

Stantec

AMHERST ISLAND WIND ENERGY PROJECT

NATURAL HERITAGE ASSESSMENT & ENVIRONMENTAL IMPACT STUDY

Appendix E

Wetland Evaluations

WETLAND DATA AND SCORING RECORD

- i) WETLAND NAME: PASTURE COMPLEX - Wetland Co
- ii) MNR ADMINISTRATIVE REGION: SOUTHERN DISTRICT: PETERBOROUGH
AREA OFFICE (if different from District):
- iii) CONSERVATION AUTHORITY JURISDICTION: CATARAQUI REGION
(If not within a designated CA, check here: _____)
- iv) COUNTY OR REGIONAL MUNICIPALITY: LENNOX AND ADDINGTON
- v) TOWNSHIP: LOYALIST
- vi) LOTS & CONCESSIONS:
(attach separate sheet if necessary)
- vii) MAP AND AIR PHOTO REFERENCES

- a) Latitude _____ Longitude: _____
- b) UTM grid reference: Zone: _____ Block: _____
Grid: E _____ N _____
- c) National Topographic Series:
map name(s) KINGSTON
map number(s) 31C edition 4
scale 1:250,000
- d) Aerial photographs: Date photo taken: _____ Scale: _____

Flight & plate numbers: _____

(attach separate sheet if necessary)
- e) Ontario Base Map numbers & scale _____

(attach separate sheets if necessary)

- FIRST BASE SOLUTIONS - IMAGER7 DATE: 2008

viii) WETLAND SIZE AND BOUNDARIES

- a) Single contiguous wetland area: 31.01 hectares
- b) Wetland complex comprised of 5 individual wetlands:

INTERSPERSION
MAP # ?

	Wetland Unit Number (for reference)	Size of each wetland unit
3	Wetland Unit No. 1	<u>19.52</u> ha
4	Wetland Unit No. 2	<u>2.08</u> ha
5	Wetland Unit No. 3	<u>4.40</u> ha
2	Wetland Unit No. 4	<u>2.67</u> ha
1	Wetland Unit No. 5	<u>2.35</u> ha
	Wetland Unit No. 6	_____ ha
	Wetland Unit No. 7	_____ ha
	Wetland Unit No. 8	_____ ha
	Wetland Unit No. 9	_____ ha
	Wetland Unit No. 10	_____ ha

(Attach additional sheets if necessary)

TOTAL WETLAND SIZE 31.01 ha

- c) Brief documentation of reasons for including any areas less than 0.5 ha in size:

(Attach separate sheets if necessary)

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1 GROWING DEGREE-DAYS/SOILS

GROWING DEGREE DAYS

(check one)

- 1) _____ <2800
- 2) _____ 2800 - 3200
- 3) 3200 - 3600
- 4) _____ 3600 - 4000
- 5) _____ >4000

SOILS

Estimated Fractional Area

- 1.00 clay/loam
- _____ silt/marl
- _____ limestone
- _____ sand
- _____ humic/mesic
- _____ fibric
- _____ granite

SCORING:

Growing Degree-Days	Clay-Loam	Silt-Marl	Lime-stone	Sand	Humic-Mesic	Fibric	Granite
<2800	15	13	11	9	8	7	5
2800-3200	18	15	13	11	9	8	7
3200-3600	22	18	15	13	11	9	7
3600-4000	26	21	18	15	13	10	8
>4000	30	25	20	18	15	12	8

(maximum score 30; if wetland contains more than one soil type, evaluate based on the fractional area)

Steps required for evaluation: (maximum score 30 points)

1. Select GDD line in evaluation table applicable to your wetland;
2. Determine fractional area of the wetland for each soil type;
3. Multiply fractional area of each soil type by score;
4. Sum individual soil type scores (round to nearest whole number).

In wetland complexes the evaluator should aim at determining the percentage of area occupied by the categories for the complex as a whole.

Final Score Growing Degree-Days/Soils (maximum 30 points) 22

1.1.2 WETLAND TYPE (Fractional Area = area of wetland type/total wetland area)

	Fractional Area		Score
Bog	_____	x 3	_____
Fen	_____	x 6	_____
Swamp	<u>0.08</u>	x 8	<u>0.64</u>
Marsh	<u>0.92</u>	x 15	<u>13.8</u>

Wetland type score (maximum 15 points) 14

1.1.3 SITE TYPE (Fractional Area = area of site type/total wetland area)

	Fractional Area		Score
Isolated	_____	x 1 =	_____
Palustrine (permanent or intermittent flow)	<u>1.0</u>	x 2 =	<u>2.0</u>
Riverine	_____	x 4 =	_____
Riverine (at rivermouth)	_____	x 5 =	_____
Lacustrine (at rivermouth)	_____	x 5 =	_____
Lacustrine (on enclosed bay, with barrier beach)	_____	x 3 =	_____
Lacustrine (exposed to lake)	_____	x 2 =	_____

Site Type Score (maximum 5 points) 2

1.2 BIODIVERSITY

1.2.1 NUMBER OF WETLAND TYPES

(Check only one)	Score
1) _____ one	9 points
2) <u>X</u> _____ two	13
3) _____ three	20
4) _____ four	30

Number of Wetland Types Score (maximum 30 points) 13

1.2.2 VEGETATION COMMUNITIES

Attach a separate sheet listing community (map) codes, vegetation forms and dominant species. Use the form on the following page to record percent area by dominant vegetation form. This information will be used in other parts of the evaluation.

Communities should be grouped by number of forms. For example, 2 form communities might appear as follows:

2 forms

<u>Code</u>	<u>Forms</u>	<u>Dominant Species</u>
M6	re, ff	re, <i>Typha latifolia</i> ; ff, <i>Lemna minor</i> , <i>Wolffia</i>
S1	ts, gc	ts, <i>Salix discolor</i> ; gc, <i>Impatiens capensis</i> , <i>Thelypteris palustris</i>

Note that the dominant species for each form are separated by a semicolon. The dominant species (maximum of 2) within a form are separated by commas.

Scoring:

Total # of communities with 1-3 forms	Total # of communities with 4-5 forms	Total # of communities with 6 or more forms
1 = 1.5 points	1 = 2 points	1 = 3 points
2 = 2.5	2 = 3.5	2 = 5
3 = 3.5	3 = 5	3 = 7
4 = 4.5	4 = 6.5	4 = 9
5 = 5	5 = 7.5	5 = 10.5
6 = 5.5	6 = 8.5	6 = 12
7 = 6	7 = 9.5	7 = 13.5
8 = 6.5	8 = 10.5	8 = 15
9 = 7	9 = 11.5	9 = 16.5
10 = 7.5	10 = 12.5	10 = 18
11 = 8	11 = 13	11 = 19
+0.5 each additional community = <u>2.5</u>	+0.5 each additional community = _____	+1 each additional community = _____

e.g., a wetland with 3 one form communities, 4 two form communities, 12 four form communities and 8 six form communities would score:

$$6 + 13.5 + 15 = 34.5 = 35 \text{ points}$$

Vegetation Communities Score (maximum 45 points) 2.5 3

Wetland Name: PASTURE COMPLEX

Wetland Size (ha): 31.01

<u>Vegetation Form</u>	<u>% area in which form is dominant</u>
h	<u>8</u>
c	—
dh	—
dc	—
ts	—
ls	—
ds	—
gc	<u>92</u>
m	—
ne	—
be	—
re	—
ff	—
f	—
su	—
u (unvegetated)	—
Total = 100%	

1.2.3 DIVERSITY OF SURROUNDING HABITAT

(Check all appropriate items)

- | | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | row crop |
| <input type="checkbox"/> | pasture |
| <input checked="" type="checkbox"/> | abandoned agricultural land |
| <input checked="" type="checkbox"/> | deciduous forest |
| <input checked="" type="checkbox"/> | coniferous forest |
| <input type="checkbox"/> | mixed forest (at least 25% conifer and 75% deciduous or vice versa) |
| <input type="checkbox"/> | abandoned pits and quarries |
| <input checked="" type="checkbox"/> | open lake or deep river |
| <input type="checkbox"/> | fence rows with cover, or shelterbelts |
| <input type="checkbox"/> | terrain appreciably undulating, hilly, or with ravines |
| <input type="checkbox"/> | creek flood plain |

Diversity of Surrounding Habitat Score (1 for each, maximum 7 points) 4

1.2.4 PROXIMITY TO OTHER WETLANDS

(Check first appropriate category only)

Scoring

- | | | |
|--|--|----------|
| 1) <input checked="" type="checkbox"/> | Hydrologically connected by surface water to other wetlands (different dominant wetland type), or to open lake or deep river within 1.5 km | 8 points |
| 2) <input type="checkbox"/> | Hydrologically connected by surface water to other wetlands (same dominant wetland type) within 0.5 km | 8 |
| 3) <input type="checkbox"/> | Hydrologically connected by surface water to other wetlands (different dominant wetland type), or to open lake or deep river from 1.5 to 4 km away | 5 |
| 4) <input type="checkbox"/> | Hydrologically connected by surface water to other wetlands (same dominant wetland type) from 0.5 to 1.5 km away | 5 |
| 5) <input type="checkbox"/> | Within 0.75 km of other wetlands (different dominant wetland type) or open water body, but not hydrologically connected by surface water | 5 |
| 6) <input type="checkbox"/> | Within 1 km of other wetlands, but not hydrologically connected by surface water | 2 |
| 7) <input type="checkbox"/> | No wetland within 1 km | 0 |

Proximity to other Wetlands Score (Choose one only, maximum 8 points) 8

1.2.5 INTERSPERSION

Number of Intersections (Check one)		Score
1) 26 or less	_____	3
2) 27 to 40	_____	6
3) 41 to 60	_____	9
4) 61 to 80	_____	12
5) 81 to 100	_____	15
6) 101 to 125	_____	18
7) 126 to 150	<u>X</u> _____	21
8) 151 to 175	_____	24
9) 176 to 200	_____	27
10) >200	_____	30

Interspersion Score (Choose one only, maximum 30 points) 21

1.2.6 OPEN WATER TYPES

Permanently flooded: (Check one)		Score
1) <u>X</u> _____	type 1	8
2) _____	type 2	8
3) _____	type 3	14
4) _____	type 4	20
5) _____	type 5	30
6) _____	type 6	8
7) _____	type 7	14
8) _____	type 8	3
9) _____	no open water	0

Open Water Type Score (Choose one only, maximum 30 points) 8

1.3 SIZE

31.01 hectares

Size Score (Biological Component) (maximum 50 points) 19

Evaluation Table Size Score (Biological Component)

Wetland size (ha)	Total Score for Biodiversity Subcomponent									
	<37	37-48	49-60	61-72	73-84	85-96	97-108	109-120	121-132	>132
<21 ha	1	5	7	8	9	17	25	34	43	50
21-40	5	7	8	9	10	19	28	37	46	50
41-60	6	8	9	10	11	21	31	40	49	50
61-80	7	9	10	11	13	23	34	43	50	50
81-100	8	10	11	13	15	25	37	46	50	50
101-120	9	11	13	15	18	28	40	49	50	50
121-140	10	13	15	17	21	31	43	50	50	50
141-160	11	15	17	19	23	34	46	50	50	50
161-180	13	17	19	21	25	37	49	50	50	50
181-200	15	19	21	23	28	40	50	50	50	50
201-400	17	21	23	25	31	43	50	50	50	50
401-600	19	23	25	28	34	46	50	50	50	50
601-800	21	25	28	31	37	49	50	50	50	50
801-1000	23	28	31	34	40	50	50	50	50	50
1001-1200	25	31	34	37	43	50	50	50	50	50
1201-1400	28	34	37	40	46	50	50	50	50	50
1401-1600	31	37	40	43	49	50	50	50	50	50
1601-1800	34	40	43	46	50	50	50	50	50	50
1801-2000	37	43	47	49	50	50	50	50	50	50
>2000	40	46	50	50	50	50	50	50	50	50

2.0 SOCIAL COMPONENT

2.1 ECONOMICALLY VALUABLE PRODUCTS

2.1.1 WOOD PRODUCTS

Area of wetland forested (ha), i.e. dominant form is h or c. Note that this is not wetland size. (Check one only)

		Score
1)	<u>X</u> <5 ha	0
2)	_____ 5 - 25 ha	3
3)	_____ 26 - 50 ha	6
4)	_____ 51 - 100 ha	9
5)	_____ 101 - 200 ha	12
6)	_____ >200 ha	18

Source of information: STANTEC FIELD SURVEYS

Wood Products Score (Score one only, maximum 18 points) 0

2.1.2 WILD RICE

(Check one)		Score (Choose one)
Present (minimum size 0.5 ha)	1) _____	6 points
Absent	2) <u>X</u>	0

Source of information: STANTEC FIELD SURVEYS

Wild Rice Score (maximum 6 points) 0

2.1.3 COMMERCIAL FISH (BAIT FISH AND/OR COARSE FISH)

(Check one)		Score (Choose one)
Present	1) _____	12 points
Habitat not suitable for fish	2) <u>X</u>	0

Source of information: STANTEC FIELD SURVEYS

Commercial Fish Score (maximum 12 points) 0

2.1.4 BULLFROGS

(Check one)		Score (Choose one)
Present	1) _____	1 points
Absent	2) <u>X</u>	0

Source of information: STANTEC FIELD SURVEYS

Bullfrog Score (maximum 1 point) 0

2.1.5 SNAPPING TURTLES

(Check one)

Present

Absent

1) _____

2) 0

Score (Choose one)

1 point

0

Source of information: STANTEC FIELD SURVEYS

Snapping Turtle Score (maximum 1 point) 0

2.1.6 FURBEARERS

(Consult Appendix 9)

Name of furbearer

Source of information

- | | | |
|----|-------|-------|
| 1) | _____ | _____ |
| 2) | _____ | _____ |
| 3) | _____ | _____ |
| 4) | _____ | _____ |
| 5) | _____ | _____ |

Scoring: 3 points for each species, maximum 12

Furbearer Score (maximum 12 points) 0

2.2 RECREATIONAL ACTIVITIES

Type of Wetland-Associated Use			
Intensity of Use	Hunting	Nature Enjoyment/ Ecosystem Study	Fishing
High	40 points	40 points	40 points
Moderate	20	20	20
Low	8	8	8
Not Possible/Not known	<u>0</u>	<u>0</u>	<u>0</u>

(score one level for each of the three wetland uses; scores are cumulative; maximum score 80 points)

Sources of information:

Hunting: _____

Nature: _____

Fishing: _____

Recreational Activities Score (maximum 80 points) 0

2.3 LANDSCAPE AESTHETICS

2.3.1 DISTINCTNESS

(Check one)		Score (Choose one)
Clearly distinct	1) _____	3 points
Indistinct	2) <u>X</u> _____	0

