

Appendix A
Consultant Biographies

1.0 Environmental Consultants

1.1 Garrett Bell, B.Sc.E, Environmental Technologist

Mr. Bell graduated from the University of New Brunswick in Fredericton, NB, with a B.Sc.E (Geological engineering). He has more than ten years in characterizing and evaluating natural resources including geology, soil, hydrology, mineral resources, vegetation and wildlife. Mr. Bell is responsible for collection of all types of environmental data from available sources including field investigations, and providing environmental monitoring/ protection services. He has extensive experience in environmental impact assessment and environmental management including review of Project Environmental Protection Plans. Mr. Bell specializes in wetland ecology, plant species at risk, and ecological land classification/ resource management.

1.2 Shawna Cox, B.Sc., Biologist

Ms. Cox graduated from the University of New Brunswick in Fredericton, NB, with a B.Sc. in Biology. She received additional training in electrofishing and rare plant identification. Ms. Cox has ten years of experience in areas of Natural Resource Management, Environmental Impact Assessment, Environmental Monitoring, Environmental Management and Project Planning, as well as Habitat Delineation and Protection. In particular, she has experience in detailed fish and aquatic habitat assessments, water sampling, benthic invertebrates sampling, wetland habitat assessment and delineation, and species at risk surveys (plants, salmonids, wood turtles, etc.).

1.3 Scott Sangster, BSc, Environmental Scientist

Mr. Sangster graduated from Saint Mary's University, Halifax, NS with a B.Sc. in Environmental Studies, and from Niagara College, Niagara On The Lake, ON with a Certificate in Environmental Management. Mr. Sangster has five years combined experience managing, preparing, and reviewing environmental assessments with AMEC Earth & Environmental, Halifax International Airport Authority, and Nova Scotia Environment and Labour. In particular, he has extensive experience in developing and implementing environmental protection and monitoring plans for rare plants. Mr. Sangster was part of a team that successfully transplanted a small number of rare plants to Acadia University for scientific research.

1.4 Marion Sensen, PhD., Botanist

Dr. Sensen is a biologist specializing in botany with a doctorate in lichenology. She received her credentials from Heinrich- Heine University in Duesseldorf, Germany. Since moving to Canada, she gained more than ten years of experience with Nova Scotia and Atlantic Canada flora, both as a member on the Nova Scotia Wild Flora Society, and professionally. During her postdoctoral research at St. Mary's University in Halifax, she concentrated on air pollution monitoring with lichens. She has carried out wetlands environmental effects monitoring programmes, environmental constraints mapping, plant inventories and rare plant surveys.

2.0 Ornithological Consultants

2.1 Clarence Stevens

Mr. Stevens is a well-known and respected naturalist specializing in ornithology. He has more than 25 years of birding experience, and is trained in methods of scientific bird observation and data collection. He is the author of numerous books and articles on birds in Nova Scotia, e.g. "Backyard Birds of Nova Scotia" and a 310 page regional birding guide. Also, for now 15 years he has been writing on birds for a birding column that appears in a regional newspaper. He has volunteered numerous hours for important projects such as six years spent gathering data for the Maritime Breeding Bird Atlas, and serving as the provincial coordinator for the Piping Plover Guardianship programme. He has carried out bird surveys for numerous larger and smaller infrastructures projects in Nova Scotia, New Brunswick and Prince Edward Island, such as the Sable Gas Pipeline, and highway construction or twinning projects. He also carried out an Assessment of Bird Hazards to aircraft at both Shearwater and Greenwood Airbases. Some survey projects included plant and small mammals surveys.

2.2 Fulton Lavender

Mr. Lavender is a well known and respected naturalist specializing in ornithology. He has more than 35 years birding experience, and is trained in methods of scientific bird observation and data collection. He has carried out numerous bird surveys for large and small infrastructure and scientific projects in Nova Scotia, New Brunswick and Ontario. His most recent projects include: the Maritimes and NorthEast Gas Pipeline, several wind farm projects, a diamond mine, as well as several years of collecting bird data for Parks Canada at Fundy National Park.

3.0 Archaeological consultants

3.1 Dr. Stephen A. Davis, B.A, M.A.

Dr. Stephen A. Davis is the President of the independent, Halifax- based company "Davis Archaeological Consultants Limited" (DAC). He holds a D.Phil in prehistory from the University of Oxford, M.A. in Anthropology (specialization in prehistoric archaeology) from Memorial University of Newfoundland, and a B.A. (Honours) in Anthropology from the University of New Brunswick, Fredericton. His formal training has been augmented with thirty-one years of teaching archaeology, part-time at the University of Oxford, Memorial University of Newfoundland and St. Francis Xavier University. Dr. Davis is presently a tenured Professor of Anthropology at Saint Mary's University, Halifax. He has recently been granted the President's Award for Excellence in Research (Saint Mary's University).

Through research and consultancy experience over a thirty-year period, Dr. Davis brings a wealth of archaeological experience to any cultural project. Although his specialization is the prehistory of Atlantic Canada, he has worked on projects in Spain, Norway, Maine, the British Isles, N.W.T., Ontario and the Canadian Arctic. With a growing public interest in protecting cultural resources of all types, Dr. Davis has become involved with

numerous projects involving historic site archaeology. During his professional career he has directed archaeological investigations of fifteen prehistoric sites, twenty-five historic sites and conducted one hundred and twenty cultural resource assessment surveys under the guidelines for a Category C Permit (Nova Scotia Museum). These activities have resulted in over 100 publications in the form of books, book chapters, journal articles and contractual documents.

3.2 April MacIntyre, B.A., Senior Technologist

April D. MacIntyre is a M.A. student at Memorial University of Newfoundland (specialization in historic archaeology) and holds a B.A. (Honours) in Anthropology from Saint Mary's University. She has been employed in the consulting field since 1999 on various projects including the Little Dutch Church burial mitigation, the Maritimes and Northeast Pipeline Project, the Shubenacadie Portobello Inclined Plane assessment, the Halifax Regional Municipality Parkade, and the Halifax Regional Municipality Sewage Treatment Plant. Prior to her employment as a consulting archaeologist, Ms. MacIntyre was involved with various archaeological projects at Saint Mary's University. Her specialization is in the historic archaeology of Nova Scotia and she is currently conducting research on a nineteenth-century Scottish homestead in Cape Breton. She works through "Davis Archaeological Consultants Limited" (DAC).

3.3 Kelly J. Peters, B.A., First Nations Technician

Kelly J. Peters is a recent graduate of Anthropology (Bachelor of Arts) at Saint Mary's University (2003) and is actively involved in the protection of aboriginal rights and resources. He has been employed by the *Treaty & Aboriginal Rights Research Centre of Nova Scotia* and the *Confederacy of Mainland Mi'kmaq* to research archaeological resources and historic documents pertaining to aboriginal peoples. He has also been employed as a consultant on various aboriginal as well as historic archaeological resource impact assessment including the Maritimes and Northeast Pipeline project and the National Historic Palaeo-Indian site at Debert for the Mi'kmawey Debert Cultural Centre. He works through "Davis Archaeological Consultants Limited" (DAC).

4.0 Contact Information

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Appendix B
Wetland Data Sheets

Wetland Number 1

Associated Watercourse: Winter Creek

Date: 2004 09 08

Name of Investigator: GB/MS

Weather: light rain, calm, cool

Aerial Photo Number: 97017-108

Wetland Atlas Number: N/A

Topographic Sheet: 11 F / 7

Wetland size: 3.0 ha

Wetland Type:

1. Aquatic bed/unconsolidated bottom (AB) _____

2. Bog (BO) X

3. Fen (FE) _____

4. Emergent wetland (EW) _____

5. Shrub wetland (SB) _____

6. Forested wetland (FW) _____

Wetland Class:

1. Open water X

2. Deep marsh _____

3. Shallow marsh _____

4. Seasonally flooded flats _____

5. Meadow _____

6. Shrub swamp _____

7. Wooded swamp _____

8. Bog X

Wetland Subclass:

1. Vegetated open water _____

2. Non-vegetated OW X

3. Floating leaved OW _____

4. Rooted floating leaved OW _____

5. Dead woody OW _____

6. Vegetated deep marsh _____

7. Non-vegetated DM _____

8. Dead woody DM _____

9. Sub-shrub DM _____

10. Floating leaved DM _____

11. Rooted floating leaved DM _____

12. Robust DM _____

13. Narrow-leaved DM _____

14. Broad-leaved DM _____

15. Dead woody shallow marsh _____

16. Robust SM _____

17. Narrow leaved SM _____

18. Broad leaved SM _____

19. Floating leaved SM _____

20. Rooted floating leaved SM _____

21. Non-vegetated SM _____

22. Emergent seasonally flooded flats _____

23. Shrubby SFF _____

24. Grazed meadow _____

25. Ungrazed M X (adjacent to shrubs)

26. Sedge M _____

27. Sapling shrub swamp _____

28. Bushy SS X

29. Compact SS _____

30. Low sparse SS _____

31. Deciduous wooded swamp _____

32. Evergreen WS _____

33. Wooded bog X

34. Shrubby B X

35. Open B _____

Water Regime Indicator:

1. Permanently flooded _____

2. Saturated X

3. Seasonally flooded X

Water Depth:

1. 0-5 cm _____

2. 5-20 cm _____

3. 20-50 cm X

4. 50-100 cm _____

5. >100 cm X (in Creek)

Impounded Wetland Type:

1. Beaver Pond _____
2. Man-made Impoundment _____
3. Ducks Unlimited Impoundment _____
4. None of the above X

Percent Vegetation Cover:

1. > 95% X
2. 76-95% in peripheral band _____
3. 76-96% in patches _____
4. 26-75% in peripheral band _____
5. 26-75% in patches _____
6. 5-25% in peripheral band _____
7. 5-25% in patches _____
8. < 5% _____

Wetland Site:

1. Lacustrine _____
2. Riverine X
3. Palustrine _____
4. Isolated _____
5. Deltaic _____

Vegetation Types (%):

1. Deciduous trees 5
2. Coniferous trees 10
3. Dead trees 5
4. Tall shrubs 5
5. Low shrubs 60
6. Dead shrubs
7. Herbs 5
8. Mosses
9. Narrow-leaved emergents 10
10. Broad-leaved emergents
11. Robust emergents
12. Free-floating plants
13. Floating plants (rooted)
14. Submerged plants
15. Other

Interspersion: 1. Minimal _____ 2. Low _____ 3. Medium X 4. High _____

Conductivity: n/a

pH: n/a

Alkalinity: n/a

Hydrological Classification:

1. Surface water depression _____
2. Ground water depression _____
3. Surface water slope X
4. Ground water slope X

Inlets/Outlets/water bodies:

Winter Creek

Wildlife: (Observation/Signs/Reports)

Deer trail

Adjacent Wildlife habitat (%):

- | | |
|----------------------|----------------|
| 1.Salt marsh _____ | 5.Beach _____ |
| 2.Forest <u>100%</u> | 6.River _____ |
| 3.Dykelands _____ | 7. Other _____ |
| 4.Mudflats _____ | |

Description:

Surrounding Land Use %:

- | | |
|---------------------------|-----------------------------|
| 1 Agriculture _____ | 7.Residential _____ |
| 2.Forestry _____ | 8.Waste Disposal _____ |
| 3 Recreation <u>100%</u> | 9.Scientific Research _____ |
| 4.Industrial _____ | 10.Trapping _____ |
| 5.Urban development _____ | 11.Education _____ |
| 6.Transportation _____ | 12.Seasonal resident _____ |

Description: ATV trails and foot trails.

Disturbance: 1.Low X 2.Moderate _____ 3.High _____

Description:

Roads and/or tracks:

- | | |
|-------------------------------|---------------------------|
| 1.Private road adjacent _____ | 4.DOT road within _____ |
| 2.DOT road adjacent _____ | 5.Vehicle tracks <u>X</u> |
| 3.Private road within _____ | 6.Other _____ |

Description: ATV tracks

Existing Uses of Wetlands:

- | | |
|-------------------------------------|--------------------------------------|
| 1.Economic use (e.g. farming) _____ | 4.Education & public awareness _____ |
| 2.Recreational activities <u>X</u> | 5. None evident <u>X</u> |
| 3.Aesthetics _____ | |

Potential Threats: ATV and foot travel in wetland, hunting

Special Features:

- | | |
|--------------------------------------|---|
| 1.Rare wetland type _____ | 4.Nesting site for colonial water birds _____ |
| 2.Rare animal or plant species _____ | 5.Migration stop-over site _____ |
| 3.Habitat of rare species _____ | 6. None evident <u>X</u> |

Description:

Notes: This location was the preliminary site for the proposed access road crossing. Since this wetland is quite large and there are other available crossing locations, this site was abandoned in order to avoid wetland habitat.

Wetland Number 2

Associated Watercourse: N/A

Date: 2004 09 08

Name of Investigator: GB/MS

Weather: light rain, calm, cool

Aerial Photo Number: 97017-108

Wetland Atlas Number: N/A

Topographic Sheet: 11 F / 7

Wetland size: 2.0 ha

Wetland Type:

1. Aquatic bed/unconsolidated bottom (AB) _____

2. Bog (BO) X

3. Fen (FE) _____

4. Emergent wetland (EW) _____

5. Shrub wetland (SB) _____

6. Forested wetland (FW) _____

Wetland Class:

1. Open water _____

2. Deep marsh _____

3. Shallow marsh _____

4. Seasonally flooded flats _____

5. Meadow _____

6. Shrub swamp _____

7. Wooded swamp _____

8. Bog X

Wetland Subclass:

1. Vegetated open water _____

2. Non-vegetated OW _____

3. Floating leaved OW _____

4. Rooted floating leaved OW _____

5. Dead woody OW _____

6. Vegetated deep marsh _____

7. Non-vegetated DM _____

8. Dead woody DM _____

9. Sub-shrub DM _____

10. Floating leaved DM _____

11. Rooted floating leaved DM _____

12. Robust DM _____

13. Narrow-leaved DM _____

14. Broad-leaved DM _____

15. Dead woody shallow marsh _____

16. Robust SM _____

17. Narrow leaved SM _____

18. Broad leaved SM _____

19. Floating leaved SM _____

20. Rooted floating leaved SM _____

21. Non-vegetated SM _____

22. Emergent seasonally flooded flats _____

23. Shrubby SFF _____

24. Grazed meadow _____

25. Ungrazed M _____

26. Sedge M _____

27. Sapling shrub swamp _____

28. Bushy SS _____

29. Compact SS _____

30. Low sparse SS _____

31. Deciduous wooded swamp _____

32. Evergreen WS _____

33. Wooded bog _____

34. Shrubby B X

35. Open B X

Water Regime Indicator:

1. Permanently flooded _____

2. Saturated X

3. Seasonally flooded _____

Water Depth:

1. 0-5 cm X

2. 5-20 cm _____

3. 20-50 cm _____

4. 50-100 cm _____

5. >100 cm _____

Impounded Wetland Type:

1. Beaver Pond _____
2. Man-made Impoundment _____
3. Ducks Unlimited Impoundment _____
4. None of the above X

Percent Vegetation Cover:

1. > 95% X
2. 76-95% in peripheral band _____
3. 76-96% in patches _____
4. 26-75% in peripheral band _____
5. 26-75% in patches _____
6. 5-25% in peripheral band _____
7. 5-25% in patches _____
8. < 5% _____

Wetland Site:

1. Lacustrine _____
2. Riverine _____
3. Palustrine X
4. Isolated _____
5. Deltaic _____

Vegetation Types (%):

1. Deciduous trees
2. Coniferous trees 5% black spruce, tamarack
3. Dead trees
4. Tall shrubs 5% wild raisin, false holly
5. Low shrubs 20% leather-leaf, Labrador tea, sheep laurel
6. Dead shrubs
7. Herbs 15% pitcher plant, calapogon, cranberry, bake-apple
8. Mosses 50% sphagnum sp.
9. Narrow-leaved emergents 5% cotton grass
10. Broad-leaved emergents
11. Robust emergents
12. Free-floating plants
13. Floating plants (rooted)
14. Submerged plants
15. Other

Interspersion: 1. Minimal _____ 2. Low X 3. Medium _____ 4. High _____

Conductivity: n/a

pH: n/a

Alkalinity: n/a

Hydrological Classification:

1. Surface water depression X
2. Ground water depression X
3. Surface water slope _____
4. Ground water slope _____

Inlets/Outlets/water bodies:

Wildlife: (Observation/Signs/Reports)

Deer trail, grey jays

Adjacent Wildlife habitat (%):

- | | |
|----------------------|----------------|
| 1.Salt marsh _____ | 5.Beach _____ |
| 2.Forest <u>100%</u> | 6.River _____ |
| 3.Dykelands _____ | 7. Other _____ |
| 4.Mudflats _____ | |

Description:

Surrounding Land Use %:

- | | |
|---------------------------|-----------------------------|
| 1 Agriculture _____ | 7.Residential _____ |
| 2.Forestry _____ | 8.Waste Disposal _____ |
| 3 Recreation <u>100%</u> | 9.Scientific Research _____ |
| 4.Industrial _____ | 10.Trapping _____ |
| 5.Urban development _____ | 11.Education _____ |
| 6.Transportation _____ | 12.Seasonal resident _____ |

Description: ATV trails and foot trails; park trails; hunting and trapping.

Disturbance: 1.Low X 2.Moderate _____ 3.High _____

Description:

Roads and/or tracks:

- | | |
|-------------------------------|---------------------------|
| 1.Private road adjacent _____ | 4.DOT road within _____ |
| 2.DOT road adjacent _____ | 5.Vehicle tracks <u>X</u> |
| 3.Private road within _____ | 6.Other _____ |

Description: ATV tracks

Existing Uses of Wetlands:

- | | |
|-------------------------------------|--------------------------------------|
| 1.Economic use (e.g. farming) _____ | 4.Education & public awareness _____ |
| 2.Recreational activities <u>X</u> | 5. None evident <u>X</u> |
| 3.Aesthetics _____ | |

Potential Threats: ATV and foot travel in wetland, hunting

Special Features:

- | | |
|--------------------------------------|---|
| 1.Rare wetland type _____ | 4.Nesting site for colonial water birds _____ |
| 2.Rare animal or plant species _____ | 5.Migration stop-over site _____ |
| 3.Habitat of rare species _____ | 6. None evident <u>X</u> |

Description:

Notes: This location was near the preliminary proposed access road. This wetland is typical of the numerous isolated bogs in the general Project area and was found to support *Calopogon tuberosis* (a common bog orchid), bakeapple (indicative of coastal bogs), and a wide variety of other acid bog herbs. This site was subsequently avoided in later iterations of the design phase in order to protect wetland habitat.

