Brooks and Sheep's Bay Wetland Complex, Jack Lake

An OWES evaluation

August, 2016



Location Information:	Anstruther Township: Con 1, Lot 38
	Burleigh Township: Con 14, Lots 15 to 17; Con 15, Lots 14 to 22; Con 16, Lots 12 to 23
	Chandos Township: Con 2, Lots A to D and 1 to 2; Con 3, Lots A to D and 1 to 5; Con 4, Lots A to C, and 1 to 5
	Methuen Township: Con 8, Lot 32; Con 9, Lots 31 to 32; Con 10, Lots 28 to 32; Con 11,
	Lots 28 to 32; Con 12, Lots 28 to 32
	County of Peterborough
Prepared for:	Jack Lake Association
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Produced by



Glenside Ecological Services Limited

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WET	LAND EV	ALUATION DATA AND SCORING RECORD	5
1.0		GICAL COMPONENT	9
1.1	TROD		
	1.1.1	Growing Degree-Days/Soils (max: 30 pts)	9
	1.1.2	Wetland Type	10
	1.1.3	Site Type	10
1.2	BIODI	VERSITY	11
	1.2.1	Number of Wetland Type	11
	1.2.2	Vegetation Communities	11
	1.2.3	Diversity of Surrounding Habitat	12
	1.2.4	Proximity to Other Wetlands	12
	1.2.5	Interspersion	13
	1.2.6	Open Water Types	13
1.3	SIZE		14
2.0	SOCIA		
2.1	ECON		
	2.1.1	Wood Products	15
	2.1.2	Lowbush Cranberry	15
	2.1.3	Wild Rice	15
	2.1.4	Commercial Baitfish	16
	2.1.5	Furbearers	16
2.2	RECRE	ATIONAL ACTIVITIES	
2.3	LANDS	SCAPE AETHETICS	
	2.3.1	Distinctness	18
	2.3.2	Absence of Human Disturbance	18
2.4	EDUCA	ATION AND PUBLIC AWARENESS	19
	2.4.1	Educational Uses	19
	2.4.2	Facilities and Programs	19
	2.4.3	Research and Studies	20



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Northe	ern OWES	S Version 1.2	August 2016			
2.5						
2.6			22			
2.7						
2.8	ABORIC	GINAL VALUES AND CULTURAL HERITAGE	23			
	2.8.1	Aboriginal Values	23			
	2.8.2	Cultural Heritage	23			
3.0	HYDRO	DLOGICAL COMPONENT	24			
3.1	FLOOD	ATTENUATION	24			
3.2	GROUN	NDWATER RECHARGE	25			
	3.2.1	Site Type	25			
	3.2.2	Soil Recharge Potential	25			
3.3	DOWN	STREAM WATER QUALITY IMPROVEMENT	26			
	3.3.1	Watershed Improvement Factor	26			
	3.3.2	Adjacent and Watershed Land Use	26			
	3.3.3	Vegetation Form	27			
3.4	CARBO	N SINK	28			
3.5	SHORE	ILNE EROSION CONTROL	28			
3.6	GROUN	NDWATER DISCHARGE	29			
4.0	SPECIA	L FEATURES COMPONENT	30			
4.1	RARITY	/				
	4.1.1	Wetlands	30			
	4.1.2	Species	31			
4.2	SIGNIFI	ICANT FEATURES AND HABITATS				
	4.2.1	Colonial Waterbirds	36			
	4.2.2	Winter Cover for Wildlife	37			
	4.2.3	Waterfowl Staging and/or Moulting Areas	37			
	4.2.4	Waterfowl Breeding	38			
	4.2.5	Migratory Passerine, Shorebird or Raptor Stopover Area	38			
	4.2.6	Ungulate Habitat	38			
	4.2.7	Fish Habitat	39			
4.3	ECOSYS	STEM AGE	44			
4.4	GREAT	LAKES COASTAL WETLANDS	44			
5.0	DOCUN	MENTATION OF WETLAND FEATURES NOT INCLUDED IN THE EVALUATION	45			
		Prenared by Glenside Ecological Services Limited	3			

Northe	ern OWES	S Version 1.2	August 2016
5.1	INVASI	VE SPECIES	45
5.2	VERNA	L POOLS	45
5.3	SPECIES	S OF SPECIAL INTEREST	46
	5.3.1	Osprey	46
	5.3.2	Common Loon	46
5.4	IMPOR [®]	TANT DRINKING WATER AREA	46
5.5	AREA O	F WETLAND RESTORATION POTENTIAL	47
<u>WETL</u>	AND EV	ALUATION SCORING RECORD	49
<u>APPEI</u>	NDICES .		54
APPE	NDIX 1: N	//APS	54
APPE	NDIX 2: V	VETLAND DATA SUMMARY FORM	64
APPE	NDIX 3: S	GIGNIFICANT SPECIES OBSERVATIONS	71
APPE	NDIX 4: S	PECIES LIST	



WETLAND EVALUATION DATA AND SCORING RECORD

- i. Wetland Name: Brooks and Sheep's Bay Wetland Complex
- MNR Administrative Region:
 MNR District: <u>Bancroft</u>
 MNR Area Office: <u>Bancroft</u>
- iii. Conservation Authority Jurisdiction: None
- iv. County or Regional Municipality: County of Peterborough
- v. Township/Geographic Township and/or Local Municipality: <u>Anstruther, Chandos, Methuen, Burleigh</u>
- vi. Lots and Concessions:
 - Anstruther Township: Con 1, Lot 38
 - Burleigh Township: Con 14, Lots 15 to 17; Con 15, Lots 14 to 22; Con 16, Lots 12 to 23
 - <u>Chandos Township: Con 2, Lots A to D and 1 to 2; Con 3, Lots A to D and 1 to 5; Con 4, Lots A to C, and 1 to 5</u>
 - Methuen Township: Con 8, Lot 32; Con 9, Lots 31 to 32; Con 10, Lots 28 to 32; Con 11, Lots 28 to 32; Con 12, Lots 28 to 32
- vii. Ecodistrict/Ecoregion: Bancroft 5E-11 / Georgian Bay 5E
- viii. Map and Air Photo References:
 - a. Latitude Longitude
 - b. UTM grid reference: <u>17 729000 4957000; 17 730000 4954000; 17 730000 4955000; 17 730000 4956000; 17 730000 4956000; 17 731000 4956000; 17 731000 4956000; 17 731000 4956000; 17 731000 4956000; 17 732000 4955000; 17 732000 4955000; 17 732000 4955000; 17 732000 4955000; 17 732000 4956000; 17 732000 4956000; 17 732000 4956000; 17 732000 4956000; 17 733000 4956000; 17 732000 4960000; 17 733000 4956000; 17 734000 4956000; 17 734000 4956000; 17 734000 4956000; 17 734000 4956000; 17 734000 4956000; 17 734000 4956000; 17 734000 4956000; 17 734000 4956000; 17 734000 4956000; 17 734000 4956000; 17 734000 4956000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000; 17 734000 49560000]
 </u>
 - National Topographic Series: Map name(s): <u>Used LIO spatial data</u> Map Number(s): Edition: Scale:
 - Aerial Photographs: SCOOP Date(s) photo taken: 2013
 Flight & plate numbers: <u>1km177290495602013SCOOP; 1km177290495702013SCOOP;</u> <u>1km177300495402013SCOOP; 1km177300495502013SCOOP; 1km177300495602013SCOOP;</u> <u>1km177300495702013SCOOP; 1km177300495802013SCOOP; 1km177300495902013SCOOP;</u>



1km177300496002013SCOOP; 1km177310495302013SCOOP; 1km177310495402013SCOOP; 1km177310495502013SCOOP; 1km177310495602013SCOOP; 1km177310495702013SCOOP; 1km177310495802013SCOOP; 1km177310495902013SCOOP; 1km177310496002013SCOOP; 1km177320495402013SCOOP; 1km177310496202013SCOOP; 1km177320495302013SCOOP; 1km177320495402013SCOOP; 1km177320495502013SCOOP; 1km177320495602013SCOOP; 1km177320495702013SCOOP; 1km177320495802013SCOOP; 1km177320495902013SCOOP; 1km177320495002013SCOOP; 1km177320496102013SCOOP; 1km177320496202013SCOOP; 1km177330495302013SCOOP; 1km177330495402013SCOOP; 1km177330495502013SCOOP; 1km177330495602013SCOOP; 1km177330495702013SCOOP; 1km177330495802013SCOOP; 1km177330495602013SCOOP; 1km177330496002013SCOOP; 1km177330495802013SCOOP; 1km177330495602013SCOOP; 1km177340495702013SCOOP; 1km177340495502013SCOOP; 1km177340495602013SCOOP; 1km177340495702013SCOOP; 1km177340495802013SCOOP; 1km177340495602013SCOOP; 1km177340495702013SCOOP; 1km177340495802013SCOOP; 1km177340495602013SCOOP; 1km177340495702013SCOOP; 1km177340495802013SCOOP; 1km177340495902013SCOOP; 1km177340495702013SCOOP; 1km177340495802013SCOOP; 1km177340495902013SCOOP; 1km177340496002013SCOOP; 1km177340496102013SCOOP; 1km177350495602013SCOOP; 1km177340496002013SCOOP; 1km177340496102013SCOOP; 1km177350495602013SCOOP; 1km177350495702013SCOOP; 1km177350495802013SCOOP; 1km177350495902013SCOOP; 1km177350495702013SCOOP; 1km177350495802013SCOOP; 1km177350495802013SCOOP; 1km177350495802013SCOOP; 1km177350495902013SCOOP; 1km177350495802013SCOOP; 1km177350495802013SCOOP; 1km177350495802013SCOOP; 1km177350495802013SCOOP; 1km177350495802013SCOOP; 1km177350495802013SCOOP; 1km177350495802013SCO

- e. Ontario Base Map numbers & scale: OBM Index Numbers: <u>1017725049550; 1017730049600;</u> <u>1017730049550; 1017730049500; 1017735049600; 1017735049550</u>
- ix. Wetland Size: (circle appropriate category, a or b)
 - a. Single contiguous wetland area

Total wetland size = hectares

b. Wetland complexed comprised of <u>44</u> individual wetlands:

Wetland Unit No 1: =	23.11	hectares
Wetland Unit No 2: =	2.38	hectares
Wetland Unit No 3: =	3.79	hectares
Wetland Unit No 4: =	3.73	hectares
Wetland Unit No 5: =	9.61	hectares
Wetland Unit No 6: =	7.86	hectares
Wetland Unit No 7: =	4.49	hectares
Wetland Unit No 8: =	2.12	hectares
Wetland Unit No 9: =	5.47	hectares
Wetland Unit No 10: =	6.54	hectares
Wetland Unit No 11: =	2.86	hectares
Wetland Unit No 12: =	7.28	hectares
Wetland Unit No 13: =	15.00	hectares
Wetland Unit No 14: =	3.87	hectares
Wetland Unit No 15: =	4.57	hectares
Wetland Unit No 16: =	5.88	hectares
Wetland Unit No 17: =	3.04	hectares
Wetland Unit No 18: =	4.20	hectares
Wetland Unit No 19: =	49.69	hectares
Wetland Unit No 20: =	2.23	hectares
Wetland Unit No 21: =	51.39	hectares
Wetland Unit No 22: =	30.81	hectares



	-0
19.26	hectares
9.02	hectares
2.28	hectares
3.34	hectares
18.17	hectares
29.49	hectares
3.55	hectares
4.55	hectares
15.97	hectares
2.81	hectares
5.70	hectares
3.16	hectares
2.15	hectares
2.01	hectares
11.29	hectares
10.01	hectares
3.63	hectares
2.53	hectares
8.39	hectares
8.94	hectares
2.10	hectares
2.45	hectares
	19.26 9.02 2.28 3.34 18.17 29.49 3.55 4.55 15.97 2.81 5.70 3.16 2.15 2.01 11.29 10.01 3.63 2.53 8.39 8.94 2.10 2.45

Total wetland size = <u>420.7</u> hectares (add together size of each unit)

Documentation requirements for evaluated wetland complex (attach additional sheet if necessary)

- A statement of rationale for identifying a wetland complex;
- A statement of rational for identifying any wetland complex less than 2 ha in total size;
- A statement of rational for any vegetation community less than 0.5 ha in size;
- Adherence to the wetland complexing rules (750m; "watershed" rule; lacustrine wetlands); and
- Written documentation for the reason for including wetland units smaller than 2 ha.

All wetlands are complexed in accordance with the OWES wetland complexing rules and are therefore within 750m of each other and in the same watershed. The complex extends from Jack Lake up into the surrounding watershed based on hydrological connectivity and contiguous habitat of identified Species at Risk. A break point was identified at Apsley Lake where the distance between wetland units >2ha exceeded 750m. No wetland units are less than 2 ha and no vegetation communities are less than 0.5 ha.



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Vegetation Form	FA
h	0.05 (0.01 unverified)
С	0.20 (0.09 unverified)
dh	
dc	
ts	0.17 (0.10 unverified)
ls	0.05 (0.02 unverified)
ds	
gc	
m	
ne	0.16 (0.05 unverified)
be	
re	0.16 (0.05 unverified)
ff	
f	0.21 (0.14 unverified)
su	
u	



1.1.1 Growing Degree-Days/Soils (max: 30 pts) Refer to page 43 of manual for further explanation **1.0 BIOLOGICAL COMPONENT** • Determine the correct GDD value for your wetland (use Figure 5) Circle the appropriate GDD value from the evaluation • table below Determine the Fractional Area (FA) of the wetland for . each soil type. **1.1 PRODUCTIVITY** Multiply the fractional area of each soil type by the ٠ applicable score-factor in the evaluation table Sum the scores for each soil type to obtain the final ٠ score(maximum score is 30 points) NOTE: In wetland complexes the evaluator should aim at determining the fractional area occupied by the categories for the complex as a whole

		Clay- Loam	Silt - Marl	Lime- stone	Sand	Humic - Mesic	Fibric	Granite
	<1600	12	11	9	7	7	6	4
ays	1600-2000	15	13	11	9	8	7	5
e-D	2000-2400	18	15	13	11	9	8	7
irov	2400-2800	22	18	15	13	11	9	7
De	2800-3000	26	21	18	15	13	10	8
	>3000	30	25	20	18	15	12	9

Soil Type	FA of wetland in soil type		Enter appropriate score-factor from above table		
Clay/Loam		х		=	
Silt/Marl		Х		=	
Limestone		Х		=	
Sand	0.15	Х	15	=	2.25
Humic/Mesic	0.35	Х	13	=	4.55
Fibric	0.03	Х	10	=	0.3
Granite		Х		=	
Total					7.1*

*Glenside Note: Score limited to field verified wetland units and therefore fractional area does not equal 1. Score may be higher.

GDD/Soils Score (maximum 30 points)

Northern OWES Version 1.2 1.1.2 Wetland Type

(Fractional Areas = area of wetland type/total wetland area)

	Fractional Area			Score
Bog		x 3	=	
Fen	0.06	x 6	=	0.36
Swamp	0.43	x 8	=	3.44
Marsh	0.51	x 15	=	7.65
Total			=	11.45

Wetland Type Score (maximum 15 points)

11

1.1.3 Site Type

(Fractional Areas = area of site type/total wetland area)

	Fractional Area			Score
Isolate		x 1	=	
Palustrine (permanent or intermittent flow)	0.86	x 2	=	1.72
Riverine		x 4	=	
Riverine (at rivermouth)		x 5	=	
Lacustrine (at rivermouth)	0.05	x 5	=	0.25
Lacustrine (with barrier beach)		x 3	=	
Lacustrine (exposed to lake)	0.09	x 2	=	0.18
Total			=	2.15

Site Type Score (maximum 5 points) 2



1.2 BIODIVERSITY

1.2.1 Number of Wetland Type

(Check only one)

	One	=	9 points
	Two	=	13
х	X Three		20
	Four	=	30

Number of Wetland Types Score (maximum 30 points) 20

1.2.2 Vegetation Communities

Use the data sheet provided I Appendix 4 to record and score vegetation communities (the completed form must be attached to this data record)

Scoring (circle only one	option for each	of the columns below):
--------------------------	-----------------	------------------------

			1				1 1			-
To	tal #	of communities		Tot	al # o	f communities	Total # of communitie			f communities
	witl	n 1-3 forms			with	4-5 forms		with 6 or more forms		
1	=	1.5 pts		1	=	2 pts		1	=	3 pts
2	=	2.5		2	=	3.5		2	=	5
3	=	3.5		3	=	5		3	=	7
4	=	4.5		4	=	6.5		4	=	9
5	=	5		5	=	7.5		5	=	10.5
6	=	5.5		6	=	8.5		6	=	12
7	=	6		7	=	9.5		7	=	13.5
8	=	6.5		8	=	10.5		8	=	15
9	=	7		9	=	11.5		9	=	16.5
10	=	7.5		10	=	12.5		10	=	18
11	=	8		11	=	13		11	=	19
+ 0	.5 for	each additional		+ 0.	5 for (each additional		+ 0.5 for each additional		
	СС	ommunity			COI	nmunity		community		
43	=	24		15	=	15		5	=	10.5

Vegetation Communities Score (maximum 45 points)

45*

*Glenside Note: For vegetation communities not verified in the field only vegetation forms visible in the aerial photography were scored. Therefore communities may be more complex and score may be higher



Check all appropriate items. Only habitat within 1.5 km of the wetland boundary and at least 0.5 ha in size are to be scored.

	recent burn (<5yr)
	abandoned agricultural land
Х	utility corridor
Х	deciduous forest
	recent cutover or clearcut (<5yr)
Х	coniferous forest
Х	mixed forest*
	crops
	abandoned pits and quarries
Х	pasture
	ravine
	fencerows
Х	open lake or deep river
	creek floodplain
X	rock outcrop

*"Mixed forest" is defined as either 25% coniferous trees distributed singly or in clumps in deciduous forest or 25% deciduous trees distributed singly or in clumps in coniferous forest. Note that Forest Resource Inventory (FRI) maps can be misleading since 25% conifer within a unit could be entirely concentrated around a lake.

