# WETLAND EVALUATION DATA AND SCORING RECORD

Wetland Name: South Bear Brook Wetland

Geographic Location (municipality, lot/concession, etc):

City of Ottawa; Bounded by Farmer's Way (west), Highway 417 (north), Boundary Road (east), Mitch Owens Road (south)

Map / Photo Locational Reference (e.g., latitude/longitude, NTS map, UTM):

45.36088, -75.48461

Eco-District: 6E-12

Wetland Size (hectares): 561.48

| Vegetation Form | FA |
|---|---|
| h | 0.70 |
| c | 0.06 |
| dh | - |
| dc | - |
| ts | 0.15 |
| ls | - |
| ds | - |
| gc | - |
| m | - |
| ne | 0.05 |
| be | - |
| re | 0.03 |
| ff | - |
| f | - |
| su | - |
| u | - |

# 1.0 BIOLOGICAL COMPONENT

## 1.1 PRODUCTIVITY

### 1.1.1 Growing Degree-Days/Soils *(max: 30 pts)*

Refer to page 36 of manual for further explanation.

1. Determine the correct GDD value for your wetland (use Figure 5).
2. Circle the appropriate GDD value from the evaluation table below.
3. Determine the Fractional Area (FA) of the wetland for each soil type.
4. Multiply the fractional area of each soil type by the applicable score-factor in the evaluation table.
5. Sum the scores for each soil type to obtain the final score (maximum score is 30 points).

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

| Soil Type | FA of wetland in soil type | Enter appropriate score-factor from above table | |
|---|---|---|---|
| Clay/Loam | 1 | x 22 | = 22 |
| Silt/Marl: | - | x | = |
| Limestone: | - | x | = |
| Sand: | - | x | = |
| Humic/Mesic: | - | x | = |
| Fibric: | - | x | = |
| Granite: | - | x | = |
| Total | 1 | | |

GDD/Soils Score *(maximum 30 points)* 22

### 1.1.2 Wetland Type

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

| | Fractional Area | | Score |
|---|---|---|---|
| Bog | - | x 3 = | |
| Fen | - | x 6 = | |
| Swamp | 0.92 | x 8 = | 7.36 |
| Marsh | 0.07 | x 15 = | 1.05 |
| Total | 1.00 | = | 8.41 |

Wetland Type Score *(maximum 15 points)* 8.41____

### 1.1.3 Site Type

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

| | Fractional Area | | Score |
|---|---|---|---|
| Isolated | 0.00 | x 1 = | 0 |
| Palustrine (permanent or intermittent flow) | 0.91 | x 2 = | 1.82 |
| Riverine | 0.09 | x 4 = | 0.36 |
| Riverine (at rivermouth) | - | x 5 = | - |
| Lacustrine (at rivermouth) | - | x 5 = | - |
| Lacustrine (with barrier beach) | - | x 3 = | - |
| Lacustrine (exposed to lake) | - | x 2 = | - |
| Total | | = | 2.18 |

Site Type Score *(maximum 5 points)* 2.18

## 1.2 BIODIVERSITY

### 1.2.1 Number of Wetland Types

*(Check only one)*

| | | | |
|---|---|---|---|
| | One | = | 9 points |
| X | Two | = | 13 |
| | Three | = | 20 |
| | Four | = | 30 |

Number of Wetland Types Score
*(maximum 30 points)* 13

### 1.2.2. Vegetation Communities

*Use the data sheet provided in 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):*

| Total # of communities with **1-3 forms** | |
|---|---|
| 1 = | 1.5 pts |
| 2 = | 2.5 |
| 3 = | 3.5 |
| 4 = | 4.5 |
| 5 = | 5 |
| 6 = | 5.5 |
| 7 = | 6 |
| 8 = | 6.5 |
| 9 = | 7 |
| 10 = | 7.5 |
| 11 = | 8 |
| + 0.5 *for each additional community* | |
| 67 = | 36 |

| Total # of communities with **4-5 forms** | |
|---|---|
| 1 = | 2 pts |
| 2 = | 3.5 |
| 3 = | 5 |
| 4 = | 6.5 |
| 5 = | 7.5 |
| 6 = | 8.5 |
| 7 = | 9.5 |
| 8 = | 10.5 |
| 9 = | 11.5 |
| 10 = | 12.5 |
| 11 = | 13 |
| + 0.5 *for each additional community* | |
| 21 = | 18 |

| Total # of communities with **6 or more forms** | |
|---|---|
| 1 = | 3 pts |
| 2 = | 5 |
| 3 = | 7 |
| 4 = | 9 |
| 5 = | 10.5 |
| 6 = | 12 |
| 7 = | 13.5 |
| 8 = | 15 |
| 9 = | 16.5 |
| 10 = | 18 |
| 11 = | 19 |
| + 1.0 *for each additional community* | |
| 0 = | 0 |

Vegetation Communities Score
*(maximum 45 points)* 45

## 1.2.3 Diversity of Surrounding Habitat

*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.*

| | |
|---|---|
| 1 | row crop |
| 1 | pasture |
| 1 | abandoned agricultural land |
| 1 | deciduous forest |
| 1 | coniferous forest |
| 1 | mixed forest* |
| 1 | abandoned pits and quarries |
| 1 | open lake or deep river |
| 1 | fence rows with deep cover, or shelterbelts |
| 1 | terrain appreciably undulating, hilly or with ravines |
| 1 | creek flood plain |