Wetland Number 3

Associated Watercourse: N/A
Date: 2004 09 08
Name of Investigator: GB/MS/SC
Weather: light rain, calm, cool

Aerial Photo Number: 97017-108
Wetland Atlas Number: N/A
Topographic Sheet: 11 F / 7
Wetland size: 0.5 ha

Wetland Type:

- | | |
|---|-----------------------------------|
| 1. Aquatic bed/unconsolidated bottom (AB) _____ | 4. Emergent wetland (EW) <u>X</u> |
| 2. Bog (BO) _____ | 5. Shrub wetland (SB) _____ |
| 3. Fen (FE) _____ | 6. Forested wetland (FW) _____ |

Wetland Class:

- | | |
|-----------------------------------|-----------------------|
| 1. Open water _____ | 5. Meadow _____ |
| 2. Deep marsh _____ | 6. Shrub swamp _____ |
| 3. Shallow marsh <u>X</u> | 7. Wooded swamp _____ |
| 4. Seasonally flooded flats _____ | 8. Bog _____ |

Wetland Subclass:

- | | |
|-------------------------------------|---|
| 1. Vegetated open water _____ | 19. Floating leaved SM _____ |
| 2. Non-vegetated OW _____ | 20. Rooted floating leaved SM _____ |
| 3. Floating leaved OW _____ | 21. Non-vegetated SM _____ |
| 4. Rooted floating leaved OW _____ | 22. Emergent seasonally flooded flats _____ |
| 5. Dead woody OW _____ | 23. Shrubby SFF _____ |
| 6. Vegetated deep marsh _____ | 24. Grazed meadow _____ |
| 7. Non-vegetated DM _____ | 25. Ungrazed M _____ |
| 8. Dead woody DM _____ | 26. Sedge M _____ |
| 9. Sub-shrub DM _____ | 27. Sapling shrub swamp _____ |
| 10. Floating leaved DM _____ | 28. Bushy SS _____ |
| 11. Rooted floating leaved DM _____ | 29. Compact SS _____ |
| 12. Robust DM _____ | 30. Low sparse SS _____ |
| 13. Narrow-leaved DM _____ | 31. Deciduous wooded swamp _____ |
| 14. Broad-leaved DM _____ | 32. Evergreen WS _____ |
| 15. Dead woody shallow marsh _____ | 33. Wooded bog _____ |
| 16. Robust SM _____ | 34. Shrubby B _____ |
| 17. Narrow leaved SM _____ | 35. Open B _____ |
| 18. Broad leaved SM _____ | |

Water Regime Indicator:

- | | |
|---------------------------------|-----------------------------|
| 1. Permanently flooded <u>X</u> | 3. Seasonally flooded _____ |
| 2. Saturated _____ | |

Water Depth:

- | | |
|---------------------|--------------------|
| 1. 0-5 cm _____ | 4. 50-100 cm _____ |
| 2. 5-20 cm <u>X</u> | 5. >100 cm _____ |
| 3. 20-50 cm _____ | |

Impounded Wetland Type:

1. Beaver Pond _____
2. Man-made Impoundment _____
3. Ducks Unlimited Impoundment _____
4. None of the above X

Percent Vegetation Cover:

1. > 95% X
2. 76-95% in peripheral band _____
3. 76-96% in patches _____
4. 26-75% in peripheral band _____
5. 26-75% in patches _____
6. 5-25% in peripheral band _____
7. 5-25% in patches _____
8. < 5% _____

Wetland Site:

1. Lacustrine _____
2. Riverine _____
3. Palustrine X
4. Isolated _____
5. Deltaic _____

Vegetation Types (%):

1. Deciduous trees
2. Coniferous trees
3. Dead trees
4. Tall shrubs
5. Low shrubs
6. Dead shrubs
7. Herbs
8. Mosses
9. Narrow-leaved emergents
10. Broad-leaved emergents
11. Robust emergents
12. Free-floating plants
13. Floating plants (rooted)
14. Submerged plants
15. Other
- 15% alder, mountain ash
5% meadow sweet, stepple bush, wild roses
5% swamp candles, asters, meadow rue, cinnamon fern
15% sphagnum sp.
60% sedges (mainly carex sp.), blue joint, blue flag

Interspersion: 1. Minimal _____ 2. Low X 3. Medium _____ 4. High _____

Conductivity: n/a

pH: n/a

Alkalinity: n/a

Hydrological Classification:

1. Surface water depression _____
2. Ground water depression _____
3. Surface water slope X
4. Ground water slope X

Inlets/Outlets/water bodies:

N/A

Wildlife: (Observation/Signs/Reports)

Dog tracks, house cat, passerine birds

Adjacent Wildlife habitat (%):

- | | |
|---------------------|----------------|
| 1.Salt marsh _____ | 5.Beach _____ |
| 2.Forest <u>50%</u> | 6.River _____ |
| 3.Dykelands _____ | 7. Other _____ |
| 4.Mudflats _____ | |

Description: Young mixed forest regenerating on old pasture.

Surrounding Land Use %:

- | | |
|---------------------------|-----------------------------|
| 1 Agriculture _____ | 7.Residential <u>40%</u> |
| 2.Forestry _____ | 8.Waste Disposal _____ |
| 3 Recreation <u>60%</u> | 9.Scientific Research _____ |
| 4.Industrial _____ | 10.Trapping _____ |
| 5.Urban development _____ | 11.Education _____ |
| 6.Transportation _____ | 12.Seasonal resident _____ |

Description: Chapel Gully trail adjacent, single family dwellings.

Disturbance: 1.Low X 2.Moderate _____ 3.High _____

Description: ATV tracks

Roads and/or tracks:

- | | |
|-------------------------------|---------------------------|
| 1.Private road adjacent _____ | 4.DOT road within _____ |
| 2.DOT road adjacent _____ | 5.Vehicle tracks <u>X</u> |
| 3.Private road within _____ | 6.Other _____ |

Description: ATV tracks

Existing Uses of Wetlands:

- | | |
|-------------------------------------|--------------------------------------|
| 1.Economic use (e.g. farming) _____ | 4.Education & public awareness _____ |
| 2.Recreational activities _____ | 5. None evident <u>X</u> |
| 3.Aesthetics _____ | |

Potential Threats:

Special Features:

- | | |
|--------------------------------------|---|
| 1.Rare wetland type _____ | 4.Nesting site for colonial water birds _____ |
| 2.Rare animal or plant species _____ | 5.Migration stop-over site _____ |
| 3.Habitat of rare species _____ | 6. None evident <u>X</u> |

Description:

Notes: This location was near the preliminary proposed access road. This site was subsequently avoided in later iterations of the design phase in order to protect wetland habitat.

Wetland Number 4

Associated Watercourse: N/A
Date: 2004 09 09
Name of Investigator: GB/MS
Weather: light rain, calm, cool

Aerial Photo Number: 97017-107
Wetland Atlas Number: 133-A-9
Topographic Sheet: 11 F / 7
Wetland size: 21 ha

Wetland Type:

1. Aquatic bed/unconsolidated bottom (AB) _____
2. Bog (BO) X
3. Fen (FE) _____
4. Emergent wetland (EW) _____
5. Shrub wetland (SB) _____
6. Forested wetland (FW) _____

Wetland Class:

1. Open water _____
2. Deep marsh _____
3. Shallow marsh X
4. Seasonally flooded flats _____
5. Meadow _____
6. Shrub swamp X
7. Wooded swamp _____
8. Bog X

Wetland Subclass:

1. Vegetated open water _____
2. Non-vegetated OW _____
3. Floating leaved OW _____
4. Rooted floating leaved OW _____
5. Dead woody OW _____
6. Vegetated deep marsh _____
7. Non-vegetated DM _____
8. Dead woody DM _____
9. Sub-shrub DM _____
10. Floating leaved DM _____
11. Rooted floating leaved DM _____
12. Robust DM _____
13. Narrow-leaved DM _____
14. Broad-leaved DM _____
15. Dead woody shallow marsh _____
16. Robust SM _____
17. Narrow leaved SM X
18. Broad leaved SM _____
19. Floating leaved SM _____
20. Rooted floating leaved SM _____
21. Non-vegetated SM _____
22. Emergent seasonally flooded flats _____
23. Shrubby SFF _____
24. Grazed meadow _____
25. Ungrazed M _____
26. Sedge M _____
27. Sapling shrub swamp _____
28. Bushy SS X
29. Compact SS X
30. Low sparse SS _____
31. Deciduous wooded swamp _____
32. Evergreen WS _____
33. Wooded bog X
34. Shrubby B X
35. Open B X

Water Regime Indicator:

1. Permanently flooded _____
2. Saturated X
3. Seasonally flooded X

Water Depth:

1. 0-5 cm X
2. 2.5-20 cm X (at the point nearest to the Project)
3. 20-50 cm _____
4. 50-100 cm _____
5. >100 cm _____

Impounded Wetland Type:

1. Beaver Pond _____
2. Man-made Impoundment _____
3. Ducks Unlimited Impoundment _____
4. None of the above X

Percent Vegetation Cover:

1. > 95% X
2. 76-95% in peripheral band _____
3. 76-96% in patches _____
4. 26-75% in peripheral band _____
5. 26-75% in patches _____
6. 5-25% in peripheral band _____
7. 5-25% in patches _____
8. < 5% _____

Wetland Site:

1. Lacustrine _____
2. Riverine _____
3. Palustrine X
4. Isolated _____
5. Deltaic _____

Vegetation Types (%):

1. Deciduous trees
2. Coniferous trees 5% black spruce, tamarack
3. Dead trees
4. Tall shrubs 5% wild raisin, false holly
5. Low shrubs 20% leather-leaf, Labrador tea, sheep laurel
6. Dead shrubs
7. Herbs 15% pitcher plant, cranberry, bake-apple
8. Mosses 50% sphagnum sp.
9. Narrow-leaved emergents 5% sedges
10. Broad-leaved emergents
11. Robust emergents
12. Free-floating plants
13. Floating plants (rooted)
14. Submerged plants
15. Other

Interspersion: 1. Minimal _____ 2. Low X 3. Medium _____ 4. High _____

Conductivity: 72.3 μ S

pH: 4.5

Alkalinity: n/a

Hydrological Classification:

1. Surface water depression X
2. Ground water depression X
3. Surface water slope _____
4. Ground water slope _____

Inlets/Outlets/water bodies:

N/A

Wildlife: (Observation/Signs/Reports)

Adjacent Wildlife habitat (%):

- | | |
|----------------------|----------------|
| 1.Salt marsh _____ | 5.Beach _____ |
| 2.Forest <u>100%</u> | 6.River _____ |
| 3.Dykelands _____ | 7. Other _____ |
| 4.Mudflats _____ | |

Description: immature to mature aged mixed and coniferous forest.

Surrounding Land Use %:

- | | |
|---------------------------|-----------------------------|
| 1 Agriculture _____ | 7.Residential _____ |
| 2.Forestry _____ | 8.Waste Disposal _____ |
| 3 Recreation <u>100%</u> | 9.Scientific Research _____ |
| 4.Industrial _____ | 10.Trapping _____ |
| 5.Urban development _____ | 11.Education _____ |
| 6.Transportation _____ | 12.Seasonal resident _____ |

Description: ATV trails and foot trails; park trails; hunting and trapping.

Disturbance: 1.Low X 2.Moderate _____ 3.High _____

Description: ATV tracks

Roads and/or tracks:

- | | |
|-------------------------------|---------------------------|
| 1.Private road adjacent _____ | 4.DOT road within _____ |
| 2.DOT road adjacent _____ | 5.Vehicle tracks <u>X</u> |
| 3.Private road within _____ | 6.Other _____ |

Description: ATV tracks

Existing Uses of Wetlands:

- | | |
|-------------------------------------|--------------------------------------|
| 1.Economic use (e.g. farming) _____ | 4.Education & public awareness _____ |
| 2.Recreational activities <u>X</u> | 5. None evident _____ |
| 3.Aesthetics _____ | |

Potential Threats: None

Special Features:

- | | |
|--------------------------------------|---|
| 1.Rare wetland type _____ | 4.Nesting site for colonial water birds _____ |
| 2.Rare animal or plant species _____ | 5.Migration stop-over site _____ |
| 3.Habitat of rare species _____ | 6. None evident <u>X</u> |

Description:

Notes: An existing ATV trail passes through an extremity of this large wetland. It is proposed to use this trail as an access road for the Project. The final road design will be diverted at this point to a location at approximately 50 m outside the wetland limits. At the point nearest to the Project, the wetland is composed of shallow marsh and shrubswamp habitat which occupies a narrow gully through which the greater bog drains. The proposed access road will be downgradient from the wetland, therefore, no potential effects are anticipated.

Wetland Number 5—from memory

Associated Watercourse: Glasgow Harbour

Date: 2004 07 24

Name of Investigator: GB/MS/SS

Weather: high wind, cool

Aerial Photo Number: 97017-110

Wetland Atlas Number: N/A

Topographic Sheet: 11 F / 7

Wetland size: 15 ha

Wetland Type:

1. Aquatic bed/unconsolidated bottom (AB) _____

2. Bog (BO) X

3. Fen (FE) _____

4. Emergent wetland (EW) _____

5. Shrub wetland (SB) _____

6. Forested wetland (FW) _____

Wetland Class:

1. Open water _____

2. Deep marsh _____

3. Shallow marsh X

4. Seasonally flooded flats _____

5. Meadow _____

6. Shrub swamp X

7. Wooded swamp _____

8. Bog X

Wetland Subclass:

1. Vegetated open water _____

2. Non-vegetated OW _____

3. Floating leaved OW _____

4. Rooted floating leaved OW _____

5. Dead woody OW _____

6. Vegetated deep marsh _____

7. Non-vegetated DM _____

8. Dead woody DM _____

9. Sub-shrub DM _____

10. Floating leaved DM _____

11. Rooted floating leaved DM _____

12. Robust DM _____

13. Narrow-leaved DM _____

14. Broad-leaved DM _____

15. Dead woody shallow marsh _____

16. Robust SM _____

17. Narrow leaved SM X

18. Broad leaved SM _____

19. Floating leaved SM _____

20. Rooted floating leaved SM _____

21. Non-vegetated SM _____

22. Emergent seasonally flooded flats _____

23. Shrubby SFF _____

24. Grazed meadow _____

25. Ungrazed M _____

26. Sedge M _____

27. Sapling shrub swamp _____

28. Bushy SS X

29. Compact SS X

30. Low sparse SS _____

31. Deciduous wooded swamp _____

32. Evergreen WS _____

33. Wooded bog X

34. Shrubby B X

35. Open B X

Water Regime Indicator:

1. Permanently flooded _____

2. Saturated X

3. Seasonally flooded X

Water Depth:

1. 0-5 cm X

2. 5-20 cm X (due to recent light rain)

3. 20-50 cm _____

4. 50-100 cm _____

5. >100 cm _____

Impounded Wetland Type:

1. Beaver Pond _____
2. Man-made Impoundment _____
3. Ducks Unlimited Impoundment _____
4. None of the above X

Percent Vegetation Cover:

1. > 95% X
2. 76-95% in peripheral band _____
3. 76-96% in patches _____
4. 26-75% in peripheral band _____
5. 26-75% in patches _____
6. 5-25% in peripheral band _____
7. 5-25% in patches _____
8. < 5% _____

Wetland Site:

1. Lacustrine _____
2. Riverine _____
3. Palustrine _____
4. Isolated X
5. Deltaic _____

Vegetation Types (%):

1. Deciduous trees
2. Coniferous trees 5% black spruce, tamarack
3. Dead trees
4. Tall shrubs 5% wild raisin, false holly
5. Low shrubs 40% leather-leaf, Labrador tea, sweet gale
6. Dead shrubs
7. Herbs 5% scotch lovage, swamp candles, blue flag
8. Mosses 35% sphagnum sp.
9. Narrow-leaved emergents 10% blue joint, rushes, black grass (*Juncus gerardii*)
10. Broad-leaved emergents
11. Robust emergents
12. Free-floating plants
13. Floating plants (rooted)
14. Submerged plants
15. Other

Interspersion: 1. Minimal _____ 2. Low X 3. Medium _____ 4. High _____

Conductivity: N/A

pH: N/A

Alkalinity: N/A

Hydrological Classification:

1. Surface water depression X
2. Ground water depression X
3. Surface water slope _____
4. Ground water slope _____

Inlets/Outlets/water bodies:

Glasgow Harbour

Wildlife: (Observation/Signs/Reports)

Adjacent Wildlife habitat (%):

- | | |
|----------------------|---------------|
| 1.Salt marsh ____ | 5.Beach ____ |
| 2.Forest <u>100%</u> | 6.River ____ |
| 3.Dykelands ____ | 7. Other ____ |
| 4.Mudflats ____ | |

Description: immature to mature aged mixed and coniferous forest.

Surrounding Land Use %:

- | | |
|--------------------------|----------------------------|
| 1 Agriculture ____ | 7.Residential ____ |
| 2.Forestry <u>20</u> | 8.Waste Disposal ____ |
| 3 Recreation <u>100</u> | 9.Scientific Research ____ |
| 4.Industrial ____ | 10.Trapping ____ |
| 5.Urban development ____ | 11.Education ____ |
| 6.Transportation ____ | 12.Seasonal resident ____ |

Description: ATV trails and foot trails; youth summer camp road; hunting and trapping, minor private wood lot clearing.

Disturbance: 1.Low X 2.Moderate ____ 3.High ____

Description: ATV tracks

Roads and/or tracks:

- | | |
|----------------------------------|---------------------------|
| 1.Private road adjacent <u>X</u> | 4.DOT road within ____ |
| 2.DOT road adjacent ____ | 5.Vehicle tracks <u>X</u> |
| 3.Private road within ____ | 6.Other ____ |

Description: Youth summer camp road (unpaved) adjacent, ATV tracks in and around wetland margin

Existing Uses of Wetlands:

- | | |
|------------------------------------|-------------------------------------|
| 1.Economic use (e.g. farming) ____ | 4.Education & public awareness ____ |
| 2.Recreational activities <u>X</u> | 5. None evident ____ |
| 3.Aesthetics ____ | |

Potential Threats: None

Special Features:

- | | |
|-------------------------------------|--|
| 1.Rare wetland type ____ | 4.Nesting site for colonial water birds ____ |
| 2.Rare animal or plant species ____ | 5.Migration stop-over site ____ |
| 3.Habitat of rare species ____ | 6. None evident <u>X</u> |

Description:

Notes: This large bog has formed in the sheltered inner bay of Glasgow Harbour. It was not identified on previous wetland mapping but was noted on aerial photos and confirmed in the field. The wetland is isolated and appears to receive water mainly from the atmosphere. Although it is adjacent to the ocean, the vegetation indicates only occasional tidal invasion during storm surges. The bog is closest to Site 6.