Landscape Distinctness Score (maximum 3 points) 0

2.3.2 ABSENCE OF HUMAN DISTURBANCE

(Check one)		Score (Choose one)
Human disturbances absent or nearly so	1) _____	7 points
One or several localized disturbances	2) _____	4
Moderate disturbance; localized water pollution	3) _____	2
Wetland intact but impairment of ecosystem quality intense in some areas	4) _____	1
Extreme ecological degradation, or water pollution severe and widespread	5) <u>X</u> _____	0

Source of information: STANTEC FIELD SURVEYS

Absence of Human Disturbance Score (maximum 7 points) 0

2.4 EDUCATION AND PUBLIC AWARENESS

2.4.1 EDUCATIONAL USES

(Check one)		Score (Choose one)
Frequent	1) _____	20 points
Infrequent	2) _____	12
No visits	3) <u>X</u> _____	0

Source of information: STANTEC FIELD SURVEYS

Educational Uses Score (maximum 20 points) 0

2.4.2 FACILITIES AND PROGRAMS

(check one)		Score (Choose one)
Staffed interpretation centre	1) _____	8 points
No interpretation centre or staff, but a system of self-guiding trails or brochures available	2) _____	4
Facilities such as maintained paths (e.g., woodchips), boardwalks, boat launches or observation towers but no brochures or other interpretation	3) _____	2
No facilities or programs	4) <u>X</u> _____	0

Source of information: STANTEC FIELD SURVEYS

Facilities and Programs Score (maximum 8 points) 0

2.4.3 RESEARCH AND STUDIES

(check appropriate spaces)

Long term research has been done	_____	Score	12 points
Research papers published in refereed scientific journal or as a thesis	_____		10
One or more (non-research) reports have been written on some aspect of the wetland's flora, fauna, hydrology, etc.	_____		5
No research or reports	<u>X</u> _____		0

Attach list of known reports by above categories

Research and Studies Score (Score is cumulative, maximum 12 points) 0

2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT

Circle the highest applicable score

Distance of wetland from settlement	1) population >10,000	2) population 2,500 - 10,000	3) population <2,500 or cottage community
1) Within or adjoining settlement	40 points	26	<u>16</u>
2) 0.5 to 10 km from settlement	26	16	10
3) 10 to 60 km from settlement	12	8	4
4) >60 km from settlement	5	2	0

Name of settlement: STELLA

Proximity to Human Settlement Score (maximum 40 points) 16

2.6 OWNERSHIP (FA = fractional area) Fractional Area

FA of wetland in public or private ownership, held under contract or in trust for wetland protection	_____ x 10 = _____
FA of wetland area in public ownership, not as above	_____ x 8 = _____
FA of wetland area in private ownership, not as above	<u>1</u> x 4 = <u>4</u>

Source of information: STANTEC

Ownership Score (maximum 10 points) 4

2.7 SIZE

3101 hectares

Evaluation Table for Size Score (Social Component)

Wetland size (ha)	Total for Size Dependent Score									
	<31	31-45	46-60	61-75	76-90	91-105	106-109	121-135	136-150	>150
<2 ha	1	2	4	8	10	12	14	14	14	15
2-4	1	2	4	8	12	13	14	14	15	16
5-8	2	2	5	9	13	14	15	15	16	16
9-12	3	3	6	10	14	15	15	16	17	17
13-17	3	4	7	10	14	15	16	16	17	17
18-28	4	5	8	11	15	16	16	17	17	18
29-37	5	7	10	13	16	17	18	18	19	19
38-49	5	7	10	13	16	17	18	18	19	20
50-62	5	8	11	14	17	17	18	19	20	20
63-81	5	8	11	15	17	18	19	20	20	20
82-105	6	9	11	15	18	18	19	20	20	20
106-137	6	9	12	16	18	19	20	20	20	20
138-178	6	9	13	16	18	19	20	20	20	20
179-233	6	9	13	16	18	20	20	20	20	20
234-302	7	9	13	16	18	20	20	20	20	20
303-393	7	9	14	17	18	20	20	20	20	20
394-511	7	10	14	17	18	20	20	20	20	20
512-665	7	10	14	17	18	20	20	20	20	20
666-863	7	10	14	17	19	20	20	20	20	20
864-1123	8	12	15	17	19	20	20	20	20	20
1124-1460	8	12	15	17	19	20	20	20	20	20
1461-1898	8	13	15	18	19	20	20	20	20	20
1899-2467	8	14	16	18	20	20	20	20	20	20
>2467	8	14	16	18	20	20	20	20	20	20

Total Size Score (Social Component) 5

2.8 ABORIGINAL AND CULTURAL HERITAGE VALUES

Either or both Aboriginal or Cultural Values may be scored. However, the maximum score permitted for 2.8 is 30 points. Attach documentation.

2.8.1 ABORIGINAL VALUES

Full documentation of sources must be attached to the data record.

- | | | | |
|-------------------|-----------------|---|-----------|
| 1) _____ | Significant | = | 30 points |
| 2) _____ | Not Significant | = | 0 |
| 3) <u>X</u> _____ | Unknown | = | 0 |

2.8.2 CULTURAL HERITAGE

- | | | | |
|-------------------|-----------------|---|-----------|
| 1) _____ | Significant | = | 30 points |
| 2) _____ | Not Significant | = | 0 |
| 3) <u>X</u> _____ | Unknown | = | 0 |

Aboriginal Values/Cultural Heritage Score (maximum 30 points) 0

3.0 HYDROLOGICAL COMPONENT**3.1 FLOOD ATTENUATION**

If the wetland is a complex including isolated wetlands, apportion the 100 points according to area. For example, if 10 ha of a 100 ha complex is isolated, the isolated portion receives the maximum proportional score of 10. The remainder of the wetland is then evaluated out of 90.

Step 1 Determination of Maximum Score

- Wetland is located on one of the defined 5 large lakes or 5 major rivers
(Go to Step 4).
 Wetland is entirely isolated (i.e. not part of a complex) (Go to Step 4)
 All other wetland types (Go through steps 2, 3, and 4B)

Step 2. Determination of Upstream Detention Factor (DF)

- | | | |
|-----|--|--------------|
| (a) | Wetland area (ha) | <u>31.01</u> |
| (b) | Total area (ha) of <u>upstream</u> detention areas
(include the wetland itself) | <u>38.41</u> |
| (c) | Ratio of (a):(b) | <u>0.81</u> |
| (d) | Upstream detention factor: (c) x 2 =
(maximum allowable factor = 1) | <u>1</u> |

Step 3 Determination of Wetland Attenuation Factor (AF)

- | | | |
|-----|---|--------------|
| (a) | Wetland area (ha) | <u>31.01</u> |
| (b) | Size of catchment basin (ha) <u>upstream</u> of wetland
(include wetland itself in catchment area) | <u>169.1</u> |
| (c) | Ratio of (a):(b) | <u>0.18</u> |
| (d) | Wetland attenuation factor: (c) x 10 =
(maximum allowable factor = 1) | <u>1</u> |

Step 4. Calculation of final score

- | | | |
|-----|--|------------|
| (a) | Wetlands on large lakes or major rivers | 0 |
| (b) | Wetland entirely isolated | 100 |
| (b) | All other wetlands -- calculate as follows: | |
| | Initial score | 100* |
| | Upstream detention factor (DF) (Step 2) | <u>1</u> |
| | Wetland attenuation factor (AF) (Step 3) | <u>1</u> |
| | Final score: ((DF + AF)/2) x Initial score = | <u>100</u> |

*Unless wetland is a complex with isolated portions (see above).

Flood Attenuation Score (maximum 100 points) 100

3.2 WATER QUALITY IMPROVEMENT

3.2.1 SHORT TERM WATER QUALITY IMPROVEMENT

Step 1: Determination of maximum initial score

 Wetland on one of the 5 defined large lakes or 5 major rivers (Go to Step 5a)
~~X~~ All other wetlands (Go through Steps 2, 3, 4, and 5b)

Step 2: Determination of watershed improvement factor (WIF)
 Calculation of WIF is based on the fractional area (FA) of each site type that makes up the total area of the wetland.

(FA = area of site type/total area of wetland)	Fractional Area
FA of isolated wetland	<u> </u> x 0.5 = <u> </u>
FA of riverine wetland	<u> </u> x 1.0 = <u> </u>
FA of palustrine wetland with no inflow	<u> </u> x 0.7 = <u> </u>
FA of palustrine wetland with inflows	<u>1</u> x 1.0 = <u>1</u>
FA of lacustrine on lake shoreline	<u> </u> x 0.2 = <u> </u>
FA of lacustrine at lake inflow or outflow	<u> </u> x 1.0 = <u> </u>

Sum (WIF cannot exceed 1.0) 1

Step 3: Determination of catchment land use factor (LUF)
 (Choose the first category that fits upstream landuse in the catchment.)

- 1) X Over 50% agricultural and/or urban 1.0
- 2) Between 30 and 50% agricultural and/or urban 0.8
- 3) Over 50% forested or other natural vegetation 0.6

LUF (maximum 1.0) 1

Step 4: Determination of pollutant uptake factor (PUT)

Calculation of PUT is based on the fractional area (FA) of each vegetation type that makes up the total area of the wetland. Base assessment on the dominant vegetation form for each community except where dead trees or shrubs dominate. In that case base assessment on the dominant live vegetation type. (FA = area of vegetation type/total area of wetland)

FA of wetland with live trees, shrubs, herbs or mosses (c,h,ts,ls,gc,m)	Fractional Area
	<u>1</u> x 0.75 = <u>0.75</u>
FA of wetland with emergent, submergent or floating vegetation (re,be,ne,su,f,ff)	<u> </u> x 1.0 = <u> </u>
FA of wetland with little or no vegetation (u)	<u> </u> x 0.5 = <u> </u>

Sum (PUT cannot exceed 1.0) 0.75

Step 5: Calculation of final score

(a)	Wetland on large lakes or major rivers	0
(b)	All other wetlands - calculate as follows	
	Initial score	60
	Water quality improvement factor (WQF)	<u>1</u>
	Land use factor (LUF)	<u>1</u>
	Pollutant uptake factor (PUT)	<u>0.75</u>

Final score: 60 x WQF x LUF x PUT = 45

Short Term Water Quality Improvement Score (maximum 60 points) 45

3.2.2 LONG TERM NUTRIENT TRAP

Step 1:

<u> </u>	Wetland on large lakes or 5 major rivers	0 points
<u>X</u>	All other wetlands (Proceed to Step 2)	

Step 2:

Choose only one of the following settings that best describes the wetland being evaluated

- 1) Wetland located in a river mouth 10 points
- 2) Wetland is a bog, fen, or swamp with more than 50% of the wetland being covered with organic soil 10
- 3) Wetland is a bog, fen, or swamp with less than 50% of the wetland being covered with organic soil 3
- 4) Wetland is a marsh with more than 50% of the wetland covered with organic soil 3
- 5) X None of the above 0

Long Term Nutrient Trap Score (maximum 10 points) 0

3.2.3 GROUNDWATER DISCHARGE

(Circle the characteristics that best describe the wetland being evaluated and then sum the scores. If the sum exceeds 30 points assign the maximum score of 30.)

Wetland Characteristics	Potential for Discharge		
	None to Little	Some	High
Wetland type	1) Bog = 0	2) Swamp/Marsh = 2	3) Fen = 5
Topography	1) Flat/rolling = 0	2) Hilly = 2	3) Steep = 5
Wetland Area:Upslope Catchment Area	Large (>50%) = 0	Moderate (5-50%) = 2	Small (<5%) = 5
Lagg Development	1) None found = 0	2) Minor = 2	3) Extensive = 5
Seeps	1) None = 0	2) = or < 3 seeps = 2	3) > 3 seeps = 5
Surface marl deposits	1) None = 0	2) = or < 3 sites = 2	3) > 3 sites = 5
Iron precipitates	1) None = 0	2) = or < 3 sites = 2	3) > 3 sites = 5
Located within 1 km of a major aquifer	N/A = 0	N/A = 0	Yes = 10

(Scores are cumulative, maximum score 30 points)

Groundwater Discharge Score (maximum 30 points) 4

3.3 CARBON SINK

Choose only one of the following

- 1) _____ Bog, fen or swamp with more than 50% coverage by organic soil 5 points
- 2) _____ Bog, fen or swamp with between 10 to 49% coverage by organic soil 2
- 3) _____ Marsh with more than 50% coverage by organic soil 3
- 4) Wetlands not in one of the above categories 0

Carbon Sink Score (maximum 5 points) 0

3.4 SHORELINE EROSION CONTROL

Step 1:

Score

- Wetland entirely isolated or palustrine 0
- Any part of the wetland riverine, or lacustrine (proceed to Step 2)

Step 2:

Choose the one characteristic that best describes the shoreline vegetation (see text for a definition of shoreline)

- | | Score |
|--|-------|
| 1) <input type="checkbox"/> Trees and shrubs | 15 |
| 2) <input type="checkbox"/> Emergent vegetation | 8 |
| 3) <input type="checkbox"/> Submergent vegetation | 6 |
| 4) <input type="checkbox"/> Other shoreline vegetation | 3 |
| 5) <input type="checkbox"/> No vegetation | 0 |

Shoreline Erosion Control Score (maximum 15 points) 0

3.5 GROUND WATER RECHARGE

3.5.1 WETLAND SITE TYPE

- | | Score |
|---|-------|
| (a) Wetland > 50% lacustrine (by area) or located on one of the five major rivers | 0 |
| (b) Wetland not as above. Calculate final score as follows:
(FA = area of site type/total area of wetland) | |

	Fractional Area
FA of isolated or palustrine wetland	<u>1</u> x 50 = <u>50</u>
FA of riverine wetland	<u> </u> x 20 = <u> </u>
FA of lacustrine wetland (wetland <50% lacustrine)	<u> </u> x 0 = <u> </u>

Ground Water Recharge, Wetland Site Type Component Score (maximum 50 points) 50

3.5.2 WETLAND SOIL RECHARGE POTENTIAL

(Circle only one choice that best describes the hydrologic soil class of the area surrounding the wetland being evaluated.)

Dominant Wetland Type	1) Sand, loam, gravel, till	2) Clay or bedrock
1) Lacustrine or on a major river	0	0
2) Isolated	10	5
3) Palustrine	7	4
4) Riverine (not a major river)	5	2

Ground Water Recharge, Wetland Soil Recharge Potential Score (maximum 10 points) 4

4.0 SPECIAL FEATURES COMPONENT

4.1 RARITY

4.1.1 WETLANDS

Site District 6E-15
 Presence of wetland type (check one or more)
 Bog
 Fen
 Swamp
 Marsh

Score for rarity within the landscape and rarity of the wetland type. Score for rarity of wetland type is cumulative (maximum 80 points) based on presence or absence.

