

APPENDIX F3
AMEC 2010 and 2014 Wetland Baseline Survey Report

Attachment D – Wetland Functional Assessment Forms

Attachment E – Additional Wetland Delineation Data Sheets

Black Point Quarry Project
Guysborough County, NS
SLR Project No.: 210.05913.00000

APPENDIX D
Wetland Functional Assessment Forms

APPENDIX D: WL1											Nova Scotia Wetland Evaluation Technique Field Data Sheet												
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 645437 E x 5022529 N												
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS																	
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																							
Evaluation Date: 04-Sep-14						Site Visit Date: 19-Aug-14																	
Weather Conditions (past 48 hours): Periods of rain with clouds																							
Seasonal Weather Conditions: Typical																							
SECTION ONE: WATERSHED CHARACTERISTICS																							
1 Watershed Name (tertiary): 1EQ-SD						Size: 518 km ²																	
2 % Watershed Land Cover						For: 43		Nat: 36		Past/Hay: <1		Crop: <1		Urb/Com: 2		Road: <1		Other Dev: <1 (Gravel Pit, Landfill, Industrial					
3 % Watershed WL Cover and by Class						Total: 10%		SM: <1		BO: 6		FE: 1		FM: 2		FS: 1		SS: 1		CP: <1		VP: Present	
SF1 Watershed condition						H		M		L													
SF2 Proportion of WL area in watershed & opportunity for floodwater detention						H		M		L													
SECTION TWO: WETLAND CHARACTERISTICS																							
Wetland Type: Bog/Swamp						WL size: 15 hectares					Landform: Basin					Landscape Position: Lotic-Stream Confined							
Water flow path: Throughflow						Wetland Origin: Natural																	
1 Water Regime						PF		SF		TF		SS		PS		RfT		IfT		AF			
2 # WL's within 30m project area						Total# 0		SM:		BO:		FE:		FM:		FS:		SS:		CP:		VP:	
3 Is WL part of complex						Yes		No															
4 % each wetland type in complex						SM:		BO: 43		FE:		FM:		FS: 32		SS: 25		CP:		VP:			
5 Is WL bordering or associated with a lake or pond?						bordering				within 100m				N/A				specify					
6 Standing water?						Yes		Avg Dep: 5-20				% Inundated: 10%				No							
7 Inlet or Outlet (circle all that apply)?						Inlet		Outlet															
8 Adjacent Upland Land Use within 100m (%)						For: 90		Nat:		PasHay:		Crop:		UrbCm:		Road:		Other Dev: 10 Powerline corridor					
9 Are there stressors in WL or WL buffer area? Circle primary stressor(s).						DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, AT __, x , DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify): Powerline corridor along south end																	
10 Hydrology Altered (circle all that apply)?						Ditching		Dams		Tiles		Culvert		Well		Diversion		Other Specify:					
SF3 Rate the general wetland condition/integrity						H		M		L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																							
1 Average width of adjacent naturalized buffer						>1000_m																	
2 Widths for water quality						H >1		M 8-15		L <8		Powerline located along one side of wetland											
3 Widths for wildlife habitat						H >100		M 15-100		L <15		Powerline located along one side of wetland											
4 Adjacent area vegetation condition (list % in each category)						H 90%		M		L 10%													
5 Adjacent area diversity and structure (list % in each category)						H 90%		M		L 10%													
6 Adjacent Upland Slope (list % in each category)						Steep 5%		Mod 20%		Gentle 75%													
7 Adjacent land supports water quality						Yes		No				Specify:											
8 Adjacent land supports wildlife habitat						Yes		No				Specify:											
SF4 Rate the overall condition and integrity land adjacent to wetland						H		M		L		is buffer required to maintain red flag functions of wetland? If yes if no											
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																							
SF5 Is the WL a WSS?						Yes		No															

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No					
SF7	Species of concern (Fed/Prov)? Specify. <i>Cladonia stygia</i>	End	Thr	SpC	Red	Yellow	S1	S2 S3 N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:				
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No					
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:				
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No					
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:				
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY								
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify: Located along a first order stream				
2	Is WL geographically isolated?	Yes	No	Specify:				
3	WL ability to maintain characteristic hydrologic regime	High		Med	Low			
4	Water Storage Depth (list % in each class)	>30cm	15-30cm 10%	up to 15cm 10%	No ponding			
5	Signs of surface water retention observed?	SW_30_cm, WSL_, WCD_, WM_cm, SM_cm, SD_, AD_, ID_, PMT_x_, AI_, BT_, AR_, Other:						
6	Describe observable/historical anthropogenic sediment delivery	Low		Med	High			
7	Disturbance of WL soils	Low		Med	High			
8	Predominant soils adjacent to WL	Sand		Silt/loam	Clay/bedrock			
9	Capacity of WL to alter/retard flows	High		Med	Low			
10	Roughness coefficient for surface water flow path	High		Med	Low			
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med	Low			
12	Water Source	Natural		Mostly natural	Partly altered	Controlled		
13	Hydrology of tidal wetlands	Unrestricted		Reduced	Restricted	N/A		
14	Coastal storm surge	Yes	No					
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified				
SF14	WL important for maintaining stream flow?	Yes	No					
SF15	WL ability to detain surface water	High	Med	Low				
SECTION SIX: WATER QUALITY								
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med	Low			
2	Nutrients/sediments from surrounding land	High		Med	Low			
3	Significant flood/stormwater attenuation	Yes	No					
4	Vegetation capacity to settle suspended sediments	High		Med	Low			
5	WL type /landscape position holds/filters runoff?	Yes	No					
SF16	Wetland improves water quality?	Yes	No					
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High				
SF18	WL contributes to water quality in downstream resources	High	Med	Low				
SECTION SEVEN: GROUNDWATER INTERACTIONS								
1	Describe soils in wetland	Recharge		Discharge				
2	Land use / run off in subwatershed upstream	Recharge		Discharge				
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge				
4	Hydroperiod of wetland	Recharge		Discharge				
5	Describe inlet/outlet configuration	Recharge		Discharge				
6	Characterize topographic relief surrounding wetland	Recharge		Discharge				

