

APPENDIX L: Wetland Evaluation Forms

[Wetlands Manual](#)

INVESTIGATORS

AFFILIATION

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DATES WETLAND VISITED

DATE THIS EVALUATION COMPLETED:

Sept 16 2016

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

WEATHER CONDITIONS

i) at time of field work fair to cloudy

(Continue in the space below if necessary)

ii) summer conditions in general DROUGHT

OTHER POTENTIALLY USEFUL INFORMATION:

Wetland is partially located within an abandoned golf course.

CHECKLIST OF PLANT AND ANIMAL SPECIES RECORDED IN THE WETLAND:

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

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

[Wetland Manual](#)**WETLAND DATA AND SCORING RECORD**

i) **WETLAND NAME:** Elfrida Wetland A: Stoney Creek

ii) **MNR ADMINISTRATIVE REGION:** Guelph **DISTRICT:** Guelph

AREA OFFICE (if different from District): Niagara (Vineland)

iii) **CONSERVATION AUTHORITY JURISDICTION:** Hamilton CA

(If not within a designated CA, check here: _____)

iv) **COUNTY OR REGIONAL MUNICIPALITY:** Hamilton

v) **TOWNSHIP:** _____

vi) **LOTS & CONCESSIONS:**
(attach separate sheet if necessary) _____

vii) **MAP AND AIR PHOTO REFERENCES**

a) Latitude: _____ Longitude: _____

b) UTM grid reference: Zone: 17T Block: n/a
Grid:E 600251 Grid:N 4782428

c) National Topographic Series:

map name(s) _____

map number(s) _____ edition _____

scale _____

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)

viii) WETLAND SIZE AND BOUNDARIES

- a) **Single contiguous wetland area:** 7.75 hectares
- b) **Wetland complex comprised of** 2 individual wetlands:

Wetland Unit Number
(for reference)

Size of each
wetland unit

		Ha
Wetland Unit No.	1	3.50
Wetland Unit No.	2	0.15
Wetland Unit No.	3	1.20
Wetland Unit No.	4	0.80
Wetland Unit No.	5	0.90
Wetland Unit No.	6	2.40
Wetland Unit No.	7	0.00
Wetland Unit No.	8	0.00
Wetland Unit No.	9	0.00
Wetland Unit No.	10	0.00
Wetland Unit No.	11	0.00
Wetland Unit No.	12	0.00
Wetland Unit No.	13	0.00
Wetland Unit No.	14	0.00
Wetland Unit No.	15	0.00
Wetland Unit No.	16	0.00
Wetland Unit No.	17	0.00
Wetland Unit No.	18	0.00
Wetland Unit No.	19	0.00
Wetland Unit Totals:	8.95	

(Attach additional sheets if necessary)

TOTAL WETLAND SIZE

8.95

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

Wetland area 2 collects overland flow and provides direct hydrologic inputs into the wetland.

(Attach separate sheets if necessary .)

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1 GROWING DEGREE-DAYS/SOILS

GROWING DEGREE DAYS [MAP](#)

(check one)

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

SOILS

Estimated Fractional Area

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

Determine the soil type from the appropriate OMAF soils maps

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.

Score		
<u>26</u>	clay/loam	<u>26.00</u>
_____	silt/marl	<u>0.00</u>
_____	limestone	<u>0.00</u>
_____	sand	<u>0.00</u>
_____	humic/mesic	<u>0.00</u>
_____	fibric	<u>0.00</u>
_____	granite	<u>0.00</u>

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

26

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

Estimate the Wetland Type from air photos or default to "swamp" (8)

Fractional Area		Score	
Bog	0.00	x 3	0.0
Fen	0.00	x 6	0.0
Swamp	0.13	x 8	1.1
Marsh	0.87	x 15	13.0
		Subtotal:	14.1

Wetland type score (maximum 15 points) 14

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

Estimate from air photos

	Fractional Area		Score
Isolated	0.00	x 1 =	0.00
Palustrine (permanent or intermittent flow)	0.61	x 2 =	1.22
Riverine	0.39	x 4 =	1.56
Riverine (at rivermouth)	0.00	x 5 =	0.00
Lacustrine (at rivermouth)	0.00	x 5 =	0.00
Lacustrine (on enclosed bay, with barrier beach)	0.00	x 3 =	0.00
Lacustrine (exposed to lake)	0.00	x 2 =	0.00
		Sub Total:	2.78

Site Type Score (maximum 5 points) 3

1.2 BIODIVERSITY

1.2.1 **NUMBER OF WETLAND TYPES**

(Check only one)	Score
1) <input type="checkbox"/> one	9 points
2) <input checked="" type="checkbox"/> 13 two	13
3) <input type="checkbox"/> three	20
4) <input type="checkbox"/> four	30

Number of Wetland Types Score (maximum 30 points) 13

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1.2.2 VEGETATION COMMUNITIES [Veg Ref](#)

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
+ .5 each additional community = <u> </u>	+ .5 each additional community = <u>5.0</u>	+ 1 each additional community = <u>7.0</u>
e.g., a wetland with 3 one form communities and 8 six form communities would score:	4 two form communities	12 four form communities and
	$6 + 13.5 + 15 = 34.5 = 35$ points	SubTotal: <u>12</u>
	Vegetation Communities Score (maximum 45 points)	<u>12</u>

Wetland Name: Elfrida Wetland A: Stoney Creek

Wetland Size (ha): 8.95

<u>Vegetation Form</u>	<u>% area in which form is dominant</u>
h	<u>13.41</u>
c	<u>0.00</u>
dh	<u>0.00</u>
dc	<u>0.00</u>
ts	<u>0.00</u>
ls	<u>0.00</u>
ds	<u>0.00</u>
gc	<u>1.68</u>
m	<u>0.00</u>
ne	<u>10.06</u>
be	<u>0.00</u>
re	<u>39.11</u>
ff	<u>0.00</u>
f	<u>8.94</u>
su	<u>26.82</u>
u (unvegetated)	<u>0.00</u>
Total = 100%	<u>100.00</u>

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1.2.3 DIVERSITY OF SURROUNDING HABITAT

(Check all appropriate items(1))

Determine from air photos

1	row crop
	pasture
1	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
1	fence rows with cover, or shelterbelts
	terrain appreciably undulating,hilly,or with ravines
1	creek flood plain
4	<u>Subtotal</u>

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

Determine from air photos and other wetlands evaluations in the vicinity

1)	0	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)	0	Hydrologically connected by surface water to other wetlands (same dominant wetland type) within 0.5 km	8
3)	5	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)	0	Hydrologically connected by surface water to other wetlands (same dominant wetland type) from 0.5 to 1.5 km away	5
5)	0	Within 0.75 km of other wetlands (different dominant wetland type) or open water body, but not hydrologically connected by surface water	5
6)	0	Within 1 km of other wetlands, but not hydrologically connected by surface water	2
7)	0	No wetland within 1 km	0

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

5

Hydrologically connected to

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1.2.5 **INTERSPERSION**

Optional: Complete as time permits or as scoring dictates.

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	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** [Ref](#)

Determine from aerial photos.

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)	no open water	0

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

30

1.3 SIZE

Score may be lower than actual if "Vegetation Community and Interspersion" have not been calculated.

9.0 hectares 70 Subtotal for Biodiversity

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

Determine the percentage of the wetland area dominated by "h" or "c" by using aerial photograph.

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

h:	1.20	c:	0.00
----	------	----	------

		Score	
1)	0	<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: Aerial photos

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)	0

Source of information: 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)	0

Source of information: Field observations

If any part of the wetland is riverine or the District fisheries files indicate presence of fish score "present"

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: Field observations and amphibian calling surveys

Bullfrog Score (maximum 1 point) 0

Southern Ontario Wetland Evaluation Data and Scoring Record

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2.1.5 SNAPPING TURTLES

(Check one)

Present

1)

Score (Choose one)

1 point

Absent

2)

0

0

Source of information:

Reptil surveys

Snapping Turtle Score (maximum 1 point)

0

2.1.6 FURBEARERS [Fur Ref](#)

(Consult Appendix 9)

Name of furbearer

Source of information

1)	Raccoon	<input checked="" type="checkbox"/> 3
2)	Virginia Opossum	<input type="checkbox"/>
3)	Red Fox	<input type="checkbox"/>
4)	Coyote	<input checked="" type="checkbox"/> 3
5)	Mink/Muskrat	<input type="checkbox"/>
SubTotal		6

0
0
0
0
0

Scoring: 3 points for each species. maximum 12

Furbearer Score (maximum 12 points)

6

2.2 RECREATIONAL ACTIVITIES

Type of Wetland-Associated Use						
Intensity of Use	Hunting		Nature Enjoyment/ Ecosystem Study		Fishing	
High	40 points	<input type="checkbox"/>	40 points	<input type="checkbox"/>	40 points	<input type="checkbox"/>
Moderate	20	<input type="checkbox"/>	20	<input type="checkbox"/>	20	<input type="checkbox"/>
Low	8	<input type="checkbox"/>	8	<input type="checkbox"/>	8	<input type="checkbox"/>
Not possible/NotKnown	0	<input checked="" type="checkbox"/> 0	0	<input checked="" type="checkbox"/> 0	0	<input checked="" type="checkbox"/> 0
Totals		0		0		0

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

Sources of information:

Hunting: _____ 0

Nature: _____ 0

Fishing: _____ 0

Recreational Activities Score (maximum 80 points)

0

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2.3 LANDSCAPE AESTHETICS

Score using ortho-aerial photography

2.3.1 DISTINCTNESS

(Check one)			Score (Choose one)
Clearly distinct	1)	<input type="text" value="3"/>	3 points
Indistinct	2)	<input type="text" value="0"/>	0

Landscape Distinctness Score (maximum 3 points)

3

2.3.2 ABSENCE OF HUMAN DISTURBANCE

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

Source of information: Field observations

Absence of Human Disturbance Score (maximum 7 points)

1

2.4 EDUCATION AND PUBLIC AWARENESS

Optional: complete as time and scoring dictates.

2.4.1 EDUCATIONAL USES

(Check one)			Score (Choose one)
Frequent	1)	<input type="text"/>	20 points
Infrequent	2)	<input type="text"/>	12
No visits	3)	<input type="text" value="0"/>	0

Source of information: Privately owned property

Requires contact with Local Boards of Education.

Educational Uses Score (maximum 20 points)

0

2.4.2 FACILITIES AND PROGRAMS

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

Source of information: 0

Facilities and Programs Score (maximum 8 points)

0

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2.7 **SIZE**

The score may be lower than actual since economic and recreational values have not been completed.