* *"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 |
|---|---|---|
| | Hydrologically connected by surface water to other wetlands (different dominant wetland type), or to open lake or deep river within 1.5 km | 8 |
| X | Hydrologically connected by surface water to other wetlands (same dominant wetland type) within 0.5 km | 8 |
| | Hydrologically connected by surface water to other wetlands (different dominant wetland type), or to open lake or deep river from 1.5 to 4 km away | 5 |
| | Hydrologically connected by surface water to other wetlands (same dominant wetland type) from 0.5 to 1.5 km away | 5 |
| | Within 0.75 km of other wetlands (different dominant wetland type) or open water body, but not hydrologically connected by surface water | 5 |
| | 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:
250 m from Swamp on NCC Property bordered by Hwy 417/Piperville Rd/Boundary Rd
200 m from Swamp east of Anderson Links Golf Course, bordered by Farmers Way/Leitrim Rd/Hydro Corridor

Proximity to other Wetlands Score
*(maximum 8 points)* 8

### 1.2.5 Interspersion

Number of Intersections = 234

| ✓ | Number of Intersections *(Check one only)* | Points |
|---|---|---|
| | 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 |
| | 151 to 175 | = 24 |
| | 176 to 200 | = 27 |
| X | >200 | = 30 |

Interspersion Score *(maximum 30 points)* 30

### 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 |
|---|---|---|---|
| X | Type 1 | Open water occupies < 5 % of wetland area | = 8 |
| | Type 2 | Open water occupies 5-25% of wetland (occurring in central area) | = 8 |
| | Type 3 | Open water occupies 5-25% (occurring in various-sized ponds, dense patches of vegetation or vegetation in diffuse stands) | = 14 |
| | 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 embayments are common) | = 30 |
| | Type 6 | Open water occupies 76%-95% of wetland (occurring in large central area; vegetation is peripheral) | = 8 |
| | Type 7 | Open water occupies 76-95% of wetland (vegetation in patches or diffuse open stands) | = 14 |
| | Type 8 | Open water occupies more than 95% of wetland area | = 3 |
| | No open water | | = 0 |

Open Water Type Score *(maximum 30 points)* 8

## 1.3 SIZE (BIOLOGICAL COMPONENT)

Total Size of Wetland = 561.48 ha

Sum of scores from Biodiversity Subcomponent

| | | |
|---|---|---|
| | 1.2.1 | 13 |
| + | 1.2.2 | 45 |
| + | 1.2.3 | 7 |
| + | 1.2.4 | 8 |
| + | 1.2.5 | 30 |
| + | 1.2.6 | 8 |
| | | 111 |

*Circle the appropriate score from the table below.*

| Wetland size (ha) | 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 |
| 141-160 | 11 | 15 | 17 | 19 | 23 | 34 | 46 | 50 | 50 | 50 |
| 161-180 | 13 | 17 | 19 | 21 | 25 | 37 | 49 | 50 | 50 | 50 |
| 181-200 | 15 | 19 | 21 | 23 | 28 | 40 | 50 | 50 | 50 | 50 |
| 201-400 | 17 | 21 | 23 | 25 | 31 | 43 | 50 | 50 | 50 | 50 |
| 401-600 | 19 | 23 | 25 | 28 | 34 | 46 | 50 | 50 | 50 | 50 |
| 601-800 | 21 | 25 | 28 | 31 | 37 | 49 | 50 | 50 | 50 | 50 |
| 801-1000 | 23 | 28 | 31 | 34 | 40 | 50 | 50 | 50 | 50 | 50 |
| 1001-1200 | 25 | 31 | 34 | 37 | 43 | 50 | 50 | 50 | 50 | 50 |
| 1201-1400 | 28 | 34 | 37 | 40 | 46 | 50 | 50 | 50 | 50 | 50 |
| 1401-1600 | 31 | 37 | 40 | 43 | 49 | 50 | 50 | 50 | 50 | 50 |
| 1601-1800 | 34 | 40 | 43 | 46 | 50 | 50 | 50 | 50 | 50 | 50 |
| 1801-2000 | 37 | 43 | 47 | 49 | 50 | 50 | 50 | 50 | 50 | 50 |
| >2000 | 40 | 46 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |

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

# 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 areas where harvest is not permitted. Check only one option.*

Area of wetland used for scoring 2.1.1: 408.87 ha

| | | | |
|---|---|---|---|
| | < 5 ha | = | 0 pts |
| | 5 - 25 ha | = | 3 |
| | 26 – 50 ha | = | 6 |
| | 51 – 100 ha | = | 9 |
| | 101 – 200 ha | = | 12 |
| X | > 200 ha | = | 18 |

Source of information:
Site Visit, City of Ottawa Ortho Imagery (2021)

Wood Products Score *(maximum 18 points)* 18

### 2.1.2 Wild Rice

*Check only one.*

| | | | |
|---|---|---|---|
| | Present (min. size 0.5 ha) | = | 6 pts |
| X | Absent | = | 0 |
| | Harvest not permitted | = | 0 |

Source of information:
Site Visit

Wild Rice Score *(maximum 6 points)* 0

### 2.1.3 Commercial Baitfish

*Check only one.*

| | | | |
|---|---|---|---|
| | Present | = | 12 pts |
| X | Absent | = | 0 |
| | Fishing not permitted | = | 0 |

Source of information:
Site Visit

Commercial Fish Score *(maximum 12 points)* __0_____

### 2.1.4 Furbearers

*Only species recognized as furbearers under the Fish & Wildlife Conservation Act may be scored here.* 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. | Trapping prohibited | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |

Furbearer Score *(maximum 12 points)* 0

## 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.*

| Intensity of Use | Type of Wetland-Associated Use: Hunting | Nature Enjoyment/ Ecosystem Study | Fishing |
|---|---|---|---|
| High | 40 points | 40 points | 40 points |
| Moderate | 20 | 20 X | 20 |
| Low | 8 | 8 | 8 |
| Not Possible/ No evidence | 0 X | 0 | 0 X |

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

Hunting: Not Permitted - 0 points

Nature: Observed use of ATV trails within the Study Area during site visits - 20 points

Fishing: No evidence from site visits.