Score 1 point for each feature checked, up to a maximum of 7 points.

Diversity of Surrounding Habitat Score (maximum 7 points)

7

1.2.4 Proximity to Other Wetlands

Check highest appropriate category (Note: if the wetland is lacustrine, score option #1 at 8 points)

		Points
v	Hydrologically connected by surface water to other wetlands (different dominant	8
^	wetland type), or to open lake or river within 1.5 km	
	Hydrologically connected by surface water to other wetlands (same dominant wetland	8
	type) within 0.5 km	
	Hydrologically connected by surface water to other wetlands (different dominant	5
	wetland type), or to open lake or river from 1.5 to 4 km away	
	Hydrologically connected by surface water to other wetlands (same dominant wetland	5
	type) from 0.5 to 1.5 km away	
	Within 0.75 km of other wetlands (different dominant wetland type) or open lake or	5
	river, but not hydrologically connected by surface water	
	Within 1 km of other wetlands, but not hydrologically connected by surface water	2
	No wetland within 1 km	0

Name and distance (from wetland) of wetlands/waterbodies scored above:

Proximity to other Wetlands Score (maximum 8 points) 8



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1.2.5 Interspersion

Number of Intersections = 168

\checkmark	Number of		Points
	Intersections		
	(check one only)		
	26 or less	=	3
	27 to 40	=	6
	41 to 60	=	9
	61 to 80	=	12
	81 to 100	=	15
	101 to 125	=	18
	126 to 150	=	21
Х	151 to 175	=	24
	176 to 200	=	27
	>200	=	30

Interspersion Score (maximum 30 points)

24

1.2.6 Open Water Types

NOTE: this attribute is only to be scored for permanently flooded open water within the wetland (adjacent lakes do not count). Check one option only.

	Open Water Type	Characteristic		Points
	Type 1	Open water occupies < 5 % of wetland area	=	8
	Type 2	Open water occupies 5-25% of wetland (occurring in central area)	=	8
v	Type 3	Open water occupies 5-25% (occurring in various-sized ponds,	=	14
^		dense patches of vegetation or vegetation in diffuse stands)		
	Type 4	Open water occupies 26-75% of wetland (occurring in a central area)	=	20
	Type 5	Open water occupies 26-75% of wetlands (small ponds and	=	30
		embayments are common)		
	Type 6	Open water occupies 76%-95% of wetland (occurring in large	=	8
		central area; vegetation is peripheral)		
	Type 7	Open water occupies 76-95% of wetland (vegetation in	=	14
		patches or diffuse open stands)		
	Type 8	Open water occupies more than 95% of wetland area	=	3
	No open water		=	0

Glenside Note: 21% of wetland is open water marsh, therefore Type 3

Open Water Type Score (maximum 30	
points)	14
_	



1.3 SIZE(BIOLOGICAL COMPONENT)

Total Size of Wetland: = 420.7 ha

Sum of scores from Biodiversity Subcomponent

1.2.1

+ 1.2.2

+ 1.2.3

+ 1.2.4

+ 1.2.5

+ 1.2.6

118

Check the appropriate score from the table below

	Total Score for Biodiversity Subcomponent										
		<37	37-47	48-60	61-72	73-84	85-96	97-108	109-120	121-132	>132
	<20 ha	1	5	7	8	9	17	25	34	43	50
	20-40	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
(al	141-160	11	15	17	19	23	34	46	50	50	50
e (F	161-180	13	17	19	21	25	37	49	50	50	50
Siz	181-200	15	19	21	23	28	40	50	50	50	50
pue	201-400	17	21	23	25	31	43	50	50	50	50
etla	401-600	19	23	25	28	34	46	50	50	50	50
Š	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

Size Score (Biological Component) (maximum 50 points)



2.0 SOCIAL COMPONENT

2.1 ECONOMICALLY VALUABLE PRODUCTS

2.1.1 Wood Products

Check the option that best reflects the total area (ha) of forested wetland (i.e., areas where the dominant vegetation form is h or c). Note that this is the area of all the forested vegetation communities, not total wetland size. Do not include area where harvest is not permitted. Check only one option.

Area of wetland used for scoring 2.1.1: 107 ha

\checkmark			Points
	<5 ha	=	0 pts
	5 – 25 ha	=	4
	26 – 50 ha	=	6
	51 – 100 ha	=	8
	101 – 200 ha	=	11
	> 200 ha	=	14

Source of information: <u>GIS & field investigation</u>. <u>85 ha dominated by conifer, 22 ha dominated</u> by hardwoods

2.1.2 Lowbush Cranberry

Check only one.

✓			Points
	Present	=	2 pts
Х	Absent	=	0
	Harvest not permitted	=	0

Source of information: Not identified in field

2.1.3 Wild Rice

Check only one.

\checkmark			Points
	Present (min size 0.5 ha)	=	10 pts
	Absent	=	0
	Harvest not permitted	=	0

Source of information: Not identified in field

Lowbush Cranberry Score (maximum 2 points)

Wood Products Score (maximum 14 points)

Wild Rice Score (maximum 10 points) 0

0



Northern OWES Version 1.2

Check only one.

✓			Points
Х	Present	=	12 pts
	Absent	=	0
	Fishing not permitted	=	0

Commercial Baitfish Score (maximum 12 points) 12

Source of information: Stephen Lawrence, Fish and Wildlife Technical Specialist, Bancroft District, OMNRF 613-332-3940 ext 242 | <u>steve.lawrence@ontario.ca</u>. Provided BHA_Numbers BA0171, BA0187, BA0188 & BA0192 and Stephen Lawrence reported that BA0171, BA0187, BA0188 are Active for baitfish and leeches and BA0192 is open.

2.1.5 Furbearers

Only species recognized as furbearers under the Fish & Wildlife Conservation Act may be scored. Score 3 points for each furbearer species listed, up to a maximum of 12 points. Score 0 points if trapping is prohibited.

	Name of Furbearer	Source of Information
1	Beaver	Field investigation
2	Muskrat	Field investigation
3	Northern Raccoon	Field investigation
4	Black Bear	Field investigation
5	Red Squirrel	Field investigation
6		

Furbearer Score (maximum 12 points)

2.2 RECREATIONAL ACTIVITIES

Sources of information and reasons for scoring a wetland under high or moderate use below, must be included below.

Circle one score for each of the activities listed. Score is cumulative – add score for hunting, nature enjoyment and fishing together for final score.

		Type of Wetland Associated Use					
		Hunting	Nature Enjoyment/ Ecosystem Study	Fishing			
e	High	<u>40 points</u>	40 points	<u>40 points</u>			
of Us	Moderate	20	20	20			
Isity	Low	8	<u>8</u>	8			
Inter	Not Possible/ No Evidence	0	0	0			

Sources of information (include evidence/criteria forming basis for score and any relevant reference used to obtain that information):

- e.g., Hunting scored at 20 points: 5 hunting blinds observed; hunters using area frequently monitored for compliance (source: D. Black, MNR Conservation Officer)

Hunting:	Mike Michell, Conservation Officer, Bancroft District, OMNRF reported more than 100 hunting
	days in the wetland complex area (pers com 27/07/2016, 705-755-3366; mike.michell@ontario.ca).
	Shotgun shells observed at wetland unit 9. Joe Dunkerley, Anchorage Marina reported 4-5 private
	hunt camps around Jack Lake Road and south of County Road 504. Mr. Dunkerley has his own
	hunt camp in this area.
Nature:	Wetland visited regularly by local naturalist Sheelagh Hysenaj

Fishing:Mike Michell, Conservation Officer, Bancroft District, OMNRF reported more than 100 angler
days in the wetland complex area (pers com 27/07/2016, 705-755-3366; mike.michell@ontario.ca).
Joe Dunkerley, Anchorage Marina reported 5-6 ice huts per year in both Sheep's Bay and Brooks
Bay for a total of 10-12 ice huts

Recreational Activities Score (maximum 80 points)



2.3 LANDSCAPE AETHETICS

2.3.1 Distinctness

Check only one.

\checkmark			Points
Х	Clearly Distinct	=	3 pts
	Indistinct	=	0

Landscape Distinctness Score (maximum 3 points)

3

2.3.2 Absence of Human Disturbance

Check only one.

\checkmark			Points
	Human disturbances absent or nearly so	=	7 pts
Х	One or several localized disturbances	=	4
	Moderate disturbance; localized water pollution	=	2
	Wetland intact but impairment of ecosystem quality intense in some areas	=	1
	Extreme ecological degradation, or water pollution severe and widespread	=	0

Details regarding type, extent and location of disturbance scored: Jack Lake Road and Hwy 504 bisect wetland units

Source of information: Aerial imagery, field investigation

Absence of Human Disturbance Score (maximum 7 points)



2.4 EDUCATION AND PUBLIC AWARENESS

2.4.1 Educational Uses

Check highest appropriate category.

\checkmark			Points
	Frequent =	=	20 pts
	Infrequent =	=	12
Х	No visits =	=	0

Details regarding type and frequency of education scored: None identified

Source of information: None identified

Educational Uses Score (maximum 20 points)

0

0

2.4.2 Facilities and Programs

Check all appropriate options, score highest category checked.

✓			Points
	Staffed interpretation centre with shelters, trails, literature	=	8 pts
	No interpretation centre or staff, but a system of self-guiding trails and observation points or brochures available	=	4
	Facilities such as maintained paths (e.g., woodchips), boardwalks, boat launches or observation towers, but no brochures or other interpretation	=	2
Х	No facilities or programs	=	0

Additional Notes/Comments:

Source of information:

Facilities and Programs Score (maximum 8 points)



Northern OWES Version 1.2 2.4.3 Research and Studies

Check all that apply; score highest category checked.

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

List of reports, publications, research studies etc. scored above:

- Corbett, B.W. 1981. The ecology of an introduced population of walleye (*Stizostedion vitreum*) in Jack
 Lake, Ontario. M Sc. Thesis. Trent University, Peterborough, Ontario.
- Corbett, B.W. and P.M. Powles 1986. Spawning and larval drift of sympatric walleyes and white suckers in an Ontario stream. Transactions of the American Fisheries Society 115 (1):41-46.
- Dosser, S. 1987. A summary of walleye and muskellunge spawning site identification and documentation, spring 1986. Fisheries Management Report 1987-02. Ontario Ministry of Natural Resources, Bancroft, Ontario.
- Kerr, S. 2015. Turtle Observations around Jack's Lake south of Apsley.
- Kerr, S. 2016. Turtle Observations in the Jack Lake Watershed during the 2016 Nesting Season.
- Jack Lake Association. 2016. Fauna of the Jack Lake Watershed. 301 p
- Jack Lake Fisheries Committee. 2013. A review of fisheries management activities on Jack Lake and proposals for the future. Jack Lake Association. Apsley, Ontario. 27p. + appendices.
- Jack Lake Association. 2015. Invasive Species Initiatives Undertaken by the Jack Lake Association in 2015. 12p

Research and Studies Score (maximum 12 points)



2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT

Name of Settlement: <u>Apsley, Ontario</u> Distance of wetland from settlement: <u>700m</u> Population of settlement: <u>2289</u>

(Source: Google 2011 data)

Circle only the highest score applicable

		Population > 10,000	Population 2,500 – 10,000	Population <2,500 or cottage community
ement	Within or adjoining settlement	40 points	26 points	16 points
to settle	0.5 to 10km from settlement	26	16	<u>10</u>
etland t	10 to 60 km from settlement	12	8	4
Distance of w	60 to 100 km from nearest settlement	5	2	0
	> 100 km from nearest settlement	0	0	0

Proximity to Human Settlement Score (maximum 40 points)



2.6 OWNERSHIP

FA of wetland on land held by or held under a legal contract by a conservation		Х	10	=	
body (as defined by the Conservation Land Act) for wetland protection					
FA of wetland occurring in provincially or nationally protected areas (e.g.,		Х	10	=	
parks and conservation reserves)					
FA of wetland area in crown/public ownership, not as above	0.19	Х	8	=	1.52
FA of wetland area in private ownership, not as above	0.81	Х	4	=	3.24

Source of information: LIO crown layer

Ownership Score (maximum 10 points)

5

2.7 SIZE (SOCIAL COMPONENT)

 Total Size of Wetland =
 420.7
 ha
 Sum of scores from Subcomponents 2.1, 2.2 and 2.5 =
 125

Circle the appropriate score from the table below

	Total for Size Dependent Social Features									
	<31	31-45	46-60	61-75	76-90	91-105	106-120	121-135	136-150	>150
<5	1	2	4	8	12	13	14	14	15	16
5-8	2	2	5	9	13	14	15	15	16	16
9-12	3	3	6	10	14	15	15	16	17	17
13-17	3	4	7	10	14	15	16	16	17	17
18-28	4	5	8	11	15	16	16	17	17	18
29-37	5	7	10	13	16	17	18	18	19	19
38-49	5	7	10	13	16	17	18	18	19	20
50-62	5	8	11	14	17	17	18	19	20	20
63-81	5	8	11	15	17	18	19	20	20	20
82-105	6	9	11	15	18	18	19	20	20	20
106-137	6	9	12	16	18	19	20	20	20	20
138-178	6	9	13	16	18	19	20	20	20	20
179-233	6	9	13	16	18	20	20	20	20	20
234-302	7	9	13	16	18	20	20	20	20	20
303-393	7	9	14	17	18	20	20	20	20	20
394-511	7	10	14	17	18	20	20	20	20	20
512-665	7	10	14	17	18	20	20	20	20	20
666-863	7	10	14	17	19	20	20	20	20	20
864-1123	8	12	15	17	19	20	20	20	20	20
1124-1460	8	12	15	17	19	20	20	20	20	20
1461-1898	8	13	15	18	19	20	20	20	20	20
1899-2467	8	14	16	18	20	20	20	20	20	20
>2467	8	14	16	18	20	20	20	20	20	20

Total Size Score (Social Component)



2.8 ABORIGINAL VALUES AND CULTURAL HERITAGE

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

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

2.8.1 Aboriginal Values

Check highest appropriate category.

\checkmark			Points
	Significant	=	30 pts
	Not Significant	=	0
0	Unknown	=	0

Additional Comments/Notes:

2.8.2 Cultural Heritage

\checkmark			Points
	Significant	=	30 pts
	Not Significant	=	0
0	Unknown	=	0

Additional Comments/Notes:

Aboriginal Values/Cultural Heritage Score (maximum 30 points)



3.0 HYDROLOGICAL COMPONENT

3.1 FLOOD ATTENUATION

Check one of the following five options:

	If we	tland is a single contiguous coastal wetland, -> score 0 points for this section.				
	 If the	e wetland is a single contiguous lacustrine wetland where the ratio of wetland area to lake area is less				
	than	0.1, -> score 0 points for this section.				
	If all	wetland units of the wetland complex are coastal wetland units, or if all wetland units are all				
	lacustrine and the ratio of the wetland area (total area of all wetland units) to the lake areas is less than					
	0.1 -> score 0 points for this section.					
	If we	tland or wetland complex is entirely isolated in site type, -> score 100 points automatically.				
	If we	tland or wetland complex is entirely isolated in site type, score 100 points automatically.				
Х	Wetl	and not as above – proceed through steps A through O below.				
	(A)	Total wetland area = ha				
	(B)	Size of wetland's catchment =2802 ha				
	(C)	Size of other detention areas in catchment = 158 ha				
	(D)	Size of 'isolated' portions of wetland = ha (FA =)				
	(E)	Size of coastal units of wetland complex = 0 ha (FA = 0)				
	(F)	Size of small lacustrine units of a wetland complex (when wetland area : lake area $< 0.1)^5$				
	= <u>0</u> ha (FA = <u>0</u>)					
	Wetland Surface Form (select the form which best describes the non-coastal units of the wetland):					
		flooded with little or no aquatic vegetation = 0				
	X flooded but with submergent, emergent, or floating vegetation = 0.2					
		flat (lawn) vegetation (typical of fens) = 0.5				
		hummock-depression microtopography = 0.7				
		patterned (e.g. string bog, ribbed fen) = 1.0				
	(G)	Wetland Surface Form Factor = 0.2 (maximum 1.0)				
	Poin	ts for Isolated Wetland Unit(s) (if not applicable, enter '0'):				
	(H)	$(FA of D) \times 100 pts = 0 pts$				
	Point	ts for coastal Wetland Unit(s) (if not applicable, enter '0'):				
	(1)	(FA of E) x 100 pts = pts				
	Point	ts for Small lacustrine Wetland Unit(s) (if not applicable enter '0'):				
	(J)	$(FA \text{ of } F) \times 100 \text{ pts} = 0 \text{ pts}$				
	(K)	Size of wetland minus isolated, coastal and small lacustrine portions = $\{A - D - E - F\} = \frac{421}{1000}$ ha				
	(L)	Number of points available to score 'rest' of wetland = $\{100 - H - I - J\} = 100$				
	(M)	Total area of upstream detention areas* = $\{A + C\} = 579$ ha				
	(N)	Upstream detention Factor = {(K/M) $\times 2$ } = <u>1</u> (maximum 1.0)				
	(0)	Attenuation Factor = $\{(K/B) \times 10\} = 1$ (maximum 1.0)				
	(P)	Surface Form Factor = 0.2 (maximum 1.0)				
	Floo	d Attenuation Final Score = {([N + O + G] /3) x L] + H} = 73				

Flood Attenuation Score (maximum 100 points) 73

3.2 GROUNDWATER RECHARGE

3.2.1 Site Type

Wetland > 50% lacustrine (by area) or located on the St. Mary's River =					=	0 pts
Wetland not as above. calculate final score as follows:						
 FA of isolated or palustrine wetland 	=	0.86	х	20	=	17.2
 FA of riverine wetland 	=	0.00	х	5	=	0
 FA of lacustrine wetland (when wetland is <50% lacustrine)" 	=	0.14	х	0	=	0

Groundwater Recharge/Wetland Site Type Score (maximum 20 points)

17

3.2.2 Soil Recharge Potential

Circle only one choice that best describes the soils in the area surrounding the wetland being evaluated (the soils within the wetland are not scored here).