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Picea mariana</i> (30%)/ <i>Chamaedaphne calyculata</i> (20%)/ <i>Nemopanthes mucronata</i> (15%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __,ATV __,G __,M __,In __, D/D __, Im __, OAH __, li __, Sd __,E __,other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3 N/A C. stygia
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_90_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Dragon flies, Passerines, Beaver, Moose Tracks					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr	SpC	Red	Yellow	S1	S2	S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __,CP __,CO __,PO __,PA __,AV_x __,GB __,E __,HI __, WV __, BO __,HU __, PG_x __, BP_x __,F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL2											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 645430 E x 5024058 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 04-Sep-14						Site Visit Date: 20-Aug-14															
Weather Conditions (past 48 hours): Periods of rain with clouds; sun and cloud																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Fen/Swamp/Marsh						WL size: 6 hectares					Landform: Basin			Landscape Position: Lotic Pond							
Water flow path: Inflow						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO:	FE: 23	FM: 45	FS: 32	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering	within 100m		N/A		specify: small pond at northern end of wetland										
6	Standing water?					Yes	Avg Dep: 5-20		% Inundated: 15%		No										
7	Inlet or Outlet (circle all that apply)?					Inlet	Outlet														
8	Adjacent Upland Land Use within 100m (%)					For: 90	Nat:	PasHay:	Crop:	UrbCm:	Road:	Other Dev: 10 gravel cobble beach									
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, Dwp __, M __, GC __, ATV __, DG_x __, EA __, R __, Rr __, U/CD __, F_x __, FA __, other (specify): Coastal garbage															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8	gravel/cobble/boulder Beach along northern end of wetland												
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 90%	M	L 10%													
5	Adjacent area diversity and structure (list % in each category)					H 90%	M	L 10%													
6	Adjacent Upland Slope (list % in each category)					Steep 5%	Mod 20%	Gentle 75%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No							
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3	N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:						
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No							
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:						
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No							
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:						
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY										
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:						
2	Is WL geographically isolated?	Yes	No	Specify:						
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm 10%	up to 15cm 5%		No ponding				
5	Signs of surface water retention observed?	SW_30_cm, WSL_x_, WCD_x_, WM_cm, SM_cm, SD_, AD_x_, ID_, PMT_x_, Al_, BT_, AR_, Other:								
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High				
7	Disturbance of WL soils	Low		Med		High				
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock				
9	Capacity of WL to alter/retard flows	High		Med		Low				
10	Roughness coefficient for surface water flow path	High		Med		Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low				
12	Water Source	Natural		Mostly natural		Partly altered		Controlled		
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A		
14	Coastal storm surge	Yes	No							
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified						
SF14	WL important for maintaining stream flow?	Yes	No							
SF15	WL ability to detain surface water	High	Med	Low						
SECTION SIX: WATER QUALITY										
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low				
2	Nutrients/sediments from surrounding land	High		Med		Low				
3	Significant flood/stormwater attenuation	Yes	No							
4	Vegetation capacity to settle suspended sediments	High		Med		Low				
5	WL type /landscape position holds/filters runoff?	Yes	No							
SF16	Wetland improves water quality?	Yes	No							
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High						
SF18	WL contributes to water quality in downstream resources	High	Med	Low						
SECTION SEVEN: GROUNDWATER INTERACTIONS										
1	Describe soils in wetland	Recharge		Discharge						
2	Land use / run off in subwatershed upstream	Recharge		Discharge						
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge						
4	Hydroperiod of wetland	Recharge		Discharge						
5	Describe inlet/outlet configuration	Recharge		Discharge						
6	Characterize topographic relief surrounding wetland	Recharge		Discharge						

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream? Small pond	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Typha latifolia</i> (30%)/ <i>Chamaedaphne calyculata</i> (10%)/ <i>Scirpus</i> (15%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	Specify type(s) below: regenerating vegetation in south end				
5	Disturbance Types	H __,ATV __,G __,M __,In __, D/D __, Im __, OAH __, li __, Sd __,E __,other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	85 %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Dragon flies, Passerines, Newts					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr	SpC	Red	Yellow	S1	S2	S3
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __,CP __,CO __,PO __,PA __,AV __,x __,GB __,E __,HI __, WV __, BO __,HU __, PG __, BP __,F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

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Evaluation Date: 04-Sep-14			Site Visit Date: 20-Aug-14								
Weather Conditions (past 48 hours): Sun and Clouds											
Seasonal Weather Conditions: Typical											
SECTION ONE: WATERSHED CHARACTERISTICS											
1	Watershed Name (tertiary): 1EQ-SD			Size: 518 km ²							
2	% Watershed Land Cover			For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial	
3	% Watershed WL Cover and by Class			Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1 CP: <1 VP: Present	
SF1	Watershed condition			H	M	L					
SF2	Proportion of WL area in watershed & opportunity for floodwater detention			H	M	L					
SECTION TWO: WETLAND CHARACTERISTICS											
Wetland Type: Fen				WL size: 0.5 hectares			Landform: Slope		Landscape Position: Lotic-Stream Confined		
Water flow path: Throughflow				Wetland Origin: Natural							
1	Water Regime			PF	SF	TF	SS	PS	RfT	IfT AF	
2	# WL's within 30m project area			Total# 0	SM:	BO:	FE:	FM:	FS:	SS: CP: VP:	
3	Is WL part of complex			Yes	No						
4	% each wetland type in complex			SM:	BO:	FE: 100	FM:	FS:	SS:	CP: VP:	
5	Is WL bordering or associated with a lake or pond?			bordering		within 100m		N/A	specify		
6	Standing water?			Yes	Avg Dep: 5-10		% Inundated: 5%		No		
7	Inlet or Outlet (circle all that apply)?			Inlet	Outlet						
8	Adjacent Upland Land Use within 100m (%)			For: 100	Nat:	PasHay:	Crop:	UrbCm:	Road:	Other Dev:	
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).			DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify):							
10	Hydrology Altered (circle all that apply)?			Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:	
SF3	Rate the general wetland condition/integrity			H	M	L					
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY											
1	Average width of adjacent naturalized buffer			>1000_m							
2	Widths for water quality			H >1	M 8-15	L <8					
3	Widths for wildlife habitat			H >100	M 15-100	L <15					
4	Adjacent area vegetation condition (list % in each category)			H 100%	M	L					
5	Adjacent area diversity and structure (list % in each category)			H 100%	M	L					
6	Adjacent Upland Slope (list % in each category)			Steep 80%	Mod 15%	Gentle 5%					
7	Adjacent land supports water quality			Yes	No	Specify:					
8	Adjacent land supports wildlife habitat			Yes	No	Specify:					
SF4	Rate the overall condition and integrity land adjacent to wetland			H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no				
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES											
SF5	Is the WL a WSS?			Yes	No						