Recreational Activities Score
*(maximum 80 points)* 20

# 2.3 LANDSCAPE AESTHETICS

## 2.3.1 Distinctness

*Check only one.*

| | | | |
|---|---|---|---|
| | Clearly Distinct | = | 3 pts |
| X | Indistinct | = | 0 |

Landscape Distinctness Score
*(maximum 3 points)* 0

## 2.3.2 Absence of Human Disturbance

*Check only one.*

| | | | |
|---|---|---|---|
| | Human disturbances absent or nearly so | = | 7 pts |
| | One or several localized disturbances | = | 4 |
| | Moderate disturbance; localized water pollution | = | 2 |
| X | 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:
Surrounding Area has been heavily farmed and includes local residential dwellings along the roads. There is heavy use of ATV trails at multiple locations. Evidence of historic peat extraction is extensive in tsS communities north of Piperville Road. Road run-off and agricultural drainage ditches are prevalent.

Source of information:
Site Visits

Absence of Human Disturbance Score
*(maximum 7 points)* 1

## 2.4 EDUCATION AND PUBLIC AWARENESS

### 2.4.1 Educational Uses

*Check highest appropriate category.*

| | | | |
|---|---|---|---|
| | Frequent | = | 20 pts |
| | Infrequent | = | 12 |
| X | No visits | = | 0 |

Details regarding the type and frequency of education uses scored above:

Source of information:
No evidence of educational use through site visits or online searches. Limited property access limits potential for educational use.

Educational Uses Score *(maximum 20 points)* 0

### 2.4.2 Facilities and Programs

*Check all appropriate options, score highest category checked.*

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

Additional Notes/Comments:
Maintained ATV trails and foot paths present

Source of information:
Site Visits

Facilities and Programs Score
*(maximum 8 points)* 2

### 2.4.3 Research and Studies

*Check all that apply; score highest category checked.*

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

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

Yang, J., Townsend, R. D., Daneshfar, B. (2005) . A GIS-based .Approach to River Network Floodplain Delineation. River Basin Management III Vol 83, page 517-524 ISSN 1743-3541

South Nation Conservation Authority (2016) Bear Brook Subwatershed Report Card Retrieved from· https·//www nation.on.ca/sites/default/files/16-SNCA-0794-Bear_Brook_ Report-ENG-Proof-r4.pdf

Research and Studies Score
*(maximum 12 points)* 5

## 2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT

Name of Settlement: Orleans

Distance of wetland from settlement: 2.2 km

Population of settlement: 125,040 (Source: City of Ottawa Demographic Statistics)

*Circle only the highest score applicable*

| Distance of wetland to settlement | population >10,000 | population 2,500-10,000 | population <2,500 or cottage community |
|---|---|---|---|
| within or adjoining settlement | 40 points | 26 points | 16 points |
| 0.5 to 10 km from settlement | 26 X | 16 | 10 |
| 10 to 60 km from settlement | 12 | 8 | 4 |
| >60 km from nearest settlement | 5 | 2 | 0 |

Proximity to Human Settlement Score
*(maximum 40 points)* 26

## 2.6 OWNERSHIP

| | |
|---|---|
| FA of wetland held by or held under a legal contract by a conservation body (as defined by the *Conservation Land Act*) for wetland protection | _____ x 10 = _____ |
| FA of wetland occurring in provincially or nationally protected areas (e.g., parks and conservation reserves) | _____ x 10 = _____ |
| FA of wetland area in Crown/public ownership, not as above | _____ x 8 = _____ |
| FA of wetland area in private ownership, not as above | 1 x 4 = 4 |

Source of information:

_____

Ownership Score *(maximum 10 points)* 4

## 2.7 SIZE (SOCIAL COMPONENT)

Total Size of Wetland = 561.48 ha  Sum of scores from Subcomponents 2.1, 2.2, and 2.5 = 64