		Group A, B, C (sands, gravels, loams)	Group D (clays, substrates in high water tables, shallow substrates over impervious materials such as bedrock)
be L	Lacustrine or on St. Mary's River	0	0
nant d Ty _l	Isolated	10	5
Domi etlan	Palustrine	<u>7</u>	4
Š	Riverine (not on a major river)	5	2

Groundwater Recharge/Wetland Soil Recharge Potential Score (maximum 10 points) 7



3.3 DOWNSTREAM WATER QUALITY IMPROVEMENT

3.3.1 Watershed Improvement Factor

Calculation of Watershed Improvement Score is based upon the fractional area (FA) of each site type within the wetland.

FA = area of site type/total area of the wetland

						Improvement
						Factor
FA of isolated wetland	=		х	0.5	=	
FA of riverine wetland	=		х	1.0	=	
FA of palustrine wetland with no inflow	=	0.1	х	0.7	=	0.07
FA of palustrine wetland with inflows	=	0.76	х	1.0	=	0.76
FA of lacustrine on lake shoreline	=	0.09	х	0.2	=	0.018
FA of lacustrine at lake inflow or outflow	=	0.05	х	1.0	=	0.05
				Total	=	0.898

Watershed Improvement Score (IF x 30) (maximum 30 points)

27

3.3.2 Adjacent and Watershed Land Use

EVAUATION

Х

Step 1. Determination of maximum Initial Score

Wetland on the great lakes or St. Mary's River (go to Step 5a) All other wetlands (go through steps 2, 3, 4, and 5b)

Step 2. Determination of Broad Upslope land Use (BLU)

Assess broad upslope land uses as logging within the previous 5 years, agriculture, or other activities which alter the natural vegetation cover in an extensive manner.

	Choose one	Score
	> 50% of catchment basin	20
	20-50% of catchment basin	14
Х	< 20% of catchment basin	4

Score for BLU 4



Prepared by Glenside Ecological Services Limited

Assess linear upslope uses (LUU) e.g., roads, railways, hydro corridors, pipelines, etc., crossing the upslope catchment within 200 m of the wetland boundary.

	Choose the highest only	Score		
Х	Major corridor ¹	15		
	Secondary corridor	11		
	Tertiary corridor	6		
	Temporary or abandoned	3		
	None	0		
	—		Score for LUU	15

¹ Major, secondary and tertiary roads are those that are indicated as such on the provincial highways map. Major hydro corridors are trunk lines coming directly from a generating station. Major pipelines are trans-continental lines. Secondary corridors are regional distribution lines (i.e. multi-cable hydro corridors not emanating directly from a generating station or regional gas distribution lines). Tertiary corridors are single hydro lines or local gas distribution lines (i.e. to domestic users).

Step 4. Determination of Point-source Land Uses (PS)

Assess point source (PS) land uses producing industrial effluents such as heavy industry, pulp and paper plants, major aggregate operations (but not small pits use for local road construction), etc. Score as 'present' only if a point source land use is located less than 1 km upstream from the wetland.

X	Present Not present	Score 15 0	Score for PS	_0
Step 5.	Calculation of total score for Adja	acent and Waters	hed Land Use	

		Score	
	a) Wetland on the great lakes or St. Mary's I	River 0	
Х	b) All other wetlands, calculate as follows:		
	Final Scor	e BLU + LUU + PS	19

3.3.3 Vegetation Form

Choose the category that best describes the vegetation of the wetland.

\checkmark			Score
	Trees, shrubs or herbs (h, c, ts, ls, gc)	=	8 pts
Х	Emergents, submergents (ne, re, be, f, ff, su)	=	10
	Little or no vegetation (u)	=	0

Dominant Vegetation Form Score (maximum 10 points)



3.4 CARBON SINK

Check only one of the following

\checkmark			Points
	Bog or fen with more than 50% coverage by organic soil	=	15 pts
v	Wetland with between 10 to 50% coverage by organic soil (i.e., mainly	=	6
^	mineral or undesignated soils, any wetland type)		
	Marshes and swamps with more than 50% coverage organic soil	=	9
	Wetland with less than 10% soils organic	=	0

Source of information: Field investigation.

*Glenside Note: Field investigation identified a minimum of 38% of wetlands with organic soils.

Carbon Sink Score (maximum 15 points)

6*

Therefore organic soils represent 10-50% if the area at a minimum and score may be higher

3.5 SHOREILNE EROSION CONTROL

From the wetland vegetation map determine the **dominant** vegetation type within the erosion zone for **lacustrine and riverine site type areas only**. Score according to the factors listed below.

Step 1.

\checkmark			Points
	Wetland entirely isolated or palustrine	=	0 pts
Х	Any part of the wetland is riverine or lacustrine	=	Go to step 2

Step 2: Choose the one characteristic that best describes the shoreline vegetation (see page 112 for description of "shoreline".)

\checkmark			Points
Х	Trees and shrubs	=	15 pts
	Emergent vegetation	=	8
	Submergent vegetation	=	6
	Other shoreline vegetation	=	3
	No vegetation	=	0

Shoreline Erosion Control Score (maximum 15 points)



3.6 GROUNDWATER DISCHARGE

Circle the characteristics that best describe the wetland being evaluated and then sum the scores. If the sum Exceeds 30 points, assign the maximum score of 30). NOTE: for wetland type, wetland type scored does not have to the dominant type in the wetland.

		r Discharge		
		None to Little	Some	High
	Wetland type presence/absence	Bog = 0	Swamp/Marsh = 2	<u>Fen = 5</u>
	Basin Topography	Flat/Rolling = 0	<u>Hilly = 2</u>	Major Relief Break = 5
cteristics	Wetland area: Upslope catchment area	Large (>50%) = 0	<u>Moderate (5-50%) = 2</u>	Small (<5%) = 5
	Lagg development	None found = 0	<u> Minor = 2</u>	Extensive = 5
hara	Seeps	<u>None = 0</u>	≤ 3 seeps = 2	> 3 seeps = 5
nd C	Iron precipitates	None = 0	<u>≤ 3 sites = 2</u>	> 3 sites = 5
Vetla	Surface marl deposits	<u>None = 0</u>	≤ 3 sites = 2	> 3 sites = 5
5	Wetland pH	Low <4.2 = 0	Moderate 4.2 – 5.7 = 5	High >5.7 = 10
	Catchment soil coverage	Patchy = 0	<u>Thin (<20cm) =2</u>	Thick = 5
	Catchment soil permeability	Low = 0	Moderate = 2	<u> High = 5</u>

Additional Comments/Notes: Iron precipitates noted flowing into wetland unit 9; Wetland pH unknown. Adjacent soils based on geology layer.

Groundwater Discharge Score (maximum 30 points)

20*

*Glenside Note: Access limited to wetland and therefore a partial score based on verified wetlands only. Score may be higher.



4.0 SPECIAL FEATURES COMPONENT

4.1 RARITY

4.1.1 Wetlands

Wetland type (check one or more)

-
Fen
Swamp
Marsh

Ecoregi	on/Ecodistrict	Marsh	Swamp	Fen	Bog
2E	James Bay	20	20	0	20
2W	Big Trout Lake	20	20	0	10
3E	Lake Abitibi	20	20	10	0
3W	Lake Nipigon	20	20	10	0
3S	Lake St. Joseph	20	20	10	0
4E	Lake Temagami	20	20	10	0
4W	Pigeon River	20	10	20	0
4S	Wabigoon Lake	20	10	20	0
5E-1	Thessalon	10	0	30	20
5E-3	La Cloche	20	0	30	20
5E-4	Sudbury	10	0	30	10
5E-5	North Bay	10	0	20	0
5E-6	Tomiko	10	0	20	0
5E-7	Parry Sound	20	0	30	20
5E-8	Huntsville	20	0	30	20
5E-9	Algonquin Park	10	0	30	0
5E-10	Brent	20	0	30	0
5E-11	Bancroft	<u>0</u>	<u>10</u>	<u>30</u>	10
5E-13	Western Sault Ste. Marie –	20	0	10	30
	Lake Superior Coast				
5-S	Lake of the Woods	10	10	20	10

Rarity of Wetland Type Score (maximum 70
points)40



4.1.2.1 Reproductive Habitat for an Endangered or Threatened Species

Under the "Activity" column, when scoring animal species, record what the animal as doing when observed (e.g. nesting, courtship, singing etc.)

Common Name	Scientific Name	Activity	Date Observed	Info Source
Least Bittern	Ixobrychus exilis	Nesting	18/06/2016	Field Investigation
Least Bittern	Ixobrychus exilis	Nesting	19/06/2016	Field Investigation
Blanding's Turtle	Emydoidea blandingii	Dead on Road	18/06/2016	Field Investigation
Blanding's Turtle	Emydoidea blandingii	Dead on Road	19/06/2016	Field Investigation
Blanding's Turtle	Emydoidea blandingii	Mixed	Historical	Natural Heritage Information Centre / Jack Lake Association

For each species score 250 points. (Score cumulative, no maximum score)

Additional Notes/Comments: See attached Appendices for observation details

Reproductive Habitat for Endangered or Threatened Species Score (*no maximum*)

nesting, courtship, singing etc.). Dates that species has been recorded using the wetland must be included in the table below.

Common Name	Scientific Name	Activity	Date Observed	Info Source
Barn Swallow	Hirundo rustica	Feeding	17/06/2016	Field investigation
Barn Swallow	Hirundo rustica	Feeding	17/06/2016	Field investigation
Barn Swallow	Hirundo rustica	Feeding	18/06/2016	Field investigation
Barn Swallow	Hirundo rustica	Feeding	18/06/2016	Field investigation
Barn Swallow*	Hirundo rustica	Feeding	<2016 (historical)	Jack Lake Association

For one species score 150 points; for each additional species score 75 points. (Score is cumulative)

Additional Notes/Comments: See Appendices for observation details.

*Observed throughout Jack Lake – 2016. Fauna of Jack Lake Watershed, Jack Lake Association. 301pp

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



4.1.2.3 Provincially Significant Animal Species

Common Name	Scientific Name	Activity	Date Observed	Info Source
Snapping Turtle	Chelydra serpentina		18/06/2016	Field investigation
Olive-sided Flycatcher	Contopus cooperi		18/06/2016	Field investigation
Canada Warbler	Cardellina canadensis		18/06/2016	Field investigation
Lilypad Clubtail	Arigomphus furcifer		18/06/2016	Field investigation
Horned Clubtail	Arigomphus cornutus		18/06/2016	Field investigation
Cyrano Darner	Nasiaeschna pentacantha		18/06/2016	Field investigation
Canada Warbler	Cardellina canadensis		<2016 (historical)	Nature Counts
Snapping Turtle	Chelydra serpentina		<2016 (historical)	Natural Heritage
				Information Centre
				/ Jack Lake
				Association

Additional Notes/Comments: See attached Appendices for observation details

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

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

Provincially Significant Animal Species Score (no	
maximum)	125

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4.1.2.4 Provincially Significant Plant Species

Common Name	Scientific Name	Activity	Date Observed	Info Source

Additional Notes/Comments:

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

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)

Northern OWES Version 1.2

4.1.2.5 Regionally Significant Species

Common Name	Scientific Name	Activity	Date Observed	Info Source

**Score only if there is an approved list

Scoring:

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

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

Regionally Significant Species Score (no	
maximum score)	0

4.1.2.6 Locally Significant Species (Ecodistrict)

Common Name	Scientific Name	Activity	Date Observed	Info Source

**Score only if there is an approved list

Scoring:

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

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

Locally Significant Species Score (no maximum score)



4.1.2.7 Species of Special Status

Black Duck

Suitable breeding habitat present and within assessment range (Figure 25)

Assessment Category	Check one	Points
20 - 40 Indicated Pairs/100 km sq		= 20
10 - 20 Indicated Pairs/100 km sq		= 15
5 - 10 Indicated Pairs/100 km sq	Х	= 10
1 - 5 Indicated Pairs/100 km sq		= 5
Habitat not suitable		= 0
Out of assessment range		= 0

Additional Notes/Comments:

Black Duck Score (maximum 20 points)

10

4.2 SIGNIFICANT FEATURES AND HABITATS

4.2.1 Colonial Waterbirds

Record all available information. Score the highest applicable category. Include additional information as possible (e.g. nest locations etc.)

Activity	Species	Info Source	Points
Currently nesting	Great Blue Heron	Field Investigation	= 50
Known to have nested within the past 5			= 25
years			
Active feeding area (great blue heron			= 15
excluded)			
None known			= 0

Additional Notes/Comments:

Colonial Waterbird Nesting Score (maximum 50 points)


Northern OWES Version 1.2 4.2.2 Winter Cover for Wildlife

Score highest category. Include rationale/sources of information

	Provincially significant	= 100 pts
	Significant in Ecoregion	= 50
	Significant in Ecodistrict	= 25
Х	Locally significant	= 10
	Little or poor winter cover	= 0

Species/habitat/vegetation community scored (e.g., winter deer cover in hemlock swamp, S3 and S4b):

Winter cover present in vegetation communities S1, S2, S3, S4, S9, S10, S11, S12, S13, S22, S26, S27, S30 (all dominated by conifer). Deer yard Stratum 1 across southern part of complex

Sources of information: Field investigation/NRVIS

Winter Cover for Wildlife Score (maximum 100 points)

10

4.2.3 Waterfowl Staging and/or Moulting Areas

Check highest level of significance for both staging and moulting; add scores for staging and for moulting together for final score. However, maximum score for evaluation under this section is 150 points.

		Staging	N	/Ioulting
Nationally/Internationally significant		= 150 pts		= 150 pts
Provincially significant		= 100		= 100
Significant in Ecoregion		= 50		= 50
Significant in Ecodistrict		= 25		= 25
Locally significant/ Known to occur		= 10		= 10
Not possible/Unknown	Х	= 0	Х	= 0

Species/habitat/vegetation community scored (e.g., approx 20 mallards in W3): Unknown

Sources of information:

Waterfowl Staging/Moulting Score (maximum 150 points)



4.2.4 Waterfowl Breeding

Check highest level of significance.

	Nationally/internationally significant	= 150 pts
	Provincially significant	
	Significant in Ecoregion	= 50
	Significant in Ecodistrict	= 25
Х	Locally significant/ Known to occur	= 10
	Habitat not suitable	= 0

Species/habitat/vegetation community scored (*e.g., mallard in W3*): <u>Ring-necked Duck, Mallard and Wood Duck</u> observed in suitable habitat during breeding season

Sources of information: Field investigation

Waterfowl Breeding Score (maximum 150 points)

10

4.2.5 Migratory Passerine, Shorebird or Raptor Stopover Area

Check highest level of significance.

	Nationally/internationally significant	= 150 pts
	Provincially significant	
	Significant in Ecoregion	= 50
	Significant in Ecodistrict	= 25
	Locally significant/ Known to occur	= 10
Х	Not possible/Unknown	= 0

Species/habitat/vegetation community scored: Unknown

Sources of information:

Passerine, Shorebird or Raptor Stopover Score (maximum 150 points)

0

4.2.6 Ungulate Habitat

EVALUATION

Score (1) + (2) +one of (3) to (6).