9.0 hectares 44 Subtotal for Social

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	106-120	121-135	136-150	>150
<2 ha	1	2	4	8	10	12	14	14	14	15
2 - 4ha	1	2	4	8	12	13	14	14	15	16
5 - 8ha	2	2	5	9	13	14	15	15	16	16
9 - 12ha	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)



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) Unknown	0.0	=	0
Total:	0		

2.8.2 CULTURAL HERITAGE

1) Significant		=	30 points
2) Not Significant		=	0
3) Unknown	0.0	=	0
Total:	0		

Aboriginal Values/Cultural Heritage Score (maximum 30 points)

0.0

3.0 HYDROLOGICAL COMPONENT

3.1 FLOOD ATTENUATION

Estimated & Calculated values can be obtained from G.I.S. data layers.

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: Detennination of Maximum Score

- Wetland is located on one of the defined 5 large lakes or 5 major rivers
(Go to Step 4)
- x** 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)
- (b) Total area (ha) of upstream detention areas 128.95 *estimate*
(include the wetland itself)
- (c) Ratio of (a):(b) 0.00
- (d) Upstream detention factor: (c) x 2 = 0.0 0.00
(maximum allowable factor = 1)

Step 3: Determination of Wetland Attenuation Factor (AF)

- (a) Wetland area (ha) 8.95
- (b) Size of catchment basin (ha) upstream of wetland 300.00 *calculate*
(include wetland itself in catchment area)
- (c) Ratio of (a):(b) 0.03
- (d) Wetland attenuation factor: (c) x 10 = 0.3 0.30
(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:
- (c) * Complex Formula - Isolated portion 100.00
- Initial Score 100 *
- Upstream detention factor (DF) (Step 2) 0.00
- Wetland attenuation factor (AF) (Step 3) 0.30
- Final score: [(DF + AF)/2] x Initial score = 14.92
- (c) * Final score:= 15

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

Flood Attenuation Score (maximum 100 points) 79.0

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>0.00</u>	x	0.5	=	<u>0.00</u>
FA of riverine wetland	<u>0.39</u>	x	1	=	<u>0.39</u>
FA of palustrine wetland with no inflow	<u> </u>	x	0.7	=	<u>0.00</u>
FA of palustrine wetland with inflows	<u>0.61</u>	x	1	=	<u>0.61</u>
FA of lacustrine on lake shoreline	<u>0.00</u>	x	0.2	=	<u>0.00</u>
FA of lacustrine at lake inflow or outflow	<u> </u>	x	1	=	<u>0.00</u>
			Sub Total:		<u>1.00</u>
			Sum (WIF cannot exceed 1.0)		1.00

Step 3: Determination of catchment land use factor (LUF)

(Choose the first category that fits upstream landuse in the catchment.)

- 1) 1.0 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) **1.00**

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. (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>0.15</u>	x	0.75	=	<u>0.11</u>
FA of wetland with emergent, submergent or floating vegetation (re,be,ne,su,f,ff)	<u>0.85</u>	x	1	=	<u>0.85</u>
FA of wetland with little or no vegetation (u)	<u>0.00</u>	x	0.5	=	<u>0.00</u>
			Subtotal:		<u>0.96</u>

Estimate FA from air photos or use default factor of "0.75" **Sum (PUT cannot exceed 1.0)** **0.96**

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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)	1.00
	Land use factor (LUF)	1.00
	Pollutant uptake factor (PUT)	0.96
Final score: 60 x WQF x LUF x PUT =		57.74

Short Term Water Quality Improvement Score (maximum 60 points) 58

3.2.2 LONG TERM NUTRIENT TRAP

Determine wetland type from aerial photos and soil type from OMAF soils maps.

Step 1:

- Wetland on large lakes or 5 major rivers 0 points
- 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) None of the above 0

Long Term Nutrient Trap Score (maximum 10 points) 0

3.2.3 GROUNDWATER DISCHARGE

The final score will be underestimated since some of the wetland characteristics cannot be scored

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

(Scores are cumulative maximum score 30 points)

Percentage of Catchment: 0.03

Groundwater Discharge Score (maximum 30 points)

9

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 0

Carbon Sink Score (maximum 5 points)

0

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3.4 SHORELINE EROSION CONTROL

Step 1: *Determine from ortho-aerial photography* Score

	<input type="checkbox"/>	Wetland entirely isolated or palustrine	0
	<input checked="" 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 checked="" 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) **8**

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 0.00
(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	0.61	x 50 =	30.4	
FA of riverine wetland	0.39	x 20 =	7.8	
FA of lacustrine wetland (wetland <50% lacustrine)	0.00	x 0 =	0.0	
		Subtotal:	38.3	

Ground Water Recharge Wetland Site Type Component Score (maximum 50 points) **38**

3.5.2 WETLAND SOIL RECHARGE POTENTIAL

Determine from OMAF soils maps.

(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
4) Riverine (not a major river)	5	2	
Totals	0		4

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

4

4.0 SPECIAL FEATURES COMPONENT

4.1 RARITY

4.1.1 WETLANDS [Ref Map](#)

Site District 7E-5
 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
7-5	60	20	0	80	80
7-6	80	30	0	80	80

Rarity within the Landscape Score (maximum 80 points)

60

Rarity of Wetland Type Score (maximum 80 points)

20

The updated scores for rarity in Site Region 7-5 are in the stages of review and still require official confirmation.(June 8, 2004)

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4.1.2.3 PROVINCIALY SIGNIFICANT ANIMAL SPECIES [Prov Ref](#)

Name of species	Source of information
1) <u>Eastern Wood-pewee</u>	<u>eeding Bird Surveys, incidental observatio</u>
2) _____	_____
3) _____	_____
4) _____	_____
5) _____	_____
6) _____	_____
7) _____	_____
8) _____	_____
9) _____	_____
10) _____	_____
11) _____	_____
12) _____	_____
13) _____	_____
14) _____	_____
15) _____	_____

Attach separate list if necessary; Attach documentation

Scoring:

Number of provincially significant animal species in the wetland:

1 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)

50

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4.1.2.4 PROVINCIALY SIGNIFICANT PLANT SPECIES

(Scientific names must be recorded)

	Common Name	Scientific Name	Source of information
1)	_____	#N/A	_____
2)	_____	#N/A	_____
3)	_____	#N/A	_____
4)	_____	#N/A	_____
5)	_____	#N/A	_____
6)	_____	#N/A	_____
7)	_____	#N/A	_____
8)	_____	#N/A	_____
9)	_____	#N/A	_____
10)	_____	#N/A	_____
11)	_____	#N/A	_____
12)	_____	#N/A	_____
13)	_____	#N/A	_____
14)	_____	#N/A	_____
15)	_____	#N/A	_____

Attach separate list if necessary; Attach documentation

Scoring:

Number of provincially significant plant species in the wetland:

1 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)



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4.1.2.5 REGIONALLY SIGNIFICANT SPECIES (SITE REGION) [Spp Ref](#)

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)	_____	_____	_____
2)	_____	_____	_____
3)	_____	_____	_____
4)	_____	_____	_____
5)	_____	_____	_____
6)	_____	_____	_____
7)	_____	_____	_____
8)	_____	_____	_____
9)	_____	_____	_____
10)	_____	_____	_____
11)	_____	_____	_____
12)	_____	_____	_____
13)	_____	_____	_____
14)	_____	_____	_____
15)	_____	_____	_____

Attach separate list if necessary .Attach documentation.

Scoring:

No. of species significant in Site Region

1 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)



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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	Schuett's Oak	Quercus shuetteii	Field obs.
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Attach separate list if necessary .Attach documentation.

Scoring:

No. of species significant in Site District

1 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)

10

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	
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	0

Consult the Ontario Heronry database at Bird Studies Canada.

Subtotal:

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

Score "locally significant" if trees & shrubs are present, also consult District deer yard data.

(Check only highest level of significance)

Score

(one only)

- | | | | |
|----|-------------------------------------|-------------------------------------|-----|
| 1) | <input type="checkbox"/> | Provincially significant | 100 |
| 2) | <input type="checkbox"/> | Significant in Site Region | 50 |
| 3) | <input type="checkbox"/> | Significant in Site District | 25 |
| 3) | <input checked="" type="checkbox"/> | Locally significant | 10 |
| 4) | <input type="checkbox"/> | Little or poor winter cover present | 0 |

Source of information:

0

Winter Cover for Wildlife Score (maximum 100 points)

10

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)

	Staging	Score (one only)	Moulting	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	0	0	0	0
6) Unknown		0		0
Total:	0		0	
Subtotal:		0		

Source of information:

0

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)	10	Habitat suitable	10
4)		Habitat not suitable	0

Source of information:

Field obs.

Waterfowl Breeding Score (maximum 100 points)

10

4.2.5 MIGRATOR PASSERINE, SHOREBIRD OR RAPTOR STOPOVER AREA

(check highest applicable category)

1)		Provincially significant	100
2)		Significant in Site Region	50
3)		Significant in Site District	10
4)	0	Not significant	0

Source of information:

0

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

0

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4.2.6 FISH HABITAT

Consult District Fisheries files. If fish are present in the wetland, score 15 or 25 points depending on the size of the fish habitat present.

4.2.6. 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 Step 3)

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)

0

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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	0.0
2	Shortgrass-Sedge				11	0.0
3	Cattail-Bulrush-Burreed				5	0.0
4	Arrowhead-Pickerelweed				5	0.0
5	Duckweed		1.4	0.2	2	0.4
6	Smartweed-Waterwillow				6	0.0
7	Waterlily-Lotus				11	0.0
8	Waterweed-Watercress				9	0.0
9	Ribbongrass				10	0.0
10	Coontail-Naiad-Watermilfoil				13	0.0
11	Narrowleaf Pondweed				5	0.0
12	Broadleaf Pondweed				8	0.0
Sub Total Score (maximum 75 points)						0.4
Total Score (maximum 75 points)						0.4

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)

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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				6 pts	0.0
2	Shortgrass-Sedge				11	0.0
3	Cattail-Bulrush-Burreed				5	0.0
4	Arrowhead-Pickerelweed				5	0.0
Sub Total Score (maximum 25 points)						0.0
Total Score (maximum 25 points)						0.0

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	0.0
Permanently flooded				10	0.0
Sub SCORE (maximum 20 points)					0.0
SCORE (maximum 20 points)					0.0

Step 7: Calculation of final score

Score for Spawning and Nursery Habitat (Low Marsh) (maximum 75) = 0.4

Score for Spawning and Nursery Habitat (High Marsh) (maximum 25) = 0.0

Score for Swamp Containing Fish Habitat (maximum 20) = 0.0

Subtotal: 0.4

Sum (maximum score 100 points) = 0.4

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4.2.6.2 Migration and Staging Habitat

Score only if information on fish migration and staging exists, e.g. migration of northern pike through a wetland to access spawning areas.

