER | 5-7 | 4 | L.L. ASTER = CIRLUTE = J. PULPIT. |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION: BA:

| SIZE CLASS ANALYSIS: | A | <10 | A | 10 – 24 | O | 25 – 50 | R | >50 |
|---|---|---|---|---|---|---|---|---|
| STANDING SNAGS: | R | <10 | R | 10 – 24 | R | 25 – 50 | N | >50 |
| DEADFALL/LOGS: | O | <10 | O | 10 – 24 | R | 25 – 50 | N | >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| DOMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|
| | | | | X | |

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | | (cm) |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | | (cm) |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| SITE: | | CODE: |
| VEGETATION TYPE: D-5 SUGAR MAPLE DECIDUOUS FOREST | | CODE: F09.5 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: SE37 | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. | SPECIES CODE | LAYER 1 | LAYER 2 | LAYER 3 | LAYER 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OST VIRG | R | O | O | | | L.L. ASTER | | | | O | |
| FAGGRAN | O | A | O-A | | | CIRLUTE | | | | O | |
| ACESASA | A | O-A | O | | | EUY OBAV | | | | R | |
| QUERUBR | R | / | | | | J. PULPIT | | | | O | |
| | | | | | | CAR ALBUR | | | | R | |
| RUBIDAE | | | | R | | | | | | | |
| RUB CANA | | | | R | | | | | | | |
| PRUN. NIGRA | | R | | | | | | | | | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐

Signature: (Project Manager)

EDGE

Stantec Consulting Ltd.
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 60450209 Project Name: NRWC SE 37

Date: JUNE 5-12 Field Personnel: JR

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 2 | — | Ø | Ø |

**ELC Polygon: #** 5 **Assessment Type:** ☐-Visual; roadside, no access / ☒-Physical; walk through feature

**Extent of Physical Investigation of Feature:** ☐-Entire / ☒-Partial, walk through polygon *(indicate on map)*

**Reptile / Bat Hibernacula Features:** Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock; crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:** Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

**Stick Nests:** Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

**Seeps/Springs/Vernal Pools:** Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*

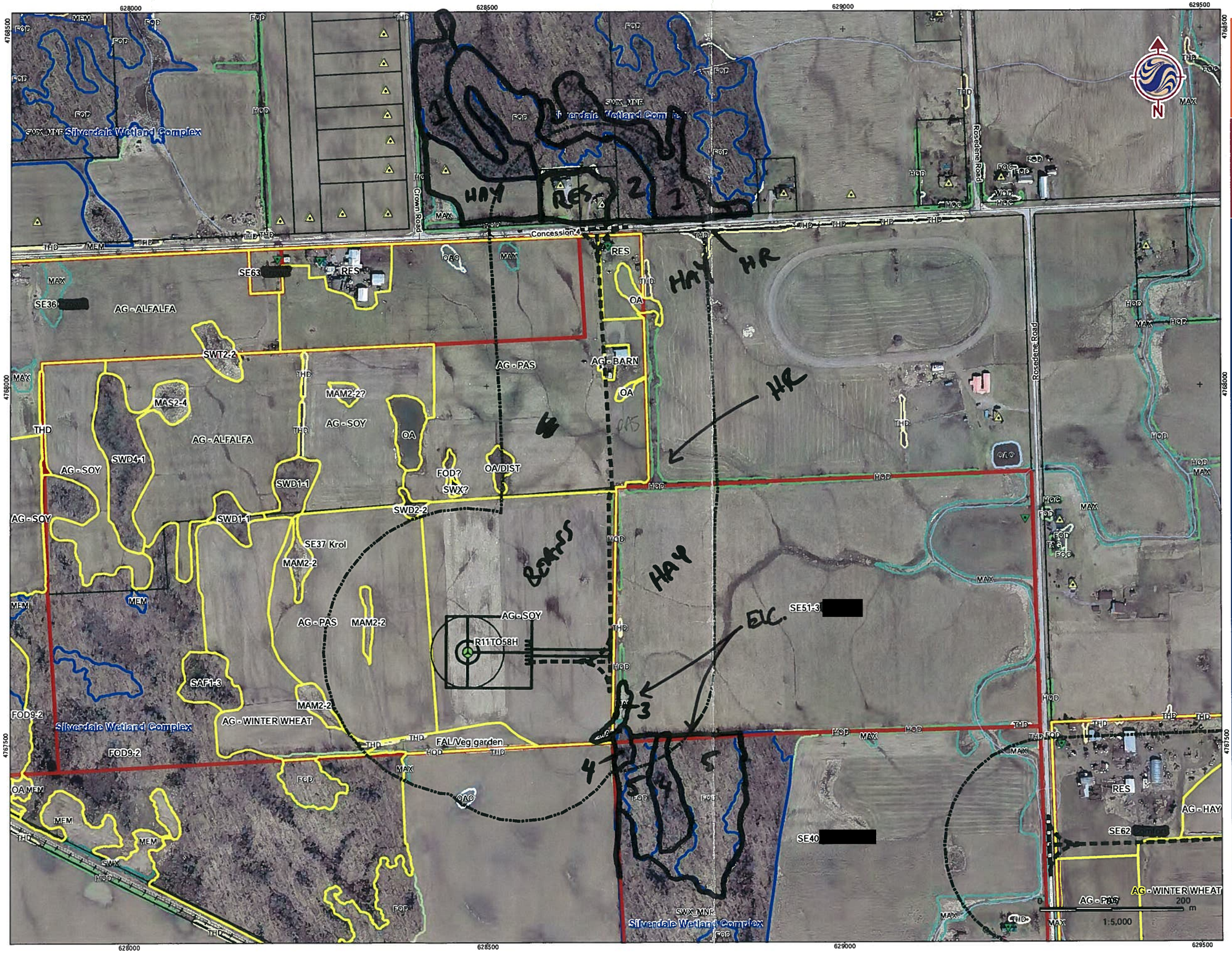
**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

RTHA - OB

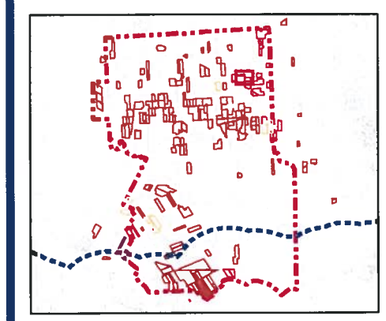
CA: carcass; DP: distinctive parts; FE: feeding evidence; FY: eggs/nest; HO: house/den; OB: observed; SC: scat; SI: other sign; TR: track; VO: vocalization




## Legend

Turbines in Signed Lands
- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands
- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



## Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

May. 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
33

Title
Property with Turbine
SE37[redacted]

V:\0160\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcowper

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: SE 44 | | POLYGON: 2 | |
|---|---|---|---|---|
| | SURVEYOR(S): M.R.ss | DATE: Aug 27/12 | UTME: | |
| | START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☑ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☑ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☐ WETLAND | ☑ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☑ TABLELAND | | ☐ LICHEN | ☐ SWMAP |
| | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☑ DECIDUOUS | ☐ BOG |
| | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| | | ☐ CREVICE / CAVE | | ☐ MIXED | ☐ MEADOW |
| | | ☐ ALVAR | | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | | | ☐ THICKET |
| | | ☐ BEACH / BAR | | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☑ FOREST |
| | | | | | ☐ PLANTATION |

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☑ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 3 | ACEFREE > ACERUBR = FRAPENN |
| 2 | SUB-CANOPY | 3 | 2 | FRAPENN |
| 3 | UNDERSTOREY | 4 | 3 | Spirebush > ULMAMER > Buttonbush = RUBALLE |
| 4 | GRD. LAYER | 5-7 | 3 | False Nettle > CARINTU = CARLACU = GLYSTRI |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | <10 | 10 – 24 | 25 – 50 | >50 |
| STANDING SNAGS: | R <10 | O 10 – 24 | R 25 – 50 | R >50 |
| DEADFALL/LOGS: | A <10 | A 10 – 24 | R 25 – 50 | N >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | ✓ MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
|---|---|---|---|
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: Swamp Maple Mixed Dec. Swamp | | CODE: SWD3-3 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

Incl for Poly 1
Photo 185

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: | |
|---|---|---|
| | POLYGON: | |
| | DATE: SE 44; Tile 45; Inclusion of Poly 1 | |
| | SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACEFREE | A | | | | |
| ACERUBR | O | | | | |
| FRAPENN | O | R-O | | A | |
| ULMAMER | | | O-A | A | |
| SAM | | | R | | |
| RUBALLE | | | O | | |
| Spirebush | | | A | | |
| Buttonbush | | | O | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| GLYSTRI | | | | O | |
| CARINTU | | | | O | |
| PHAARUN | | | | O | |
| ~~ROSA~~ | | | | | |
| ~~Beggar Ticks~~ | | | | | |
| False Nettle | | | | O-A | |
| ~~SAMA~~ | | | | | |
| Stinging Nettle | | | | C | |
| Water Hemlock | | | | | |
| CARLACU | | | | | |
| POLYGONUM sp. | | | | R | |

Page 2 of 5

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950159 Project Name: NRWC SE44

Date: Aug 27/12 Field Personnel: M. Ross

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 25° | 3-4 | 100 | Rain | None |

**ELC Polygon: #** **Assessment Type:** ☐-Visual; roadside, no access / ☑-Physical; walk through feature

**Extent of Physical Investigation of Feature:** ☑-Entire / ☐-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

**Contains potential reptile hibernacula features?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

**Contains potential bat hibernacula features?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

**Contains potential bat roosting features?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## Stick Nests:

**Contains large stick nests?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

## Seeps/Springs/Vernal Pools:

**Contains seeps/springs/vernal pools?**
☑-Y* / ☐-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| 0621137-4756610 | (A) Vernal Pool | 15m | N/A | 185 | N/A | Yes |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

AMTO
NOCA

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

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: SE 44 | | POLYGON: (1) | |
|---|---|---|---|---|
| | SURVEYOR(S): M Rok | DATE: Aug 27/12 | UTME: | |
| | START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☑ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☑ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☐ WETLAND | ☑ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☑ TABLELAND | | ☐ LICHEN | ☐ SWMAP |
| | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☑ DECIDUOUS | ☐ BOG |
| | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| | | ☐ CREVICE / CAVE | | ☐ MIXED | ☐ MEADOW |
| | | ☐ ALVAR | | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | | | ☐ THICKET |
| | | ☐ BEACH / BAR | | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☑ FOREST |
| | | | | | ☐ PLANTATION |

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☐ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ACERUBR >> FRAPENN > FAGGRAN |
| 2 | SUB-CANOPY | 3 | 4 | OSTVIRG > ACERUBR = FAGGRAN = TILAMER |
| 3 | UNDERSTOREY | 4 | 3 | Blue Beech = OSTVIRG = FRAPENN = ACESASA |
| 4 | GRD. LAYER | 6-7 | 2 | Blue Cohosh = large leaved Aster > False Solomons seal = Poison Ivy |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | | | | BA: |
|---|---|---|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | | <10 | | 10 – 24 | | 25 – 50 | >50 |
| STANDING SNAGS: | O | <10 | O | 10 – 24 | R | 25 – 50 | N >50 |
| DEADFALL/LOGS: | A | <10 | A | 10 – 24 | R | 25 – 50 | N >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | | PIONEER | | YOUNG | | MID-AGE | ✓ | MATURE | | OLD GROWTH |
|---|---|---|---|---|---|---|---|---|---|---|

## SOIL ANALYSIS:

| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
|---|---|---|---|
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: F-M Oak-Maple Dec. Forest | | CODE: FOD9-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

Community Photo: 184

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: | |
|---|---|---|
| | POLYGON: | |
| | DATE: SE 44; Tile 45; Poly 1 | |
| | SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACERUBR | A | | | | |
| Blue Beech | | | O | | |
| ACERUBR | | O | | | |
| OSTVIRG | | A | O | | |
| FRAPENN | O | O | O | | |
| ACESASA | | | O | | |
| TILAMER | | O | O | | |
| RETPAM | | R | | | |
| POPTREM | | R | | | |
| FAGGRAN | O | O | O | | |
| Spicebush | | | R-O | | |
| Ribes sp | | | | R-O | |
| Maple leaved Viburnum | | | | O | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Blue Cohosh | | | | A | |
| Poison Ivy | | | | O | |
| large leaved Aster | | | | A | |
| ~~Maple leaved Viburnum~~ | | | | ~~-~~ | |
| Christmas Fern | | | | R-O | |
| False Solomon Seal | | | | O | |
| ONOSENS | | | | R | |
| RUBALLE | | | | R | |
| Rose Twisted Stalk | | | | O | |

Page 1 of 5

Signature: (Field Personnel)

Quality Control: This form is complete ☑ & legible ☑.