Appendix C

Significant Habitats in a Radius of 50 km around Canso

Mainland SigHab

WLD#	WC1	WC2	WC1	Common Name	STAT	Scientific Name
GU841	382	0	wetland	significant wetland		
GU872	383	0	of concern	Common Eider	G	Somateria mollissima
GU873	383	0	of concern	Common Eider	G	Somateria mollissima
GU874	383	0	of concern	Common Eider	G	Somateria mollissima
GU828	380	0	wetland	significant wetland		
GU853	380	0	wetland	significant wetland		
GU898	382	0	deer wintering	White-tailed Deer	G	Odocoileus virginianus
GU899	383	0	other habitat	Bald Eagle	G	Haliaeetus leucocephalus
GU906	383	0	other habitat	Bald Eagle	G	Haliaeetus leucocephalus
GU914	383	0	migratory bird	Canada Goose	G	Branta canadensis
GU915	383	0	migratory bird	Common Eider	G	Somateria mollissima
GU920	382	0	deer wintering	White-tailed Deer	G	Odocoileus virginianus
GU938	383	0	species at risk	Roseate Tern	R	Sterna dougallii
GU940	383	0	species at risk	Roseate Tern	R	Sterna dougallii
GU871	383	0	migratory bird	Waterfowl (unclassified)		
GU266	383	0	old forest	old forest		
GU267	383	0	old forest	old forest		
GU277	383	0	old forest	old forest		
GU278	383	0	old forest	old forest		
GU279	383	0	old forest	old forest		
GU285	383	0	old forest	old forest		
GU287	383	0	old forest	old forest		
GU288	383	0	old forest	old forest		
GU855	383	0	other habitat	significant area		
GU858	383	0	other habitat	significant area		
GU875	383	0	other habitat	significant area		
GU876	383	0	other habitat	significant area		
GU877	383	0	other habitat	significant area		
GU829	381	0	saltmarsh	saltmarsh		
GU854	381	0	saltmarsh	saltmarsh		
GU859	381	0	saltmarsh	saltmarsh		
GU826	380	0	wetland	significant wetland		
GU837	380	0	wetland	significant wetland		
GU838	380	0	wetland	significant wetland		
GU839	380	0	wetland	significant wetland		
GU840	380	0	wetland	significant wetland		
GU842	380	0	wetland	significant wetland		
GU843	380	0	wetland	significant wetland		
GU845	380	0	wetland	significant wetland		
GU846	380	0	wetland	significant wetland		
GU850	380	0	wetland	significant wetland		
GU866	380	0	wetland	significant wetland		
GU870	380	0	wetland	significant wetland		
GU883	380	0	wetland	significant wetland		

GU884	380	0	wetland	significant wetland		
GU941	383	0	of concern	Four-toed Salamander	Y	Hemidactylum scutatum
GU942	383	0	of concern	Four-toed Salamander	Y	Hemidactylum scutatum
GU943	383	0	of concern	Four-toed Salamander	Y	Hemidactylum scutatum
GU944	383	0	of concern	Four-toed Salamander	Y	Hemidactylum scutatum
GU945	383	0	of concern	Four-toed Salamander	Y	Hemidactylum scutatum
GU947	383	0	of concern	Four-toed Salamander	Y	Hemidactylum scutatum
GU958	383	0	of concern	Northern Bur-Reed	Y	Sparganium hyperboreum
GU963	383	0	rare plant	Sea-blite	I	Suaeda maritima ssp richii
GU963	383	0	rare plant	Hare Figwort	I	Scrophularia lanceolata
GU872	383	0	of concern	Limestone Scurvey-grass	R	Cochlearia tridactylites
GU873	383	0	of concern	Limestone Scurvey-grass	R	Cochlearia tridactylites
GU874	383	0	of concern	Limestone Scurvey-grass	R	Cochlearia tridactylites
GU973	0	0	of concern	Atlantic Salmon	R	Salmo salar
GU974	0	0	of concern	Atlantic Salmon	R	Salmo salar
GU975	0	0	of concern	Atlantic Salmon	R	Salmo salar
GU977	0	0	of concern	Atlantic Salmon	R	Salmo salar
GU978	0	0	of concern	Four-toed Salamander	Y	Hemidactylum scutatum

WC= WCode

Stat= Nova Scotia Status:

R= Red, Y= Yellow, G= Green , I- Indeterminate

Cape Breton SigHab

WLD#	WC1	WC2	WC1	Common Name	STAT	Scientific Name
IN101	380		0 of concern	Common Loon	Y	<i>Gavia immer</i>
IN102	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN108	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN109	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN112	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN113	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN117	383		0 other habitat	Atlantic Saury		<i>Scomberesox saurus</i>
IN118	0		0 freshwater	Rainbow Smelt	G	<i>Osmerus mordax</i>
IN122	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN123	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN210	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN237	383		0 of concern	Common Tern	Y	<i>Sterna hirundo</i>
IN283	380		0 of concern	Four-toed Salamander	Y	<i>Hemidactylium scutatum</i>
IN285	380		0 species at risk	Wood Turtle	Y	<i>Clemmys insculpta</i>
IN337	380		0 of concern	Common Loon	Y	<i>Gavia immer</i>
IN343	380		0 species at risk	Wood Turtle	Y	<i>Clemmys insculpta</i>
IN343	380	382	species at risk	Eastern Pearlshell	G	<i>Margaritifera margaritifera</i>
IN343	380	380	species at risk	Alewife (Gaspereau)	Y	<i>Alosa pseudoharengus</i>
IN343	380		species at risk	Atlantic Salmon	R	<i>Salmo salar</i>
IN343	380		species at risk	Trout (unclassified)		
IN343	380		species at risk	Rainbow Trout	E	<i>Oncorhynchus mykiss</i>
IN343	380		species at risk	Sea Lamprey	G	<i>Petromyzon marinus</i>
IN343	380		species at risk	Stalked Bulrush	I	<i>Scirpus pedicellatus</i>
IN343	380		species at risk	Broad-Blumed Brome	R	<i>Bromus latiglumis</i>
IN343	380		species at risk	Stout Wood Reed-Grass	R	<i>Cinna arundinacea</i>
IN343	380		species at risk	Wood Nettle	Y	<i>Laportea canadensis</i>
IN343	380		species at risk	Alderleaf Buckthorn	Y	<i>Rhamnus alnifolia</i>
IN343	380		species at risk	Climbing False-Buckwheat	Y	<i>Polygonum scandens</i> var. <i>scandens</i>
IN409	383		0 other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
IN46	380		0 freshwater	Rainbow Smelt	G	<i>Osmerus mordax</i>
IN50	380	382	freshwater	Rainbow Smelt	G	<i>Osmerus mordax</i>
IN55	383		0 other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
IN57	380		0 of concern	False Mermaid-Weed	Y	<i>Floerkea proserpinacoides</i>
IN57	380		0 of concern	Northern Bog Violet	Y	<i>Viola nephrophylla</i>
IN59	383		0 other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
IN60	383		0 other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
IN64	383		0 other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
IN65	383		0 other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
IN8	383		0 migratory bird	Double-crested Cormorant	G	<i>Phalacrocorax auritus</i>
IN93	0		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN94	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN97	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
IN98	380		0 wetland	significant wetland		
RI101	380		0 of concern	Common Loon	Y	<i>Gavia immer</i>
RI113	382		0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI234	383		0 other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI237	383	380	of concern	Tern (unclassified)		
RI241	383		0 migratory bird	Common Eider	G	<i>Somateria mollissima</i>
RI241	383		0 migratory bird	Great Cormorant	G	<i>Phalacrocorax carbo</i>
RI241	383		0 migratory bird	Great Black-backed Gull	G	<i>Larus marinus</i>
RI241	383		0 migratory bird	Herring Gull	G	<i>Larus argentatus</i>
RI241	383		0 migratory bird	Gray Seal		<i>Halichoerus grypus</i>

RI246	380	0 migratory bird	Green-winged Teal	G	Anas crecca
RI246	380	0 migratory bird	American Black Duck	G	Anas rubripes
RI246	380	0 migratory bird	Great Blue Heron	G	Ardea herodias
RI247	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI248	382	0 deer wintering	White-tailed Deer	G	Odocoileus virginianus
RI254	383	0 migratory bird	Common Eider	G	Somateria mollissima
RI254	383	0 migratory bird	Great Cormorant	G	Phalacrocorax carbo
RI254	383	0 migratory bird	Great Black-backed Gull	G	Larus marinus
RI254	383	0 migratory bird	Herring Gull	G	Larus argentatus
RI254	383	0 migratory bird	Gray Seal		Halichoerus grypus
RI255	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI256		deer	White-tailed Deer	G	Odocoileus virginianus
RI258	383	0 other habitat	Osprey	G	Pandion haliaetus
RI259	383	0 of concern	Common Tern	Y	Sterna hirundo
RI261	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI262	380	0 of concern	Common Loon	Y	Gavia immer
RI263	380	380 of concern	Common Loon	Y	Gavia immer
RI265	383	0 migratory bird	Common Eider	G	Somateria mollissima
RI265	383	0 migratory bird	Great Cormorant	G	Phalacrocorax carbo
RI265	383	0 migratory bird	Great Black-backed Gull	G	Larus marinus
RI265	383	0 migratory bird	Gray Seal		Halichoerus grypus
RI266	383	0 of concern	Arctic Tern	Y	Sterna paradisaea
RI266	383	0 of concern	Spotted Sandpiper	G	Actitis macularia
RI267	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI268	380	380 of concern	Common Loon	Y	Gavia immer
RI269	383	380 migratory bird	Waterfowl (unclassified)		
RI270	383	0 of concern	Tern (unclassified)		
RI270	383	0 of concern	Shorebirds (unclassified)		
RI270	383	0 of concern	Waterfowl (unclassified)		
RI270	383	0 of concern	IBP Site		
RI271	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI272	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI272	383	0 other habitat	Osprey	G	Pandion haliaetus
RI273	383	0 of concern	Arctic Tern	Y	Sterna paradisaea
RI274	380	0 of concern	Common Loon	Y	Gavia immer
RI275	383	0 other habitat	Osprey	G	Pandion haliaetus
RI276	382	0 deer wintering	White-tailed Deer	G	Odocoileus virginianus
RI277	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI278	380	0 of concern	Common Loon	Y	Gavia immer
RI279	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI280	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI280	383	0 other habitat	Osprey	G	Pandion haliaetus
RI280	383	0 other habitat	Great Blue Heron	G	Ardea herodias
RI281	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI282	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI282	383	0 other habitat	Great Horned Owl	G	Bubo virginianus
RI283	380	380 of concern	Common Loon	Y	Gavia immer
RI284	383	0 other habitat	Osprey	G	Pandion haliaetus
RI285	380	0 migratory bird	Waterfowl (unclassified)		
RI286	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI286	383	0 other habitat	Osprey	G	Pandion haliaetus
RI287	383	0; 38 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI288	383	0 other habitat	Osprey	G	Pandion haliaetus
RI288	383	0 other habitat	Great Blue Heron	G	Ardea herodias
RI289	380	380 of concern	Common Loon	Y	Gavia immer
RI290	383	0 other habitat	Osprey	G	Pandion haliaetus

RI291	383	383	migratory bird	Waterfowl (unclassified)		
RI292	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI293	383	0	of concern	Great Blue Heron	G	<i>Ardea herodias</i>
RI293	383	0	of concern	Tern (unclassified)		
RI294	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI295	383	0	migratory bird	Waterfowl (unclassified)		
RI295	383	0	migratory bird	Goldeneye (unclassified)		<i>Bucephala</i> sp.
RI296	383	0	of concern	Common Tern	Y	<i>Sterna hirundo</i>
RI297	383	0	migratory bird	Common Eider	G	<i>Somateria mollissima</i>
RI297	383	0	migratory bird	Double-crested Cormorant	G	<i>Phalacrocorax auritus</i>
RI298	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI300	383	0	of concern	Tern (unclassified)		
RI301	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI302	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI303	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI304	380	0	species at risk	Livid Sedge	R	<i>Carex livida</i> var. <i>radicalis</i>
RI304	380	0	species at risk	Moor Rush	Y	<i>Juncus stygius</i> ssp. <i>americanus</i>
RI304	380	0	species at risk	New Jersey Rush	R	<i>Juncus caesariensis</i>
RI304	380	0	species at risk	a moss		<i>Alonia brevirostris</i>
RI304	380	0	species at risk	Sparse-Flowered Sedge	R	<i>Carex tenuiflora</i>
RI305	383	0	other habitat	Osprey	G	<i>Pandion haliaetus</i>
RI306	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI307	380	380	of concern	Common Loon	Y	<i>Gavia immer</i>
RI308	382	0	deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI309	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI310	382	0	deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI311	380	383	of concern	Common Loon	Y	<i>Gavia immer</i>
RI312	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI313	383	0	other habitat	Great Horned Owl	G	<i>Bubo virginianus</i>
RI313	383	0	other habitat	Red-tailed Hawk	G	<i>Buteo jamaicensis</i>
RI314	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI315	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI316	383	0	of concern	Tern (unclassified)		
RI317	383	0	species at risk	Lynx	R	<i>Lynx canadensis</i>
RI318	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI319	383	0	of concern	Tern (unclassified)		
RI320	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI321	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI322	380	0	of concern	Common Loon	Y	<i>Gavia immer</i>
RI323	383	0	migratory bird	Double-crested Cormorant	G	<i>Phalacrocorax auritus</i>
RI323	383	0	migratory bird	Great Blue Heron	G	<i>Ardea herodias</i>
RI324	383	0	of concern	Common Tern	Y	<i>Sterna hirundo</i>
RI324	383	0	of concern	Arctic Tern	Y	<i>Sterna paradisaea</i>
RI324	383	0	of concern	Common Eider	G	<i>Somateria mollissima</i>
RI325	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI326	380	0	of concern	Common Loon	Y	<i>Gavia immer</i>
RI327	383	0	other habitat	Osprey	G	<i>Pandion haliaetus</i>
RI327	383	0	other habitat	Great Blue Heron	G	<i>Ardea herodias</i>
RI328	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI329	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI330	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI331	383	0	other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI331	383	0	other habitat	Great Blue Heron	G	<i>Ardea herodias</i>
RI332	380	0	migratory bird	Waterfowl (unclassified)		
RI332	380	0	migratory bird	Wood Duck	G	<i>Aix sponsa</i>
RI132	380	0	migratory bird	Ducks Unlimited Project		

RI333	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI334	383	0 other habitat	Osprey	G	Pandion haliaetus
RI335	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI336	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI337	380	0 of concern	Common Loon	Y	Gavia immer
RI338	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI339	383	0 other habitat	Osprey	G	Pandion haliaetus
RI340	383	0 migratory bird	Waterfowl (unclassified)		
RI340	383	0 migratory bird	Gull (unclassified)		
RI341	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI342	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI342	383	0 other habitat	Great Blue Heron	G	Ardea herodias
RI343	380	0 species at risk	Wood Turtle	Y	Clemmys insculpta
RI343	380	382 species at risk	Atlantic Salmon	R	Salmo salar
RI343	380	species at risk	Brook Trout	Y	Salvelinus fontinalis
RI343	380	species at risk	Rainbow Trout	E	Oncorhynchus mykiss
RI343	380	species at risk	Sea Lamprey	G	Petromyzon marinus
RI344	380	0 of concern	Bald Eagle	G	Haliaeetus leucocephalus
RI344	380	0 of concern	Atlantic Salmon	R	Salmo salar
RI344	380	0 of concern	Brook Trout	Y	Salvelinus fontinalis
RI344	380	0 of concern	Rainbow Trout	E	Oncorhynchus mykiss
RI344	380	0 of concern	Sea Lamprey	G	Petromyzon marinus
RI345	383	0 of concern	Tern (unclassified)		
RI346	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI347	380	0 of concern	Common Loon	Y	Gavia immer
RI348	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI349	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI352	383	0 other habitat	Osprey	G	Pandion haliaetus
RI358	383	0 migratory bird	Common Eider	G	Somateria mollissima
RI358	383	0 migratory bird	Double-crested Cormorant	G	Phalacrocorax auritus
RI358	383	0 migratory bird	Great Black-backed Gull	G	Larus marinus
RI358	383	0 migratory bird	Great Blue Heron	G	Ardea herodias
RI359	382	0 deer wintering	White-tailed Deer	G	Odocoileus virginianus
RI360	383	0 of concern	Common Tern	Y	Sterna hirundo
RI360	383	0 of concern	Great Black-backed Gull	G	Larus marinus
RI360	383	0 of concern	Double-crested Cormorant	G	Phalacrocorax auritus
RI361	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI364	383	0 of concern	Tern (unclassified)		
RI366	380	0 of concern	Common Loon	Y	Gavia immer
RI367	383	0 migratory bird	Whimbrel		Numenius phaeopus
RI369	380	0 species at risk	New Jersey Rush	R	Juncus caesariensis
RI369	380	0 species at risk	Moor Rush	Y	Juncus stygius ssp. americanus
RI375	383	0 migratory bird	Whimbrel		Numenius phaeopus
RI376	383	0 of concern	Tern (unclassified)		
RI378	380	0 migratory bird	Wood Duck	G	Aix sponsa
RI379	380	0 species at risk	New Jersey Rush	R	Juncus caesariensis
RI382	383	0 other habitat	Bald Eagle	G	Haliaeetus leucocephalus
RI383	380	0 species at risk	New Jersey Rush	R	Juncus caesariensis
RI385	380	0 migratory bird	Wood Duck	G	Aix sponsa
RI390	380	0 migratory bird	Wood Duck	G	Aix sponsa
RI392	383	0 of concern	Arctic Tern	Y	Sterna paradisaea
RI397	380	0 of concern	Moor Rush	Y	Juncus stygius ssp. americanus
RI398	380	0 species at risk	New Jersey Rush	R	Juncus caesariensis
RI400	383	383 of concern	Water Pigmy-Weed	Y	Crassula aquatica
RI400	383	383 of concern	Livid Sedge	R	Carex livida var. radicaulis
RI403	380	0 species at risk	New Jersey Rush	R	Juncus caesariensis

RI403	380	0 species at risk	Moor Rush	Y	<i>Juncus stygius</i> ssp. <i>americanus</i>
RI404	382	0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI407	382	0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI409	382	0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI411	382	0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI413	382	0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI415	382	0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI422	382	0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI429	380 0; 38	species at risk	New Jersey Rush	R	<i>Juncus caesariensis</i>
RI430	383	0 of concern	Tern (unclassified)		
RI435	383	0 of concern	Tern (unclassified)		
RI438	382	0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI441	383	0 migratory bird	Great Cormorant	G	<i>Phalacrocorax carbo</i>
RI441	383	0 migratory bird	Double-crested Cormorant	G	<i>Phalacrocorax auritus</i>
RI441	383	0 migratory bird	Great Cormorant	G	<i>Phalacrocorax carbo</i>
RI442	383	0 of concern	Tern (unclassified)		
RI445	383	0 migratory bird	Great Cormorant	G	<i>Phalacrocorax carbo</i>
RI445	383	0 migratory bird	Red-breasted Merganser	G	<i>Mergus serrator</i>
RI445	383	0 migratory bird	Great Black-backed Gull	G	<i>Larus marinus</i>
RI445	383	0 migratory bird	Double-crested Cormorant	G	<i>Phalacrocorax auritus</i>
RI445	383	0 migratory bird	Herring Gull	G	<i>Larus argentatus</i>
RI460	380 0; 38	of concern	Alewife (Gaspereau)	Y	<i>Alosa pseudoharengus</i>
RI461	380	0 freshwater	Rainbow Trout	E	<i>Oncorhynchus mykiss</i>
RI462	380	0 of concern	Brook Trout	Y	<i>Salvelinus fontinalis</i>
RI462	380 383	of concern	Atlantic Salmon	R	<i>Salmo salar</i>
RI465	380	0 of concern	Atlantic Salmon	R	<i>Salmo salar</i>
RI465	380 382	of concern	Alewife (Gaspereau)	Y	<i>Alosa pseudoharengus</i>
RI465	380 382	of concern	American Shad	G	<i>Alosa sapidissima</i>
RI465	380 382	of concern	Eastern Pearlshell	G	<i>Margaritifera margaritifera</i>
RI465	380 382	of concern	Alewife Floater	G	<i>Anodonta implicata</i>
RI468	380	0 of concern	Brown Trout	E	<i>Salmo trutta</i>
RI468	380	0 of concern	Atlantic Salmon	R	<i>Salmo salar</i>
RI469	380 382;	freshwater	Brown Trout	E	<i>Salmo trutta</i>
RI470	380	0 of concern	Atlantic Salmon	R	<i>Salmo salar</i>
RI470	380 383	of concern	Eastern Elliptio	G	<i>Elliptio complanata</i>
RI470	380 383	of concern	Alewife Floater	G	<i>Anodonta implicata</i>
RI470	380 382	of concern	Eastern Floater	G	<i>Pyganodon cataracta</i>
RI481	380	0 species at risk	New Jersey Rush	R	<i>Juncus caesariensis</i>
RI491	380	0 species at risk	New Jersey Rush	R	<i>Juncus caesariensis</i>
RI495	380	0 species at risk	New Jersey Rush	R	<i>Juncus caesariensis</i>
RI541	383	0 of concern	Spurred Gentian	I	<i>Halenia deflexa</i>
RI541	383	0 of concern	Slender Cotton-Grass	Y	<i>Eriophorum gracile</i> var. <i>gracile</i>
RI574	383	0 other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI579	380	0 rare plant	Alpine Bluegrass	B	<i>Poa alpina</i>
RI606	382	0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI647	382	0 deer wintering	White-tailed Deer	G	<i>Odocoileus virginianus</i>
RI664	383	0 of concern	Little Brown Bat	Y	<i>Myotis lucifugus</i>
RI678	383	0 other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI679	383	0 other habitat	Bald Eagle	G	<i>Haliaeetus leucocephalus</i>
RI680	380 382	of concern	Eastern Elliptio	G	<i>Elliptio complanata</i>
RI680	380	0 of concern	Eastern Floater	G	<i>Pyganodon cataracta</i>
RI680	380	0 of concern	Triangle Floater	Y	<i>Alasmidonta undulata</i>
RI681	0	0 of concern	Northern Comandra	Y	<i>Geocaulon lividum</i>
RI681	0	0 of concern	Southern Twayblade	R	<i>Listera australis</i>

Stat= Nova Scotia Status:

R= Red, Y= Yellow, G= Green, I= indeterminate, E = Exotic

Appendix D

Species- at –Risk Database Rank Definitions

SPECIES-AT-RISK DATABASES AND RANKS

1. COMMITTEE ON THE STATUS OF ENDANGERED SPECIES IN CANADA (COSEWIC)

COSEWIC determines the national status of wild Canadian species, subspecies and separate populations suspected of being at risk. COSEWIC bases its decisions on the best up-to-date scientific information and Aboriginal Traditional Knowledge available. All native mammals, birds, reptiles, amphibians, fish, molluscs, lepidopterans (butterflies and moths), vascular plants, mosses and lichens are included in its current mandate.