Step 1:

- 1) 0 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) <u> </u> Significant in Site Region | 25 points |
| 2) <u> </u> Significant in Site District | 15 |
| 3) <u> </u> Locally Significant | 10 |
| 4) <u> </u> 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) <u> </u> Wetland is riverine at rivermouth or lacustrine at rivermouth | 25 points |
| 2) <u> </u> Wetland is riverine, within 0.75 km of rivermouth | 15 |
| 3) <u> </u> Wetland is lacustrine, within 0.75 km of rivermouth | 10 |
| 4) <u> </u> Fish staging and/or migration habitat present, but not as above | 5 |

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

0

4.3 ECOSYSTEM AGE

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

	Fractional Area			Scoring
Bog	0.00	x	25 =	0.0
Fen, treed to open on deep soils floating mats or marl	0.00	x	20 =	0.0
Fen, on limestone rock	0.00	x	5 =	0.0
Swamp	0.13	x	3 =	0.4
Marsh	0.87	x	0 =	0.0
		Sub Total:		0.4
Ecosystem Age Score (maximum 25 points)				0.4

4.4 GREAT LAKES COASTAL WETLANDS

Score for coastal (see text for definition) wetlands only

Choose one only

wetland < 10 ha	=	0 points
wetland 10- 50 ha	=	25
wetland 51 -100 ha	=	50
wetland > 100 ha	=	75

Great Lakes Coastal Wetlands Score (maximum 75 points)

0

_____ The wetland is not within the Coastal zone for either the Great Lakes or associated major rivers and as such will not be scored within this section.

5.0 EXTRA INFORMATION

5.1 PURPLE LOOSESTRIFE

 Absent/Not seen

 x Present

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

Abundance code

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

5.2 SEASONALLY FLOODED AREAS

Check one or more

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

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 x

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 x

WETLAND EVALUATION SCORING RECORD

WETLAND NAME AND/OR NUMBER

Elfrida Wetland A: Stoney Creek

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1	Growing Degree-Days/Soils	26.0
1.1.2	Wetland Type	14.1
1.1.3	Site Type	2.8

Total for Productivity **43**

1.2 BIODIVERSITY

1.2.1	Number of Wetland Types	13.0
1.2.2	Vegetation Communities (maximum 45)	12.0
1.2.3	Diversity of Surrounding Habitat (maximum 7)	4.0
1.2.4	Proximinty to Other Wetlands	5.0
1.2.5	Interspersion	6.0
1.2.6	Open Water Type	30.0

Total for Biodiversity **70**

Sub Total for Biodiversity **70**

1.3 SIZE (Biological Component) **8**

Sub Total: **121**

TOTAL FOR BIOLOGICAL COMPONENT (not to exceed 250) **121**

2.0 SOCIAL COMPONENT**2.1 ECONOMICALLY VALUABLE PRODUCTS**

2.1.1 Wood Products	0
2.1.2 Wild Rice	0
2.1.3 Commercial Fish	12
2.1.4 Bullfrogs	0
2.1.5 Snapping Turtles	0
2.1.6 Furbearers	6

Total for Economically Valuable Products **18**

2.2 RECREATIONAL ACTIVITIES (maximum 80)**0****2.3 LANDSCAPE AESTHETICS**

2.3.1 Distinctness	3
2.3.2 Absence of Human Disturbance	1

Total for Landscape Aesthetics **4**

2.4 EDUCATION AND PUBLIC AWARENESS

2.4.1 Educational Uses	0
2.4.2 Facilities and Programs	0
2.4.3 Research and Studies	0

Total for Education and Public Awareness **0**

2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT**26****2.6 OWNERSHIP****4**

Subtotal for Social Component **44.0**

2.7 SIZE (Social Component)**0****2.8 ABORIGINAL AND CULTURAL VALUES****0**

Sub Total: **52**

TOTAL FOR SOCIAL COMPONENT (not to exceed 250) **52**

3.0 HYDROLOGICAL COMPONENT

3.1	<u>FLOOD ATTENUATION</u>		79
3.2	<u>WATER QUALITY IMPROVEMENT</u>		
3.2.1	Short Term Improvement	57.7	
3.2.2	Long Term Improvement	0.0	
3.2.3	Groundwater Discharge (maximum 30)	9.0	
	Total for Water Quality Improvement		67
3.3	<u>CARBON SINK</u>		0
3.4	<u>SHORELINE EROSION CONTROL</u>		8
3.5	<u>GROUNDWATER RECHARGE</u>		
3.5.1	Site Type	38.27	
3.5.2	Soils	4.0	
	Total for Groundwater Recharge		42
		Sub Total:	196
	<u>TOTAL FOR HYDROLOGICAL COMPONENT (not to exceed 250)</u>		196

4.0 SPECIAL FEATURES**4.1 RARITY**

4.1.1 Wetlands

4.1.1.1 Rarity within the Landscape 60.0

4.1.1.2 Rarirty of Wetland Type (maximum 80) 20.0

Total for Wetland Rarity

80

4.1.2 Species

4.1.2.1 Endangered or Threatened Species Breeding 0.0

4.1.2.2 Traditional Use by Endangered or Threatened Species 0.0

4.1.2.3 Provincially Significant Animals 50.0

4.1.2.4 Provincially Significant Plants 0.0

4.1.2.5 Regionally Significant Species 0.0

4.1.2.6 Locally Significant Species 10.0

Total for Species Rarity

60

4.2 SIGNIFICANT FEATURES OR HABITAT

4.2.1 Colonial Waterbirds 0.0

4.2.2 Winter Cover for Wildlife 10.0

4.2.3 Waterfowl Staging and Moulting 0.0

4.2.4 Waterfowl Breeding 10.0

4.2.5 Migratory Passerine, Shorebird or Raptor Stopover 0.0

4.2.6 Fish Habitat 0.4

Total for Significant Features and Habitat

20

4.3 ECOSYSTEM AGE

0

4.4 GREAT LAKES COASTAL WETLANDS

0

Sub Total:

161

TOTAL FOR SPECIAL FEATURES (maximum 250)

161

SUMMARY OF EVALUATION RESULT

Wetland	Elfrida Wetland A: Stoney Creek	
TOTAL FOR 1.0 BIOLOGICAL COMPONENT		121
TOTAL FOR 2.0 SOCIAL COMPONENT		52
TOTAL FOR 3.0 HYDROLOGICAL COMPONENT		196
TOTAL FOR 4.0 SPECIAL FEATURES COMPONENT		161
	<u>WETLAND TOTAL</u>	<u>530</u>

INVESTIGATORS

Ash Baron	
Rebecca Vito	
0	
0	
0	

AFFILIATION

Aquafor Beech Limited	
"	
0	
0	
0	

DATE

Sept 16 2016

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INVESTIGATORS

AFFILIATION

Ash Baron

Aquafor Beech Limited

DATES WETLAND VISITED

DATE THIS EVALUATION COMPLETED:

Aug 30 2016

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

WEATHER CONDITIONS

i) at time of field work Sunny

(Continue in the space below if necessary)

ii) summer conditions in general DROUGHT

OTHER POTENTIALLY USEFUL INFORMATION:

Pond-ish area of wetland appears to be of anthropogenic origin

CHECKLIST OF PLANT AND ANIMAL SPECIES RECORDED IN THE WETLAND:

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

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

[Wetland Manual](#)**WETLAND DATA AND SCORING RECORD**

i) **WETLAND NAME:** Elfrida Wetland B: Sinkhole Creek Headwaters

ii) **MNR ADMINISTRATIVE REGION:** Guelph **DISTRICT:** Guelph

AREA OFFICE (if different from District): Niagara (Vineland)

iii) **CONSERVATION AUTHORITY JURISDICTION:** Hamilton CA

(If not within a designated CA, check here: _____)

iv) **COUNTY OR REGIONAL MUNICIPALITY:** Hamilton

v) **TOWNSHIP:** _____

vi) **LOTS & CONCESSIONS:**
(attach separate sheet if necessary) _____

vii) **MAP AND AIR PHOTO REFERENCES**

a) Latitude: _____ Longitude: _____

b) UTM grid reference: Zone: 17T Block: n/a
Grid:E 597310 Grid:N 4780582

c) National Topographic Series:

map name(s) _____

map number(s) _____ edition _____

scale _____

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)

viii) WETLAND SIZE AND BOUNDARIES

- a) **Single contiguous wetland area:** 7.75 hectares
- b) **Wetland complex comprised of** 2 individual wetlands:

Wetland Unit Number
(for reference)

Size of each
wetland unit

Ha

Wetland Unit No.	<u>1</u>	<u>1.20</u>
Wetland Unit No.	<u>2</u>	<u>0.59</u>
Wetland Unit No.	<u>3</u>	<u>1.44</u>
Wetland Unit No.	<u>4</u>	<u>0.10</u>
Wetland Unit No.	<u>5</u>	<u>0.00</u>
Wetland Unit No.	<u>6</u>	<u>0.00</u>
Wetland Unit No.	<u>7</u>	<u>0.00</u>
Wetland Unit No.	<u>8</u>	<u>0.00</u>
Wetland Unit No.	<u>9</u>	<u>0.00</u>
Wetland Unit No.	<u>10</u>	<u>0.00</u>
Wetland Unit No.	<u>11</u>	<u>0.00</u>
Wetland Unit No.	<u>12</u>	<u>0.00</u>
Wetland Unit No.	<u>13</u>	<u>0.00</u>
Wetland Unit No.	<u>14</u>	<u>0.00</u>
Wetland Unit No.	<u>15</u>	<u>0.00</u>
Wetland Unit No.	<u>16</u>	<u>0.00</u>
Wetland Unit No.	<u>17</u>	<u>0.00</u>
Wetland Unit No.	<u>18</u>	<u>0.00</u>
Wetland Unit No.	<u>19</u>	<u>0.00</u>
Wetland Unit Totals:	<u><u>3.33</u></u>	

(Attach additional sheets if necessary)

TOTAL WETLAND SIZE

3.33

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

Differing community type that provides ecologic function and or hydrologic function

(Attach separate sheets if necessary .)

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1 GROWING DEGREE-DAYS/SOILS

GROWING DEGREE DAYS [MAP](#)

(check one)

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

SOILS

Estimated Fractional Area

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

Determine the soil type from the appropriate OMAF soils maps

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.