Signature: (Project Manager)

Stantec Consulting Ltd.
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Guelph, ON
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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950159 | Project Name: NRWC SE44

Date: Aug 27/12 | Field Personnel: M. Ross

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 25 | 3-4 | 100 | Rain | None |

**ELC Polygon: #** 1 **Assessment Type:** ☐-Visual; roadside, no access / ☑-Physical; walk through feature

**Extent of Physical Investigation of Feature:** ☑-Entire / ☐-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

**Contains potential reptile hibernacula features?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

**Contains potential bat hibernacula features?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

**Contains potential bat roosting features?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## Stick Nests:

**Contains large stick nests?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

## Seeps/Springs/Vernal Pools:

**Contains seeps/springs/vernal pools?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

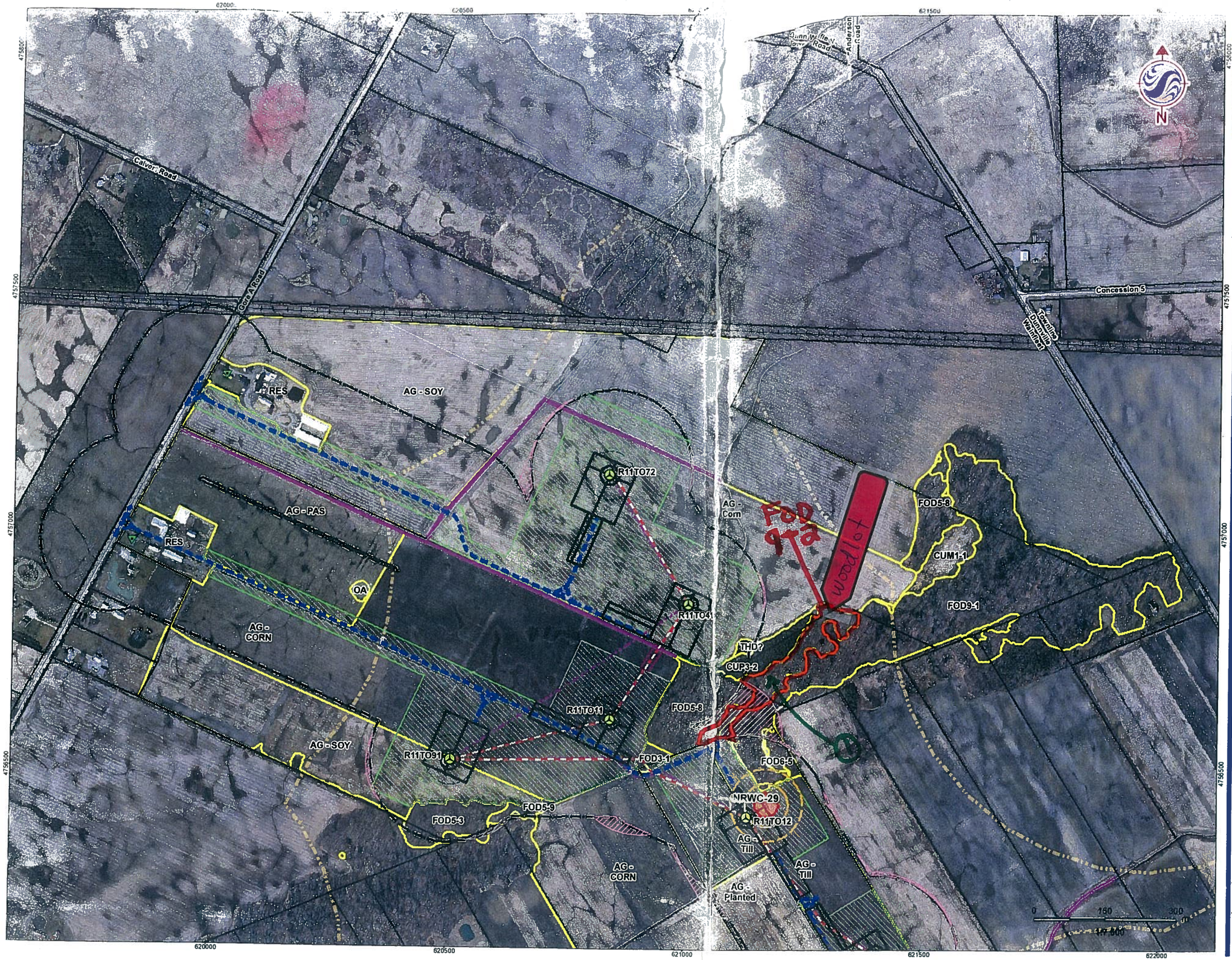
**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

Monarch

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




**Turbines in Signed Lands**

- Standard Turbine (105 dBA)
- 51m Turbine Setback
- Proposed Collector Cable
- Proposed Fibre OpticCable
- Zone of Influence (150m)
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- Zone of Investigation Comparison (Areas not previously included in terrestrail and waterbody site investigation)
- ELC Boundary
- Property Boundary

**Stage 2AA Archaelogy**

**Archaeological**

- Completed
- Incomplete
- Ready

**Archaeology**

- Stage 3 AA Required
- No Stage 3 AA Required
- Waterbody
- Possible Undentified Waterbody

refine interior of woodlot

## Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

1 of 2

Stantec

August, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Waterbody Map

Figure No.
45

Title
**Property with Turbine SE44 [redacted]**

V:\0-609\Active\160950269\planning\drawings\n\20120809_Archaelogy_Field_Maps\160950269_Release_20_Waterbody_and_Arch_Field_Map_Book_20120817.mxd
Revised 20[illegible]-17 By: ssalm

SE48; Tile 1; Poly 1

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | | |
|---|---|---|---|---|
| SITE: NIAGARA | | | POLYGON: 1 | |
| SURVEYOR(S): JR | DATE: JUNE 11-12 | | UTME: | |
| START: | END: | | UTMZ: | UTMN: |

**POLYGON DESCRIPTION**

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☒ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☐ WETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☒ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☒ MARSH |
| | ☐ CARB. BEDRK. | ☒ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☐ DECIDUOUS | ☐ BOG |
| | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| | | ☐ CREVICE / CAVE | | ☐ MIXED | ☐ MEADOW |
| | | ☐ ALVAR | | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | | | ☐ THICKET |
| | | ☐ BEACH / BAR | | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☒ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☒ SURFICIAL DEP. | ☐ TREED |
| ☒ BEDROCK | |

**STAND DESCRIPTION:**

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 3 | 1 | |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | | | |
| 4 | GRD. LAYER | 4-7 | 4 | PHAARUN >> SPIALBA > CEPH OCCI |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | R <10 | R 10 – 24 | N 25 – 50 | N >50 |
| STANDING SNAGS: | R <10 | R 10 – 24 | N 25 – 50 | N >50 |
| DEADFALL/LOGS: | N <10 | R 10 – 24 | R 25 – 50 | N >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

**SOIL ANALYSIS:**

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | | (cm) |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | | (cm) |

**COMMUNITY CLASSIFICATION:**

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | reed-canary grass mineral meadow marsh | CODE: MAM2-2 |
| INCLUSION | broad lvd sedge mineral shallow marsh | CODE: MAS2-4 |
| COMPLEX | | CODE: |

**Evidence of Disturbance / Notes:**

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: | Property (Fig 1) |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ULMAMER | R | | | | |
| CEPH OCCI | | | | R-O | |
| SPI ALBA | | | | R-O | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| PHAARUN | | | | | A-D |
| GLYGRAN | | | | | R |
| POLYGONUM SP | | | | | R |
| WATER PURSLANE | | | | | R |
| SCIRPUS SP | | | | | R |
| CAR LACU | | | | | R (INCLUSION) |
| TYPHALAN | | | | | R PIC 4C |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☑ & legible ☐.

Signature: (Project Manager)

– IN INCLUSION, SOIL SATURATED BUT NO SURFACE $H_2O$

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Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 11, 2012 Field Personnel: J. Leslie

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 28 | 2-3 | 100% | Ø | RAIN |

**ELC Polygon:** #1-1 **Assessment Type:** ☐-Visual; no access / ☑-Walk through feature

**Extent of Physical Investigation of Feature:** ☑-Entire / ☐-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## Stick Nests:

Contains large stick nests?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

## Seeps/Springs/Vernal Pools:

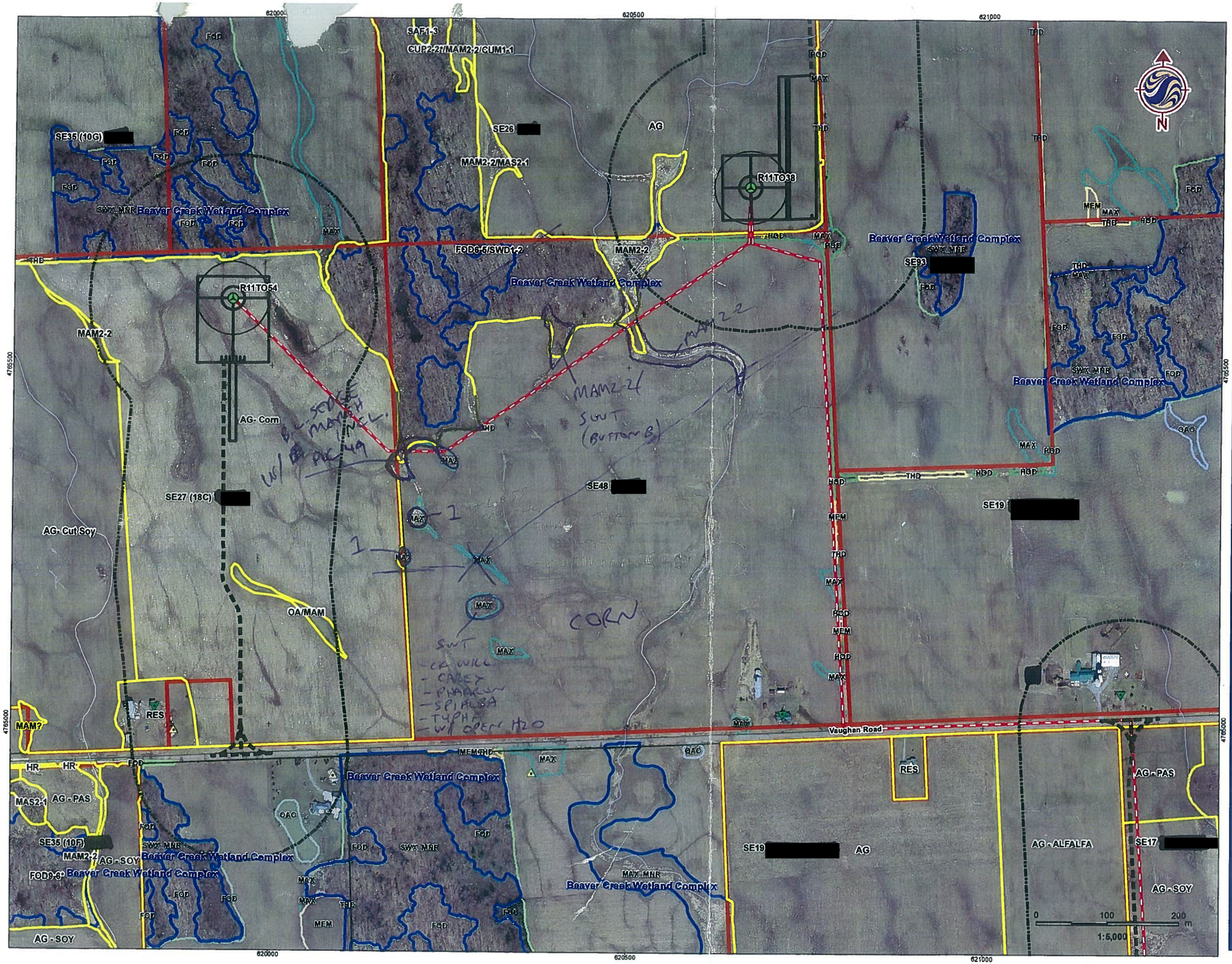
Contains seeps/springs/vernal pools?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

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

- Potential Transformer Station

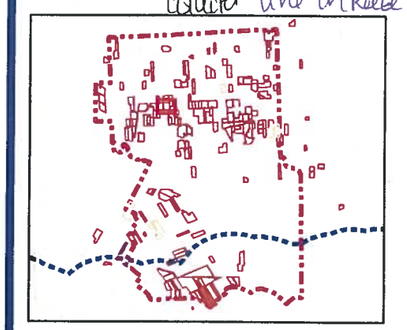
**Turbines in Signed Lands**

- Standard Turbine (105 dBA)
- Potential Turbine Locations

**Turbines in Unsigned Lands**

- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Proposed Collector Cable
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer

* Please do 120m from collector line on Reece



## Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
1

Title
Property
SE 48

V:\01609\active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_SE48 Reece_20120528.mxd
Revised: 2012-05-28 By: bcowper

SE 49 ; Tile 41 ; Poly 1

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: 49-6 | | POLYGON: 1 | |
|---|---|---|---|---|
| | SURVEYOR(S): | DATE: May 24, 2012 | UTME: | |
| | START: 5:15 | END: 5:30 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☑ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☑ WETLAND | ☑ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☐ TABLELAND | | ☐ LICHEN | ☑ SWMAP |
| **SITE** | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| ☐ OPEN WATER | | ☐ CLIFF | | ☑ DECIDUOUS | ☐ BOG |
| ☐ SHALLOW WATER | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| ☑ SURFICIAL DEP. | | ☐ CREVICE / CAVE | **COVER** | ☐ MIXED | ☐ MEADOW |
| ☐ BEDROCK | | ☐ ALVAR | ☐ OPEN | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | ☑ TREED | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | FRAPENN > ACERUBR |
| 2 | SUB-CANOPY | 3 | 3 | FRAPENN = ACERUBR |
| 3 | UNDERSTOREY | 4 | 3 | LINBENZ > VIBLENT > RUBIDAE |
| 4 | GRD. LAYER | 5-7 | 4 | PARINSE > SOLRUGO > GRASS |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | | | | | BA: |
|---|---|---|---|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | A | <10 | A | 10 – 24 | O | 25 – 50 | R | >50 |
| STANDING SNAGS: | O | <10 | O | 10 – 24 | R | 25 – 50 | N | >50 |
| DEADFALL/LOGS: | A | <10 | O | 10 – 24 | N | 25 – 50 | N | >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | X MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | green ash mineral deciduous swamp | CODE: SWD2-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

**Evidence of Disturbance / Notes:**

No property access - from edge

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: |
|---|---|
| | POLYGON: |
| | DATE: |
| | SURVEYOR(S): |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRAPENN | A | | | | | CAREX SPP | O | | | | |
| ACERUBR | O | | | | | PARINSE | A | | | | |
| BETPAPY | R | | | | | SOLIDAGU RUGO | A | | | | |
| POP SP | R | | | | | SENS FERN | O | | | | |
| | | | | | | GRASS | A | | | | |
| | | | | | | SOL SP | O | | | | |
| LINBENZ | | | A | | | | | | | | |
| RUBIDAE | | | O | | | | | | | | |
| VIBLENT | | | O | | | | | | | | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

Stantec Consulting Ltd.
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Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269

Project Name: NRWC

Date: 24/05/2012

Field Personnel: R. Walpole, N. Charlton

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 32 | 0-1 | 10 | — | — |

**ELC Polygon:** # 41-1 **Assessment Type:** ☑-Visual; roadside, no access / ☐-Physical; walk through feature

**Extent of Physical Investigation of Feature:** ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## Stick Nests:

Contains large stick nests?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

## Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☑-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

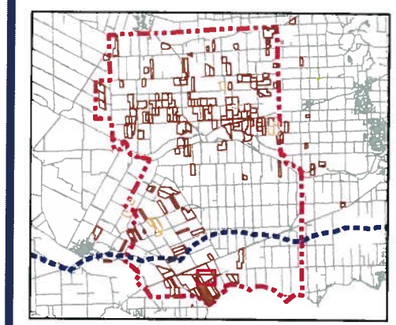
CA=carcass; DP=distinctive parts; FE=feeding evidence; EY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

## Legend

519-579-4410 KW

- Turbines in Signed Lands
  - Standard Turbine (105 dBA)
  - Potential Turbine Locations
- Turbines in Unsigned Lands
  - Standard Turbine (105 dBA)
  - 51 m Turbine Setback
  - Non-Particpating Receptor
  - Particpating Receptor
  - Preliminary Study Area
  - Signed Property
  - Signed Property - Outside Study Area
  - Potential Signed Property
  - Potential Signed Property - Outside Study Area
  - ELC Boundary
  - Provincially Significant Wetland
  - Other/Locally Significant Wetland
  - Property Boundary
  - Turbine and Access Road 150m buffer

Matt



## Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
41

Title
Property with Turbine
SE49-6 [redacted]

V:\0160\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcowper

DIST 2 : Grass (oats?), SOLIDAGO C/A, POA SP, FRAX (R) ♡ CUW1-3 + CUT1-7* + North side of road

SES2 ; Tile 43; Poly 1

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: NIAGARA | | POLYGON: 1 | |
| SURVEYOR(S): JT | DATE: JUNE 4-12 | UTME: | |
| START: 5:00 | END: 5:20 pm | UTMZ: | UTMN: |

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: SES2 | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| X TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | X NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☐ WETLAND | X MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | X TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| **SITE** | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| ☐ OPEN WATER | | ☐ CLIFF | | X DECIDUOUS | ☐ BOG |
| ☐ SHALLOW WATER | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| X SURFICIAL DEP. | | ☐ CREVICE / CAVE | **COVER** | ☐ MIXED | ☐ MEADOW |
| ☐ BEDROCK | | ☐ ALVAR | ☐ OPEN | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | X TREED | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | X FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 1-2 | 4 | ACESASA = HICKORY > ACERUBR > QUE BICO |
| 2 | SUB-CANOPY | — | | N/A |
| 3 | UNDERSTOREY | 4-5 | 4 | CORRACE >> PRUVIRG > VIBLENT |
| 4 | GRD. LAYER | 6-7 | 4 | SOLIDAGO > FRAVESC = ALL PETIO |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | A <10 | A 10 – 24 | A 25 – 50 | R >50 |
| STANDING SNAGS: | R <10 | O 10 – 24 | R 25 – 50 | N >50 |
| DEADFALL/LOGS: | R <10 | O 10 – 24 | O 25 – 50 | N >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | X MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | CODE: | |
| COMMUNITY SERIES: | CODE: | |
| ECOSITE: | CODE: | |
| VEGETATION TYPE: FM OAK-MAPLE-HICKORY DECID. FOREST | CODE: FOD9 | |
| INCLUSION | CODE: | |
| COMPLEX: FRESHMAN / OAK | CODE: SWD COMPLEX | |

Evidence of Disturbance / Notes:

- EDGE ASSESSMENT.

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| SHAGHICK | O | | | | |
| TILAMER | R | | | | |
| ACESASAS | O | | | | |
| FRAPENN | R-O | | | | |
| FRAAMER | R-O | | | | |
| ACERUBR | O | | | | |
| OSTVIRG | / | | | | |
| QUE ALBA | R | | | | |
| JUG NIGR | R | | | | |
| QUE RUBR | R | | | | |
| QUE BICO | R-O | | | | |
| CRATAEGUS | | | R | | |
| VIBLENT | | | R | | |
| PRUVIRG | | | O | | |
| CORRACE | | | O-A | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| HES MATR | | | | R | |
| FRAVESC | | | | O | |
| EUO OBOV | | | | R-O | |
| SOLIDAGO | | | | O-A | |
| J. PULPIT | | | | O | |
| MAYAPPLE | | | | R | |
| ALL PETIO | | | | O | |
| URT DIOC | | | | R | EURO |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

**Stantec Consulting Ltd.**
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

SE52

Project Number: 160950269 Project Name: NIAGARA WIND

Date: JUNE 4-12 Field Personnel: JR

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 18° | 2 | 50% | Ø | RAIN |

**ELC Polygon: #** 1 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

**Extent of Physical Investigation of Feature:** ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

| POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED | | | |
|---|---|---|---|
| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
| | | | |

## Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

| POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED | | | | | | | |
|---|---|---|---|---|---|---|---|
| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
| | | | | | | | |

## Stick Nests:

Contains large stick nests?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*

| STICK NEST(S) IDENTIFIED | | | | | |
|---|---|---|---|---|---|
| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
| | | | | | |

## Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*

| SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED | | | | | | |
|---|---|---|---|---|---|---|
| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

SE52; Tile43; Poly 2

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NIAGARA | | POLYGON: 2 | |
|---|---|---|---|---|
| | SURVEYOR(S): JR | DATE: JUNE 4-12 | | UTME: |
| | START: 5:30 | END: 6:10 PM | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☒ WETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | | ☒ TABLELAND | | ☐ LICHEN | ☒ SWAMP |
| | ☐ ACIDIC BEDRK. | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☒ DECIDUOUS | ☐ BOG |
| | ☐ BASIC BEDRK. | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| SITE | | ☐ CREVICE / CAVE | COVER | ☐ MIXED | ☐ MEADOW |
| ☐ OPEN WATER | ☐ CARB. BEDRK. | ☐ ALVAR | ☐ OPEN | | ☐ PRAIRIE |
| ☐ SHALLOW WATER | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| ☒ SURFICIAL DEP. | | ☐ BEACH / BAR | ☒ TREED | | ☐ SAVANNAH |
| ☐ BEDROCK | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ACERREC > FRAPENN > QUEBICO |
| 2 | SUB-CANOPY | 3 | 3 | ACERRUB >> ULMAMER |
| 3 | UNDERSTOREY | 4-5 | 4 | BUTTONBUSH = SPIRALBA > ACERREC |
| 4 | GRD. LAYER | 6-7 | 4 | ONOSENS > LYCUNIF = IMPATENS |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | O <10 | A 10 – 24 | O 25 – 50 | R >50 |
| STANDING SNAGS: | R <10 | R 10 – 24 | R 25 – 50 | R >50 |
| DEADFALL/LOGS: | O <10 | O 10 – 24 | R 25 – 50 | R >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | X MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | | (cm) |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | | (cm) |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: SWAMP MAPLE MINERAL DECID SWAMP | | CODE: SWD3-3 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: SE52 |
|---|---|
| | POLYGON: |
| | DATE: |
| | SURVEYOR(S): |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| QUEBICO | R-O | O | | | |
| FRAPENN | O | R-O | | | |
| ACERREC | A | A | O-A | | |
| ULMAMER | R-O | O | | | |
| SALIX | | R | | | |
| SPIALBA | | | O-A | | |
| BUTTONBUSH | | | O-A | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ONOSENS | | | | O | |
| FOLARVE | | | | R | |
| BIDENS SP. | | | | O | |
| IRIS VERS | | | | R | |
| LYCUNIF | | | | O | |
| CARUTRIC | | | | R | |
| OSMREGA | | | | R | |
| IMPATENS | | | | R-O | |
| ELYGRAND | | | | R | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

PIC 89-90, 91

**Stantec Consulting Ltd.**
1 – 70 Southgate Drive
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Canada N1G 4P5
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Fax: (519) 836-2493

# Woodland & Wildlife Habitat Assessment Form

SE52

Project Number: 160950269 Project Name: NIAGARA WIND

Date: JUNE 4-12 Field Personnel: JR

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 18 | L | 50% | X | RAIN |

**ELC Polygon:** # 2 **Assessment Type:** ☐-Visual; no access / ☒-Walk through feature

**Extent of Physical Investigation of Feature:** ☐-Entire / ☒-Partial, walk through polygon *(indicate on map)*

**Reptile / Bat Hibernacula Features:**

Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

**Bat Roosting Features:**

Contains potential bat roosting features?
☒-Y* / ☐-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| 626712, 4768575 | WILLOW | WILLOW | 70 | 92-94 | MOST BRANCHES GONE | 3 | 7-10M ~ NON FEEDING? LARGEST ~ 12 x 22cm |

**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)**

DOES CONTAIN POOLS OF SURFACE $H_2O$ IN AREAS W/ DENSE BUTTONBUSH - A COMMON FEATURE IN THESE WETLANDS.

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

SE52; Tile 43; Poly 3

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NIAGARA | | POLYGON: 3 | |
|---|---|---|---|---|
| | SURVEYOR(S): JR | DATE: JUNE 4-12 | UTME: | |
| | START: 6:10 | END: 6:35 pm | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☒ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☐ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☐ WETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☒ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☒ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| **SITE** | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| ☐ OPEN WATER | | ☐ CLIFF | | ☒ DECIDUOUS | ☐ BOG |
| ☐ SHALLOW WATER | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| ☒ SURFICIAL DEP. | | ☐ CREVICE / CAVE | **COVER** | ☐ MIXED | ☐ MEADOW |
| ☐ BEDROCK | | ☐ ALVAR | ☐ OPEN | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | ☒ TREED | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☒ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 3 | 3 | ACERFREE > FRAPENN = POPTREM |
| 2 | SUB-CANOPY | — | | |
| 3 | UNDERSTOREY | 4-5 | 4 | CORRACE > ACERFREE > SPIALBA |
| 4 | GRD. LAYER | 6-7 | 4 | POAPRAT > POTREPTANS = FRAVESC = SOLIDAGO |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | A <10 | R 10 – 24 | R 25 – 50 | N >50 |
| STANDING SNAGS: | N <10 | R 10 – 24 | N 25 – 50 | N >50 |
| DEADFALL/LOGS: | N <10 | N 10 – 24 | R 25 – 50 | N >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | X YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | | |
|---|---|---|---|
| COMMUNITY CLASS: | | CODE: | |
| COMMUNITY SERIES: | | CODE: | |
| ECOSITE: | | CODE: | |
| VEGETATION TYPE: MINERAL CULTURAL WOODLAND | | CODE: CUW1 | |
| INCLUSION | | CODE: | |
| COMPLEX | | CODE: | |

Evidence of Disturbance / Notes: - AVG HEIGHT ~ 6-8m
- CANOPY COVER ~ 35-45%
- APPEARS TO CONSIST OF REGENERATION.