Site District	Score for Rarity within the Landscape	Score for Rarity of Wetland Type			
		Marsh	Swamp	Fen	Bog
6-1	60	40	0	80	80
6-2	60	40	0	80	80
6-3	40	10	0	40	80
6-4	60	40	0	80	80
6-5	20	40	0	80	80
6-6	40	20	0	80	80
6-7	60	10	0	80	80
6-8	20	20	0	80	80
6-9	0	20	0	80	80
6-10	20	0	20	80	80
6-11	0	30	0	80	80
6-12	0	30	0	60	80
6-13	60	10	0	80	80
6-14	40	20	0	40	80
6-15	40	0	0	80	80
7-1	60	0	60	80	80
7-2	60	0	0	80	80
7-3	60	0	0	80	80
7-4	80	0	0	80	80
7-6	80	30	0	80	80

Rarity within the Landscape Score (maximum 80 points) 40
 Rarity of Wetland Type Score (Maximum 80 points) 0

4.1.2 SPECIES

4.1.2.1 BREEDING HABITAT FOR AN ENDANGERED OR THREATENED SPECIES

Name of species	Source of information
1) <u>NONE</u>	<u>STANTEC FIELD SURVEYS</u>
2) _____	_____
3) _____	_____

Attach documentation.

Scoring:

For each species 250 points

(Score is cumulative, no maximum score)

Breeding Habitat for Endangered or Threatened Species Score (no maximum) 0

4.1.2.2 TRADITIONAL MIGRATION OR FEEDING HABITAT FOR AN ENDANGERED OR THREATENED SPECIES

Name of species	Source of information
1) <u>NONE</u>	<u>STANTEC FIELD SURVEYS</u>
2) _____	_____
3) _____	_____

Attach documentation.

Scoring:

For one species 150 points

For each additional species 75

(Score is cumulative, no maximum score)

Traditional Habitat for Endangered or Threatened Species Score (no maximum) 0

4.1.2.3 PROVINCIALY SIGNIFICANT ANIMAL SPECIES

Name of species	Source of information
1) <u>NONE</u>	<u>SPATIAL FIELD SURVEYS</u>
2) _____	_____
3) _____	_____
4) _____	_____
5) _____	_____

Attach separate list if necessary; Attach documentation

Scoring:

Number of provincially significant animal species in the wetland:

One species = 50 points	14 species = 154
2 species = 80	15 species = 156
3 species = 95	16 species = 158
4 species = 105	17 species = 160
5 species = 115	18 species = 162
6 species = 125	19 species = 164
7 species = 130	20 species = 166
8 species = 135	21 species = 168
9 species = 140	22 species = 170
10 species = 143	23 species = 172
11 species = 146	24 species = 174
12 species = 149	25 species = 176
13 species = 152	

Add one point for every species past 25 (for example, 26 species = 177 points, 27 species = 178 points etc.)

(no maximum score)

Provincially Significant Animal Species Score (no maximum) 0

4.1.2.4 PROVINCIALY SIGNIFICANT PLANT SPECIES

(Scientific names must be recorded)

Common Name	Scientific Name	Source of information
1) <u>NONE</u>	_____	<u>STARTER FIELD SURVEYS</u>
2) _____	_____	_____
3) _____	_____	_____
4) _____	_____	_____
5) _____	_____	_____

Attach separate list if necessary. Attach documentation.

Scoring:

Number of provincially significant plant species in the wetland:

One species = 50 points	14 species = 154
2 species = 80	15 species = 156
3 species = 95	16 species = 158
4 species = 105	17 species = 160
5 species = 115	18 species = 162
6 species = 125	19 species = 164
7 species = 130	20 species = 166
8 species = 135	21 species = 168
9 species = 140	22 species = 170
10 species = 143	23 species = 172
11 species = 146	24 species = 174
12 species = 149	25 species = 176
13 species = 152	

Add one point for every species past 25 (for example, 26 species = 177 points, 27 species = 178 points etc.)

Provincially Significant Plant Species Score (no maximum) 0

4.1.2.5 REGIONALLY SIGNIFICANT SPECIES (SITE REGION)

Scientific names must be recorded for plant species. Lists of significant species must be approved by MNR.

SIGNIFICANT IN SITE REGION:

Common Name	Scientific Name	Source of information
1) <u>NONE</u>	_____	<u>SPANTEC Field Surveys</u>
2) _____	_____	_____
3) _____	_____	_____
4) _____	_____	_____
5) _____	_____	_____
6) _____	_____	_____
7) _____	_____	_____
8) _____	_____	_____

Attach separate list if necessary. Attach documentation

Scoring:

No. of species significant in Site Region

One species	=	20	6 species	=	55
2 species	=	30	7 species	=	58
3 species	=	40	8 species	=	61
4 species	=	45	9 species	=	64
5 species	=	50	10 species	=	67

Add one point for every species past 10. (No maximum score)

Regionally Significant Species Score (Site Region) (no maximum) 0

4.2.1.6 LOCALLY SIGNIFICANT SPECIES (SITE DISTRICT)

Scientific names must be recorded for plant species. Lists of significant species must be approved by MNR.

Common Name	Scientific Name	Source of information
1) <u>NONE</u>	_____	<u>STANTEC Field Surveys</u>
2) _____	_____	_____
3) _____	_____	_____
4) _____	_____	_____
5) _____	_____	_____
6) _____	_____	_____
7) _____	_____	_____
8) _____	_____	_____
9) _____	_____	_____
10) _____	_____	_____

Attach separate list if necessary. Attach documentation.

Scoring:

No. of species significant in Site District

One species	=	10	6 species	=	41
2 species	=	17	7 species	=	43
3 species	=	24	8 species	=	45
4 species	=	31	9 species	=	47
5 species	=	38	10 species	=	49

For each significant species over 10 in the wetland, add 1 point.

Locally Significant Species Score(Site District) (no maximum)

0

4.2 SIGNIFICANT FEATURES AND/OR FISH & WILDLIFE HABITAT

4.2.1 NESTING OF COLONIAL WATERBIRDS

Status	Name of species	Source of Information	Score
1) Currently nesting			50 points
2) Known to have nested within past 5 years			25
3) Active feeding area (Do not include feeding by great blue herons)			15
4) None known	NONE		0

Attach documentation (nest locations, etc., if known)

Score highest applicable category only; maximum score 50 points.

Score for Nesting Colonial Waterbirds (maximum 50 points) 0

4.2.2. WINTER COVER FOR WILDLIFE

(Check only highest level of significance)
(one only) Score

- 1) _____ Provincially significant 100
- 2) _____ Significant in Site Region 50
- 3) _____ Significant in Site District 25
- 3) _____ Locally significant 10
- 4) X Little or poor winter cover present 0

Source of information: STANDARD FIELD SURVEYS

Winter Cover for Wildlife Score (maximum 100 points) 0

4.2.3 WATERFOWL STAGING AND/OR MOULTING

(Check only highest level of significance for both staging and moulting; score is cumulative across columns, maximum score 150)

	<u>Staging</u>	Score (one only)	<u>Mouling</u>	Score (one only)
1) Nationally significant	_____	150	_____	150
2) Provincially significant	_____	100	_____	100
3) Regionally significant	_____	50	_____	50
4) Known to occur	_____	10	_____	10
5) Not possible	_____ <input checked="" type="checkbox"/>	0	_____ <input checked="" type="checkbox"/>	0
6) Unknown	_____	0	_____	0

Source of information: STARTEC FIELD SURVEY

Waterfowl Moulting and Staging Score (maximum 150 points) 0

4.2.4 WATERFOWL BREEDING

(Check only highest level of significance) Score

1) _____	Provincially significant	100
2) _____	Regionally significant	50
3) _____	Habitat suitable	10
4) <u>_____</u> <input checked="" type="checkbox"/>	Habitat not suitable	0

Source of information: STARTEC FIELD SURVEY

Waterfowl Breeding Score (maximum 100 points) 0

4.2.5 MIGRATORY PASSERINE, SHOREBIRD OR RAPTOR STOPOVER AREA

(check highest applicable category)

		Score
1) _____	Provincially significant	100
2) _____	Significant in Site Region	50
3) _____	Significant in Site District	10
4) <u>_____</u> <input checked="" type="checkbox"/>	Not significant	0

Source of information: STARTEC FIELD SURVEY

Passerine, Shorebird or Raptor Stopover Score (maximum 100 points) 0

4.2.7 FISH HABITAT**4.2.7.1 Spawning and Nursery Habitat****Table 5. Area Factors for Low Marsh, High Marsh and Swamp Communities.**

No. of ha of Fish Habitat	Area Factor
< 0.5 ha	0.1
0.5 - 4.9	0.2
5.0 - 9.9	0.4
10.0 - 14.9	0.6
15.0 - 19.9	0.8
20.0+ ha	1.0

Step 1:

Fish habitat is not present within the wetland (Score = 0)

Fish habitat is present within the wetland (Go to Step 2)

Step 2: Choose only one option

1) Significance of the spawning and nursery habitat within the wetland is known (Go to Step3)

2) Significance of the spawning and nursery habitat within the wetland is not known (Go through Steps 4, 5, 6, and 7)

Step 3: Select the highest appropriate category below, attach documentation:

1) Significant in Site Region 100 points

2) Significant in Site District 50

3) Locally Significant Habitat (5.0+ ha) 25

4) Locally Significant Habitat (<5.0 ha) 15

Score for Spawning and Nursery Habitat (maximum score 100 points) 15

Step 4: Proceed to Steps 4 to 7 only if Step 3 was not answered.

(Low Marsh: marsh area from the existing water line out to the outer boundary of the wetland)

_____ Low marsh not present (Continue to Step 5)

_____ Low marsh present (Score as follows)

Scoring for Presence of Key Vegetation Groups

Scoring is based on the one most clearly dominant plant species of the dominant form in each Low Marsh vegetation community. Check the appropriate Vegetation Group (see Appendix 16, Table 16-2) for each Low Marsh community. Sum the areas of the communities assigned to each Vegetation Group and multiply by the appropriate size factor from Table 5.

Vegetation Group Number	Vegetation Group Name	Present as a Dominant Form (check)	Total Area (ha)	Area Factor (see Table 5)	Score	Final Score (area factor x score)
1	Tallgrass				6 pts	
2	Shortgrass-Sedge				11	
3	Cattail-Bulrush-Burreed				5	
4	Arrowhead-Pickerelweed				5	
5	Duckweed				2	
6	Smartweed-Waterwillow				6	
7	Waterlily-Lotus				11	
8	Waterweed-Watercress				9	
9	Ribbongrass				10	
10	Coontail-Naiad-Watermilfoil				13	
11	Narrowleaf Pondweed				5	
12	Broadleaf Pondweed				8	
Total Score (maximum 75 points)						

Step 5: (High Marsh: area from the water line to the inland boundary of marsh wetland type. This is essentially what is commonly referred to as a wet meadow, in that there is insufficient standing water to provide fisheries habitat except during flood or high water conditions.)

_____ High marsh not present (Continue to Step 6)

_____ High marsh present (Score as follows)

Scoring for Presence of Key Vegetation Groups

Scoring is based on the one most clearly dominant plant species of the dominant form in each High Marsh vegetation community. Check the appropriate Vegetation Group (see Appendix 16, Table 16-2) for each High Marsh community. Sum the areas of the communities assigned to each Vegetation Group and multiply by the appropriate size factor from Table 5.

Vegetation Group Number	Vegetation Group Name	Present as a Dominant Form (check)	Total Area (ha)	Area Factor (see Table 5)	Score	Final Score (area factor x score)
1	Tallgrass				6 pts	
2	Shortgrass-Sedge				11	
3	Cattail-Bulrush-Burreed				5	
4	Arrowhead-Pickerelweed				5	
Total Score (maximum 25 points)						

Step 6: (Swamp: Swamp communities containing fish habitat, either seasonally or permanently.)
 Determine the total area of seasonally flooded swamps and permanently flooded swamps containing fish habitat.)

- Swamp containing fish habitat not present (Continue to Step 7)
- Swamp containing fish habitat present (Score as follows)

Swamp containing fish habitat	Present (check)	Total area (ha)	Area Factor (see Table 5)	Score	TOTAL SCORE (factor x score)
seasonally flooded				10	
permanently flooded				10	
SCORE (maximum 20 points)					

Step 7: Calculation of final score

Score for Spawning and Nursery Habitat (Low Marsh) (maximum 75) = ____

Score for Spawning and Nursery Habitat (High Marsh) (maximum 25) = ____

Score for Swamp Containing Fish Habitat (maximum 20) = ____

Sum (maximum score 100 points) = ____

4.2.6.2 Migration and Staging Habitat

Step 1:

- 1) Staging or Migration Habitat is not present in the wetland (Score = 0)
- 2) Staging or Migration Habitat is present in the wetland, significance of the habitat is known (Go to Step 2)
- 3) Staging or Migration Habitat is present in the wetland, significance of the habitat is not known (Go to Step 3)

NOTE: Only one of Step 2 or Step 3 is to be scored.

Step 2: Select the highest appropriate category below, attach documentation:

		Score
1) <input type="checkbox"/>	Significant in Site Region	25 points
2) <input type="checkbox"/>	Significant in Site District	15
3) <input type="checkbox"/>	Locally Significant	10
4) <input type="checkbox"/>	Fish staging and/or migration habitat present, but not as above	5

Score for Fish Migration and Staging Habitat (maximum score 25 points) 0

Step 3: Select the highest appropriate category below based on presence of the designated site type (does not have to be dominant). See Section 1.1.3. Note name of river for 2) and 3).