Score		
26	clay/loam	26.00
	silt/marl	0.00
	limestone	0.00
	sand	0.00
	humic/mesic	0.00
	fibric	0.00
	granite	0.00

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

26

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

Estimate the Wetland Type from air photos or default to "swamp" (8)

Fractional Area		Score	
Bog	0.00	x 3	0.0
Fen	0.00	x 6	0.0
Swamp	0.18	x 8	1.4
Marsh	0.82	x 15	12.3
		Subtotal:	13.8

Wetland type score (maximum 15 points) 14

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

Estimate from air photos

	Fractional Area		Score
Isolated	0.00	x 1 =	0.00
Palustrine (permanent or intermittent flow)	0.57	x 2 =	1.14
Riverine	0.43	x 4 =	1.73
Riverine (at rivermouth)	0.00	x 5 =	0.00
Lacustrine (at rivermouth)	0.00	x 5 =	0.00
Lacustrine (on enclosed bay, with barrier beach)	0.00	x 3 =	0.00
Lacustrine (exposed to lake)	0.00	x 2 =	0.00
		Sub Total:	2.86

Site Type Score (maximum 5 points) 3

1.2 BIODIVERSITY

1.2.1 **NUMBER OF WETLAND TYPES**

(Check only one)	Score
1) <input type="checkbox"/> one	9 points
2) <input checked="" type="checkbox"/> 13 two	13
3) <input type="checkbox"/> three	20
4) <input type="checkbox"/> four	30

Number of Wetland Types Score (maximum 30 points) 13

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1.2.2 VEGETATION COMMUNITIES [Veg Ref](#)

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
+ .5 each additional community = <u>2.5</u>	+ .5 each additional community = <u>3.5</u>	+ 1 each additional community = <u>0.0</u>
e.g., a wetland with 3 one form communities and 8 six form communities would score:	4 two form communities	12 four form communities and
	$6 + 13.5 + 15 = 34.5 = 35$ points	SubTotal: <u>6</u>
	Vegetation Communities Score (maximum 45 points)	<u>6</u>

Wetland Name: Elfrida Wetland B: Sinkhole Creek Headwaters

Wetland Size (ha): 3.33

<u>Vegetation Form</u>	<u>% area in which form is dominant</u>
h	0.00
c	0.00
dh	0.00
dc	0.00
ts	17.72
ls	0.00
ds	0.00
gc	3.00
m	0.00
ne	43.24
be	0.00
re	36.04
ff	0.00
f	0.00
su	0.00
u (unvegetated)	0.00
Total = 100%	100.00

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1.2.3 DIVERSITY OF SURROUNDING HABITAT

(Check all appropriate items(1))

Determine from air photos

1	row crop
	pasture
1	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
1	creek flood plain
3	Subtotal

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

3

1.2.4 PROXIMITY TO OTHER WETLANDS

(Check first appropriate category only)

Scoring

Determine from air photos and other wetlands evaluations in the vicinity

1)	0	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)	0	Hydrologically connected by surface water to other wetlands (same dominant wetland type) within 0.5 km	8
3)	5	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)	0	Hydrologically connected by surface water to other wetlands (same dominant wetland type) from 0.5 to 1.5 km away	5
5)	0	Within 0.75 km of other wetlands (different dominant wetland type) or open water body, but not hydrologically connected by surface water	5
6)	0	Within 1 km of other wetlands, but not hydrologically connected by surface water	2
7)	0	No wetland within 1 km	0

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

5

Hydrologically connected to

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1.2.5 **INTERSPERSION**

Optional: Complete as time permits or as scoring dictates.

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	21
8)	151 to 175	24
9)	176 to 200	27
10)	>200	30

Interspersion Score (Choose one only maximum 30 points)

9

1.2.6 **OPEN WATER TYPES** [Ref](#)

Determine from aerial photos.

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)	no open water	0

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

20

1.3 SIZE

Score may be lower than actual if "Vegetation Community and Interspersion" have not been calculated.

3.3 hectares 56 Subtotal for Biodiversity

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

Determine the percentage of the wetland area dominated by "h" or "c" by using aerial photograph.

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

h:	0.00	c:	0.00
----	------	----	------

		Score	
1)	0	<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: Aerial photos

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)	0

Source of information: 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)	0

Source of information: Field observations

If any part of the wetland is riverine or the District fisheries files indicate presence of fish score "present"

Commercial Fish Score (maximum 12 points) 0

2.1.4 BULLFROGS

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

Source of information: Field observations and amphibian calling surveys

Bullfrog Score (maximum 1 point) 0

Southern Ontario Wetland Evaluation Data and Scoring Record

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2.1.5 SNAPPING TURTLES

(Check one)

Present

1)

Score (Choose one)

1 point

Absent

2)

0

Source of information:

Reptile surveys

Snapping Turtle Score (maximum 1 point)

0

2.1.6 FURBEARERS [Fur Ref](#)

(Consult Appendix 9)

Name of furbearer

Source of information

1)	Raccoon	3
2)	Virginia Opossum	
3)	Red Fox	
4)	Coyote	3
5)	Deer	3
SubTotal		9

Field Observations
0
0
"
"

Scoring: 3 points for each species. maximum 12

Furbearer Score (maximum 12 points)

9

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/NotKnown	0	0	0	0	0	0
Totals		0		0		0

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

Sources of information:

Hunting: 0

Nature: 0

Fishing: 0

Recreational Activities Score (maximum 80 points)

0

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2.3 LANDSCAPE AESTHETICS

Score using ortho-aerial photography

2.3.1 DISTINCTNESS

(Check one)			Score (Choose one)
Clearly distinct	1)	<input type="text" value="3"/>	3 points
Indistinct	2)	<input type="text" value="0"/>	0

Landscape Distinctness Score (maximum 3 points)

3

2.3.2 ABSENCE OF HUMAN DISTURBANCE

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

Source of information: Field observations

Absence of Human Disturbance Score (maximum 7 points)

1

2.4 EDUCATION AND PUBLIC AWARENESS

Optional: complete as time and scoring dictates.

2.4.1 EDUCATIONAL USES

(Check one)			Score (Choose one)
Frequent	1)	<input type="text"/>	20 points
Infrequent	2)	<input type="text"/>	12
No visits	3)	<input type="text" value="0"/>	0

Source of information: Privately owned property

Requires contact with Local Boards of Education.

Educational Uses Score (maximum 20 points)

0

2.4.2 FACILITIES AND PROGRAMS

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

Source of information: 0

Facilities and Programs Score (maximum 8 points)

0

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2.7 **SIZE**

The score may be lower than actual since economic and recreational values have not been completed.

3.3 hectares

49 Subtotal for Social

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	106-120	121-135	136-150	>150
<2 ha	1	2	4	8	10	12	14	14	14	15
2 - 4ha	1	2	4	8	12	13	14	14	15	16
5 - 8ha	2	2	5	9	13	14	15	15	16	16
9 - 12ha	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)



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) Unknown	0.0	=	0
Total:	0		

2.8.2 CULTURAL HERITAGE

1) Significant		=	30 points
2) Not Significant		=	0
3) Unknown	0.0	=	0
Total:	0		

Aboriginal Values/Cultural Heritage Score (maximum 30 points)

0.0

3.0 HYDROLOGICAL COMPONENT

3.1 FLOOD ATTENUATION

Estimated & Calculated values can be obtained from G.I.S. data layers.

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: Detennination of Maximum Score

- Wetland is located on one of the defined 5 large lakes or 5 major rivers
(Go to Step 4)
- x** 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)
- (b) Total area (ha) of upstream detention areas 123.33 *estimate*
(include the wetland itself)
- (c) Ratio of (a):(b) 0.00
- (d) Upstream detention factor: (c) x 2 = 0.0 0.00
(maximum allowable factor = 1)

Step 3: Determination of Wetland Attenuation Factor (AF)

- (a) Wetland area (ha) 3.33
- (b) Size of catchment basin (ha) upstream of wetland 300.00 *calculate*
(include wetland itself in catchment area)
- (c) Ratio of (a):(b) 0.01
- (d) Wetland attenuation factor: (c) x 10 = 0.1 0.11
(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:
- (c) * Complex Formula - Isolated portion 100.00
- Initial Score 100 *
- Upstream detention factor (DF) (Step 2) 0.00
- Wetland attenuation factor (AF) (Step 3) 0.11
- Final score: [(DF + AF)/2] x Initial score = 5.55
- (c) * Final score:= 6

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

Flood Attenuation Score (maximum 100 points) 79.0

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>0.00</u>	x	0.5 =	<u>0.00</u>
FA of riverine wetland	<u>0.43</u>	x	1 =	<u>0.43</u>
FA of palustrine wetland with no inflow	<u> </u>	x	0.7 =	<u>0.00</u>
FA of palustrine wetland with inflows	<u>0.57</u>	x	1 =	<u>0.57</u>
FA of lacustrine on lake shoreline	<u>0.00</u>	x	0.2 =	<u>0.00</u>
FA of lacustrine at lake inflow or outflow	<u> </u>	x	1 =	<u>0.00</u>
			Sub Total:	<u>1.00</u>
			Sum (WIF cannot exceed 1.0)	1.00

Step 3: Determination of catchment land use factor (LUF)

(Choose the first category that fits upstream landuse in the catchment.)

- 1) 1.0 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) **1.00**

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. (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)	<u>0.21</u>	x	0.75 =	<u>0.16</u>
FA of wetland with emergent, submergent or floating vegetation (re,be,ne,su,f,ff)	<u>0.79</u>	x	1 =	<u>0.79</u>
FA of wetland with little or no vegetation (u)	<u>0.00</u>	x	0.5 =	<u>0.00</u>
			Subtotal:	<u>0.95</u>

Estimate FA from air photos or use default factor of "0.75" **Sum (PUT cannot exceed 1.0)** **0.95**

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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)	1.00
	Land use factor (LUF)	1.00
	Pollutant uptake factor (PUT)	0.95
Final score: 60 x WQF x LUF x PUT =		56.89

Short Term Water Quality Improvement Score (maximum 60 points) 57

3.2.2 LONG TERM NUTRIENT TRAP

Determine wetland type from aerial photos and soil type from OMAF soils maps.