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No							
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3	N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No		specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No							
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No		specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No							
SF12	Fed/Prov/Municipal area of interest?	Yes	No		specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY										
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No		Specify: small first order stream flows through wetland					
2	Is WL geographically isolated?	Yes	No		Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med	Low					
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm 5%	No ponding					
5	Signs of surface water retention observed?	SW_10_cm, WSL_, WCD_, WM_cm, SM_cm, SD_, AD_, ID_, PMT_, AI_, BT_, AR_, Other:								
6	Describe observable/historical anthropogenic sediment delivery	Low		Med	High					
7	Disturbance of WL soils	Low		Med	High					
8	Predominant soils adjacent to WL	Sand		Silt/loam	Clay, bedrock					
9	Capacity of WL to alter/retard flows	High		Med	Low					
10	Roughness coefficient for surface water flow path	High		Med	Low					
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med	Low					
12	Water Source	Natural		Mostly natural	Partly altered	Controlled				
13	Hydrology of tidal wetlands	Unrestricted		Reduced	Restricted	N/A				
14	Coastal storm surge	Yes	No							
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified						
SF14	WL important for maintaining stream flow?	Yes	No							
SF15	WL ability to detain surface water	High	Med	Low						
SECTION SIX: WATER QUALITY										
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med	Low					
2	Nutrients/sediments from surrounding land	High		Med	Low					
3	Significant flood/stormwater attenuation	Yes	No							
4	Vegetation capacity to settle suspended sediments	High		Med	Low					
5	WL type /landscape position holds/filters runoff?	Yes	No							
SF16	Wetland improves water quality?	Yes	No							
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High						
SF18	WL contributes to water quality in downstream resources	High	Med	Low						
SECTION SEVEN: GROUNDWATER INTERACTIONS										
1	Describe soils in wetland	Recharge		Discharge						
2	Land use / run off in subwatershed upstream	Recharge		Discharge						
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge						
4	Hydroperiod of wetland	Recharge		Discharge						
5	Describe inlet/outlet configuration	Recharge		Discharge						
6	Characterize topographic relief surrounding wetland	Recharge		Discharge						

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Osmunda cinnamomea</i> (20%)/ <i>Rhynchospora alba</i> (20%)/ <i>Mainantheum trifolium</i> (15%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __,ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3
									N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_95_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Dragon flies, Passerines, Bull Frog					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3
									N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, x __, GB __, E __, HI __, WV __, BO __, HU __, PG __, BP __, F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL4											Nova Scotia Wetland Evaluation Technique Field Data Sheet											
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 645076 E x 5024059 N											
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS																
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																						
Evaluation Date: 04-Sep-14						Site Visit Date: 20-Aug-14																
Weather Conditions (past 48 hours): Sun and Clouds																						
Seasonal Weather Conditions: Typical																						
SECTION ONE: WATERSHED CHARACTERISTICS																						
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²																
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial										
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present								
SF1	Watershed condition					H	M	L														
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L														
SECTION TWO: WETLAND CHARACTERISTICS																						
Wetland Type: Bog						WL size: 0.2 hectares					Landform: Basin					Landscape Position: Terrene						
Water flow path: Isolated						Wetland Origin: Natural																
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF									
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:								
3	Is WL part of complex					Yes	No															
4	% each wetland type in complex					SM:	BO: 100	FE:	FM:	FS:	SS:	CP:	VP:									
5	Is WL bordering or associated with a lake or pond?					bordering			within 100m			N/A	specify									
6	Standing water?					Yes	Avg Dep: 5-10			% Inundated:			No									
7	Inlet or Outlet (circle all that apply)?					Inlet	Outlet															
8	Adjacent Upland Land Use within 100m (%)					For: 100	Nat:	PasHay:	Crop:	UrbCm:	Road:	Other Dev:										
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD__, CW__, WcS__, O/C__, EB__, DP__, F__, M__, ES__, NE__, DwP__, M__, GC__, ATV__, DG__, EA__, R__, Rr__, U/CD__, F__, FA__, other (specify):																
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:										
SF3	Rate the general wetland condition/integrity					H	M	L														
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																						
1	Average width of adjacent naturalized buffer					>1000_m																
2	Widths for water quality					H >1	M 8-15	L <8														
3	Widths for wildlife habitat					H >100	M 15-100	L <15														
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L														
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L														
6	Adjacent Upland Slope (list % in each category)					Steep 40%	Mod 40%	Gentle 20%														
7	Adjacent land supports water quality					Yes	No	Specify:														
8	Adjacent land supports wildlife habitat					Yes	No	Specify:														
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no													
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																						
SF5	Is the WL a WSS?					Yes	No															