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: SE52 |
|---|---|
| | POLYGON: |
| | DATE: |
| | SURVEYOR(S): |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| FRAPENN | O | | O | | |
| POPTREM | O | | O | | |
| ACERFREE | O | | O-A | | |
| ULMAMER | R-O | | / | | |
| SALIX | | | R | | |
| SPIALBA | | | O | | |
| CORORBI | | | R-O | | |
| CORRACE | | | A | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| PHAARUN | | | | R-O | |
| POTREPT | | | | O-A | |
| HYPPERF | | | | R | |
| CAREX SP. | | | | O | |
| FRAVESC | | | | O-A | |
| POAPRAT | | | | O | |
| FIELD HANKEW. | | | | O | |
| DANCAND | | | | O | |
| OX-EYE | | | | R | |
| VIC CRAC | | | | R-O | |
| SOL. SEM | | | | R | |
| SOLIDAGO | | | | O | |
| YARROW | | | | O | |
| CAR VULP | | | | R | |
| CAR GRAC | | | | O | |
| BRING LOOSE | | | | R | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

**Stantec Consulting Ltd.**
1 – 70 Southgate Drive
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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NIAGARA WIND SESR

Date: JUNE 4-11 Field Personnel: JR

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 18 | 2 | 50% | Ø | RAIN |

**ELC Polygon: #** 3 **Assessment Type:** ☐-Visual; no access / ☒-Walk through feature

**Extent of Physical Investigation of Feature:** ☐-Entire / ☒-Partial, walk through polygon *(indicate on map)*

**Reptile / Bat Hibernacula Features:**

Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

| POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED | | | |
|---|---|---|---|
| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
| | | | |

**Bat Roosting Features:**

Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

| POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED | | | | | | | |
|---|---|---|---|---|---|---|---|
| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
| | | | | | | | |

**Stick Nests:**

Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*

| STICK NEST(S) IDENTIFIED | | | | | |
|---|---|---|---|---|---|
| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
| | | | | | |

**Seeps/Springs/Vernal Pools:**

Contains seeps/springs/vernal pools?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*

| SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED | | | | | | |
|---|---|---|---|---|---|---|
| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
| | | | | | | |

| SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map) |
|---|
| |

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

SE52 ; Tile 43 ; Poly 4

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | | |
|---|---|---|---|---|
| SITE: NIAGARA | | | POLYGON: 4 | |
| SURVEYOR(S): JN | DATE: JUNE 4-12 | | UTME: | |
| START: 6:38 | END: 6:46 PM | | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☒ WETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☒ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☒ MARSH |
| | ☐ CARB. BEDRK. | ☒ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| **SITE** | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| ☐ OPEN WATER | | ☐ CLIFF | | ☐ DECIDUOUS | ☐ BOG |
| ☐ SHALLOW WATER | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| ☒ SURFICIAL DEP. | | ☐ CREVICE / CAVE | **COVER** | ☐ MIXED | ☐ MEADOW |
| ☐ BEDROCK | | ☐ ALVAR | ☒ OPEN | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | ☐ TREED | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | | | |
| 4 | GRD. LAYER | 4-7 | 4 | 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%

| STAND COMPOSITION: | BA: |
|---|---|

| | | | | |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | N <10 | N 10 – 24 | N 25 – 50 | N >50 |
| STANDING SNAGS: | N <10 | N 10 – 24 | N 25 – 50 | N >50 |
| DEADFALL/LOGS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: REED-CANARY GRASS MINERAL MEADOW MARSH | | CODE: MAM2-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

EDGE ASSESSMENT

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: SE52 | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | PHAARUN | | | | D | |
| | | | | | | SOLIDAGO | | | | R | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: NIAGARA WIND

Project Name: 160950269 SES2

Date: JUNE 04-12

Field Personnel: JTL

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 18 | 2 | 50% | Ø | RAIN |

**ELC Polygon: #** 4 **Assessment Type:** ☒-Visual; no access / ☐-Walk through feature

**Extent of Physical Investigation of Feature:** ☐-Entire / ☐-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## Stick Nests:

Contains large stick nests?
☐-Y* / ☒-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

## Seeps/Springs/Vernal Pools:

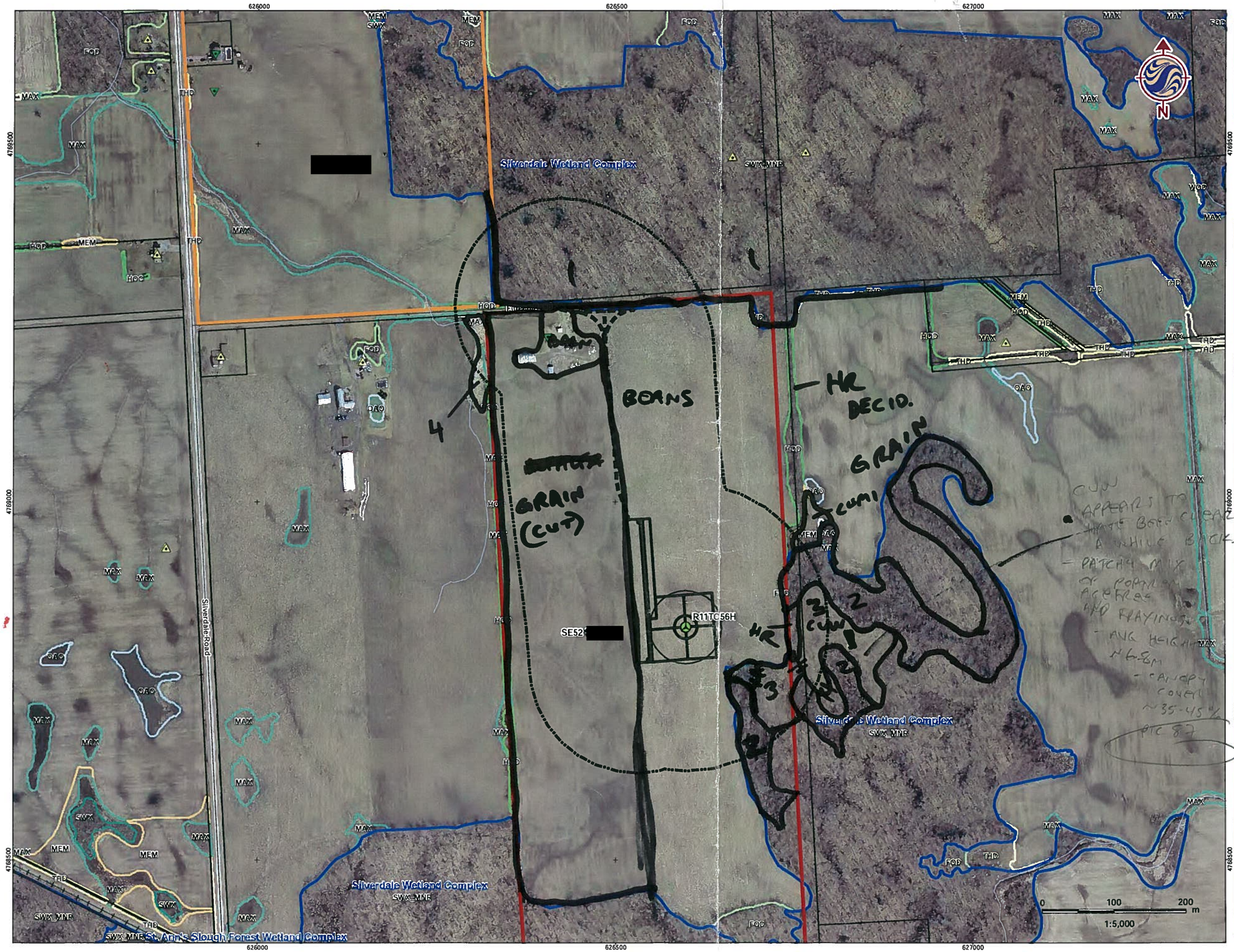
Contains seeps/springs/vernal pools?
☐-Y* / ☐-N / ☒-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization




## Legend

Turbines in Signed Lands
- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands
- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer

## Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
43

Title
Property with Turbine
SE52[redacted]

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcowper

SE57; Tile 46; Poly 3

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NIAGARA | | POLYGON: 3 | |
|---|---|---|---|---|
| | SURVEYOR(S): JTL | DATE: JUNE 05-12 | | UTME: |
| | START: 3:04 | END: 3:15 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☒ WETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☒ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☒ MARSH |
| | ☐ CARB. BEDRK. | ☒ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☐ DECIDUOUS | ☐ BOG |
| | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| | | ☐ CREVICE / CAVE | | ☐ MIXED | ☒ MEADOW |
| | | ☐ ALVAR | | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | | | ☐ THICKET |
| | | ☐ BEACH / BAR | | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☒ OPEN |
| ☒ SHALLOW WATER | ☐ SHRUB |
| ☒ SURFICIAL DEP. | ☐ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | 4 | 4 | PHAARUN > TYP GLAU |
| 4 | GRD. LAYER | 5-7 | 3 | CARSTIP = JUNCUS > CARVULP |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | BA: |
|---|---|

| | | | | |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |
| STANDING SNAGS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |
| DEADFALL/LOGS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | V dc y grass mineral meadow marsh | CODE: MAM 2-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

- SHALLOW POCKETS OF $H_2O$ < 10cm DEEP

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: |
|---|---|
| | POLYGON: |
| | DATE: |
| | SURVEYOR(S): |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| PHAARUN | | | | D | |
| BIDENS SP. | | | | O | |
| ALI PLA-AQUA | | | | R | |
| CARSTIP | | | | O | |
| CAR VULP | | | | O | |
| JUNCUS SP. | | | | O | |
| TYP GLAU | | | | R-O | |
| CAREX HYSTERICIN. | | | | R | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 5, 2012 Field Personnel: J. Leslie

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 2 | 50% | Ø | Ø |

**ELC Polygon:** #46-3 **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? |
|---|---|---|---|---|---|---|
| throughout | POOL | | <10 cm | | ✓ | no |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

BULLFROG HEARD CALLING IN 'OA' OUTSIDE 120 & GRFR

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

SFST, TRE 46, POLY 2

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: NIAGAR | | POLYGON: 2 | |
| SURVEYOR(S): JD | DATE: JUNE 05-12 | UTME: | |
| START: 2:50 | END: 3:20 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☒ WETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☒ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☒ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| **SITE** | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| ☐ OPEN WATER | | ☐ CLIFF | | ☐ DECIDUOUS | ☐ BOG |
| ☐ SHALLOW WATER | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| ☒ SURFICIAL DEP. | | ☐ CREVICE / CAVE | **COVER** | ☐ MIXED | ☒ MEADOW |
| ☐ BEDROCK | | ☐ ALVAR | ☒ OPEN | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | ☐ TREED | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | | | |
| 4 | GRD. LAYER | 3-7 | 4 | PHRAUST >> CORRACE |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | N <10 | N 10 – 24 | N 25 – 50 | N >50 |
| STANDING SNAGS: | N <10 | R 10 – 24 | N 25 – 50 | N >50 |
| DEADFALL/LOGS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: PHRAGMITES MINERAL MEADOW MARSH | | CODE: MAM2-11* |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

- ROADSIDE ASSMENT
- NO $H_2O$ OBS.