Step 1:

- | | | |
|-------------------------------------|--|----------|
| <input type="checkbox"/> | Wetland on large lakes or 5 major rivers | 0 points |
| <input checked="" 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

The final score will be underestimated since some of the wetland characteristics cannot be scored

(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	2	3) Fen = 5	
Topography	1) Flat/rolling = 0	0	2) Hilly = 2		3) Steep = 5	
Wetland Area: Upslope Catchment Area	Large (>50%) = 0		Moderate (5-50%) = 2	2	Small <(5%) = 5	
Lagg Development	1) None found = 0	0	2) Minor = 2		3) Extensive = 5	
Seeps	1) None = 0	0	2) = or < 3 seeps = 2		3) > 3 seeps = 5	
Surface marl deposits	1) None = 0	0	2) = or < 3 sites = 2		3) > 3 sites = 5	
Iron precipitates	1) None = 0	0	2) = or < 3 sites = 2		3) > 3 sites = 5	
Located within 1 km of a major aquifer	N/A = 0	0	N/A = 0		Yes = 10	
Totals		0		4		0

(Scores are cumulative maximum score 30 points)

Percentage of Catchment: 0.01

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 0

Carbon Sink Score (maximum 5 points)

0

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3.4 SHORELINE EROSION CONTROL

Step 1: *Determine from ortho-aerial photography*

Score

	<input type="checkbox"/>	Wetland entirely isolated or palustrine	0
	<input checked="" 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 checked="" 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)

8

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		<u>0.00</u>
(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>0.57</u>	x 50 =	<u>28.4</u>
FA of riverine wetland	<u>0.43</u>	x 20 =	<u>8.6</u>
FA of lacustrine wetland (wetland <50% lacustrine)	<u>0.00</u>	x 0 =	<u>0.0</u>
		Subtotal:	<u>37.0</u>

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

37

3.5.2 WETLAND SOIL RECHARGE POTENTIAL

Determine from OMAF soils maps.

(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
4) Riverine (not a major river)	5	2	
Totals	0		4

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

4

4.0 SPECIAL FEATURES COMPONENT

4.1 RARITY

4.1.1 WETLANDS [Ref Map](#)

Site District 7E-5
 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
7-5	60	20	0	80	80
7-6	80	30	0	80	80

Rarity within the Landscape Score (maximum 80 points)

60

Rarity of Wetland Type Score (maximum 80 points)

20

The updated scores for rarity in Site Region 7-5 are in the stages of review and still require official confirmation.(June 8, 2004)

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4.1.2.3 PROVINCIALY SIGNIFICANT ANIMAL SPECIES [Prov Ref](#)

Name of species	Source of information
1) _____	_____
2) _____	_____
3) _____	_____
4) _____	_____
5) _____	_____
6) _____	_____
7) _____	_____
8) _____	_____
9) _____	_____
10) _____	_____
11) _____	_____
12) _____	_____
13) _____	_____
14) _____	_____
15) _____	_____

Attach separate list if necessary; Attach documentation

Scoring:

Number of provincially significant animal species in the wetland:

1 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)

50

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4.1.2.4 PROVINCIALY SIGNIFICANT PLANT SPECIES

(Scientific names must be recorded)

	Common Name	Scientific Name	Source of information
1)	_____	#N/A	_____
2)	_____	#N/A	_____
3)	_____	#N/A	_____
4)	_____	#N/A	_____
5)	_____	#N/A	_____
6)	_____	#N/A	_____
7)	_____	#N/A	_____
8)	_____	#N/A	_____
9)	_____	#N/A	_____
10)	_____	#N/A	_____
11)	_____	#N/A	_____
12)	_____	#N/A	_____
13)	_____	#N/A	_____
14)	_____	#N/A	_____
15)	_____	#N/A	_____

Attach separate list if necessary; Attach documentation

Scoring:

Number of provincially significant plant species in the wetland:

1 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)



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4.1.2.5 REGIONALLY SIGNIFICANT SPECIES (SITE REGION) [Spp Ref](#)

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)	_____	_____	_____
2)	_____	_____	_____
3)	_____	_____	_____
4)	_____	_____	_____
5)	_____	_____	_____
6)	_____	_____	_____
7)	_____	_____	_____
8)	_____	_____	_____
9)	_____	_____	_____
10)	_____	_____	_____
11)	_____	_____	_____
12)	_____	_____	_____
13)	_____	_____	_____
14)	_____	_____	_____
15)	_____	_____	_____

Attach separate list if necessary .Attach documentation.

Scoring:

No. of species significant in Site Region

1 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)



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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	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____
9	_____	_____	_____
10	_____	_____	_____
11	_____	_____	_____
12	_____	_____	_____
13	_____	_____	_____
14	_____	_____	_____
15	_____	_____	_____
16	_____	_____	_____
17	_____	_____	_____
18	_____	_____	_____

Attach separate list if necessary .Attach documentation.

Scoring:

No. of species significant in Site District

1 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	
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	0

Consult the Ontario Heronry database at Bird Studies Canada.

Subtotal:

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

Score "locally significant" if trees & shrubs are present, also consult District deer yard data.

(Check only highest level of significance)

Score

(one only)

- | | | | |
|----|-------------------------------------|-------------------------------------|-----|
| 1) | <input type="checkbox"/> | Provincially significant | 100 |
| 2) | <input type="checkbox"/> | Significant in Site Region | 50 |
| 3) | <input type="checkbox"/> | Significant in Site District | 25 |
| 3) | <input type="checkbox"/> | Locally significant | 10 |
| 4) | <input checked="" type="checkbox"/> | Little or poor winter cover present | 0 |

Source of information:

0

Winter Cover for Wildlife Score (maximum 100 points)

0

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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)

	Staging	Score (one only)	Moulting	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	0	0	0	0
6) Unknown		0		0
Total:	0		0	
Subtotal:		0		

Source of information:

0

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)	0	Habitat not suitable	0

Source of information:

Field obs.

Waterfowl Breeding Score (maximum 100 points)

0

4.2.5 MIGRATOR PASSERINE, SHOREBIRD OR RAPTOR STOPOVER AREA

(check highest applicable category)

1)		Provincially significant	100
2)		Significant in Site Region	50
3)		Significant in Site District	10
4)	0	Not significant	0

Source of information:

0

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

0

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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	0.0
2	Shortgrass-Sedge				11	0.0
3	Cattail-Bulrush-Burreed				5	0.0
4	Arrowhead-Pickerelweed				5	0.0
5	Duckweed				2	0.0
6	Smartweed-Waterwillow				6	0.0
7	Waterlily-Lotus				11	0.0
8	Waterweed-Watercress				9	0.0
9	Ribbongrass				10	0.0
10	Coontail-Naiad-Watermilfoil				13	0.0
11	Narrowleaf Pondweed				5	0.0
12	Broadleaf Pondweed				8	0.0
Sub Total Score (maximum 75 points)						0.0
Total Score (maximum 75 points)						0.0

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)

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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	0.0
2	Shortgrass-Sedge				11	0.0
3	Cattail-Bulrush-Burreed				5	0.0
4	Arrowhead-Pickerelweed				5	0.0
Sub Total Score (maximum 25 points)						0.0
Total Score (maximum 25 points)						0.0

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	0.0
Permanently flooded				10	0.0
Sub SCORE (maximum 20 points)					0.0
SCORE (maximum 20 points)					0.0

Step 7: Calculation of final score

Score for Spawning and Nursery Habitat (Low Marsh) (maximum 75) = 0.0

Score for Spawning and Nursery Habitat (High Marsh) (maximum 25) = 0.0

Score for Swamp Containing Fish Habitat (maximum 20) = 0.0

Subtotal: 0.0

Sum (maximum score 100 points) = 0.0

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4.2.6.2 Migration and Staging Habitat

Score only if information on fish migration and staging exists, e.g. migration of northern pike through a wetland to access spawning areas.

Step 1:

- 1) 0 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) <u> </u> Significant in Site Region | 25 points |
| 2) <u> </u> Significant in Site District | 15 |
| 3) <u> </u> Locally Significant | 10 |
| 4) <u> </u> 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) <u> </u> Wetland is riverine at rivermouth or lacustrine at rivermouth | 25 points |
| 2) <u> </u> Wetland is riverine, within 0.75 km of rivermouth | 15 |
| 3) <u> </u> Wetland is lacustrine, within 0.75 km of rivermouth | 10 |
| 4) <u> </u> Fish staging and/or migration habitat present, but not as above | 5 |

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

4.3 ECOSYSTEM AGE

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

	Fractional Area			Scoring
Bog	0.00	x	25 =	0.0
Fen, treed to open on deep soils floating mats or marl	0.00	x	20 =	0.0
Fen, on limestone rock	0.00	x	5 =	0.0
Swamp	0.18	x	3 =	0.5
Marsh	0.82	x	0 =	0.0
		Sub Total:		0.5

Ecosystem Age Score (maximum 25 points) **0.5**

4.4 GREAT LAKES COASTAL WETLANDS

Score for coastal (see text for definition) wetlands only

Choose one only

wetland < 10 ha	=	0 points
wetland 10- 50 ha	=	25
wetland 51 -100 ha	=	50
wetland > 100 ha	=	75

Great Lakes Coastal Wetlands Score (maximum 75 points) **0**

_____ The wetland is not within the Coastal zone for either the Great Lakes or associated major rivers and as such will not be scored within this section.

5.0 EXTRA INFORMATION

5.1 PURPLE LOOSESTRIFE

 Absent/Not seen

 x Present

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

Abundance code

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

5.2 SEASONALLY FLOODED AREAS

Check one or more

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

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 x

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 x

WETLAND EVALUATION SCORING RECORD

WETLAND NAME AND/OR NUMBER

Elfrida Wetland B: Sinkhole Creek Headwaters

1.0 BIOLOGICAL COMPONENT1.1 PRODUCTIVITY

1.1.1	Growing Degree-Days/Soils	26.0
1.1.2	Wetland Type	13.8
1.1.3	Site Type	2.9

Total for Productivity 43

1.2 BIODIVERSITY

1.2.1	Number of Wetland Types	13.0
1.2.2	Vegetation Communities (maximum 45)	6.0
1.2.3	Diversity of Surrounding Habitat (maximum 7)	3.0
1.2.4	Proximity to Other Wetlands	5.0
1.2.5	Interspersion	9.0
1.2.6	Open Water Type	20.0

Total for Biodiversity 56

Sub Total for Biodiversity 56

1.3 SIZE (Biological Component) 8

Sub Total: 107

TOTAL FOR BIOLOGICAL COMPONENT (not to exceed 250) 107

2.0 SOCIAL COMPONENT**2.1 ECONOMICALLY VALUABLE PRODUCTS**

2.1.1 Wood Products	0
2.1.2 Wild Rice	0
2.1.3 Commercial Fish	0
2.1.4 Bullfrogs	0
2.1.5 Snapping Turtles	0
2.1.6 Furbearers	9