Х	1. Ungulate summer cover	= 15 pts
	2. Mineral lick	= 50
	3. Moose aquatic feeding area Class 1	= 0
	4. Moose aquatic feeding area Class 2	= 10
	5. Moose aquatic feeding area Class 3	= 20
	6. Moose aquatic feeding area Class 4	= 35

(Score is cumulative for a maximum possible score of 100)

Ungulate Habitat Score (maximum 100 points)



4.2.7 Fish Habitat

August 2016

4.2.7.1 Spawning and Nursery Habitat

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 +	1.0

Area Factors for Low Marsh, High Marsh and Swamp Communities

Step 1:

	Fish habitat is not present within the wetland	Go to Step 7, Score 0 points
Х	Fish habitat is present within the wetland	Go to Step 2
Step 2: Ch	noose only one option	
	Significance of the spawning and nursery habitat within the wetland is known	Go to Step 3
Х	Significance of the spawning and nursery habitat within the wetland is not known	Go through Steps 4, 5 and 6
Step 3: Se	lect the highest appropriate category below, attach	documentation:
	Significant in Ecoregion	Go to Step 7, Score 100 points
	Significant in Ecodistrict	Go to Step 7, Score 50 points
	Locally Significant Habitat (5.0+ ha)	Go to Step 7, Score 25 points
	Locally Significant Habitat (<5.0 ha)	Go to Step 7, Score 15 points

Step 4: Low Marsh = the 'permanent' marsh area, from the existing water line out to the outer boundary of the wetland.

	Low marsh not present	Go to Step 5
Х	Low marsh present	Continue through Step 4, scoring as noted below



- 1. Check the appropriate **Vegetation Group** (see Appendix 7) for each Low Marsh community. (Based on the one most clearly dominant plant species of the dominant form in each Low Marsh vegetation community.)
- 2. Sum the areas (ha) of the vegetation communities assigned to each Vegetation Group.
- 3. Use these areas to assign an Area Factor (from Table 8) for each checked Vegetation Group.
- 4. Multiply the Area Factor by the Multiplication Factor for each row to calculate Score.
- 5. Sum all numbers in Score column to get **Total Score** for **Low Marsh**.

Scoring for Presence of Key Vegetation Groups – Low Marsh						
Vegetation Group Number	Vegetation Group Name	Present as a Dominant Form (check)	Total Area (ha)	Area Factor (from Table 8)	Multiplication Factor	Score
1	Tallgrass				6	
2	Shortgrass-sedge	х	22.94	1	11	11
3	Cattail-Bulrush-Burreed	х	43.35	1	5	5
4	Arrowhead-Pickerelweed				5	
5	Duckweed				2	
6	Smartweed-Waterwillow				6	
7	Waterlily-Lotus	х	31.11	1	11	11
8	Waterweed-Watercress				9	
9	Ribbongrass				10	
10	Coontail-Naiad-Watermilfoil	х	0.59	0.2	13	2.6
11	Narrowleaf Pondweed				5	
12	Broadleaf Pondwee				8	

Total Score for Low Marsh (maximum 75 points)

30*

Continue to Step 5.

*Glenside Note: Did not score unverified vegetation communities therefore only partial score. Score likely higher.



Step 5: High Marsh = the 'seasonal' 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	Go to Step 6
Х	- High marsh present	Continue through Step 5, scoring as noted below

Scoring of High Marsh:

- 1. Check the appropriate **Vegetation Group** (see Appendix 7) for each High Marsh community. (Based on the one most clearly dominant plant species of the dominant form in each High Marsh vegetation community.)
- 2. Sum the areas (ha) of the vegetation communities assigned to each Vegetation Group.
- 3. Use these areas to assign an Area Factor (from Table 8) for each checked Vegetation Group.
- 4. Multiply the Area Factor by the Multiplication Factor for each row to calculate Score.
- 5. Sum all numbers in Score column to get Total Score for High Marsh

Scoring for Presence of Key Vegetation Groups – High Marsh						
Vegetation Group Number	Vegetation Group Name	Present as a Dominant Form (check)	Total Area (ha)	Area Factor (from Table 8)	Multiplication Factor	Score
1	Tallgrass				6	
2	Shortgrass-sedge	х	15.01	0.8	11	8.8
3	Cattail-Bulrush-Burreed	х	3.26	0.2	5	1.0
4	Arrowhead-Pickerelweed				5	

Total Score for High Marsh (maximum 25 points)

10*

Continue to Step 6

*Glenside Note: Did not score unverified vegetation communities therefore only partial score. Score likely higher.



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	Go to Step 7
Х	Swamp containing fish habitat present	Continue through Step 6, scoring as follows

Scoring of Swamp:

- 1. Determine the total area (ha) of seasonally flooded swamp communities within the wetland containing fish habitat and record below.
- 2. Determine the total area (ha) of permanently flooded swamp communities within the wetland containing fish habitat and record in below.
- 3. Use these areas to assign an Area Factor (from Table 8).
- 4. Multiply the Area Factor by the Multiplication Factor for each row to calculate Score.
- 5. Sum all numbers in Score column to get **Total Score for Swamp**.

Scoring Swamps for Fish Habitat (Seasonally Flooded; Permanently Flooded)					
Swamp Containing Fish Habitat	Present (check)	Total Area (ha)	Area Factor (from Table 8)	Multiplication Factor	Score
Seasonally Flooded Swamp	x	18.65	0.8	10	8
Permanently Flooded Swamp	х	5.65	0.4	10	4
Total Score for High Marsh (maximum 20 points)					12*

Total Score for High Marsh (maximum 20 points)

*Glenside Note: Did not score unverified vegetation communities therefore only partial score. Score likely higher.

Continue to Step 7

Step 7: CALCULATION OF FINAL SCORE

NOTE: Scores for Steps 4, 5, and 6 are only recorded if Steps 1 and 3 have not been scored.

A. Score from Step 1 (fish habitat not present)	=	
B. Score from Step 3 (significance known)	=	
C. Score from Step 4 (low marsh)	=	30
D. Score from Step 5 (High marsh)	=	10
E. Score from Step 6 (Swamp)	=	12

Calculation of Final Score for Spawning and Nursery Habitat = A or B or Sum of C, D and E

Score for Spawning and Nursery Habitat (maximum 100 points)

52*

*Glenside Note: Did not score unverified vegetation communities therefore only partial score. Score likely higher.



4.2.7.2 Migration and Staging Habitat

Step 1:		
	Staging or migration Habitat is not present in the wetland	Go to Step 4, Score 0 points
	Staging or migration Habitat is present in the wetland, significance of the habitat is known	Go to Step 2
х	Staging or migration Habitat is present in the wetland, significance of the habitat is not known	Go to Step 3

Step 2: Select the highest appropriate category below. Ensure that documentation is attached to the data record.

Significant in Ecoregion	Score 25 points in Step 4
 Significant in Ecodistrict	Score 15 points in Step 4
 Locally Significant	Score 10 points in Step 4
Fish staging and/or migration habitat present, but not as above	Score 5 points in Step 4

Step 3: Select the highest appropriate category below based on presence of the designated site type (i.e. does not have to be the dominant site type). Note name of river for ones within 0.75 km of rivermouth.

Х	Wetland is riverine at rivermouth or lacustrine at rivermouth	Score 25 points in Step 4
	Wetland is riverine, within 0.75 km of rivermouth	Score 15 points in Step 4
	Wetland is lacustrine, within 0.75 km of rivermouth	Score 10 points in Step 4
	Fish staging and/or migration habitat present, but not as above	Score 5 points in Step 4

Step 4: Enter a score from only one of the three above steps

Score for Staging and Migration Habitat (maximum 25 points)



4.3 ECOSYSTEM AGE

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

	Fractional Area			Score
Bog		x 25	=	
Fen, treed to open on deep soils, floating	0.06	x 20	=	1.2
mats or marl				
Fen, on limestone rock		x 5	=	
Swamp	0.43	x 3	=	1.29
Marsh	0.51	x 0	=	0
Total			=	

Ecosystem Age Score (maximum 25 points)

2

4.4 GREAT LAKES COASTAL WETLANDS

Choose one only. Only coastal wetland units may be scored.

Wetland < 10 ha	= 10 pts
Wetland 10-50 ha	= 25
Wetland 51-100 ha	= 50
Wetland >100 ha	= 75

If the wetland is a complex, identify which wetlands units or wetland communities are being scored as coastal:

Great Lakes Coastal Wetland Score (maximum 75 points)



5.0 DOCUMENTATION OF WETLAND FEATURES NOT INCLUDED IN THE EVALUATION

5.1 INVASIVE SPECIES

Attach documentation of invasive species found in the wetland. Note location and coarse estimate of abundance (F= few, C = fairly common, A = abundant)

5.2 VERNAL POOLS

Documentation of information on vernal pools encountered during the wetland evaluation but not included as part of the evaluated wetland.



5.3 SPECIES OF SPECIAL INTEREST

5.3.1 Osprey

	Present and nesting (attach map showing nest site)		
	Known to have nested in last 5 yrs.		
Х	Feeding area for Osprey		
	Not as above		

5.3.2 Common Loon

	Nesting in wetland (attach map showing nest site)
	Feeding at edge of wetland
Х	Observed or heard on lake or river adjoining the wetland
	Not as above

5.4 IMPORTANT DRINKING WATER AREA

 Wetland located within:
 Wellhead Protection Area

 (check all that apply)
 Intake Protection Zone

Source of Information:

Additional Comments:



Significant Recharge Area Vulnerable Aquifer Area

5.5 AREA OF WETLAND RESTORATION POTENTIAL

Check all that apply. Attach additional pages if necessary.

- Area of wetland restoration potential adjacent to evaluated wetland unit(s)
- Area of wetland restoration potential within 750m of evaluated wetland unit(s), but not adjacent
- Area of wetland restoration potential encountered elsewhere
- Area currently functioning as wetland (e.g., showing signs of degradation but still mapped as wetland). Adjacent Wetland Unit (if applicable):
- GPS coordinates of Site:

Description of site (e.g., current land use, wetland characteristics of site, etc) and why it is identified as an area of restoration potential:

Additional Notes/Comments (e.g., adjacent lands, etc):



Northern OWES Version 1.2 General Information

Wetland Evaluator(s)

Name:	Paul C. Heaven		Affiliation:	Glenside Ecological Services Limited
Name:	Ed Poropat		Affiliation:	Glenside Ecological Services Limited
Name:			Affiliation:	
Name:			Affiliation:	
Name:			Affiliation:	
Date(s) wetland visited: 17/06/2016; 18/06/2016; 19/06/2016; 03/07/2016				
Date eva	aluation completed:			
Estimate	ed time devoted to co	ompleting the field surv	vey in person h	ours: 60
Weather	Conditions			
i.	At time of work	Sunny clear skies		
ii.	Summer conditions	in general Primarily	sunny and war	m with moderate rainfall



WETLAND EVALUATION SCORING RECORD

WETLAND NAME:

	1.0	IOLOGICAL COMPONEN	г
	1.1	PRODUCTIVITY	
7		1.1.1 Growing Degree-Days	/Soils
11		1.1.2 Wetland Type	
2		1.1.3 Site Type	
20		Fotal for Productivity	
	1.2	BIODIVERSITY	
20		1.2.1 Number of Wetland t	ypes
45		1.2.2 Vegetation communit	ies (maximum 45)
7		1.2.3 Diversity of Surround	ng Habitat (maximum 7)
8		1.2.4 Proximity to Other W	etlands
24		1.2.5 Interspersion	
14		1.2.6 Open Water type	
118		Total for Biodiversity	
50	1.3	SIZE (Biological Component)	
188		FOTAL FOR BIOLOGICAL COM	PONENT (not to exceed 250)



	2.0	SOCIA	L COMPONENT
	2.1	ECON	OMICALLY VALUABLE PRODUCTS
11		2.1.1	Wood Products
0		2.1.2	Low Bush Cranberry
0		2.1.3	Wild Rice
12		2.1.4	Commercial Baitfish
12		2.1.5	Furbearers
35		Total f	or Economically Valuable Products
80	2.2	RECRE	ATIONAL ACTIVITIES (maximum 80)
	2.3	LANDS	SCAPE AESTHETICS
3		2.3.1	Distinctness
4		2.3.2	Absence of Human Disturbance
7		Total f	or Landscape Aesthetics
	2.4	EDUC	ATION AND PUBLIC AWARENESS
0		2.4.1	Educational Uses
0		2.4.2	Facilities and Programs
12		2.4.3	Research and Studies
12		Total f	or Education and Public Awareness
10	2.5	PROXI	MITY TO AREAS OF HUMAN SETTLEMENT
5	2.6	OWNE	RSHIP
20	2.7	SIZE (S	Social Component)
0	2.8	ABORI	IGINAL AND CULTURAL VALUES

169 TOTAL FOR SOCIAL COMPONENT (not to exceed 250)



ļ	Northern O	WES	Version 1.2	Au
		3.0	HYDROLOGICAL COMPONENT	
	73	3.1	FLOOD ATTENUATION	
		3.2	GROUNDWATER RECHARGE	
	17		3.2.1 Site Type	
	7		3.2.2 Soil Recharge Potential	
	24		Total for Groundwater Recharge	
		3.3	WATER QUALITY IMPROVEMENT	
	27		3.3.1 Watershed Improvement Factor	
	19		3.3.2 Adjacent and Watershed Land Use	
	10		3.3.3 Vegetation Form	
	56		Total for Water Quality Improvement	
	6	3.4	CARBON SINK	
	15	3.5	SHORELINE EROSION CONTROL	
	20	3.6	GROUNDWATER RECHARGE (maximum 30)	
1	194		IOTAL FOR HYDROLOGICAL COMPONENT (not to exceed 250)	



	4.0	SPECIA	AL FEATU	IRES
	4.1	Rarity		
40	-	4.1.1	Wetland	S
		4.1.2	Species	
500	-		4.1.2.1	Endangered or Threatened Species Breeding Habitat
150	-		4.1.2.2	Traditional Use by Endangered or Threatened Species
125	-		4.1.2.3	Provincially Significant Animals
0	-		4.1.2.4	Provincially Significant Plants
0	-		4.1.2.5	Regionally Significant Species
0	-		4.1.2.6	Locally Significant Species
10	_		4.1.2.7	Species of Special Status
825	-	Total f	or Rarity	
	4.2	SIGNI	FICANT FE	ATURES OR HABITAT
50	-	4.2.1	Colonial	Waterbirds
10	-	4.2.2	Winter C	Cover for Wildlife
0	_	4.2.3	Waterfo	wl Staging and Moulting
10	-	4.2.4	Waterfo	wl Breeding
0	-	4.2.5	Migrator	y Passerine, Shorebird or Raptor Stopover
15	-	4.2.6	Ungulate	e Habitat
52	-	4.2.7	Fish Hab	itat
137	-	Total f	or Signific	ant Features and Habitat
2	4.3	ECOSY	STEM AGE	<u>-</u>
0	4.4	GREA 1	I LAKES CO	DASTAL WETLANDS
250(964)		TOTAL	FOR SPEC	CIAL FEATURES COMPONENT (not to exceed 250)



Northern	OWES	Version	1.2
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SUMMARY OF EVALUATION RESULT

Wetland:

- 188 1.0 TOTAL FOR BIOLOGICAL COMPONENT
- 169 2.0 TOTAL FOR SOCIAL COMPONENT
- 194 3.0 TOTAL FOR HYDROLOGICAL COMPONENT
- 250 4.0 TOTAL FOR SPECIAL FEATURES COMPONENT

801 TOTAL WETLAND SCORE

	TOR MINR OSE ONET
MNR Reviewer (Name & Position)	
Reviewer Comments	
MNR Approver (Name and Position)	
Approval Date	