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: E | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | PHRAUST | | | | D | |
| CORRACE | | | | R | | | | | | | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Guelph, ON
Canada N1G 4P5
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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 5, 2012 Field Personnel: J. Leslie

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 2 | 50% | ~~0~~ | ~~0~~ |

**ELC Polygon:** #46-2 **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

SEST, Tile 46, row 1

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: NIAGARA | | POLYGON: 1 | |
| SURVEYOR(S): JR | DATE: JUNE 05-12 | UTME: | |
| START: 2:50 | END: 2:55 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☑ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☑ WETLAND | ☑ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☑ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☑ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| **SITE** | | ☐ ROLL. UPLAND | **COVER** | ☐ BRYOPHYTE | ☐ FEN |
| ☐ OPEN WATER | | ☐ CLIFF | ☑ OPEN | ☐ DECIDUOUS | ☐ BOG |
| ☐ SHALLOW WATER | | ☐ TALUS | ☐ SHRUB | ☐ CONIFEROUS | ☐ BARREN |
| ☑ SURFICIAL DEP. | | ☐ CREVICE / CAVE | ☐ TREED | ☐ MIXED | ☑ MEADOW |
| ☐ BEDROCK | | ☐ ALVAR | | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | | | ☐ THICKET |
| | | ☐ BEACH / BAR | | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | | | |
| 4 | GRD. LAYER | 4? | 4 | PHAARUN |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | BA: |
|---|---|---|

| | | | | |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | N <10 | N 10 – 24 | N 25 – 50 | N >50 |
| STANDING SNAGS: | R <10 | N 10 – 24 | N 25 – 50 | N >50 |
| DEADFALL/LOGS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | re d ca M9 m h | CODE: MAM2-2 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

**Evidence of Disturbance / Notes:**

- ROADSIDE ASSESSMENT
- NO $H_2O$ OBS.

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: S5 | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | PHAARUN | | | | D | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Guelph, ON
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Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 5, 2012 Field Personnel: J. Leslie

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 2 | 50% | Ø | Ø |

**ELC Polygon:** #6-1 **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

DEDT

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: | | POLYGON: | |
| SURVEYOR(S): | DATE: | UTME: | |
| START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☒ WETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☒ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| **SITE** | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| ☐ OPEN WATER | | ☐ CLIFF | | ☒ DECIDUOUS | ☐ BOG |
| ☐ SHALLOW WATER | | ☐ TALUS | **COVER** | ☐ CONIFEROUS | ☐ BARREN |
| ☒ SURFICIAL DEP. | | ☐ CREVICE / CAVE | ☐ OPEN | ☐ MIXED | ☐ MEADOW |
| ☐ BEDROCK | | ☐ ALVAR | ☐ SHRUB | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | ☐ TREED | | ☒ THICKET |
| | | ☐ BEACH / BAR | | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | 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 | CORRACE > PHAARUN > IMPATIENS |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION: BA:

| | | | | |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | R <10 | N 10 – 24 | N 25 – 50 | N >50 |
| STANDING SNAGS: | N <10 | N 10 – 24 | N 25 – 50 | N >50 |
| DEADFALL/LOGS: | N <10 | R 10 – 24 | N 25 – 50 | N >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | |
|---|---|
| COMMUNITY CLASS: | CODE: |
| COMMUNITY SERIES: | CODE: |
| ECOSITE: | CODE: |
| VEGETATION TYPE: Gray dogwood mineral thicket swamp | CODE: SWT2-9 |
| INCLUSION | CODE: |
| COMPLEX | CODE: |

Evidence of Disturbance / Notes:

- RECEIVES AG DRAIN INPUT
- SOIL MOIST IN SPOTS BUT NO
- [illegible] NO PRESENT

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: S 7 | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ULMAMER | | | | R | |
| SPIALBA | | | | R | |
| CORRACE | | | | A | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ARUN | | | | A | |
| IRIPA | | | | R | |
| C STIP | | | | O | |
| R SH SP | | | | R | |
| AR CRIN | | | | R | |
| S IDAGO SP | | | | O | |
| I PATIENS | | | | O | |
| CAR HYST | | | | R | |
| R AVENS | | | | O | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Guelph, ON
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Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 8, 2012 Field Personnel: J. Leslie

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 2 | 50% | ∅ | ∅ |

**ELC Polygon:** #46-5 **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

SE57, line 46, poly 4

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NIAGARA | | POLYGON: 4 | |
|---|---|---|---|---|
| | SURVEYOR(S): SR | DATE: JUNE 05-12 | | UTME: |
| | START: 3:30 | END: 3:47 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☒ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☐ WETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☒ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| **SITE** | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| ☐ OPEN WATER | | ☐ CLIFF | | ☒ DECIDUOUS | ☐ BOG |
| ☐ SHALLOW WATER | | ☐ TALUS | **COVER** | ☐ CONIFEROUS | ☐ BARREN |
| ☒ SURFICIAL DEP. | | ☐ CREVICE / CAVE | ☐ OPEN | ☐ MIXED | ☐ MEADOW |
| ☐ BEDROCK | | ☐ ALVAR | ☐ SHRUB | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | ☒ TREED | | ☐ THICKET |
| | | ☐ BEACH / BAR | | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☒ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | QUERUBR > ACESASA |
| 2 | SUB-CANOPY | 3 | 3 | ACESASA >> FAGGRAN = FRAAMER = QUERUBR |
| 3 | UNDERSTOREY | 4 | 4 | ACESASA > RUBCANA = PRUVIRG > FAGGRAN |
| 4 | GRD. LAYER | 5-7 | 4 | ARITRTR > CARPENS > SOLIDAGO = SYMMACR |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | A <10 | O 10 – 24 | A 25 – 50 | R >50 |
| STANDING SNAGS: | R <10 | R 10 – 24 | R 25 – 50 | N >50 |
| DEADFALL/LOGS: | O <10 | R 10 – 24 | R 25 – 50 | N >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | X MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
|---|---|---|---|
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | CODE: | |
| COMMUNITY SERIES: | CODE: | |
| ECOSITE: | CODE: | |
| VEGETATION TYPE: Dry-fresh sugar maple - oak deciduous forest | CODE: | FOD5-3 |
| INCLUSION | CODE: | |
| COMPLEX | CODE: | |

Evidence of Disturbance / Notes:

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: SE57 |
|---|---|
| | POLYGON: |
| | DATE: |
| | SURVEYOR(S): |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACESASA | O-A | A | A | | |
| FAGGRAN | R | R | R-O | | |
| FRAAMER | R | R | R | | |
| QUERUBR | A | R | N | | |
| ACERRUB | R | R | / | | |
| RUBCANA | | | O | | |
| PRUVIRG | | | O | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| J. PULPIT | | | | O | |
| L-L. AITER | | | | O | |
| SOLIDAGO | | | | O | |
| CARPENSYL. | | | | O | |
| CAR ALBU | | | | R | |
| MAYAPPLE | | | | R | |
| EPI HELL | | | | R | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Guelph, ON
Canada N1G 4P5
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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 5, 2012 Field Personnel: J. Leslie

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 20 | 2 | 50% | Ø | Ø |

**ELC Polygon:** #46-4 **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:**

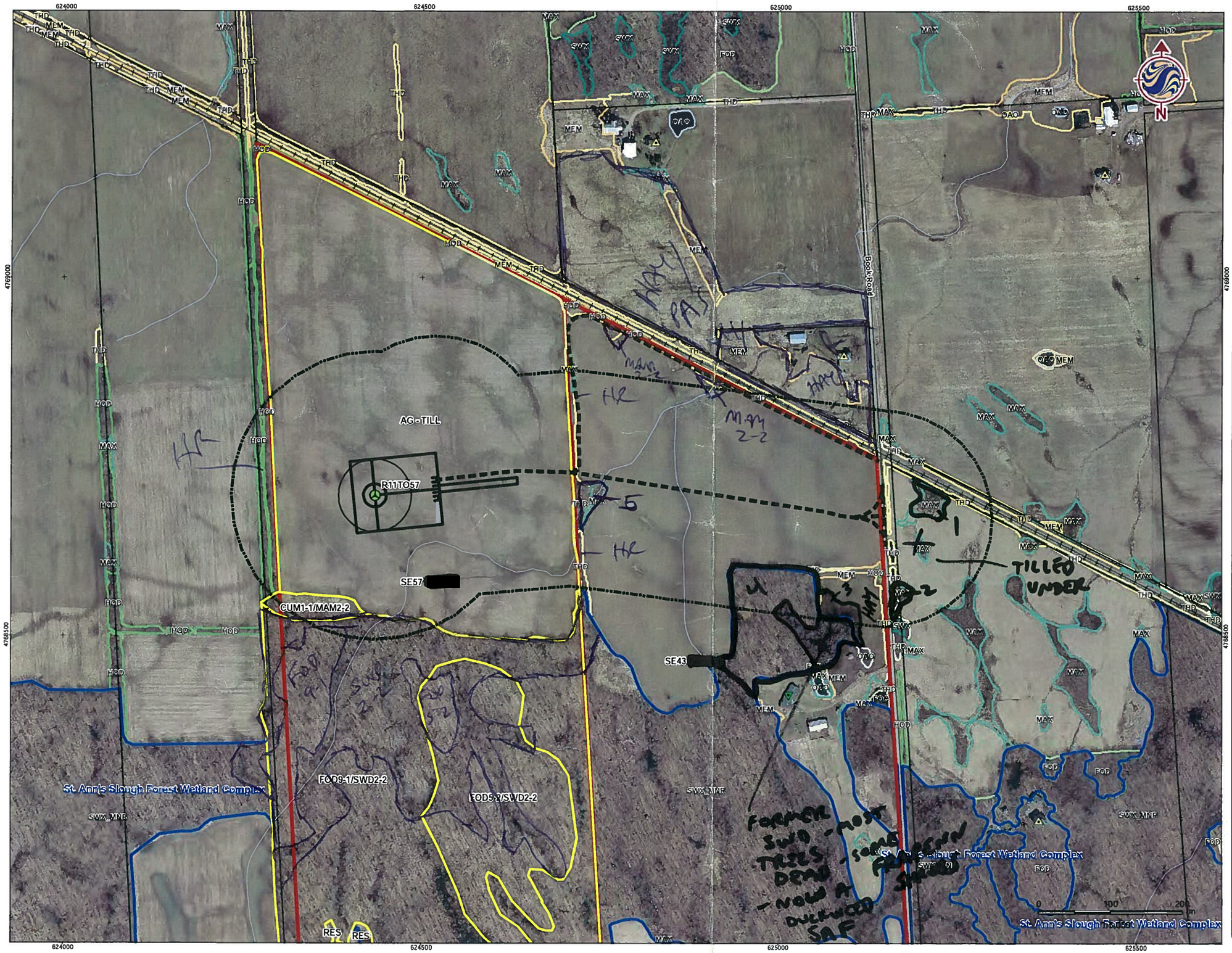
Contains seeps/springs/vernal pools?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**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)**

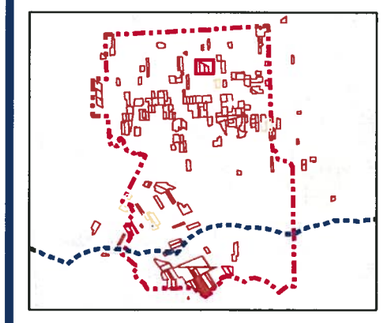
CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization




## Legend

Turbines in Signed Lands
- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands
- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



## Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
46

Title
Property with Turbine
SE57 [redacted]

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcowper

↳ ACI 24-28

SE59; Tile 47; Poly 1

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: N (ARAGA ( SE59 ) | | POLYGON: | |
|---|---|---|---|---|
| | SURVEYOR(S): JR | DATE: JUNE | | UTME: |
| | START: 8:30 | END: 9:00 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC TURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☒ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| | | ☐ RIVERINE | | ☐ SUBMERGED | ☐ POND |
| ☐ WETLAND | ☒ MINERAL SOIL | ☐ BOTTOMLAND | ☐ CULTURAL | ☐ FLOATING-LVD. | ☐ RIVER |
| | | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | | ☒ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| | ☐ ACIDIC BEDRK. | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☒ DECIDUOUS | ☐ BOG |
| | ☐ BASIC BEDRK. | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| SITE | | ☐ CREVICE / CAVE | COVER | ☐ MIXED | ☐ MEADOW |
| ☐ OPEN WATER | ☐ CARB. BEDRK. | ☐ ALVAR | ☐ OPEN | | ☐ PRAIRIE |
| ☐ SHALLOW WATER | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | ☒ TREED | | ☐ SAVANNAH |
| ☒ SURFICIAL DEP. | | ☐ SAND DUNE | | | ☐ WOODLAND |
| ☐ BEDROCK | | ☐ BLUFF | | | ☒ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | 4 | A ASA Q ALBA Q ER BR |
| 2 | SUB-CANOPY | 3 | 4 | ACESA A FAGGRAN > RG |
| 3 | UNDERSTOREY | 4 | | R ISSP ACER HA VIRG |
| 4 | GRD. LAYER | | 4 | Y > > EUMA te |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | A <10 | A 10 – 24 | A 25 – 50 | >50 |
| STANDING SNAGS: | <10 | O 10 – 24 | R 25 – 50 | >50 |
| DEADFALL/LOGS: | <10 | O 10 – 24 | O 25 – 50 | N >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | X MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
|---|---|---|---|
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: F-M Oak-sugar Maple deciduous forest | | CODE: |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

| C COMMU DESCRIPTION CLASSIFICATION | SITE: |
|---|---|
| | POLYGON: |
| | DATE: |
| | SURVEYOR(S): |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACESASA | A | A | | | |
| OST VIRG | / | O | | | |
| FAG GRAC | R | O | | | |
| QUS ALBA | A | R | | | |
| QUERUBR | O-A | R | | | |
| RUBUS SP | | | O | | |
| V.B ACER | | | O | | |
| HAM VIRG | | | R | | |

| SPECIES CODE | LAYER 1 | | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| L STER | | | | | |
| SO | | | | | |
| GE | | | | | |
| CI | | | | | O |
| W S | | | | | |
| CL | | | | | |
| B F | | | | | |
| WO Y | | Y | | | |
| C | | | | | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 11, 2012 Field Personnel: J. Leslie