*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 |
| <2 ha | 1 | 2 | 4 | 8 | 10 | 12 | 14 | 14 | 14 | 15 |
| 2-4 | 1 | 2 | 4 | 8 | 12 | 13 | 14 | 14 | 15 | 16 |
| 5-8 | 2 | 2 | 5 | 9 | 13 | 14 | 15 | 15 | 16 | 16 |
| 9-12 | 3 | 3 | 6 | 10 | 14 | 15 | 15 | 16 | 17 | 17 |
| 13-17 | 3 | 4 | 7 | 10 | 14 | 15 | 16 | 16 | 17 | 17 |
| 18-28 | 4 | 5 | 8 | 11 | 15 | 16 | 16 | 17 | 17 | 18 |
| 29-37 | 5 | 7 | 10 | 13 | 16 | 17 | 18 | 18 | 19 | 19 |
| 38-49 | 5 | 7 | 10 | 13 | 16 | 17 | 18 | 18 | 19 | 20 |
| 50-62 | 5 | 8 | 11 | 14 | 17 | 17 | 18 | 19 | 20 | 20 |
| 63-81 | 5 | 8 | 11 | 15 | 17 | 18 | 19 | 20 | 20 | 20 |
| 82-105 | 6 | 9 | 11 | 15 | 18 | 18 | 19 | 20 | 20 | 20 |
| 106-137 | 6 | 9 | 12 | 16 | 18 | 19 | 20 | 20 | 20 | 20 |
| 138-178 | 6 | 9 | 13 | 16 | 18 | 19 | 20 | 20 | 20 | 20 |
| 179-233 | 6 | 9 | 13 | 16 | 18 | 20 | 20 | 20 | 20 | 20 |
| 234-302 | 7 | 9 | 13 | 16 | 18 | 20 | 20 | 20 | 20 | 20 |
| 303-393 | 7 | 9 | 14 | 17 | 18 | 20 | 20 | 20 | 20 | 20 |
| 394-511 | 7 | 10 | 14 | 17 | 18 | 20 | 20 | 20 | 20 | 20 |
| 512-665 | 7 | 10 | 14 | 17 | 18 | 20 | 20 | 20 | 20 | 20 |
| 666-863 | 7 | 10 | 14 | 17 | 19 | 20 | 20 | 20 | 20 | 20 |
| 864-1123 | 8 | 12 | 15 | 17 | 19 | 20 | 20 | 20 | 20 | 20 |
| 1124-1460 | 8 | 12 | 15 | 17 | 19 | 20 | 20 | 20 | 20 | 20 |
| 1461-1898 | 8 | 13 | 15 | 18 | 19 | 20 | 20 | 20 | 20 | 20 |
| 1899-2467 | 8 | 14 | 16 | 18 | 20 | 20 | 20 | 20 | 20 | 20 |
| >2467 | 8 | 14 | 16 | 18 | 20 | 20 | 20 | 20 | 20 | 20 |

Total Size Score (Social Component) 17

## 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

| | | | |
|---|---|---|---|
| | Significant | = | 30 pts |
| | Not Significant | = | 0 |
| X | Unknown | = | 0 |

Additional Comments/Notes:

### 2.8.2 Cultural Heritage

| | | | |
|---|---|---|---|
| | Significant | = | 30 pts |
| | Not Significant | = | 0 |
| X | Unknown | = | 0 |

Additional Comments/Notes:

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

## 3.0 HYDROLOGICAL COMPONENT

## 3.1 FLOOD ATTENUATION

*Check one of the following options.*

| | |
|---|---|
| | If wetland is a coastal wetland, ➡ score 0 points for this section. |
| | If wetland is entirely isolated in site type, ➡ score 100 points automatically. |
| X | Wetland not as above – proceed through 'steps' A through F below. |

(A) Total wetland area = 561.48 ha

(B) Size of wetland's catchment = 5216.85 ha

(C) Size of other detention areas in catchment = 733.39 ha

(D) Total area of upstream detention areas = {A + C } = 1294.87 ha

(E) Upstream Detention Factor = {(A/D) x 2} = 0.87 (maximum 1.0)

(F) Attenuation Factor = {(A/B) x 10} = 1 (maximum 1.0)

Flood Attenuation Final Score = {(E + F) /2) x 100 = 93.5

| Flood Attenuation Score *(maximum 100 points)* | 94 |
|---|---|

# 3.2 WATER QUALITY IMPROVEMENT

## 3.2.1 Short Term Water Quality Improvement

Step 1: Determination of maximum initial score

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

Step 2: Determination of Watershed Improvement Factor (WIF)

*Calculation of WIF is based on the fractional area (FA) of each site type that makes up the total area of the wetland.*

(FA = area of site type/total area of wetland)

| | | | |
|---|---|---|---|
| FA of isolated wetland | = 0 | x 0.5 = | 0 |
| FA of riverine wetland | = 0.09 | x 1.0 = | 0.09 |
| FA of palustrine wetland with no inflow | = 0.91 | x 0.7 = | 0.64 |
| FA of palustrine wetland with inflows | = 0 | x 1.0 = | 0 |
| FA of lacustrine on lake shoreline | = 0 | x 0.2 = | 0 |
| FA of lacustrine at lake inflow or outflow | = 0 | x 1.0 = | 0 |

Sum (*WIF cannot exceed 1.0*) 0.73

Step 3: Determination of Catchment Land Use Factor (LUF)

*(Choose the first category that fits upstream land use in the catchment.)*

| | | |
|---|---|---|
| X | Over 50% agricultural and/or urban | = 1.0 |
| | Between 30 and 50% agricultural and/or urban | = 0.8 |
| | Over 50% forested or other natural vegetation | = 0.6 |

LUF *(maximum 1.0)* 1

Step 4: Determination of Pollutant Uptake Factor (PUF)

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

(FA = area of vegetation type/total area of wetland)

| | | | | | |
|---|---|---|---|---|---|
| FA of wetland with live trees, shrubs, herbs or mosses (c, h, ts, ls, gc, m) | 0.92 | = x | 0.75 | = | 0.69 |
| FA of wetland with emergent, submergent or floating vegetation (re, be, ne, su, f, ff) | 0.08 | = x | 1.0 | = | 0.08 |
| FA of wetland with little or no vegetation (u) | 0 | = x | 0.5 | = | 0 |

Sum *(PUF cannot exceed 1.0)* 0.77

Step 5: Calculation of final score

| | | |
|---|---|---|
| | Wetland on defined 5 major lakes or 5 major rivers | 0 |
| X | All other wetlands – calculate as follows | |
| | Initial score | 60 |
| | Watershed Improvement Factor (WIF) | 0.73 |
| | Land Use Factor (LUF) | 1 |
| | Pollutant Uptake Factor (PUF) | 0.77 |
| | Final score: 60 x WIF x LUF x PUF = | 33.63 |