Total for Economically Valuable Products **9**

2.2 RECREATIONAL ACTIVITIES (maximum 80) **0**

2.3 LANDSCAPE AESTHETICS

2.3.1 Distinctness	3
2.3.2 Absence of Human Disturbance	1

Total for Landscape Aesthetics **4**

2.4 EDUCATION AND PUBLIC AWARENESS

2.4.1 Educational Uses	0
2.4.2 Facilities and Programs	0
2.4.3 Research and Studies	0

Total for Education and Public Awareness **0**

2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT **40**

2.6 OWNERSHIP **10**

Subtotal for Social Component **49.0**

2.7 SIZE (Social Component) **0**

2.8 ABORIGINAL AND CULTURAL VALUES **0**

Sub Total: **63**

TOTAL FOR SOCIAL COMPONENT (not to exceed 250) **63**

3.0 HYDROLOGICAL COMPONENT

3.1	<u>FLOOD ATTENUATION</u>		79
3.2	<u>WATER QUALITY IMPROVEMENT</u>		
3.2.1	Short Term Improvement	56.9	
3.2.2	Long Term Improvement	0.0	
3.2.3	Groundwater Discharge (maximum 30)	4.0	
	Total for Water Quality Improvement		61
3.3	<u>CARBON SINK</u>		0
3.4	<u>SHORELINE EROSION CONTROL</u>		8
3.5	<u>GROUNDWATER RECHARGE</u>		
3.5.1	Site Type	37.03	
3.5.2	Soils	4.0	
	Total for Groundwater Recharge		41
		Sub Total:	189
	<u>TOTAL FOR HYDROLOGICAL COMPONENT (not to exceed 250)</u>		189

4.0 SPECIAL FEATURES**4.1 RARITY**

4.1.1 Wetlands

4.1.1.1 Rarity within the Landscape 60.0

4.1.1.2 Rarirty of Wetland Type (maximum 80) 20.0

Total for Wetland Rarity

80

4.1.2 Species

4.1.2.1 Endangered or Threatened Species Breeding 0.0

4.1.2.2 Traditional Use by Endangered or Threatened Species 0.0

4.1.2.3 Provincially Significant Animals 50.0

4.1.2.4 Provincially Significant Plants 0.0

4.1.2.5 Regionally Significant Species 0.0

4.1.2.6 Locally Significant Species 0.0

Total for Species Rarity

50

4.2 SIGNIFICANT FEATURES OR HABITAT

4.2.1 Colonial Waterbirds 0.0

4.2.2 Winter Cover for Wildlife 0.0

4.2.3 Waterfowl Staging and Moulting 0.0

4.2.4 Waterfowl Breeding 0.0

4.2.5 Migratory Passerine, Shorebird or Raptor Stopover 0.0

4.2.6 Fish Habitat 0.0

Total for Significant Features and Habitat

0

4.3 ECOSYSTEM AGE

1

4.4 GREAT LAKES COASTAL WETLANDS

0

Sub Total:

131

TOTAL FOR SPECIAL FEATURES (maximum 250)

131

SUMMARY OF EVALUATION RESULT

Wetland	Elfrida Wetland B: Sinkhole Creek Headwaters	
TOTAL FOR 1.0 BIOLOGICAL COMPONENT		107
TOTAL FOR 2.0 SOCIAL COMPONENT		63
TOTAL FOR 3.0 HYDROLOGICAL COMPONENT		189
TOTAL FOR 4.0 SPECIAL FEATURES COMPONENT		131
	<u>WETLAND TOTAL</u>	<u>489</u>

INVESTIGATORS

Ash Baron		
	0	
	0	
	0	
	0	

AFFILIATION

Aquafor Beech Limited		
	0	
	0	
	0	
	0	

DATE

Aug 30 2016

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INVESTIGATORS

AFFILIATION

Ash Baron

Aquafor Beech Limited

DATES WETLAND VISITED

DATE THIS EVALUATION COMPLETED:

Sept 21 2016

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

WEATHER CONDITIONS

i) at time of field work Sunny

(Continue in the space below if necessary)

ii) summer conditions in general DROUGHT

OTHER POTENTIALLY USEFUL INFORMATION:

CHECKLIST OF PLANT AND ANIMAL SPECIES RECORDED IN THE WETLAND:

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

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

[Wetland Manual](#)**WETLAND DATA AND SCORING RECORD**

i) **WETLAND NAME:** Elfrida Wetland B: Sinkhole Creek Headwaters

ii) **MNR ADMINISTRATIVE REGION:** Guelph **DISTRICT:** Guelph
AREA OFFICE (if different from District): Niagara (Vineland)

iii) **CONSERVATION AUTHORITY JURISDICTION:** Hamilton CA
 (If not within a designated CA, check here: _____)

iv) **COUNTY OR REGIONAL MUNICIPALITY:** Hamilton

v) **TOWNSHIP:** _____

vi) **LOTS & CONCESSIONS:** _____
 (attach separate sheet if necessary) _____

vii) **MAP AND AIR PHOTO REFERENCES**

a) Latitude: _____ Longitude: _____

b) UTM grid reference: Zone: 17T Block: n/a
 Grid:E 599268 Grid:N 4780439

c) National Topographic Series:
 map name(s) _____
 map number(s) _____ edition _____
 scale _____

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)

viii) **WETLAND SIZE AND BOUNDARIES**

- a) **Single contiguous wetland area:** 7.75 hectares
- b) **Wetland complex comprised of** 2 individual wetlands:

Wetland Unit Number
(for reference)

Size of each
wetland unit

		Ha
Wetland Unit No.	1	4.15
Wetland Unit No.	2	0.29
Wetland Unit No.	3	2.48
Wetland Unit No.	4	0.25
Wetland Unit No.	5	1.38
Wetland Unit No.	6	0.00
Wetland Unit No.	7	0.00
Wetland Unit No.	8	0.00
Wetland Unit No.	9	0.00
Wetland Unit No.	10	0.00
Wetland Unit No.	11	0.00
Wetland Unit No.	12	0.00
Wetland Unit No.	13	0.00
Wetland Unit No.	14	0.00
Wetland Unit No.	15	0.00
Wetland Unit No.	16	0.00
Wetland Unit No.	17	0.00
Wetland Unit No.	18	0.00
Wetland Unit No.	19	0.00
Wetland Unit Totals:	8.55	

(Attach additional sheets if necessary)

TOTAL WETLAND SIZE

8.55

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

Differing community type that provides ecologic function and or hydrologic function

(Attach separate sheets if necessary .)

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1 GROWING DEGREE-DAYS/SOILS

GROWING DEGREE DAYS [MAP](#)

(check one)

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

SOILS

Estimated Fractional Area

0.48	clay/loam
0.52	silt/marl
0.00	limestone
0.00	sand
0.00	humic/mesic
0.00	fibric
0.00	granite

Determine the soil type from the appropriate OMAF soils maps

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.

Score		
<u>26</u>	clay/loam	<u>12.50</u>
<u>21</u>	silt/marl	<u>10.91</u>
_____	limestone	<u>0.00</u>
_____	sand	<u>0.00</u>
_____	humic/mesic	<u>0.00</u>
_____	fibric	<u>0.00</u>
_____	granite	<u>0.00</u>

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

23

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

Estimate the Wetland Type from air photos or default to "swamp" (8)

Fractional Area		Score	
Bog	0.00	x 3	0.0
Fen	0.00	x 6	0.0
Swamp	0.03	x 8	0.2
Marsh	0.97	x 15	14.6
		Subtotal:	14.8

Wetland type score (maximum 15 points) 15

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

Estimate from air photos

	Fractional Area		Score
Isolated	0.00	x 1 =	0.00
Palustrine (permanent or intermittent flow)	0.22	x 2 =	0.45
Riverine	0.78	x 4 =	3.10
Riverine (at rivermouth)	0.00	x 5 =	0.00
Lacustrine (at rivermouth)	0.00	x 5 =	0.00
Lacustrine (on enclosed bay, with barrier beach)	0.00	x 3 =	0.00
Lacustrine (exposed to lake)	0.00	x 2 =	0.00
		Sub Total:	3.55

Site Type Score (maximum 5 points) 4

1.2 BIODIVERSITY

1.2.1 **NUMBER OF WETLAND TYPES**

(Check only one)	Score
1) <input type="checkbox"/> one	9 points
2) <input checked="" type="checkbox"/> 13 two	13
3) <input type="checkbox"/> three	20
4) <input type="checkbox"/> four	30

Number of Wetland Types Score (maximum 30 points) 13

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1.2.2 VEGETATION COMMUNITIES [Veg Ref](#)

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
+ .5 each additional community = <u>2.5</u>	+ .5 each additional community = <u>5.0</u>	+ 1 each additional community = <u>0.0</u>
e.g., a wetland with 3 one form communities and 8 six form communities would score:	4 two form communities	12 four form communities and
	$6 + 13.5 + 15 = 34.5 = 35$ points	SubTotal: <u>8</u>
	Vegetation Communities Score (maximum 45 points)	<u>8</u>

Wetland Name: Elfrida Wetland B: Sinkhole Creek Headwaters

Wetland Size (ha): 8.55

Vegetation Form	% area in which form is dominant
h	2.92
c	0.00
dh	0.00
dc	0.00
ts	0.00
ls	0.00
ds	0.00
gc	3.39
m	0.00
ne	45.15
be	0.00
re	48.54
ff	0.00
f	0.00
su	0.00
u (unvegetated)	0.00
Total = 100%	100.00

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1.2.3 DIVERSITY OF SURROUNDING HABITAT

(Check all appropriate items(1))

Determine from air photos

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

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

3

1.2.4 PROXIMITY TO OTHER WETLANDS

(Check first appropriate category only)

Scoring

Determine from air photos and other wetlands evaluations in the vicinity

1) 8	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) 0	Hydrologically connected by surface water to other wetlands (same dominant wetland type) within 0.5 km	8
3) 0	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) 0	Hydrologically connected by surface water to other wetlands (same dominant wetland type) from 0.5 to 1.5 km away	5
5) 0	Within 0.75 km of other wetlands (different dominant wetland type) or open water body, but not hydrologically connected by surface water	5
6) 0	Within 1 km of other wetlands, but not hydrologically connected by surface water	2
7) 0	No wetland within 1 km	0

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

8

Hydrologically connected to

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1.2.5 INTERSPERSION

Optional: Complete as time permits or as scoring dictates.

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	21
8)	151 to 175	24
9)	176 to 200	27
10)	>200	30

Interspersion Score (Choose one only maximum 30 points)

12

1.2.6 OPEN WATER TYPES [Ref](#)

Determine from aerial photos.

Permanently flooded: (Check one)		Score
1)	8 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

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1.3 SIZE

Score may be lower than actual if "Vegetation Community and Interspersion" have not been calculated.

8.6 hectares 52 Subtotal for Biodiversity

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

Determine the percentage of the wetland area dominated by "h" or "c" by using aerial photograph.