		Score
1) <input type="checkbox"/>	Wetland is riverine at rivermouth or lacustrine at rivermouth	25 points
2) <input type="checkbox"/>	Wetland is riverine, within 0.75 km of rivermouth	15
3) <input type="checkbox"/>	Wetland is lacustrine, within 0.75 km of rivermouth	10
4) <input type="checkbox"/>	Fish staging and/or migration habitat present, but not as above	0

Score for Staging and Migration Habitat (maximum score 25 points) _____

4.3 ECOSYSTEM AGE

(Fractional Area = area of wetland/total area of wetland area)

Fractional Area	Scoring
Bog	_____ x 25 _____
Fen, treed to open on deep soils, floating mats or marl	_____ x 20 _____
Fen, on limestone rock	_____ x 5 _____
Swamp	<u>0.08</u> x 3 <u>0.24</u>
Marsh	<u>0.92</u> x 0 <u>0</u>

Ecosystem Age Score (maximum 25 points) 0

4.4 GREAT LAKES COASTAL WETLANDS

Score for coastal (see text for definition) wetlands only

Choose one only

- | | |
|-------------------------|-------------|
| _____ wetland <10 ha | = 10 points |
| _____ wetland 10-50 ha | = 25 |
| _____ wetland 51-100 ha | = 50 |
| _____ wetland >100 ha | = 75 |

Great Lakes Coastal Wetlands Score (maximum 75 points) 0

5.0 EXTRA INFORMATION

5.1 PURPLE LOOSESTRIFE

Absent/Not seen

Present (a) One location in wetland _____
Two to many locations _____

Abundance code
(b) (1) < 20 stems _____
(2) 20-99 stems _____
(3) 100-999 stems _____
(4) >1000 stems _____

5.2 SEASONALLY FLOODED AREAS

Indicate length of seasonal flooding

Check one or more

Ephemeral (less than 2 weeks) _____
Temporal (2 weeks to 1 month) _____
Seasonal (1 to 3 months) _____
Semi-permanent (>3 months) _____
No seasonal flooding

5.3 SPECIES OF SPECIAL SIGNIFICANCE

5.3.1 Osprey

Present and nesting _____
Known to have nested in last 5 yr. _____
Feeding area for Osprey _____
Not as above

5.3.2 Common Loon

Nesting in wetland _____
Feeding at edge of wetland _____
Observed or heard on lake or
river adjoining the wetland _____
Not as above

INVESTIGATORS

AFFILIATION

JAMES LESLIE

STANTEC CONSULTING

KATHERINE ST. JAMES

STANTEC CONSULTING

ALAN WARMINGTON

CONTRACT BIRDER

DATES WETLAND VISITED

JULY 27, 2011 ; MARCH 27, 2012

DATE THIS EVALUATION COMPLETED: AUGUST 23, 2012

ESTIMATED TIME DEVOTED TO COMPLETING THE FIELD SURVEY IN "PERSON HOURS"

8 HRS

WEATHER CONDITIONS

i) at time of field work JULY - 23°C & SUNNY; MARCH - 4°C, WINDY, SUNNY.
(Continue in the space below if necessary)

ii) summer conditions in general WARM, SUBJECT TO LAKE EFFECT
PRECIPITATION

OTHER POTENTIALLY USEFUL INFORMATION:

- WETLAND IS AN ACTIVELY USED SHEEP PASTURE
- HORBS ARE GRAZED IN THE SPRING BUT SELECTIVELY
GRAZED AS THE MATURE (REED-CANARY GRASS AFTER
INTACT WITH MINIMAL GRASS & MODERATE TRAMPLING

CHECKLIST OF PLANT AND ANIMAL SPECIES RECORDED IN THE WETLAND:

Attach list of all flora and fauna observed in the wetland.

* Indicate if voucher specimens or photos have been obtained, where located, etc.

WETLAND EVALUATION SCORING RECORD

WETLAND NAME AND/OR NUMBER PASTURE COMPLEX

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1 Growing Degree-Days/Soils	<u>22</u>
1.1.2 Wetland Type	<u>14</u>
1.1.3 Site Type	<u>2</u>

Total for Productivity 38

1.2 BIODIVERSITY

1.2.1 Number of Wetland Types	<u>13</u>
1.2.2 Vegetation Communities (maximum 45)	<u>3</u>
1.2.3 Diversity of Surrounding Habitat (maximum 7)	<u>4</u>
1.2.4 Proximity to Other Wetlands	<u>8</u>
1.2.5 Interspersion	<u>21</u>
1.2.6 Open Water Type	<u>8</u>

Total for Biodiversity 57

1.3 SIZE (Biological Component)

19

TOTAL FOR BIOLOGICAL COMPONENT (not to exceed 250)

114

2.0 SOCIAL COMPONENT

2.1 ECONOMICALLY VALUABLE PRODUCTS

2.1.1 Wood Products	<u>0</u>
2.1.2 Wild Rice	<u>0</u>
2.1.3 Commercial Fish	<u>0</u>
2.1.4 Bullfrogs	<u>0</u>
2.1.5 Snapping Turtles	<u>0</u>
2.1.6 Furbearers	<u>0</u>

Total for Economically Valuable Products 0

2.2 RECREATIONAL ACTIVITIES (maximum 80) 0

2.3 LANDSCAPE AESTHETICS

2.3.1 Distinctness	<u>0</u>
2.3.2 Absence of Human Disturbance	<u>0</u>

Total for Landscape Aesthetics 0

2.4 EDUCATION AND PUBLIC AWARENESS

2.4.1 Educational Uses	<u>0</u>
2.4.2 Facilities and Programs	<u>0</u>
2.4.3 Research and Studies	<u>0</u>

Total for Education and Public Awareness 0

2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT 16

2.6 OWNERSHIP 4

2.7 SIZE (Social Component) 5

2.8 ABORIGINAL AND CULTURAL VALUES 0

TOTAL FOR SOCIAL COMPONENT (not to exceed 250) 25

3.0 HYDROLOGICAL COMPONENT

3.1 FLOOD ATTENUATION

100

3.2 WATER QUALITY IMPROVEMENT

3.2.1 Short Term Improvement

45

3.2.2 Long Term Improvement

0

3.2.3 Groundwater Discharge (maximum 30)

4

Total for Water Quality Improvement

49

3.3 CARBON SINK

0

3.4 SHORELINE EROSION CONTROL

0

3.5 GROUNDWATER RECHARGE

3.5.1 Site Type

50

3.5.2 Soils

4

Total for Groundwater Recharge

54

TOTAL FOR HYDROLOGICAL COMPONENT (not to exceed 250)

203

4.0 SPECIAL FEATURES

4.1 RARITY

4.1.1 Wetlands

4.1.1.1 Rarity within the Landscape 40
 4.1.1.2 Rarity of Wetland Type (maximum 80) 0

Total for Wetland Rarity 40

4.1.2 Species

4.1.2.1 Endangered Species Breed 0
 4.1.2.2 Traditional Use by Endangered or
 Threatened Species 0
 4.1.2.3 Provincially Significant Animals 0
 4.1.2.4 Provincially Significant Plants 0
 4.1.2.5 Regionally Significant Species 0
 4.1.2.6 Locally Significant Species 0

Total for Species Rarity 0

4.2 SIGNIFICANT FEATURES OR HABITAT

4.2.1 Colonial Waterbirds 0
 4.2.2 Winter Cover for Wildlife 0
 4.2.3 Waterfowl Staging and Moulting 0
 4.2.4 Waterfowl Breeding 0
 4.2.5 Migratory Passerine, Shorebird or Raptor Stopover 0
 4.2.6 Fish Habitat 15

Total for Significant Features and Habitat 15

4.3 ECOSYSTEM AGE

0

4.4 GREAT LAKES COASTAL WETLANDS

0

TOTAL FOR SPECIAL FEATURES (maximum 250)

55

SUMMARY OF EVALUATION RESULT

Wetland PASTURE COMPLEX

TOTAL FOR 1.0 BIOLOGICAL COMPONENT 114

TOTAL FOR 2.0 SOCIAL COMPONENT 25

TOTAL FOR 3.0 HYDROLOGICAL COMPONENT 203

TOTAL FOR 4.0 SPECIAL FEATURES COMPONENT 55

WETLAND TOTAL 397

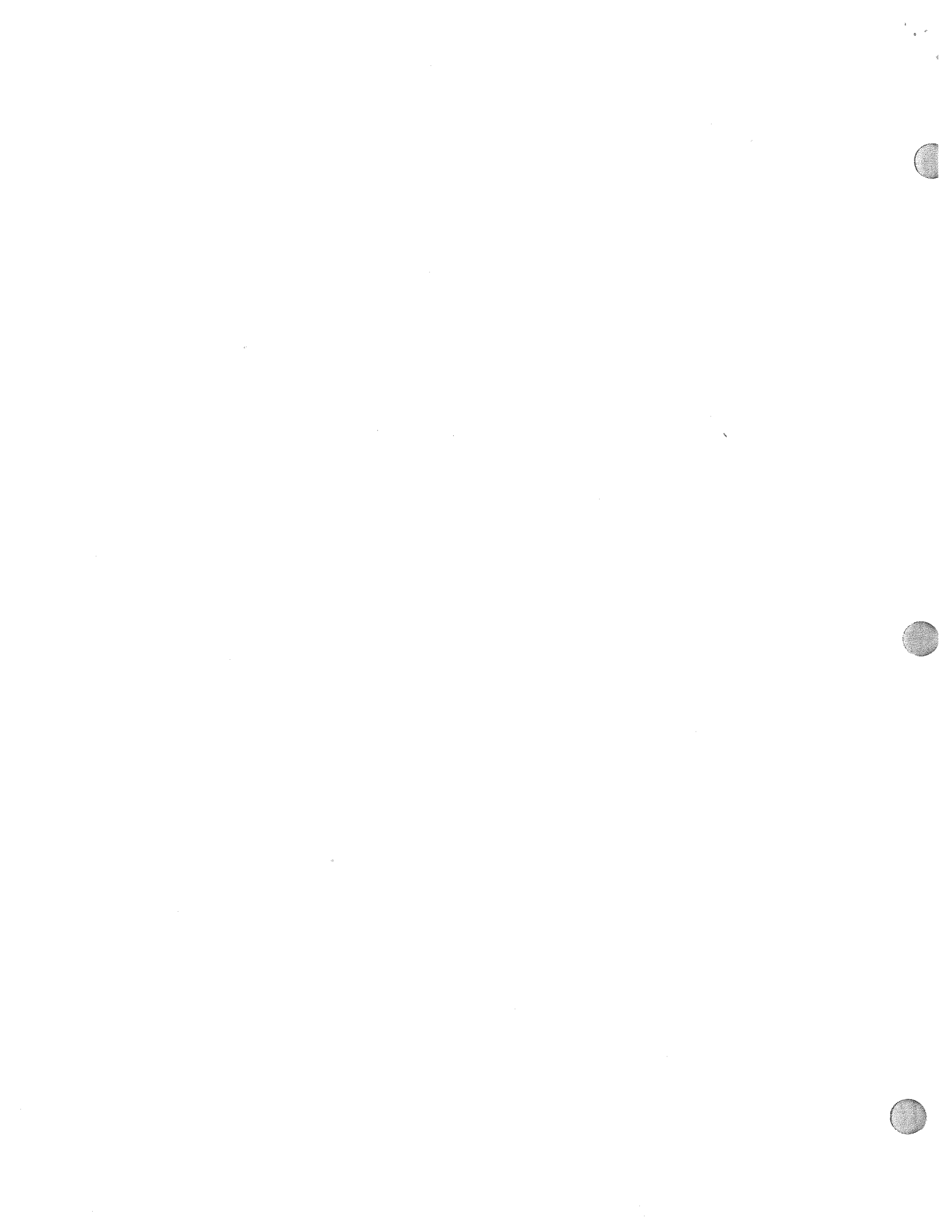
INVESTIGATORS

JAMES LESLIE - VEGETATION / ONICES EVALUATOR
KATHERINE ST. JAMES - VEGETATION
ALAN WORMINGTON - AVIAN OBSERVATIONS

AFFILIATION

SMITTE CONSULTING LTD.