COSEWIC categorizes listed species based on a qualitative classification system as follows:

- Extinct – Species that no longer exists.
- Endangered – Species is facing imminent extirpation or extinction.
- Extirpated – Species that no longer exists in the wild in Canada, but occurs elsewhere.
- Threatened – Species is likely to become endangered if limiting factors are not reversed.
- Special concern – Species has characteristics that make it particularly sensitive to human activities or natural events.
- Not at Risk – Species that has been evaluated and found to be not a risk.
- Data Deficient – Species for which there is insufficient information to designate a status.

Although there are 7 categories of classifications, review of the COSEWIC database is limited to those species listed as endangered, extirpated, threatened, and of special concern.

2. NOVA SCOTIA DEPARTMENT OF NATURAL RESOURCES (NSDNR)

The General Status Ranks of Wild Species in Nova Scotia is compiled by the Nova Scotia Department of Natural Resources. The broad goal is to prevent species from becoming extinct or extirpated as a result of human activities. This commitment will help identify those species most in need of immediate conservation and recovery action. The approach also helps to identify gaps in scientific knowledge and serves as an early warning system that better aligns human priorities for species conservation recognizing the need for a heightened focus on prevention in decision-making.

The General Status Assessment process is a system that provides an overall indication of viability of species in Nova Scotia, highlighting which species populations are secure, which are sensitive and which are at risk.

The General Status Ranks of Wild Species in Nova Scotia categorizes listed species based on a colour designation system as follows:

- Blue – Species are extirpated or extinct.
- Red – Species are at risk or may be at risk of extirpation or extinction.
- Yellow – Species are not believed to be at risk of immediate extirpation or extinction, but may require special attention or protection to prevent them from becoming at risk.
- Green – Species are not believed to be at risk, or sensitive.
- Undetermined – Species for which insufficient data, information, or knowledge is available.
- Not Assessed – Species that are known to be regularly present, but not yet assessed.
- Exotic – Species have migrated beyond natural range, as a result of human activity.
- Accidental – Species occurring infrequently and unpredictably, outside natural range.

Although there are 8 colour ranked categories, review of the General Status of Wildlife in Nova Scotia is limited to those species listed as Red and Yellow.

3. NOVA SCOTIA MUSEUM OF NATURAL HISTORY

The Nova Scotia Museum of Natural History is an active partner with the provincial government in evaluating, protecting, and aiding in recovery efforts of habitats and species at risk. The Museum relies heavily on the COSEWIC and NSDNR General Status Ranks to identify species at risk but compile records of confirmed sightings or collections of such species.

The Museum has developed a resource book titled *Natural History of Nova Scotia* that is intended to provide a framework in which the significant natural resources of the province of Nova Scotia can be understood, managed and interpreted. The information is useful for parks and natural areas planning, management and interpretation; land use planning for municipalities; development project planning, assessment and evaluation; eco-tourism and recreational planning. Accordingly, the Museum has generated a broad base of knowledge pertaining to Nova Scotia environment, and therefore, is an exceptional source for information related to species at risk and potential for species to be present at the wind farm site.

4. ATLANTIC CANADA CONSERVATION DATA CENTRE (ACCDC)

Conservation Data Centres (CDCs), as part of The NatureServe (formally The Nature Conservancy) international network, track biodiversity at two levels: species and ecological communities. Species and ecological communities are referred to as elements of biodiversity. Elements are ranked in each jurisdiction (province or state) and at global and national levels in order to help prioritize conservation efforts.

NatureServe and all CDCs (called Heritage Programs in the US) use a standardized element ranking system that has evolved over 30 years with input from hundreds of

scientists, managers and conservationists. The ranking system is very elaborate and comprehensive, thus, the following material describes only the provincial-level ranking used in this investigation, as follows:

- S1 – Extremely rare throughout its range in the province, and may be especially vulnerable to extirpation.
- S2 – Rare throughout its range in the province, and may be vulnerable to extirpation due to rarity or other factors.
- S3 – Uncommon throughout its range in the province, or found only in a restricted range, even if abundant in at some locations.

Appendix E

Nova Scotia Priority Species List

Common Name	Scientific Name	Priority List	Status	Habitat	Region
Plants					
Russet Sedge	<i>Carex saxatilis</i>	NSDNR General Status	Red	Damp, peaty or gravelly soils.	Collected once in NS at Warren lake, Victoria County.
Northern Wild Comfrey	<i>Cynoglossum virginianum</i>	NSDNR General Status	Red	Open beech woods, on dryish soils or gypsum. Woods and thickets.	West of Kentville, and near Windsor...not common.
Purple Lousewort	<i>Pedicularis palustris</i>	NSDNR General Status	Red	Marshes and meadows.	Specimens reported in Guysborough County, not common.
Common Butterwort	<i>Pinguicula vulgaris</i>	NSDNR General Status	Red	Moist ledges, especially on limestone or shores.	Cape Paul Island, Cheticamp River, Southwest Brook (Inverness). Corney Brook Gorge, South of French lake.
Northeastern Bladderwort	<i>Utricularia resupinata</i>	NSDNR General Status	Red	Ponds, lakes and river shores.	Digby Neck. Barren lake in Richmond County, near Argyl (Yarmouth County).
Northern Arnica	<i>Arnica lonchophylla</i>	NSDNR General Status	Red	Calcareous gravel ledges, cliffs.	Waterfall at Grand Anse River (Inverness). Some in Cape Breton Island. Cliff edges at Big Southwest Brook (Victoria), and once in Richmond County.
Pacific Wormwood	<i>Artemisia campestris</i>	NSDNR General Status	Red	Talus slopes in native habitats.	Lockhart Brook, Salmon River, Victoria County.
Rose Coreopsis	<i>Coreopsis rosea</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Red / Endangered / Endangered	Sandy or cobbly beaches, wet shores, and margins of lakes and streams. High wave energy shorelines.	Tusket valley (Yarmouth County).
Spiked Wood-Rush	<i>Luzula spicata</i>	NSDNR General Status	Red	Exposed headland, over 300 m A.S.L.	St. Lawrence Bay, north of Cape Breton Is.
Slender Blue Flag	<i>Iris prismatica</i>	NSDNR General Status	Red	Wet ground near the coast.	Annapolis, Guysborough, and Inverness. Possibly Louisbourg.
Livid Sedge	<i>Carex livida</i>	NSDNR General Status	Red	calcareous bogs and meadows.	Reported from Windsor, collected at Louisbourg, some in Richmond County.
Plymouth Gentian	<i>Sabatia kennedyana</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Red / Endangered / Threatened	Cobbly, Sandy Beaches, and peaty margins of lakes, rivers and boggy savannahs.	Tusket River Valley in Yarmouth County.
Tuckerman Sedge	<i>Carex tuckermanii</i>	NSDNR General Status	Red	Swales	Sweets Corner, Hants County, and along Wallace River in Cumberland County. Also Pugwash River.
Long-Tubercled Spike-Rush	<i>Eleocharis tuberculosa</i>	NSDNR General Status / NSESA / COSEWIC	Red / Threatened / Threatened	Sandy or boggy lake margins, as in coastal plain areas.	Harper's Lake, Shelbourne County; Great Pubnico Lake, Yarmouth County.
Horned Beakrush	<i>Rhynchospora capillacea</i>	NSDNR General Status	Red	Alkaline bogs	Southern end of Lake Ainslie at Black River and in the Baddeck Bay region.
Bottlebrush Grass	<i>Hystrix patula</i>	NSDNR General Status	Red	Wooded bottomlands	Five Mile River and Meander River in Hants County. Also in the River Valley of the East River at Charcoal, Pictou County.
Wiegand's Wild Rye	<i>Elymus wiegandii</i>	NSDNR General Status	Red	Streambanks and meadows	Sydney, Alma and River John, Pictou County.
Spreading Panic-Grass	<i>Panicum dichotomiflorum</i>	NSDNR General Status	Red	Along railways and in towns. Might be a serious weed in grain fields.	Truro, and Halifax.
Small White Leek	<i>Allium tricoccum</i>	NSDNR General Status	Red	Rish Deciduous Forests	Cape Blomidon and Brooklyn Corner and Cambridge in Kings County; Kemptown in Colchester County; Beaman's Mountain in Digby; and Inverness County.
Carolina Redroot	<i>Lachnanthes carolina</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Red / Threatened / Threatened	Peaty Shores and lakeside marshes	Ponhook, Little Ponhook, Molega, Cameron, Hog, and Beartrap lakes, Queens County.
Moonwort Grape-Fern	<i>Botrychium lunaria</i>	NSDNR General Status	Red	Open, turfy and gravelly slopes, shores, and meadows on basic soils.	New Campbellton and Indian Brook in northern Cape Breton Island. Also Halifax County on Conrad's Beach.
Northern Bog Sedge	<i>Carex dioica</i>	NSDNR General Status	Red	Sphagnum bogs and coniferous swamps.	St. Paul Island and bog at Black River, Inverness County.
Oval-Leaf Huckleberry	<i>Vaccinium ovalifolium</i>	NSDNR General Status	Red	Moist coniferous woods to an elevation of 2100 m a.s.l.	North Cape Breton Island
Northern Maidenhair-Fern	<i>Adiantum pedatum</i>	NSDNR General Status	Red	In fertile or alkaline soils. Under oak-birch-sugar maple trees.	Yarmouth to north cape Breton Island along Meander River.

Common Name	Scientific Name	Priority List	Status	Habitat	Region
Plants					
Round-Leaved Liverleaf	<i>Hepatica americana</i>	NSDNR General Status	Red	Dry mixed deciduous forests.	St. Andrews River, Bridgewater, New Minas, Windsor, Pictou, Stewiacke, Antigonish and on the North Mountain.
Thread-Leaf Sundew	<i>Drosera filiformis</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Red / Endangered / Endangered	Nutrient poor peat bogs, peaty depressions, intermediate moisture.	Swaines Road bog, Quinns meadows, Port La Tour, West Baccarobogs in Shelbourne County.
Canada Frostweed	<i>Helianthemum canadense</i>	NSDNR General Status	Red	Sand Barrens	Sand plains between Aylesford and Middleton. Greenfield in Queens County.
Tomentose Sand-Heather	<i>Hudsonia tomentosa</i>	NSDNR General Status	Red	Sandy Shores and dunes	Near coast on sandy shore near Pictou and New Glasgow.
Hoary Willow	<i>Salix candida</i>	NSDNR General Status	Red	Calcareous bogs and thickets	Black River bog in Inverness. Halifax County (possible)
Gray Willow	<i>Salix cordifolia</i>	NSDNR General Status	Red	Arctic and alpine	St. Paul Island, off northern Cape Breton Island.
Bearberry Willow	<i>Salix uva-ursi</i>	NSDNR General Status	Red	Barrens and subalpine areas. On calcareous ledges.	Cape Breton Island, St. Paul Island, Corney Brook gorge, Cape Breton Highlands park, Inverness County.
Rock Whitlow-Grass	<i>Draba glabella</i>	NSDNR General Status	Red	Crevices of cliff ledges and talus slopes.	Head of Bay of Fundy in north and east Cape Breton Island; Cape Blomidon, Kings County. Isle Haute cliffs, Cape D'or, and New Prospect cliffs in Cumberland County.
Eastern Lilaepsis	<i>Lilaeopsis chinensis</i>	NSDNR General Status / COSEWIC	Red / Special Concern	Muddy and rocky tidal banks in estuaries.	Tusket River in Yarmouth County. La Have River in Lunenburg County. Medway River in Queens County.
Norwegian Whitlow-Grass	<i>Draba glabella</i>	NSDNR General Status	Red	Cliff or Talus Slope	Upper Corney Brook, Big Southwest Brook CBHNP, Big Intervale, Margaree Inv. Co.
Many-Flowered Pennywort	<i>Hydrocotyle umbellata</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Red / Endangered / Threatened	Wet, sandy, and gravelly lake margins	Wilson's lake in Yarmouth County. Lake Kejimikujik and George Lake in northern Queens County.
Lapland Diapensia	<i>Diapensia lapponica</i>	NSDNR General Status	Red	In clumps on projecting shoulders, and in crevices of steep, north facing slopes.	Lockhart Brook, Salmon River in Victoria County. Upper Cheticamp River gorge above waterfalls.
Yellow Mountain Saxifrage	<i>Saxifraga aizoides</i>	NSDNR General Status	Red	Dripping cliffs. Within spray of waterfalls on north facing limestone ledges.	Big Southwest Brook, south of French Lake at Corney Brook gorge, Cape Breton Highlands.
Mountain Avens	<i>Geum peckii</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Red / Endangered / Endangered	Boggy areas and sphagnum hummocks.	Digby County, Digby neck.
Robbins' Milk-Vetch	<i>Astragalus robbinsii</i>	NSDNR General Status	Red	Cliff headlands.	Cape D'or and West Advocate in Cumberland County.
Showy Tick-Trefoil	<i>Desmodium canadense</i>	NSDNR General Status	Red	Open woods and river banks	Lake Kejimikujik to rivers of Pictou County.
St. John's Oxytrope	<i>Oxytropis campestris</i>	NSDNR General Status	Red	Exposed cliff crevices, rocky or gravelly scree.	St. Paul Island, north of Inverness County, Cumberland County.
Threadfoot	<i>Podostemum ceratophyllum</i>	NSDNR General Status	Red	Fast flowing gravelly streams	La Have River in Cumberland County. New Germany and Dog Falls in Lunenburg County.
Eastern Leatherwood	<i>Dirca palustris</i>	NSDNR General Status	Red	Rich Deciduous or mixed woods.	Milford Station in Hants County. St. Croix River near Newport in Hants County.
Ram's-Head Lady's-Slipper	<i>Cypripedium arietinum</i>	NSDNR General Status	Red	Gypsum sinkholes.	St. Croix to Brooklyn in Hants County.
Norwegian Whitlow-Grass	<i>Draba norvegica</i>	NSDNR General Status	Red	Calcareous ledges, gravel and turf	On dry limestone on cliff in Big Southwest Brook, Inverness County.
Sparse-Flowered Sedge	<i>Carex tenuiflora</i>	NSDNR General Status	Red	Wet woods and bogs	Little Harbour, Richmond County.
Purple Mountain Saxifrage	<i>Saxifraga oppositifolia</i>	NSDNR General Status	Red	Seepage area on partly shaded rock face.	Corney Brook gorge in Cape Breton Highlands.
Poison Sumac	<i>Toxicodendron vernix</i>	NSDNR General Status	Red	Swampy lakeshores and marshy areas.	Tefler Lake in Queens County.
Northern Gentian	<i>Gentianella amarella</i>	NSDNR General Status	Red	Field / meadow	Meat Cove Vict. Co.
Black Snake-Root	<i>Sanicula gregaria</i>	NSDNR General Status	Red	Rich Alluvial woods.	Five Mile River, Hants County. Cornwallis River and Margaree in Inverness County.
Foxtail Sedge	<i>Carex alopecoidea</i>	NSDNR General Status	Red	Moist, overgrown, clearcut woods near coast	St. Georges Bay, east of Antigonish.
Creeping Sedge	<i>Carex chordorrhiza</i>	NSDNR General Status	Red	bog	Gisborne Vict. Co.
Slender Wood Sedge	<i>Carex digitalis</i>	NSDNR General Status	Red	Dry, Sandy Woodlands.	Kejimikujik National Park
Elk Sedge	<i>Carex garberi</i>	NSDNR General Status	Red	Fen, river or stream	St Paul Island CB Co., Black River Inv. Co.
Sticky False-Asphodel	<i>Tofieldia glutinosa</i>	NSDNR General Status	Red	Swamps, bogs and rocky beaches.	Black River bog and Cheticamp in Inverness.