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

h:	0.25	c:	0.00
----	------	----	------

		Score
1)	<u>0</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: Aerial photos

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) <u>6 points</u>	6 points
Absent	2) <u>0</u>	0

Source of information: 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) <u>12</u>	12 points
Habitat not suitable for fish	2) <u>0</u>	0

Source of information: Field observations

If any part of the wetland is riverine or the District fisheries files indicate presence of fish score "present"

Commercial Fish Score (maximum 12 points) 12

2.1.4 BULLFROGS

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

Source of information: Field observations and amphibian calling surveys

Bullfrog Score (maximum 1 point) 0

Southern Ontario Wetland Evaluation Data and Scoring Record

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2.1.5 SNAPPING TURTLES

(Check one)

Present

1)

Score (Choose one)

1 point

Absent

2)

0

Source of information:

Reptile surveys

Snapping Turtle Score (maximum 1 point)

0

2.1.6 FURBEARERS [Fur Ref](#)

(Consult Appendix 9)

Name of furbearer

Source of information

1)	Raccoon	3
2)	Virginia Opossum	
3)	Red Fox	
4)	Coyote	
5)	Deer	3
SubTotal		6

Field Observations	
	0
	0
	"
	"

Scoring: 3 points for each species. maximum 12

Furbearer Score (maximum 12 points)

6

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/NotKnown	0	0	0	0	0	0
Totals		0		0		0

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

Sources of information:

Hunting: 0

Nature: 0

Fishing: 0

Recreational Activities Score (maximum 80 points)

0

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2.3 LANDSCAPE AESTHETICS

Score using ortho-aerial photography

2.3.1 DISTINCTNESS

(Check one)			Score (Choose one)
Clearly distinct	1)	<input type="text" value="3"/>	3 points
Indistinct	2)	<input type="text" value="0"/>	0

Landscape Distinctness Score (maximum 3 points)

3

2.3.2 ABSENCE OF HUMAN DISTURBANCE

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

Source of information: Field observations

Absence of Human Disturbance Score (maximum 7 points)

1

2.4 EDUCATION AND PUBLIC AWARENESS

Optional: complete as time and scoring dictates.

2.4.1 EDUCATIONAL USES

(Check one)			Score (Choose one)
Frequent	1)	<input type="text"/>	20 points
Infrequent	2)	<input type="text"/>	12
No visits	3)	<input type="text" value="0"/>	0

Source of information: Privately owned property

Requires contact with Local Boards of Education.

Educational Uses Score (maximum 20 points)

0

2.4.2 FACILITIES AND PROGRAMS

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

Source of information: 0

Facilities and Programs Score (maximum 8 points)

0

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2.4.3 RESEARCH AND STUDIES

(check appropriate spaces)

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

Attach list of known reports by above categories

Refer to ESPA, EPA and ANSI reports.

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	40	26	16
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
	40		0	0

Name of settlement: Elfrida/Hamilton

Proximity to Human Settlement Score (maximum 40 points)

40

2.6 OWNERSHIP (FA= fraction Area)

Score

Select a default value of "4" if no other information exists.

FA of wetland in public or private ownership held under contract or in trust for wetland protection		x	10	=	0.00
FA of wetland area in public ownership, not as above		x	8	=	0.00
FA of wetland area in private ownership, not as above	1.00	x	4	=	4.00

Source of information: Guelph GIS Parcel layer:

Ownership Score (maximum 10 points)

4

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2.7 **SIZE**

The score may be lower than actual since economic and recreational values have not been completed.

8.6 hectares 58 Subtotal for Social

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	106-120	121-135	136-150	>150
<2 ha	1	2	4	8	10	12	14	14	14	15
2 - 4ha	1	2	4	8	12	13	14	14	15	16
5 - 8ha	2	2	5	9	13	14	15	15	16	16
9 - 12ha	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)

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) Unknown	0.0	=	0
Total:	0		

2.8.2 CULTURAL HERITAGE

1) Significant		=	30 points
2) Not Significant		=	0
3) Unknown	0.0	=	0
Total:	0		

Aboriginal Values/Cultural Heritage Score (maximum 30 points)

0.0

3.0 HYDROLOGICAL COMPONENT

3.1 FLOOD ATTENUATION

Estimated & Calculated values can be obtained from G.I.S. data layers.

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: Detennination 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)
- x** All other wetland types (Go through Steps 2,3 and 4B)

Step 2: Determination of Upstream Detention Factor (DF)

- (a) Wetland area (ha) 8.10
- (b) Total area (ha) of upstream detention areas (include the wetland itself) 128.55 *estimate*
- (c) Ratio of (a):(b) 0.06
- (d) Upstream detention factor: (c) x 2 = 0.1 0.13
(maximum allowable factor = 1)

Step 3: Determination of Wetland Attenuation Factor (AF)

- (a) Wetland area (ha) 8.55
- (b) Size of catchment basin (ha) upstream of wetland (include wetland itself in catchment area) 300.00 *calculate*
- (c) Ratio of (a):(b) 0.03
- (d) Wetland attenuation factor: (c) x 10 = 0.3 0.29
(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:
- (c) * Complex Formula - Isolated portion 100.00 100 *
- Initial Score 100 *
- Upstream detention factor (DF) (Step 2) 0.13
- Wetland attenuation factor (AF) (Step 3) 0.29
- Final score: [(DF + AF)/2] x Initial score = 20.55
- (c) * Final score:= 21

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

Flood Attenuation Score (maximum 100 points) 79.0

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>0.00</u>	x	0.5 =	<u>0.00</u>
FA of riverine wetland	<u>0.78</u>	x	1 =	<u>0.78</u>
FA of palustrine wetland with no inflow		x	0.7 =	<u>0.00</u>
FA of palustrine wetland with inflows	<u>0.22</u>	x	1 =	<u>0.22</u>
FA of lacustrine on lake shoreline	<u>0.00</u>	x	0.2 =	<u>0.00</u>
FA of lacustrine at lake inflow or outflow	<u> </u>	x	1 =	<u>0.00</u>
			Sub Total:	<u>1.00</u>
			Sum (WIF cannot exceed 1.0)	1.00

Step 3: Determination of catchment land use factor (LUF)

(Choose the first category that fits upstream landuse in the catchment.)

- 1) 1.0 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) **1.00**

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. (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>0.06</u>	x	0.75 =	<u>0.05</u>
FA of wetland with emergent, submergent or floating vegetation (re,be,ne,su,f,ff)	<u>0.94</u>	x	1 =	<u>0.94</u>
FA of wetland with little or no vegetation (u)	<u>0.00</u>	x	0.5 =	<u>0.00</u>
			Subtotal:	<u>0.98</u>

Estimate FA from air photos or use default factor of "0.75" **Sum (PUT cannot exceed 1.0)** **0.98**

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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)	1.00
	Land use factor (LUF)	1.00
	Pollutant uptake factor (PUT)	0.98
Final score: 60 x WQF x LUF x PUT =		59.05

Short Term Water Quality Improvement Score (maximum 60 points) 59

3.2.2 LONG TERM NUTRIENT TRAP

Determine wetland type from aerial photos and soil type from OMAF soils maps.

Step 1:

- | | | |
|-------------------------------------|--|----------|
| <input type="checkbox"/> | Wetland on large lakes or 5 major rivers | 0 points |
| <input checked="" 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 type="checkbox"/> 0 None of the above | 0 |

Long Term Nutrient Trap Score (maximum 10 points) 0

3.2.3 GROUNDWATER DISCHARGE

The final score will be underestimated since some of the wetland characteristics cannot be scored

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

(Scores are cumulative maximum score 30 points)

Percentage of Catchment: 0.03

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 0

Carbon Sink Score (maximum 5 points)

0

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3.4 SHORELINE EROSION CONTROL

Step 1: *Determine from ortho-aerial photography* Score

- | | | | |
|--|----------|---|---|
| | | Wetland entirely isolated or palustrine | 0 |
| | x | 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) | | Trees and shrubs | 15 |
| 2) | 8 | Emergent vegetation | 8 |
| 3) | | Submergent vegetation | 6 |
| 4) | | Other shoreline vegetation | 3 |
| 5) | | No vegetation | 0 |

Shoreline Erosion Control Score (maximum 15 points) **8**

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 | 0.00 |
| (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	0.22	x	50	=
FA of riverine wetland	0.78	x	20	=
FA of lacustrine wetland (wetland <50% lacustrine)	0.00	x	0	=
			Subtotal:	26.7

Ground Water Recharge Wetland Site Type Component Score (maximum 50 points) **27**

3.5.2 WETLAND SOIL RECHARGE POTENTIAL

Determine from OMAF soils maps.

(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
4) Riverine (not a major river)	5	2	
Totals	0		4

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

4

4.0 SPECIAL FEATURES COMPONENT**4.1 RARITY****4.1.1 WETLANDS** [Ref Map](#)

Site District 7E-5
 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
7-5	60	20	0	80	80
7-6	80	30	0	80	80

Rarity within the Landscape Score (maximum 80 points)

60

Rarity of Wetland Type Score (maximum 80 points)

20

The updated scores for rarity in Site Region 7-5 are in the stages of review and still require official confirmation.(June 8, 2004)

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4.1.2.3 PROVINCIALY SIGNIFICANT ANIMAL SPECIES [Prov Ref](#)

	Name of species	Source of information
1)	_____	_____
2)	_____	_____
3)	_____	_____
4)	_____	_____
5)	_____	_____
6)	_____	_____
7)	_____	_____
8)	_____	_____
9)	_____	_____
10)	_____	_____
11)	_____	_____
12)	_____	_____
13)	_____	_____
14)	_____	_____
15)	_____	_____

Attach separate list if necessary; Attach documentation

Scoring:

Number of provincially significant animal species in the wetland:

1 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)

50

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4.1.2.4 PROVINCIALY SIGNIFICANT PLANT SPECIES

(Scientific names must be recorded)

	Common Name	Scientific Name	Source of information
1)	_____	#N/A	_____
2)	_____	#N/A	_____
3)	_____	#N/A	_____
4)	_____	#N/A	_____
5)	_____	#N/A	_____
6)	_____	#N/A	_____
7)	_____	#N/A	_____
8)	_____	#N/A	_____
9)	_____	#N/A	_____
10)	_____	#N/A	_____
11)	_____	#N/A	_____
12)	_____	#N/A	_____
13)	_____	#N/A	_____
14)	_____	#N/A	_____
15)	_____	#N/A	_____

Attach separate list if necessary; Attach documentation

Scoring:

Number of provincially significant plant species in the wetland:

1 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)



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4.1.2.5 REGIONALLY SIGNIFICANT SPECIES (SITE REGION) [Spp Ref](#)

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)	_____	_____	_____
2)	_____	_____	_____
3)	_____	_____	_____
4)	_____	_____	_____
5)	_____	_____	_____
6)	_____	_____	_____
7)	_____	_____	_____
8)	_____	_____	_____
9)	_____	_____	_____
10)	_____	_____	_____
11)	_____	_____	_____
12)	_____	_____	_____
13)	_____	_____	_____
14)	_____	_____	_____
15)	_____	_____	_____

Attach separate list if necessary .Attach documentation.

