



**APPENDIX J. ACID ROCK DRAINAGE TESTING RESULTS**

21-Aug-20

Dexter Construction Co. Ltd.  
927 Rocky Lake Drive  
P.O. Box 48100  
Bedford, NS  
B4A 3Z2  
Atten: Chris Mullins

Re: Results of analysis on submitted samples.

PO#  
Job# 2001048-9270

Sample	Wt. % S(Total)	kg/t Acid Prod. Potential
Lantz Quarry	0.021	0.65

Certified Ref. Sa.	Wt. % S(Total)
KZK-1 (0.80% S)	0.803

Daniel Chevalier, MASC  
Manager, Minerals Engineering Centre



**APPENDIX K. LIST OF VASCULAR PLANTS**

VASCULAR PLANT LIST		
Scientific Name	Common Name	SRank
<i>Abies balsamea</i>	Balsam Fir	S5
<i>Acer pensylvanicum</i>	Striped Maple	S5
<i>Acer rubrum</i>	Red Maple	S5
<i>Acer spicatum</i>	Mountain Maple	S5
<i>Agalinis neoscotica</i>	Nova Scotia Agalinis	S4S5
<i>Agrostis perennans</i>	Upland Bent Grass	S5
<i>Agrostis scabra</i>	Rough Bent Grass	S5
<i>Alnus incana</i>	Speckled Alder	S5
<i>Amelanchier laevis</i>	Smooth Serviceberry	S5
<i>Amelanchier sp.</i>	Serviceberry	-
<i>Aralia hispida</i>	Bristly Sarsaparilla	S5
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	S5
<i>Aronia melanocarpa</i>	Black Chokeberry	S5
<i>Athyrium filix-femina</i>	Common Lady Fern	S5
<i>Betula alleghaniensis</i>	Yellow Birch	S5
<i>Betula papyrifera</i>	Paper Birch	S5
<i>Betula populifolia</i>	Gray Birch	S5
<i>Bidens frondosa</i>	Devil's Beggarticks	S5
<i>Brachyelytrum aristosum</i>	Northern Shorthusk	S5
<i>Calamagrostis canadensis</i>	Bluejoint Reed Grass	S5
<i>Calopogon tuberosus</i>	Tuberous Grass Pink	S4S5
<i>Carex crinita</i>	Fringed Sedge	S5
<i>Carex cumulata</i>	Dense Sedge	S4S5
<i>Carex echinata</i>	Star Sedge	S5
<i>Carex folliculata</i>	Northern Long Sedge	S5
<i>Carex gynandra</i>	Nodding Sedge	S5
<i>Carex intumescens</i>	Bladder Sedge	S5
<i>Carex lurida</i>	Sallow Sedge	S5
<i>Carex magellanica</i>	Boreal Bog Sedge	S5
<i>Carex scoparia</i>	Broom Sedge	S5
<i>Carex stricta</i>	Tussock Sedge	S5
<i>Carex tonsa</i>	Deep Green Sedge	S5
<i>Carex trisperma</i>	Three-seeded Sedge	S5
<i>Carex utriculata</i>	Northern Beaked Sedge	S5
<i>Centaurea nigra*</i>	Black Knapweed	SNA
<i>Centaureum pulchellum</i>	Branched Centaury	SNA
<i>Chamaenerion angustifolium</i>	Fireweed	S5
<i>Chelone glabra</i>	White Turtlehead	S5
<i>Circaea alpina</i>	Small Enchanter's Nightshade	S5
<i>Cirsium arvense*</i>	Canada Thistle	SNA
<i>Cirsium vulgare*</i>	Bull Thistle	SNA
<i>Claytosmunda claytoniana</i>	Interrupted Fern	S5
<i>Clintonia borealis</i>	Yellow Bluebead Lily	S5
<i>Comptonia peregrina</i>	Sweet-fern	S5
<i>Coptis trifolia</i>	Goldthread	S5
<i>Cornus canadensis</i>	Bunchberry	S5
<i>Corylus cornuta</i>	Beaked Hazel	S5

VASCULAR PLANT LIST		
Scientific Name	Common Name	SRank
<i>Cypripedium acaule</i>	Pink Lady's-Slipper	S5
<i>Danthonia compressa</i>	Flattened Oat Grass	S5
<i>Danthonia spicata</i>	Poverty Oat Grass	S5
<i>Diervilla lonicera</i>	Northern Bush Honeysuckle	S5
<i>Digitaria sanguinalis</i>	Hairy Crab Grass	SNA
<i>Doellingeria umbellata</i>	Hairy Flat-top White Aster	S5
<i>Drosera rotundifolia</i>	Round-leaved Sundew	S5
<i>Dryopteris campyloptera</i>	Mountain Wood Fern	S5
<i>Dryopteris cristata</i>	Crested Wood Fern	S5
<i>Dryopteris intermedia</i>	Evergreen Wood Fern	S5
<i>Epigaea repens</i>	Trailing Arbutus	S5
<i>Epilobium ciliatum</i>	Northern Willowherb	S5
<i>Erigeron sp.</i>	Fleabane	-
<i>Eriophorum tenellum</i>	Rough Cottongrass	S4S5
<i>Eriophorum virginicum</i>	Tawny Cottongrass	S5
<i>Eupatorium perfoliatum</i>	Common Boneset	S5
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	S5
<i>Fragaria virginiana</i>	Wild Strawberry	S5
<i>Fraxinus americana</i>	White Ash	S4
<i>Galium palustre</i>	Common Marsh Bedstraw	S5
<i>Gaultheria hispidula</i>	Creeping Snowberry	S5
<i>Gaultheria procumbens</i>	Eastern Teaberry	S5
<i>Gaylussacia baccata</i>	Black Huckleberry	S5
<i>Geranium bicknellii</i>	Bicknell's Crane's-bill	S3
<i>Glyceria grandis</i>	Common Tall Manna Grass	S5
<i>Glyceria striata</i>	Fowl Manna Grass	S5
<i>Gnaphalium uliginosum</i>	Marsh Cudweed	SNA
<i>Gymnocarpium dryopteris</i>	Common Oak Fern	S5
<i>Hieracium lachenalia*</i>	Common Hawkweed	SNA
<i>Hypericum boreale</i>	Northern St John's-Wort	S5
<i>Hypericum canadense</i>	Canada St John's-wort	S5
<i>Ilex mucronata</i>	Mountain Holly	S5
<i>Iris versicolor</i>	Harlequin Blue Flag	S5
<i>Jacobaea vulgaris*</i>	Tansy Ragwort	SNA
<i>Juncus brevicaudatus</i>	Narrow-Paniced Rush	S5
<i>Juncus canadensis</i>	Canada Rush	S5
<i>Juncus effusus</i>	Soft Rush	S5
<i>Juncus filiformis</i>	Thread Rush	S5
<i>Juncus pelocarpus</i>	Brown-Fruited Rush	S5
<i>Juncus tenuis</i>	Slender Rush	S5
<i>Kalmia angustifolia</i>	Sheep Laurel	S5
<i>Lactuca sp.</i>	Lettuce	-
<i>Larix laricina</i>	Tamarack	S5
<i>Latuca canadensis</i>	Canada Lettuce	S5
<i>Leersia oryzoides</i>	Rice Cut Grass	S5
<i>Leucanthemum vulgare</i>	Oxeye Daisy	SNA
<i>Linnaea borealis</i>	Twinflower	S5

VASCULAR PLANT LIST		
Scientific Name	Common Name	SRank
<i>Lonicera villosa</i>	Mountain Fly Honeysuckle	S4S5
<i>Lycopus uniflorus</i>	Northern Water Horehound	S5
<i>Lysimachia borealis</i>	Northern Starflower	S5
<i>Lysimachia terrestris</i>	Swamp Yellow Loosestrife	S5
<i>Maianthemum canadense</i>	Wild Lily-of-The-Valley	S5
<i>Maianthemum trifolium</i>	Three-leaved False Solomon's Seal	S5
<i>Melilotus albus</i> *	White Sweet-clover	SNA
<i>Mitchella repens</i>	Partridgeberry	S5
<i>Mitella nuda</i>	Naked Bishop's-Cap	S4S5
<i>Monotropa uniflora</i>	Convulsion-Root	S5
<i>Muhlenbergia uniflora</i>	Bog Muhly	S5
<i>Myrica gale</i>	Sweet Gale	S5
<i>Oclemena acuminata</i>	Whorled Wood Aster	S5
<i>Oclemena nemoralis</i>	Bog Aster	S5
<i>Onoclea sensibilis</i>	Sensitive Fern	S5
<i>Osmundastrum cinnamomeum</i>	Cinnamon Fern	S5
<i>Oxalis stricta</i>	European Wood Sorrel	S5
<i>Panicum sp.</i>	-	-
<i>Parathelypteris noveboracensis</i>	New York Fern	S5
<i>Phalaris arundinacea</i> *	Reed Canary Grass	S5
<i>Phegopteris connectilis</i>	Northern Beech Fern	S5
<i>Phleum pratense</i>	Common Timothy	SNA
<i>Picea mariana</i>	Black Spruce	S5
<i>Picea rubens</i>	Red Spruce	S5
<i>Pinus resinosa</i>	Red Pine	S4S5
<i>Pinus strobus</i>	Eastern White Pine	S5
<i>Plantago lanceolata</i>	English Plantain	SNA
<i>Plantago major</i>	Common Plantain	SNA
<i>Platanthera clavellata</i>	Club Spur Orchid	S5
<i>Poa pratensis</i>	Kentucky Blue Grass	S5
<i>Polygonum aviculare</i>	Oval-leaved knotweed	S5
<i>Polypodium virginianum</i>	Rock Polypody	S5
<i>Polystichum acrostichoides</i>	Christmas Fern	S5
<i>Populus grandidentata</i>	Large-toothed Aspen	S5
<i>Populus tremuloides</i>	Trembling Aspen	S5
<i>Potentilla simplex</i>	Old Field Cinquefoil	S5
<i>Prunella vulgaris</i>	Common Self-heal	S5
<i>Prunus virginiana var. virginiana</i>	Chokecherry	S5
<i>Pteridium aquilinum</i>	Bracken Fern	S5
<i>Quercus rubra</i>	Northern Red Oak	S5
<i>Ranunculus acris</i>	Common Buttercup	SNA
<i>Rhododendron canadense</i>	Rhodora	S5
<i>Rhododendron groenlandicum</i>	Common Labrador Tea	S5
<i>Rosa palustris</i>	Swamp Rose	S4
<i>Rubus hispidus</i>	Bristly Dewberry	S5
<i>Rubus idaeus</i>	Red Raspberry	S5
<i>Rubus illecebrosus</i>	Strawberry Raspberry	SNA

VASCULAR PLANT LIST		
Scientific Name	Common Name	SRank
<i>Rubus pubescens</i>	Dwarf Red Raspberry	S5
<i>Rubus repens</i>	Dewdrop	S4S5
<i>Salix bebbiana</i>	Bebb's Willow	S5
<i>Schoenoplectus acutus</i>	Hardstem Bulrush	S4
<i>Scirpus cyperinus</i>	Common Woolly Bulrush	S5
<i>Scirpus hattorianus</i>	Mosquito Bulrush	S5
<i>Scirpus microcarpus</i>	Small-fruited Bulrush	S5
<i>Solidago bicolor</i>	White Goldenrod	S5
<i>Solidago canadensis</i>	Canada Goldenrod	S4S5
<i>Solidago rugosa</i>	Rough-stemmed Goldenrod	S5
<i>Solidago uliginosa</i>	Northern Bog Goldenrod	S5
<i>Sparganium americanum</i>	American Burreed	S5
<i>Spiraea alba</i>	White Meadowsweet	S5
<i>Spiraea tomentosa</i>	Steeplebush	S5
<i>Spiranthes cernua</i>	Nodding Ladies'-Tresses	S4?
<i>Symphyotrichum lateriflorum</i>	Calico Aster	S5
<i>Symphyotrichum novi-belgii</i>	New York Aster	S5
<i>Symphyotrichum puniceum</i>	Purple-stemmed Aster	S5
<i>Taraxacum officinale</i>	Common Dandelion	SNA
<i>Thelypteris palustris</i>	Eastern Marsh Fern	S5
<i>Trifolium arvense</i>	Rabbit's-foot Clover	SNA
<i>Trifolium aureum</i>	Yellow Clover	SNA
<i>Trifolium pratense</i>	Red Clover	SNA
<i>Tsuga canadensis</i>	Eastern Hemlock	S4
<i>Tussilago farfara</i> *	Coltsfoot	SNA
<i>Typha latifolia</i>	Broad-leaved Cattail	S5
<i>Vaccinium angustifolium</i>	Late Lowbush Blueberry	S5
<i>Vaccinium myrtilloides</i>	Velvet-leaved Blueberry	S5
<i>Veronica officinalis</i>	Common Speedwell	SNA
<i>Viburnum cassinoides</i>	Northern Wild Raisin	S5
<i>Vicia cracca</i>	Tufted Vetch	SNA
<i>Viola cucullata</i>	Marsh Blue Violet	S5
<i>Viola macloskeyi</i>	Small White Violet	S5

Note: Scientific names used are in accordance to the latest ACCDC species list retrieved in March 2022. Scientific names may no longer be in use, however, for consistency in this report, species names in the ACCDC species list are used.