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low			
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding			
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT __, AI __, BT __, AR __, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High			
7	Disturbance of WL soils	Low		Med		High			
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock			
9	Capacity of WL to alter/retard flows	High		Med		Low			
10	Roughness coefficient for surface water flow path	High		Med		Low			
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low			
12	Water Source	Natural		Mostly natural		Partly altered		Controlled	
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A	
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified			Significantly Modified			
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low			
2	Nutrients/sediments from surrounding land	High		Med		Low			
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med		Low			
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Picea mariana</i> (70%)/ <i>Carex trisperma</i> (40%)/ <i>Mainantheum trifolium</i> (25%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __,ATV __,G __,M __,In __, D/D __, Im __, OAH __, li __, Sd __,E __,other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3
									N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_100_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list:					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3
									N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __,CP __,CO __,PO __,PA __,AV __,GB __,E __,HI __, WV __, BO __,HU __, PG __, BP __,F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No							
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3	N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:						
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No							
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:						
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No							
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:						
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY										
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:						
2	Is WL geographically isolated?	Yes	No	Specify:						
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding				
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT __, AI __, BT __, AR __, Other:								
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High				
7	Disturbance of WL soils	Low		Med		High				
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock				
9	Capacity of WL to alter/retard flows	High		Med		Low				
10	Roughness coefficient for surface water flow path	High		Med		Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low				
12	Water Source	Natural		Mostly natural		Partly altered		Controlled		
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A		
14	Coastal storm surge	Yes	No							
SF13	WL hydrologic condition	Natural	Modified			Significantly Modified				
SF14	WL important for maintaining stream flow?	Yes	No							
SF15	WL ability to detain surface water	High	Med	Low						
SECTION SIX: WATER QUALITY										
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low				
2	Nutrients/sediments from surrounding land	High		Med		Low				
3	Significant flood/stormwater attenuation	Yes	No							
4	Vegetation capacity to settle suspended sediments	High		Med		Low				
5	WL type /landscape position holds/filters runoff?	Yes	No							
SF16	Wetland improves water quality?	Yes	No							
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High						
SF18	WL contributes to water quality in downstream resources	High	Med	Low						
SECTION SEVEN: GROUNDWATER INTERACTIONS										
1	Describe soils in wetland	Recharge		Discharge						
2	Land use / run off in subwatershed upstream	Recharge		Discharge						
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge						
4	Hydroperiod of wetland	Recharge		Discharge						
5	Describe inlet/outlet configuration	Recharge		Discharge						
6	Characterize topographic relief surrounding wetland	Recharge		Discharge						

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Illex glabra</i> (20%)/ <i>Osmunda cinnamomea</i> (20%)/ <i>Picea mariana</i> (10%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __,ATV __,G __,M __,In __, D/D __, Im __, OAH __, li __, Sd __,E __,other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3
									N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_100_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Passerines, Wood frog, Brown Snake					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3
									N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __,CP __,CO __,PO __,PA __,AV __,x __,GB __,E __,HI __, WV __, BO __,HU __, PG __, BP __,F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL6											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 644737 E x 5024077 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 04-Sep-14						Site Visit Date: 20-Aug-14															
Weather Conditions (past 48 hours): Sun and Clouds																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Bog						WL size: 0.3 hectares					Landform: Basin					Landscape Position: Terrene outflow					
Water flow path: Outflow						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO: 100	FE:	FM:	FS:	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering		within 100m			N/A	specify									
6	Standing water?					Yes	Avg Dep: 5-10		% Inundated:			No									
7	Inlet or Outlet (circle all that apply)?					Inlet	Outle														
8	Adjacent Upland Land Use within 100m (%)					For: 90	Nat: 10	PasHay:	Crop:	UrbCm:	Road:	Other Dev:									
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD__, CW__, WcS__, O/C__, EB__, DP__, F__, M__, ES__, NE__, DwP__, M__, GC__, ATV__, DG__, EA__, R__, Rr__, U/CD__, F__, FA__, other (specify):															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8													
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L													
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L													
6	Adjacent Upland Slope (list % in each category)					Steep 70%	Mod 25%	Gentle 5%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No							
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3	N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No		specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No							
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No		specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No							
SF12	Fed/Prov/Municipal area of interest?	Yes	No		specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY										
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No		Specify: Small outlet stream at east and west end of wetlands					
2	Is WL geographically isolated?	Yes	No		Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding				
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT __, AI __, BT __, AR __, Other:								
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High				
7	Disturbance of WL soils	Low		Med		High				
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock				
9	Capacity of WL to alter/retard flows	High		Med		Low				
10	Roughness coefficient for surface water flow path	High		Med		Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low				
12	Water Source	Natural		Mostly natural		Partly altered		Controlled		
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A		
14	Coastal storm surge	Yes	No							
SF13	WL hydrologic condition	Natural	Modified		Significantly Modified					
SF14	WL important for maintaining stream flow?	Yes	No							
SF15	WL ability to detain surface water	High	Med	Low						
SECTION SIX: WATER QUALITY										
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low				
2	Nutrients/sediments from surrounding land	High		Med		Low				
3	Significant flood/stormwater attenuation	Yes	No							
4	Vegetation capacity to settle suspended sediments	High		Med		Low				
5	WL type /landscape position holds/filters runoff?	Yes	No							
SF16	Wetland improves water quality?	Yes	No							
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High						
SF18	WL contributes to water quality in downstream resources	High	Med	Low						
SECTION SEVEN: GROUNDWATER INTERACTIONS										
1	Describe soils in wetland	Recharge		Discharge						
2	Land use / run off in subwatershed upstream	Recharge		Discharge						
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge						
4	Hydroperiod of wetland	Recharge		Discharge						
5	Describe inlet/outlet configuration	Recharge		Discharge						
6	Characterize topographic relief surrounding wetland	Recharge		Discharge						