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 28° | 2-3 | 10 ~~90~~ | 0 | RAIN |

**ELC Polygon:** # 47-1 **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

SE59; Tile 47; Poly 2

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: NIAGARA (SE 59) | | POLYGON: | |
| SURVEYOR(S): | DATE: | | UTME: |
| START: | END: 9 | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☒ WETLAND | ☒ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☒ TABLELAND | | ☐ LICHEN | ☒ SWAMP |
| | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☒ DECIDUOUS | ☐ BOG |
| | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| | | ☐ CREVICE / CAVE | | ☐ MIXED | ☐ MEADOW |
| | | ☐ ALVAR | | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | | | ☐ THICKET |
| | | ☐ BEACH / BAR | | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☒ SURFICIAL DEP. | ☒ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | ACEFREE >> FRAPENN |
| 2 | SUB-CANOPY | 3 | 4 | ACEFREE > FRAPENN = CARCARO |
| 3 | UNDERSTOREY | 4 | 4 | CEPOCCI |
| 4 | GRD. LAYER | 5-7 | 4 | ONOSENS = THEPALU > BOECYLI > GLYSTRI |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION: BA:

| SIZE CLASS ANALYSIS: | O A | <10 | A | 10 – 24 | A | 25 – 50 | R | >50 |
|---|---|---|---|---|---|---|---|---|
| STANDING SNAGS: | O | <10 | O | 10 – 24 | R | 25 – 50 | ~ | >50 |
| DEADFALL/LOGS: | O | <10 | O | 10 – 24 | O | 25 – 50 | ~ | >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | X MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: Swamp maple mineral deciduous swamp | | CODE: SWD3-3 |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

- FREQUENTLY CONTAINS POCKETS OF SAF & SWT COMMUNITIES -

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACERFRE | A | A | | | |
| CAR CARO | / | O | | | |
| FRAPENN | R-O | O | | | |
| CEPH OCC | | | R | | |

| SPECIES | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| BIDENS SP. | | | | | |
| | | | | O | |
| FALSE F E | | | | | |
| MAL H FSX | | | | | |
| R FORM | | | | R | |
| YSTRI | | | | | |
| AR Y S | | | | | |
| F S / | | | | | |
| S | | | | | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

PIC 44

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Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 11, 2012 Field Personnel: J. Leslie

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 28 | 2-3 | 100% | Ø | RAIN |

**ELC Polygon:** #47-2 **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? |
|---|---|---|---|---|---|---|
| throughout | pools | | | | ✓ | ✓ |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

WOFR - OB
- GRFR - VO

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

SE59; Tile 47; Poly 3

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NIAGARA (SE59 | | POLYGON: 3 | |
|---|---|---|---|---|
| | SURVEYOR(S): STL | DATE: JUNE 11-12 | | UTME: |
| | START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☑ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☑ WETLAND | ☑ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☑ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☑ DECIDUOUS | ☐ BOG |
| | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| | | ☐ CREVICE / CAVE | | ☐ MIXED | ☐ MEADOW |
| | | ☐ ALVAR | | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | | | ☑ THICKET |
| | | ☐ BEACH / BAR | | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☑ SHALLOW WATER | ☑ SHRUB |
| ☐ SURFICIAL DEP. | ☐ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 3 | | FRAPNN Q B D |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | | | |
| 4 | GRD. LAYER | 4 | 4 | ALBA B . |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | R <10 | R 10 – 24 | N 25 – 50 | N >50 |
| STANDING SNAGS: | N <10 | N 10 – 24 | R 25 – 50 | N >50 |
| DEADFALL/LOGS: | N <10 | N 10 – 24 | N 25 – 50 | N >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
|---|---|---|---|
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | CODE: | |
| COMMUNITY SERIES: | CODE: | |
| ECOSITE: | CODE: | |
| VEGETATION TYPE: meadowsweet mineral thicket swamp | CODE: | SWT2-6 |
| INCLUSION | CODE: | |
| COMPLEX | CODE: | |

Evidence of Disturbance / Notes:

– SHALLOW SURFACE $H_2O$ TOWARD INTERIOR.

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: |
|---|---|
| | POLYGON: |
| | DATE: |
| | SURVEYOR(S): |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| FRAPENN | R | | R | R | |
| QUERICO | R | | | | |
| ROSA PALU | | | | R | |
| SPIALBA | | | | A | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| TYP GLAU | | | | R | |
| OENS SP. | | | | A | |
| A - PLAGTAOU | | | | O | |
| P PERF | | | | R-O | |
| A PALU | | | | O | |
| PHAARUN | | | | O | |
| RUBUS SP. | | | | O-A | |
| SW. MILKWEED | | | | R | |
| LEOCHAR SP. | | | | R | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

Pic 45

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Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 11, 2012 Field Personnel: J. Leslie

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 28 | 2-3 | 100% | Ø | RAIN |

**ELC Polygon:** #47-3 **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? |
|---|---|---|---|---|---|---|
| in centre of poly | pool | | shallow | | ✓ | ✓ |

**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

SE59; Tile 47; Poly 4

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: NIAGARA | | POLYGON: 4 | |
| SURVEYOR(S): JTL | DATE: JUNE 11-12 | UTME: | |
| START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☒ ORGANIC | ☐ LACUSTRINE | ☒ NATURAL | ☐ PLANKTON | ☐ LAKE |
| | | ☐ RIVERINE | | ☐ SUBMERGED | ☐ POND |
| ☒ WETLAND | ☒ MINERAL SOIL | ☐ BOTTOMLAND | ☐ CULTURAL | ☐ FLOATING-LVD. | ☐ RIVER |
| | | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ VALLEY SLOPE | | ☒ FORB | ☒ MARSH |
| | | ☒ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| | ☐ ACIDIC BEDRK. | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☐ DECIDUOUS | ☐ BOG |
| | ☐ BASIC BEDRK. | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| **SITE** | | ☐ CREVICE / CAVE | **COVER** | ☐ MIXED | ☐ MEADOW |
| ☐ OPEN WATER | ☐ CARB. BEDRK. | ☐ ALVAR | ☒ OPEN | | ☐ PRAIRIE |
| ☒ SHALLOW WATER | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | ☐ TREED | | ☐ SAVANNAH |
| ☐ SURFICIAL DEP. | | ☐ SAND DUNE | | | ☐ WOODLAND |
| ☐ BEDROCK | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | | | |
| 4 | GRD. LAYER | 5-7 | 4 | LEMNA SP > GRASS SP > ALI PLA |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION: BA:

| | | | | |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |
| STANDING SNAGS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |
| DEADFALL/LOGS: | ✓ <10 | ✓ 10 – 24 | ✓ 25 – 50 | ✓ >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | |
|---|---|
| COMMUNITY CLASS: | CODE: |
| COMMUNITY SERIES: | CODE: |
| ECOSITE: | CODE: |
| VEGETATION TYPE: Forb mineral shallow marsh | CODE: MASF-9 |
| INCLUSION | CODE: |
| COMPLEX | CODE: |

Evidence of Disturbance / Notes:
- LOCATED WHERE R11 TO 51 PROPOSED
- ~ 25 x 20m OVERALL
- H2O DEPTH ~12cm OVER ORGANICS

SE59

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE:
POLYGON:
DATE:
SURVEYOR(S):

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER
ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| DULCHWOOD | | | | A | |
| ALI PLA-AQUA | | | | O | |
| POA PAL | | | | OA | |
| TYP GLAU | | | | R | |
| SW. MILKWOOD | | | | R | |

Page ___ of ___

Signature: (Field Personnel)

PICS 46-48

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC

Date: June 11, 2012 Field Personnel: J. Leslie

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 28 | 2-3 | 100% | Ø | RAIN |

**ELC Polygon:** #47-4 **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)*

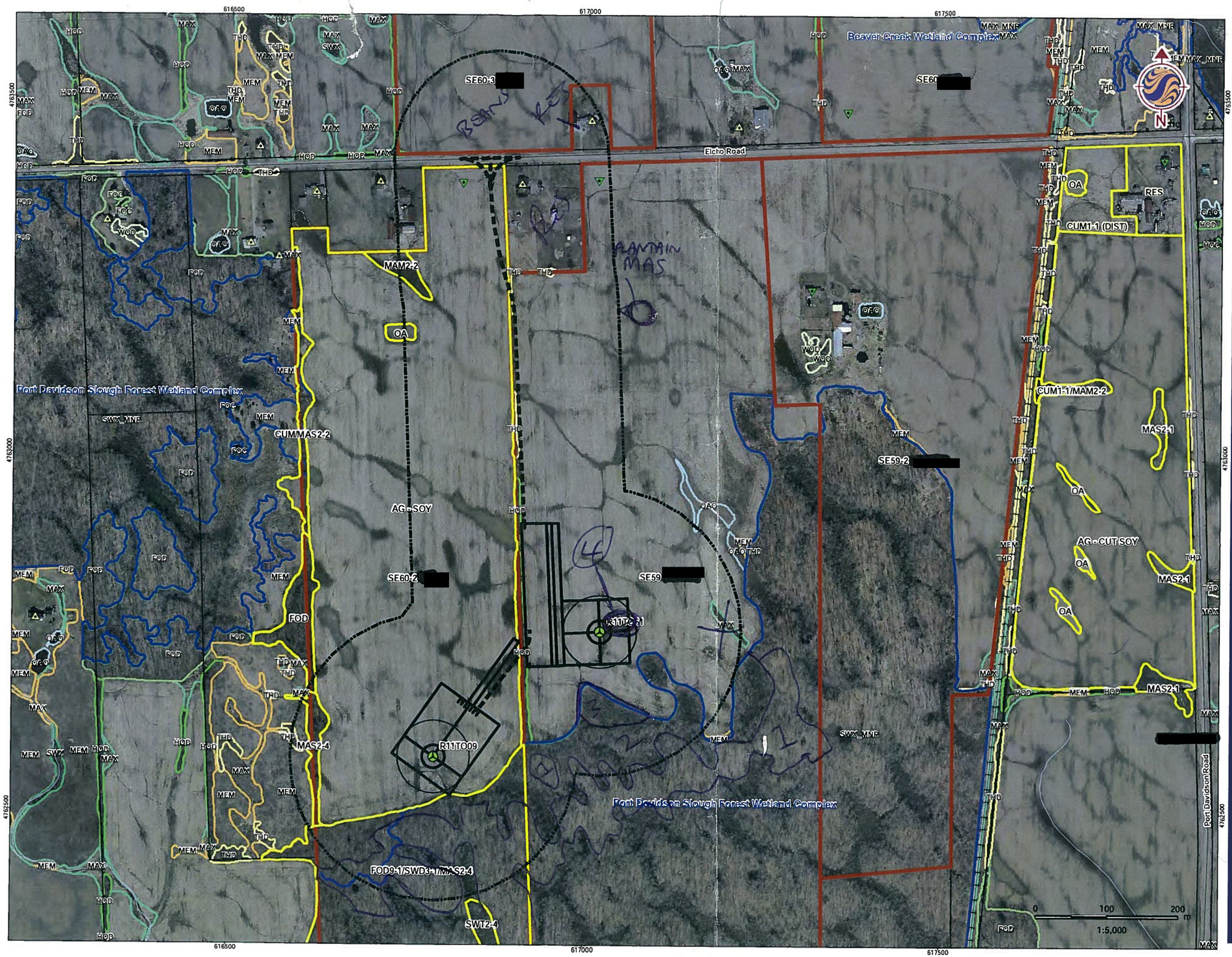
**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| entire | pool | | 12 cm | | ✓ | ✓ |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