\*Listed as an invasive species to Nova Scotia



**APPENDIX L. WETLAND DETERMINATION FORMS**



**WETLAND DETERMINATION DATA FORM – NOVA SCOTIA**

Project/Site: Lantz Quarry Municipality/County: Halifax Sampling Date: July 7/21  
 Applicant/Owner: Dexter Sampling Point: Wet 1  
 Investigator(s): Emma H Affiliation: MEL  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: 0463579 Long: 4978754 Datum: NAD83UTM20  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: SWAMP

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	<u>30</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Abies balsamea</u>	<u>10</u>		<u>FAC</u>	
3. <u>Picea mariana</u>	<u>25</u>		<u>FACW</u>	
4. _____				
5. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>45</u> x 1 = <u>45</u> FACW species <u>75</u> x 2 = <u>150</u> FAC species <u>102</u> x 3 = <u>306</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>222</u> (A) <u>501</u> (B)  Prevalence Index = B/A = <u>2.26</u>
1. <u>Alnus incana</u>	<u>10</u>		<u>FACW</u>	
2. <u>Ilex mucronata</u>	<u>5</u>		<u>FAC</u>	
3. <u>Abies balsamea</u>	<u>5</u>		<u>FAC</u>	
4. _____				
_____ = Total Cover				
1. <u>Osmunda cinnamomea</u>	<u>30</u>		<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Rubus hispicius</u>	<u>20</u>		<u>FACW</u>	
3. <u>Kalmia angustifolia</u>	<u>5</u>		<u>FAC</u>	
4. <u>Carex trisperma</u>	<u>25</u>		<u>OBL</u>	
5. <u>Carex folliculata</u>	<u>20</u>		<u>OBL</u>	
6. <u>Caulisaxcia baccata</u>	<u>10</u>		<u>FAC</u>	
7. <u>Equisetum arvense</u>	<u>3</u>		<u>FAC</u>	
8. <u>Maranthemum canadense</u>	<u>2</u>		<u>FAC</u>	
9. <u>Glycerhiza striata</u>	<u>10</u>		<u>FACW</u>	
10. <u>Coccoloba canadensis</u>	<u>2</u>		<u>FAC</u>	
_____ = Total Cover				
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2009)

**SOIL**

Lantz Quarry

Sampling Point: Wet 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10cm							mesic	organic
10-30cm	10YR4/1	10D					clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Sandy Redox (S5)	
	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
	<input type="checkbox"/> Coast Prairie Redox (A16)
	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)
	<input type="checkbox"/> Iron-Manganese Masses (F12)
	<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: none

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): 5cm

Water Table Present? Yes  No  Depth (inches): 0cm

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – NOVA SCOTIA**

Project/Site: Lantz Quarry Municipality/County: Halifax Sampling Date: July 7/21  
 Applicant/Owner: Dexter Sampling Point: UP1#2  
 Investigator(s): Emma H Affiliation: MEL  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: 463588 Long: 4978773 Datum: NAD83 UTM Z0  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	<u>40</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Picea rubens</u>	<u>10</u>		<u>FAC</u>	
3. <u>Betula papyrifera</u>	<u>30</u>		<u>FACU</u>	
4. <u>Abies balsamea</u>	<u>10</u>		<u>FAC</u>	
5. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>148</u> x 3 = <u>444</u> FACU species <u>63</u> x 4 = <u>252</u> UPL species _____ x 5 = _____ Column Totals: <u>211</u> (A) <u>696</u> (B)  Prevalence Index = B/A = <u>3.3</u>
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Arceuthobium canadense</u>	<u>20</u>		<u>FACW</u>	
2. <u>Viburnum nudum</u>	<u>10</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. <u>Pteridium aquilinum</u>	<u>20</u>		<u>FACU</u>	
2. <u>Kalmia angustifolia</u>	<u>40</u>		<u>FAC</u>	
3. <u>Cornus canadensis</u>	<u>5</u>		<u>FAC</u>	
4. <u>Vaccinium myrtilloides</u>	<u>20</u>		<u>FAC</u>	
5. <u>Caulophthya procumbens</u>	<u>10</u>		<u>FAC</u>	
6. <u>Trientalis borealis</u>	<u>1</u>		<u>FAC</u>	
7. <u>Picea rubens</u>	<u>2</u>		<u>FAC</u>	
8. <u>Epigaea repens</u>	<u>3</u>		<u>FACU</u>	
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
1. _____				
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

**SOIL**

Sampling Point: UP142

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10cm							fibric	organic

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Sandy Redox (S5)	
	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
	<input type="checkbox"/> Coast Prairie Redox (A16)
	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)
	<input type="checkbox"/> Iron-Manganese Masses (F12)
	<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: rock  
 Depth (inches): 10cm

Hydric Soil Present? Yes  No

Remarks:  
I tried to take a core in several locations, and hit rock each time.

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	
<b>Field Observations:</b>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – NOVA SCOTIA**

Project/Site: Lantz Municipality/County: Halifax Sampling Date: July 7/21  
 Applicant/Owner: Dexter Sampling Point: WET2  
 Investigator(s): Emma H Affiliation: MEL  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: 463653 Long: 4998772 Datum: NA083 UTM 20  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: Treed swamp  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	<u>5</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Picea mariana</u>	<u>5</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>38</u> x 1 = <u>38</u> FACW species <u>35</u> x 2 = <u>70</u> FAC species <u>58</u> x 3 = <u>174</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>131</u> (A) <u>282</u> (B)  Prevalence Index = B/A = <u>2.15</u>
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. <u>Alnus incana</u>	<u>20</u>		<u>FACW</u>	
2. <u>Picea mariana</u>	<u>10</u>		<u>FACW</u>	
3. _____				
4. _____				
5. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Osmunda cinnamomea</u>	<u>30</u>		<u>FAC</u>	
2. <u>Thelypteris noveboracensis</u>	<u>15</u>		<u>FAC</u>	
3. <u>Rubus hispida</u>	<u>5</u>		<u>FACW</u>	
4. <u>Orlemna nemoralis</u>	<u>3</u>		<u>OBL</u>	
5. <u>Carex canadensis</u>	<u>2</u>		<u>FAC</u>	
6. <u>Maianthemum canadense</u>	<u>1</u>		<u>FAC</u>	
7. <u>Carex lasiocarpa</u>	<u>10</u>		<u>OBL</u>	
8. <u>Carex crinita</u>	<u>25</u>		<u>OBL</u>	
9. _____				
10. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____				
_____ = Total Cover				Remarks: (Include photo numbers here or on a separate sheet.)
Remarks: (Include photo numbers here or on a separate sheet.)				

**SOIL**

Sampling Point: Wet 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0-15						mesic	organic
15-40	10YR 4/2	80				silty clay	mineral
	10YR 5/3	20				silty sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Depleted Dark Surface (F7)
- Sandy Redox (S5)

- Stripped Matrix (S6)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)
- Red Parent Material (TF2)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- Sandy Gleyed Matrix (S4)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

- Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
  - High Water Table (A2)
  - Saturation (A3)
  - Water Marks (B1)
  - Sediment Deposits (B2)
  - Drift Deposits (B3)
  - Algal Mat or Crust (B4)
  - Iron Deposits (B5)
  - Inundation Visible on Aerial Imagery (B7)
  - Sparsely Vegetated Concave Surface (B8)
  - Water-Stained Leaves (B9)
  - Aquatic Fauna (B13)
  - Marl Deposits (B15)
  - Hydrogen Sulfide Odor (C1)
  - Oxidized Rhizospheres on Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Tilled Soils (C6)
  - Thin Muck Surface (C7)
  - Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): 10cm  
 Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – NOVA SCOTIA**

Project/Site: Lantz Quarry Municipality/County: Halifax Sampling Date: July 7/21  
 Applicant/Owner: Dexter Sampling Point: Wet 3  
 Investigator(s): Emma H Affiliation: MEL  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): concave  
 Slope (%): \_\_\_\_\_ Lat: 463678 Long: 4978870 Datum: NAD83 UTM 20  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: SWAMP

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Betula papyrifera</u>	<u>20</u>		<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Acer rubrum</u>	<u>20</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>3</u> x 1 = <u>3</u> FACW species <u>80</u> x 2 = <u>160</u> FAC species <u>62</u> x 3 = <u>186</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species _____ x 5 = _____ Column Totals: <u>165</u> (A) <u>429</u> (B)  Prevalence Index = B/A = <u>2.6</u>
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. <u>Picea mariana</u>	<u>5</u>		<u>FACW</u>	
2. <u>Viburnum nudum</u>	<u>10</u>		<u>FAC</u>	
3. <u>Acer rubrum</u>	<u>5</u>		<u>FAC</u>	
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Chamaenerion angustifolium</u>	<u>5</u>		<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Rosa palustris</u>	<u>3</u>		<u>OBL</u>	
3. <u>Glyceria striata</u>	<u>5</u>		<u>FACW</u>	
4. <u>Rubus hispidus</u>	<u>60</u>		<u>FACW</u>	
5. <u>Vaccinium myrtilloides</u>	<u>10</u>		<u>FAC</u>	
6. <u>Scirpus cyperinus</u>	<u>10</u>		<u>FACW</u>	
7. <u>Gaylussacia baccata</u>	<u>2</u>		<u>FAC</u>	
8. <u>Kalmia angustifolia</u>	<u>5</u>		<u>FAC</u>	
9. <u>Osmunda cinnamomea</u>	<u>5</u>		<u>FAC</u>	
10. _____				
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2009)

**SOIL**

Sampling Point: Wet 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-20							moist	organic
20-40	10YR5/3	100					silty sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Depleted Dark Surface (F7)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)
- Red Parent Material (TF2)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- Sandy Gleyed Matrix (S4)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required)**

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): 20cm  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