Short Term Water Quality Improvement Score
*(maximum 60 points)* 33.63

## 3.2.2 Long Term Nutrient Trap

Step 1:

| | |
|---|---|
| | Wetland on defined 5 major lakes or 5 major rivers = 0 points |
| X | All other wetlands (Proceed to Step 2) |

Step 2: Choose only one of the following settings that best describes the wetland being evaluated

| | | | |
|---|---|---|---|
| | Wetland located in a river mouth | = | 10 pts |
| | Wetland is a bog, fen, or swamp with more than 50% of the wetland being covered with organic soil | = | 10 |
| X | Wetland is a bog, fen, or swamp with less than 50% of the wetland being covered with organic soil | = | 3 |
| | Wetland is a marsh with more than 50% of the wetland covered with organic soil | = | 3 |
| | None of the above | = | 0 |

Long Term Nutrient Trap Score
*(maximum 10 points)* 3

### 3.2.3 Groundwater Discharge

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

| Wetland Characteristics | Potential for Discharge | | |
|---|---|---|---|
| | None to Little | Some | High |
| Wetland type | Bog = 0 | X Swamp/Marsh = 2 | Fen = 5 |
| Topography | X Flat/rolling = 0 | Hilly = 2 | Steep = 5 |
| Wetland area: Upslope catchment area | Large (>50%) = 0 | Moderate (5-50%) = 2 X | Small (<5%) = 5 |
| Lagg development | X None found = 0 | Minor = 2 | Extensive = 5 |
| Seeps | None = 0 | ≤ 3 seeps = 2 | X > 3 seeps = 5 |
| Surface marl deposits | X None = 0 | ≤ 3 sites = 2 | > 3 sites = 5 |
| Iron precipitates | None = 0 | ≤ 3 sites = 2 | X > 3 sites = 5 |
| Located within 1 km of a major aquifer | N/A = 0 | N/A = 0 | X Yes = 10<br>No = 0 |

Additional Comments/Notes:

Groundwater Discharge Score
*(maximum 30 points)* 24

## 3.3 CARBON SINK

*Check only one of the following:*

| | | | |
|---|---|---|---|
| | Bog, fen or swamp with more than 50% coverage by organic soil | = | 5 pts |
| | Bog, fen or swamp with between 10 to 50% coverage by organic soil | = | 2 |
| | Marsh with more than 50% coverage by organic soil | = | 3 |
| X | Wetlands not in one of the above categories | = | 0 |

Source of information:

Site visit noted residual organic soils no greater than 20 cm deep.

Carbon Sink Score
*(maximum 5 points)* 0

## 3.4 SHORELINE EROSION CONTROL

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

Step 1:

| | | | |
|---|---|---|---|
| | Wetland entirely isolated or palustrine | = | 0 pts |
| X | 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 109 for description of "shoreline".)*

| | | | |
|---|---|---|---|
| | Trees and shrubs | = | 15 pts |
| X | Emergent vegetation | = | 8 |
| | Submergent vegetation | = | 6 |
| | Other shoreline vegetation | = | 3 |
| | No vegetation | = | 0 |

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

# 3.5 GROUNDWATER RECHARGE

## 3.5.1 Site Type

| | | | |
|---|---|---|---|
| Wetland > 50% lacustrine (by area) or located on one of the five major rivers | | = 0 pts | |
| Wetland not as above. Calculate final score as follows: | | | |
| ■ FA of isolated or palustrine wetland | = 0.91 | x 50 = | 45.59 |
| ■ FA of riverine wetland | = 0.09 | x 20 = | 1.75 |
| ■ FA of lacustrine wetland (not dominant site type) | = 0 | x 0 = | 0 |
| | | | |

Groundwater Recharge/Wetland Site Type Score *(maximum 50 points)* 47.34

## 3.5.2 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).*

| Dominant Wetland Type | Group A, B, C (sands, gravels, loams) | Group D (clays, substrates in high water tables, shallow substrates over impervious materials such as bedrock) |
|---|---|---|
| Lacustrine or major river | 0 | 0 |
| Isolated | 10 | 5 |
| Palustrine | X 7 | 4 |
| Riverine (not on a major river) | 5 | 2 |

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

# 4.0 SPECIAL FEATURES COMPONENT

## 4.1 RARITY

### 4.1.1 Wetland Types

| Ecodistrict | Rarity within the Landscape (4.1.1.1) | Rarity of Wetland Type (4.1.1.2) | | | |
|---|---|---|---|---|---|
| | | Marsh | Swamp | Fen | Bog |
| 6E-1 | 60 | 40 | 0 | 80 | 80 |
| 6E -2 | 60 | 40 | 0 | 80 | 80 |
| 6E-4 | 60 | 40 | 0 | 80 | 80 |
| 6E-5 | 20 | 40 | 0 | 80 | 80 |
| 6E-6 | 40 | 20 | 0 | 80 | 80 |
| 6E-7 | 60 | 10 | 0 | 80 | 80 |
| 6E-8 | 20 | 20 | 0 | 80 | 80 |
| 6E-9 | 0 | 20 | 0 | 80 | 80 |
| 6E-10 | 20 | 0 | 20 | 80 | 80 |
| 6E-11 | 0 | 30 | 0 | 80 | 80 |
| 6E-12 | x 0 | x 30 | X 0 | 60 | 80 |
| 6E-13 | 60 | 10 | 0 | 80 | 80 |
| 6E-14 | 40 | 20 | 0 | 40 | 80 |
| 6E-15 | 40 | 0 | 0 | 80 | 80 |
| 6E-16 | 60 | 20 | 0 | 80 | 60 |
| 6E-17 | 40 | 10 | 0 | 30 | 80 |
| 7E-1 | 60 | 0 | 60 | 80 | 80 |
| 7E-2 | 60 | 0 | 0 | 80 | 80 |
| 7E-3 | 60 | 00 | 0 | 80 | 80 |
| 7E-4 | 80 | 0 | 0 | 80 | 80 |
| 7E-5 | 60 | 20 | 0 | 80 | 80 |
| 7E-6 | 80 | 30 | 0 | 80 | 80 |