DATE AUG. 27, 2012

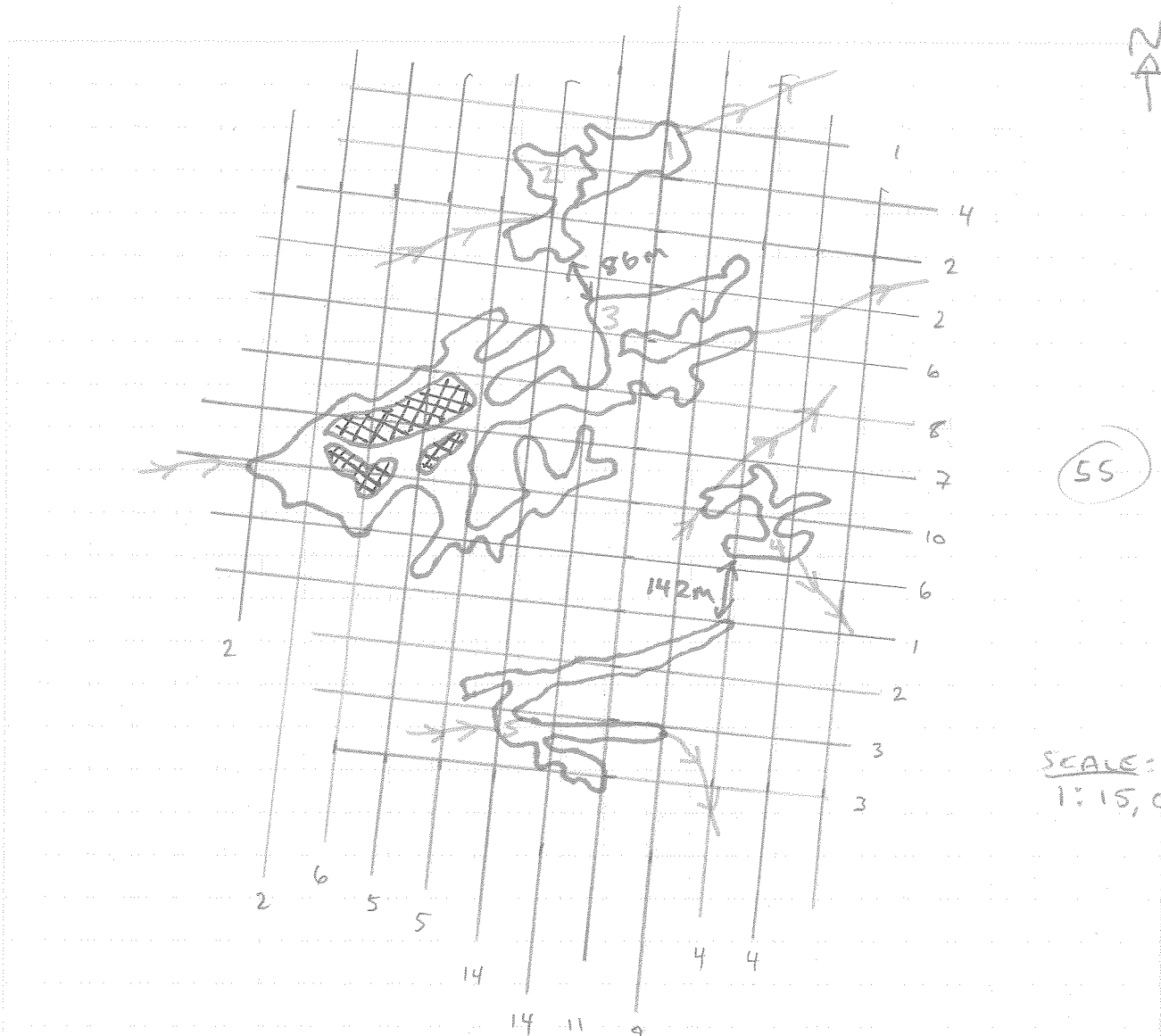


LATIN NAME	LOCAL STATUS SOURCE LAST UPDATE/ INITIALS	COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
GYMNOSPERMS									
CONIFERS									
<i>Juniperus</i>	<i>virginiana</i>	Eastern Red Cedar				S5			G5
Pinaceae									
Pine Family									
<i>Picea</i>	<i>glauca</i>	White Spruce	6	3		S5			G5
DICOTYLEDONS									
DICOTS									
Apiaceae									
Carrot or Parsley Family									
<i>Daucus</i>	<i>carota</i>	Wild Carrot		5	-2	SE5			G?
<i>Heracleum</i>	<i>lanatum</i>	Cow-parsnip	3	-3		S5			G5
Asteraceae									
Composite or Aster Family									
<i>Ambrosia</i>	<i>artemisiifolia</i>	Common Ragweed	0	3		S5			G5
Cornaceae									
Dogwood Family									
<i>Cornus</i>	<i>foemina</i> ssp. <i>racemosa</i>	Red Panicked Dogwood	2	-2		S5			G5?
<i>Cornus</i>	<i>stolonifera</i>	Red-osier Dogwood	2	-3		S5			G5
Guttiferae									
St. John's-wort Family									
<i>Hypericum</i>	<i>perforatum</i>	Common St. John's-wort		5	-3	SE5			G?
Lamiaceae									
Mint Family									
<i>Lycopus</i>	<i>uniflorus</i>	Northern Water-horehound	5	-5		S5			G5
Oleaceae									
Olive Family									
<i>Fraxinus</i>	<i>pennsylvanica</i>	Red Ash	3	-3		S5			G5
Polygonaceae									
Smartweed Family									
<i>Persicaria</i>	<i>maculosa</i>	Lady's-thumb		-3	-1	SE5			G?
Rosaceae									
Rose Family									
<i>Crataegus</i>	<i>species</i>	Hawthorn species							
<i>Fragaria</i>	<i>vesca</i> ssp. <i>americana</i>	Woodland Strawberry	4	4		S5			G5?
Ulmaceae									
Elm Family									
<i>Ulmus</i>	<i>americana</i>	White Elm	3	-2		S5			G5?
Verbenaceae									
Vervain Family									
<i>Verbena</i>	<i>hastata</i>	Blue Vervain	4	-4		S5			G5
Vitaceae									
Grape Family									
<i>Parthenocissus</i>	<i>inserta</i>	Inserted Virginia-creeper	3	3		S5			G5
<i>Vitis</i>	<i>riparia</i>	Riverbank Grape	0	-2		S5			G5
MONOCOTYLEDONS									
MONOCOTS									
Cyperaceae									
Sedge Family									
<i>Carex</i>	<i>granularis</i>	Meadow Sedge	3	-4		S5			G5
<i>Carex</i>	<i>pellita</i>	Woolly Sedge	4	-5		S5			G5
<i>Carex</i>	<i>vulpinoidea</i>	Fox Sedge	3	-5		S5			G5
<i>Scirpus</i>	<i>atrovirens</i>	Dark-green Bulrush	3	-5		S5			G5?
<i>Scirpus</i>	<i>cyperinus</i>	Wool-grass	4	-5		S5			G5
Juncaceae									
Rush Family									
<i>Juncus</i>	<i>tenuis</i>	Path Rush	0	0		S5			G5
Poaceae									
Grass Family									
<i>Agrostis</i>	<i>stolonifera</i>	Redtop		-3		S5			G5
<i>Phalaris</i>	<i>arundinacea</i>	Reed Canary Grass	0	-4		S5			G5
Typhaceae									
Cattail Family									
<i>Typha</i>	<i>angustifolia</i>	Narrow-leaved Cattail	3	-5		S5			G5



Stantec

INTERSPERSION MAP & SPECIES WITHIN DOMINANT FORMS.



INTERSPERSION TOTAL: 131

76

- 1. S1 - h, ts, gc → FRAPEND; CORPACC; PHAARUN
- 2. M1 - gc → PHAARUN
- 3. M2 - gc → PHAARUN
- 4. M3 - gc → PHAARUN
- 5. M4 = gc → PHAARUN

Designed by: _____ Checked by: _____





WETLAND DATA AND SCORING RECORD

- i) **WETLAND NAME:** WETLAND #7
- ii) **MNR ADMINISTRATIVE REGION:** SOUTHERN **DISTRICT:** PETERBOROUGH
AREA OFFICE (if different from District): _____
- iii) **CONSERVATION AUTHORITY JURISDICTION:** CATAWAUGUS REGION
(If not within a designated CA, check here: _____)
- iv) **COUNTY OR REGIONAL MUNICIPALITY:** LENNOX + ADDINGTON
- v) **TOWNSHIP:** LOYALIST
- vi) **LOTS & CONCESSIONS:** _____
(attach separate sheet if necessary)
- vii) **MAP AND AIR PHOTO REFERENCES**
- a) Latitude _____ Longitude: _____
- b) UTM grid reference: Zone: _____ Block: _____
Grid: E _____ N _____
- c) National Topographic Series:
map name(s) KINGSTON
map number(s) 31c edition 4
scale 1:250,000
- d) Aerial photographs: Date photo taken: _____ Scale: _____

Flight & plate numbers: _____

(attach separate sheet if necessary)
- e) Ontario Base Map numbers & scale _____

(attach separate sheets if necessary)

- FIRST BASE SOLUTIONS - IMAGERY DATE = 2008
- BING IMAGERY

viii) WETLAND SIZE AND BOUNDARIES

- a) Single contiguous wetland area: 2.1 hectares
- b) Wetland complex comprised of 1 individual wetlands:

Wetland Unit Number (for reference)	Size of each wetland unit
Wetland Unit No.1	<u>2.1</u> ha
Wetland Unit No. 2	_____ ha
Wetland Unit No. 3	_____ ha
Wetland Unit No. 4	_____ ha
Wetland Unit No. 5	_____ ha
Wetland Unit No. 6	_____ ha
Wetland Unit No. 7	_____ ha
Wetland Unit No. 8	_____ ha
Wetland Unit No. 9	_____ ha
Wetland Unit No. 10	_____ ha

(Attach additional sheets if necessary)

TOTAL WETLAND SIZE 2.1 ha

- c) Brief documentation of reasons for including any areas less than 0.5 ha in size:

(Attach separate sheets if necessary)

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1 GROWING DEGREE-DAYS/SOILS

GROWING DEGREE DAYS

(check one)

- 1) _____ <2800
- 2) _____ 2800 - 3200
- 3) X 3200 - 3600
- 4) _____ 3600 - 4000
- 5) _____ >4000

SOILS

Estimated Fractional Area

- 1.5 clay/loam
- _____ silt/marl
- _____ limestone
- _____ sand
- _____ humic/mesic
- _____ fibric
- _____ granite

SCORING:

Growing Degree-Days	Clay-Loam	Silt-Marl	Lime-stone	Sand	Humic-Mesic	Fibric	Granite
<2800	15	13	11	9	8	7	5
2800-3200	18	15	13	11	9	8	7
3200-3600	<u>22</u>	18	15	13	11	9	7
3600-4000	26	21	18	15	13	10	8
>4000	30	25	20	18	15	12	8

(maximum score 30; if wetland contains more than one soil type, evaluate based on the fractional area)

Steps required for evaluation: (maximum score 30 points)

1. Select GDD line in evaluation table applicable to your wetland;
2. Determine fractional area of the wetland for each soil type;
3. Multiply fractional area of each soil type by score;
4. Sum individual soil type scores (round to nearest whole number).

In wetland complexes the evaluator should aim at determining the percentage of area occupied by the categories for the complex as a whole.

Final Score Growing Degree-Days/Soils (maximum 30 points) 22

1.1.2 WETLAND TYPE (Fractional Area = area of wetland type/total wetland area)

	Fractional Area		Score
Bog	_____	x 3	_____
Fen	_____	x 6	_____
Swamp	_____	x 8	_____
Marsh	<u>1</u> _____	x 15	<u>15</u> _____

Wetland type score (maximum 15 points) 15

1.1.3 SITE TYPE (Fractional Area = area of site type/total wetland area)

	Fractional Area		Score
Isolated	_____	x 1 =	_____
Palustrine (permanent or intermittent flow)	<u>1.0</u> _____	x 2 =	<u>2</u> _____
Riverine	_____	x 4 =	_____
Riverine (at rivermouth)	_____	x 5 =	_____
Lacustrine (at rivermouth)	_____	x 5 =	_____
Lacustrine (on enclosed bay, with barrier beach)	_____	x 3 =	_____
Lacustrine (exposed to lake)	_____	x 2 =	_____

Site Type Score (maximum 5 points) 2

1.2 BIODIVERSITY

1.2.1 NUMBER OF WETLAND TYPES

(Check only one)	Score
1) <u>X</u> one	9 points
2) _____ two	13
3) _____ three	20
4) _____ four	30

Number of Wetland Types Score (maximum 30 points) 9

1.2.2 VEGETATION COMMUNITIES

Attach a separate sheet listing community (map) codes, vegetation forms and dominant species. Use the form on the following page to record percent area by dominant vegetation form. This information will be used in other parts of the evaluation.

Communities should be grouped by number of forms. For example, 2 form communities might appear as follows:

2 forms

<u>Code</u>	<u>Forms</u>	<u>Dominant Species</u>
M6	re, ff	re, <i>Typha latifolia</i> ; ff, <i>Lemna minor</i> , <i>Wolffia</i>
S1	ts, gc	ts, <i>Salix discolor</i> ; gc, <i>Impatiens capensis</i> , <i>Thelypteris palustris</i>

Note that the dominant species for each form are separated by a semicolon. The dominant species (maximum of 2) within a form are separated by commas.

Scoring:

Total # of communities with 1-3 forms

- ① 1 = 1.5 points
- 2 = 2.5
- 3 = 3.5
- 4 = 4.5
- 5 = 5
- 6 = 5.5
- 7 = 6
- 8 = 6.5
- 9 = 7
- 10 = 7.5
- 11 = 8

+0.5 each additional community = 1.5

Total # of communities with 4-5 forms

- 1 = 2 points
- 2 = 3.5
- 3 = 5
- 4 = 6.5
- 5 = 7.5
- 6 = 8.5
- 7 = 9.5
- 8 = 10.5
- 9 = 11.5
- 10 = 12.5
- 11 = 13

+0.5 each additional community = _____

Total # of communities with 6 or more forms

- 1 = 3 points
- 2 = 5
- 3 = 7
- 4 = 9
- 5 = 10.5
- 6 = 12
- 7 = 13.5
- 8 = 15
- 9 = 16.5
- 10 = 18
- 11 = 19

+1 each additional community = _____

e.g., a wetland with 3 one form communities, 4 two form communities, 12 four form communities and 8 six form communities would score:

$$6 + 13.5 + 15 = 34.5 = 35 \text{ points}$$

Vegetation Communities Score (maximum 45 points) 2

Wetland Name: WETLAND #7

Wetland Size (ha): 2.1

<u>Vegetation Form</u>	<u>% area in which form is dominant</u>
h	<u>4</u>
c	—
dh	—
dc	—
ts	<u>11</u>
ls	—
ds	—
gc	<u>85</u>
m	—
ne	—
be	—
re	—
ff	—
f	—
su	—
u (unvegetated)	—
Total = 100%	

1.2.3 DIVERSITY OF SURROUNDING HABITAT

(Check all appropriate items)

- row crop
- pasture
- abandoned agricultural land
- deciduous forest
- coniferous forest
- mixed forest (at least 25% conifer and 75% deciduous or vice versa)
- abandoned pits and quarries
- open lake or deep river
- fence rows with cover, or shelterbelts
- terrain appreciably undulating, hilly, or with ravines
- creek flood plain

Diversity of Surrounding Habitat Score (1 for each, maximum 7 points) 5

1.2.4 PROXIMITY TO OTHER WETLANDS

(Check first appropriate category only)

- | | Scoring |
|---|----------|
| 1) <input checked="" type="checkbox"/> Hydrologically connected by surface water to other wetlands (different dominant wetland type), or to open lake or deep river within 1.5 km | 8 points |
| 2) <input type="checkbox"/> Hydrologically connected by surface water to other wetlands (same dominant wetland type) within 0.5 km | 8 |
| 3) <input type="checkbox"/> Hydrologically connected by surface water to other wetlands (different dominant wetland type), or to open lake or deep river from 1.5 to 4 km away | 5 |
| 4) <input type="checkbox"/> Hydrologically connected by surface water to other wetlands (same dominant wetland type) from 0.5 to 1.5 km away | 5 |
| 5) <input type="checkbox"/> Within 0.75 km of other wetlands (different dominant wetland type) or open water body, but not hydrologically connected by surface water | 5 |
| 6) <input type="checkbox"/> Within 1 km of other wetlands, but not hydrologically connected by surface water | 2 |
| 7) <input type="checkbox"/> No wetland within 1 km | 0 |

Proximity to other Wetlands Score (Choose one only, maximum 8 points) 8

1.2.5 INTERSPERSION

Number of Intersections (Check one)		Score
1) 26 or less	_____	3
2) 27 to 40	<u>X</u> _____	6
3) 41 to 60	_____	9
4) 61 to 80	_____	12
5) 81 to 100	_____	15
6) 101 to 125	_____	18
7) 126 to 150	_____	21
8) 151 to 175	_____	24
9) 176 to 200	_____	27
10) >200	_____	30

Interspersion Score (Choose one only, maximum 30 points) 6

1.2.6 OPEN WATER TYPES

Permanently flooded: (Check one)		Score
1) _____	type 1	8
2) _____	type 2	8
3) _____	type 3	14
4) _____	type 4	20
5) _____	type 5	30
6) _____	type 6	8
7) _____	type 7	14
8) _____	type 8	3
9) <u>X</u> _____	no open water	0

Open Water Type Score (Choose one only, maximum 30 points) 0

1.3 SIZE

2.1 hectares

Size Score (Biological Component) (maximum 50 points) 8

Evaluation Table Size Score (Biological Component)