Scoring:

No. of species significant in Site Region

1 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)



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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	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____
9	_____	_____	_____
10	_____	_____	_____
11	_____	_____	_____
12	_____	_____	_____
13	_____	_____	_____
14	_____	_____	_____
15	_____	_____	_____
16	_____	_____	_____
17	_____	_____	_____
18	_____	_____	_____

Attach separate list if necessary .Attach documentation.

Scoring:

No. of species significant in Site District

1 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	
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	0

Consult the Ontario Heronry database at Bird Studies Canada.

Subtotal:

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

Score "locally significant" if trees & shrubs are present, also consult District deer yard data.

(Check only highest level of significance)

Score

- | | | |
|---|-------------------------------------|-----|
| | (one only) | |
| 1) <input type="checkbox"/> | Provincially significant | 100 |
| 2) <input type="checkbox"/> | Significant in Site Region | 50 |
| 3) <input type="checkbox"/> | Significant in Site District | 25 |
| 3) <input checked="" type="checkbox"/> 10 | Locally significant | 10 |
| 4) <input type="checkbox"/> | Little or poor winter cover present | 0 |

Source of information:

0

Winter Cover for Wildlife Score (maximum 100 points)

10

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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)

	Staging	Score (one only)	Moulting	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	0	0	0	0
6) Unknown		0		0
Total:	0		0	
Subtotal:		0		

Source of information:

0

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) 0 Habitat not suitable	0

Source of information:

Field obs.

Waterfowl Breeding Score (maximum 100 points)

0

4.2.5 MIGRATOR PASSERINE, SHOREBIRD OR RAPTOR STOPOVER AREA

(check highest applicable category)

1) Provincially significant	100
2) Significant in Site Region	50
3) Significant in Site District	10
4) 0 Not significant	0

Source of information:

0

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

0

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4.2.6 FISH HABITAT

Consult District Fisheries files. If fish are present in the wetland, score 15 or 25 points depending on the size of the fish habitat present.

4.2.6. 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 Step 3)

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)

0

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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	x	1.77	0.4	6 pts	2.4
2	Shortgrass-Sedge				11	0.0
3	Cattail-Bulrush-Burreed	x	4.15	0.04	5	0.2
4	Arrowhead-Pickerelweed				5	0.0
5	Duckweed				2	0.0
6	Smartweed-Waterwillow				6	0.0
7	Waterlily-Lotus				11	0.0
8	Waterweed-Watercress				9	0.0
9	Ribbongrass				10	0.0
10	Coontail-Naiad-Watermilfoil				13	0.0
11	Narrowleaf Pondweed				5	0.0
12	Broadleaf Pondweed				8	0.0
Sub Total Score (maximum 75 points)						2.6
Total Score (maximum 75 points)						2.6

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)

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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				6 pts	0.0
2	Shortgrass-Sedge				11	0.0
3	Cattail-Bulrush-Burreed				5	0.0
4	Arrowhead-Pickerelweed				5	0.0
Sub Total Score (maximum 25 points)						0.0
Total Score (maximum 25 points)						0.0

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	0.0
Permanently flooded				10	0.0
Sub SCORE (maximum 20 points)					0.0
SCORE (maximum 20 points)					0.0

Step 7: Calculation of final score

Score for Spawning and Nursery Habitat (Low Marsh) (maximum 75) = 2.6

Score for Spawning and Nursery Habitat (High Marsh) (maximum 25) = 0.0

Score for Swamp Containing Fish Habitat (maximum 20) = 0.0

Subtotal: 2.6

Sum (maximum score 100 points) = 2.6

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4.2.6.2 Migration and Staging Habitat

Score only if information on fish migration and staging exists, e.g. migration of northern pike through a wetland to access spawning areas.

Step 1:

- 1) 0 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) <u> </u> Significant in Site Region | 25 points |
| 2) <u> </u> Significant in Site District | 15 |
| 3) <u> </u> Locally Significant | 10 |
| 4) <u> </u> 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) <u> </u> Wetland is riverine at rivermouth or lacustrine at rivermouth | 25 points |
| 2) <u> </u> Wetland is riverine, within 0.75 km of rivermouth | 15 |
| 3) <u> </u> Wetland is lacustrine, within 0.75 km of rivermouth | 10 |
| 4) <u> </u> Fish staging and/or migration habitat present, but not as above | 5 |

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

4.3 ECOSYSTEM AGE

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

	Fractional Area			Scoring
Bog	0.00	x	25 =	0.0
Fen, treed to open on deep soils floating mats or marl	0.00	x	20 =	0.0
Fen, on limestone rock	0.00	x	5 =	0.0
Swamp	0.03	x	3 =	0.1
Marsh	0.97	x	0 =	0.0
		Sub Total:		0.1

Ecosystem Age Score (maximum 25 points) **0.1**

4.4 GREAT LAKES COASTAL WETLANDS

Score for coastal (see text for definition) wetlands only

Choose one only

wetland < 10 ha	=	0 points
wetland 10- 50 ha	=	25
wetland 51 -100 ha	=	50
wetland > 100 ha	=	75

Great Lakes Coastal Wetlands Score (maximum 75 points) **0**

_____ The wetland is not within the Coastal zone for either the Great Lakes or associated major rivers and as such will not be scored within this section.

5.0 EXTRA INFORMATION

5.1 PURPLE LOOSESTRIFE

 Absent/Not seen

 x Present

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

Abundance code

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

5.2 SEASONALLY FLOODED AREAS

Check one or more

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

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 x

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 x

WETLAND EVALUATION SCORING RECORD

WETLAND NAME AND/OR NUMBER **Elfrida Wetland B: Sinkhole Creek Headwaters**

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1	Growing Degree-Days/Soils	23.4
1.1.2	Wetland Type	14.8
1.1.3	Site Type	3.6
Total for Productivity		42

1.2 BIODIVERSITY

1.2.1	Number of Wetland Types	13.0
1.2.2	Vegetation Communities (maximum 45)	7.5
1.2.3	Diversity of Surrounding Habitat (maximum 7)	3.0
1.2.4	Proximity to Other Wetlands	8.0
1.2.5	Interspersion	12.0
1.2.6	Open Water Type	8.0
Total for Biodiversity		52

Sub Total for Biodiversity **52**

1.3 SIZE (Biological Component) **8**

Sub Total: **101**

TOTAL FOR BIOLOGICAL COMPONENT (not to exceed 250) **101**

2.0 SOCIAL COMPONENT**2.1 ECONOMICALLY VALUABLE PRODUCTS**

2.1.1 Wood Products	0
2.1.2 Wild Rice	0
2.1.3 Commercial Fish	12
2.1.4 Bullfrogs	0
2.1.5 Snapping Turtles	0
2.1.6 Furbearers	6

Total for Economically Valuable Products **18**

2.2 RECREATIONAL ACTIVITIES (maximum 80)**0****2.3 LANDSCAPE AESTHETICS**

2.3.1 Distinctness	3
2.3.2 Absence of Human Disturbance	1

Total for Landscape Aesthetics **4**

2.4 EDUCATION AND PUBLIC AWARENESS

2.4.1 Educational Uses	0
2.4.2 Facilities and Programs	0
2.4.3 Research and Studies	0

Total for Education and Public Awareness **0**

2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT**40****2.6 OWNERSHIP****4**

Subtotal for Social Component **58.0**

2.7 SIZE (Social Component)**0****2.8 ABORIGINAL AND CULTURAL VALUES****0**

Sub Total: **66**

TOTAL FOR SOCIAL COMPONENT (not to exceed 250) **66**

3.0 HYDROLOGICAL COMPONENT

3.1	<u>FLOOD ATTENUATION</u>		79
3.2	<u>WATER QUALITY IMPROVEMENT</u>		
3.2.1	Short Term Improvement	59.1	
3.2.2	Long Term Improvement	0.0	
3.2.3	Groundwater Discharge (maximum 30)	7.0	
	Total for Water Quality Improvement		66
3.3	<u>CARBON SINK</u>		0
3.4	<u>SHORELINE EROSION CONTROL</u>		8
3.5	<u>GROUNDWATER RECHARGE</u>		
3.5.1	Site Type	26.74	
3.5.2	Soils	4.0	
	Total for Groundwater Recharge		31
		Sub Total:	184
	<u>TOTAL FOR HYDROLOGICAL COMPONENT (not to exceed 250)</u>		184

4.0 SPECIAL FEATURES**4.1 RARITY**

4.1.1 Wetlands

4.1.1.1 Rarity within the Landscape 60.0

4.1.1.2 Rarirty of Wetland Type (maximum 80) 20.0

Total for Wetland Rarity

80

4.1.2 Species

4.1.2.1 Endangered or Threatened Species Breeding 0.0

4.1.2.2 Traditional Use by Endangered or Threatened Species 0.0

4.1.2.3 Provincially Significant Animals 50.0

4.1.2.4 Provincially Significant Plants 0.0

4.1.2.5 Regionally Significant Species 0.0

4.1.2.6 Locally Significant Species 0.0

Total for Species Rarity

50

4.2 SIGNIFICANT FEATURES OR HABITAT

4.2.1 Colonial Waterbirds 0.0

4.2.2 Winter Cover for Wildlife 10.0

4.2.3 Waterfowl Staging and Moulting 0.0

4.2.4 Waterfowl Breeding 0.0

4.2.5 Migratory Passerine, Shorebird or Raptor Stopover 0.0

4.2.6 Fish Habitat 2.6

Total for Significant Features and Habitat

13

4.3 ECOSYSTEM AGE

0

4.4 GREAT LAKES COASTAL WETLANDS

0

Sub Total:

143

TOTAL FOR SPECIAL FEATURES (maximum 250)

143

SUMMARY OF EVALUATION RESULT

Wetland	Elfrida Wetland B: Sinkhole Creek Headwaters	
TOTAL FOR 1.0 BIOLOGICAL COMPONENT		101
TOTAL FOR 2.0 SOCIAL COMPONENT		66
TOTAL FOR 3.0 HYDROLOGICAL COMPONENT		184
TOTAL FOR 4.0 SPECIAL FEATURES COMPONENT		143
	<u>WETLAND TOTAL</u>	<u>494</u>

INVESTIGATORS

	Ash Baron	
	0	
	0	
	0	
	0	

AFFILIATION

	Aquafor Beech Limited	
	0	
	0	
	0	
	0	

DATE

Sept 21 2016