#### 4.1.1.1 Rarity within the Landscape

*Choose appropriate score from 2nd column above.*

Score *(maximum 80 points)* 0

#### 4.1.1.2 Rarity of Wetland Type

*Score is cumulative, based on presence/absence. Circle all appropriate scores from above table and sum.*

Score *(maximum 80 points)* 30

## 4.1.2 Species

### 4.1.2.1 Provincially Significant Animal Species

| Common Name | Scientific Name | Activity | Dates Observed | Info Source |
|---|---|---|---|---|
| Snapping Turtle | *Chelydra serpentina* | Nest Evidence | July 2022 | Site Visit |
| Monarch | *Danaus plexippus* | Adults foraging, caterpillar on milkweed | June - July 2022 | Site Visit |
| Wood Thrush | *Hylocichla mustelina* | Singing, commonly observed in hS | June - July 2022 | Site Visit |
| Eastern Wood Pewee | *Contopus virens* | Singing, commonly observed in hS | June - July 2022 | Site Visit |
| | | | | |
| | | | | |
| | | | | |

Additional Notes/Comments:
*See Appendix C for full list of background sources confirming multiple years of observation.*

| | | | | | |
|---|---|---|---|---|---|
| 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
*(no maximum)* 105

### 4.1.2.2 Provincially Significant Plant Species

| Common Name | Scientific Name | Activity | Dates Observed | Info Source |
|---|---|---|---|---|
| Red Spruce | Picea rubens | n/a | July 2022, 2019 | Site Visit, NHIC, iNaturalist |
| Black Ash | Fraxinus nigra | n/a | July 2022, 2020 | Site Visit, NHIC, iNaturalist |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Additional Notes/Comments:

Note that Polygala sanguinea has been identified within the hydro corridor immediately outside of the wetland. Multiple years observations are lacking, but this species is likely to be present in a greater geographic area than observed in. See Appendix C for additional details and source records.

| | | | | | |
|---|---|---|---|---|---|
| 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
*(no maximum)* 80

### 4.1.2.3 Regionally Significant Species

| Common Name | Scientific Name | Activity | Dates Observed | Info Source |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| | | |
|---|---|---|
| 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

### 4.1.2.4 Locally Significant Species

| Common Name | Scientific Name | Activity | Dates Observed | Info Source |
|---|---|---|---|---|
| Interupted Fern | Osmunda claytoniana | n/a | June 2022, June 2021 | Site Visit, iNaturalist |
| Round-leaved Sundew | Drosera rotundifolia | n/a | July 2022, June 2019 | Site Visit, iNaturalist |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

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

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

Locally Significant Species Score
*(no maximum score)* 17

## 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 | Site Visit | = 50 |
| Known to have nested within the past 5 years | | | = 25 |
| Active feeding area (great blue heron excluded) | | | = 15 |
| None known | | | = 0 |

Additional Notes/Comments:
Heronry with 3 active nests and 9 juvenile birds in nests during fieldwork in June - July 2022. Birds were observed throughout the duration of site visits and were also seen after fledging.

Colonial Waterbird Nesting Score
*(maximum 50 points)* 50

### 4.2.2 Winter Cover for Wildlife

*Score highest appropriate category. Include rationale/sources of information.*

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

Species/habitat/vegetation community scored *(e.g., winter deer cover in hemlock swamp, S3 and S4b)*:
Limited areas of coniferous dominant communities. Little winter cover available.

Source of information:

Winter Cover for Wildlife Score
*(maximum 100 points)* 0

### 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 | Moulting |
|---|---|---|
| Nationally/internationally significant | = 150 pts | = 150 pts |
| Provincially significant | = 100 | = 100 |
| Significant in the Ecoregion | = 50 | = 50 |
| Significant in Ecodistrict | = 25 | = 25 |
| Known to occur | = 10 | X = 10 |
| Not possible/Unknown | X = 0 | = 0 |

Species/habitat/vegetation community scored *(e.g., approx 20 mallards in W3)*:
Moulting signs observed in W communities north of Mitch Owens Road.

Source of information:
Site visits

Waterfowl Staging/Moulting Score
*(maximum 150 points)* 10

### 4.2.4 Waterfowl Breeding

*Check highest level of significance.*

| | | |
|---|---|---|
| | Nationally/internationally significant | = 150 pts |
| | Provincially significant | = 100 |
| | Significant in the Ecoregion | = 50 |
| | Significant in Ecodistrict | = 25 |
| X | Habitat Suitable | = 10 |
| | Habitat not suitable | = 0 |

Species/habitat/vegetation community scored *(e.g., mallard in W3)*:
Wood Duck and ducklings observed in reM7-A2 (north of Mitch Owens). Habitat suitable in other reM and W communities throughout.