Wetland size (ha)	Total Score for Biodiversity Subcomponent									
	<37	37-48	49-60	61-72	73-84	85-96	97-108	109-120	121-132	>132
<21 ha	1	5	7	8	9	17	25	34	43	50
21-40	5	7	8	9	10	19	28	37	46	50
41-60	6	8	9	10	11	21	31	40	49	50
61-80	7	9	10	11	13	23	34	43	50	50
81-100	8	10	11	13	15	25	37	46	50	50
101-120	9	11	13	15	18	28	40	49	50	50
121-140	10	13	15	17	21	31	43	50	50	50
141-160	11	15	17	19	23	34	46	50	50	50
161-180	13	17	19	21	25	37	49	50	50	50
181-200	15	19	21	23	28	40	50	50	50	50
201-400	17	21	23	25	31	43	50	50	50	50
401-600	19	23	25	28	34	46	50	50	50	50
601-800	21	25	28	31	37	49	50	50	50	50
801-1000	23	28	31	34	40	50	50	50	50	50
1001-1200	25	31	34	37	43	50	50	50	50	50
1201-1400	28	34	37	40	46	50	50	50	50	50
1401-1600	31	37	40	43	49	50	50	50	50	50
1601-1800	34	40	43	46	50	50	50	50	50	50
1801-2000	37	43	47	49	50	50	50	50	50	50
>2000	40	46	50	50	50	50	50	50	50	50

2.0 SOCIAL COMPONENT

2.1 ECONOMICALLY VALUABLE PRODUCTS

2.1.1 WOOD PRODUCTS

Area of wetland forested (ha), i.e. dominant form is h or c. Note that this is not wetland size. (Check one only)

		Score
1)	<u>X</u> <5 ha	0
2)	_____ 5 - 25 ha	3
3)	_____ 26 - 50 ha	6
4)	_____ 51 - 100 ha	9
5)	_____ 101 - 200 ha	12
6)	_____ >200 ha	18

Source of information: STANTEC

Wood Products Score (Score one only, maximum 18 points) 0

2.1.2 WILD RICE

(Check one)		Score (Choose one)
Present (minimum size 0.5 ha)	1) _____	6 points
Absent	2) <u>X</u>	0

Source of information: STANTEC

Wild Rice Score (maximum 6 points) 0

2.1.3 COMMERCIAL FISH (BAIT FISH AND/OR COARSE FISH)

(Check one)		Score (Choose one)
Present	1) <u>X</u>	12 points
Habitat not suitable for fish	2) _____	0

Source of information: STANTEC

Commercial Fish Score (maximum 12 points) 12

2.1.4 BULLFROGS

(Check one)		Score (Choose one)
Present	1) _____	1 points
Absent	2) _____	0

Source of information: STANTEC

Bullfrog Score (maximum 1 point) 0

2.1.5 SNAPPING TURTLES

(Check one)

Present
Absent

1) _____
2) X

Score (Choose one)

1 point
0

Source of information: STANTEC

Snapping Turtle Score (maximum 1 point) 0

2.1.6 FURBEARERS

(Consult Appendix 9)

Name of furbearer

Source of information

1) NONE OBSERVED STANTEC
2) _____
3) _____
4) _____
5) _____

Scoring: 3 points for each species, maximum 12

Furbearer Score (maximum 12 points) 0

2.2 RECREATIONAL ACTIVITIES

Type of Wetland-Associated Use			
Intensity of Use	Hunting	Nature Enjoyment/ Ecosystem Study	Fishing
High	40 points	40 points	40 points
Moderate	20	20	20
Low	8	8	8
Not Possible/Not known	<u>0</u>	<u>0</u>	<u>0</u>

(score one level for each of the three wetland uses; scores are cumulative; maximum score 80 points)

Sources of information:

Hunting: STANTEC

Nature: STANTEC

Fishing: STANTEC

Recreational Activities Score (maximum 80 points) 0

2.3 LANDSCAPE AESTHETICS

2.3.1 DISTINCTNESS

(Check one)

- Clearly distinct 1) _____
- Indistinct 2) X

Score (Choose one)

- 3 points
- 0

Landscape Distinctness Score (maximum 3 points) 0

2.3.2 ABSENCE OF HUMAN DISTURBANCE

(Check one)

- Human disturbances absent or nearly so
- One or several localized disturbances
- Moderate disturbance; localized water pollution
- Wetland intact but impairment of ecosystem quality intense in some areas
- Extreme ecological degradation, or water pollution severe and widespread

Score (Choose one)

- 1) _____ 7 points
- 2) _____ 4
- 3) _____ 2
- 4) _____ 1
- 5) X 0

Source of information: STANTEC

Absence of Human Disturbance Score (maximum 7 points) 0

2.4 EDUCATION AND PUBLIC AWARENESS

2.4.1 EDUCATIONAL USES

(Check one)

- Frequent 1) _____
- Infrequent 2) _____
- No visits 3) X

Score (Choose one)

- 20 points
- 12
- 0

Source of information: STANTEC

Educational Uses Score (maximum 20 points) 0

2.4.2 FACILITIES AND PROGRAMS

(check one)

- Staffed interpretation centre
- No interpretation centre or staff, but a system of self-guiding trails or brochures available
- Facilities such as maintained paths (e.g., woodchips), boardwalks, boat launches or observation towers but no brochures or other interpretation
- No facilities or programs

Score (Choose one)

- 1) _____ 8 points
- 2) _____ 4
- 3) _____ 2
- 4) X 0

Source of information: STANTEC

Facilities and Programs Score (maximum 8 points) 0

2.4.3 RESEARCH AND STUDIES

(check appropriate spaces)

Long term research has been done	_____	Score 12 points
Research papers published in refereed scientific journal or as a thesis	_____	10
One or more (non-research) reports have been written on some aspect of the wetland's flora, fauna, hydrology, etc.	_____	5
No research or reports	<u>X</u>	0

Attach list of known reports by above categories

Research and Studies Score (Score is cumulative, maximum 12 points) 0

2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT

Circle the highest applicable score

Distance of wetland from settlement	1) population >10,000	2) population 2,500 - 10,000	3) population <2,500 or cottage community
1) Within or adjoining settlement	40 points	26	16
2) 0.5 to 10 km from settlement	26	16	<u>10</u>
3) 10 to 60 km from settlement	12	8	4
4) >60 km from settlement	5	2	0

Name of settlement: STELLA

Proximity to Human Settlement Score (maximum 40 points) 10

2.6 OWNERSHIP (FA = fractional area) Fractional Area

Score

FA of wetland in public or private ownership, held under contract or in trust for wetland protection _____ x 10 = _____

FA of wetland area in public ownership, not as above _____ x 8 = _____

FA of wetland area in private ownership, not as above 1 x 4 = 4

Source of information: STANTEC

Ownership Score (maximum 10 points) 4

2.7 SIZE

_____ hectares

Evaluation Table for Size Score (Social Component)

Wetland size (ha)	Total for Size Dependent Score									
	<31	31-45	46-60	61-75	76-90	91-105	106-109	121-135	136-150	>150
<2 ha	1	2	4	8	10	12	14	14	14	15
2-4	1	2	4	8	12	13	14	14	15	16
5-8	2	2	5	9	13	14	15	15	16	16
9-12	3	3	6	10	14	15	15	16	17	17
13-17	3	4	7	10	14	15	16	16	17	17
18-28	4	5	8	11	15	16	16	17	17	18
29-37	5	7	10	13	16	17	18	18	19	19
38-49	5	7	10	13	16	17	18	18	19	20
50-62	5	8	11	14	17	17	18	19	20	20
63-81	5	8	11	15	17	18	19	20	20	20
82-105	6	9	11	15	18	18	19	20	20	20
106-137	6	9	12	16	18	19	20	20	20	20
138-178	6	9	13	16	18	19	20	20	20	20
179-233	6	9	13	16	18	20	20	20	20	20
234-302	7	9	13	16	18	20	20	20	20	20
303-393	7	9	14	17	18	20	20	20	20	20
394-511	7	10	14	17	18	20	20	20	20	20
512-665	7	10	14	17	18	20	20	20	20	20
666-863	7	10	14	17	19	20	20	20	20	20
864-1123	8	12	15	17	19	20	20	20	20	20
1124-1460	8	12	15	17	19	20	20	20	20	20
1461-1898	8	13	15	18	19	20	20	20	20	20
1899-2467	8	14	16	18	20	20	20	20	20	20
>2467	8	14	16	18	20	20	20	20	20	20

Total Size Score (Social Component) 1

2.8 ABORIGINAL AND CULTURAL HERITAGE VALUES

Either or both Aboriginal or Cultural Values may be scored. However, the maximum score permitted for 2.8 is 30 points. Attach documentation.

2.8.1 ABORIGINAL VALUES

Full documentation of sources must be attached to the data record.

- | | | | |
|-------------------|-----------------|---|-----------|
| 1) _____ | Significant | = | 30 points |
| 2) _____ | Not Significant | = | 0 |
| 3) <u>X</u> _____ | Unknown | = | 0 |

2.8.2 CULTURAL HERITAGE

- | | | | |
|-------------------|-----------------|---|-----------|
| 1) _____ | Significant | = | 30 points |
| 2) _____ | Not Significant | = | 0 |
| 3) <u>X</u> _____ | Unknown | = | 0 |

Aboriginal Values/Cultural Heritage Score (maximum 30 points) 0

3.0 HYDROLOGICAL COMPONENT

3.1 FLOOD ATTENUATION

If the wetland is a complex including isolated wetlands, apportion the 100 points according to area. For example, if 10 ha of a 100 ha complex is isolated, the isolated portion receives the maximum proportional score of 10. The remainder of the wetland is then evaluated out of 90.

Step 1 Determination of Maximum Score

- Wetland is located on one of the defined 5 large lakes or 5 major rivers (Go to Step 4).
- Wetland is entirely isolated (i.e. not part of a complex) (Go to Step 4)
- All other wetland types (Go through steps 2, 3, and 4B)

Step 2. Determination of Upstream Detention Factor (DF)

- (a) Wetland area (ha) 2.1
- (b) Total area (ha) of upstream detention areas (include the wetland itself) 4.2
- (c) Ratio of (a):(b) 0.5
- (d) Upstream detention factor: (c) x 2 = 1
(maximum allowable factor = 1)

Step 3 Determination of Wetland Attenuation Factor (AF)

- (a) Wetland area (ha) 2.1
- (b) Size of catchment basin (ha) upstream of wetland (include wetland itself in catchment area) 273
- (c) Ratio of (a):(b) 0.008
- (d) Wetland attenuation factor: (c) x 10 = 0.08
(maximum allowable factor = 1)

Step 4. Calculation of final score

- (a) Wetlands on large lakes or major rivers 0
- (b) Wetland entirely isolated 100
- (b) All other wetlands -- calculate as follows:

Initial score 100*
 Upstream detention factor (DF) (Step 2) 1
 Wetland attenuation factor (AF) (Step 3) 0.08
 Final score: ((DF + AF)/2) x Initial score = 54

*Unless wetland is a complex with isolated portions (see above).

Flood Attenuation Score (maximum 100 points)

54

3.2 WATER QUALITY IMPROVEMENT

3.2.1 SHORT TERM WATER QUALITY IMPROVEMENT

Step 1: Determination of maximum initial score

X Wetland on one of the 5 defined large lakes or 5 major rivers (Go to Step 5a)
All other wetlands (Go through Steps 2, 3, 4, and 5b)

Step 2: Determination of watershed improvement factor (WIF)
Calculation of WIF is based on the fractional area (FA) of each site type that makes up the total area of the wetland.

(FA = area of site type/total area of wetland)	Fractional Area
FA of isolated wetland	_____ x 0.5 = _____
FA of riverine wetland	_____ x 1.0 = _____
FA of palustrine wetland with no inflow	_____ x 0.7 = _____
FA of palustrine wetland with inflows	<u>1</u> x 1.0 = <u>1</u>
FA of lacustrine on lake shoreline	_____ x 0.2 = _____
FA of lacustrine at lake inflow or outflow	_____ x 1.0 = _____

Sum (WIF cannot exceed 1.0) 1

Step 3: Determination of catchment land use factor (LUF)
(Choose the first category that fits upstream landuse in the catchment.)

- 1) X Over 50% agricultural and/or urban 1.0
- 2) _____ Between 30 and 50% agricultural and/or urban 0.8
- 3) _____ Over 50% forested or other natural vegetation 0.6

LUF (maximum 1.0) 1

Step 4: Determination of pollutant uptake factor (PUT)

Calculation of PUT is based on the fractional area (FA) of each vegetation type that makes up the total area of the wetland. Base assessment on the dominant vegetation form for each community except where dead trees or shrubs dominate. In that case base assessment on the dominant live vegetation type. (FA = area of vegetation type/total area of wetland)

FA of wetland with live trees, shrubs, herbs or mosses (c,h,ts,ls,gc,m)	Fractional Area
	<u>1</u> x 0.75 = _____
FA of wetland with emergent, submergent or floating vegetation (re,be,ne,su,f,ff)	_____ x 1.0 = _____
FA of wetland with little or no vegetation (u)	_____ x 0.5 = _____

Sum (PUT cannot exceed 1.0) 0.75

Step 5: Calculation of final score

- | | | |
|-----|---|-------------|
| (a) | Wetland on large lakes or major rivers | 0 |
| (b) | All other wetlands - calculate as follows | |
| | Initial score | 60 |
| | Water quality improvement factor (WQF) ^{WIF} | <u>1</u> |
| | Land use factor (LUF) | <u>1</u> |
| | Pollutant uptake factor (PUT) | <u>0.75</u> |

Final score: 60 x WQF x LUF x PUT =

45

Short Term Water Quality Improvement Score (maximum 60 points) 45

3.2.2 LONG TERM NUTRIENT TRAP

Step 1:

- | | | |
|-------------------------------------|--|----------|
| <input checked="" type="checkbox"/> | Wetland on large lakes or 5 major rivers | 0 points |
| <input type="checkbox"/> | All other wetlands (Proceed to Step 2) | |

Step 2:

Choose only one of the following settings that best describes the wetland being evaluated

- | | | |
|--|---|-----------|
| 1) <input type="checkbox"/> | Wetland located in a river mouth | 10 points |
| 2) <input type="checkbox"/> | Wetland is a bog, fen, or swamp with more than 50% of the wetland being covered with organic soil | 10 |
| 3) <input type="checkbox"/> | Wetland is a bog, fen, or swamp with less than 50% of the wetland being covered with organic soil | 3 |
| 4) <input type="checkbox"/> | Wetland is a marsh with more than 50% of the wetland covered with organic soil | 3 |
| 5) <input checked="" type="checkbox"/> | None of the above | 0 |

Long Term Nutrient Trap Score (maximum 10 points) 0

3.2.3 GROUNDWATER DISCHARGE

(Circle the characteristics that best describe the wetland being evaluated and then sum the scores. If the sum exceeds 30 points assign the maximum score of 30.)