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Mainantheum trifolium</i> (20%)/ <i>Gaylussacia baccata</i> (10%)/ <i>Eriophorum virginicum</i> (10%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __,ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3
									N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_100_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Passerines, Wood frog, Passerines					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3
									N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, GB __, E __, HI __, WV __, BO __, HU __, PG __, BP __, F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL7											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 644845 E x 5024349 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 04-Sep-14						Site Visit Date: 20-Aug-14															
Weather Conditions (past 48 hours): Sun and Clouds																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Treed Swamp						WL size: 0.5 hectares			Landform: Slope			Landscape Position: Lotic Stream-Confinde									
Water flow path: Throughflow						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO:	FE:	FM:	FS: 100	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering		within 100m		N/A	specify										
6	Standing water?					Yes	Avg Dep: 5-10		% Inundated:		No										
7	Inlet or Outlet (circle all that apply)?					Inlet	Outlet														
8	Adjacent Upland Land Use within 100m (%)					For: 70	Nat: 20	PasHay:	Crop:	UrbCm:	Road:	Other Dev:		10 Rock cliff							
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD__, CW__, WcS__, O/C__, EB__, DP__, F__, M__, ES__, NE__, Dwp__, M__, GC__, ATV__, DG__, EA__, R__, Rr__, U/CD__, F__, FA__, other (specify):															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8													
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L													
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L													
6	Adjacent Upland Slope (list % in each category)					Steep 30%	Mod 60%	Gentle 10%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No							
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3	N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:						
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No							
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:						
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No							
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:						
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY										
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:						
2	Is WL geographically isolated?	Yes	No	Specify:						
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding				
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT_x __, AI __, BT __, AR __, Other:								
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High				
7	Disturbance of WL soils	Low		Med		High				
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock				
9	Capacity of WL to alter/retard flows	High		Med		Low				
10	Roughness coefficient for surface water flow path	High		Med		Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low				
12	Water Source	Natural		Mostly natural		Partly altered		Controlled		
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A		
14	Coastal storm surge	Yes	No							
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified						
SF14	WL important for maintaining stream flow?	Yes	No							
SF15	WL ability to detain surface water	High	Med	Low						
SECTION SIX: WATER QUALITY										
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low				
2	Nutrients/sediments from surrounding land	High		Med		Low				
3	Significant flood/stormwater attenuation	Yes	No							
4	Vegetation capacity to settle suspended sediments	High		Med		Low				
5	WL type /landscape position holds/filters runoff?	Yes	No							
SF16	Wetland improves water quality?	Yes	No							
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High						
SF18	WL contributes to water quality in downstream resources	High	Med	Low						
SECTION SEVEN: GROUNDWATER INTERACTIONS										
1	Describe soils in wetland	Recharge		Discharge						
2	Land use / run off in subwatershed upstream	Recharge		Discharge						
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge						
4	Hydroperiod of wetland	Recharge		Discharge						
5	Describe inlet/outlet configuration	Recharge		Discharge						
6	Characterize topographic relief surrounding wetland	Recharge		Discharge						

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Picea mariana</i> (60%)/ <i>Osmunda cinnamomea</i> (20%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __,ATV __,G __,M __,In __, D/D __, Im __, OAH __, li __, Sd __,E __,other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3
									N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_100_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Passerines, Wood frog					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3
									N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __,CP __,CO __,PO __,PA __,AV __,GB __,E __,HI __, WV __, BO __,HU __, PG __, BP __,F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL8											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 644009 E x 5023134 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 04-Sep-14						Site Visit Date: 22-Aug-14															
Weather Conditions (past 48 hours): Sun and Clouds																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Swamp/Bog/Fen						WL size: 10.3 hectares					Landform: Flat					Landscape Position: Lotic Stream-Confinde					
Water flow path: Throughflow						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO: 26	FE: 24	FM:	FS: 50	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering	within 100m		N/A		specify Portion of wetland borers Fogherty Lak										
6	Standing water?					Yes	Avg Dep: 0-5		% Inundated: 2%		No										
7	Inlet or Outlet (circle all that apply)?					Inlet	Outlet														
8	Adjacent Upland Land Use within 100m (%)					For: 40	Nat: 50	PasHay:	Crop:	UrbCm:	Road:	Other Dev:	10 lake								
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, Dwp __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify):															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8													
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L													
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L													
6	Adjacent Upland Slope (list % in each category)					Steep 10%	Mod 60%	Gentle 30%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify. <i>Usnea flammea</i> ; <i>Cladonia stygia</i>	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify: Small watercourse flows through wetland from north to south					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med	Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm	No ponding				
5	Signs of surface water retention observed?	SW_5_cm, WSL_, WCD_, WM_cm, SM_cm, SD_, AD_, ID_, PMT_x_, AI_, BT_, AR_, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med	High				
7	Disturbance of WL soils	Low		Med	High				
8	Predominant soils adjacent to WL	Sand		Silt/loam	Clay, bedrock				
9	Capacity of WL to alter/retard flows	High		Med	Low				
10	Roughness coefficient for surface water flow path	High		Med	Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med	Low				
12	Water Source	Natural		Mostly natural	Partly altered	Controlled			
13	Hydrology of tidal wetlands	Unrestricted		Reduced	Restricted	N/A			
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified					
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med	Low				
2	Nutrients/sediments from surrounding land	High		Med	Low				
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med	Low				
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth <4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Picea mariana</i> (60%)/ <i>Osmunda cinnamomea</i> (20%)/ <i>Carex trisperma</i> (40%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __, ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3 N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_100_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians, etc)	Yes	No	list: Passerines, Wood frog, Deer					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, x __, GB __, E __, HI __, WV __, BO __, HU __, PG __, x __, BP __, x __, F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL9											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 643617 E x 5023397 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 05-Sep-14						Site Visit Date: 22-Aug-14															
Weather Conditions (past 48 hours): Sun and Clouds																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Bog						WL size: 4.6 hectares					Landform: Flat					Landscape Position: Terrene					
Water flow path: Isolated						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO: 100	FE:	FM:	FS:	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering		within 100m			N/A	specify									
6	Standing water?					Yes	Avg Dep: 0-10 cm		% Inundated: 5%			No									
7	Inlet or Outlet (circle all that apply)?					Inlet		Outlet													
8	Adjacent Upland Land Use within 100m (%)					For: 60	Nat: 40	PasHay:	Crop:	UrbCm:	Road:	Other Dev:									
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD__, CW__, WcS__, O/C__, EB__, DP__, F__, M__, ES__, NE__, DwP__, M__, GC__, ATV__, DG__, EA__, R__, Rr__, U/CD__, F__, FA__, other (specify):															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8													
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L													
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L													
6	Adjacent Upland Slope (list % in each category)					Steep 10%	Mod 30%	Gentle 60%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low			
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding			
5	Signs of surface water retention observed?	SW_5_cm, WSL_x_, WCD_, WM_cm, SM_cm, SD_, AD_, ID_, PMT_x_, AI_, BT_, AR_, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High			
7	Disturbance of WL soils	Low		Med		High			
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock			
9	Capacity of WL to alter/retard flows	High		Med		Low			
10	Roughness coefficient for surface water flow path	High		Med		Low			
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low			
12	Water Source	Natural		Mostly natural		Partly altered		Controlled	
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A	
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified					
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low			
2	Nutrients/sediments from surrounding land	High		Med		Low			
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med		Low			
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No	Possible recharge wetland			
SF20	WL serves as a discharge site	Yes	No				
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY							
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth <4m	WB Exposed	WB Sheltered
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%			
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m			
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low			
5	Describe shoreline erosion potential	High	Med	Low			
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial		
SF21	WL ability to stabilize shoreline	H	M	L	N/A		
SECTION NINE: PLANT COMMUNITY							
1	Vegetation diversity	High	Med	Low			
1b	Dominant plant species and % cover in the WL	list: <i>Gaylussacia baccata</i> (60%)/ <i>Trichophorum caespitosus</i> (20%)					
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %			
4	Vegetation Disturbance	H	M	L	specify type(s) below		
5	Disturbance Types	H __, ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,					
7	Vegetative Integrity of plant community	E	H	M	L		
SF22	Is the plant community unique or rare regionally or provincially?	Yes	No	specify:			
SF23	Does the WL contain a diversity of plant communities	H	M	L			
SF24	Rate the overall integrity/quality of plant community?	H	M	L			
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1 S2 S3 N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY							
1	Interspersion of open water and vegetation (open water types only)	H	M	L			
1b	% cover in vegetation versus open water	95 %					
2	Interspersion that best fits entire wetland	H	M	L	N/A		
3	Wetland condition related to detritus	H	M	L	N/A		
4	Interspersion of other wetlands in vicinity	H	M	L			
6	Barriers/restriction between wetland and other habitat	L	M	H			
7	Noteworthy wildlife or evidence (birds, mammals, amphibians, etc)	Yes	No	list: Passerines, Deer			
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A	
9	Fish species observed or evidence seen (list)	Yes	No	list:			
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha		
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish R/E species
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:			
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1 S2 S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L			
SECTION ELEVEN: COMMUNITY USE/VALUE							
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, x __, GB __, E __, HI __, WV __, BO __, HU __, PG __, BP __, F __, E __, R __, Other:					
SF29	Rate the wetland's community use/value	H	M	L			