Source of information:
Site Visit

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 | = 100 |
| | Significant in Ecoregion | = 50 |
| | Significant in Ecodistrict | = 25 |
| | Known to occur | = 10 |
| X | Not possible / Unknown | = 0 |

Species/habitat/vegetation community scored:

Source of information:

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

## 4.2.6 Fish Habitat

### 4.2.6.1 Spawning and Nursery Habitat

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

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

Step 1:

| | | |
|---|---|---|
| | Fish habitat is not present within the wetland | Go to Step 7, Score 0 points |
| X | Fish habitat is present within the wetland | Go to Step 2 |

Step 2: *Choose only one option*

| | | |
|---|---|---|
| | Significance of the spawning and nursery habitat within the wetland is known | Go to Step 3 |
| X | Significance of the spawning and nursery habitat within the wetland is not known | Go through Steps 4, 5 and 6 |

Step 3: *Select 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 |

Source of information:

---

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 |
| X | Low marsh present | Continue through Step 4, scoring as noted below |

***Scoring of Low Marsh:***

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 7) 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 7) | Multiplication Factor | Score |
|---|---|---|---|---|---|---|
| 1 | Tallgrass | X | 23.73 | 1 | 6 | 6 |
| 2 | Shortgrass-Sedge | | | | 11 | |
| 3 | Cattail-Bulrush-Burreed | X | 12.63 | 0.6 | 5 | 3 |
| 4 | Arrowhead-Pickerelweed | | | | 5 | |
| 5 | Duckweed | | | | 2 | |
| 6 | Smartweed-Waterwillow | | | | 6 | |
| 7 | Waterlily-Lotus | X | 2.48 | 0.2 | 11 | 2.2 |
| 8 | Waterweed-Watercress | | | | 9 | |
| 9 | Ribbongrass | | | | 10 | |
| 10 | Coontail-Naiad-Watermilfoil | | | | 13 | |
| 11 | Narrowleaf Pondweed | | | | 5 | |
| 12 | Broadleaf Pondweed | | | | 8 | |
| | | | | | | 11.2 |

Total Score for Low Marsh (*maximum 75 points*)

Continue to Step 5

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 |
| X | 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 7) 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 7) | Multiplication Factor | Score |
|---|---|---|---|---|---|---|
| 1 | Tallgrass | X | 4.86 | 0.2 | 6 | 1.2 |
| 2 | Shortgrass-Sedge | | | | 11 | |
| 3 | Cattail-Bulrush-Burreed | | | | 5 | |
| 4 | Arrowhead-Pickerelweed | | | | 5 | |
| | Total Score for High Marsh (*maximum 25 points*) | | | | | 1.2 |

Continue to Step 6

Step 6:

| | | |
|---|---|---|
| | Swamp containing fish habitat not present | Go to Step 7 |
| X | 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 below.
3. Use these areas to assign an **Area Factor** (from Table 7).
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 7) | Multiplication Factor | Score |
|---|---|---|---|---|---|
| Seasonally Flooded Swamp | X | 31.93 | 1 | 10 | 10 |
| Permanently Flooded Swamp | | | | 10 | |
| | | | Total Score for Swamp (*maximum 20 points*) | | 10 |

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) = 11.2
D. Score from Step 5 (High Marsh) = 1.2
E. Score from Step 6 (Swamp) = 10

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)* 22.4

### 4.2.6.2 Migration and Staging Habitat

Step 1:

| | | |
|---|---|---|
| X | 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 |
| | 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 |

Source of information:

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). Refer to Site Types recorded earlier (section 1.1.3). Attach documentation.

| | | |
|---|---|---|
| | 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)* 0

## 4.3 ECOSYSTEM AGE

| | | Fractional Area | | Score |
|---|---|---|---|---|
| Bog | = | | x 25 = | |
| Fen, on deeper soils; floating mats or marl | = | | x 20 = | |
| Fen, on limestone rock | = | | x 5 = | |
| Swamp | = | 0.92 | x 3 = | 2.76 |
| Marsh | = | 0.08 | x 0 = | 0 |
| | Total | | = | |

Ecosystem Age Score *(maximum 25 points)* 2.76

## 4.4 GREAT LAKES COASTAL WETLANDS

*Choose one only.*

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

n/a

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

# GENERAL INFORMATION

## Wetland Evaluator(s)

Name: Nicole Nolan (Certified OWES Evaluator) Affiliation: Parsons Corporation, Ottawa

Signature: 

(by signing, I confirm that this evaluation has been undertaken and completed in accordance with the Ontario Wetland Evaluation System Southern Manual 4th Edition / Northern Manual 2nd Edition)

Name: Maria Ning (Terrestrial Ecologist) Affiliation: Parsons Corporation, Ottawa

Signature: _____

(by signing, I confirm that this evaluation has been undertaken and completed in accordance with the Ontario Wetland Evaluation System Southern Manual 4th Edition / Northern Manual 2nd Edition)

Name: _____ Affiliation: _____

Signature: _____

(by signing, I confirm that this evaluation has been undertaken and completed in accordance with the Ontario Wetland Evaluation System Southern Manual 4th Edition / Northern Manual 2nd Edition)

Name: _____ Affiliation: _____

Signature: _____

(by signing, I confirm that this evaluation has been undertaken and completed in accordance with the Ontario Wetland Evaluation System Southern Manual 4th Edition / Northern Manual 2nd Edition)

Name: _____ Affiliation: _____

Signature: _____

(by signing, I confirm that this evaluation has been undertaken and completed in accordance with the Ontario Wetland Evaluation System Southern Manual 4th Edition / Northern Manual 2nd Edition)

Date(s) wetland visited (in field): June 2022: 7-10, 14-18, 25; July 2022: 8, 13, 22, 26, 27

Date evaluation completed: October 15, 2022; Re-evaluation in accordance with 4th Edition Manual Completed July 12, 2023

Estimated time devoted to completing the field survey in person hours: 300 hours

## Weather Conditions

i) at time of field work: Ranged from clear and sunny to overcast and rain, 15-30 degrees Celsius, typically 22-28 degrees.

ii) summer conditions in general: Sunny and clear with extended periods without rain. Occasional, severe thunderstorms with stronger winds than typical year. Extensive spring storm damage within Study Area due to May 2022 derecho.