NOLF - OB

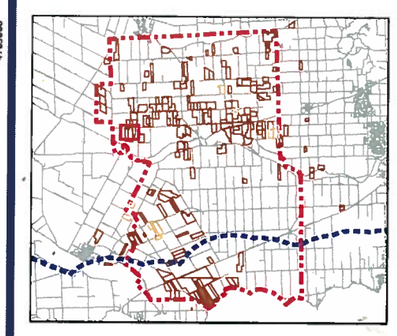
CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization




## Legend

Turbines in Signed Lands
- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands
- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



## Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
47

Title
Property with Turbine
SE59 [redacted]

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcowper

SE62; Tile 49; Poly A

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: | | POLYGON: | |
|---|---|---|---|---|
| | SURVEYOR(S): | DATE: | | UTME: |
| | START: | END: | UTMZ: | UTMN: |

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC |
|---|---|
| | POLYGON: A tile SE62 |
| | DATE: June 8, 2012 |
| | SURVEYOR(S): C. Paytte |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☐ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☑ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☑ WETLAND | ☑ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☑ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☑ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☑ MARSH |
| | ☐ CARB. BEDRK. | ☐ TABLELAND | | ☐ LICHEN | ☐ SWAMP |
| **SITE** | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| ☐ OPEN WATER | | ☐ CLIFF | | ☐ DECIDUOUS | ☐ BOG |
| ☑ SHALLOW WATER | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| ☐ SURFICIAL DEP. | | ☐ CREVICE / CAVE | **COVER** | ☐ MIXED | ☐ MEADOW |
| ☐ BEDROCK | | ☐ ALVAR | ☑ OPEN | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | ☐ TREED | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 2 | crack willow > trembling aspen > oak |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | 3-4 | 3 | gray dogwood > Meadowsweet > red elderberry |
| 4 | GRD. LAYER | 5-7 | 4 | Broad-leaved Sedge > narrow-leaved sedge |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | BA: |
|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | O | <10 | C | 10 – 24 | R | 25 – 50 | N | >50 |
| STANDING SNAGS: | N | <10 | R | 10 – 24 | N | 25 – 50 | N | >50 |
| DEADFALL/LOGS: | A | <10 | O | 10 – 24 | R | 25 – 50 | N | >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | | PIONEER | | YOUNG | ✓ | MID-AGE | | MATURE | | OLD GROWTH |
|---|---|---|---|---|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: SiCL/SiCl | DEPTH TO MOTTLES/GLEY | g= 20cm | G= 20cm |
| MOISTURE: 6 | DEPTH OF ORGANICS: | 5 | (cm) |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | >120 | (cm) |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: Broad-leaved Sedge Min. Meadow | | CODE: MAM2-6 |
| INCLUSION | willow lowland | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes: lots of dry water pooling areas

photos 1-7

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. | SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| trembling aspen | O | | | | | Sedge sp (narrow) | | | O | A | ✓ |
| willow (crack) | O | | | | | Sedge sp. broad | | | | A-D | ✓ |
| white elm | R | | | | | Aster sp. | | | | O | |
| white oak | R | | | | | Cattail | | | | R | |
| | | | | | | Swamp milkweed | | | | R-O | |
| | | | | | | garlic mustard | | | | O | |
| | | | | | | bitter nightshade | | | | O | |
| | | | | | | common milkweed | | | | R-O | |
| red elderberry | | | A | | | | | | | | |
| riverbank grape | | | O | | | | | | | | |
| Meadowsweet | | | A | | | | | | | | |
| gray dogwood | | | A | | | | | | | | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

**Stantec Consulting Ltd.**
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC SE62

Date: June 8, 2012 Field Personnel: C. Payette

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 29 | 3-4 | 30% | none | none |

**ELC Polygon: #** A **Assessment Type:** ☐-Visual; no access / ☑-Walk through feature

**Extent of Physical Investigation of Feature:** ☑-Entire / ☐-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]
Contains potential bat hibernacula features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## Stick Nests:

Contains large stick nests?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

## Seeps/Springs/Vernal Pools:

Contains seeps/springs/vernal pools?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization

Hedgerow

SEb2; Tile 49; Poly B (Hedgerow)

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: | | POLYGON: | |
|---|---|---|---|---|
| | SURVEYOR(S): | DATE: | | UTME: |
| | START: | END: | UTMZ: | UTMN: |

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | SITE: NRWC |
|---|---|
| | POLYGON: B SEb2 |
| | DATE: June 8, 2012 |
| | SURVEYOR(S): C. Paytte |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☑ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☐ NATURAL | ☐ PLANKTON | ☐ LAKE |
| | | ☐ RIVERINE | | ☐ SUBMERGED | ☐ POND |
| ☐ WETLAND | ☐ MINERAL SOIL | ☐ BOTTOMLAND | ☐ CULTURAL | ☐ FLOATING-LVD. | ☐ RIVER |
| | | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | | ☐ TABLELAND | | ☑ LICHEN | ☐ SWAMP |
| | ☐ ACIDIC BEDRK. | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☐ DECIDUOUS | ☐ BOG |
| | ☐ BASIC BEDRK. | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| **SITE** | | ☐ CREVICE / CAVE | **COVER** | ☐ MIXED | ☐ MEADOW |
| ☐ OPEN WATER | ☐ CARB. BEDRK. | ☐ ALVAR | ☐ OPEN | | ☐ PRAIRIE |
| ☐ SHALLOW WATER | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | ☐ TREED | | ☐ SAVANNAH |
| ☐ SURFICIAL DEP. | | ☐ SAND DUNE | | | ☐ WOODLAND |
| ☐ BEDROCK | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; ≈ ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | | | |
| 2 | SUB-CANOPY | | | |
| 3 | UNDERSTOREY | | | |
| 4 | GRD. LAYER | | | |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

| STAND COMPOSITION: | | | | BA: |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | <10 | 10 – 24 | 25 – 50 | >50 |
| STANDING SNAGS: | <10 | 10 – 24 | 25 – 50 | >50 |
| DEADFALL/LOGS: | <10 | 10 – 24 | 25 – 50 | >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
|---|---|---|---|
| MOISTURE: | DEPTH OF ORGANICS: | | (cm) |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | | (cm) |

## COMMUNITY CLASSIFICATION:

| COMMUNITY CLASS: | | CODE: |
|---|---|---|
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: Hedgerow | | CODE: n/a |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes: Raccoon asleep in tree.

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| American elm | O | | | | |
| Red oak | R | | | | |
| Pin oak | | | R | | |
| trembling aspen | | | R | | |
| Burr oak | R-O | | | | |
| Apple sp. | R | | | | |
| green ash | | | R | | |
| Black cherry | O | | | | |
| riverbank grape | | | O | | |
| Rose sp | | | R-O | | |
| Red raspberry | | | O | | |
| Serviceberry sp. | | | O | | |
| gray dogwood | | | A | | |
| Meadowsweet | | | A | | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| oxeye daisy | | | | O | |
| teasel | | | | O | |
| goldenrod | | | | A | |
| aster sp. | | | | O | |
| Reed canary grass | | | | O | |
| Sedge sp (long flow) | | | | O | ✓ |
| rush sp | | | | R | |
| timothy grass | | | | O | |
| phil. fleabane | | | | R-O | |
| garlic mustard | | | | A | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

**Stantec Consulting Ltd.**
1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 Project Name: NRWC SE62

Date: June 8, 2012 Field Personnel: C. Paquette

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 29 | 3-4 | 30% | none | none |

**ELC Polygon: #** B **Assessment Type:** ☐-Visual; no access / ☑-Walk through feature

**Extent of Physical Investigation of Feature:** ☑-Entire / ☐-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

Contains potential reptile hibernacula features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

Contains potential bat hibernacula features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

Contains potential bat roosting features?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## Stick Nests:

Contains large stick nests?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

## Seeps/Springs/Vernal Pools:

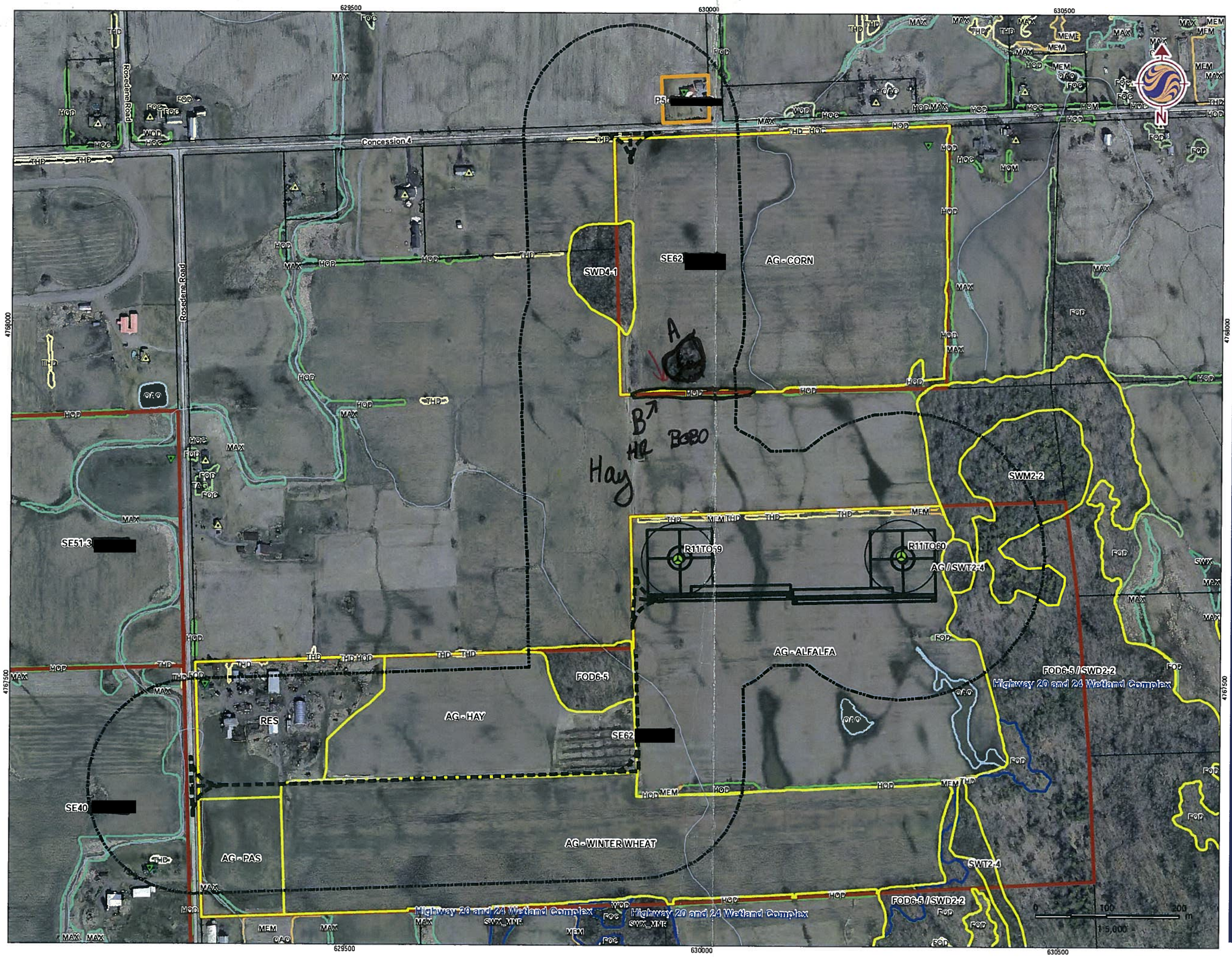
Contains seeps/springs/vernal pools?
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

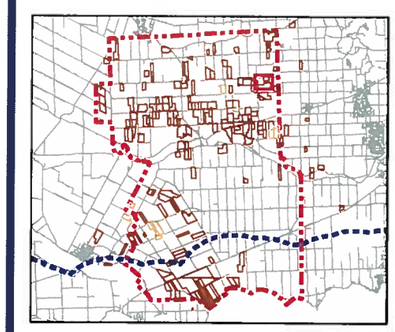
CA=carcass; DP=distinctive parts; FE=feeding evidence; FY=eggs/nest; HO=house/den; OB=observed; SC=scat; SI=other sign; TK=track; VO=vocalization




## Legend

Turbines in Signed Lands
- Standard Turbine (105 dBA)
- Potential Turbine Locations

Turbines in Unsigned Lands
- Standard Turbine (105 dBA)
- 51 m Turbine Setback
- Non-Particpating Receptor
- Particpating Receptor
- Preliminary Study Area
- Signed Property
- Signed Property - Outside Study Area
- Potential Signed Property
- Potential Signed Property - Outside Study Area
- ELC Boundary
- Provincially Significant Wetland
- Other/Locally Significant Wetland
- Property Boundary
- Turbine and Access Road 150m buffer