**WETLAND DETERMINATION DATA FORM – NOVA SCOTIA**

Project/Site: Lantz Quarry Municipality/County: Halifax Sampling Date: July 7/21  
 Applicant/Owner: Dexter Sampling Point: UP 3#4  
 Investigator(s): EMMA H Affiliation: MEL  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: 463650 Long: 4978894 Datum: NAD83 UTM 20  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. <u>Abies balsamea</u>	<u>10</u>		<u>FAC</u>	
2. <u>Betula papyrifera</u>	<u>15</u>		<u>FACU</u>	
3. _____	_____		_____	
4. _____	_____		_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>115</u> x 3 = <u>345</u> FACU species <u>55</u> x 4 = <u>220</u> UPL species _____ x 5 = _____ Column Totals: <u>170</u> (A) <u>565</u> (B) Prevalence Index = B/A = <u>3.32</u>
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Pinus strobus</u>	<u>5</u>		<u>FAC</u>	
2. <u>Viburnum nudum</u>	<u>10</u>		<u>FAC</u>	
3. _____	_____		_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Kalmia angustifolia</u>	<u>75</u>		<u>FAC</u>	
2. <u>Pteridium aquilinum</u>	<u>40</u>		<u>FACU</u>	
3. <u>Vaccinium myrtillus</u>	<u>10</u>		<u>FAC</u>	
4. <u>Cornus canadensis</u>	<u>5</u>		<u>FAC</u>	
5. _____	_____		_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____		_____	
2. _____	_____		_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				
<b>Hydrophytic Vegetation Indicators:</b> ___ Rapid Test for Hydrophytic Vegetation ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>				

**SOIL**

Sampling Point: up 374

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5							fibre	organic
5-10							mesic	organic
10-25	10YR 6/3	100					silty sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Polyvalue Below Surface (S8)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Thin Dark Surface (S9)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Red Parent Material (TF2)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: rock root

Depth (inches): 25cm

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Depth (inches): _____	
Saturation Present? (Includes capillary fringe) Yes <input type="checkbox"/> No <input type="checkbox"/>	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2009)

## WETLAND DETERMINATION DATA FORM – NOVA SCOTIA

Project/Site: Lantz Quarry Municipality/County: Halifax Sampling Date: July 7/21

Applicant/Owner: Dexter Sampling Point: Wet 4

Investigator(s): Emma H Affiliation: MEL

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_

Slope (%): \_\_\_\_\_ Lat: 463533 Long: 4978839 Datum: NAD83 UTM 20

Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: bog P64

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Picea mariana</u>	<u>3</u>		<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. <u>Betula populifolia</u>	<u>10</u>		<u>FAC</u>	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____				
5. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Viburnum nudum</u>	<u>15</u>		<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Gaylussacia baccata</u>	<u>20</u>		<u>FAC</u>	OBL species <u>70</u> x 1 = <u>70</u>
3. <u>Picea mariana</u>	<u>15</u>		<u>FACW</u>	FACW species <u>18</u> x 2 = <u>36</u>
4. _____				FAC species <u>105</u> x 3 = <u>315</u>
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: <u>193</u> (A) <u>421</u> (B)
				Prevalence Index = B/A = <u>2.18</u>
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Gaylussacia baccata</u>	<u>10</u>		<u>FAC</u>	_____ Rapid Test for Hydrophytic Vegetation
2. <u>Carex acinosa</u>	<u>40</u>		<u>OBL</u>	_____ Dominance Test is >50%
3. <u>Kalmia angustifolia</u>	<u>35</u>		<u>FAC</u>	_____ Prevalence Index is ≤3.0 <sup>1</sup>
4. <u>Osmunda cinnamomum</u>	<u>10</u>		<u>FAC</u>	_____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. <u>Carex lasperma</u>	<u>30</u>		<u>OBL</u>	_____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. <u>Cornus canadensis</u>	<u>5</u>		<u>FAC</u>	
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No _____
2. _____				
_____ = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: Wet 4

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-15 cm							mesic	organic
15-90	10.5YR5/2	100					silty clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Polyvalue Below Surface (S8)	
<input type="checkbox"/> Thin Dark Surface (S9)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Red Parent Material (TF2)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): 20cm

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2009)

**WETLAND DETERMINATION DATA FORM - NOVA SCOTIA**

Project/Site: Lantz Quarry Municipality/County: Halifax Sampling Date: July 7, 2021  
 Applicant/Owner: Dexter Sampling Point: W15  
 Investigator(s): Emma H Affiliation: MEL  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: 463593 Long: 4979007 Datum: NAD 83 UTM 20  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: (Explain alternative procedures here or in a separate report.)			If yes, optional Wetland Site ID: _____

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Pinus strobus</u>	5		FAC	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Acer rubrum</u>	2		FAC	
3. <u>Abies balsamea</u>	3		FAC	
4. <u>Picea mariana</u>	5		FACW	
5. <u>Betula alleghaniensis</u>	5		FAC	
= Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>8</u> x 1 = <u>8</u> FACW species <u>82</u> x 2 = <u>164</u> FAC species <u>46</u> x 3 = <u>138</u> FACU species _____ x 4 = _____ UPL species <u>2</u> x 5 = <u>10</u> Column Totals: <u>138</u> (A) <u>320</u> (B) Prevalence Index = B/A = <u>2.3</u>
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Corylus rostrata borealis</u>	7		FAC	
2. <u>Acer rubrum</u>	3		FAC	
3. <u>Spiraea alba</u>	3		FAC	
= Total Cover				
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Glyceria striata</u>	3		OBL	
2. <u>Rubus hispidus</u>	40		FACW	
3. <u>Rubus pubescens</u>	10		FAC	
4. <u>Gonolobus borealis</u>	5		FAC	
5. <u>Chamaenerion angustifolium</u>	5		FAC	
6. <u>Scirpus cyperinus</u>	15		FACW	
7. <u>Dalmanea nemoralis</u>	5		OBL	
8. <u>Juncus effusus</u>	7		FACW	
9. <u>Comptonia perigrina</u>	2		UPL	
= Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____				
2. _____				
= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2009)

**SOIL**

Sampling Point: Wt 5

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>		
0-10								
10-30	10YR 3/1	100					clay / loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
	<input type="checkbox"/> Coast Prairie Redox (A16)
	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)
	<input type="checkbox"/> Iron-Manganese Masses (F12)
	<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required: check all that apply)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Microtopographic Relief (D4)
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – NOVA SCOTIA**

Project/Site: Lantz Quarry Municipality/County: Halifax Sampling Date: July 7, 2021  
 Applicant/Owner: Dexter Sampling Point: UP5#6  
 Investigator(s): Emma H Affiliation: MEL  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: 463593 Long: 4979028 Datum: UTM20 NAD83  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Abies balsamea</u>	<u>7</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Pinus strobus</u>	<u>30</u>		<u>FAC</u>	
3. <u>Betula populifolia</u>	<u>10</u>		<u>FAC</u>	
4. _____				
5. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>112</u> x 3 = <u>336</u> FACU species <u>22</u> x 4 = <u>88</u> UPL species <u>1</u> x 5 = <u>5</u> Column Totals: <u>135</u> (A) <u>429</u> (B)  Prevalence Index = B/A = <u>3.18</u>
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. <u>Betula populifolia</u>	<u>5</u>		<u>FAC</u>	
2. <u>Abies balsamea</u>	<u>5</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Pteridium aquilinum</u>	<u>20</u>		<u>FACU</u>	
2. <u>Cornus canadensis</u>	<u>10</u>		<u>FAC</u>	
3. <u>Kalmia angustifolia</u>	<u>40</u>		<u>FAC</u>	
4. <u>Picea rubens</u>	<u>2</u>		<u>FAC</u>	
5. <u>Maranthaceae canadensis</u>	<u>2</u>		<u>FAC</u>	
6. <u>Comptonia peregrina</u>	<u>1</u>		<u>UPL</u>	
7. <u>Epigaea repens</u>	<u>2</u>		<u>FACU</u>	
8. <u>Calamagrostis sp.</u>	<u>5</u>		<u>_____</u>	
9. <u>Pinus strobus</u>	<u>1</u>		<u>FAC</u>	
10. _____				
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____				
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

**Hydrophytic Vegetation Indicators:**  
 Rapid Test for Hydrophytic Vegetation  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2009)

**SOIL**

Sampling Point: UP546

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-30	10YR 4/14	60						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Sandy Redox (S5)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: rock

Depth (inches): 30cm

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2009)



**WETLAND DETERMINATION DATA FORM – NOVA SCOTIA**

Project/Site: Lantz Quarry Municipality/County: Halifax Sampling Date: July 7, 2021

Applicant/Owner: Dexter Sampling Point: Wet6

Investigator(s): Emma H Affiliation: MEL

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_

Slope (%): \_\_\_\_\_ Lat: 463505 Long: 4979045 Datum: NAD83 UTM 20

Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: Bog

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Betula populifolia</u>	<u>5</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)														
2. <u>Larix laricina</u>	<u>5</u>		<u>FAC</u>															
3. _____																		
4. _____																		
5. _____																		
_____ = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>3</u></td> <td>x 1 = <u>3</u></td> </tr> <tr> <td>FACW species <u>54</u></td> <td>x 2 = <u>108</u></td> </tr> <tr> <td>FAC species <u>47</u></td> <td>x 3 = <u>141</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td><b>Column Totals:</b> <u>104</u> (A)</td> <td><u>252</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.42</u>	Total % Cover of:	Multiply by:	OBL species <u>3</u>	x 1 = <u>3</u>	FACW species <u>54</u>	x 2 = <u>108</u>	FAC species <u>47</u>	x 3 = <u>141</u>	FACU species <u>0</u>	x 4 = _____	UPL species _____	x 5 = _____	<b>Column Totals:</b> <u>104</u> (A)	<u>252</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>3</u>	x 1 = <u>3</u>																	
FACW species <u>54</u>	x 2 = <u>108</u>																	
FAC species <u>47</u>	x 3 = <u>141</u>																	
FACU species <u>0</u>	x 4 = _____																	
UPL species _____	x 5 = _____																	
<b>Column Totals:</b> <u>104</u> (A)	<u>252</u> (B)																	
_____ = Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																		
1. <u>Alnus incana</u>	<u>10</u>		<u>FACW</u>															
2. <u>Gaultheria procumbens</u>	<u>10</u>		<u>FAC</u>															
3. <u>Spiraea alba</u>	<u>5</u>		<u>FAC</u>															
4. <u>Rubus nudum</u>	<u>2</u>		<u>FAC</u>															
5. _____																		
_____ = Total Cover																		
<b>Herb Stratum (Plot size: _____)</b>																		
1. <u>Lectum groenlandicum</u>	<u>5</u>		<u>FACW+</u>															
2. <u>Picea mariana</u>	<u>1</u>		<u>FACW</u>															
3. <u>Carex folliculata</u>	<u>7</u>		<u>OBL</u>															
4. <u>Spiraea alba</u>	<u>10</u>		<u>FAC</u>															
5. <u>Calamagrostis canadensis</u>	<u>6</u>		<u>FACW</u>															
6. <u>Rubus hispidus</u>	<u>30</u>		<u>FACW</u>															
7. <u>Solidago uliginosa</u>	<u>3</u>		<u>OBL</u>															
8. <u>Scirpus cyperinus</u>	<u>2</u>		<u>FACW</u>															
9. <u>Rubus pubescens</u>	<u>5</u>		<u>FAC</u>															
10. <u>Gaultheria procumbens</u>	<u>5</u>		<u>FAC</u>															
_____ = Total Cover																		
<b>Woody Vine Stratum (Plot size: _____)</b>																		
1. _____																		
2. _____																		
_____ = Total Cover																		
<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																		
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2009)

**SOIL**

Sampling Point: Wet 6.