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL10											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 643857 E x 5023694 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 04-Sep-14						Site Visit Date: 22-Aug-14															
Weather Conditions (past 48 hours): Sun and Clouds																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Treed Swamp						WL size: 0.1 hectares			Landform: Slope			Landscape Position: Lotic Stream-Confined									
Water flow path: Throughflow						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO:	FE:	FM:	FS: 100	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering		within 100m		N/A	specify										
6	Standing water?					Yes	Avg Dep: 5-10		% Inundated: 2%		No										
7	Inlet or Outlet (circle all that apply)?					Inlet	Outlet														
8	Adjacent Upland Land Use within 100m (%)					For: 100	Nat:	PasHay:	Crop:	UrbCm:	Road:	Other Dev:									
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, A(V x), DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify):															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8													
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L													
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L													
6	Adjacent Upland Slope (list % in each category)					Steep 30%	Mod 40%	Gentle 20%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify. <i>Nephroma bellum</i>	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low			
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding			
5	Signs of surface water retention observed?	SW_5_cm, WSL_, WCD_, WM_cm, SM_cm, SD_, AD_, ID_, PMT_x_, AI_, BT_, AR_, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High			
7	Disturbance of WL soils	Low		Med		High			
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock			
9	Capacity of WL to alter/retard flows	High		Med		Low			
10	Roughness coefficient for surface water flow path	High		Med		Low			
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low			
12	Water Source	Natural		Mostly natural		Partly altered		Controlled	
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A	
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified					
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low			
2	Nutrients/sediments from surrounding land	High		Med		Low			
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med		Low			
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth <4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Abies balsamea</i> (40%)/ <i>Osmunda cinnamomea</i> (10%)/ <i>Carex trisperma</i> (20%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __, ATV __, x __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify. <i>N. bellum</i>	End	Thr	SpC	Red	Yellow	S1	S2	S3 N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_100_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians, etc)	Yes	No	list: Passerines, Deer					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, GB __, E __, HI __, WV __, BO __, HU __, PG __, BP __, F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL11											Nova Scotia Wetland Evaluation Technique Field Data Sheet											
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 644458 E x 5023456 N											
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS																
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																						
Evaluation Date: 05-Sep-14						Site Visit Date: 21-Aug-14																
Weather Conditions (past 48 hours): Sun and Clouds																						
Seasonal Weather Conditions: Typical																						
SECTION ONE: WATERSHED CHARACTERISTICS																						
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²																
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial										
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present								
SF1	Watershed condition					H	M	L														
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L														
SECTION TWO: WETLAND CHARACTERISTICS																						
Wetland Type: Bog						WL size: 9.0 hectares					Landform: Flat					Landscape Position: Terrene						
Water flow path: Isolated						Wetland Origin: Natural																
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF									
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:								
3	Is WL part of complex					Yes	No															
4	% each wetland type in complex					SM:	BO: 100	FE:	FM:	FS:	SS:	CP:	VP:									
5	Is WL bordering or associated with a lake or pond?					bordering			within 100m			N/A	specify									
6	Standing water?					Yes	Avg Dep: 0-10 cm			% Inundated: 5%			No									
7	Inlet or Outlet (circle all that apply)?					Inlet			Outlet													
8	Adjacent Upland Land Use within 100m (%)					For: 40	Nat: 60	PasHay:	Crop:	UrbCm:	Road:	Other Dev:										
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify):																
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:										
SF3	Rate the general wetland condition/integrity					H	M	L														
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																						
1	Average width of adjacent naturalized buffer					>1000_m																
2	Widths for water quality					H >1	M 8-15	L <8														
3	Widths for wildlife habitat					H >100	M 15-100	L <15														
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L														
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L														
6	Adjacent Upland Slope (list % in each category)					Steep 10%	Mod 30%	Gentle 60%														
7	Adjacent land supports water quality					Yes	No	Specify:														
8	Adjacent land supports wildlife habitat					Yes	No	Specify:														
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no													
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																						
SF5	Is the WL a WSS?					Yes	No															