APPENDICES

APPENDIX 1: MAPS







































APPENDIX 2: WETLAND DATA SUMMARY FORM

			Ve	egetation	Communities		Soi	bils Fish Habitat								
Мар	Wtld	Dom.		#		Area		Sub				Veg		Area	Mult	Fld
Code	Туре	Form	Forms	Form	Dominant Species	(ha)	Soils	Туре	Туре	Prcnt	Area	Grp	Flood	Fctr	Fctr	Vrfd
					c, Larix laricina; ls, Chamaedaphne											
					calyculata, Andromeda polifolia;											
lsF4	Fen	ls	c, ls, ne*	3	ne, Carex lacustris	2.23	Organic	Mesic		0	0.00					Y
cS13	Swamp	ts	c, ts*, ne	3		3.50	Organic			0	0.00					
			c, ls*, ne, gc,													
lsF7	Fen	ls	m	5		0.68	Organic			0	0.00					
reM2	Marsh	re	re*	1		2.04	Organic		High Marsh	100	2.04		Seasonal	0.2	5	
fW16	OWM	f	re, f*	2		5.88	Organic		Low Marsh	100	5.88		Permanent	0.4	2	
					f, Persicaria amphibia var.											
					stipulace, Nymphaea odorata ssp.								_			
fW3	OWM	t	t*	1	odorata, Nuphar variegata	2.34	Mineral	Sand	Low Marsh	100	2.34	7	Permanent	0.2	11	Y
4.00	Currente		+=* ···	2	ts, Salix petiolaris; re, Typha	1 4 2	Oversein	N 4	Guana	100	1 4 2		Democrat	0.2	1	v
1558	Swamp	ls	ts ⁻ , re	2	ro Typha angustifolia: gc Onocloa	1.42	Organic	wesic	Swamp	100	1.42		Permanent	0.2	1	Ť
reM10	Marsh	re	re*.gc	2	sensibilis	5.91	Mineral	Sand	Low Marsh	100	5.91	3	Permanent	0.4	5	Y
noN117	March		de re ne*			E 94	Organic	Mosic	Low March	100	E 94	2	Dormanont	0.1	11	v
TIEIVI17	IVIALSI	ne	uc, re, ne	5	f Brasenia schreberi Nymphaea	5.64	Organic	IVIESIC		100	5.64	2	Fermanent	0.4	- 11	
					odorata ssp. odorata. Nuphar											
fW3	OWM	f	f*	1	variegata	1.40	Mineral	Sand	Low Marsh	100	1.40	7	Permanent	0.2	11	Y
					re, Typha latifolia; ff, Spirodela											
reM9	Marsh	re	re*, ff	2	polyrrhiza	1.24	Mineral	Sand	Low Marsh	100	1.24	3	Permanent	0.2	5	Y
					c, Abies balsamea; d, Fraxinus											
					nigra; ts, llex verticillata, Salix											
					petiolaris; Is, Cornus stolonifera,											
			o* d b to lo		Rubus pubescens; ne, Poa											
c\$30	Swamp	C	ne gc ff	7	Spirodela polyrrhiza	1 36	Organic	Fibric		0	0.00					v
0350	Swamp	C		,	c Thuia occidentalis: h Acer	1.50	Organic	TIDITC		0	0.00					-
					rubrum. Fraxinus nigra. Ulmus											
					americana; ts, Salix petiolaris; re,											
			c*, h, ts, ls, re,		Typha latifolia; ne, Carex utriculata,											
cS26	Swamp	с	ne	6	Carex diandra	2.33	Organic	Mesic	Swamp	10	0.23		Seasonal	0.1	10	Y
cS2	Swamp	с	c*, h	2		5.07	Organic			0	0.00					
fW3	OWM	f	f*	1		1.65	Organic		Low Marsh	100	1.65		Permanent	0.2	2	



			,	Vegetation	Communities		Soils Fish Habitat									
Мар	Wtld	Dom.		#		Area		Sub				Veg		Area	Mult	Fld
Code	Туре	Form	Forms	Form	Dominant Species	(ha)	Soils	Туре	Туре	Prcnt	Area	Grp	Flood	Fctr	Fctr	Vrfd
fW3	OWM	f	f*	1		0.77	Organic		Low Marsh	100	0.77		Permanent	0.2	2	
	_				ne, Carex livida, Carex lasiocarpa,											
neF1	Fen	ne	ne*	1	Carex stricta	1.75	Organic	Fibric		0	0.00					Y
reM2	Marsh	re	re*	1		2.27	Organic		High Marsh	100	2.27		Seasonal	0.2	5	
fW3	OWM	f	f*	1		1.69	Organic		Low Marsh	100	1.69		Permanent	0.2	2	
neM1	Marsh	ne	ne*	1		0.55	Organic		High Marsh	100	0.55		Seasonal	0.2	5	
neM1	Marsh	ne	ne*	1		3.87	Organic		High Marsh	80	3.10		Seasonal	0.2	5	
reM22	Marsh	re	dc, ls, re*	3	dc; ls, Chamaedaphne calyculata; re, Typha latifolia	24.36	Organic	Mesic	Low Marsh	100	24.36	3	Permanent	1	5	Y
					 f, Nuphar variegata, Nymphaea odorata ssp. odorata; ff, Utricularia intermedia; su, Potamogeton 											
fW25	OWM	f	f*, ff, su	3	robbinsii	2.39	Organic	Mesic	Low Marsh	100	2.39	7	Permanent	0.2	11	Y
fW16	OWM	f	re, f*	2		2.45	Organic		Low Marsh	100	2.45		Permanent	0.2	2	
fW3	OWM	f	f*	1		1.62	Organic		Low Marsh	100	1.62		Permanent	0.2	2	
fW3	OWM	f	f*	1		2.10	Organic		Low Marsh	100	2.10		Permanent	0.2	2	
fW12	OWM	f	dc, f*	2	dc; f, Brasenia schreberi	6.54	Mineral	Sand	Low Marsh	100	6.54	7	Permanent	0.4	11	Y
0.4/12	01404		1. (*		dc; f, Brasenia schreberi, Nuphar variegata, Nymphaea odorata ssp.	5.47		Caral	Law Marsh	100	F 47	-	Description			
10012	OWIN	T	dc, t*	2	odorata	5.47	winerai	Sand	Low Marsh	100	5.47	/	Permanent	0.4	11	Y
reM2	Marsh	re	re*	1	re, Typha latifolia	9.43	Organic	Mesic	Low Marsh	100	9.43	3	Permanent	0.4	5	Y
					f, Nymphaea odorata ssp. odorata, Nuphar variegata; ff, Utricularia vulgaris; su, Ceratophyllum											
fW25	OWM	f	f*, ff, su	3	demersum	2.55	Organic	Mesic	Low Marsh	100	2.55	7	Permanent	0.2	11	Y
f\//1/	OWM	f	f* cu	2	r, Nymphaea odorata ssp. odorata, Nuphar variegata; su, Ceratophyllum demersum, Myriophyllum sibiricum	1 40	Organic	Mesic	Low Marsh	100	1 40	7	Permanent	0.2	11	v
10014	OWIVI	1	T, Su	2	ls. Spiraea alba: ne. Carex stricta.	1.40	Organic	IVIESIC	LOW IVIDISII	100	1.40	/	Permanent	0.2	11	T
					Calamagrostis canadensis, Carex											
neM19	Marsh	ne	ls, ne*, gc	3	perfoliatum	1.10	Organic	Fibric		0	0.00					Y
c\$10	Swamp	с	c*. h. ls	3	c, Thuja occidentalis, Larix laricina; h. Acer rubrum; ls. Spirea alba	2.74	Organic			0	0.00					Y
reM10	Marsh	re	re*, gc	2	· · · · · · · · · · · · · · · · · · ·	2.79	Organic		High Marsh	100	2.79		Seasonal	0.2	5	



			Ve	egetation	Communities		So	ls			Fish	Habita	at			
Мар	Wtld	Dom.		#		Area		Sub				Veg		Area	Mult	Fld
Code	Туре	Form	Forms	Form	Dominant Species	(ha)	Soils	Туре	Туре	Prcnt	Area	Grp	Flood	Fctr	Fctr	Vrfd
					c, Thuja occidentalis, Abies balsamea; h, Fraxinus nigra; ts, Alnus incana; ls, Rubus pubescens; gc, Onoclea sensibilis, Cornus											
hS23	Swamp	h	c, h*, ts, ls, gc	5	canadensis	2.91	Mineral	Sand		0	0.00					Y
cS27	Swamp	с	c*, ts, ls, ne, gc, m	6	c, Larix Iaricina, Picea mariana; ts, Ilex verticillata, Alnus incana; ls, Rhododendron groenlandicum, Vaccinium myrtilloides; ne, Carex aquatilus; gc, Maianthemum trifolium; m, Sphagnum sp.	12.50	Mineral	Sand		0	0.00					Y
cS22	Swamp	с	c*, ls, ne, gc, m	5	c, Larix laricina, Picea mariana; ls, Chamaedaphne calyculata, Rhododendron groenlandicum; ne, Carex aquatilus; gc, Maianthemum trifolium; m, Sphagnum sp.	0.55	Organic	Mesic		0	0.00					Y
cS4	Swamp	с	c*. ts	2	c. Larix laricina: ts. llex mucronata	28.30	Organic	Mesic		0	0.00					Y
tsS18	Swamp	ts	dc, ts*, ne, gc	4	dc; ts, Alnus incana, Ilex verticillata; ne, Calamagrostis canadensis, Carex stipata; Carex interior; gc, Impatiens capensis	2.42	Mineral	Sand		0	0.00					Y
neM18	Marsh	ne	ls, ne*, f	3	ls, Myrica gale; ne, Carex stricta, Carex lacustris; f, Nuphar variegata, Nymphaea odorata ssp. odorata	2.28	Mineral	Sand	High Marsh	100	2.28	2	Seasonal	0.2	11	Y
neM26	Marsh	ne	ls ne* he f	4	ls, Myrica gale; ne, Carex lacustris, Carex stricta; be, Pontederia cordata; f, Nuphar variegata, Nymphaea odorata ssp. odorata	9.02	Organic	Mesic	High Marsh	100	9.02	2	Seasonal	0.4	11	Y
1101120		ne	13, HC , DC, I			5.02	organic	wiesie		100	0.02	2	Scasonal	0.4		-
neM1	Marsh	ne f	ne*	1		2.19	Organic		High Marsh	100	0.69		Seasonal	0.2	<u>5</u>	
ts\$14	Swamn	ts	dc ts* ne	2		6.29	Organic			100	0.00		Permanent	0.2	2	
13514	Swamp	13			ls, Myrica gale; ne, Carex lacustris;	0.25	Organic			0	0.00					
neM20	Marsh	ne	ls, ne, m	3	m, Sphagnum sp.	11.84	Organic	Mesic	Low Marsh	100	11.84	2	Permanent	0.6	11	Y
tsS5	Swamp	ts	c, ts*	2		1.51	Organic		Swamp	100	1.51		Seasonal	0.2	10	
cS12	Swamp	h	c, h*, dc	3		0.78	Organic			0	0.00					ļ
fW24	OWM	f	dc, ne, f*	3		2.56	Organic		Low Marsh	100	2.56		Permanent	0.2	2	<u> </u>
neM1	Marsh	ne	ne*	1		0.93	Organic		High Marsh	100	0.93		Seasonal	0.2	5	



			Ve	Communities		Soi	ils	Fish Habitat								
Мар	Wtld	Dom.		#		Area		Sub				Veg		Area	Mult	Fld
Code	Туре	Form	Forms	Form	Dominant Species	(ha)	Soils	Туре	Туре	Prcnt	Area	Grp	Flood	Fctr	Fctr	Vrfd
fW15	OWM	f	ne, f*	2		2.53	Organic		Low Marsh	100	2.53		Permanent	0.2	2	
neF5	Fen	ne	c, ts, ls, ne*	4		1.68	Organic			0	0.00					
fW16	OWM	f	re, f*	2		8.86	Organic		Low Marsh	100	8.86		Permanent	0.4	2	
*****	March	*0	de le re* ce		dc; ls, Spiraea alba; re, Typha	2 60	Minoral	Cond	Lligh Morch	100	2.60	2	Sassanal	0.2	-	V
0.00	IVIdI SII	ie c	uc, is, ie, gc	4	latifolia, gc, Offociea serisibilis	2.09	winerar	Sallu		100	2.09	5	Seasonal	0.2	5	T
fW15	OWM	Ť	ne, f*	2		3.98	Organic		Low Marsh	100	3.98		Permanent	0.2	2	
tsS6	Swamp	ts	ts*, f	2		0.99	Organic		Swamp	100	0.99		Permanent	0.2	1	
cS11	Swamp	h	c, h*, ne	3	f Nuchan varianata Nucashaan	2.15	Organic			0	0.00					
					r, Nuphar Variegata, Nymphaea odorata ssp. odorata; su,											
fW14	OWM	f	f*, su	2	Utricularia vulgaris, Chara spp.	2.57	Mineral	Sand	Low Marsh	100	2.57	7	Permanent	0.2	11	Y
neM6	Marsh	ne	ls, ne*	2		0.75	Organic		High Marsh	100	0.75		Seasonal	0.2	5	
cS2	Swamp	с	c* <i>,</i> h	2		5.70	Organic			0	0.00					
lsF6	Fen	ls	c, ls*, ne, m	4		4.55	Organic			0	0.00					
tsS5	Swamp	ts	c, ts*	2		1.91	Organic			0	0.00					
tsS7	Swamp	ts	ts*. ne	2		1.24	Organic		Swamp	50	0.62		Seasonal	0.2	10	
					ls, Myrica gale, Spiraea alba; ne,											
neM6	Marsh	ne	ls ne*	2	Calamagrostis canadensis, Carex	4 16	Mineral	Sand	High Marsh	10	0.42		Seasonal	0.1	5	
+c\$7	Swamp	te	tc* po	2		14 55	Organic	Junu	Swamp	10	1 46		Seasonal	0.1	10	
0.000	Swamp	LS C	ts , ne	2		14.55	Organic		Swallip	10	1.40		Seasonal	0.2	10	
fW13	OWM	t	f*, ne	2		11.45	Organic		Low Marsh	100	11.45		Permanent	0.6	2	
cS1	Swamp	С	C*	1		6.54	Organic			0	0.00					
cS13	Swamp	ts	c, ts*, ne	3		4.06	Organic		Swamp	20	0.81		Seasonal	0.2	10	
cS1	Swamp	с	С*	1		1.93	Organic			0	0.00					
cS3	Swamp	с	c*, m	2		8.40	Organic			0	0.00					
tsS7	Swamp	ts	ts*, ne	2		4.21	Organic			0	0.00					
reM8	Marsh	re	re* <i>,</i> f	2		4.88	Organic		Low Marsh	100	4.88		Permanent	0.2	2	
					ts, Salix petiolaris, Alnus incana; ls,											
tsS15	Swamp	ts	ts*. ls. ne	3	Spiraea alba; ne, Calamagrostis canadensis	2.86	Mineral	Sand	Swamp	50	1.43		Permanent	0.2	1	Y
					h, Fraxinus nigra; ts, Alnus incana,											
tsS19	Swamp	ts	h, ts*, ne, gc	4	ne, Carex stipata, Phalaris	2.64	Mineral	Sand	Swamp	40	1.06		Seasonal	0.2	10	Y



			Ve	getation	Communities	Soils			Fish Habitat							
Мар	Wtld	Dom.		#		Area		Sub				Veg		Area	Mult	Fld
Code	Туре	Form	Forms	Form	Dominant Species	(ha)	Soils	Туре	Туре	Prcnt	Area	Grp	Flood	Fctr	Fctr	Vrfd
					arundinacea; gc, Impatiens capensis, Gallium palustre											
					c, Abies balsamea; d, Acer rubrum, Fraxinus nigra; ts, Alnus incana; ne, Carex crinita, Phalaris arundinacea; c, Impatians canosis; Lanostoa											
			c, d, ts*, ne,		canadensis, Eutrochium											
tsS25	Swamp	ts	gc	5	maculatum	1.73	Mineral	Sand		0	0.00					Y
h528	Swamp	h	h*, c, ts, ls, gc, m	6	h, Fraxinus nigra, Acer rubrum; c, Thuja occidentalis, Picea mariana, Abies balsamea; ts, Alnus incana; Is, Rubus pubescens; gc, Onoclea sensibilis, Trientalis borealis; m, Ptilium crista-castrensis	15.00	Organic	Humic		0	0.00					Y
f\/15	OWM	f	ne f*	2		2.81	Organic		Low Marsh	100	2.81		Permanent	0.2	2	
IcE2	Eon	le.		2		1 50	Organic		Low marsh	100	0.00		1 clination	0.2		
			h, ts*, ls, re,		h, Acre rubrum; ts, Alnus incana; ls, Chamaedaphne calyculata; re, Typha latifolia; ne, Calamagrostis canadensis; gc, Lycopus uniflorus,	1.00	Barne									
tsS29	Swamp	ts	ne, gc	6	Triadenum fraseri	9.73	Organic	Fibric	Swamp	100	9.73		Seasonal	0.4	10	Y
tsS17	Swamp	ts	dc. ts*. ls. ne	4	dc; ts*, Alnus incana; ls, Spiraea alba: ne. Calamagrostis canadensis	1.02	Organic	Mesic		0	0.00					Y
tc\$20	Swamp	tc	ts* is no go	1	ts, Alnus incana; ls, Spiraea alba; ne, Carex lacustris; gc, Thalictrum nubecens, Eutrochium maculatum	0.85	Mineral	Sand	Swamp	10	0.09		Permanent	0.1	1	v
13320	Swamp	13	13 , 13, 110, gc			0.85	winera	Janu	Swamp	10	0.05		remanent	0.1	- 1	-
tsS7	Swamp	ts	ts*, ne	2		2.31	Organic		Swamp	50	1.16		Permanent	0.2	1	
tsS8	Swamp	ts	ts*, re	2		1.16	Organic		Swamp	50	0.58		Permanent	0.2	1	
reM2	Marsh	re	re*	1		1.03	Organic		High Marsh	100	1.03		Seasonal	0.2	5	
neM1	Marsh	ne	ne*	1		1.96	Organic		High Marsh	40	0.79		Seasonal	0.2	5	
reM2	Marsh	re	re*	1		1.03	Organic		High Marsh	100	1.03		Seasonal	0.2	5	
tsS14	Swamp	ts	dc, ts*, ne	3		1.65	Organic			0	0.00					
cS9	Swamp	с	c*, dc, ne	3		2.84	Organic			0	0.00					
reM11	Marsh	re	re*, ne	2		1.54	Organic		High Marsh	100	1.54		Seasonal	0.2	5	
reM11	Marsh	re	re*, ne	2		2.50	Organic		High Marsh	100	2.50		Seasonal		5	
neM21	Marsh	ne	ts, ne*, gc	3	ts, Alnus incana; ne, Calamagrostis canadensis, Carex crinita, Carex	0.92	Organic	Mesic	High Marsh	100	0.92	2	Seasonal	0.2	11	Y