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-15cm							humic	organic
15-30	7.5YR4/1						silty clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Depleted Dark Surface (F7)
- Sandy Redox (S5)

- Stripped Matrix (S6)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)
- Red Parent Material (TF2)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- Sandy Gleyed Matrix (S4)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)

- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required)**

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – NOVA SCOTIA**

Project/Site: Lantz Quarry Municipality/County: Halifax Sampling Date: July 7/12  
 Applicant/Owner: Dexter Sampling Point: Wet 7  
 Investigator(s): Emma H. Affiliation: MEC  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: 463532 Long: 4978876 Datum: NAD83 UTM20  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: Bog PG 4  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Betula populifolia</u>	<u>25</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Acer rubrum</u>	<u>10</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>45</u> x 1 = <u>45</u> FACW species <u>32</u> x 2 = <u>64</u> FAC species <u>62</u> x 3 = <u>186</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>138</u> (A) <u>295</u> (B)  Prevalence Index = B/A = <u>2.138</u>
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. <u>Corylus americana</u>	<u>10</u>		<u>FAC</u>	
2. <u>Viburnum nudum</u>	<u>5</u>		<u>FAC</u>	
3. <u>Acer rubrum</u>	<u>2</u>		<u>FAC</u>	
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Vaccinium myrtillus</u>	<u>10</u>		<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Rubus hispidus</u>	<u>25</u>		<u>FACW</u>	
3. <u>Glyceria crinita</u>	<u>30</u>		<u>OBL</u>	
4. <u>Scirpus cyperinus</u>	<u>5</u>		<u>FACW</u>	
5. <u>Clintonia borealis</u>	<u>1</u>		<u>FAC</u>	
6. <u>Juncus effusus</u>	<u>2</u>		<u>FACW</u>	
7. <u>Carex echinata</u>	<u>10</u>		<u>OBL</u>	
8. <u>Kalmia angustifolia</u>	<u>2</u>		<u>FAC</u>	
9. <u>Carex folliculata</u>	<u>5</u>		<u>OBL</u>	
10. _____				
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2009)

**SOIL**

Sampling Point: Wet 7 -

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-15 cm		100					maxc	organic
15-30	10YR5/3	100					Sapric	very moist

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Sandy Redox (S5)	
	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
	<input type="checkbox"/> Coast Prairie Redox (A16)
	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)
	<input type="checkbox"/> Iron-Manganese Masses (F12)
	<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – NOVA SCOTIA**

Project/Site: Lant 2 Municipality/County: Halifax Sampling Date: July 7, 2021  
 Applicant/Owner: Dexter Sampling Point: UP 7  
 Investigator(s): Emma H Affiliation: MEL  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: 463542 Long: 4978889 Datum: NA08347420  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Betula papyfera</u>	<u>5</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. <u>Abies rubens</u>	<u>5</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>115</u> x 3 = <u>345</u> FACU species <u>35</u> x 4 = <u>140</u> UPL species _____ x 5 = _____ Column Totals: <u>150</u> (A) <u>485</u> (B)  Prevalence Index = B/A = <u>3.23</u>
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. <u>Viburnum nudum</u>	<u>5</u>		<u>FAC</u>	
2. _____				
3. _____				
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Pteridium aquilinum</u>	<u>85</u>		<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Gaylussacia baccata</u>	<u>25</u>		<u>FAC</u>	
3. <u>Kalmia angustifolia</u>	<u>50</u>		<u>FAC</u>	
4. <u>Vaccinium baccatum</u>	<u>15</u>		<u>FAC</u>	
5. <u>Vaccinium myrtillus</u>	<u>5</u>		<u>FAC</u>	
6. <u>Viburnum nudum</u>	<u>5</u>		<u>FAC</u>	
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____				
2. _____				
_____ = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2009)

**SOIL**

Sampling Point: UP 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-15							Fibric	Organic

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Depleted Dark Surface (F7)
- Sandy Redox (S5)

- Stripped Matrix (S6)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)
- Red Parent Material (TF2)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- Sandy Gleyed Matrix (S4)
- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: rock  
 Depth (inches): 15cm

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)

- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: \_\_\_\_\_ City/County: \_\_\_\_\_ Sampling Date: \_\_\_\_\_  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: \_\_\_\_\_  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 UTM Zone: \_\_\_\_\_ Easting: \_\_\_\_\_ Northing: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)    	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (cm): _____ Water Table Present? Yes _____ No _____ Depth (cm): _____ Saturation Present? Yes _____ No _____ Depth (cm): _____ (includes capillary fringe)	<b>Wetland Hydrology Present? Yes _____ No _____</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION – Use scientific names of plants.**

Sampling Point: \_\_\_\_\_

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____ = Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____ = Total Cover			
<b>Herb Stratum</b> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	_____ = Total Cover			
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	_____ = Total Cover			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)

Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)





**WETLAND DELINEATION DATA FORM – NOVA SCOTIA**

Project/Site: 21-453 Municipality/County: HRM Sampling Date: July 5/22  
 Applicant/Owner: \_\_\_\_\_ Sampling Point: WL9  
 Investigator(s): LB + ND Affiliation: MEL  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_  
 Slope (%): \_\_\_\_\_ Lat: 20T 0463413 Long: 4978949 Datum: NAD83  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: tree bog  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<b>Tree Stratum</b> (Plot size: <u>10</u> )				Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)
1. <u>red maple</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>6</u> (B)
2. <u>white pine</u>	<u>10</u>		<u>FAC</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (AB)
3. <u>black spruce</u>	<u>5</u>		<u>FACW</u>	
4. <u>tamarak</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
5. <u>grey birch</u>	<u>10</u>		<u>FAC</u>	
	<u>55</u> = Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>5</u> )				<b>Prevalence Index worksheet:</b>
1. <u>tamarak</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. <u>black huckleberry</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	OBL species <u>0</u> x 1 = <u>0</u>
3. <u>big labrador tea</u>	<u>10</u>		<u>FACW</u>	FACW species <u>35</u> x 2 = <u>70</u>
4. <u>black spruce</u>	<u>5</u>		<u>FACW</u>	FAC species <u>135</u> x 3 = <u>405</u>
5. _____				FACU species <u>0</u> x 4 = <u>0</u>
	<u>65</u> = Total Cover			UPL species <u>0</u> x 5 = <u>0</u>
<b>Herb Stratum</b> (Plot size: <u>1</u> )				Column Totals: <u>170</u> (A) <u>475</u> (B)
1. <u>big labrador tea</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Prevalence Index = B/A = <u>2.79</u>
2. <u>bramberry</u>	<u>5</u>		<u>FAC</u>	
3. <u>black huckleberry</u>	<u>10</u>		<u>FAC</u>	
4. <u>swamp meadow grass</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
5. <u>fowl bluegrass</u>	<u>5</u>			
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
	<u>55</u> = Total Cover			
<b>Woody Vine Stratum</b> (Plot size: _____)				
1. _____				
2. _____				
	_____ = Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.)				

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ Rapid Test for Hydrophytic Vegetation  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

**SOIL**

Sampling Point: \_\_\_\_\_

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	7.5YR 2.5/2	25%					Organic S. Moss	
10-40	7.5YR 2.5/1	75%					Organic Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<b>Primary Indicators (minimum of one is required; check all that apply)</b>	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): 70cm

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): 0cm

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DELINEATION DATA FORM – NOVA SCOTIA**

Project/Site: 21-453 Municipality/County: HRM Sampling Date: July 5/22  
 Applicant/Owner: \_\_\_\_\_ Sampling Point: WL10  
 Investigator(s): LB & ND Affiliation: MEL  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): convex  
 Slope (%): 2 Lat: 207 0463409 Long: 4979002 Datum: NAD83  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: tree bog  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>10</u> )				<b>Dominance Test worksheet:</b>
1. <u>red maple</u>	<u>5</u>		<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A)
2. <u>black spruce</u>	<u>5</u>		<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>67</u> (B)
3. <u>tamarack</u>	<u>7</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. <u>grey birch</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
5. _____				
	<u>27</u>	= Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>5</u> )				<b>Prevalence Index worksheet:</b>
1. <u>speckled alder</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____
2. <u>tamarack</u>	<u>5</u>		<u>FAC</u>	OBL species <u>0</u> x 1 = <u>0</u>
3. <u>black spruce</u>	<u>10</u>		<u>FACW</u>	FACW species <u>30</u> x 2 = <u>60</u>
4. <u>red maple</u>	<u>5</u>		<u>FAC</u>	FAC species <u>109</u> x 3 = <u>327</u>
5. <u>grey birch</u>	<u>2</u>		<u>FAC</u>	FACU species <u>0</u> x 4 = <u>0</u>
6. <u>black huckleberry</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	UPL species <u>0</u> x 5 = <u>0</u>
	<u>57</u>	= Total Cover		Column Totals: <u>139</u> (A) <u>387</u> (B)
<b>Herb Stratum</b> (Plot size: <u>1</u> )				Prevalence Index = B/A = <u>2.78</u>
1. <u>black huckleberry</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b>
2. <u>Virginia strawberry</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation
3. <u>sheep laurel</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
4. <u>swamp meadowgrass</u>	<u>5</u>		<u>FAC</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
5. <u>fowl bluegrass</u>				<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
6. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
7. _____				
8. _____				
9. _____				
10. _____				
	<u>55</u>	= Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<b>Woody Vine Stratum</b> (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. _____				
2. _____				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)				

**SOIL**

Sampling Point: \_\_\_\_\_

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-20	7.5YR2.5/1	50%					Organic Sphagnum moss	
10-40	7.5YR2.5/1	50%					Organic clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Polyvalue Below Surface (S8)	
<input type="checkbox"/> Thin Dark Surface (S9)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): N/A

Water Table Present? Yes  No  Depth (inches): to 5cm

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): 0cm

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: \_\_\_\_\_ City/County: \_\_\_\_\_ Sampling Date: \_\_\_\_\_  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: \_\_\_\_\_  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 UTM Zone: \_\_\_\_\_ Easting: \_\_\_\_\_ Northing: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (cm): _____ Water Table Present? Yes _____ No _____ Depth (cm): _____ Saturation Present? Yes _____ No _____ Depth (cm): _____ (includes capillary fringe)	<b>Wetland Hydrology Present? Yes _____ No _____</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION – Use scientific names of plants.**

Sampling Point: \_\_\_\_\_

<u>Tree Stratum</u> (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> _____ Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
<u>Sapling/Shrub Stratum</u> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: _____ )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____ )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				





## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: \_\_\_\_\_ City/County: \_\_\_\_\_ Sampling Date: \_\_\_\_\_  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: \_\_\_\_\_  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 UTM Zone: \_\_\_\_\_ Easting: \_\_\_\_\_ Northing: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (cm): _____ Water Table Present? Yes _____ No _____ Depth (cm): _____ Saturation Present? Yes _____ No _____ Depth (cm): _____ (includes capillary fringe)	<b>Wetland Hydrology Present? Yes _____ No _____</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION – Use scientific names of plants.**

Sampling Point: \_\_\_\_\_

<u>Tree Stratum</u> (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____ = Total Cover			<b>Prevalence Index worksheet:</b> _____ Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
<u>Sapling/Shrub Stratum</u> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____ = Total Cover			<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>Herb Stratum</u> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	_____ = Total Cover			<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
<u>Woody Vine Stratum</u> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	_____ = Total Cover			<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: \_\_\_\_\_

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (cm)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: \_\_\_\_\_  
 Depth (cm): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:

**WETLAND DELINEATION DATA FORM – NOVA SCOTIA**

Project/Site: 21-453 Municipality/County: HRM Sampling Date: July 5/22  
 Applicant/Owner: \_\_\_\_\_ Sampling Point: WL13  
 Investigator(s): LB+ND Affiliation: MEL  
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): convex concave  
 Slope (%): 2-5 Lat: 207 0463168 Long: 4979372 Datum: NAD83  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: treeed swamp  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Red maple</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																
2. <u>red oak</u>	<u>5</u>		<u>FACU</u>																	
3. <u>balsam fir</u>	<u>10</u>		<u>FAC</u>																	
4. <u>white pine</u>	<u>2</u>		<u>FAC</u>																	
5. <u>grey birch</u>	<u>5</u>		<u>FAC</u>																	
<u>82</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>27</u></td> <td>x 2 = <u>54</u></td> </tr> <tr> <td>FAC species <u>166</u></td> <td>x 3 = <u>498</u></td> </tr> <tr> <td>FACU species <u>157</u></td> <td>x 4 = <u>628</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>208</u> (A)</td> <td><u>612</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.94</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>27</u>	x 2 = <u>54</u>	FAC species <u>166</u>	x 3 = <u>498</u>	FACU species <u>157</u>	x 4 = <u>628</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>208</u> (A)	<u>612</u> (B)	Prevalence Index = B/A = <u>2.94</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>27</u>	x 2 = <u>54</u>																			
FAC species <u>166</u>	x 3 = <u>498</u>																			
FACU species <u>157</u>	x 4 = <u>628</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>208</u> (A)	<u>612</u> (B)																			
Prevalence Index = B/A = <u>2.94</u>																				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																				
1. <u>speckled alder</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>																	
2. <u>balsam fir</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																	
3. <u>american witch-hazel</u>	<u>10</u>		<u>FACU</u>																	
4. _____																				
5. _____																				
<u>80</u> = Total Cover																				
<b>Herb Stratum (Plot size: _____)</b>																				
1. <u>Interrupted Fern</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																	
2. <u>red maple</u>	<u>2</u>		<u>FAC</u>																	
3. <u>dwarf raspberry</u>	<u>5</u>		<u>FAC</u>																	
4. <u>virginia strawberry</u>	<u>2</u>		<u>FAC</u>																	
5. <u>low mowgrass</u>	<u>73</u>		<u>FACW</u>																	
6. <u>grass spp.</u>	<u>7</u>																			
7. _____																				
8. _____																				
9. _____																				
10. _____																				
<u>46</u> = Total Cover																				
<b>Woody Vine Stratum (Plot size: _____)</b>																				
1. _____																				
2. _____																				
_____ = Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2011)

**SOIL**

Sampling Point: \_\_\_\_\_

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	7.5YR 2.5/2	25%					Organic	
	7.5YR 4/3	75%					organic sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Polyvalue Below Surface (S8)	
<input type="checkbox"/> Thin Dark Surface (S9)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): N/A

Water Table Present? Yes  No  Depth (inches): N/A

Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): 0

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DELINEATION DATA FORM - NOVA SCOTIA**

Project/Site: 21-453 Municipality/County: HRM Sampling Date: July 5/22  
 Applicant/Owner: \_\_\_\_\_ Sampling Point: WL14  
 Investigator(s): LB+ND Affiliation: MEL  
 Landform (hillslope, terrace, etc.): terrace flat Local relief (concave, convex, none): concave  
 Slope (%): 2-5 Lat: 20T 0465126 Long: 4979375 Datum: NAD83  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: tree swamp  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (if no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION - Use scientific names of plants.**

Tree Stratum (Plot size: <u>10</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>red oak</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
2. <u>red maple</u>	<u>15</u>		<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>6</u> (B)
3. <u>white pine</u>	<u>5</u>		<u>FAC</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3%</u> (A/B)
4. <u>grey birch</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
5. _____				
<u>80</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>5</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>balsam fir</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. <u>speckled alder</u>	<u>2</u>		<u>FACW</u>	OBL species <u>10</u> x 1 = <u>10</u>
3. <u>jack pine</u>	<u>2</u>		<u>FACU</u>	FACW species <u>7</u> x 2 = <u>14</u>
4. <u>white pine</u>	<u>5</u>		<u>FAC</u>	FAC species <u>101</u> x 3 = <u>303</u>
5. <u>red oak</u>	<u>2</u>		<u>FACU</u>	FACU species <u>44</u> x 4 = <u>176</u>
6. <u>red maple</u>	<u>2</u>		<u>FAC</u>	UPL species <u>0</u> x 5 = <u>0</u>
7. _____				Column Totals: <u>162</u> (A) <u>503</u> (B)
8. _____				Prevalence Index = B/A = <u>3.10</u>
<u>43</u> = Total Cover				
Herb Stratum (Plot size: <u>1</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>red maple</u>	<u>2</u>		<u>FAC</u>	<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation
2. <u>bunchberry</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
3. <u>swamp dewberry</u>	<u>5</u>		<u>FACW</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
4. <u>sheep laurel</u>	<u>2</u>		<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
5. <u>giant goldenrod</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. <u>fringed sedge</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
7. _____				
8. _____				
9. _____				
10. _____				
<u>39</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No _____
2. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

Adapted from U.S. Army Corps of Engineers form for Northeast-North Central Supplement for use in Nova Scotia (2011)

**SOIL**

Sampling Point: \_\_\_\_\_

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-30	7.5YR 2.5/1	75%					Organic	
30-40	<del>7.5YR 2.5/1</del>						Sandy organic	
	10YR 5/3	25%						

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils (F19)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required)**

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): 10cm

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DELINEATION DATA FORM – NOVA SCOTIA**

Project/Site: 21-453 Lantz Municipality/County: HRM Sampling Date: July 5/22  
 Applicant/Owner: \_\_\_\_\_ Sampling Point: WL15  
 Investigator(s): LB + ND Affiliation: MEL  
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none  
 Slope (%): 2-5 Lat: 20T 0463613 Long: 4979767 Datum: NAD83  
 Soil Map Unit Name/Type: \_\_\_\_\_ Wetland Type: freed swamp  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**VEGETATION – Use scientific names of plants.**

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<b>Tree Stratum</b> (Plot size: <u>10</u> )				Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
1. <u>Acer rubrum (red maple)</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>6</u> (B)
2. <u>Eastern Hemlock</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3%</u> (A/B)
3. <u>Balsam Fir</u>	<u>5</u>		<u>FAC</u>	
4. <u>White Ash</u>	<u>5</u>		<u>FAC</u>	
5. _____				
	<u>80</u> = Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>5</u> )				<b>Prevalence Index worksheet:</b>
1. <u>White Ash</u>	<u>2</u>		<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Balsam Fir</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	OBL species <u>0</u> x 1 = <u>0</u>
3. <u>Speckled Alder</u>	<u>2</u>		<u>FACW</u>	FACW species <u>9</u> x 2 = <u>18</u>
4. <u>Red maple</u>	<u>2</u>		<u>FAC</u>	FAC species <u>146</u> x 3 = <u>438</u>
5. <u>White pine</u>	<u>5</u>		<u>FAC</u>	FACU species <u>40</u> x 4 = <u>160</u>
	<u>51</u> = Total Cover			UPL species <u>0</u> x 5 = <u>0</u>
<b>Herb Stratum</b> (Plot size: <u>1</u> )				Column Totals: <u>195</u> (A) <u>616</u> (B)
1. <u>New York fern</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Prevalence Index = B/A = <u>3.16</u>
2. <u>Sensitiva fern</u>	<u>5</u>		<u>FACW</u>	
3. <u>Bunch Berry</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b>
4. <u>Dwarf raspberry</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation
5. <u>Speckled alder</u>	<u>2</u>		<u>FACW</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
6. <u>Star Flower</u>	<u>1</u>		<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
7. <u>Canada mayflower</u>	<u>1</u>		<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8. <u>Bladder sedge</u>	<u>5</u>		<u>FAC</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
9. <del>_____</del>				
10. _____				
	<u>64</u> = Total Cover			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<b>Woody Vine Stratum</b> (Plot size: _____)				
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____				
Remarks: (Include photo numbers here or on a separate sheet.)				



**SOIL**

Sampling Point: \_\_\_\_\_

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-40	7.5R2.5/1	100					Organic Loamy	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Polyvalue Below Surface (S8)
- Thin Dark Surface (S9)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- Coast Prairie Redox (A16)
- 5 cm Mucky Peat or Peat (S3)
- Iron-Manganese Masses (F12)
- Piedmont Floodplain Soils (F19)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)

- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): N/A  
 Water Table Present? Yes  No  Depth (inches): N/A  
 Saturation Present? Yes  No  Depth (inches): 0  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: \_\_\_\_\_ City/County: \_\_\_\_\_ Sampling Date: \_\_\_\_\_  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: \_\_\_\_\_  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 UTM Zone: \_\_\_\_\_ Easting: \_\_\_\_\_ Northing: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (cm): _____ Water Table Present? Yes _____ No _____ Depth (cm): _____ Saturation Present? Yes _____ No _____ Depth (cm): _____ (includes capillary fringe)	<b>Wetland Hydrology Present? Yes _____ No _____</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION – Use scientific names of plants.**

Sampling Point: \_\_\_\_\_

<u>Tree Stratum</u> (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> _____ Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
<u>Sapling/Shrub Stratum</u> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>Herb Stratum</u> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
<u>Woody Vine Stratum</u> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: \_\_\_\_\_

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (cm)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)

- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L, M**)
- Polyvalue Below Surface (S8) (**LRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p><b>Restrictive Layer (if observed):</b></p> <p>Type: _____</p> <p>Depth (cm): _____</p>	<p><b>Hydric Soil Present?</b> Yes _____ No _____</p>
--	---

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: \_\_\_\_\_ City/County: \_\_\_\_\_ Sampling Date: \_\_\_\_\_  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: \_\_\_\_\_  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 UTM Zone: \_\_\_\_\_ Easting: \_\_\_\_\_ Northing: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (cm): _____ Water Table Present? Yes _____ No _____ Depth (cm): _____ Saturation Present? Yes _____ No _____ Depth (cm): _____ (includes capillary fringe)	<b>Wetland Hydrology Present? Yes _____ No _____</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION – Use scientific names of plants.**

Sampling Point: \_\_\_\_\_

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: _____ )				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> _____ Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
_____ = Total Cover				
<b>Sapling/Shrub Stratum</b> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<b>Herb Stratum</b> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____
Remarks: (Include photo numbers here or on a separate sheet.)				

**SOIL**

Sampling Point: \_\_\_\_\_

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (cm)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- \_\_\_ Histosol (A1)
- \_\_\_ Histic Epipedon (A2)
- \_\_\_ Black Histic (A3)
- \_\_\_ Hydrogen Sulfide (A4)
- \_\_\_ Stratified Layers (A5)
- \_\_\_ Depleted Below Dark Surface (A11)
- \_\_\_ Thick Dark Surface (A12)
- \_\_\_ Sandy Mucky Mineral (S1)
- \_\_\_ Sandy Gleyed Matrix (S4)
- \_\_\_ Sandy Redox (S5)
- \_\_\_ Stripped Matrix (S6)
- \_\_\_ Dark Surface (S7) (LRR R, MLRA 149B)

- \_\_\_ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- \_\_\_ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- \_\_\_ Loamy Mucky Mineral (F1) (LRR K, L)
- \_\_\_ Loamy Gleyed Matrix (F2)
- \_\_\_ Depleted Matrix (F3)
- \_\_\_ Redox Dark Surface (F6)
- \_\_\_ Depleted Dark Surface (F7)
- \_\_\_ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- \_\_\_ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- \_\_\_ Coast Prairie Redox (A16) (LRR K, L, R)
- \_\_\_ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- \_\_\_ Dark Surface (S7) (LRR K, L, M)
- \_\_\_ Polyvalue Below Surface (S8) (LRR K, L)
- \_\_\_ Thin Dark Surface (S9) (LRR K, L)
- \_\_\_ Iron-Manganese Masses (F12) (LRR K, L, R)
- \_\_\_ Piedmont Floodplain Soils (F19) (MLRA 149B)
- \_\_\_ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- \_\_\_ Red Parent Material (F21)
- \_\_\_ Very Shallow Dark Surface (TF12)
- \_\_\_ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (cm): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:



**APPENDIX M. WESP-AC RESULTS**



Assessment Area (AA) Results:						
Wetland ID: WL1						
Date: July 7, 2021						
Observer: Emma Halupka						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	6.41	Moderate	1.97	Lower	6.73	0.88
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	7.67	Higher	0.00	Lower	5.11	0.00
Sediment Retention & Stabilisation (SR)	10.00	Higher	0.65	Lower	10.00	0.32
Phosphorus Retention (PR)	10.00	Higher	1.25	Moderate	10.00	0.97
Nitrate Removal & Retention (NR)	10.00	Higher	5.00	Moderate	10.00	5.00
Carbon Sequestration (CS)	3.40	Moderate			6.80	
Organic Nutrient Export (OE)	7.76	Higher			5.07	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	4.94	Moderate	4.39	Moderate	5.51	3.61
Amphibian & Turtle Habitat (AM)	7.68	Higher	3.22	Moderate	7.15	4.41
Waterbird Feeding Habitat (WBF)	5.90	Moderate	2.50	Lower	4.49	2.50
Waterbird Nesting Habitat (WBN)	5.19	Moderate	2.50	Moderate	3.76	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	7.17	Moderate	2.50	Lower	6.24	2.50
Pollinator Habitat (POL)	7.20	Moderate	0.00	Lower	5.97	0.00
Native Plant Habitat (PH)	5.74	Moderate	4.07	Lower	6.19	4.07
Public Use & Recognition (PU)			2.19	Moderate		1.80
Wetland Sensitivity (Sens)			10.00	Higher		5.46
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.55	Moderate		2.37
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	6.41	Moderate	1.97	Lower	6.73	0.88
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	9.17	Higher	3.65	Moderate	9.60	3.55
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.42	Higher	2.93	Lower	4.72	2.41
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	5.72	Moderate	2.43	Moderate	5.11	3.15
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.96	Higher	3.13	Lower	6.19	3.13
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.28	Higher		3.92
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	12.65112091	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	33.48567615	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	18.79834049	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	13.89132804	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	21.77700499	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL2						
Date: July7, 2021						
Observer: Emma Halupka						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	6.48	Moderate	1.80	Lower	6.78	0.80
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	3.38	Moderate	0.00	Lower	2.25	0.00
Sediment Retention & Stabilisation (SR)	10.00	Higher	0.76	Lower	10.00	0.37
Phosphorus Retention (PR)	10.00	Higher	0.86	Lower	10.00	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	5.00	Moderate	10.00	5.00
Carbon Sequestration (CS)	4.26	Moderate			7.21	
Organic Nutrient Export (OE)	6.71	Moderate			4.39	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	3.47	Moderate	4.54	Moderate	4.91	3.69
Amphibian & Turtle Habitat (AM)	6.63	Moderate	3.58	Moderate	6.60	4.71
Waterbird Feeding Habitat (WBF)	5.40	Moderate	2.50	Lower	4.11	2.50
Waterbird Nesting Habitat (WBN)	5.40	Moderate	2.50	Moderate	3.91	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	8.65	Higher	2.50	Lower	7.53	2.50
Pollinator Habitat (POL)	6.87	Moderate	0.00	Lower	5.69	0.00
Native Plant Habitat (PH)	1.72	Lower	4.41	Lower	4.59	4.41
Public Use & Recognition (PU)			2.02	Moderate		1.68
Wetland Sensitivity (Sens)			5.81	Moderate		3.83
Wetland Ecological Condition (EC)			0.00	Lower		2.50
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	6.48	Moderate	1.80	Lower	6.78	0.80
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	9.28	Higher	3.60	Moderate	9.65	3.51
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.05	Moderate	3.03	Lower	3.90	2.46
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	5.06	Moderate	2.65	Moderate	4.76	3.33
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.20	Higher	3.35	Lower	6.73	3.35
WETLAND CONDITION (EC)			0.00	Lower		2.50
WETLAND RISK (average of Sensitivity & Stressors)			5.15	Moderate		3.08
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	11.69632389	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	33.4369826	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	15.30342932	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	13.40067103	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	24.1450862	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL3						
Date: July 7, 2021						
Observer: Emma Halupka						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	6.27	Moderate	1.64	Lower	6.62	0.73
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	3.25	Moderate	0.00	Lower	2.17	0.00
Sediment Retention & Stabilisation (SR)	10.00	Higher	0.76	Lower	10.00	0.37
Phosphorus Retention (PR)	10.00	Higher	0.86	Lower	10.00	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	4.17	Moderate	10.00	4.17
Carbon Sequestration (CS)	2.66	Lower			6.45	
Organic Nutrient Export (OE)	5.36	Moderate			3.50	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	3.30	Lower	4.37	Moderate	4.84	3.60
Amphibian & Turtle Habitat (AM)	6.29	Moderate	3.45	Moderate	6.42	4.61
Waterbird Feeding Habitat (WBF)	5.07	Moderate	2.50	Lower	3.86	2.50
Waterbird Nesting Habitat (WBN)	5.31	Moderate	2.50	Moderate	3.85	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	8.57	Higher	2.50	Lower	7.46	2.50
Pollinator Habitat (POL)	8.82	Higher	0.00	Lower	7.31	0.00
Native Plant Habitat (PH)	3.07	Lower	4.92	Lower	5.13	4.92
Public Use & Recognition (PU)			2.02	Moderate		1.68
Wetland Sensitivity (Sens)			5.42	Moderate		3.71
Wetland Ecological Condition (EC)			5.36	Moderate		7.78
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	6.27	Moderate	1.64	Lower	6.62	0.73
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	9.08	Higher	3.05	Lower	9.56	2.95
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	4.17	Moderate	2.92	Lower	3.73	2.40
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.82	Moderate	2.57	Moderate	4.62	3.26
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.82	Higher	3.70	Lower	7.04	3.70
WETLAND CONDITION (EC)			5.36	Moderate		7.78
WETLAND RISK (average of Sensitivity & Stressors)			4.95	Moderate		3.03
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	10.24748493	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	27.67000464	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	12.14597159	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	12.38393807	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	28.92715253	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL4						
Date: July 7, 2021						
Observer: Emma Halupka						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	6.48	Moderate	1.80	Lower	6.78	0.80
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	2.63	Moderate	0.00	Lower	1.75	0.00
Sediment Retention & Stabilisation (SR)	10.00	Higher	0.76	Lower	10.00	0.37
Phosphorus Retention (PR)	10.00	Higher	0.86	Lower	10.00	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	4.17	Moderate	10.00	4.17
Carbon Sequestration (CS)	4.34	Moderate			7.25	
Organic Nutrient Export (OE)	6.70	Moderate			4.38	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	3.54	Moderate	4.64	Moderate	4.94	3.74
Amphibian & Turtle Habitat (AM)	6.65	Moderate	3.71	Moderate	6.61	4.82
Waterbird Feeding Habitat (WBF)	5.22	Moderate	2.50	Lower	3.98	2.50
Waterbird Nesting Habitat (WBN)	5.38	Moderate	2.50	Moderate	3.90	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	9.17	Higher	2.50	Lower	7.98	2.50
Pollinator Habitat (POL)	8.62	Higher	0.00	Lower	7.15	0.00
Native Plant Habitat (PH)	6.50	Higher	5.04	Lower	6.49	5.04
Public Use & Recognition (PU)			2.10	Moderate		1.74
Wetland Sensitivity (Sens)			8.81	Higher		4.68
Wetland Ecological Condition (EC)			6.52	Higher		8.33
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	6.48	Moderate	1.80	Lower	6.78	0.80
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	9.29	Higher	3.05	Lower	9.66	2.95
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	4.96	Moderate	3.09	Lower	3.85	2.50
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	5.05	Moderate	2.73	Moderate	4.75	3.39
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.63	Higher	3.78	Lower	7.59	3.78
WETLAND CONDITION (EC)			6.52	Higher		8.33
WETLAND RISK (average of Sensitivity & Stressors)			6.65	Moderate		3.51
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	11.69632389	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	28.31267872	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	15.34860014	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	13.76106358	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	32.60632771	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL5						
Date: July 7, 2021						
Observer: Emma Halupka						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	5.79	Moderate	1.69	Lower	6.26	0.75
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	2.40	Moderate	0.00	Lower	1.60	0.00
Sediment Retention & Stabilisation (SR)	10.00	Higher	0.76	Lower	10.00	0.37
Phosphorus Retention (PR)	10.00	Higher	0.86	Lower	10.00	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.22	Lower	10.00	2.22
Carbon Sequestration (CS)	4.02	Moderate			7.10	
Organic Nutrient Export (OE)	4.66	Moderate			3.05	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	0.28	Lower	2.57	Moderate	3.61	2.63
Amphibian & Turtle Habitat (AM)	1.32	Lower	2.74	Moderate	3.82	4.02
Waterbird Feeding Habitat (WBF)	4.68	Moderate	2.50	Lower	3.56	2.50
Waterbird Nesting Habitat (WBN)	3.32	Moderate	2.50	Moderate	2.40	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	6.89	Moderate	2.50	Lower	6.00	2.50
Pollinator Habitat (POL)	7.38	Moderate	0.00	Lower	6.12	0.00
Native Plant Habitat (PH)	1.31	Lower	4.04	Lower	4.42	4.04
Public Use & Recognition (PU)			2.02	Moderate		1.68
Wetland Sensitivity (Sens)			4.41	Lower		3.43
Wetland Ecological Condition (EC)			0.00	Lower		5.00
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	5.79	Moderate	1.69	Lower	6.26	0.75
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	9.25	Higher	1.75	Lower	9.64	1.65
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	3.25	Moderate	1.72	Lower	2.83	1.75
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	3.27	Moderate	2.14	Moderate	2.89	2.91
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.29	Moderate	3.11	Lower	5.82	3.11
WETLAND CONDITION (EC)			0.00	Lower		5.00
WETLAND RISK (average of Sensitivity & Stressors)			4.45	Moderate		2.88
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	9.790941656	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	16.19616568	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	5.569801372	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	7.010038753	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	19.54674282	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL6						
Date: July 7, 2021						
Observer: Emma Halupka						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	5.52	Moderate	1.75	Lower	6.07	0.78
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	2.63	Moderate	0.00	Lower	1.75	0.00
Sediment Retention & Stabilisation (SR)	10.00	Higher	0.91	Lower	10.00	0.44
Phosphorus Retention (PR)	10.00	Higher	0.86	Lower	10.00	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	5.00	Moderate	10.00	5.00
Carbon Sequestration (CS)	3.27	Moderate			6.74	
Organic Nutrient Export (OE)	5.83	Moderate			3.81	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	1.49	Lower	2.81	Moderate	4.10	2.76
Amphibian & Turtle Habitat (AM)	1.28	Lower	3.18	Moderate	3.79	4.38
Waterbird Feeding Habitat (WBF)	3.81	Moderate	2.50	Lower	2.90	2.50
Waterbird Nesting Habitat (WBN)	2.90	Moderate	2.50	Moderate	2.10	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	8.89	Higher	2.50	Lower	7.74	2.50
Pollinator Habitat (POL)	8.52	Higher	0.00	Lower	7.06	0.00
Native Plant Habitat (PH)	4.64	Moderate	4.93	Lower	5.75	4.93
Public Use & Recognition (PU)			2.02	Moderate		1.68
Wetland Sensitivity (Sens)			7.26	Higher		4.24
Wetland Ecological Condition (EC)			6.52	Higher		8.33
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	5.52	Moderate	1.75	Lower	6.07	0.78
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	9.16	Higher	3.63	Moderate	9.59	3.52
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	4.16	Moderate	1.87	Lower	3.26	1.84
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	2.70	Lower	2.41	Moderate	2.78	3.13
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.12	Higher	3.71	Lower	7.29	3.71
WETLAND CONDITION (EC)			6.52	Higher		8.33
WETLAND RISK (average of Sensitivity & Stressors)			5.87	Moderate		3.29
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	9.657010469	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	33.22072336	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	7.776271249	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	6.505255828	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	30.07936923	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL7						
Date: July 7, 2021						
Observer: Emma Halupka						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	5.31	Moderate	1.75	Lower	5.91	0.78
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	2.40	Moderate	0.00	Lower	1.60	0.00
Sediment Retention & Stabilisation (SR)	10.00	Higher	0.91	Lower	10.00	0.44
Phosphorus Retention (PR)	10.00	Higher	0.86	Lower	10.00	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.50	Lower	10.00	2.50
Carbon Sequestration (CS)	2.78	Lower			6.51	
Organic Nutrient Export (OE)	4.73	Moderate			3.09	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	0.51	Lower	2.28	Moderate	3.70	2.47
Amphibian & Turtle Habitat (AM)	0.00	Lower	2.68	Moderate	3.09	3.97
Waterbird Feeding Habitat (WBF)	4.04	Moderate	2.50	Lower	3.08	2.50
Waterbird Nesting Habitat (WBN)	3.21	Moderate	2.50	Moderate	2.33	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	7.28	Moderate	2.50	Lower	6.34	2.50
Pollinator Habitat (POL)	8.02	Higher	0.00	Lower	6.65	0.00
Native Plant Habitat (PH)	2.70	Lower	4.33	Lower	4.98	4.33
Public Use & Recognition (PU)			2.02	Moderate		1.68
Wetland Sensitivity (Sens)			5.30	Moderate		3.68
Wetland Ecological Condition (EC)			3.04	Lower		6.67
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	5.31	Moderate	1.75	Lower	5.91	0.78
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	9.10	Higher	1.96	Lower	9.56	1.85
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	3.32	Moderate	1.52	Lower	2.90	1.65
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	2.75	Lower	2.11	Moderate	2.40	2.88
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.01	Higher	3.30	Lower	6.32	3.30
WETLAND CONDITION (EC)			3.04	Lower		6.67
WETLAND RISK (average of Sensitivity & Stressors)			4.89	Moderate		3.01
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	9.280404726	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	17.83798505	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	5.048193813	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	5.792021715	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	23.15054323	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL8						
Date: August 9, 2021						
Observer: Jillian Saulnier						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	5.16	Moderate	1.58	Lower	5.79	0.70
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	2.00	Lower	0.00	Lower	1.33	0.00
Sediment Retention & Stabilisation (SR)	10.00	Higher	0.91	Lower	10.00	0.44
Phosphorus Retention (PR)	10.00	Higher	0.86	Lower	10.00	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	4.17	Moderate	10.00	4.17
Carbon Sequestration (CS)	0.94	Lower			5.64	
Organic Nutrient Export (OE)	3.60	Moderate			2.35	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	3.36	Lower	3.35	Moderate	4.86	3.05
Amphibian & Turtle Habitat (AM)	6.17	Moderate	3.13	Moderate	6.35	4.34
Waterbird Feeding Habitat (WBF)	4.06	Moderate	5.00	Moderate	3.09	5.00
Waterbird Nesting Habitat (WBN)	5.41	Moderate	5.00	Higher	3.92	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	5.67	Moderate	5.00	Moderate	4.94	5.00
Pollinator Habitat (POL)	6.99	Moderate	0.00	Lower	5.79	0.00
Native Plant Habitat (PH)	1.73	Lower	3.58	Lower	4.59	3.58
Public Use & Recognition (PU)			2.02	Moderate		1.68
Wetland Sensitivity (Sens)			3.84	Lower		3.26
Wetland Ecological Condition (EC)			4.78	Moderate		7.50
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	5.16	Moderate	1.58	Lower	5.79	0.70
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.87	Higher	3.07	Lower	9.45	2.96
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	2.92	Lower	2.24	Lower	3.50	2.03
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.65	Moderate	3.81	Moderate	4.51	3.93
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	5.89	Moderate	3.93	Lower	5.45	3.93
WETLAND CONDITION (EC)			4.78	Moderate		7.50
WETLAND RISK (average of Sensitivity & Stressors)			4.16	Lower		2.80
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	8.142929173	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	27.23927072	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	6.52738618	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	17.71830851	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	23.15834212	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>