Wetland Characteristics	Potential for Discharge		
	None to Little	Some	High
Wetland type	1) Bog = 0	2) Swamp/Marsh = 2	3) Fen = 5
Topography	1) Flat/rolling = 0	2) Hilly = 2	3) Steep = 5
Wetland Area:Upslope Catchment Area	Large (>50%) = 0	Moderate (5-50%) = 2	Small (<5%) = 5
Lagg Development	1) None found = 0	2) Minor = 2	3) Extensive = 5
Seeps	1) None = 0	2) = or < 3 seeps = 2	3) > 3 seeps = 5
Surface marl deposits	1) None = 0	2) = or < 3 sites = 2	3) > 3 sites = 5
Iron precipitates	1) None = 0	2) = or < 3 sites = 2	3) > 3 sites = 5
Located within 1 km of a major aquifer	N/A = 0	N/A = 0	Yes = 10

(Scores are cumulative, maximum score 30 points)

Groundwater Discharge Score (maximum 30 points) 7

3.3 CARBON SINK

Choose only one of the following

- 1) _____ Bog, fen or swamp with more than 50% coverage by organic soil 5 points
- 2) _____ Bog, fen or swamp with between 10 to 49% coverage by organic soil 2
- 3) _____ Marsh with more than 50% coverage by organic soil 3
- 4) Wetlands not in one of the above categories 0

Carbon Sink Score (maximum 5 points) 0

3.4 SHORELINE EROSION CONTROL

Step 1:	Score
<input checked="" type="checkbox"/> Wetland entirely isolated or palustrine	0
<input type="checkbox"/> Any part of the wetland riverine, or lacustrine (proceed to Step 2)	

Step 2:

Choose the one characteristic that best describes the shoreline vegetation (see text for a definition of shoreline)

	Score
1) <input type="checkbox"/> Trees and shrubs	15
2) <input type="checkbox"/> Emergent vegetation	8
3) <input type="checkbox"/> Submergent vegetation	6
4) <input type="checkbox"/> Other shoreline vegetation	3
5) <input type="checkbox"/> No vegetation	0

Shoreline Erosion Control Score (maximum 15 points) 0

3.5 GROUND WATER RECHARGE

3.5.1 WETLAND SITE TYPE

	Score
(a) Wetland > 50% lacustrine (by area) or located on one of the five major rivers	0
(b) Wetland not as above. Calculate final score as follows: (FA = area of site type/total area of wetland)	

	Fractional Area
FA of isolated or palustrine wetland	<u>1</u> x 50 = <u>50</u>
FA of riverine wetland	<u> </u> x 20 = <u> </u>
FA of lacustrine wetland (wetland <50% lacustrine)	<u> </u> x 0 = <u> </u>

Ground Water Recharge, Wetland Site Type Component Score (maximum 50 points) 50

3.5.2 WETLAND SOIL RECHARGE POTENTIAL

(Circle only one choice that best describes the hydrologic soil class of the area surrounding the wetland being evaluated.)

Dominant Wetland Type	1) Sand, loam, gravel, till	2) Clay or bedrock
1) Lacustrine or on a major river	0	0
2) Isolated	10	5
3) Palustrine	7	4
4) Riverine (not a major river)	5	2

Ground Water Recharge, Wetland Soil Recharge Potential Score (maximum 10 points) 4

4.0 SPECIAL FEATURES COMPONENT

4.1 RARITY

4.1.1 WETLANDS

Site District 6E-15
 Presence of wetland type (check one or more)

- Bog
- Fen
- Swamp
- Marsh

Score for rarity within the landscape and rarity of the wetland type. Score for rarity of wetland type is cumulative (maximum 80 points) based on presence or absence.

Site District	Score for Rarity within the Landscape	Score for Rarity of Wetland Type			
		Marsh	Swamp	Fen	Bog
6-1	60	40	0	80	80
6-2	60	40	0	80	80
6-3	40	10	0	40	80
6-4	60	40	0	80	80
6-5	20	40	0	80	80
6-6	40	20	0	80	80
6-7	60	10	0	80	80
6-8	20	20	0	80	80
6-9	0	20	0	80	80
6-10	20	0	20	80	80
6-11	0	30	0	80	80
6-12	0	30	0	60	80
6-13	60	10	0	80	80
6-14	40	20	0	40	80
6-15	40	0	0	80	80
7-1	60	0	60	80	80
7-2	60	0	0	80	80
7-3	60	0	0	80	80
7-4	80	0	0	80	80
7-6	80	30	0	80	80

Rarity within the Landscape Score (maximum 80 points) 40
 Rarity of Wetland Type Score (Maximum 80 points) 0

4.1.2 SPECIES

4.1.2.1 BREEDING HABITAT FOR AN ENDANGERED OR THREATENED SPECIES

Name of species	Source of information
1) <u>NONE OBSERVED</u>	<u>STANTEC</u>
2) _____	_____
3) _____	_____

Attach documentation.

Scoring:

For each species 250 points

(Score is cumulative, no maximum score)

Breeding Habitat for Endangered or Threatened Species Score (no maximum) 0

4.1.2.2 TRADITIONAL MIGRATION OR FEEDING HABITAT FOR AN ENDANGERED OR THREATENED SPECIES

Name of species	Source of information
1) <u>NONE OBSERVED</u>	<u>STANTEC</u>
2) _____	_____
3) _____	_____

Attach documentation.

Scoring:

For one species 150 points

For each additional species 75

(Score is cumulative, no maximum score)

Traditional Habitat for Endangered or Threatened Species Score (no maximum) 0

4.1.2.3 PROVINCIALY SIGNIFICANT ANIMAL SPECIES

Name of species	Source of information
1) <u>NONE OBSERVED</u>	<u>SIATEC</u>
2) _____	_____
3) _____	_____
4) _____	_____
5) _____	_____

Attach separate list if necessary; Attach documentation

Scoring:

Number of provincially significant animal species in the wetland:

One species = 50 points	14 species = 154
2 species = 80	15 species = 156
3 species = 95	16 species = 158
4 species = 105	17 species = 160
5 species = 115	18 species = 162
6 species = 125	19 species = 164
7 species = 130	20 species = 166
8 species = 135	21 species = 168
9 species = 140	22 species = 170
10 species = 143	23 species = 172
11 species = 146	24 species = 174
12 species = 149	25 species = 176
13 species = 152	

Add one point for every species past 25 (for example, 26 species = 177 points, 27 species = 178 points etc.)

(no maximum score)

Provincially Significant Animal Species Score (no maximum) 0

4.1.2.4 PROVINCIAALLY SIGNIFICANT PLANT SPECIES

(Scientific names must be recorded)

Common Name	Scientific Name	Source of information
1) <u>NONE OBSERVED</u>	_____	<u>STANTEC</u>
2) _____	_____	_____
3) _____	_____	_____
4) _____	_____	_____
5) _____	_____	_____

Attach separate list if necessary. Attach documentation.

Scoring:

Number of provincially significant plant species in the wetland:

One species = 50 points	14 species = 154
2 species = 80	15 species = 156
3 species = 95	16 species = 158
4 species = 105	17 species = 160
5 species = 115	18 species = 162
6 species = 125	19 species = 164
7 species = 130	20 species = 166
8 species = 135	21 species = 168
9 species = 140	22 species = 170
10 species = 143	23 species = 172
11 species = 146	24 species = 174
12 species = 149	25 species = 176
13 species = 152	

Add one point for every species past 25 (for example, 26 species = 177 points, 27 species = 178 points etc.)

Provincially Significant Plant Species Score (no maximum) 0

4.1.2.5 REGIONALLY SIGNIFICANT SPECIES (SITE REGION)

Scientific names must be recorded for plant species. Lists of significant species must be approved by MNR.

SIGNIFICANT IN SITE REGION:

Common Name	Scientific Name	Source of information
1) <u>NONE OBSERVED</u>	_____	<u>STANTEC</u>
2) _____	_____	_____
3) _____	_____	_____
4) _____	_____	_____
5) _____	_____	_____
6) _____	_____	_____
7) _____	_____	_____
8) _____	_____	_____

Attach separate list if necessary. Attach documentation

Scoring:

No. of species significant in Site Region

One species = 20	6 species = 55
2 species = 30	7 species = 58
3 species = 40	8 species = 61
4 species = 45	9 species = 64
5 species = 50	10 species = 67

Add one point for every species past 10. (No maximum score)

Regionally Significant Species Score (Site Region) (no maximum) 0

4.2.1.6 LOCALLY SIGNIFICANT SPECIES (SITE DISTRICT)

Scientific names must be recorded for plant species. Lists of significant species must be approved by MNR.

Common Name	Scientific Name	Source of information
1) <u>NONE OBSERVED</u>	_____	<u>STANTEC</u>
2) _____	_____	_____
3) _____	_____	_____
4) _____	_____	_____
5) _____	_____	_____
6) _____	_____	_____
7) _____	_____	_____
8) _____	_____	_____
9) _____	_____	_____
10) _____	_____	_____

Attach separate list if necessary. Attach documentation.

Scoring:

No. of species significant in Site District

One species	=	10	6 species	=	41
2 species	=	17	7 species	=	43
3 species	=	24	8 species	=	45
4 species	=	31	9 species	=	47
5 species	=	38	10 species	=	49

For each significant species over 10 in the wetland, add 1 point.

Locally Significant Species Score(Site District) (no maximum)

0

4.2 SIGNIFICANT FEATURES AND/OR FISH & WILDLIFE HABITAT

4.2.1 NESTING OF COLONIAL WATERBIRDS

Status	Name of species	Source of Information	Score
1) Currently nesting			50 points
2) Known to have nested within past 5 years			25
3) Active feeding area (Do not include feeding by great blue herons)			15
4) None known			0

Attach documentation (nest locations, etc., if known)

Score highest applicable category only; maximum score 50 points.

Score for Nesting Colonial Waterbirds (maximum 50 points) 0

4.2.2. WINTER COVER FOR WILDLIFE

(Check only highest level of significance)
(one only)

Score

- 1) _____ Provincially significant 100
- 2) _____ Significant in Site Region 50
- 3) _____ Significant in Site District 25
- 3) _____ Locally significant 10
- 4) X _____ Little or poor winter cover present 0

Source of information: STANTEC

Winter Cover for Wildlife Score (maximum 100 points) 0

4.2.3 WATERFOWL STAGING AND/OR MOULTING

(Check only highest level of significance for both staging and moulting; score is cumulative across columns, maximum score 150)

	<u>Staging</u>	Score (one only)	<u>Moulting</u>	Score (one only)
1) Nationally significant	_____	150	_____	150
2) Provincially significant	_____	100	_____	100
3) Regionally significant	_____	50	_____	50
4) Known to occur	_____	10	_____	10
5) Not possible	<u>X</u>	0	<u>X</u>	0
6) Unknown	_____	0	_____	0

Source of information: STANTEC

Waterfowl Moulting and Staging Score (maximum 150 points) 0

4.2.4 WATERFOWL BREEDING

(Check only highest level of significance) Score

1) _____ Provincially significant	100
2) _____ Regionally significant	50
3) _____ Habitat suitable	10
4) <u>X</u> _____ Habitat not suitable	0

Source of information: STANTEC

Waterfowl Breeding Score (maximum 100 points) 0

4.2.5 MIGRATORY PASSERINE, SHOREBIRD OR RAPTOR STOPOVER AREA

(check highest applicable category)

	Score
1) _____ Provincially significant	100
2) _____ Significant in Site Region	50
3) _____ Significant in Site District	10
4) <u>X</u> _____ Not significant	0

Source of information: STANTEC

Passerine, Shorebird or Raptor Stopover Score (maximum 100 points) 0

4.2.7 FISH HABITAT

4.2.7.1 Spawning and Nursery Habitat

Table 5. Area Factors for Low Marsh, High Marsh and Swamp Communities.

No. of ha of Fish Habitat	Area Factor
< 0.5 ha	0.1
0.5 - 4.9	0.2
5.0 - 9.9	0.4
10.0 - 14.9	0.6
15.0 - 19.9	0.8
20.0+ ha	1.0

Step 1:

- Fish habitat is not present within the wetland (Score = 0)
- Fish habitat is present within the wetland (Go to Step 2)

Step 2: Choose only one option

- 1) Significance of the spawning and nursery habitat within the wetland is known (Go to Step3)
- 2) Significance of the spawning and nursery habitat within the wetland is not known (Go through Steps 4, 5, 6, and 7)

Step 3: Select the highest appropriate category below, attach documentation:

- 1) Significant in Site Region 100 points
- 2) Significant in Site District 50
- 3) Locally Significant Habitat (5.0+ ha) 25
- 4) Locally Significant Habitat (<5.0 ha) 15

Score for Spawning and Nursery Habitat (maximum score 100 points) _____

Step 4: Proceed to Steps 4 to 7 only if Step 3 was not answered.

(Low Marsh: marsh area from the existing water line out to the outer boundary of the wetland)

- Low marsh not present (Continue to Step 5)
- Low marsh present (Score as follows)

Scoring for Presence of Key Vegetation Groups

Scoring is based on the one most clearly dominant plant species of the dominant form in each Low Marsh vegetation community. Check the appropriate Vegetation Group (see Appendix 16, Table 16-2) for each Low Marsh community. Sum the areas of the communities assigned to each Vegetation Group and multiply by the appropriate size factor from Table 5.

Vegetation Group Number	Vegetation Group Name	Present as a Dominant Form (check)	Total Area (ha)	Area Factor (see Table 5)	Score	Final Score (area factor x score)
1	Tallgrass				6 pts	
2	Shortgrass-Sedge				11	
3	Cattail-Bulrush-Burreed				5	
4	Arrowhead-Pickerelweed				5	
5	Duckweed				2	
6	Smartweed-Waterwillow				6	
7	Waterlily-Lotus				11	
8	Waterweed-Watercress				9	
9	Ribbongrass				10	
10	Coontail-Naiad-Watermilfoil				13	
11	Narrowleaf Pondweed				5	
12	Broadleaf Pondweed				8	
Total Score (maximum 75 points)						

Step 5: (High Marsh: area from the water line to the inland boundary of marsh wetland type. This is essentially what is commonly referred to as a wet meadow, in that there is insufficient standing water to provide fisheries habitat except during flood or high water conditions.)

- High marsh not present (Continue to Step 6)
- High marsh present (Score as follows)

Scoring for Presence of Key Vegetation Groups

Scoring is based on the one most clearly dominant plant species of the dominant form in each High 1 Marsh vegetation community. Check the appropriate Vegetation Group (see Appendix 16, Table 16-2) for each High Marsh community. Sum the areas of the communities assigned to each Vegetation Group and multiply by the appropriate size factor from Table 5.