## Notes

1. Coordinate System: NAD 1983 UTM Zone 17N).
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

Stantec

May, 2012
160950269

Client/Project
Niagara Region Wind Corporation
Amphibian Field Maps

Figure No.
49

Title
Property with Turbine
SE62[redacted]

V:\01609\Active\160950269\planning\drawing\mxd\20120423_NE_Fieldmaps\160950269_Release_17_ELC_Map_Book_20120518.mxd
Revised: 2012-05-23 By: bcowper

SE70; Tile 50; Poly B

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | | | |
|---|---|---|---|
| SITE: NRWC SE70 | | POLYGON: B | |
| SURVEYOR(S): M. Ross | DATE: May 31/12 | UTME: | |
| START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☑ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☐ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☐ WETLAND | ☑ MINERAL SOIL | ☐ RIVERINE | ☑ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☑ TABLELAND | | ☐ LICHEN | ☐ SWMAP |
| | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| | | ☐ CLIFF | | ☐ DECIDUOUS | ☐ BOG |
| | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| | | ☐ CREVICE / CAVE | | ☑ MIXED | ☐ MEADOW |
| | | ☐ ALVAR | | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | | | ☐ THICKET |
| | | ☐ BEACH / BAR | | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☑ WOODLAND |
| | | ☐ BLUFF | | | ☐ FOREST |
| | | | | | ☐ PLANTATION |

| SITE | COVER |
|---|---|
| ☐ OPEN WATER | ☐ OPEN |
| ☐ SHALLOW WATER | ☐ SHRUB |
| ☑ SURFICIAL DEP. | ☑ TREED |
| ☐ BEDROCK | |

## STAND DESCRIPTION:

| LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|
| CANOPY | 2 | 3 | JUG NIGR > Scots pine > ACE SASA > ACE NEG |
| SUB-CANOPY | 3 | 3 | JUG NIGR = Scots Pine |
| UNDERSTOREY | 4 | 2 | Black Cherry = JUG NIGR >> ACE NEG |
| GRD. LAYER | 6-7 | 4 | Aarostis > RUB ALLE > Garlic mustard > Solidago |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION: BA:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | A | <10 | A | 10 – 24 | O | 25 – 50 | N | >50 |
| STANDING SNAGS: | A | <10 | A | 10 – 24 | O | 25 – 50 | N | >50 |
| DEADFALL/LOGS: | A | <10 | O | 10 – 24 | R | 25 – 50 | N | >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| DOMM. AGE: | PIONEER | YOUNG | ✓ MID-AGE | MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: | DEPTH TO MOTTLES/GLEY | g= | G= |
| MOISTURE: | DEPTH OF ORGANICS: | (cm) | |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | (cm) | |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| SITE: | | CODE: |
| VEGETATION TYPE: | Black Walnut Cultural Woodland | CODE: CUW1-3* |
| INCLUSION | | CODE: |
| COMPLEX | | CODE: |

Evidence of Disturbance / Notes:

Some garbage, PAS occ is through March half of brush piles environment Comm 79. - Many snags; no Scots pine dead

# ELC COMMUNITY DESCRIPTION & CLASSIFICATION

| | |
|---|---|
| SITE: | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACE NEGU | O | | R O | | |
| Scots Pine | O | O | | | |
| JUG NIGR | A | O | O | | |
| ACE SASA | O | | | | |
| Black Cherry | | | O | | |
| Norway Spruce | R | | | | |
| E. cottonwood | | R | | | |
| PAR VITA | | | | | |
| EUT RIPA | | | | O | |
| RUB ALLE | | | | A | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Lilac | | | | O A | |
| S. Alto Sp | | | | O A | |
| Red Top (Aa) | | | | A | |
| " Sp | | | | | |
| IMP AP | | | | O | |

Page ___ of ___

Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)

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1 – 70 Southgate Drive
Guelph, ON
Canada N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

Stantec

# Woodland & Wildlife Habitat Assessment Form

Project Number: 160950269 | Project Name: NRWC SE70

Date: May 31/12 | Field Personnel: M. Ross

| Weather Conditions: | TEMP (°C): | WIND: | CLOUD: | PPT: | PPT (in last 24 hrs): |
|---|---|---|---|---|---|
| | 16°C | 3 | 80% | None | None |

**ELC Polygon: #** B **Assessment Type:** ☐-Visual; roadside, no access / ☑-Physical; walk through feature

**Extent of Physical Investigation of Feature:** ☑-Entire / ☐-Partial, walk through polygon *(indicate on map)*

## Reptile / Bat Hibernacula Features:

**Contains potential reptile hibernacula features?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. features that would provide a route underground, including buried concrete or rock (e.g. foundations, bridge abutments or culverts with cracks/entry points, exposed rock crevices or inactive animal burrows)]

**Contains potential bat hibernacula features?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. karst topography, abandoned mines or caves]

**POTENTIAL HIBERNACULA FEATURE(S) IDENTIFIED**

| UTM | Feature Description | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|
| | | | |

## Bat Roosting Features:

**Contains potential bat roosting features?**
☑-Y* / ☐-N / ☐-Unknown, no access *(*if yes, describe in table below)*
[i.e. tall trees with open surroundings, DBH >25cm, side-facing cavities ~10m high in tree]

**POTENTIAL BAT ROOSTING FEATURE(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | DBH | Photo No. | Decay Class (1-5) | No. of Cavities | Height and Type of Cavities |
|---|---|---|---|---|---|---|---|
| 619301 - 4754394 | 2 | Unknown | >40 | 60 | 4 | 1 | 6-8m, Rot |

## Stick Nests:

**Contains large stick nests?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**STICK NEST(S) IDENTIFIED**

| UTM | Tree ID | Tree Spp. | Nest Size | Photo No. | Spp. Observed Using Feature |
|---|---|---|---|---|---|
| | | | | | |

## Seeps/Springs/Vernal Pools:

**Contains seeps/springs/vernal pools?**
☐-Y* / ☑-N / ☐-Unknown, no access *(*if yes, describe in table below)*

**SEEP / SPRING / VERNAL POOL FEATURE(S) IDENTIFIED**

| UTM | Feature No. & Type | Feature Size (Diameter) | Water Depth | Photo No. | Sub/Emergent Veg. Spp. Present? | Shrubs/ Logs at Edge Present? |
|---|---|---|---|---|---|---|
| | | | | | | |

**SPECIES & HABITAT OBSERVATIONS (list species and type of observation & indicate on map)**

AMRO Canadian swallowtail
CHSP
SOSP
CEDW
EUST
MODO

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

REV: 2011-07-18

SE70; Tile 50; Poly C

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | | | |
|---|---|---|---|
| SITE: MRWC SE70 | | POLYGON: C | |
| SURVEYOR(S): M. Ross | DATE: May 31/12 | | UTME: |
| START: | END: | UTMZ: | UTMN: |

## POLYGON DESCRIPTION

| SYSTEM | SUBSTRATE | TOPOGRAPHIC FEATURE | HISTORY | PLANT FORM | COMMUNITY |
|---|---|---|---|---|---|
| ☑ TERRESTRIAL | ☐ ORGANIC | ☐ LACUSTRINE | ☑ NATURAL | ☐ PLANKTON | ☐ LAKE |
| ☐ WETLAND | ☑ MINERAL SOIL | ☐ RIVERINE | ☐ CULTURAL | ☐ SUBMERGED | ☐ POND |
| ☐ AQUATIC | ☐ PARENT MIN. | ☐ BOTTOMLAND | | ☐ FLOATING-LVD. | ☐ RIVER |
| | ☐ ACIDIC BEDRK. | ☐ TERRACE | | ☐ GRAMINOID | ☐ STREAM |
| | ☐ BASIC BEDRK. | ☐ VALLEY SLOPE | | ☐ FORB | ☐ MARSH |
| | ☐ CARB. BEDRK. | ☑ TABLELAND | | ☐ LICHEN | ☐ SWMAP |
| **SITE** | | ☐ ROLL. UPLAND | | ☐ BRYOPHYTE | ☐ FEN |
| ☐ OPEN WATER | | ☐ CLIFF | | ☑ DECIDUOUS | ☐ BOG |
| ☐ SHALLOW WATER | | ☐ TALUS | | ☐ CONIFEROUS | ☐ BARREN |
| ☑ SURFICIAL DEP. | | ☐ CREVICE / CAVE | **COVER** | ☐ MIXED | ☐ MEADOW |
| ☐ BEDROCK | | ☐ ALVAR | ☐ OPEN | | ☐ PRAIRIE |
| | | ☐ ROCKLAND | ☐ SHRUB | | ☐ THICKET |
| | | ☐ BEACH / BAR | ☑ TREED | | ☐ SAVANNAH |
| | | ☐ SAND DUNE | | | ☐ WOODLAND |
| | | ☐ BLUFF | | | ☑ FOREST |
| | | | | | ☐ PLANTATION |

## STAND DESCRIPTION:

| | LAYER | HT | CVR | SPECIES IN ORDER OF DECREASING DOMINANCE (>>MUCH GREATER THAN; >GREATER THAN; = ABOUT EQUAL TO) |
|---|---|---|---|---|
| 1 | CANOPY | 2 | 4 | AM Beech > ACE SASA >> Black Cherry = Yellow birch |
| 2 | SUB-CANOPY | 3 | 4 | ACE SASA > Am. beech >> Hop hornbeam |
| 3 | UNDERSTOREY | 3-4 | 3 | ACE SASA > Am. beech = Hop hornbeam > B. Cherry |
| 4 | GRD. LAYER | 6-7 | 2 | Jack in the pulpit = PARVITA > Can. May flower > Trillium |

HT CODES: 1=>25m 2=10<HT≤25m 3=2<HT≤10m 4=1<HT≤2m 5=0.5<HT≤1m 6=0.2<HT≤0.5m 7=HT<0.2m

CVR CODES: 0=NONE 1=0%<CVR≤10% 2=10<CVR≤25% 3=25<CVR≤60% 4=CVR>60%

STAND COMPOSITION: | BA:

| | | | | |
|---|---|---|---|---|
| SIZE CLASS ANALYSIS: | A <10 | A 10 – 24 | A 25 – 50 | O >50 |
| STANDING SNAGS: | R <10 | O 10 – 24 | O 25 – 50 | R >50 |
| DEADFALL/LOGS: | A <10 | A 10 – 24 | O 25 – 50 | R >50 |

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT

| COMM. AGE: | PIONEER | YOUNG | MID-AGE | ✓ MATURE | OLD GROWTH |
|---|---|---|---|---|---|

## SOIL ANALYSIS:

| | | | |
|---|---|---|---|
| TEXTURE: Sand | DEPTH TO MOTTLES/GLEY | g= / | G= / |
| MOISTURE: | DEPTH OF ORGANICS: | ~8cm | (cm) |
| HOMOGENEOUS / VARIABLE | DEPTH TO BEDROCK: | >120 | (cm) |

## COMMUNITY CLASSIFICATION:

| | | |
|---|---|---|
| COMMUNITY CLASS: | | CODE: |
| COMMUNITY SERIES: | | CODE: |
| ECOSITE: | | CODE: |
| VEGETATION TYPE: | D-F Sugar Maple-Beech Dec Forest | CODE: FOD5-2 |
| INCLUSION | | CODE: |
| COMPLEX | Swamp Maple Mineral Dec | CODE: SWD3-2 |

Evidence of Disturbance / Notes: – ATV Trails

Photos: photo 64: sandy NW edge of woodlot

| ELC COMMUNITY DESCRIPTION & CLASSIFICATION | |
|---|---|
| SITE: | |
| POLYGON: | |
| DATE: | |
| SURVEYOR(S): | |

LAYERS: 1=CANOPY>10m 2=SUB-CANOPY 3=UNDERSTOREY 4=GROUND (GRD.) LAYER

ABUNDANCE CODES: N=NONE R=RARE O=OCCASIONAL A=ABUNDANT D=DOMINANT

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| ACESASA | O | A | A | | |
| Am. Beech | A | O | O | | |
| Hop hornbeam | | RO | O | | |
| Black cherry | RO | | RO | | |
| Yellow Birch | RO | | | | |
| ARI RE | | | | | |
| F. [illegible] | | | | | |
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| ACE SBR | | | | | |
| RUB ALLE | | | | O | |
| PARVITA | | | | OA | |

| SPECIES CODE | LAYER 1 | 2 | 3 | 4 | COLL. |
|---|---|---|---|---|---|
| Jack in Pulpit | | | | OA | |
| Trillium Sp | | | | O | |
| Baneberry Sp | | | | RO | |
| False Solomons Seal | | | | RO | |
| IMP CAPE | | | | RO | |
| Can Mayflower | | | | O | |
| Mayapple | | | | | |

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Signature: (Field Personnel)

Quality Control: This form is complete ☐ & legible ☐.

Signature: (Project Manager)