Common Name	Scientific Name	Priority List	Status	Habitat	Region
Plants					
Loose-Flowered Sedge	<i>Carex rariflora</i>	NSDNR General Status	Red	Fens, calcareous coastal heaths, bogs.	Scatarie Island and Baleine in Cape Breton Island.
Large Toothwort	<i>Cardamine X maxima</i>	NSDNR General Status	Red	Woodland streams or calcareous woods.	Isle haute
Tinged Sedge	<i>Carex tinctoria</i>	NSDNR General Status	Red	Rich soils, at the edge of mixed woods.	West of Bay Field in St. Georges Bay, Inverness County.
Little Green Sedge	<i>Carex viridula</i>	NSDNR General Status	Red	Sphagnum swales, rocky and gravelly shores, and low pastures near coast or borders of brackish ponds.	Scattered around province.
A Sedge	<i>Carex lepidocarpa</i>	NSDNR General Status	Red	Calcareous bogs and gravels.	Black River in Inverness.
Broad-Flumed Brome	<i>Bromus latiglumis</i>	NSDNR General Status	Red	Aluvial Floodplain	Yarm. Co. to northern Cape Breton
Stout Wood Reed-Grass	<i>Cinna arundinacea</i>	NSDNR General Status	Red	Aluvial Floodplain	Sable Island
Slender Dichanthelium	<i>Panicum xanthophysum</i>	NSDNR General Status	Red	Open thickets in dry, rocky, sandy soils.	Bridgewater only.
Downy Rattlesnake-Plantain	<i>Goodyera pubescens</i>	NSDNR General Status	Red	Woodlands and thickets	Melanson Mountain and Kentville in Kings County. Annapolis County near Eleven Mile Lake and South Milford.
Narrow-Leaved Wild Leek	<i>Allium tricoccum</i>	NSDNR General Status	Red	Rich, deciduous forests.	Cape Blomidon and Cambridge in Kings County. Kepmtown in Colchester County. Beaman's Mountain in Digby County. And Inverness County.
Pubescent Sedge	<i>Carex hirtifolia</i>	NSDNR General Status	Red	Calcareous regions in meadows and thickets on forest slopes.	Shubenacadie and Brookfield.
Prairie Sedge	<i>Carex prairea</i>	NSDNR General Status	Red	Typha swamp	Centreville, Kings County
Chestnut-Colored Sedge	<i>Carex castanea</i>	NSDNR General Status	Red	Swamps and wet meadows, cliff crevices and ledges.	Northern Cape Breton, and exected elsewhere.
Southern Twayblade	<i>Listera australis</i>	NSDNR General Status	Red	Sphagnum moss bogs or damp woods. Always near small spruce or tamarak.	Between Hay's River and Lake Ainslie Chapel, south of Inverness. Also one location in King's county. Unsubstantiated report at Halifax International Airport.
White Adder's-Mouth	<i>Malaxis monophyllos</i>	NSDNR General Status	Red	Moss cushions and wet, mossy cliff edges.	Isle Haute, Cape Blomidon, Five Mile River in Colchester County. Also known in Guysborough County.
Northern White Cedar	<i>Thuja occidentalis</i>	NSDNR General Status	Red	Lakesides and swamps or old pastures.	Annapolis, Digby and Cumberland Counties.
Hairy Rock-Cress	<i>Arabis hirsuta</i>	NSDNR General Status	Red	Dry cliffs, crevices, ledges, talus slopes and gravels.	Colchester, Victoria, and Cumberland Counties.
Coast Pepper-Bush	<i>Clethra alnifolia</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Red / Vulnerable / Special Concern	Shores of Lake headwaters, sandy woods, swamps, thickets.	Digby County. Canoe Lake, Louis Lake and East Quinan in Yarmouth County. Also in Halifax (introduced).
Nodding Fescue	<i>Festuca subverticillata</i>	NSDNR General Status	Red	Rish, deciduous forest, alluvial woods.	Cape Blomidon, Kings County. Five Mile River in Hants County. Southern Cumberland County.
Blue Cohosh	<i>Caulophyllum thalictroides</i>	NSDNR General Status	Red	Deciduous Forests	Colchester County, Hants County, Kings County and Inverness County.
Northern Blueberry	<i>Vaccinium boreale</i>	NSDNR General Status	Red	Exposed headlands and barrens	Cape Breton, and 2 records on the mainland.
Large Tick-Trefoil	<i>Desmodium glutinosum</i>	NSDNR General Status	Red	Rich, deciduous forests.	Rare. Halfway River in Hants County. Gaspereau River in Kings County. Kejimikujik National Park in Queens County.
Lapland Azalea	<i>Rhododendron lapponicum</i>	NSDNR General Status	Red	Located on calcareous ledges at 1 location in Nova Scotia.	Cape Breton Highlands National Park, Inverness County.
Joe-Pye Thoroughwort	<i>Eupatorium dubium</i>	NSDNR General Status	Red	Rocky shores, swamps and damp thickets.	Tusket Valley, and scattered east to Halifax and Lunenburg County.
Limestone Scurvy-grass	<i>Cochlearia tridactylites</i>	NSDNR General Status	Red	Calcareous or brackish soils. Salt loving species	Little-white Island and Big White Island in Halifax County.
Golden Crest	<i>Lophiola aurea</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Red / Threatened / Threatened	Lakeshores, wet savannahs, and sphagnum swale.	Southwestern Counties.
Showy Lady's-Slipper	<i>Cypripedium reginae</i>	NSDNR General Status	Red	Alkaline swamps and bogs	Hants and Cumberland Counties to Northern Cape Breton County.
Prototype Quillwort	<i>Isoetes prototypus</i>	NSDNR General Status	Red	Dark water in nutrient poor acidic water	Sutherland Lake in Cumberland County. Economy Lake in Colchester County. Pottle Lake in North Sydney. Sandy Lake in Annapolis County.
Early Anemone	<i>Anemone multifida</i>	NSDNR General Status	Red	Shores and rocky banks on calcareous soil.	One colony found on north face of limestone cliff below waterfall at Corney Brook gorge in Inverness.

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Plants					
Small-Flower Anemone	<i>Anemone parviflora</i>	NSDNR General Status	Red	Wet limestone cliffs bordering waterfalls, gravelly bluffs.	Cape Breton Highlands National Park, in Inverness County.
Purple Clematis	<i>Clematis occidentalis</i>	NSDNR General Status	Red	Rocky, calcareous slopes and open woods.	One plant found in Amherst Point Bird Sanctuary.
Net-Veined Willow	<i>Salix reticulata</i>	NSDNR General Status	Red	Calcareous Barrens and cliffs.	Only in Corney Brook gorge in Inverness.
Rock Willow	<i>Salix vestita</i>	NSDNR General Status	Red	Humid, north facing crevices on cliffs in calcareous soil.	Corney Brook gorge in Inverness.
Low Spike-Moss	<i>Selaginella selaginoides</i>	NSDNR General Status	Red	Border bog tusseks, peat bogs and stream margins.	Brier Island, Richmond County. North Cape Breton County.
Coffee Tinker's-Weed	<i>Triosteum aurantiacum</i>	NSDNR General Status	Red	Rich soils along rivers. Limestones banks in one location	Rare above Truro. Found in Kemptown in Colchester County. Also near New Glasgow. Meander River, and also in north Cape Breton.
Squashberry	<i>Viburnum edule</i>	NSDNR General Status	Yellow	Cold woods and along streams. Climax coniferous forest	Northern Cape Breton.
Mountain Sandwort	<i>Arenaria groenlandica</i>	NSDNR General Status	Yellow	Granitic ledges and gravel. On coasts at higher elevations.	Halifax and Lunenburg counties. Collected from rocks at Northwest Arm but not typical. Found in a gorge south of French Lake, Inverness County.
Willow Dock	<i>Rumex salicifolius</i>	NSDNR General Status	Yellow	Beaches or along rivers.	Sweets Corner, Hants County, and River Inhabitants, Inverness County. Below a bridge in Kentville.
Northern Bog Violet	<i>Viola nephrophylla</i>	NSDNR General Status	Yellow	Cool mossy bogs. Borders of streams, and damp woods.	Wet woods north of Truro. Occasionally in Cape Breton. Also is Wolfville and Shelburne County.
Bog Willow	<i>Salix pedicellaris</i>	NSDNR General Status	Yellow	Swampy thickets, poorly drained soils, bogs, and heavy soils.	From Digby County to Cape Breton. Uncommon near the Atlantic coast, and not known in northern Cape Breton.
Silky Willow	<i>Salix sericea</i>	NSDNR General Status	Yellow	Low thickets and streambanks.	Western Nova Scotia. Scattered east to Shubenacadie Grand Lake, Brier Island.
Drummond Rockcress	<i>Arabis drummondii</i>	NSDNR General Status	Yellow	Dry slopes and talus. Occasionally in fertile areas at lower elevations.	The head of the Bay of Fundy and northern Cape Breton. Hayfields in West New Annan, Colchester County.
Rock Whitlow-Grass	<i>Draba arabisans</i>	NSDNR General Status	Yellow	Muddy soils or calcareous rocks. Cliff crevices and ledges.	Cumberland and Kings counties. Northern Cape Breton.
Dwarf Huckleberry	<i>Vaccinium cespitosum</i>	NSDNR General Status	Yellow	Rocky cliffs and crevices. Dry or wet acidic sites from sea level to 3800 m.	Black River, Gaspereau Valley, Kings County. Northern Victoria and Inverness counties. Halifax County.
Alpine Blueberry	<i>Vaccinium uliginosum</i>	NSDNR General Status	Yellow	Dry or wet, organic or inorganic acid soils. Tolerant of high copper concentrations.	Northern and eastern Cape Breton. Halifax and Digby counties.
Water Pimpernel	<i>Samolus floribundus</i>	NSDNR General Status	Yellow	Brackish meadows, and tidal banks. Edge of salt marshes.	Tusket River, Yarmouth to Bridgewater. Antigonish.
White Mountain Saxifrage	<i>Saxifraga aizoon</i>	NSDNR General Status	Yellow	Pockets in cliffs, mossy hillsides, dripping cliffs, and limestone ledges.	Cape Blomidon. Cape d'Or and northern Cape Breton.
Heart-Leaved Foam Flower	<i>Tiarella cordifolia</i>	NSDNR General Status	Yellow	Deciduous forests and gravelly roadsides.	Colchester and Pictou counties. Huntington Point, Kings County.
Clammy Hedge-Hyssop	<i>Gratiola neglecta</i>	NSDNR General Status	Yellow	Wet or muddy places.	Muddy swale at the Stewiacke River in Middle Stewiacke. The Hilden area, Colchester County.
Humped Bladderwort	<i>Utricularia gibba</i>	NSDNR General Status	Yellow	Shallow lake margins. Small pools, and small ponds in quagmires or peat.	Southwest of the Nova Scotia and St. Paul Island.
Greater Creeping Spearwort	<i>Ranunculus flammula</i>	NSDNR General Status	Yellow	Semi-aquatic, in bogs and cold streams.	Annapolis and Cumberland counties to northern Cape Breton.
Seabeach Groundsel	<i>Senecio pseudoarnica</i>	NSDNR General Status	Yellow	Gravelly seashores.	Scattered along Atlantic coast to Northern Cape Breton.
Waxy-Leaved Aster	<i>Aster undulatus</i>	NSDNR General Status	Yellow	Old fields and edge of thickets.	Lunenburg County to Kings, Queens, and Halifax counties
Highland Rush	<i>Juncus trifidus</i>	NSDNR General Status	Yellow	Dry cliff crevices. North-facing cliffs in northern Cape Breton.	Margaree, the Cheticamp River, Gray Glen Brook, and Lockhart Brook, all in Cape Breton.
Capitate Spikerush	<i>Eleocharis flavescens</i>	NSDNR General Status	Yellow	Peaty muck of bogs. Wet sandy shores, and swales.	Argyle Head, Yarmouth County; Italy Cross, Lunenburg County; Tiddville, Digby County. Also in Antigonish County.
Slender Cotton-Grass	<i>Eriophorum gracile</i>	NSDNR General Status	Yellow	Wet peat and inundated shores.	Annapolis eastward.
Long's Bulrush	<i>Scirpus longii</i>	NSDNR General Status / NSESA / COSEWIC	Yellow / Vulnerable / Special Concern	Peaty or mucky shores of lakes in the southwest. Stillwater meadows, and ferns.	Ponhook Lake and Moosehorn Lake, Queens County. Also Eighteen Mile Brook, Shingle Lake, Dunraven Fen, and Quinn's Meadow, Shelburne County.
Redtop Panic Grass	<i>Panicum longifolium</i>	NSDNR General Status	Yellow	Sandy and peaty beaches. Gravelly lake margins.	Yarmouth County to Lake Kejimikujik. Along the Mersey River.
Canada Mountain-Ricegrass	<i>Oryzopsis canadensis</i>	NSDNR General Status	Yellow	Dry sandy soils.	Cumberland and Colchester counties. Near Porters Lake, Halifax County. Near Jordan Falls, Shelburne County.

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Plants					
Long-Bract Green Orchis	<i>Coeloglossum viride</i>	NSDNR General Status	Yellow	Boggy spots, damp mature woods. Fir or floodplain forests.	Sable Island. The northern tip of Cape Breton. Bay St. Lawrence, Victoria County. Black River Lake region, Kings County.
Southern Rein Orchid	<i>Platanthera flava</i>	NSDNR General Status	Yellow	Sandy or gravelly beaches. Wet peat, and lake or river margins. Bogs, swamps, and meadows.	Tusket River in Yarmouth County and Medway River in Queens County. Kings County and Kempton region of Colchester County.
Yellow Nodding Ladies'-Tresses	<i>Spiranthes ochroleuca</i>	NSDNR General Status	Yellow	Driest sand barrens in southwestern counties. Near rivers, and in dry habitats like roadsides and fields.	Southwestern of Nova Scotia, northeast to West Gore, Hants County.
Least Grape-Fern	<i>Botrychium simplex</i>	NSDNR General Status	Yellow	Lakeshores, or mossy edges of streams or waterfalls.	A number of locations from Yarmouth County to northern Cape Breton (gravelly beach at Cedar Lake, Yarmouth County; West Berlin, Queens County; Petpeswick, Halifax County; Antigonish, Victoria, and Inverness counties).
Yellow-Seed False-Pimpernel	<i>Lindernia dubia</i>	NSDNR General Status	Yellow	Wet areas and muddy edges of streams. Drained millponds and gravel pits.	Sheffield Mills, Kings County. The bottom of Maitland Pond, Lunenburg County. The banks of the River Philip near Oxford and Wallace River, Cumberland County.
Bentgrass	<i>Calamagrostis stricta</i>	NSDNR General Status	Yellow	Around lakes and bogs, and wet cliff-faces.	Some lakes near Amherst. Reported at Beaver Lake, Yarmouth County. A larch bog at Big Baddeck, Cape Breton; and at Lockhart Brook, Salmon River, Cape Breton.
Estuary Beggar-Ticks	<i>Bidens hyperborea</i>	NSDNR General Status	Yellow	Estuarine, on tidal mud flats.	River Philip, Oxford, Cumberland County. The estuaries at Antigonish, and Margaree, Inverness County.
Cinnamon-Spot Pondweed	<i>Potamogeton oblongus</i>	NSDNR General Status	Yellow	Freshwater ponds on Sable Island.	Only on Sable Island.
Bulbous Rush	<i>Juncus bulbous</i>	NSDNR General Status	Yellow	The borders of freshwater ponds, ditches, canals, and roadsides. Especially in alkaline soils.	Sable Island. Near Sydney and Louisbourg National Historic Site, Cape Breton.
Moor Rush	<i>Juncus stygius</i>	NSDNR General Status	Yellow	Wet moss, bogs, and bog pools.	Gracieville, Richmond County. Isle Madame, and Louisbourg.
New England Northern Reed Grass	<i>Calamagrostis stricta</i>	NSDNR General Status	Yellow	Around lakes and bogs, and wet cliff-faces.	Some lakes near Amherst. Reported at Beaver Lake, Yarmouth County. A larch bog at Big Baddeck, Cape Breton; and at Lockhart Brook, Salmon River, Cape Breton.
Mountain Timothy	<i>Phleum alpinum</i>	NSDNR General Status	Yellow	River ledges.	Along the Cheticamp River and LeBlanc Brook, Inverness County.
Purple False Oats	<i>Graphephorum melicoides</i>	NSDNR General Status	Yellow	Gravelly shores and banks, especially alkaline areas.	Indian Brook, Victoria County; Digby County, Cumberland County to Pictou County.
Fragile Rockbrake	<i>Cryptogramma stelleri</i>	NSDNR General Status	Yellow	Shaded limestone cliffs, and shaded crevices in conglomerate cliff-face.	Hillsborough and Waycobah, Inverness County. The region of Windsor.
Northern Woodsia	<i>Woodsia alpina</i>	NSDNR General Status	Yellow	Dryish cliffs	North Aspy River, Cape Breton. Cheticamp River and Big Southwest Brook, Inverness County; Indian Brook, Victoria County.
River Anemone	<i>Anemone virginiana</i>	NSDNR General Status	Yellow	Streamsides. Calcareous and slaty ledges, shores, and thickets.	Meander River in Hants County. Colchester and Pictou counties. Northern Cape Breton. Truro area.
Swedish Dwarf Dogwood	<i>Cornus suecica</i>	NSDNR General Status	Yellow	Sphagnum depressions in barrens, gravelly shores, and dry exposed headlands.	St. Paul Island, Scatarie Island, and Canso. Near Port Mouton, Queens County..
Common Alexanders	<i>Zizia aurea</i>	NSDNR General Status	Yellow	Meadows, shores, damp thickets, and wet woods. Roadsides.	Ponmquet River and South River, Antigonish County. Upper Musquodobit, Halifax County. Truro area and northeast.
Swamp Birch	<i>Betula glandulosa</i>	NSDNR General Status	Yellow	Acidic, rocky barrens, crests, and summits.	Twin Island Lake, Ingonish Barrens
New Jersey Rush	<i>Juuncus caesariensis</i>	NSDNR General Status / NSESA / COSEWIC	Yellow / Vulnerable / Special Concern	Bogs and fens along Cape Breton's southeastern coastal plain.	Gracieville, Richmond County. Lower L'Ardoise to Fourchu, Cape Breton County, and inland to Loch Lomond..
Brook-Side Alder	<i>Alnus serrulata</i>	NSDNR General Status	Yellow	Lakeshores	Southwestern Nova Scotia.
Proliferous Red Fescue	<i>Festuca rubra</i>	NSDNR General Status	Yellow	Pastures, exposed situations, in sand and gravel along beaches, and in upper zones of salt marshes.	Throughout the province.
Northern Bur-Reed	<i>Sparganium hyperboreum</i>	NSDNR General Status	Yellow	Peaty pools.	Cape Breton. New Harbour, Guysborough County.
Lance-Leaf Grape-Fern	<i>Botrychium lanceolatum</i>	NSDNR General Status	Yellow	Rich, wooded hillsides.	Kentville ravine, Kings County. Colchester and Cumberland counties. Indian Brook, Cheticamp River, and Grand Anse in Northern Cape Breton
Green Spleenwort	<i>Asplenium trichomanesramosum</i>	NSDNR General Status	Yellow	Shaded cliffs along streams, on limestone or other basic rocks.	East branch of Five Islands River, Colchester County. Cumberland County and Cape Breton.