			V	egetation	Communities		So	ils			Fish	Habita	at			
Мар	Wtld	Dom.		#		Area		Sub				Veg		Area	Mult	Fld
Code	Туре	Form	Forms	Form	Dominant Species	(ha)	Soils	Туре	Туре	Prcnt	Area	Grp	Flood	Fctr	Fctr	Vrfd
					Lysimachia thyrsiflora											
					c, Larix laricina; ls, Chamaedaphne											
					calyculata, Andromeda polifolia											
					virginicum. Carex interior: gc.											
			c, ls*, ne, gc,		Maianthemum trifolium; m,											
lsF7	Fen	ls	m	5	Spagnum wulfianum	11.20	Organic	Humic		0	0.00					Y
cS3	Swamp	с	c* <i>,</i> m	2	c, Larix laricina; m, Sphagnum spp.	1.20	Organic	Mesic		0	0.00					Y
					c, Larix laricina, Picea glauca; ts,											
					Alnus incana, llex verticillata,											
					Calamagrostis canadensis Carex											
cS13	Swamp	ts	c, ts*, ne	3	stipata	0.99	Organic	Humic		0	0.00					Y
cS4	Swamp	с	c*, ts	2		5.66	Organic			0	0.00					
neM5	Marsh	ne	dc, ne*	2	dc; ne, Carex sp.	3.62	Organic			0	0.00					Y
					c, Larix laricina, Picea mariana; ts,											
					Salix petiolaris, Salix bebbiana; re,											
tsS16	Swamn	ts	c ts* re ne	4	l ypha latifolia; ne, Calamagrostis	2 68	Organic	Mesic		0	0.00					Y
	Swamp			· ·	ne, Carex utriculata, Eleocharis	2.00	orgunie	ivicsic			0.00					
neM1	Marsh	ne	ne*	1	palustris, Calamagrostis canadensis	2.84	Organic	Mesic	Low Marsh	100	2.84	2	Permanent	0.2	11	Y
reM7	Marsh	re	dc, re*	2	dc; re, Typha latifolia	0.57	Organic	Mesic	High Marsh	100	0.57	3	Seasonal	0.2	5	Y
neM1	Marsh	ne	ne	1		0.58	Organic		High Marsh	100	0.58		Seasonal	0.2	5	
reM2	Marsh	re	re*	1		0.52	Organic		High Marsh	70	0.37		Seasonal	0.1	5	
fW3	OWM	f	f*	1		1.49	Organic		Low Marsh	100	1.49		Permanent	0.2	2	
lsF3	Fen	ne	ls, ne*	2		1.03	Organic		Low Marsh	30	0.31		Permanent	0.1	2	
					ts, Alnus incana; ls, Spiraea alba;											
+-5.21	Swamp	to	to* lo ro po	1	re, Typha latifolia; ne, Carex	2 20	Minoral	Sand	Swamp	70	2 20		Seasonal	0.2	10	v
15521	Swamp	15	ts , is, re, ne	4		5.29	IVIII ei ai	Sanu	Swallip	70	2.50		Seasonal	0.2	10	T
neivi1	warsn	ne	ne*	1		0.72	Organic		Hign Marsh	100	0.72		Seasonal	0.2	5	
fW3	OWM	f	f*	1		4.76	Organic		Low Marsh	100	4.76		Permanent	0.2	2	
neM1	Marsh	ne	ne*	1		0.89	Organic		High Marsh	100	0.89		Seasonal	0.2	5	
					dc; re, Typha latifolia; ne, Carex crinita. Calamagrostis canadensis											
neM17	Marsh	ne	dc. re. ne*	3	Carex lacustris	2.80	Mineral	Sand	High Marsh	100	2.80	2	Seasonal	0.2	11	Y



			Ve	Communities		So	ils			Fish	Habita	ıt				
Мар	Wtld	Dom.		#		Area		Sub				Veg		Area	Mult	Fld
Code	Туре	Form	Forms	Form	Dominant Species	(ha)	Soils	Туре	Туре	Prcnt	Area	Grp	Flood	Fctr	Fctr	Vrfd
neM1	Marsh	ne	ne*	1		0.68	Organic		High Marsh	100	0.68		Seasonal	0.2	5	
h524	Swamp	h	h*, dc, ts, re,	5	h, Fraxinus nigra; dc; ts, Salix bebbiana, Ilex verticillata; re, Typha latifolia: pa, Caroy lacustris	0.94	Minoral	Sand	Swamp	100	0.94		Soconal	0.2	10	v
11324	Swamp	- 11		5	Typha latholia, he, carex lacustris	0.94	winteral	Janu	Swamp	100	0.94		Seasonal	0.2	10	1
reM2	Marsh	re	re*	1		0.75	Organic		High Marsh	100	0.75		Seasonal	0.2	5	
lsF3	Fen	ne	ls, ne*	2		0.52	Organic		Low Marsh	20	0.10		Permanent	0.1	2	
0.000		c			f, Nymphaea odorata ssp. odorata, Nuphar variegata, Brasenia schreberi; su, Potamogeton richardsonii, Myriophyllum					100		_				
reM23	Marsh	re	t*, su re*, ne, f	3	re, Typha latifolia, Typha angustifolia; ne, Sparganium eurycarpum; f, Nymphaea odorata ssp. odorata	0.96	Organic	Mesic	Low Marsh	100	0.96	3	Permanent	0.2	5	Y
su\\//4	OWM	SU	SIL	1	su Chara son	0.59	Organic	Mesic	Low Marsh	100	0.59	10	Permanent	0.2	13	v
neM1	Marsh	ne	ne*	1	ne, Carex utriculata, Eleocharis palustris, Calamagrostis canadensis	2.42	Organic	Mesic	Low Marsh	100	2.42	2	Permanent	0.2	11	Y
reM2	Marsh	re	re*	1	re, Typha angustifolia f, Nymphaea odorata ssp. odorata,	1.45	Organic	Mesic	Low Marsh	100	1.45	3	Permanent	0.2	5	Y
fW3	OWM	f	f*	1	natans	4.07	Organic	Mesic	Low Marsh	100	4.07	7	Permanent	0.2	11	Y
fW3	OWM	f	f*	1		1.64	Organic		Low Marsh	100	1.64		Permanent	0.2	2	



APPENDIX 3: SIGNIFICANT SPECIES OBSERVATIONS

SOURCE: Glens	side Ecolog	zical Services Limited - 2016 field investigation	
Arigomphus cor	nutus	Horned Clubtail	
Provincially	/ Tracked?:	: Track all extant and selected historical EOs	
SARO Statu			
S Rank:		S3	
17/6/2016			
Location			
General	Jack Lake	Road	30
Datum	NAD83	Upper Tier PETERBOROUGH	
Zone	17	Lower Tier	
Easting	730935	Township BURLEIGH	
Northing	4954896	Lot / Concession 15 / 15	
Source/Acc	GPS	5m	
Observation De	etails		
Observed 3 in	n area	and and a second s	

Observer Details

Observer	Ed Poropat
Observer 2	Paul Heaven

17/6/2016

Location

General	County Road 504					
Datum	NAD83	Upper Tier	PETERBORG	DUG	Н	
Zone	17	Lower Tier				
Easting	734064	Township	CHANDOS			
Northing	4960096	Lot / Conc	ession	3	/	4
Source/Acc	GPS	5m				

Observation Details

Observer Details

Observer	Ed Poropat		
Observer 2	Paul Heaven		





Arigomphus cor	nutus	Horned Clubtail	
Provincially	v Tracked?:	Track all extant and selected historical FOs	
SARO Status:			
S Rank:		\$3	
18/6/2016			
Location			
General	County Roa	ad504	the second se
Datum	NAD83	Upper Tier PETERBOROUGH	A STATISTICS AND A STAT
Zone	17	Lower Tier	and the second second
Easting	732222	Township CHANDOS	an 199
Northing	4959834	Lot / Concession C / 4	
Source/Acc	GPS	5m	
Observation Details			
2 males			
			house the second second
Observer Detai	ls		
Observer	Ed Poropat		
Observer 2	Paul Heave	n	
Arigomphus fur	cifer	Lilvnad Clubtail	1
Provincially	v Tracked?:	Track all extant and selected historical EOs	
SARO Statu	is:		
S Rank:		S3	
17/6/2016			
Location			
General	James Road	ł	
Datum	NAD83	Upper Tier PETERBOROUGH	
Zone	17	Lower Tier	·······························
Easting	732979	Township CHANDOS	- Das inte
Northing	4958115	Lot / Concession C / 2	······································
Source/Acc	GPS	5m	
Observation De	etails		
Resting on lil	ypad, 3 obse	erved	
Observer Detai	ls		
Observer	Ed Poropat		



Observer 2 Paul Heaven
Arigomphus fur	cifer	Lilypad Clubtail
Provincially	/ Tracked?:	Track all extant and selected historical EOs
SARO Statu	is:	
S Rank:		S3
17/6/2016		
Location		
General	County Ro	ad 504
Datum	NAD83	Upper Tier PETERBOROUGH
Zone	17	Lower Tier
Easting	732243	Township CHANDOS
Northing	4959843	Lot / Concession C / 4
Source/Acc	GPS	5m
Observation De	etails	

Observer Details

Observer	Ed Poropat
Observer 2	Paul Heaven

Cardellina canad	densis	Canada Warbler
Provincially	Tracked?:	Track all extant and selected historical EOs
SARO Statu		SC
S Rank:		S4B
17/6/2016		
Location		
General	Jack Lake F	Road
Datum	NAD83	Upper Tier PETERBOROUGH
Zone	17	Lower Tier
Easting	731571	Township BURLEIGH
Northing	4954836	Lot / Concession 15 / 15
Source/Acc	GPS	25 m
Observation De	tails	
male singing		
Observer Detail	s	

Observer Ed Poropat Observer 2 Paul Heaven



Cardellina canadensis Provincially Trac SARO Status:	ked?: Track all ext	Canada Warbler ant and selected his	torical EOs
S Rank:	S4B		
19/6/2016			
Location			
General Jack	Lake Road		
Datum NAD	83 Upper Tier	PETERBOROUGH	
Zone 17	Lower Tier		
Easting 7320	83 Township	BURLEIGH	
Northing 4955	005 Lot / Con	cession 15 ,	/ 16
Source/Acc GPS	25m		
Observation Details			

1 singing male

Observer Details

Observer	Ed Poropat
Observer 2	Paul Heaven

18/6/2016

1.1.2.2	1			1	
10	C	ลา	1	n	n

reaction								
General	Jack Lake							
Datum	NAD83	Upper Tier PETERBORC			DUGH	ł		
Zone	17	Lower	· Tier					
Easting	733045	Towns	ship	METHUEN				
Northing	4954725	Lot / Concession		29	/	11		
Source/Acc	GPS	5m						

Observation Details

male calling

Observer	Ed Poropat
Observer 2	Paul Heaven



Cardellina cana	densis	Canada Warbler
Provincially	y Tracked?:	Track all extant and selected historical EOs
SARO Statu	IS:	SC
S Rank:		S4B
18/6/2016		
Location		
General	Jack Lake	
Datum	NAD83	Upper Tier PETERBOROUGH
Zone	17	Lower Tier
Easting	732891	Township BURLEIGH
Northing	4954505	Lot / Concession 12 / 16
Source/Acc	GPS	5m
Observation De	etails	
male singing		
Observer Detai	ls	
Observer	Ed Poropat	
Observer 2	Paul Heave	- 20
000011012	ruurreuve	
Chelydra serper	ntina	Snapping Turtle
Provincially	y Tracked?:	Track all extant and selected historical EUs
SARU Sidii	15:	5L C2
17/6/2016		33
1770/2010		
Concerci	la alc Lalca D	
General	JACK LAKE F	
Datum	NAD83	Upper Her PETERBOROUGH
Zone	1/	
Easting	/3242/	
Northing	4955211	Lot / Concession 15 / 16
Source/Acc	GPS	5m
Observation De	etails	
Depredated	nest from 20	016, white, round

Observer Details

Observer 2 Paul Heaven



Chelydra serpentina	Snapping Turtle
Provincially Tracked?:	Track all extant and selected historical E
SARO Status:	sc
S Rank:	S3

17/6/2016 Location

General	Jack Lake Road					
Datum	NAD83	Upper Tier	PETERBORG	DUGH	ł	
Zone	17	Lower Tier				
Easting	732043	Township	METHUEN			
Northing	4956734	Lot / Conc	ession	32	/	12
Source/Acc	GPS	5m				

Observation Details

depredated nest from 2016, white, round

Observer Details

Observer 2 Paul Heaven

17/6/2016

Location

General	County Road 504							
Datum	NAD83	Upper	Tier	PETERBO	ROUG	H		
Zone	17	Lower	Tier					
Easting	732243	Towns	ship	ANSTRUT	HER			
Northing	4959825	Lot /	Concession		С	/	4	
Source/Acc	GPS	5m						

Observation Details

Freshly depredated nest, round, white

Observer	Ed Poropat
Observer 2	Paul Heaven







Chelydra serpentina	Snapping Turtle
Provincially Tracked?:	Track all extant and selected historical EO
SARO Status:	sc
S Rank:	S3

17/6/2016

LÜ	Co	111	01	1

General	County Roa	d 504				
Datum	NAD83	Upper Tier	PETERBOR	DUGH	ł	
Zone	17	Lower Tier				
Easting	732258	Township	CHANDOS			
Northing	4959818	Lot / Conc	ession	С	/	4
Source/Acc	GPS	5m				

Observation Details

Freshly depredated nest, eggs round and white

Observer Details

Observer 2 Paul Heaven

18/6/2016

Location

(General	Jack Lake						
[Datum	NAD83	Upper	Tier	PETERBORG	DUGH	ł	
2	Zone	17	Lower	Tier				
E	Easting	733851	Towns	ship	METHUEN			
ſ	Northing	4954499	Lot /	Conc	ession	28	/	10
9	Source/Acc	GPS	5m					

Observation Details

swimming in wetland

Observer	Ed Poropat
Observer 2	Paul Heaven





Chelydra serpentina	Snapping Turtle
Provincially Tracked?:	Track all extant and selected historical E
SARO Status:	SC
S Rank:	S3
19/6/2016	

Location

General	Hwy 504					
Datum	NAD83	Upper Tier	PETERBOR	DUG	Ч	
Zone	17	Lower Tier				
Easting	732284	Township	CHANDOS			
Northing	4959824	Lot / Cond	cession	С	/	4
Source/Acc	GPS	5m				

Observation Details

recently depredated nest, eggs round and white (fresh)

Observer Details

Observer	Paul Heaven
Observer 2	Ed Poropat

19/6/2016

Location						
General	Hwy 504					
Datum	NAD83	Upper Tier	PETERBOR	DUG	Н	
Zone	17	Lower Tier				
Easting	734461	Township	CHANDOS			
Northing	4960461	Lot / Cond	cession	4	/	4
Source/Acc	GPS	5m				

Observation Details

recently depredated nest, eggs round and white (fresh)

Observer	Paul Heaven
Observer 2	Ed Poropat







Contopus cooperi		Olive-sided Flycatcher				
Provincially Tracked?: SARO Status:		Track all extant and selected historical EOs				
		SC				
S Rank:		S4B				
19/6/2016						
Location						
General	Jack Lake F	Road				
Datum	NAD83	Upper Tier	PETERBOR	OUGH		
Zone	17	Lower Tier				
Easting	730594	Township	BURLEIGH			
Northing	4955225	Lot / Cond	cession	16 / 15		

Northing 4955225 Lot / Source/Acc GPS 25m

Observation Details

single male singing

Observer Details

Observer	Paul Heaven
Observer 2	Ed Poropat

18/6/2016

Location

General	Jack Lake Road						
Datum	NAD83	Upper Tier PETERBORC			OUGH		
Zone	17	Lower Tier					
Easting	731975	Towns	hip	CHANDOS			
Northing	4957396	Lot /	Conc	ession	А	/	2
Source/Acc	GPS	5m					

Observation Details

1 singing male

Observer	Ed Poropat		
Observer 2	Paul Heaven		



Emydoidea blandingii	Blanding's Turtle	
Provincially Tracked?:	Track all extant and selected historical EOs	
SARO Status:	THR	
S Rank:	S3	
18/6/2016		

Location

General	County Road 504					
Datum	NAD83	Upper Tier	OUGH			
Zone	17	Lower Tier				
Easting	733471	Township	CHANDOS			
Northing	4959909	Lot / Cond	cession	2	/	4
Source/Acc	GPS	5m				