# WETLAND EVALUATION SCORING RECORD

WETLAND NAME: South Bear Brook Wetland

## 1.0 BIOLOGICAL COMPONENT

| | |
|---|---|
| 32.74 | 1.1 PRODUCTIVITY |
| 22 | 1.1.1 Growing Degree-Days/Soils |
| 9 | 1.1.2 Wetland Type |
| 2 | 1.1.3 Site Type |
| | |
| 111 | 1.2 BIODIVERSITY |
| 13 | 1.2.1 Number of Wetland Types |
| 45 | 1.2.2 Vegetation Communities |
| 7 | 1.2.3 Diversity of Surrounding Habitat |
| 8 | 1.2.4 Proximity to Other Wetlands |
| 30 | 1.2.5 Interspersion |
| 8 | 1.2.6 Open Water Type |
| | |
| 50 | 1.3 SIZE (Biological Component) |
| 194 | TOTAL (Biological Component) |

## 2.0 SOCIAL COMPONENT

| | |
|---|---|
| | 2.1 ECONOMICALLY VALUABLE PRODUCTS |
| 18 | 2.1.1 Wood Products |
| 0 | 2.1.2 Wild Rice |
| 0 | 2.1.3 Commerical Baitfish |
| 0 | 2.1.4 Furbearers |
| 18 | Total for Economically Valuable Products |
| 20 | 2.2 RECREATIONAL ACTIVITIES |
| | 2.3 LANDSCAPE AESTHETICS |
| 0 | 2.3.1 Distinctness |
| 1 | 2.3.2 Absence of Human Disturbance |
| 1 | Total for Landscape Aesthetics |
| | 2.4 EDUCATION AND PUBLIC AWARENESS |
| 0 | 2.4.1 Educational Uses |
| 2 | 2.4.2 Facilities and Programs |
| 5 | 2.4.3 Research and Studies |
| 7 | Total for Education and Public Awareness |
| 26 | 2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT |
| 4 | 2.6 OWNERSHIP |
| 17 | 2.7 SIZE (Social Component) |
| 0 | 2.8 ABORIGINAL VALUES AND CULTURAL HERITAGE |
| 0 | 2.8.1 Aboriginal Values |
| 0 | 2.8.2 Cultural Heritage |
| 93 | TOTAL (Social Component) |

## 3.0 HYDROLOGICAL COMPONENT

| | |
|---|---|
| 94 | 3.1 FLOOD ATTENUATION |
| | 3.2 WATER QUALITY IMPROVEMENT |
| 33.63 | 3.2.1 Short Term Water Quality Improvement |
| 3 | 3.2.2 Long Term Nutrient Trap |
| 24 | 3.2.3 Groundwater Discharge |
| 61 | Total for Water Quality Improvement |
| 0 | 3.3 CARBON SINK |
| 8 | 3.4 SHORELINE EROSION CONTROL |
| | 3.5 GROUNDWATER RECHARGE |
| 47.34 | 3.5.1 Site Type |
| 7 | 3.5.2 Soil Recharge Potential |
| 54 | Total for Groundwater Recharge |
| 217 | TOTAL (Hydrological Component) |

## 4.0 SPECIAL FEATURES COMPONENT

### 4.1 RARITY

#### 4.1.1 Wetlands

| | |
|---|---|
| 0 | 4.1.1.1 Rarity within the Landscape |
| 30 | 4.1.1.2 Rarity of Wetland Type |
| 30 | Total for Wetland Rarity |

#### 4.1.2 Species

| | |
|---|---|
| 105 | 4.1.2.1 Provincially Significant Animals |
| 80 | 4.1.2.2 Provincially Significant Plants |
| 0 | 4.1.2.3 Regionally Significant Species |
| 17 | 4.1.2.4 Locally Significant Species |
| 202 | Total for Species Rarity |

### 4.2 SIGNIFICANT FEATURES AND HABITATS

| | |
|---|---|
| 50 | 4.2.1 Colonial Waterbirds |
| 0 | 4.2.2 Winter Cover for Wildlife |
| 10 | 4.2.3 Waterfowl Staging and/or Moulting Areas |
| 10 | 4.2.4 Waterfowl Breeding |
| 0 | 4.2.5 Migratory Passerine, Shorebird or Raptor Stopover Area |
| | 4.2.6 Fish Habitat |
| 22.4 | 4.2.6.1 Spawning and Nursery Habitat |
| 0 | 4.2.6.2 Migration and Staging Habitat |
| 92.4 | Total for Significant Features and Habitats |

| | |
|---|---|
| 2.76 | 4.3 ECOSYSTEM AGE |
| 0 | 4.4 GREAT LAKES COASTAL WETLANDS |
| 250 (327) | TOTAL FOR SPECIAL FEATURES COMPONENT (*not to exceed 250*) |

## SUMMARY OF EVALUATION RESULT

Wetland _____

| | |
|---|---|
| 194 | 1.0 TOTAL FOR BIOLOGICAL COMPONENT |
| 93 | 2.0 TOTAL FOR SOCIAL COMPONENT |
| 217 | 3.0 TOTAL FOR HYDROLOGICAL COMPONENT |
| 250 | 4.0 TOTAL FOR SPECIAL FEATURES COMPONENT |
| 754 | TOTAL WETLAND SCORE |

# APPENDICES