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Plants					
Fragrant Fern	<i>Dryopteris fragrans</i>	NSDNR General Status	Yellow	Dry overhanging cliffs, and in cliff crevices along streams or near waterfalls.	Between Earltown and Parrsboro. Along streams in Northern Cape Breton.
Northern Holly-Fern	<i>Polystichum lonchitis</i>	NSDNR General Status	Yellow	Alkaline areas. On or near limestone or gypsum in rocky areas, and cool shaded places.	Cape North, Bay St. Lawrence, south to Waycobah and River Denys in Cape Breton.
Smooth Woodsia	<i>Woodsia glabella</i>	NSDNR General Status	Yellow	Shaded verticle cliffs. Along streams in Northern Cape Breton.	Jeffers Brook, Cumberland County. Big Southwest Brook, Lockhart Brook, and Skye Glen Mountain, northern Cape Breton.
Netted Chainfern	<i>Woodwardia areolata</i>	NSDNR General Status	Yellow	Swamps, bog margins, and particularly along streams.	Yarmouth and Shelburne counties. A stream at Argyle Head, Yarmouth County.
Canada Anemone	<i>Anemone canadensis</i>	NSDNR General Status	Yellow	Damp thickets, meadows, and gravelly shores, on calcareous or alluvial soils.	Near the sea at Cape Jack and Havre Boucher, Antigonish County. North of Cheticamp, at Presquille, Cape North, and Bay St. Lawrence, Cape Breton. Meander River area, Hants County, and Queens County.
Wood Anemone	<i>Anemone quinquefolia</i>	NSDNR General Status	Yellow	Wooded riverbanks and shaded intervals.	North of Bridgetown, Annapolis County. Newport, Hants County; and Middle Stewiacke, Colchester County. Two miles north of Sherbrooke, Guysborough County. Cape Breton.
River Anemone	<i>Anemone virginiana</i>	NSDNR General Status	Yellow	Streamsides. Calcareous and slaty ledges, shores, and thickets.	Meander River in Hants County. Colchester and Pictou counties. Northern Cape Breton. Truro area.
Marsh Marigold	<i>Caltha palustris</i>	NSDNR General Status	Yellow	Swamps, wet meadows, and wet rocks.	The coastal plain of northern Inverness County, near Mabou; Northeast Margaree; Margaree River; St. Joseph du Moine; Cheticamp; and occasionally near the mouth of Grand Anse Brook, Pleasant Bay. Merigomish Island, Pictou County.
Purple Crowberry	<i>Empetrum rubrum eamesii</i>	NSDNR General Status	Yellow	Headlands, bogs and barrens.	Around the entire coast.
Kalm's Lobelia	<i>Lobelia kalmii</i>	NSDNR General Status	Yellow	Dripping cliffs, meadows, and bogs. Usually in calcareous or marly locations.	Alkaline bog at Black River, Inverness County. A wet, quaking bog near McAdam Lake, Cape Breton County.
Wood Nettle	<i>Laportea canadensis</i>	NSDNR General Status	Yellow	Alluvial woods of mixed or deciduous trees. Floodplains on Cape Breton plateau. Only the most fertile places.	From Coldbrook, Kings County, to northwestern Cape Breton.
Dwarf Birch	<i>Betula pumila</i>	NSDNR General Status	Yellow	Bogs and bog meadows. Mixed with alders of the same size.	Northern Victoria and Inverness counties. Black River, Inverness County at 60 m a.s.l.
Large Yellow Lady's Slipper	<i>Cypripedium calceolus</i>	NSDNR General Status	Yellow	Calcareous soils, near outcrops of gypsum, or limestone. Occasionally in deciduous forests.	The Windsor-Brooklyn area of Hants County, sparingly west to Kings County, east to Cape Breton (Iona Area).
Large Round-Leaved Orchid	<i>Platanthera orbiculata</i>	NSDNR General Status	Yellow	Damp woods in deep shade	Southwestern Nova Scotia. The coniferous forest of northern Cape Breton. Annapolis County.
Purple-Leaf Willow-Herb	<i>Epilobium coloratum</i>	NSDNR General Status	Yellow	Low-lying ground, springy slopes, and similar locations.	Scattered in mainland Nova Scotia, from Digby County to Guysborough.
Slim-Leaf Witchgrass	<i>Panicum linearifolium</i>	NSDNR General Status	Yellow	Dry, sandy soils.	Annapolis County to Pictou County. Coldbrook, Kings County.
Lake Quillwort	<i>Isoetes lacustris</i>	NSDNR General Status	Yellow	Cobbly margins and gravel bottoms of water bodies. Deep water of nutrient-poor lakes in the Pre-Cambrian shield.	Scattered throughout Nova Scotia. East branch, Tusket River and Clyde River in southwestern NS. Ethel Lake on St. Paul Island, Cape Breton.
Adder's Tongue	<i>Ophioglossum pusillum</i>	NSDNR General Status	Yellow	Sterile meadows, grassy swamps, and damp, sandy, or cobbly beaches of lakes.	Yarmouth and Digby Counties, east to Halifax and Amherst, George River in Cape Breton.
Hornemann Willow-Herb	<i>Epilobium hornemannii</i>	NSDNR General Status	Yellow	Damp rocks, margins of rills, and similar locations.	Northern Cape Breton.
Hemlock Parsley	<i>Conioselinum chinense</i>	NSDNR General Status	Yellow	Swamps, mossy coniferous woods or swales, and seepy slopes near the coast.	Digby Neck. St. Paul Island.
American Germander	<i>Teucrium canadense</i>	NSDNR General Status	Yellow	Gravelly seacoasts, the crest of the beach, beyond the reach of the tide.	Scattered.
Mudwort	<i>Limosella subulata</i>	NSDNR General Status	Yellow	Low areas by ponds, gravel lakeshores, the muddy edges of ponds behind barrier beaches, and muddy river margins.	The coast near Yarmouth and Shelburne counties. Near Wallace Lake on Sable Island. Cape Breton.
Cut-Leaved Coneflower	<i>Rudbeckia laciniata</i>	NSDNR General Status	Yellow	Swales, the edges of swamps or in gullies, in small colonies.	Kings county. Isolated from Annapolis and Cumberland counties to Guysborough County.
Pale Jewel-Weed	<i>Impatiens pallida</i>	NSDNR General Status	Yellow	Rich alluvial soils, damp thickets and along intervals.	Kings County to northern Cape Breton, becoming more frequent eastward.. The slope of Isle Haute, Cumberland County.

Common Name	Scientific Name	Priority List	Status	Habitat	Region
Plants					
Short-Awn Foxtail	<i>Alopecurus aequalis</i>	NSDNR General Status	Yellow	The muddy edges of rivers and shallow ponds, and gravel margins.	Top of Cape Blomidon, and from Cumberland County to Strathlorne and Margaree in Cape Breton.
Canada Buffalo-Berry	<i>Shepherdia canadensis</i>	NSDNR General Status	Yellow	Gypsum or talus slopes. Along the coast in the reach of salt spray. Grows with Shrubby Cinquefoil and <i>Senecio pauperculus</i> .	The roadside between Windsor and Brooklyn, and in northern Cape Breton.
Longleaf Stitchwort	<i>Stellaria longifolia</i>	NSDNR General Status	Yellow	Damp or wet grassy places, in sandy to mucky soils.	The meadow along the Salmon River, Truro, and in neighbouring gardens. From the Musquodoboit and Stewiacke River valleys; Kemptown; Colchester County; Isle Haute.
Comb-Leaved Mermaid-Weed	<i>Proserpinaca pectinata</i>	NSDNR General Status	Yellow	Wet savannas, sphagnum swales, and the sandy, gravelly, or muddy borders of lakes or ponds.	Yarmouth and Shelburne counties. Infrequent east to Cumberland County, and through central Lunenburg to Halifax County. Medway Valley of Queens County.
Downy Willow-Herb	<i>Epilobium strictum</i>	NSDNR General Status	Yellow	Boggy areas and meadows.	Scattered throughout Cape Breton. Infrequent from Cumberland County to Queens County.
Alderleaf Buckthorn	<i>Rhamnus alnifolia</i>	NSDNR General Status	Yellow	Swampy woods and boggy meadows. Alkaline areas, near limestone or in marl bogs in rich, alluvial soil. Poorly drained swamps in Cape Breton.	Central Nova Scotia and southern Inverness County.
Black Ash	<i>Fraxinus nigra</i>	NSDNR General Status	Yellow	Low ground, damp woods, and swamps.	Digby and central Lunenburg counties to northern Cape Breton. Scattered through northern part of NS.
Boreal Bedstraw	<i>Galium kamtschaticum</i>	NSDNR General Status	Yellow	Rich Deciduous forests and ravines. In fir-birch areas on top of Cape Breton plateau.	Grand Anse to the Lakes O'Law and Waycobah in northern Cape Breton.. Also Richmond County.
Beck Water-Marigold	<i>Bidens beckii</i>	NSDNR General Status	Yellow	Shallow quiet waters, slow moving streams, and ponds.	Scattered throughout NS. Infrequent in southwestern counties. Abundant from Pictou to Cape Breton.
Balsam Ragweed	<i>Senecio pauperculus</i>	NSDNR General Status	Yellow	Gypsum outcrops. Dry cliffs and talus slopes.	Scattered from Hants County to northern Cape Breton.
Elliot Goldenrod	<i>Solidago elliotii</i>	NSDNR General Status	Yellow	Boggy swales, clearings, damp thickets, spruce and maple swamps, and lake shores.	Southern Yarmouth County and east to Queens and Halifax counties.
Pennsylvania Blackberry	<i>Rubus pensilvanicus</i>	NSDNR General Status	Yellow	Thickets, the edges of woods, and clearings.	Southwestern counties and scattered eastward.
Marsh Bellflower	<i>Campanula aparinoides</i>	NSDNR General Status	Yellow	Meadows, ditches and river banks.	Cumberland and Hants counties to Antigonish County. One location in Cape Breton County.
Purple-Stem Swamp Beggar Ticks	<i>Bidens connata</i>	NSDNR General Status	Yellow	Boggy swales, and the borders of ponds and ditches.. Thickets and swales behind brackish shores.	LaHave River, Bridgewater; along the Atlantic shore; Annapolis River; and in the Minas area of Hants County. Sable Island.
Arrow-Leaved Violet	<i>Viola sagittata</i>	NSDNR General Status	Yellow	Dry sterile woods, clearings, and fields.	From Yarmouth to Halifax and Hants counties. Not collected eastward.
Grassleaf Rush	<i>Juncus marginatus</i>	NSDNR General Status	Yellow	Clayey roadsides, damp fields, and brookside.	Yarmouth and Shelburne counties, north to Belleisle in Annapolis County.
Ebony Sedge	<i>Carex eburnea</i>	NSDNR General Status	Yellow	Cliffs and talus slopes. Under conifers in calcareous soil.	From Cumberland and Hants counties to Antigonish and Cape Breton.
Slender Wedge Grass	<i>Sphenopholis obtusata</i>	NSDNR General Status	Yellow	Cliff faces, where roots are in contact with limestone, basalt, or gypsum.	Cape Blomidon and in Cumberland County. More common in central and northern Cape Breton.
Hairy Swamp Loosestrife	<i>Decodon verticillatus</i>	NSDNR General Status	Yellow	Quaking margins of ponds or lakes.	Shelburne County and New Tusket, Digby County. Kejimikujik National Park.
Northern Comandra	<i>Geocaldon lividum</i>	NSDNR General Status	Yellow	Sterile soils and damp sands, in acid or peaty areas.	Kingston, Kings County. Auburn, Kings County. Cape Breton and Spicer's Cove Cumberland County.
Field Milkwort	<i>Polygala sanguinea</i>	NSDNR General Status	Yellow	Poor or acidic fields, damp slopes, and open woods or bush.	Cumberland, Annapolis, and Kings County.
False Mermaid-Weed	<i>Floerkea proserpinacoides</i>	NSDNR General Status	Yellow	Deciduous ravine slopes, river margins, and interval forests.	Glenora Falls and central Cape Breton. Antigonish County, Truro, and Sheffield Mills, Kings County.
Thyme-Leaved Speedwell	<i>Veronica serpyllifolia</i>	NSDNR General Status	Yellow	Moist soils. Pastures and damp runs, creeping on the grass.	Throughout NS.
Common Buttonbush	<i>Cephalanthus occidentalis</i>	NSDNR General Status	Yellow	Granite boulders, rocky shores, about lakes.	Shelburne County; Deception Lake and Lake John, Yarmouth County. Along the Medway River in Queens County.
Daisy Fleabane	<i>Erigeron hyssopifolius</i>	NSDNR General Status	Yellow	Gypsum outcrops in central NS, or damp stream banks between flood levels. Banks, ledges, and cliff crevices in northern Cape Breton.	Hants County, near Antigonish, and northern Cape Breton.
Flatstem Pondweed	<i>Potamogeton zosteriformis</i>	NSDNR General Status	Yellow	Lakes and deep rivers in less acid regions.	Rare in Kings, Colchester, Cumberland, and Halifax counties. Mouth of the Hays River, Inverness County.
White Bluegrass	<i>Poa glauca</i>	NSDNR General Status	Yellow	Cliff crevices, on shelves, and talus slopes.	Cumberland County, Cape Breton, Cape Blomidon, and Isle Haute.

Common Name	Scientific Name	Priority List	Status	Habitat	Region
Plants					
Yellow Canada Lily	<i>Lilium canadense</i>	NSDNR General Status	Yellow	In meadows and in stream banks.	Kings and Cumberland counties to Middle River and Margaree in Cape Breton.
Giant Rattlesnake-Plantain	<i>Goodyera oblongifolia</i>	NSDNR General Status	Yellow	Deciduous climax forest. Slopes in damp, mixed forests, and ravines.	Northern Cape Breton.
Small Yellow Lady's-Slipper	<i>Cypripedium calceolus</i>	NSDNR General Status	Yellow	Calcareous soils, near outcrops of gypsum, or limestone. Occasionally in deciduous forests.	The Windsor-Brooklyn area of Hants County, sparingly west to Kings County, east to Cape Breton (Iona Area).
Grass-Leaved Goldenrod	<i>Euthamia tenuifolia</i>	NSDNR General Status	Yellow	Dry sandy soils and beaches.	Yarmouth County. Infrequent elsewhere.
Purple Crowberry	<i>Empetrum rubrum atropurpureum</i>	NSDNR General Status	Yellow	Headlands, bogs and barrens.	Around the entire coast.
Salt-Marsh False-Foxglove	<i>Agalinis maritima</i>	NSDNR General Status	Yellow	Salt marshes along the coast.	Salt marsh along the Argyle River at Argyle Head, Yarmouth County.
A Hawthorn	<i>Crataegus flabellata</i>	NSDNR General Status	Yellow	Hedgerows and thickets.	Eastern NS and northern Cape Breton. Hants County and Kentville.
A Bramble	<i>Rubus recurvicaulis</i>	NSDNR General Status	Yellow	Rough ground, thickets, the borders of woods and lake margins.	Southwestern areas, scattered east to northern Cape Breton.
Canada Clearweed	<i>Pilea pumila</i>	NSDNR General Status	Yellow	Cool, moist, shaded places.	Seepage slope in rich maple-beech woods at West Branch, Pictou County.
Fountain Miner's-Lettuce	<i>Montia fontana</i>	NSDNR General Status	Yellow	Springy or seepy slopes, wet shores and brackish spots.	Collected on a mossy bank above the sea on the Northwest Arm, Halifax. Brier Island. Port Hawkesbury, Inverness County. Burke Brook, Advocate, Cumberland County.
Acadian Quillwort	<i>Isoetes acadensis</i>	NSDNR General Status	Yellow	Water up to 1 m deep, bordering lakes or ponds, and occasionally along rivers.	Yarmouth County to northern Cape Breton. Lake Kejimikujik, near exit of Grafton Brook.
Greene's Rush	<i>Juncus greenei</i>	NSDNR General Status	Yellow	Sandy soil and dune hollows.	Halifax; near Pugwash, Cumberland County; Villagedale, Shelburne County; the dunes at Pomquet, Antigonish County.
Philadelphia Panic Grass	<i>Panicum philadelphicum</i>	NSDNR General Status	Yellow	Floodplains, sandy shores, cranberry bogs.	Near Bridgewater.
Meadow Horsetail	<i>Equisetum pratense</i>	NSDNR General Status	Yellow		No existing collections
Halberd-Leaf Tearthumb	<i>Polygonum arifolium</i>	NSDNR General Status	Yellow	Thickets, marshy borders, usually under alders. Flourishes in the richest alluvial soil.	Kings, Colchester, and Cumberland counties.
Climbing False-Buckwheat	<i>Polygonum scandens</i>	NSDNR General Status	Yellow	Low thickets along river intervals. Luxuriant after ground has been disturbed or woods cleared.	Northern distribution from Digby to Richmond counties.
Golden-Heather	<i>Hudsonia ericoides</i>	NSDNR General Status	Yellow	Dry, rocky and sandy barrens. Disturbed areas or on open sandy soils.	Shelburne to Halifax counties. The centre of the Annapolis Valley.
Small-Flower Bitter-Cress	<i>Cardamine parviflora</i>	NSDNR General Status	Yellow	Dry woods, shaded or exposed ledges, and in sandy soils.	The Bay of Fundy from Brier Island to Cape Blomidon and Cape d'Or. Halifax County to Victoria County in Northern Central Cape Breton.
Virginia Meadow-Beauty	<i>Rhexia virginica</i>	NSDNR General Status	Yellow	Peaty lake margins and swales, or wet thickets.	Southwestern counties.
Boreal Felt Lichen	<i>Erioderma pedicellatum</i>	NSESA / SARA/ COSEWIC	Endangered / Endangered	Cool, maritime climates. Highly sensitive to acid rain. Grow on bark of coniferous trees.	Found in Maritime climates throughout NS, NB and NL. A 90% reduction in NS and NB populations in past 2 decades.
Lepidoptera					
Jutta Arctic	<i>Oeneis jutta</i>	NSDNR General Status	Red	Tamarack and Black Spruce bogs	Found in Cape Breton
Early Hairstreak	<i>Erora laetus</i>	NSDNR General Status	Red	Deciduous woods where Beech is present	Recorded in the Wentworth Valley and Annapolis Valley.
Bog Elfin	<i>Incisalia lanoraieensis</i>	NSDNR General Status	Red	Black Spruce-Tamarack Bogs	Gold River, Nova Scotia, close to Chester Basin, Lunenburg County
Northern Cloudywing	<i>Thorybes pylades</i>	NSDNR General Status	Yellow	Unknown for Nova Scotia	Three records from Pictou and Colchester counties
Monarch	<i>Danaus plexippus</i>	NSDNR General Status / SARA/ COSEWIC	Yellow / Special Concern	Monarchs in Canada exist primarily wherever milkweed (<i>Asclepius</i>) and wildflowers (such as Goldenrod, asters, and Purple Loosestrife) exist. This includes abandoned farmland, along roadsides, and other open spaces where these plants grow.	The eastern population includes all Monarchs east of the Rocky Mountains, from the Gulf coast to southern Canada, and from the Great Plain States and Prairie Provinces east to the Atlantic coast.
Hoary Comma	<i>Polygonia gracilis</i>	NSDNR General Status	Yellow	Boreal forest	
Satyr Anglewing (Comma)	<i>Polygonia satyrus</i>	NSDNR General Status	Yellow	Boreal forest	
Arctic (Titania) Fritillary	<i>Boloria chariclea</i>	NSDNR General Status	Yellow	Boreal forest and bogs	Parrsboro area; likely accidental
Short-tailed Swallowtail	<i>Papilio brevicauda</i>	NSDNR General Status	Yellow	Coastal areas, in the presence of larval foodplant	Only found in the Atlantic provinces and eastern Quebec
Freshwater Mussels					

Common Name	Scientific Name	Priority List	Status	Habitat	Region
Plants					
Yellow Lamp Mussel	<i>Lampsilis cariosa</i>	NSDNR General Status / COSEWIC	Red / Special Concern	Predominantly a river species. Occurs in swift currents on shoals or in riffles and principally on sand bottom. Occasionally found in ponds.	From Sydney River, Cape Breton to Georgia.
Squawfoot	<i>Strophitus undulatus</i>	NSDNR General Status	Red	Occurs in rivers and creeks but occasionally in lakes. Inhabits all substrates.	From Nova Scotia to South Carolina; Cumberland Cty, Westchester Cty, NB Fundy Coast
Delicate Lamp Mussel (Tidewater Mucket)	<i>Lampsilis ochraceae</i>	NSDNR General Status	Yellow	Occurs in quiet water, that is ponds, canals, and slow moving parts of rivers. Found in mud or sand bottoms. Occurs only near the seacoast.	From Cape Breton to Savannah River, Georgia
Eastern Lamp Mussel	<i>Lampsilis radiata</i>	NSDNR General Status	Yellow	Occurs in rivers and lakes of all sizes, usually on gravel and sand bottoms but occasionally on mud.	St. Lawrence River to South Carolina.
Brook Floater (Swollen Wedge Mussel)	<i>Alasmodonta varicosa</i>	NSDNR General Status	Yellow	Usually found in rapids or riffles on rocky or gravel substrates and in sandy shoals. Most abundant in small rivers and creeks.	From Nova Scotia and New Brunswick to North Carolina
Eastern River Pearl Mussel (E. Pearl Sh)	<i>Margaritifera margaritifera</i>	NSDNR General Status	Yellow	Occur in small and medium-sized running streams. Found on sandy shoals and in pools with overhanging branches	Abundant in Newfoundland and Nova Scotia
Odonata					
Zebra Clubtail	<i>Stylurus scudderii</i>	NSDNR General Status	Red	Streams and rivers with slight to moderate current and gravel or sandy bottoms	Cornwallis River at Hwy 101, Annapolis River at Middleton
Rusty Snaketail	<i>Ophiogomphus rupinulensis</i>	NSDNR General Status	Red	Common along rivers. Inhabits generally low-flowing mesotrophic rivers with diverse substratum.	
Brook Snaketail	<i>Ophiogomphus aspersus</i>	NSDNR General Status	Red	Clear sand bottomed streams with intermittent rapids. Sand or gravel; Current may be slow to	
Black Meadowfly	<i>Sympetrum danae</i>	NSDNR General Status	Yellow	Inhabits marshes with slow moving streams and ponds, soft substratum. Often associated with peatlands	Known from salt marsh ponds in Cape Breton
Elfin Skimmer	<i>Nannothemis bella</i>	NSDNR General Status	Yellow	Stagnant pools in marshy places, bogs. Not known from ponds in this region; fens	
Muskeg Emerald	<i>Somatochlora septentrionalis</i>	NSDNR General Status	Yellow	Shallow and Sphagnum-choked ponds within bogs	In Nova Scotia confined to the Capr Breton Highlands
Prince Baskettail	<i>Epitheca princeps</i>	NSDNR General Status	Yellow	Rivers, Streams and Lakes. Only active wave washed shores of lakes, and slow running streams and rivers.	
Zorro Clubtail (Northern Pygmy Clubtail)	<i>Lanthus parvulus</i>	NSDNR General Status	Yellow	Clear streams and brooks with strong currents over clean gravel, cobbles, or bedrock, on comparatively unproductive soils	
Greenstriped Darner	<i>Aeshna verticalis</i>	NSDNR General Status	Yellow	Open marshy areas and open fields; acidic and circumneutral fens and marshes	
Zigzag Darner	<i>Aeshna sitchensis</i>	NSDNR General Status	Yellow	High elevation sedge marshes near lakes and streams; fens and bogs	
Mottled Darner	<i>Aeshna clepsydra</i>	NSDNR General Status	Yellow	Edges of ponds and lakes, most often with emergent vegetation	
Harlequin Darner	<i>Gomphaeschna furcillata</i>	NSDNR General Status	Yellow	Swamps or bogs	
Little Bluet	<i>Enallagma minusculum</i>	NSDNR General Status	Yellow	Ponds, shallow gravel-bottomed margins of mesotrophic lakes, where there are sparse emergent plants; occasionally larger heavily vegetated ponds.	
Fish					