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify. <i>Cladonia stygia</i>	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low			
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding			
5	Signs of surface water retention observed?	SW_5_cm, WSL_x_, WCD_, WM_cm, SM_cm, SD_, AD_, ID_, PMT_x_, AI_, BT_, AR_, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High			
7	Disturbance of WL soils	Low		Med		High			
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock			
9	Capacity of WL to alter/retard flows	High		Med		Low			
10	Roughness coefficient for surface water flow path	High		Med		Low			
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low			
12	Water Source	Natural		Mostly natural		Partly altered		Controlled	
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A	
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified					
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low			
2	Nutrients/sediments from surrounding land	High		Med		Low			
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med		Low			
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No	Possible recharge wetland				
SF20	WL serves as a discharge site	Yes	No					
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY								
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth <4m	WB Exposed	WB Sheltered	
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%				
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m				
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low				
5	Describe shoreline erosion potential	High	Med	Low				
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial			
SF21	WL ability to stabilize shoreline	H	M	L	N/A			
SECTION NINE: PLANT COMMUNITY								
1	Vegetation diversity	High	Med	Low				
1b	Dominant plant species and % cover in the WL	list: <i>Gaylussacia baccata</i> (60%)/ <i>Trichophorum caespitosus</i> (20%)						
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %				
4	Vegetation Disturbance	H	M	L	specify type(s) below			
5	Disturbance Types	H __, ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,						
7	Vegetative Integrity of plant community	E	H	M	L			
SF22	Is the plant community unique or rare regionally or provincially?	Yes	No	specify:				
SF23	Does the WL contain a diversity of plant communities	H	M	L				
SF24	Rate the overall integrity/quality of plant community?	H	M	L				
SF25	Are there any observed rare or endangered plant species? Specify. <i>C.stygia</i>	End	Thr	SpC	Red	Yellow	S1	S2
							S3	N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY								
1	Interspersion of open water and vegetation (open water types only)	H	M	L				
1b	% cover in vegetation versus open water	95 %						
2	Interspersion that best fits entire wetland	H	M	L	N/A			
3	Wetland condition related to detritus	H	M	L	N/A			
4	Interspersion of other wetlands in vicinity	H	M	L				
6	Barriers/restriction between wetland and other habitat	L	M	H				
7	Noteworthy wildlife or evidence (birds, mammals, amphibians, etc)	Yes	No	list: Passerines, Deer				
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A		
9	Fish species observed or evidence seen (list)	Yes	No	list:				
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha			
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:				
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2
							S3	N/A
SF28	Overall fish and wildlife habitat quality	H	M	L				
SECTION ELEVEN: COMMUNITY USE/VALUE								
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, x __, GB __, E __, HI __, WV __, BO __, HU __, PG __, x __, BP __, x __, F __, E __, R __, Other:						
SF29	Rate the wetland's community use/value	H	M	L				

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL12											Nova Scotia Wetland Evaluation Technique Field Data Sheet																		
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 644737 E x 5024077 N																		
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS																							
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																													
Evaluation Date: 04-Sep-14						Site Visit Date: 21-Aug-14																							
Weather Conditions (past 48 hours): Sun and Clouds																													
Seasonal Weather Conditions: Typical																													
SECTION ONE: WATERSHED CHARACTERISTICS																													
1 Watershed Name (tertiary): 1EQ-SD											Size: 518 km ²																		
2 % Watershed Land Cover											For: 43		Nat: 36		Past/Hay: <1		Crop: <1		Urb/Com: 2		Road: <1		Other Dev: <1 (Gravel Pit, Landfill, Industrial						
3 % Watershed WL Cover and by Class											Total: 10%		SM: <1		BO: 6		FE: 1		FM: 2		FS: 1		SS: 1		CP: <1		VP: Present		
SF1 Watershed condition											H		M		L														
SF2 Proportion of WL area in watershed & opportunity for floodwater detention											H		M		L														
SECTION TWO: WETLAND CHARACTERISTICS																													
Wetland Type: Bog/fen											WL size: 0.3 hectares					Landform: Basin					Landscape Position: Terrene outflow								
Water flow path: Outflow											Wetland Origin: Natural																		
1 Water Regime											PF		SF		TF		SS		PS		RfT		IfT		AF				
2 # WL's within 30m project area											Total# 0		SM:		BO:		FE:		FM:		FS:		SS:		CP:		VP:		
3 Is WL part of complex											Yes		No																
4 % each wetland type in complex											SM:		BO: 20		FE: 80		FM:		FS:		SS:		CP:		VP:				
5 Is WL bordering or associated with a lake or pond?											bordering					within 100m					N/A		specify						
6 Standing water?											Yes		Avg Dep:					% Inundated:					No						
7 Inlet or Outlet (circle all that apply)?											Inlet		Outlet																
8 Adjacent Upland Land Use within 100m (%)											For: 40		Nat: 60		PasHay:		Crop:		UrbCm:		Road:		Other Dev:						
9 Are there stressors in WL or WL buffer area? Circle primary stressor(s).											DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify): Skidder trail through wetland																		
10 Hydrology Altered (circle all that apply)?											Ditching		Dams		Tiles		Culvert		Well		Diversion		Other Specify:						
SF3 Rate the general wetland condition/integrity											H		M		L														
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																													
1 Average width of adjacent naturalized buffer											>1000_m																		
2 Widths for water quality											H >1		M 8-15		L <8														
3 Widths for wildlife habitat											H >100		M 15-100		L <15														
4 Adjacent area vegetation condition (list % in each category)											H 100%		M		L														
5 Adjacent area diversity and structure (list % in each category)											H 100%		M		L														
6 Adjacent Upland Slope (list % in each category)											Steep 70%		Mod 25%		Gentle 5%														
7 Adjacent land supports water quality											Yes		No		Specify:														
8 Adjacent land supports wildlife habitat											Yes		No		Specify:														
SF4 Rate the overall condition and integrity land adjacent to wetland											H		M		L		is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																													
SF5 Is the WL a WSS?											Yes		No																