Vegetation Group Number	Vegetation Group Name	Present as a Dominant Form (check)	Total Area (ha)	Area Factor (see Table 5)	Score	Final Score (area factor x score)
1	Tallgrass	✓	2.1	0.1	6 pts	0.6
2	Shortgrass-Sedge				11	
3	Cattail-Bulrush-Burreed				5	
4	Arrowhead-Pickerelweed				5	
Total Score (maximum 25 points)						0.6

Step 6: (Swamp: Swamp communities containing fish habitat, either seasonally or permanently.)
 Determine the total area of seasonally flooded swamps and permanently flooded swamps containing fish habitat.)

- Swamp containing fish habitat not present (Continue to Step 7)
 Swamp containing fish habitat present (Score as follows)

Swamp containing fish habitat	Present (check)	Total area (ha)	Area Factor (see Table 5)	Score	TOTAL SCORE (factor x score)
seasonally flooded				10	
permanently flooded				10	
SCORE (maximum 20 points)					

Step 7: Calculation of final score

Score for Spawning and Nursery Habitat (Low Marsh) (maximum 75) = 0

Score for Spawning and Nursery Habitat (High Marsh) (maximum 25) = 0.6

Score for Swamp Containing Fish Habitat (maximum 20) = 0

Sum (maximum score 100 points) = 1

4.2.6.2 Migration and Staging Habitat

Step 1:

- 1) Staging or Migration Habitat is not present in the wetland (Score = 0)
- 2) Staging or Migration Habitat is present in the wetland, significance of the habitat is known (Go to Step 2)
- 3) Staging or Migration Habitat is present in the wetland, significance of the habitat is not known (Go to Step 3)

NOTE: Only one of Step 2 or Step 3 is to be scored.

Step 2: Select the highest appropriate category below, attach documentation:

		Score
1) <input type="checkbox"/>	Significant in Site Region	25 points
2) <input type="checkbox"/>	Significant in Site District	15
3) <input type="checkbox"/>	Locally Significant	10
4) <input type="checkbox"/>	Fish staging and/or migration habitat present, but not as above	5

Score for Fish Migration and Staging Habitat (maximum score 25 points) 0

Step 3: Select the highest appropriate category below based on **presence** of the designated site type (does not have to be dominant). See Section 1.1.3. Note name of river for 2) and 3).

		Score
1) <input type="checkbox"/>	Wetland is riverine at rivermouth or lacustrine at rivermouth	25 points
2) <input type="checkbox"/>	Wetland is riverine, within 0.75 km of rivermouth	15
3) <input type="checkbox"/>	Wetland is lacustrine, within 0.75 km of rivermouth	10
4) <input type="checkbox"/>	Fish staging and/or migration habitat present, but not as above	0

Score for Staging and Migration Habitat (maximum score 25 points) 0

4.3 ECOSYSTEM AGE

(Fractional Area = area of wetland/total area of wetland area)

Fractional Area	Scoring
Bog	_____ x 25 _____
Fen, treed to open on deep soils, floating mats or marl	_____ x 20 _____
Fen, on limestone rock	_____ x 5 _____
Swamp	_____ x 3 _____
Marsh	<u>1.0</u> x 0 <u>0</u>

Ecosystem Age Score (maximum 25 points) 0

4.4 GREAT LAKES COASTAL WETLANDS

Score for coastal (see text for definition) wetlands only

Choose one only

_____ wetland <10 ha	= 10 points
_____ wetland 10-50 ha	= 25
_____ wetland 51-100 ha	= 50
_____ wetland >100 ha	= 75

Great Lakes Coastal Wetlands Score (maximum 75 points) 0

5.0 EXTRA INFORMATION

5.1 PURPLE LOOSESTRIFE

Absent/Not seen

Present

(a) One location in wetland _____
Two to many locations _____

Abundance code

(b) (1) < 20 stems _____
(2) 20-99 stems _____
(3) 100-999 stems _____
(4) >1000 stems _____

5.2 SEASONALLY FLOODED AREAS

Indicate length of seasonal flooding

Check one or more

Ephemeral (less than 2 weeks)
Temporal (2 weeks to 1 month) _____
Seasonal (1 to 3 months) _____
Semi-permanent (>3 months) _____
No seasonal flooding _____

5.3 SPECIES OF SPECIAL SIGNIFICANCE

5.3.1 Osprey

Present and nesting _____
Known to have nested in last 5 yr. _____
Feeding area for Osprey _____
Not as above

5.3.2 Common Loon

Nesting in wetland _____
Feeding at edge of wetland _____
Observed or heard on lake or
river adjoining the wetland _____
Not as above

INVESTIGATORS

AFFILIATION

JAMES LESLIE

STANTEC CONSULTING

ALAN WORMINGTON

CONTRACT BIRDER

DATES WETLAND VISITED

AUGUST 19, 2011

DATE THIS EVALUATION COMPLETED: NOV. 1, 2012

ESTIMATED TIME DEVOTED TO COMPLETING THE FIELD SURVEY IN "PERSON HOURS"

2 HRS

WEATHER CONDITIONS

i) at time of field work 25°C NO PRECIPITATION, SUN
(Continue in the space below if necessary)

ii) summer conditions in general WARM, SUBJECT TO LAKE EFFECT PRECIPITATION

OTHER POTENTIALLY USEFUL INFORMATION:

- WETLAND ASSOCIATED WITH A CONSTRUCTED DRAIN AND TOPOGRAPHIC LOW AREA - INTERMIXED W/ 25% COVER OF UPLAND SPECIES.
- SURROUNDED BY AGRICULTURAL LAND USE

CHECKLIST OF PLANT AND ANIMAL SPECIES RECORDED IN THE WETLAND:

Attach list of all flora and fauna observed in the wetland.

* Indicate if voucher specimens or photos have been obtained, where located, etc.

SEE ELC CARD FOR VASCULAR SPP LIST
(TILE 4 - NORTH OF S20, POLYCON 8)

WETLAND EVALUATION SCORING RECORD

WETLAND NAME AND/OR NUMBER WETLAND #7

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1 Growing Degree-Days/Soils	<u>22</u>
1.1.2 Wetland Type	<u>15</u>
1.1.3 Site Type	<u>2</u>

Total for Productivity 39

1.2 BIODIVERSITY

1.2.1 Number of Wetland Types	<u>9</u>
1.2.2 Vegetation Communities (maximum 45)	<u>2</u>
1.2.3 Diversity of Surrounding Habitat (maximum 7)	<u>5</u>
1.2.4 Proximity to Other Wetlands	<u>8</u>
1.2.5 Interspersion	<u>6</u>
1.2.6 Open Water Type	<u>0</u>

Total for Biodiversity 33

1.3 SIZE (Biological Component) 8

TOTAL FOR BIOLOGICAL COMPONENT (not to exceed 250) 77

2.0 SOCIAL COMPONENT

2.1 ECONOMICALLY VALUABLE PRODUCTS

2.1.1 Wood Products	<u>0</u>
2.1.2 Wild Rice	<u>0</u>
2.1.3 Commercial Fish	<u>12</u>
2.1.4 Bullfrogs	<u>0</u>
2.1.5 Snapping Turtles	<u>0</u>
2.1.6 Furbearers	<u>0</u>

Total for Economically Valuable Products 12

2.2 RECREATIONAL ACTIVITIES (maximum 80)

0

2.3 LANDSCAPE AESTHETICS

2.3.1 Distinctness	<u>0</u>
2.3.2 Absence of Human Disturbance	<u>0</u>

Total for Landscape Aesthetics 0

2.4 EDUCATION AND PUBLIC AWARENESS

2.4.1 Educational Uses	<u>0</u>
2.4.2 Facilities and Programs	<u>0</u>
2.4.3 Research and Studies	<u>0</u>

Total for Education and Public Awareness 0

2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT

10

2.6 OWNERSHIP

4

2.7 SIZE (Social Component)

1

2.8 ABORIGINAL AND CULTURAL VALUES

0

TOTAL FOR SOCIAL COMPONENT (not to exceed 250)

27

3.0 HYDROLOGICAL COMPONENT

3.1 FLOOD ATTENUATION

54

3.2 WATER QUALITY IMPROVEMENT

3.2.1 Short Term Improvement

45

3.2.2 Long Term Improvement

70

3.2.3 Groundwater Discharge (maximum 30)

7

Total for Water Quality Improvement

52

3.3 CARBON SINK

0

3.4 SHORELINE EROSION CONTROL

0

3.5 GROUNDWATER RECHARGE

3.5.1 Site Type

50

3.5.2 Soils

4

Total for Groundwater Recharge

54

TOTAL FOR HYDROLOGICAL COMPONENT (not to exceed 250)

160

4.0 SPECIAL FEATURES

4.1 RARITY

4.1.1 Wetlands

4.1.1.1 Rarity within the Landscape

40

4.1.1.2 Rarity of Wetland Type (maximum 80)

0

Total for Wetland Rarity

40

4.1.2 Species

4.1.2.1 Endangered Species Breed

0

4.1.2.2 Traditional Use by Endangered or Threatened Species

0

4.1.2.3 Provincially Significant Animals

0

4.1.2.4 Provincially Significant Plants

0

4.1.2.5 Regionally Significant Species

0

4.1.2.6 Locally Significant Species

0

Total for Species Rarity

0

4.2 SIGNIFICANT FEATURES OR HABITAT

4.2.1 Colonial Waterbirds

0

4.2.2 Winter Cover for Wildlife

0

4.2.3 Waterfowl Staging and Moulting

0

4.2.4 Waterfowl Breeding

0

4.2.5 Migratory Passerine, Shorebird or Raptor Stopover

0

4.2.6 Fish Habitat

1

Total for Significant Features and Habitat

1

4.3 ECOSYSTEM AGE

0

4.4 GREAT LAKES COASTAL WETLANDS

0

TOTAL FOR SPECIAL FEATURES (maximum 250)

41

SUMMARY OF EVALUATION RESULT

Wetland WETLAND #7

TOTAL FOR 1.0 BIOLOGICAL COMPONENT	<u>77</u>
TOTAL FOR 2.0 SOCIAL COMPONENT	<u>27</u>
TOTAL FOR 3.0 HYDROLOGICAL COMPONENT	<u>160</u>
TOTAL FOR 4.0 SPECIAL FEATURES COMPONENT	<u>41</u>
<u>WETLAND TOTAL</u>	<u>305</u>

INVESTIGATORS

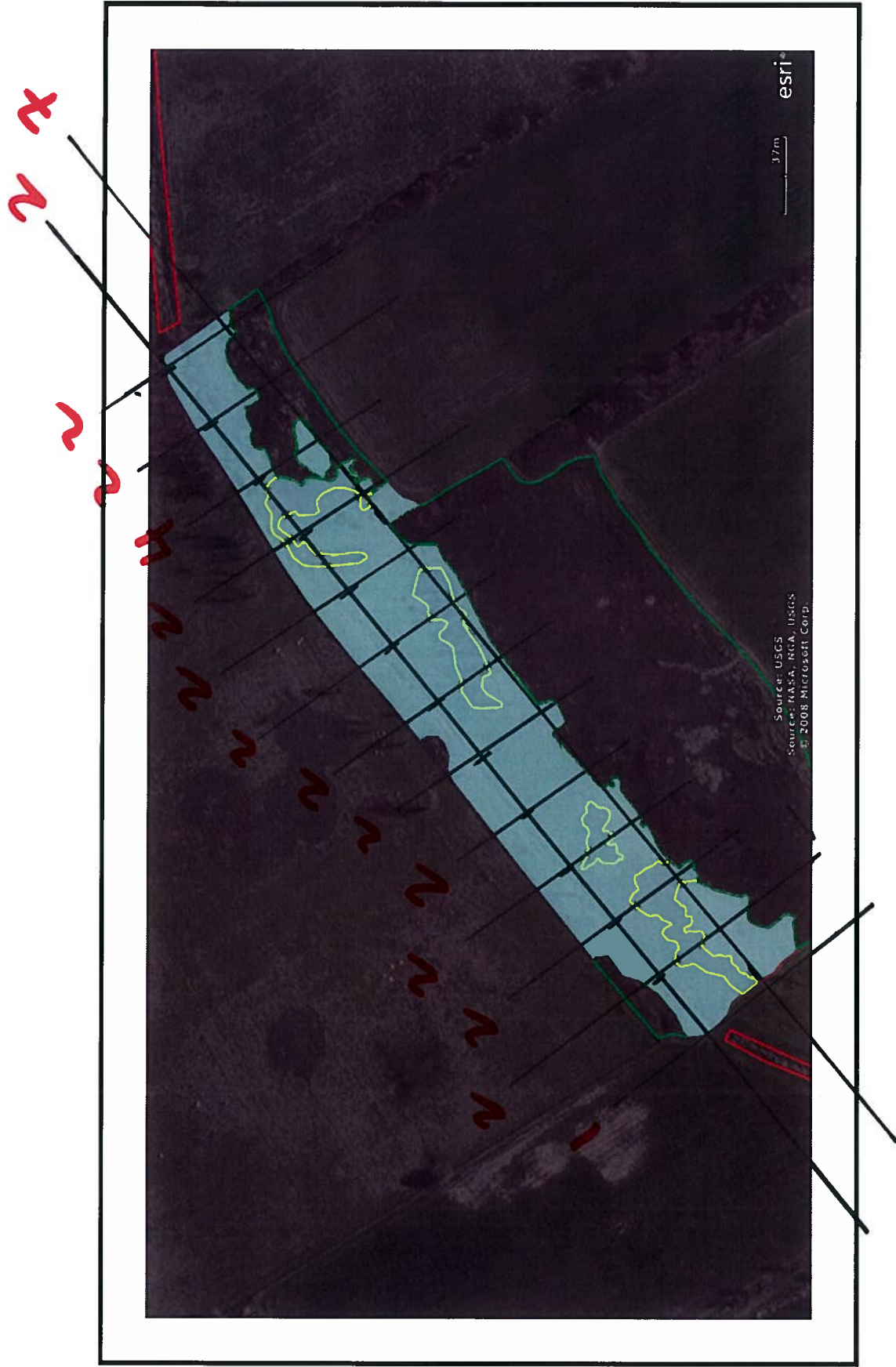
JAMES LESLIE - VEGETATION / BIRDS EVALUATOR
ALAN WORMWOOD - AVIAN SURVEYOR

AFFILIATION

STA-TEC CONSULTING

DATE NOV. 1, 2012

WETLAND #7 - OWNERS EVALUATION
INTERSPERSION MAP



— WETLAND CONSISTS OF 1 Mappable TYPE AND FORM,
AN OTHER FORMS/TYPES ARE SMALLER THAN 0.2 ha.