Common Name	Scientific Name	Priority List	Status	Habitat	Region
Plants					
Atlantic Salmon (Anadromous pops.)	<i>Salmo salar</i>	NSDNR General Status / SARA / COSEWIC	Red / Endangered	In freshwater habitat, the species requires clean, cool, flowing water free from chemical or organic pollution. It prefers natural stream channels with rapids and pools, a gravelly bottom, and water temperatures between 15 and 25°C in summer. The marine habitat in the Bay of Fundy is ideal for the marine habitat.	Salmon spawn young in rivers of NS and NB that drain to the Minas basin and Chignecto Bay, as far south as Black River in NB. They remain in Bay of Fundy after going to sea for a few months. Winter migration is not known.
Striped Bass	<i>Morone saxatilis</i>	NSDNR General Status / COSEWIC	Red / Threatened	Steady-flowing, turbid rivers that have low slopes and large estuaries	Bay of Fundy, Gulf of St. Lawrence, Annapolis River, Shubenacadie River
Atlantic Salmon (Landlocked Pops.)	<i>Salmo salar</i>	NSDNR General Status	Red	Lakes	
Atlantic Sturgeon	<i>Acipenser oxyrinchus</i>	NSDNR General Status	Red	Estuarine	
Atlantic Whitefish	<i>Coregonus huntsmani</i>	NSDNR General Status / NSESA / COSEWIC	Red / Endangered / Endangered	The specific habitat requirements are largely unknown. It is salmon-like in that it spawns in freshwater and runs to sea in the spring. Most populations are land locked however.	It is found only in the Tusket and Petite Riviere watersheds in southern Nova Scotia.
Pearl Dace	<i>Margariscus margarita</i>	NSDNR General Status	Yellow	Lakes, cool bog ponds, creeks, and cool springs	
Lake Trout (Char)	<i>Salvelinus namaycush</i>	NSDNR General Status	Yellow	Lakes	Sherbrooke Lake, Lunenburg County, and Dollar Lake, Halifax County. Pockwock and Big Indian Lakes, Halifax County, and Lochaber Lake, Antigonish County.
Brook Trout (Char)	<i>Salvelinus fontinalis</i>	NSDNR General Status / SARA / COSEWIC	Yellow	Cool clear waters of 10 - 18°C with a lot of cover. Usually they live in spring-fed streams with many pools and riffles.	Maritime provinces, Newfoundland and Labrador west to Manitoba
Gaspereau (Alewife)	<i>Alosa pseudoharengus</i>	NSDNR General Status	Yellow	Rivers, freshwater lakes, ponds and streams	
Fourspine Stickleback	<i>Apeltes quadracus</i>	NSDNR General Status	Yellow	Near shore marine species, however some inland populations occur in lakes	Generally found in brackish (salty) waters near the coast. It occurs in the Atlantic Provinces and Quebec.
Amphibians					
Four-toed Salamander	<i>Hemidactylium scutatum</i>	NSDNR General Status	Yellow	Found in forested areas adjacent to wet Sphagnum bogs or in woods	Throughout NS.
Reptiles					
Blanding's Turtle	<i>Emydoidea blandingi</i>	NSDNR General Status / NSESA / COSEWIC	Red / Endangered / Threatened	Forested wetlands	
Northern Ribbon Snake	<i>Thamnophis sauritus septentrionalis</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Yellow / Threatened / Threatened	Quiet, vegetated ponds, coves of lakes and grassy places along streams. Enjoy an abundance of aquatic vegetation.	Southwestern, Nova Scotia - Queens County and Lunenburg County.
Wood Turtle	<i>Clemmys insculpta</i>	NSDNR General Status / NSESA / COSEWIC	Yellow / Vulnerable / Special Concern	The species is associated with moving water; it frequents streams, creeks and rivers. It is also one of the most terrestrial members of its family and occupies a great variety of habitats, including forests, but favours riparian areas with open canopy. It also prefers moderate currents, clear streams and drainages. Generally, it overwinters in water, spends its spring and fall in or near water, and summers on the ground. It appears to select habitats rather than use them randomly.	The species has been reported in most of New Brunswick, north-central Nova Scotia (including Cape Breton Island), southern Quebec, and both south-central and north-central Ontario.
Birds					
Roseate Tern	<i>Sterna dougallii</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Red / Endangered / Endangered	Nest on small offshore islands and inlets	Brothers Islands, Grassy Island, and Country Island Complex
Piping Plover	<i>Charadrius melodus ssp. melodus</i>	NSDNR General Status / NSESA / SARA / COSEWIC	Red / Endangered / Endangered	Nest above normal high water mark on sand and gravel beaches.	Lunenburg County, Queens, Shelburne, Cape Breton Highlands, Pictou and Colchester

Common Name	Scientific Name	Priority List	Status	Habitat	Region
Plants					
Peregrine Falcon	<i>Falco peregrinus ssp. anatum</i>	NSDNR General Status / SARA/ NSESA	Red / Threatened	Cliff ledges	Colchester County
Harlequin Duck	<i>Histrionicus histrionicus</i>	NSDNR General Status / NSESA / SARA/ COSEWIC	Red / Endangered / Special Concern	Nests built on ground on islands or banks of fast-flowing streams. Favour marine environments, but move inland to breed. In winter, occurs along headlands where surf breaks against rocks. Feed close to rocky shorelines or skerries.	Breed in eastern Hudson Bay, but some inland on north shore of Gulf of St. Lawrence and Gaspé Peninsula. Many winter in east and south coasts of NL, southern NS, NB, Maine and Cape Cod.
Atlantic Puffin	<i>Fratercula arctica</i>	NSDNR General Status	Yellow	Islands	Machais Seal Island, NB; Pearl Island, NS; and Hertford/Ciboux Islands, NS
Snowy Egret	<i>Egretta thula</i>	NSDNR General Status	Yellow	salt marshes	Bon Portage Island, NS
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	NSDNR General Status	Yellow	Spruce or fir trees and islands.	Amherst and Southwestern NS
Brant	<i>Branta bernicla</i>	NSDNR General Status	Yellow		
Barrow's Goldeneye	<i>Bucephala islandica</i>	NSDNR General Status / SARA/ COSEWIC	Yellow / Special Concern	Birds appear to be restricted to high elevation lakes north of St. Lawrence Estuary and Gulf. Eastern Canada populations have dwindled in recent years as a result of habitat loss due to fish introduction, logging and contamination.	Small numbers breed and winter in Maritimes. During non-breeding season, species found in coastal waters of Estary and Gulf. During late fall, winter and early spring, large numbers are found in a few areas of St. Lawrence corridor.
Northern Goshawk	<i>Accipiter gentilis</i>	NSDNR General Status? SARA/ COSEWIC	Yellow	Forested areas, farms and woodlots.	Scattered throughout NS
Semipalmated Sandpiper	<i>Calidris pusilla</i>	NSDNR General Status	Yellow		
Red-necked Phalarope	<i>Phalaropus lobatus</i>	NSDNR General Status	Yellow		
Red Phalarope	<i>Phalaropus fulicaria</i>	NSDNR General Status	Yellow		
Common Tern	<i>Sterna hirundo</i>	NSDNR General Status	Yellow	Coastal areas and lakes in Southwest NS	Scattered throughout NS
Common Loon	<i>Gavia immer</i>	NSDNR General Status	Yellow	lakes larger than 40 hectares where plant growth is sparse.	Scattered throughout NS
Razorbill	<i>Alca torda</i>	NSDNR General Status	Yellow	Islands	Hertford/Ciboux Islands, Pearl Island, and Margaree Island, NS
Eastern Meadowlark	<i>Sturnella magna</i>	NSDNR General Status	Yellow	Grasslands	Annapolis Valley and Hantsport, NS
Long-eared Owl	<i>Asio otus</i>	NSDNR General Status	Yellow	Large and small woodlands, dense or open, conifer or broad-leafed, and some open areas.	Few coastal areas of NS
Short-eared Owl	<i>Asio flammeus</i>	NSDNR General Status / COSEWIC	Yellow / Special Concern	Nests are slight depression in the ground. In Ontario, are cups of dried weeds or flattened grasses. Often hidden under low shrubs, reeds, and grasses near water. Prefers extensive stretches of relatively open habitat such as marshland or dep grass fields. Hunts in abandoned pastures, airports, grain stubble and meadows, but marshes in the winter.	Found in middle America, Europe, Asia and Africa for a global range. Breeds in every province and territory in Canada. It is absent from the Boreal Forest and other heavily forested areas. In winter, it withdraws from north and remains in southern range.
Purple Martin	<i>Progne subis</i>	NSDNR General Status	Yellow	agricultural lands	Northwest NS
Eastern Bluebird	<i>Sialia sialis</i>	NSDNR General Status	Yellow	clear cut areas amid forests	northern and central NS
Bicknell's Thrush	<i>Catharus minimus</i> or <i>C. bicknellii</i>	NSDNR General Status / NSESA / COSEWIC	Yellow / Special Concern / Special Concern	Breed at high elevation, dense and stunted fir/spruce forests (726 m to 914 m a.s.l.) on rocky peaks. Favour a wet, cool, windy climate that increases in severity with elevation.	Found throughout the maritimes. Primarily breed in Quebec, but some populations breed in New Brunswick and Cape Breton Highlands.
Vesper Sparrow	<i>Poocetes gramineus</i>	NSDNR General Status	Yellow	short grass or low shrubs, such as pastures, blueberry fields, and clearings	northern nova scotia

Common Name	Scientific Name	Priority List	Status	Habitat	Region
Plants					
Ipswich Sparrow	<i>Passerculus sandwichensis ssp. principis</i>	NSDNR General Status / SARA/ COSEWIC	Yellow / Special Concern	Nests of grass and vegetation built on hollows scratched in ground under shelter of shrub, small tree or tussock of grass. Nest in heath-dominated terrain in dense marram grass on coastal dunes and upper beaches. Prefer outer dune beaches with good grass coverage.	Nest almost exclusively on Sable Island. Some on beaches in NS and northern Florida. Some winter in NS.
Sharp-tailed Sparrow	<i>Ammodramus caudacutus</i>	NSDNR General Status	Yellow	salt marshes and other saline habitats	coastal areas around NS
Bobolink	<i>Dolichonyx oryzivorus</i>	NSDNR General Status	Yellow	beaver meadows and lush grasses along flood plains	Throughout NS.
Arctic Tern	<i>Sterna paradisaea</i>	NSDNR General Status	Yellow	islands facing the open sea.	Lower Bay of Fundy to Cape Breton Island
Eskimo Curlew	<i>Numenius borealis</i>	SARA/ COSEWIC	Endangered	Tundra to Transitional Woodland	NWT, Fly east to Maritimes during migration
Mammals					
Moose (mainland population)	<i>Alces alces</i>	NSDNR General Status / NSESA	Red / Endangered	young deciduous shrubs and trees	Cobequid Mountains and Tobeco Wildlife Reserve
Lynx	<i>Lynx lynx</i>	NSDNR General Status / NSESA	Red / Endangered		Highlands of Cape Breton Island
American Marten (Cape Breton population)	<i>Martes americana</i>	NSDNR General Status / NSESA/ SARA/ COSEWIC	Red / Endangered	mature softwood forest	Cape Breton Island
Southern Flying Squirrel	<i>Glaucomys volans</i>	NSDNR General Status / COSEWIC	Yellow / Special Concern	Southern Flying Squirrels inhabit hardwood forests in eastern North America. Dead hollow trees are used as den sites.	In Canada, Southern Flying Squirrels are found in southern Ontario, southwestern Québec and southern Nova Scotia.
Fisher	<i>Martes pennanti</i>	NSDNR General Status	Yellow	Mixed forests	Throughout NS. Mostly in Cumberland, Colchester and Pictou Counties
Hoary Bat	<i>Lasiurus cinereus</i>	NSDNR General Status	Yellow	Trees along floodplains, wooded areas. Hang in trees. Solitary.	Nova Scotia, New Brunswick, Newfoundland
Red Bat	<i>Lasiurus borealis</i>	NSDNR General Status	Yellow	Large mature deciduous forests. Normally roost in trees, occasionally in caves. Solitary. Migrate	Nova Scotia (not Cape Breton), New Brunswick, Newfoundland, South Quebec
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	NSDNR General Status	Yellow	Caves, cliff faces, coniferous and deciduous forests, buildings. Solitary.	Nova Scotia (not Cape Breton), New Brunswick, Newfoundland, South Quebec
Eastern Pipistrelle	<i>Pipistrellus subflavus</i>	NSDNR General Status	Yellow	Caves, mine tunnels, crevices in rocks, buildings, wooded areas, near water. Hangs singly or in small clusters. Some hibernate, some migrate	Nova Scotia, New Brunswick (not North), West
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	NSDNR General Status	Yellow	Dense forest and caves	Nova Scotia, New Brunswick, Newfoundland
Little Brown Bat	<i>Myotis lucifugus</i>	NSDNR General Status	Yellow	Caves, mine tunnels, hollow trees, buildings. Dead trees close to lakes and ponds. Hibernate in caves. Colonial. Most hibernate together in caves.	Nova Scotia, Newfoundland, Labrador, Quebec, West
Long-tailed Shrew	<i>Sorex dispar</i>	NSDNR General Status	Yellow	Talus slopes and rock slides in deciduous and coniferous forests	
Gaspé Shrew	<i>Sorex gaspensis</i>	NSDNR General Status / COSEWIC	Yellow / Special Concern	The Gaspé Shrew prefers rock outcrops and talus slopes in highlands where there are steep slopes.	At the present time there are four populations of the Gaspé Shrew in Canada: one in the Gaspé peninsula, two in New Brunswick, and one in northern Nova Scotia.

Appendix F

Short List of Priority Plant Species in Eastern Nova Scotia

COMMON NAME	NSDNR NAME	Status Rank	NS S-rank	Nova Scotia Distribution
Northern Maidenhair-Fern	<i>Adiantum pedatum</i>	Red	S1	Yarmouth to Cape Breton
Brook-Side Alder	<i>Alnus serrulata</i>	Yellow	S2	Cape Blomindon Kings Co., Urbania Hants Co., Economy River Col. Co., River Hebert Cumb. Co., James River Ant. Co., Strathorne & Margaree Inv. Co., French River Vict. Co.
Nantucket Shadbush	<i>Amelanchier nantucketens</i>	Red	S1	Queens Co., Hants Co., Cape Jack Ant. Co., MacKay Brook Pictou Co., Petit Etang Inv. Co., Capstick Vict. Co.
Early Anemone	<i>Anemone multifida</i> var.h	Red	S1	Anna. Co., Hants Co., St Andrews River Col. Co., Sherbrooke Guys. Co., West Middle River CB Co.
Mountain Sandwort	<i>Arenaria (Minuartia) groenlandica</i>	Yellow	S2	Isle Haute, Five Island River Col. Co. Cape Blomindon Kings Co.
Swamp Birch	<i>Betula glandulosa (B. nana)</i>	Yellow	S2	Brier Island Digby Co., Shingle Lake Lun. Co., O'Hearn Lake Hants Co., Bennery Lake Hfx Co., Two Island Lake , Ingonish Barrens Vict. Co., CB Co., Fourth Lake, Gaspereaux Brook Guys Co.
Purple-Stem Swamp Beggar's Tick	<i>Bidens connata</i>	Yellow	S3?	Province-wide
Lance-Leaf Grape-Fern	<i>Botrychium lanceolatum</i>	Yellow	S2	River Philip, Oxford, Cumb. Co., Ant. Co., Inv. Co.
Broad-Glumed Brome	<i>Bromus latiglumis</i>	Red	S1	Yarm. Co. to northern Cape Breton
Marsh Bellflower	<i>Campanula aparinoides</i>	Yellow	S3?	Merigomish Island Pictou Co., Grand Etang, Inverness, Cheticamp, Margaree area Inv. Co.
Small-Flower Bitter-Cress	<i>Cardamine parviflora</i> va	Yellow	S2	Brier Island, Digby Co. to Cape d'Or Cumb. Co., Hfx Co. to Vict. Co., northcentral CB
Large Toothwort	<i>Cardamine X maxima</i>	Red	S1	Kennetcook River Hants Co., Parrsboro Cumb. Co., Economy River, French River Col. Co., Marsh Hope Ant. Co., River John Pictou Co., Homeville CB Co.
Chestnut-Colored Sedge	<i>Carex castanea</i>	Red	S2	St. Georges Bay Ant.Co.
Northern Bog Sedge	<i>Carex dioica</i>	Red	S1	Hants, Cumb., Hfx, Ant. Vict., Inv.Co.'s
A Sedge	<i>Carex lepidocarpa (C. viridula var.elat)</i>	Red	S1	Sweets Corner, Herbert River Hants Co., Wallace River Pugwash River Cumb Co., West River Pict. Co.
Little Green Sedge	<i>Carex viridula</i> ssp. bra	Red	S1	St. Georges Bay Ant. Co.
Hemlock Parsley	<i>Conioselinum chinense</i>	Yellow	S2S3	Little White, Big White Island, Camp Island, Halibut Islands Hfx.Co., Sugar Islands Tor Bay Guys. Co.
Rose Coreopsis	<i>Coreopsis rosea</i>	Red	S1	Digby Neck, Digby Co., Broad River Queens Co., Salt Springs Cumb. Co., St Paul Island Vict. Co., Pleasant Bay Inv. Co.
A Hawthorn	<i>Crataegus flabellata</i>	Yellow	S?	Port Mouton Queens Co., St. Paul Island Vict. Co., Scaterie Island, Little Lorraine CB Co., Canso Guys Co.
Northern Wild Comfrey	<i>Cynoglossum virginianum</i>	Red	S1	Yarm. Co., Kings Co., Hants Co., Dutch Settlement Hfx. Co., Ant. Co., Ironville CB Co.
Showy Lady's-Slipper	<i>Cypripedium reginae</i>	Red	S2	Karsdale Annapolis Co., Brooklyn area, Swets Corner, Poplar Grove, West Gore Hants Co.
Hairy Swamp Loosestrif	<i>Decodon verticillatus</i> v	Yellow	S2S3	Lovelace Corner, Rockland Kings Co., Three-mile Plains Hants Co., Corney Brook, Hillsboro Inv. Co.
Showy Tick-Trefoil	<i>Desmodium canadense</i>	Red	S1	West Gore, MacKay Section Hants Co., Col Co., Tidnish Cumb. Co., Upper Musquodboit Hfx Co., Tarbotvale, Baddeck Forks, St. Lawrence Bay Vict. Co., Black River, Blue Mills Inv. Co., Ball's Creek CB Co.
Lapland Diapensia	<i>Diapensia lapponica</i>	Red	S1	once KNP to Pictou Co., rare or absent now