Observation Details

Dead on road, female with destroyed eggs beside carapace fragments

Observer Details

Observer	Paul Heaven				
Observer 2	Ed Poropat				

19/6/2016

Location

General	Hwy 504					
Datum	NAD83	Upper Tier	PETERBOR	OUG	н	
Zone	17	Lower Tier				
Easting	734855	Township	CHANDOS			
Northing	4960519	Lot / Con	cession	5	/ 4	
Source/Acc	GPS	5m				

Observation Details

Dead on Road, 15cm carapace

Observer	Paul Heaven
Observer 2	Ed Poropat







Hirundo rustica			arn Swallow			
Provincially Tracked?: SARO Status:		Track all extant and selected historical EOs THR				
18/6/2016						
Location						
General	County Ro	ad 504				
Datum	NAD83	Upper Tier	PETERBOROUGH			

Zone	17	Lower Tie	r			
Easting	732272	Township	CHANDOS			
Northing	4959858	Lot / Co	ncession	С	/	4
Source/Acc	GPS	5m				

Observation Details

foraging over wetland

Observer Details

Observer	Ed Poropat
Observer 2	Paul Heaven

18/6/2016

Location

General	Jack Lake							
Datum	NAD83	Upper ⁻	Tier	PETERBORC	DUGH	ł		
Zone	17	Lower	Tier					
Easting	732663	Townsh	nip	BURLEIGH				
Northing	4955077	Lot /	Conc	ession	15	/	16	
Source/Acc	GPS	5m						

Observation Details

Foraging

Observer	Ed Poropat
Observer 2	Paul Heaven



Hirundo rustica		Barn Swallow
Provincially T	racked?:	Track all extant and selected historical EOs
SARO Status:		THR
S Rank:		S4B
17/6/2016		
Location		
General Ja	ack Lake	
Datum N	IAD83	Upper Tier PETERBOROUGH
Zone 1	7	Lower Tier
Easting 7	32511	Township BURLEIGH
Northing 4	955017	Lot / Concession 14 / 16
Source/Acc	BPS	25m

Observation Details

Foraging over water

Observer Details

Observer	Ed Poropat
Observer 2	Paul Heaven

17/6/2016

Location

General	County Roa	ad 504					
Datum	NAD83	Upper	Tier	PETERBO	ROUGH	ł	
Zone	17	Lower	Tier				
Easting	732235	Towns	ship	ANSTRUT	HER		
Northing	4959874	Lot /	Cond	cession	38	/	1
Source/Acc	GPS	5m					

Observation Details

Foraging over wetland

Observer	Ed Poropat
Observer 2	Paul Heaven



hun -		
Hylocichla must	elina	Wood Thrush
Provincially	/ Tracked?:	Do not track
SARU Statu	15:	\$/B
10/6/2016	_	
15/0/2010		
Location	teal. Lake D	
General	Јаск цаке в	
Datum	NAD83	
Zone	17	Lower Her
Easting	/3266/	Township METHUEN
Northing	4955525	Lot / Concession 30 / 11
Source/Acc	GPS	25m
Observation De	etails	
single male s	inging	
Threatened F	ederally	
Observer Detai	ls	
Observer	Ed Poropat	
Observer 2	Paul Heave	n
19/6/2016		
Location		
General	Jack Lake R	oad
Datum	NAD83	Upper Tier PETERBOROUGH
Zone	17	Lower Tier
Easting	732424	Township METHUEN
Northing	4955970	Lot / Concession 31 / 12
Source/Acc	GPS	25m
Observation De	etails	
1 singing mal	е	
Threatened F	ederally	
Observer Detai	ls	
Observer	Ed Poropat	
Observer 2	Paul Heave	n



Least Bittern
Track all extant and selected
THR
S4B

historical EOs

18/6/2016

Location						
General	County Roa	d 504				
Datum	NAD83	Upper Ti	er PETERBOR	ougi	Н	
Zone	17	Lower Ti	er			
Easting	732302	Townshi	p CHANDOS			
Northing	4959793	Lot/ C	oncession	С	/	4
Source/Acc	GPS	5m				

Observation Details

Flushed female from Typha. Female landed 5m to the northeast. Investigated place of origin and located nest. Nest consisted of a platform of Typha approx, 24 inches above water with a partial Typha canopy approximately 12" above the nest platform.

Observation noted light yellow coloured legs and bill, buff colored heron-like body, with neck outstretched when it flew. Colouration of wings included large buffy patches on the upper surface of the wing. Much smaller than American Bittern with a body the size of a softball. No dark coloration of males. Returned to site and Least Bittern flushed again and Ed Poropat verified observation. Female flew 10m west and landed in Typha. Returned on 19/06/2016 with a scope and photographed Least Bittern on nest. Scope observations through Typha included bill, eye neck and head. Best photograph consists of a section of bill and head. Least Bittern observed pulling Typha down over nest.

Observer	Paul Heaven
Observer 2	Ed Poropat





Naciaocchna n	ontacantha		Wrano Darnor	1
Provincial	ly Tracked2.	Track all exta	ant and selected historical EOs	
SARO Stat	IIS'	TTACK all CALC		
S Rank:	u	S3		
18/6/2016				
Location				
General	County Ro	ad 504		
Datum	NAD83	Upper Tier	PETERBOROUGH	
Zone	17	Lower Tier		A Carter
Easting	732041	Township	ANSTRUTHER	
Northing	4960070	Lot / Cond	cession 38 / 1	
Source/Acc	GPS	5m		
Observation D	etails			8
12+, female	s ovipositing			
, e	5 0 HP 0011118			
Observer Date	11.			
Observer Deta	Ed Doropo	+		
Observer		L		
Observer 2	Paul Heave	en		
Pachydiplax lo	ngipennis	(6	Blue Dasher	0
Provincial	ly Tracked?:	Do not track		
SARO Stat	us:			
S Rank:		\$5		
17/6/2016				
Location				
General	County Ro	ad 504		
Datum	NAD83	Upper Tier	PETERBOROUGH	
Zone	17	Lower Tier		
Easting	732235	Township	CHANDOS	

Source/Acc GPS Observation Details

Northing

Resting on emergent vegetation

4959845

Restricted to richer wetlands south of the Shield - Jones et al, 2008. Therefore regionally rare on Shield

5m

Lot / Concession C / 4

Observer	Ed Poropat
Observer 2	Paul Heaven





Pandion haliaetus Provincially Tracked? SARO Status:		C Do not track	Osprey	
S Rank:		S5B		
18/6/2016				
Location				
General	Jack Lake			
Datum	NAD83	Upper Tier	PETERBOROUGH	
Zone	17	Lower Tier		

Source/Acc	GPS	5m					
Northing	4954699	Lot /	Con	cession	14	/	16
Easting	/32200	lown	ship	BURLEIGH			

Observation Details

perched in tree beside wetland

Observer Details

Observer	Ed Poropat
Observer 2	Paul Heaven

18/6/2016

Location

G	ieneral	Jack Lake							
D	atum	NAD83	Upper	Tier	PETERBORG	DUGH	ł		
Ζ	one	17	Lower	Tier					
E	asting	732862	Towns	ship	METHUEN				
N	lorthing	4954688	Lot /	Conc	ession	29	/	12	
S	ource/Acc	GPS	5m						

Observation Details

perched on tree near wetland

Observer	Ed Poropat
Observer 2	Paul Heaven





SOURCE: Jack Lake Associa	iation - 06/2016		
Chelydra serpentina	Snapping Turtle		
Provincially Tracked?:	Track all extant and selected historica		

SARO Status:

7/6/2015

Location		
General	Hwy 504	
Datum	NAD83	Upper Tier PETERBOROUGH
Zone	17	Lower Tier
Easting	731463	Township
Northing	4959744	Lot / Concession /
Source/Acc	GPS	6m

Observation Details

looking for nest site

Observer Details

Observer	Bob Bowles
Observer 2	Neill Lanz

7/6/2015

Hwy 504	
NAD83	Upper Tier PETERBOROUGH
17	Lower Tier
737476	Township
4955289	Lot / Concession /
GPS	9m
	Hwy 504 NAD83 17 737476 4955289 GPS

Observation Details

Observer	Bob Bowles
Observer 2	Neill Lanz



<i>Chelydra serpentina</i> Provincially Tracked?: SARO Status:		Snapping Turtle Track all extant and selected historical EOs)
		SC	
S Rank:		S3	
6/7/2015			
Location			
General	Jack Lake	Road	
Datum	NAD83	Upper Tier PETERBOROUGH	
Zone	17	Lower Tier	
Easting	732058	Township	
Northing	4956736	Lot / Concession /	

Source/Acc GPS Observation Details

laying eggs

Observer Details

Observer Sheelagh Hysenaj Observer 2

6/7/2015

Location

General	Jack Lake Ro	ad			
Datum	NAD83	Upper	Tier	PETERBOROUGH	
Zone	17	Lower	Tier		
Easting	732056	Towns	ship		
Northing	4955023	Lot /	Conc	ession	/
Source/Acc	GPS				

Observation Details

laying eggs

Observer Details

Observer 2 Sheelagh Hysenaj



Chelydra serpe	entina	Snapping Turtle			
Provincia	lly Tracked?:	Track all exta	nt and selected historical EO		
SARO Status:		sc			
S Rank:		S3			
6/7/2015					
Location					
General	Jack Lake I	Road			
Datum	NAD83	Upper Tier	PETERBOROUGH		
Zone	17	Lower Tier			
Easting	732058	Township			

Easting	732058	Township		
Northing	4956736	Lot /	Concession	/
Source/Acc	GPS			

Observation Details

two snapping turtles laying eggs

Observer Details

Observer	Sheelagh Hysenaj
Observer 2	

7/6/2015

Location

Jeacion				
General	Hwy 504			
Datum	NAD83	Upper Tier	PETERBOROUGH	
Zone	17	Lower Tier		
Easting	733872	Township		
Northing	4959966	Lot / Cond	cession /	ĺ
Source/Acc	GPS	7m		

Observation Details

Large female snapping turtle

Observer	Bob Bowles
Observer 2	Neill Lanz



Chelydra serpentina Provincially Tracked?: SARO Status: S Rank:		Snapping Turtle Track all extant and selected historical EOs SC S3
7/6/2015		
Location		
General	HWY 504	
Datum	NAD83	Upper Tier PETERBOROUGH
Zone	17	Lower Tier
Easting	733941	Township
Northing	49600025	Lot / Concession /
Source/Acc	GPS	11m
Observation D	stails	

Observation Details

looking for nest site near driveway

Observer Details

Observer	Bob Bowles
Observer 2	Neill Lanz

7/6/2016

Lo	ocation		
	General	Hwy 504	
	Datum	NAD83	Upper Tier PETERBOROUGH
	Zone	17	Lower Tier
	Easting	733872	Township
	Northing	4959966	Lot / Concession /
	Source/Acc	GPS	5m

Observation Details

by lane #840

Observer	Bob Bowles
Observer 2	Neill Lanz



Chaludra corpor	ting	Snanning Turtla
Provincially	v Tracked?	Track all extant and selected historical FOs
SARO Statu	IS:	SC
S Rank:		S3
7/6/2015		
Location		
General	Hwy 504	
Datum	NAD83	Upper Tier PETERBOROUGH
Zone	17	Lower Tier
Easting	732260	Township
Northing	4959818	Lot / Concession /
Source/Acc	GPS	5m
Observation De	etails	
still alive but nests in this a	with cracke area as well	d carapace. Thre were about 5 predated
Observer Detai	ls	
Observer	Bob Bowle	S
Observer 2	Neill Lanz	
Emvdoidea hlar	dingii	Blanding's Turtle
Provincially	v Tracked?:	Track all extant and selected historical EOs
SARO Statu	IS:	THR
S Rank:		53
//		
Location		
General		
Datum	NAD83	Upper Tier PETERBOROUGH
Zone	17	Lower Tier
Easting	732082	Township
Northing	4956750	Lot / Concession /
Source/Acc		
Observation De	etails	
used to see t	hem at this	location
Observer Detai	lc	
observer Detai		

Observer 2 Sheelagh Hysenaj



<i>Emydoidea I</i> Provinc SARO Si S Rank:	blandingii ially Tracked?: tatus:	Blanding's Turtle Track all extant and selected historical EOs THR S3	
//			
Location			
General			
Datum	NAD83	Upper Tier PETERBOROUGH	
Zone	17	Lower Tier	
Easting	731606	Township	
Northing	4957527	Lot / Concession /	

Source/Acc Observation Details

Seen several over the years at this location

Observer Details

Observer 2 Sheelagh Hysenaj



SOURCE: Nature Counts/	Ontario Breeding Bird Atlas - 02/06/2016
Cardellina canadensis	Canada Warbler
Provincially Tracked?:	Track all extant and selected historical EOs
SARO Status:	SC
S Rank:	S4B
19/5/2002	
Location	
General	
Datum NAD83	Upper Tier PETERBOROUGH
Zone 17	Lower Tier
Easting 732485	Township
Northing 4958338	Lot / Concession /
Source/Acc	
Observation Details	

1

Observer Details

Observer Observer 2

19/6/2002

Location			
General			
Datum	NAD83	Upper Tier PETERBOROUGH	ł
Zone	17	Lower Tier	
Easting	732063	Township	
Northing	4958619	Lot / Concession	

Source/Acc

Observation Details

Observer Details

Observer OBBA Point Count Data
Observer 2



Cardellina canadensis Provincially Tracked SARO Status: S Rank:	Canada Warbler ?: Track all extant and selected historical EOs SC S4B
19/6/2002	
Location	
General	
Datum NAD83	Upper Tier PETERBOROUGH
Zone 17	Lower Tier
Easting 733382	Township
Northing 4958292	Lot / Concession /
Source/Acc	
Observation Details	

Observer Details

Observer	OBBA Point Count Data
Observer 2	

18/6/2002

Location

General				
Datum	NAD83	Upper Tier	PETERBOROUG	Н
Zone	17	Lower Tier		
Easting	731492	Township		
Northing	4958316	Lot / Cond	cession	/
Source/Acc				

Observation Details

Observer Details

Observer OBBA Point Count Data
Observer 2



APPENDIX 4: SPECIES LIST

CLASS SCI_NAME COM_NAME FAMILY MNR S_RANK Amphibia Anaxyrus americanus American Toad Bufonidae S5 Hyla versicolor Hylidae S5 Gray Treefrog Lithobates catesbeianus American Bullfrog Ranidae S4 Lithobates clamitans S5 Green Frog Ranidae Lithobates pipiens Northern Leopard Frog Ranidae NAR S5 Lithobates septentrionalis Mink Frog Ranidae S5 Aves Agelaius phoeniceus **Red-winged Blackbird** Icteridae S4 Wood Duck Anatidae S5 Aix sponsa Anas platyrhynchos Mallard Anatidae S5 Archilochus colubris Ruby-throated Hummingbird Trochilidae S5B Ardea herodias Great Blue Heron Ardeidae S4 Aythya collaris **Ring-necked Duck** Anatidae **S**5 Bombycilla cedrorum Cedar Waxwing Bombycillidae S5B **Ruffed Grouse** Phasianidae Bonasa umbellus **S**4 Botaurus lentiginosus American Bittern Ardeidae S4B Branta canadensis Canada Goose Anatidae S5 Buteo lineatus **Red-shouldered Hawk** Accipitridae NAR S4B Buteo platypterus Broad-winged Hawk Accipitridae S5B Ardeidae S4B Butorides virescens Green Heron Cardellina pusilla Wilson's Warbler Parulidae S4B Carduelis tristis American Goldfinch Fringillidae S5B Carpodacus purpureus **Purple Finch** Fringillidae S4B **Turkey Vulture** Cathartes aura Cathartidae S5B Turdidae Catharus fuscescens Veery S4B Catharus guttatus Hermit Thrush Turdidae S5B Certhia americana **Brown Creeper** Certhiidae S5B Cistothorus palustris Marsh Wren Troglodytidae S4B Coccyzus erythropthalmus Black-billed Cuckoo Cuculidae S5B Northern Flicker Colaptes auratus Picidae S4B Contopus cooperi Olive-sided Flycatcher Tyrannidae SC S4B Eastern Wood-pewee Tyrannidae S4B Contopus virens Corvus brachyrhynchos American Crow Corvidae S5B Common Raven Corvidae S5 Corvus corax Cyanocitta cristata Blue Jay Corvidae S5 Dryocopus pileatus Pileated Woodpecker Picidae **S**5 Dumetella carolinensis Gray Catbird Mimidae S4B S5B Empidonax alnorum Alder Flycatcher Tyrannidae Tyrannidae S4B Empidonax minimus Least Flycatcher NAR Gavia immer Gaviidae S5B,S5N Common Loon Geothlypis philadelphia Mourning Warbler Parulidae S4B Geothlypis trichas **Common Yellowthroat** Parulidae S5B Grus canadensis S5B Sandhill Crane Gruidae Hirundinidae S4B THR Hirundo rustica Barn Swallow Hylocichla mustelina Wood Thrush Turdidae S4B Icterus galbula **Baltimore Oriole** Icteridae S4B THR Ixobrychus exilis Least Bittern Ardeidae S4B Larus argentatus Herring Gull Laridae S5B,S5N Lophodytes cucullatus Hooded Merganser Anatidae S5B,S5N Megaceryle alcyon **Belted Kingfisher** Alcedinidae S4B Meleagris gallopavo Wild Turkey Phasianidae S5 Melospiza georgiana Swamp Sparrow Emberizidae S5B Melospiza melodia Emberizidae S5B Song Sparrow Mniotilta varia Black-and-white Warbler Parulidae S5B