Assessment Area (AA) Results:						
Wetland ID: WL9						
Date: August 9, 2021						
Observer: Jillian Saulnier						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	5.56	Moderate	1.75	Lower	6.10	0.78
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	1.50	Lower	0.00	Lower	1.00	0.00
Sediment Retention & Stabilisation (SR)	10.00	Higher	0.91	Lower	10.00	0.44
Phosphorus Retention (PR)	10.00	Higher	0.86	Lower	10.00	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	4.17	Moderate	10.00	4.17
Carbon Sequestration (CS)	1.93	Lower			6.11	
Organic Nutrient Export (OE)	5.69	Moderate			3.72	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	2.46	Lower	3.37	Moderate	4.49	3.06
Amphibian & Turtle Habitat (AM)	4.05	Moderate	3.31	Moderate	5.24	4.49
Waterbird Feeding Habitat (WBF)	4.42	Moderate	2.50	Lower	3.37	2.50
Waterbird Nesting Habitat (WBN)	2.97	Moderate	2.50	Moderate	2.15	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	8.74	Higher	2.50	Lower	7.61	2.50
Pollinator Habitat (POL)	8.02	Higher	0.00	Lower	6.65	0.00
Native Plant Habitat (PH)	3.65	Moderate	4.75	Lower	5.36	4.75
Public Use & Recognition (PU)			2.10	Moderate		1.74
Wetland Sensitivity (Sens)			9.11	Higher		4.77
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	5.56	Moderate	1.75	Lower	6.10	0.78
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.99	Higher	3.07	Lower	9.51	2.96
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	4.05	Moderate	2.25	Lower	3.40	2.04
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	3.36	Moderate	2.49	Moderate	3.70	3.20
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.77	Higher	3.58	Lower	7.07	3.58
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			6.80	Higher		3.55
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	9.726752273	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	27.62107225	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	9.109579095	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	8.348315037	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	27.85139422	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL10						
Date: August 9, 2021						
Observer: Jillian Saulnier						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.96	Higher	1.69	Lower	8.63	0.75
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	6.44	Moderate	0.91	Lower	7.22	0.44
Phosphorus Retention (PR)	3.29	Moderate	0.86	Lower	5.80	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.50	Lower	10.00	2.50
Carbon Sequestration (CS)	7.55	Higher			8.77	
Organic Nutrient Export (OE)	8.02	Higher			5.24	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	9.04	Higher	1.35	Moderate	7.18	1.97
Amphibian & Turtle Habitat (AM)	5.56	Moderate	1.21	Lower	6.04	2.76
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.64	Moderate	2.50	Lower	5.78	2.50
Pollinator Habitat (POL)	6.77	Moderate	0.00	Lower	5.61	0.00
Native Plant Habitat (PH)	4.83	Moderate	3.80	Lower	5.83	3.80
Public Use & Recognition (PU)			2.13	Moderate		1.76
Wetland Sensitivity (Sens)			10.00	Higher		6.12
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	8.96	Higher	1.69	Lower	8.63	0.75
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.41	Higher	1.96	Lower	8.97	1.85
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.65	Higher	0.90	Lower	5.14	1.31
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	3.34	Moderate	0.73	Lower	3.62	1.66
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.43	Moderate	2.95	Lower	5.78	2.95
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.24	Higher		4.23
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	15.16000513	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	16.4903526	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	5.975632008	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	2.42449232	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	18.94169284	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL11						
Date: August 9, 2021						
Observer: Jillian Saulnier						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.71	Higher	1.58	Lower	8.44	0.70
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	6.44	Moderate	0.91	Lower	7.22	0.44
Phosphorus Retention (PR)	2.22	Lower	0.86	Lower	5.14	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.22	Lower	10.00	2.22
Carbon Sequestration (CS)	6.65	Higher			8.34	
Organic Nutrient Export (OE)	6.96	Moderate			4.55	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	7.45	Higher	0.93	Lower	6.53	1.75
Amphibian & Turtle Habitat (AM)	3.23	Lower	1.16	Lower	4.82	2.72
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.50	Moderate	2.50	Lower	5.66	2.50
Pollinator Habitat (POL)	7.02	Moderate	0.00	Lower	5.82	0.00
Native Plant Habitat (PH)	3.24	Lower	3.83	Lower	5.19	3.83
Public Use & Recognition (PU)			2.02	Moderate		1.68
Wetland Sensitivity (Sens)			10.00	Higher		5.55
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	8.71	Higher	1.58	Lower	8.44	0.70
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.16	Higher	1.78	Lower	8.84	1.67
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.53	Moderate	0.62	Lower	4.65	1.16
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.94	Lower	0.70	Lower	2.89	1.63
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.30	Moderate	2.97	Lower	5.69	2.97
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.24	Higher		3.95
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	13.75248476	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	14.49468593	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	3.430697158	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	1.350165362	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	18.70416359	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL12						
Date: August 12, 2021						
Observer: Jillian Saulnier						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.96	Higher	1.41	Lower	8.63	0.63
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	6.16	Moderate	0.76	Lower	7.00	0.37
Phosphorus Retention (PR)	3.89	Moderate	0.71	Lower	6.18	0.56
Nitrate Removal & Retention (NR)	10.00	Higher	2.67	Lower	10.00	2.67
Carbon Sequestration (CS)	7.22	Higher			8.62	
Organic Nutrient Export (OE)	7.03	Moderate			4.60	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	6.32	Higher	0.81	Lower	6.07	1.68
Amphibian & Turtle Habitat (AM)	3.04	Lower	2.06	Lower	4.72	3.46
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.17	Moderate	5.00	Moderate	5.37	5.00
Pollinator Habitat (POL)	8.11	Higher	0.00	Lower	6.72	0.00
Native Plant Habitat (PH)	3.61	Moderate	4.03	Lower	5.34	4.03
Public Use & Recognition (PU)			2.19	Moderate		1.80
Wetland Sensitivity (Sens)			10.00	Higher		6.10
Wetland Ecological Condition (EC)			7.10	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			4.55	Moderate		2.37
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	8.96	Higher	1.41	Lower	8.63	0.63
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.41	Higher	2.02	Lower	8.97	1.93
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.18	Moderate	0.54	Lower	4.37	1.12
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.82	Lower	1.23	Lower	2.83	2.07
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.04	Higher	4.00	Lower	6.27	4.00
WETLAND CONDITION (EC)			7.10	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			7.28	Higher		4.24
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	12.63333761	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	17.00834167	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	2.800553652	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	2.247795825	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	28.18516703	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL13						
Date: August 9, 2021						
Observer: Jillian Saulnier						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.57	Higher	1.41	Lower	8.34	0.63
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	6.16	Moderate	0.76	Lower	7.00	0.37
Phosphorus Retention (PR)	1.76	Lower	0.71	Lower	4.84	0.56
Nitrate Removal & Retention (NR)	10.00	Higher	3.33	Lower	10.00	3.33
Carbon Sequestration (CS)	6.30	Moderate			8.18	
Organic Nutrient Export (OE)	6.61	Moderate			4.32	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	6.69	Higher	0.69	Lower	6.22	1.62
Amphibian & Turtle Habitat (AM)	2.74	Lower	1.96	Lower	4.56	3.38
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	5.90	Moderate	5.00	Moderate	5.14	5.00
Pollinator Habitat (POL)	7.51	Moderate	0.00	Lower	6.22	0.00
Native Plant Habitat (PH)	3.68	Moderate	3.79	Lower	5.37	3.79
Public Use & Recognition (PU)			0.66	Lower		0.75
Wetland Sensitivity (Sens)			10.00	Higher		5.44
Wetland Ecological Condition (EC)			7.10	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			4.60	Moderate		2.40
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	8.57	Higher	1.41	Lower	8.34	0.63
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.03	Higher	2.47	Lower	8.75	2.38
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.01	Moderate	0.46	Lower	4.43	1.08
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.64	Lower	1.18	Lower	2.74	2.03
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.60	Moderate	3.96	Lower	5.90	3.96
WETLAND CONDITION (EC)			7.10	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			7.30	Higher		3.92
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	12.08215238	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	19.80306889	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	2.306229213	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	1.936008024	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	26.17202134	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied? NO  
 Support Rule Satisfied? NO  
 Habitat/Support Hybrid Rule Satisfied? NO  
**CONCLUSION: Site is not a WSS**