COMMON NAME	NSDNR NAME	Status Rank	NS S-rank	Nova Scotia Distribution
Capitate Spikerush	<i>Eleocharis flavescens</i>	Yellow	S2	Argyle Head, Kempt Back Lake Yarm. Co., Weagle Lake, Italy Cross Lun. Co., Sweeney Brook KNP, Grafton Brook KNP Queens Co., Tiddville Digby Co., Pinevale Ant. Co.
Wiegand's Wild Rye	<i>Elymus wiegandii</i> var. w	Red	S1	Peggy's Cove, Herring Cove Hfx Co., Canso Guys. Co., Ingonish Vict.Co., northern Inv. Co.
Purple Crowberry	<i>Empetrum rubrum</i> var. ea	Yellow	S2S3	Roxville Digby Co., Maple Lake Anna. Co., Wolfville Kings Co., Rawdon Glod Mines Hants Co., Trenton Pictou Co., Seabright Ant. Co.
Hornemann Willow-Herb	<i>Epilobium hornemannii</i>	Yellow	S2S3	Eagle Head Queens Co., Hortonville Kings Co., Amherst Point, Tidnish River Cumb. Co., Merland Ant. Co., Cape St. Lawrence, Broad Cove Inv. Co., Crowdis Mnt., Baddeck Forks Vict. Co.,
Meadow Horsetail	<i>Equisetum pratense</i>	Yellow	S2	Five Mile River, South Maitland, Hayes Siding Hants Co., Great Village River Col. Co. Brierly Brook Ant. Co., Plaster Cove, Cape North Vict. Co.,
Daisy Fleabane	<i>Erigeron hyssopifolius</i>	Yellow	S2S3	New Canaan Kings Co., Upper Economy River Col. Co., Thompson Station Cumb. Co., Seal Harbour Guys. Co. Bay St. Lawrence Vict. Co., French Mnt Inv.Co.
Joe-Pye Thoroughwort	<i>Eupatorium dubium</i>	Red	S2	Advocate, Refugee Cove Cumb. Co., possibly Ant. Co.
False Mermaid-Weed	<i>Floerkea proserpinacoides</i>	Yellow	S2S3	Cambridge Stn. Kings Co., St. Andrews Ant. Co., Glenora, Margaree Inv. Co.
Black Ash	<i>Fraxinus nigra</i>	Yellow	S3	Digby Co., Lun. Co., northern mainland, northern Cape Breton
Northern Comandra	<i>Geocaulon lividum</i>	Yellow	S2S3	Kingston, Auburn Kings Co., Spicers Cove Cumb. Co., Sheet Harbour Hfx Co., Mulgrave Guys Co., Jim Campell's Barren MacGregor Brook Inv. Co., St. Paul Island Vict. Co.
Downy Rattlesnake-Plan	<i>Goodyera pubescens</i>	Red	S1	Melanson Mnt., Kentville Ravine Kings Co., Elevenmile L, South Milford, Lower Lake Sixty, KNP Anna. Co., Meander River Hants Co., Pomquet Island Ant.Co.
Purple False Oats	<i>Graphephorum melicoides</i>	Yellow	S1	Meander River Hants Co., Truro, Kemptown Col. Co., New Glasgow area Pictou Co., Frasers Mills Ant. Co., Hillsboro, Mabou River Inv. Co.
Water-Pennywort	<i>Hydrocotyle umbellata</i>	Red	S1	Pictou Co., Pomquet Beach Ant. Co.
Bottlebrush Grass	<i>Hystrix patula</i>	Red	S1	Alma, River John Pictou Co, Cape Breton Co.
Slender Blue Flag	<i>Iris prismatica</i>	Red	S1	Five Mile River, Meander River Hants Co., East River Pictou Co.
Acadian Quillwort	<i>Isoetes acadiensis</i>	Yellow	S3?	Kings Co. Baddeck Vict. Co., Mabou River, Whycomomagh Inv. Co., Isle Haute Cumb. Co.
Lake Quillwort	<i>Isoetes lacustris</i>	Yellow	S3?	Ann, Kings, Guys, Inv., CB Co's
Prototype Quillwort	<i>Isoetes prototypus</i>	Red	S1	Yarm. Co. to northern Cape Breton
Bulbous Rush	<i>Juncus bulbosus</i>	Yellow	S1	Tusket River Yarm. Co. Clyde River Shelb. Co., St Paul Island Vict. Co., probably throughout NS
Moor Rush	<i>Juncus stygius</i> var. amer	Yellow	S1	Villagedale Shelb Co., South Maitland Hants Co., Hfx Co., Cumb. Co., Pomquet Ant. Co.
Yellow Canada Lily	<i>Lilium canadense</i> ssp. ca.	Yellow	S2S3	Cambridge Stn. Kings, Sweets Corner Hants Co., Cumb., Little River Col.Co., Ant., Middle River Pictou Co., Margaree Forks Inv. Co.
Yellow-Seed False-Pimp	<i>Lindernia dubia</i>	Yellow	S2	Gaspereau River Kings Co., Newport, Meander River Hants Co., South Hampton Cumb.Co. Col., Pictou, Ant., Guys., Inv. Co.'s
Farwell's Water-Milfoil	<i>Myriophyllum farwellii</i>	Yellow	S2	Wilson's Lake Yarm. Co., Lapland, Lake Leville Lun. Co., Stewiacke River Col. Co., Frog Lake Guys Co.
St. John's Oxytrope	<i>Oxytropis campestris</i>	Red	S1	Cumb. Co., Debert Col. Co., Petite Bog Hants Co., Geoffs Hfx Co., Jordan Falls, Granite Village, Canada Hill Shelb. Co., Everlasting Barrens Inv. Co.
Redtop Panic Grass	<i>Panicum longifolium</i>	Yellow	S2	Bridgetown Anna. Co., Wentzalls Lake Lun. Co. to Pictou Co.

COMMON NAME	NSDNR NAME	Status Rank	NS S-rank	Nova Scotia Distribution
Common Butterwort	<i>Pinguicula vulgaris</i>	Red	S1	Bay St. Lawrence Vict. Co., Baleine CB Co.
Southern Rein Orchid	<i>Platanthera flava</i> var.	Yellow	S2	West Branch Pictou Co., Little River Col. Co., Herbert River Hants Co.
Threadfoot	<i>Podostemum ceratophyllum</i>	Red	S1	Hectanooga Digby Co., Castle Frederick Hants Co., Cumb. Co., Great Village River Col. Co., West Branch Pictou Co., Aspy Trail Vict. Co.
Cinnamon-Spot Pondweed	<i>Potamogeton oblongus</i>	Yellow	S1	Digby Co. to Rich. Co., northerly distribution
Alderleaf Buckthorn	<i>Rhamnus alnifolia</i>	Yellow	S3	Ellenwood Lake Yarm., Queens, Hfx, Uniacke Lake Hants, Anna., Cumb., Col. Co.'s , northern Cape Breton
Lapland Azalea	<i>Rhododendron lapponicum</i>	Red	S1	Slade Lake, Maccan Cumb Co., poss. Pictou Co.(A.H. MacKay)
Willow Dock	<i>Rumex salicifolius</i> ssp.	Yellow	S2	common southwest, scattered east, White Point CB Co.
Plymouth Gentian	<i>Sabatia kennedyana</i>	Red	S1	Gaspereau River Kings Co., Anna Co., Fiver Mile Lake Hants Co., Salmon River Col. Co., Halfway River Cumb.Co., East River St. Mary's Guys. Co.
Silky Willow	<i>Salix sericea</i>	Yellow	S2	Medway River, Eighteen Mile Bog, Middlefield Queens Co., Upper Musquodoboit Hfx Co., Sharpe Brook Cambridge Kings Co., South Branch Stewiacke River Col. Co., possibly Pictou Co., Black River Inv. Co.
Yellow Mountain Saxifr	<i>Saxifraga aizoides</i>	Red	S1	Pleasant Lake, Eel Lake, Tusket River, Argyle Head Yarm. Co., Port Medway Queens Co., Bridgewater Lun. Co. .to Ant. Co.
Purple Mountain Saxifr	<i>Saxifraga oppositifolia</i>	Red	S1	Meander River Hants Co., Cambridge Kings Co., Mabou Falls Inv. Co.
Long's Bulrush	<i>Scirpus longii</i>	Red	S2	Cape Sable Island Yarm. Co., Brier Island, Long Island Digby Co., KNP Queens Co., Peggy's Cove, Bear Cove Hfx Co., Belfry Gut, Little Lorambec CB Co., Jim Campbell's Barren, French Mnt. Inv. Co., Ingonish Barrens Vict. Co.
Northern Bur-Reed	<i>Sparganium hyperboreum</i>	Yellow	S1S2	along atlantic coast to northern CB, Sable Island
Yellow Nodding Ladies'	<i>Spiranthes ochroleuca</i>	Yellow	S2	Drumhead, New Harbour Guys Co., Inv. Co., Scaterie Island, Fort Louisburg CB Co., Mabou, French Mnt. Inv. Co.
Northern White Cedar	<i>Thuja occidentalis</i>	Red	S1S2	Eel Brook/Lake, Comeau Hill Yarm. Co., Roseway Shelb. Co., Clattenburg Island Queens Co., Karsdale Anna. Co., Sable Island, Queensland Hfx Co., Isle Madame Rich. Co.
Heart-Leaved Foam Flow	<i>Tiarella cordifolia</i>	Yellow	S2	Anna. Co., Digby Co., Cumb. Co.
Poison Sumac	<i>Toxicodendron vernix</i>	Red	S1	Halls Harbour Kings Co., Earltown, Salmon River Col Co., Pictou Co.
Northern Blueberry	<i>Vaccinium boreale</i>	Red	S2	Zinck Head Lun. Co., Marie Joseph, Larry's River Guys Co., French Mnt., Everlasting Barrens Inv. Co., Kennington Cove, Louisburg area, Eastern Harbour CB Co., Forchu Head Rich. Co., Sunday Lake, Lockhart Brook Slamon River Vict. Co.
Oval-Leaf Huckleberry	Vaccinium ovalifolium	Red	S1	Lockhart Brook, Salmon River, Glasgow Brook Vict. Co.
Alpine Blueberry	<i>Vaccinium uliginosum</i> va	Yellow	S2	Portuguese Cove Hfx Co., Brier Island Digby Co., Scaterie Island CB. Co., St Paul Island, Lockhart Brook Slamon River, Ingonish Barrens, Aspy Bay, Glasgow Lakes area, Gray Glen, Neil's Harbour Vict. Co., Big Head Inv. Co.
Common Alexanders	<i>Zizia aurea</i>	Yellow	S1S2	Upper Musquodoboit Hfx Co., Black River - Salmon River Col. Co., Pomquet River, South River Ant. Co.
Notes:				
bolded species: added for Eastern region based on ACCDC				

COMMON NAME	NSDNR NAME	Status Rank	NS S-rank	Nova Scotia Distribution
bolded flowering times: added from other sources				

Appendix G

CWS Information Requirements for Wind Farms- Summary Table 2 (CWS Draft Guidance Document)

Table 2. Baseline information requirements and suggested methods for fulfilling these requirements.

	Small projects (1-10 turbines)	Medium projects (11-50 turbines)	Large projects (50-200+ turbines)
Breeding Birds			
What avian species breed at the site? What is the relative abundance of species breeding at the site?	Two surveys during the breeding season (follow Environment Canada’s point count survey protocol), in addition to consultation and literature review. In potential habitat, an owl survey should be included (this should be done at an appropriate time- late winter for most species). In areas where consultation and literature show there is low bird usage / poor habitat no surveys are required. If there is any indication that a Species at Risk may be present, the recovery team must be consulted.	In potentially good habitat, surveys several times during the breeding season (once every two weeks with appropriate number of replicates, follow Environment Canada’s point count survey protocol) in all on-site habitats, in addition to consultation and literature review. In potential habitat, owl surveys should be included (this should be done at appropriate time- late winter for most species). Surveys need not be numerous (twice during breeding season, with appropriate number of replicates, follow Environment Canada’s point count survey protocol) if site is located in area where consultation and literature show there is low bird usage / poor habitat (e.g., urban, industrial). If there is any indication that a Species at Risk may be present, the recovery team must be consulted.	
What avian species breed in the surrounding area? Are any of the breeding birds found on or off-site considered Species at Risk? Do bird colonies occur in the area? If so how close, and what species? Do raptor nests occur in the area? If so, what species? Do breeding birds commute through or near the area, and if so, in what direction is the movement? Do any species present have aerial courtship displays?	Surveys and background review, as above. Area of interest should extend approximately 500 m from the project site for onshore projects and 5 km for offshore sites. In areas where consultation and literature show there is low bird usage / poor habitat no surveys are required. If there is any indication that a Species at Risk may be present, the recovery team must be consulted.	Surveys and background review, as above. One or two point count surveys should be undertaken in all major habitats (e.g., mixed forest, coniferous forest) identified within 500m of most onshore sites, but within 1km if site and area is located in open natural habitats such as prairie, savannah and peatlands (if there is a possibility of Sage Grouse in the area surveys should extend 3km from the proposed site). All breeding colonies should be identified within 20 km of offshore sites and coastal sites. If there is any indication that a Species at Risk may be present, the recovery team must be consulted.	
What is the expected amount and type (vehicles, pedestrians) of human presence at the site during the breeding season?	Estimate required, based on consultation.		

	Small projects (1-10 turbines)	Medium projects (11-50 turbines)	Large projects (50-200+ turbines)
What habitat occurs in the surrounding area? What types of habitat will be lost or altered? How much of each habitat type will be lost or altered?	Provide a general description of surrounding habitats (e.g., wetland, agricultural), within 1km of the project site for onshore projects and within 5 km for offshore projects. A map (to scale) showing the location of these habitats in relation to the proposed turbines should be provided.	Provide a general description of surrounding habitats (e.g., maple/beech dominated hardwood forest), within 1km of onshore habitats. Habitat should be described within 10 km of offshore projects (habitat descriptions should include water depth, plant communities and substrate of ocean/lake floor). A map (to scale) showing the location of these habitats in relation to the proposed turbines should be provided.	
Migrating Birds			
What is the species composition of birds that migrate through the area? Are any of the migrating birds found on or off-site considered Species at Risk? What is the approximate number of migrants that use the area? How does this number compare to other nearby sites?	Two surveys conducted during each of the spring and fall migration periods, focussing on the group(s) of most interest (e.g., waterfowl migrate earlier in the spring than most passerines), at dawn to capture movements of nocturnal migrants and during midday to capture movements of diurnal migrants, in addition to consultation and literature review. In areas where consultation and literature show there is low bird usage / poor habitat and has no landforms that concentrate birds or elevate turbines significantly higher, no surveys are required.	Surveys at least once a week during each of the spring and fall migration periods, focussing on the group(s) of most interest (e.g., waterfowl migrate earlier in the spring than most passerines), at dawn to capture movements of nocturnal migrants and during midday to capture movements of diurnal migrants, in addition to consultation and literature review. In areas where consultation and literature show there is low bird usage / poor habitat and has no landforms that concentrate birds or elevate turbines significantly higher, two surveys conducted during each of the spring and fall migration periods, focussing on the group(s) of most interest.	
What is the flight altitude of diurnal migrants at the site?	Not required unless proposed site is located offshore, on a ridge, or another landform that concentrates bird movement (e.g., peninsula). If so, estimates of flight height should be done at least twice during each of the migration periods.		
What is the flight altitude of nocturnal migrants at the site?	Not required unless proposed site is located on a ridge or other height of land. If so, nocturnal monitoring should be done at least twice during each of the migration periods. The use of radar is recommended to determine average flight heights.		

	Small projects (1-10 turbines)	Medium projects (11-50 turbines)	Large projects (50-200+ turbines)
Are there significant staging areas nearby?	One site visit at appropriate time for species of interest and background review. Area of interest should extend approximately 500 m from the project site if onshore, 5km from offshore sites. If large numbers of birds are found to stage at the site, Environment Canada may request further in-depth behavioural studies of birds present to help assess risk.	Two site visits at appropriate time for species of interest and background review, as above. Area of interest should extend approximately 1 km from the project site for onshore projects and 10 km for offshore projects. If large numbers of birds are found to stage at the site, Environment Canada may ask for further in-depth behavioural studies of birds present to help assess risk.	
If significant numbers of birds stage in the area of the proposed wind power project, what activities taking place nearby could increase potential risk of bird collision with turbines and associated structures?	Based on site visits, public and agency consultation and background review.		
Wintering Birds			
What is the species composition of wintering birds in the area?	In potentially good habitat, one survey is suggested, in addition to consultation and literature review. Surveys need not be undertaken if site is located in obviously poor bird habitat (e.g., urban, industrial).	In potentially good habitat, surveys several times (once every 3-4 weeks) in all on-site habitats, in addition to consultation and literature review. Surveys need not be numerous (e.g., twice) if site is located in obviously poor bird habitat (e.g., urban, industrial).	
Are any of the wintering birds found on or off-site considered to be Species-At-Risk?	Site visits and background review, as above.		
What is the importance of the site for wintering birds? Are there alternative wintering sites in the area? What is the approximate number of birds that use the area?	Site visits and background review, as above.		
What are the possible effects on the food supply of wintering birds?	Estimates based on site visits and background review for both onshore and offshore projects.		

	Small projects (1-10 turbines)	Medium projects (11-50 turbines)	Large projects (50-200+ turbines)
Do significant numbers of wintering birds commute through or near the area, and if so, in what direction is the movement?	Site visits and background review, as above.		
Other Data			
What is the frequency of dense fog (visibility <200m) and low cloud bases (<200m) during migration	Based on onsite meteorological data and/or consultation with Environment Canada.		
What topographical features are located on or near the site that may influence bird movement?	Site visits and background review.		
Are any wetlands potentially affected by the proposed project?	Site visits and background review.		
Is the site already designated or in the process of being identified as an area of special importance for birds or is it nearby or adjacent to such an area (e.g., Important Bird Area, National Wildlife Area, Migratory Bird Sanctuary, RAMSAR site, Western Hemisphere Shorebird Reserve Network site, candidates for Marine Wildlife Areas or National Parks)?	Background review.		
Notes: See also Table 3 in Section 8 for specific environmental effects monitoring guidelines. Background review should be obtained by literature searches and consultation with appropriate natural resource agencies, environmental non-government organisations (ENGOS) and the local population (see Section 6).			