95

Northern OWE	S Version 1.2			Au	gust 2016
CLASS	SCI_NAME	COM_NAME	FAMILY	MNR	S_RANK
	Myiarchus crinitus	Great Crested Flycatcher	Tyrannidae		S4B
	Oreothlypis ruficapilla	Nashville Warbler	Parulidae		S5B
	Pandion haliaetus	Osprey	Pandionidae		S5B
	Parkesia noveboracensis	Northern Waterthrush	Parulidae		S5B
	Passerina cyanea	Indigo Bunting	Cardinalidae		S4B
	Pheucticus Iudovicianus	Rose-breasted Grosbeak	Cardinalidae		S4B
	Picoides pubescens	Downy Woodpecker	Picidae		S5
	Picoides villosus	Hairy Woodpecker	Picidae		S5
	Piranga olivacea	Scarlet Tanager	Cardinalidae		S4B
	Podilymbus podiceps	Pied-billed Grebe	Podicipedidae		S4B,S4N
	Poecile atricapillus	Black-capped Chickadee	Paridae		S5
	Quiscalus quiscula	Common Grackle	Icteridae		S5B
	Rallus limicola	Virginia Rail	Rallidae		S5B
	Sayornis phoebe	Eastern Phoebe	Tyrannidae		S5B
	Scolopax minor	American Woodcock	Scolopacidae		S4B
	Seiurus aurocapilla	Ovenbird	Parulidae		S4B
	Setophaga caerulescens	Black-throated Blue Warbler	Parulidae		S5B
	Setophaga coronata	Yellow-rumped Warbler	Parulidae		S5B
	Setophaga fusca	Blackburnian Warbler	Parulidae		55B
	Setophaga magnolia	Magnolia Warbler	Parulidae		55B 55B
	Setophaga nensylvanica	Chestnut-sided Warbler	Parulidae		55B
	Setophaga petechia	Vellow Warbler	Parulidae		55B
	Setophaga pinus	Rino Warbler	Parulidao		550
	Setophaga ruticilla	Amorican Rodstart	Parulidao		550
	Setophaga viranc	Allerical Reustalt	Parulidao		33D 6ED
	Setophaga virens	Black-till Dated Green Warbler	Falulluae		330
	Sitta canadensis	Nucleite breested Nucleater	Sittidae		35 CF
	Sitta carolinerisis	White-breasted Nutriatch	Sittidae		35 CED
	Spnyrapicus varius	Yellow-bellied Sapsucker	Picidae		55B
	Spizella passerina	Chipping Sparrow	Emperizidae		55B
	Stelgidopteryx serripennis	Northern Rough-winged Swallow	Hirundinidae		S4B
	Tachycineta bicolor	Tree Swallow	Hirundinidae		S4B
	Toxostoma rufum	Brown Thrasher	Mimidae		S4B
	Troglodytes aedon	House Wren	Troglodytidae		S5B
	Troglodytes troglodytes	Winter Wren	Troglodytidae		S5B
	Turdus migratorius	American Robin	Turdidae		S5B
	Tyrannus tyrannus	Eastern Kingbird	Tyrannidae		S4B
	Vireo gilvus	Warbling Vireo	Vireonidae		S5B
	Vireo olivaceus	Red-eyed Vireo	Vireonidae		S5B
	Vireo solitarius	Blue-headed Vireo	Vireonidae		S5B
	Zenaida macroura	Mourning Dove	Columbidae		S5
	Zonotrichia albicollis	White-throated Sparrow	Emberizidae		S5B
Chelonia					
	Chaluder conserving	Concerning Truths	Chaludridaa		62
	Chelyara serpentina		Chelydridae	SC	53
	Chrysemys picta marginata		Emydidae	-	54
Mammalia	Emyaolaea bianaingii	Blanding's Turtle	Emydidae	THK	53
	Alces americanus	Moose	Cervidae		S5
	Castor canadensis	Beaver	Castoridae		S5
	Lepus americanus	Snowshoe Hare	Leporidae		S5
	Odocoileus virainianus	White-tailed Deer	Cervidae		S5
	Ondatra zibethicus	Muskrat	Cricetidae		SS SS
	Brocyon lator	Northern Paccoon	Drogvonidaa		55
	Tamias striatus	Fastorn Chinewalt	Sciuridae		33 SE
	Tamias striatus		Sciuridae		35 65
	i amiasciurus nuasonicus	Ked Squirrei	Sciuridae		35 65
Develille	Ursus americanus	American Black Bear	Ursidae	NAR	55
NORTHIN					

Reptilia



Northern OWES \	/ersion 1.2			Au	gust 2016
CLASS	SCI_NAME	COM_NAME	FAMILY	MNR	S_RANK
	Nerodia sipedon sipedon	Northern Watersnake	Colubridae	NAR	S5
	Thamnophis sirtalis sirtalis	Fastern Gartersnake	Colubridae		55
			contabilitate		00
Incocto					
Insecta					
	Aeshna canadensis	Canada Darner	Aeshnidae		S5
	Anax junius	Common Green Darner	Aeshnidae		S5
	Arigomphus cornutus	Horned Clubtail	Gomphidae		S3
	Arigomphus furcifer	Lilypad Clubtail	Gomphidae		S3
	Calopteryx maculata	Ebony Jewelwing	Calopterygidae		S5
	Celithemis elisa	Calico Pennant	Libellulidae		S5
	Chlosyne nycteis	Silvery Checkerspot	Nymphalidae		S5
	Chromagrion conditum	Aurora Damsel	Coenagrionidae		S5
	Coenonympha tullia	Common Ringlet	Nymphalidae		S5
	Cordulegaster diastatops	Delta-spotted Spiketail	Cordulegastridae		S4
	Cordulegaster maculata	Twin-spotted Spiketail	Cordulegastridae		S4
	Cordulia shurtleffii	American Emerald	Corduliidae		S5
	Dorocordulia libera	Racket-tailed Emerald	Corduliidae		S5
	Enallagma ebrium	Marsh Bluet	Coenagrionidae		S5
	Enallagma haqeni	Hagen's Bluet	Coenagrionidae		S5
	Enallaama vesperum	Vesper Bluet	Coenagrionidae		S4
	Epitheca canis	Beaverpond Baskettail	Corduliidae		S5
	Epitheca cvnosura	Common Baskettail	Corduliidae		S5
	Epitheca princeps	Prince Baskettail	Corduliidae		S5
	Enitheca spiniaera	Spiny Baskettail	Corduliidae		55
	Epithecu spingeru Frynnis juvenalis	luvenal's Duskywing	Hesperiidae		55
	Glauconsyche lyadamus	Silvery Blue	Lycaenidae		S5
	Gomphus exilis	Lancet Clubtail	Gomphidae		S5
	Gomphus snicatus	Dusky Clubtail	Gomphidae		55
	lichnura posita	Eragilo Forktail	Coonagrionidao		27
			Coenagrionidae		34 CF
		Chalk fronted Corneral	Libollulidoo		35
			Libellulidae		35
	Leucorrhinia jrigida	Frosted Whiteface	Libellulidae		35
		Dot-tailed whiteface	Libellulidae		55
	Leucorrninia proxima	Red-Walsted Whiteface	Libellulidae		55
	Libellula incesta	Slaty Skimmer	Libellulidae		54
	Libellula pulchella	I welve-spotted Skimmer	Libellulidae		55
	Libellula quadrimaculata	Four-spotted Skimmer	Libellulidae		55
	Limenitis archippus	Viceroy	Nymphalidae		\$5
	Nasiaeschna pentacantha	Cyrano Darner	Aeshnidae		53
	Nehalennia irene	Sedge Sprite	Coenagrionidae		\$5
	Pachydiplax longipennis	Blue Dasher	Libellulidae		S5
	Papilio canadensis	Canadian Tiger Swallowtail	Papilionidae		S5
	Phyciodes cocyta	Northern Crescent	Nymphalidae		S5
	Plathemis lydia	Common Whitetail	Libellulidae		S5
	Poanes hobomok	Hobomok Skipper	Hesperiidae		S5
	Polites mystic	Long Dash Skipper	Hesperiidae		S5
	Thymelicus lineola	European Skipper	Hesperiidae		SNA
	Vanessa virginiensis	American Lady	Nymphalidae		S5
Dicotyledoneae					
	Acer rubrum	Pod Maplo	Acoração		55
	ALEI IUDIUIII	neu Maple	Aceraceae		33 SE
			Bernaceae		35 65
	Anaromeaa polifolia var. latifolia		Ericaceae		55
	Asclepias incarnata	Swamp Milkweed	Asclepiadaceae		\$5
	Asciepias syriaca		Asciepiadaceae		55
	Betula alleghaniensis	Yellow Birch	Betulaceae		\$5
	Betula papyrifera	Paper Birch	Betulaceae		S5



ASS	SCI_NAME	COM_NAME	FAMILY	MNR	S_RA
	Brasenia schreberi	Watershield	Cabombaceae		S5
	Ceratophyllum demersum	Common Hornwort	Ceratophyllaceae		S5
	Chamaedaphne calyculata	Leatherleaf	Ericaceae		S5
	Cicuta maculata var. maculata	Spotted Water-hemlock	Apiaceae		S5
	Clematis virginiana	Virginia Virgin's-bower	Ranunculaceae		S5
	Comarum palustre	Marsh Cinquefoil	Rosaceae		S5
	Coptis trifolia	Goldthread	Ranunculaceae		S 5
	Cornus canadensis	Bunchberry	Cornaceae		55
	Cornus stolonifera	Red-osier Dogwood	Cornaceae		55
	Echium vulgare	Common Viner's-hugloss	Boraginaceae		SNA
	Europatorium perfoliatum	Common Bonosot	Astoração		514
	Eutrochium maculatum var	Spotted Ioo Byo Wood	Astoração		55
	maculatum	sponed for the weed	Asteraceae		55
	Fraxinus nigra	Black Ash	Oleaceae		S4
	Galium asprellum	Rough Bedstraw	Rubiaceae		S5
	Galium palustre	Marsh Bedstraw	Rubiaceae		S5
	Galium trifidum	Three-petalled Bedstraw	Rubiaceae		S5
	Gaultheria procumbens	Eastern Teaberry	Ericaceae		S5
	llex mucronata	Mountain Holly	Aquifoliaceae		S 5
	llex verticillata	Black Holly	Aquifoliaceae		\$5
	Impatiens canensis	Spotted lewelweed	Balsaminaceae		55
	Lanartag canadansis	Wood Nottlo	Urticacoao		55
	Lipponeu cunduensis	Twinflower	Caprifoliacoao		22
		Canada Ely Hanaysuelda	Caprifoliaceae		35
			Lamiana		35
		Northern Water-norehound	Lamaceae		35
	Lysimachia thyrsiflora	Water Loosestrife	Primulaceae		55
	Mitella nuda	Naked Bishop's-cap	Saxifragaceae		\$5
	Myrica gale	Sweet Bayberry	Myricaceae		\$5
	Myriophyllum sibiricum	Siberian Water-milfoil	Haloragaceae		S5
	Nuphar variegata	Variegated Pond-lily	Nymphaeaceae		S5
	Nymphaea odorata ssp. odorata	Fragrant Water-lily	Nymphaeaceae		S5?
	Parthenocissus inserta	Thicket Creeper	Vitaceae		S5
	Persicaria amphibia var. stipulacea	Flanged Smartweed	Polygonaceae		S5?
	Populus balsamifera	Balsam Poplar	Salicaceae		S5
	Rhododendron groenlandicum	Common Labrador Tea	Ericaceae		S5
	Rubus idaeus ssp. idaeus	Common Red Raspberry	Rosaceae		SNA
	Rubus pubescens	Dewberry	Rosaceae		S5
	Rumex orbiculatus	Water Dock	Polygonaceae		S4S5
	Salix bebbiana	Bebb's Willow	Salicaceae		S5
	Salix candida	Hoary Willow	Salicaceae		S5
	Salix discolor	Pussy Willow	Salicaceae		55
	Salix netiolaris	Meadow Willow	Salicaceae		55
	Silene vulgaris	Maidon's Toars	Carvonhullacoao		55
	Sheric vulguris	White Moodewayest	Bossesse		SINA
	spiraea aiba		Rosaceae		35
	i nalictrum pubescens		Kanunculaceae		55
	l'iarella cordifolia	Heart-leaved Foam-flower	Saxifragaceae		S5
	Triadenum fraseri	Fraser's St. John's-wort	Clusiaceae		S5
	Trientalis borealis	Northern Starflower	Primulaceae		S5
	Ulmus americana	American Elm	Ulmaceae		S5
	Utricularia intermedia	Flatleaf Bladderwort	Lentibulariaceae		S5
	Utricularia vulgaris	Greater Bladderwort	Lentibulariaceae		S5
	Vaccinium myrtilloides	Velvetleaf Blueberry	Ericaceae		S5
ocotyledoneae			_		
	Calamagrostis canadensis	Bluejoint Reedgrass	Poaceae		S5
	Calla palustris	Wild Calla	Araceae		S5
	Carex aquatilis var. aquatilis	Water Sedge	Cyperaceae		S5

Northern OWES	Version 1.2			Au	gust 2016
CLASS	SCI_NAME	COM_NAME	FAMILY	MNR	S_RANK
	Carex diandra	Lesser Panicled Sedge	Cyperaceae		S5
	Carex interior	Inland Sedge	Cyperaceae		S5
	Carex lacustris	Lake-bank Sedge	Cyperaceae		S5
	Carex lasiocarpa	Slender Sedge	Cyperaceae		S5
	Carex livida	Livid Sedge	Cyperaceae		S5
	Carex stipata	Awl-fruited Sedge	Cyperaceae		S5
	Carex stricta	Tussock Sedge	Cyperaceae		S5
	Carex utriculata	Bladder Sedge	Cyperaceae		S5
	Carex viridula	Greenish Sedge	Cyperaceae		S5
	Dulichium arundinaceum	Three-way Sedge	Cyperaceae		S5
	Eleocharis palustris	Creeping Spike-rush	Cyperaceae		S5
	Eriophorum virginicum	Tawny Cottongrass	Cyperaceae		S5
	Iris versicolor	Harlequin Blue Flag	Iridaceae		S5
	Juncus canadensis	Canada Rush	Juncaceae		S5
	Maianthemum trifolium	Three-leaved Solomon's-seal	Liliaceae		S5
	Phalaris arundinacea	Reed Canary Grass	Poaceae		S5
	Poa palustris	Fowl Bluegrass	Poaceae		S5
	Pontederia cordata	Pickerel Weed	Pontederiaceae		S5
	Potamogeton natans	Floating Pondweed	Potamogetonaceae		S5
	Potamogeton pusillus ssp. pusillus	Slender Pondweed	Potamogetonaceae		SU
	Potamogeton richardsonii	Richardson's Pondweed	Potamogetonaceae		S5
	Potamogeton robbinsii	Robbins' Pondweed	Potamogetonaceae		S4S5
	Schoenoplectus acutus	Hard-stemmed Bulush	Cyperaceae		S5
	Scirpus cyperinus	Cottongrass Bulrush	Cyperaceae		S5
	Sparganium eurycarpum	Broad-fruited Burreed	Sparganiaceae		S5
	Spirodela polyrrhiza	Great Duckweed	Lemnaceae		S5
	Typha angustifolia	Narrow-leaved Cattail	Typhaceae		SNA
	Typha latifolia	Broad-leaved Cattail	Typhaceae		S5
Bryopsida					
	Ptilium crista-castrensis	Knight's Plume	Hypnaceae		S5
Sphagnopsida					
	Sphagnum wulfianum	Wulf's Peat Moss	Sphagnaceae		S5
Pinopsida					
	Ahies halsamea	Balsam Fir	Pinaceae		\$5
	l arix laricina	American Larch	Pinaceae		S5
	Picea alauca	White Spruce	Pinaceae		55
	Picea mariana	Black Spruce	Pinaceae		S5
	Thuja occidentalis	Eastern White Cedar	Cupressaceae		S5
Filicopsida					
	Gymnocarpium dryopteris	Common Oak Fern	Dryopteridaceae		S5
	Matteuccia struthiopteris	Ostrich Fern	Dryopteridaceae		S5
	Onoclea sensibilis	Sensitive Fern	Dryopteridaceae		S5
Equisetopsida					
	Fauisetum arvense	Field Horsetail	Fauisetaceae		\$5
	Equisetum fluviatile	Water Horsetail	Equisetaceae		SS SS
	Equisetum pratense	Meadow Horsetail	Equisetaceae		SS SS
	Equise tuin proteinse	inicadow noisetall	Lyuisetateat		