Assessment Area (AA) Results:						
Wetland ID: WL14						
Date: August 9, 2021						
Observer: Jillian Saulnier						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.57	Higher	1.41	Lower	8.34	0.63
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	6.16	Moderate	0.91	Lower	7.00	0.44
Phosphorus Retention (PR)	1.76	Lower	0.86	Lower	4.84	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.22	Lower	10.00	2.22
Carbon Sequestration (CS)	5.99	Moderate			8.03	
Organic Nutrient Export (OE)	6.39	Moderate			4.18	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	7.99	Higher	0.91	Lower	6.75	1.73
Amphibian & Turtle Habitat (AM)	2.99	Lower	2.19	Lower	4.69	3.57
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.55	Moderate	5.00	Moderate	5.70	5.00
Pollinator Habitat (POL)	7.46	Moderate	0.00	Lower	6.18	0.00
Native Plant Habitat (PH)	3.56	Lower	3.96	Lower	5.32	3.96
Public Use & Recognition (PU)			2.02	Moderate		1.68
Wetland Sensitivity (Sens)			10.00	Higher		5.40
Wetland Ecological Condition (EC)			7.10	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	8.57	Higher	1.41	Lower	8.34	0.63
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	7.99	Higher	1.78	Lower	8.73	1.67
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.80	Higher	0.60	Lower	4.74	1.15
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.79	Lower	1.31	Lower	2.81	2.14
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.66	Moderate	3.99	Lower	5.96	3.99
WETLAND CONDITION (EC)			7.10	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			7.24	Higher		3.87
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	12.08215238	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	14.18281685	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	3.499367379	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	2.357935965	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	26.58064841	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL15						
Date: August 9, 2021						
Observer: Jillian Saulnier						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	1.06	Lower	3.95	Moderate	2.74	1.75
Stream Flow Support (SFS)	2.59	Moderate	3.39	Moderate	2.08	2.25
Water Cooling (WC)	8.15	Higher	0.39	Lower	5.43	0.21
Sediment Retention & Stabilisation (SR)	2.27	Lower	1.59	Moderate	3.97	0.78
Phosphorus Retention (PR)	4.14	Moderate	1.50	Moderate	6.34	1.17
Nitrate Removal & Retention (NR)	3.90	Moderate	5.42	Moderate	5.59	5.42
Carbon Sequestration (CS)	4.96	Moderate			7.54	
Organic Nutrient Export (OE)	7.72	Higher			5.05	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	1.91	Moderate	3.25	Moderate	1.04	2.03
Aquatic Invertebrate Habitat (INV)	7.32	Higher	4.16	Moderate	6.48	3.49
Amphibian & Turtle Habitat (AM)	3.99	Moderate	4.74	Moderate	5.21	5.67
Waterbird Feeding Habitat (WBF)	5.44	Moderate	5.00	Moderate	4.14	5.00
Waterbird Nesting Habitat (WBN)	3.67	Moderate	5.00	Higher	2.66	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	9.03	Higher	5.00	Moderate	7.86	5.00
Pollinator Habitat (POL)	9.35	Higher	0.00	Lower	7.75	0.00
Native Plant Habitat (PH)	4.03	Moderate	5.20	Lower	5.51	5.20
Public Use & Recognition (PU)			2.10	Moderate		1.74
Wetland Sensitivity (Sens)			10.00	Higher		5.51
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			5.14	Moderate		2.65
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	1.06	Lower	3.95	Moderate	2.74	1.75
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	4.39	Moderate	4.13	Moderate	6.70	3.94
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.30	Higher	3.40	Lower	5.62	2.73
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.22	Moderate	4.30	Moderate	3.91	4.60
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.41	Higher	4.30	Lower	7.45	4.30
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.57	Higher		4.08
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	4.199721698	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	18.10583365	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	24.84015798	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	18.14101125	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	36.18289904	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>

Assessment Area (AA) Results:						
Wetland ID: WL16						
Date: August 9, 2021						
Observer: Jillian Saulnier						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	8.82	Higher	1.64	Lower	8.53	0.73
Stream Flow Support (SFS)	0.00	Lower	0.00	Lower	0.00	0.00
Water Cooling (WC)	0.00	Lower	0.00	Lower	0.00	0.00
Sediment Retention & Stabilisation (SR)	6.16	Moderate	0.91	Lower	7.00	0.44
Phosphorus Retention (PR)	3.89	Moderate	0.86	Lower	6.18	0.67
Nitrate Removal & Retention (NR)	10.00	Higher	2.67	Lower	10.00	2.67
Carbon Sequestration (CS)	7.31	Higher			8.66	
Organic Nutrient Export (OE)	7.03	Moderate			4.60	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	7.14	Higher	0.84	Lower	6.41	1.69
Amphibian & Turtle Habitat (AM)	2.97	Lower	2.10	Lower	4.68	3.50
Waterbird Feeding Habitat (WBF)	0.00	Lower	0.00	Lower	0.00	0.00
Waterbird Nesting Habitat (WBN)	0.00	Lower	0.00	Lower	0.00	0.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.30	Moderate	5.00	Moderate	5.49	5.00
Pollinator Habitat (POL)	8.41	Higher	0.00	Lower	6.97	0.00
Native Plant Habitat (PH)	4.20	Moderate	4.15	Lower	5.58	4.15
Public Use & Recognition (PU)			2.19	Moderate		1.80
Wetland Sensitivity (Sens)			10.00	Higher		6.19
Wetland Ecological Condition (EC)			7.10	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			4.55	Moderate		2.37
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	8.82	Higher	1.64	Lower	8.53	0.73
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	8.42	Higher	2.07	Lower	8.98	1.96
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.34	Moderate	0.56	Lower	4.58	1.13
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	1.78	Lower	1.26	Lower	2.81	2.10
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.36	Higher	4.03	Lower	6.49	4.03
WETLAND CONDITION (EC)			7.10	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			7.28	Higher		4.28
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	14.42632346	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	17.44322891	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	2.975026073	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	2.246105439	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	29.62375409	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>



Assessment Area (AA) Results:						
Wetland ID: WL17						
Date: August 9, 2021						
Observer: Jillian Saulnier						
Latitude & Longitude (decimal degrees):						
Scores will appear below after data are entered in worksheets OF, F, and S. See Manual for definitions and descriptions of how scores were computed.						
Wetland Functions or Other Attributes:	Function Score (Normalised)	Function Rating	Benefits Score (Normalised)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	0.59	Lower	4.40	Moderate	2.38	1.95
Stream Flow Support (SFS)	1.86	Moderate	4.37	Moderate	1.50	2.91
Water Cooling (WC)	7.65	Higher	0.46	Lower	5.10	0.25
Sediment Retention & Stabilisation (SR)	1.95	Lower	1.32	Moderate	3.72	0.65
Phosphorus Retention (PR)	2.09	Lower	1.25	Moderate	5.05	0.97
Nitrate Removal & Retention (NR)	3.51	Moderate	2.33	Lower	5.31	2.33
Carbon Sequestration (CS)	3.64	Moderate			6.92	
Organic Nutrient Export (OE)	7.50	Higher			4.90	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	5.59	Higher	2.65	Moderate	3.04	1.66
Aquatic Invertebrate Habitat (INV)	6.20	Higher	4.61	Moderate	6.02	3.73
Amphibian & Turtle Habitat (AM)	3.89	Moderate	4.72	Moderate	5.16	5.65
Waterbird Feeding Habitat (WBF)	5.63	Moderate	5.00	Moderate	4.28	5.00
Waterbird Nesting Habitat (WBN)	3.06	Moderate	5.00	Higher	2.22	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	8.81	Higher	5.00	Moderate	7.67	5.00
Pollinator Habitat (POL)	8.55	Higher	0.00	Lower	7.08	0.00
Native Plant Habitat (PH)	3.01	Lower	4.92	Lower	5.10	4.92
Public Use & Recognition (PU)			2.02	Moderate		1.68
Wetland Sensitivity (Sens)			9.56	Higher		4.90
Wetland Ecological Condition (EC)			8.26	Higher		9.17
Wetland Stressors (STR) (higher score means more stress)			4.48	Moderate		2.34
<b>Summary Ratings for Grouped Functions:</b>						
HYDROLOGIC Group (WS)	0.59	Lower	4.40	Moderate	2.38	1.95
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.22	Moderate	1.98	Lower	6.08	1.83
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.73	Higher	3.88	Lower	5.20	3.01
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.63	Moderate	4.24	Moderate	4.05	4.56
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.80	Higher	4.15	Lower	7.14	4.15
WETLAND CONDITION (EC)			8.26	Higher		9.17
WETLAND RISK (average of Sensitivity & Stressors)			7.02	Higher		3.62
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among all the NS calibration wetlands that were assessed previously.						

## NOVA SCOTIA - Functional WSS Interpretation Tool

### 1. General Description of Tool:

This interpretive tool automatically determines whether the subject wetland will be regulated as a Wetland of Special Significance (WSS). This determination is made based on the WESP-AC functional results, per the Nova Scotia *Wetland Conservation Policy*.

A 'Function-Benefit Product' (FBP) is calculated based upon the Grouped Functions, and has a theoretical maximum of 100. Threshold values for the FBP are applied, in order to categorize the FBP scores into 'Low', 'Moderate' or 'High' scores. Thresholds are determined based upon the statistical distribution of WESP-AC scores compiled from various sites across the Province (N=442). These categories are subsequently used to apply various 'Functional WSS Rules', as described below.

For the purpose of defining and applying the Functional WSS rules, two supergroups are defined based on grouped functions, as follows: **(1) Support Supergroup** - includes Hydrologic, Water Quality Support, and Aquatic Support grouped functions. **(2) Habitat Supergroup** - includes Aquatic Habitat and Transition Habitat grouped functions.

### 2. Functional WSS Rule Definitions:

**Habitat Rule:** In consideration of the Habitat Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(HAB 1) Two 'High Scores' OR

(HAB 2) One 'High' and one 'Moderate' score

**Support Rule:** In consideration of the Support Supergroup, the subject wetland is a WSS if either of the following sub-rules are satisfied:

(SUP 1) Three 'High' scores OR

(SUP 2) Two 'High' and one 'Moderate' score

**Habitat/Support Hybrid Rule:** In consideration of both the Habitat and Support Supergroups, the subject wetland is a WSS if the following is satisfied:

(HYB 1) One 'High' Habitat score AND Two or three 'High' Support scores

### 3. Functional WSS Interpretation Results

Function-Benefit Product (FBP)	FBP SCORE	FBP SCORE CATEGORY
SUPPORT SUPERGROUP - HYDROLOGIC	2.57393735	Low
SUPPORT SUPERGROUP - WATER QUALITY SUPPORT	6.38694865	Low
SUPPORT SUPERGROUP - AQUATIC SUPPORT	26.10626993	Low
HABITAT SUPERGROUP - AQUATIC HABITAT	19.61791521	Low
HABITAT SUPERGROUP - TRANSITION HABITAT	32.38844344	Low

#### 3a. Functional WSS Determination: Automatic Method

Habitat Rule Satisfied?	NO
Support Rule Satisfied?	NO
Habitat/Support Hybrid Rule Satisfied?	NO
<b>CONCLUSION:</b>	<b>Site is not a WSS</b>