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify. <i>Usnea flammea</i>	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med	Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm	No ponding				
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT_x __, AI __, BT __, AR __, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med	High				
7	Disturbance of WL soils	Low		Med	High				
8	Predominant soils adjacent to WL	Sand		Silt/loam	Clay, bedrock				
9	Capacity of WL to alter/retard flows	High		Med	Low				
10	Roughness coefficient for surface water flow path	High		Med	Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med	Low				
12	Water Source	Natural		Mostly natural	Partly altered	Controlled			
13	Hydrology of tidal wetlands	Unrestricted		Reduced	Restricted	N/A			
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified					
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med	Low				
2	Nutrients/sediments from surrounding land	High		Med	Low				
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med	Low				
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Osmunda cinnamomea</i> (20%)/ <i>Gaylussacia baccata</i> (40%)/ <i>Eriophorum virginicum</i> (10%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __,ATV __,G __,M __,In __, D/D __, Im __, OAH __, li __, Sd __,E __,other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify. <i>U.flammea</i>	End	Thr	SpC	Red	Yellow	S1	S2	S3 N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_100_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Passerines,					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __,CP __,CO __,PO __,PA __,AV __,GB __,E __,HI __, WV __, BO __,HU __, PG __, BP __,F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL13											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 644860 E x 5023362 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 04-Sep-14						Site Visit Date: 21-Aug-14															
Weather Conditions (past 48 hours): Sun and Clouds																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Treed Swamp						WL size: 0.6 hectares					Landform: Slope					Landscape Position: Terrene					
Water flow path: Isolated						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO:	FE:	FM:	FS: 100	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering		within 100m			N/A	specify									
6	Standing water?					Yes	Avg Dep:		% Inundated:			No									
7	Inlet or Outlet (circle all that apply)?					Inlet	Outlet														
8	Adjacent Upland Land Use within 100m (%)					For: 20	Nat: 80	PasHay:	Crop:	UrbCm:	Road:	Other Dev:									
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD__, CW__, WcS__, O/C__, EB__, DP__, F__, M__, ES__, NE__, DwP__, M__, GC__, ATV__, DG__, EA__, R__, Rr__, U/CD__, F__, FA__, other (specify):															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8													
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L													
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L													
6	Adjacent Upland Slope (list % in each category)					Steep 10%	Mod 70%	Gentle 20%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No							
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3	N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:						
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No							
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:						
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No							
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:						
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY										
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:						
2	Is WL geographically isolated?	Yes	No	Specify:						
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding				
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT_x __, AI __, BT __, AR __, Other:								
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High				
7	Disturbance of WL soils	Low		Med		High				
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock				
9	Capacity of WL to alter/retard flows	High		Med		Low				
10	Roughness coefficient for surface water flow path	High		Med		Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low				
12	Water Source	Natural		Mostly natural		Partly altered		Controlled		
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A		
14	Coastal storm surge	Yes	No							
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified						
SF14	WL important for maintaining stream flow?	Yes	No							
SF15	WL ability to detain surface water	High	Med	Low						
SECTION SIX: WATER QUALITY										
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low				
2	Nutrients/sediments from surrounding land	High		Med		Low				
3	Significant flood/stormwater attenuation	Yes	No							
4	Vegetation capacity to settle suspended sediments	High		Med		Low				
5	WL type /landscape position holds/filters runoff?	Yes	No							
SF16	Wetland improves water quality?	Yes	No							
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High						
SF18	WL contributes to water quality in downstream resources	High	Med	Low						
SECTION SEVEN: GROUNDWATER INTERACTIONS										
1	Describe soils in wetland	Recharge		Discharge						
2	Land use / run off in subwatershed upstream	Recharge		Discharge						
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge						
4	Hydroperiod of wetland	Recharge		Discharge						
5	Describe inlet/outlet configuration	Recharge		Discharge						
6	Characterize topographic relief surrounding wetland	Recharge		Discharge						

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Picea mariana</i> (60%)/ <i>Acer rubrum</i> (30%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __,ATV __,G __,M __,In __, D/D __, Im __, OAH __, li __, Sd __,E __,other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3
									N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_100_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Passerines					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3
									N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __,CP __,CO __,PO __,PA __,AV __,GB __,E __,HI __, WV __, BO __,HU __, PG __, BP __,F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL14		Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry				Evaluator: Scott Burley				GPS Coordinates: 645506 E x 5023190 N				
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS						
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)												
Evaluation Date: 04-Sep-14			Site Visit Date: 19-Aug-14									
Weather Conditions (past 48 hours): Periods of rain with clouds; sun and cloud												
Seasonal Weather Conditions: Typical												
SECTION ONE: WATERSHED CHARACTERISTICS												
1	Watershed Name (tertiary): 1EQ-SD			Size: 518 km ²								
2	% Watershed Land Cover			For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial		
3	% Watershed WL Cover and by Class			Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1 CP: <1 VP: Present		
SF1	Watershed condition			H	M	L						
SF2	Proportion of WL area in watershed & opportunity for floodwater detention			H	M	L						
SECTION TWO: WETLAND CHARACTERISTICS												
Wetland Type: Fen/Bog				WL size: 6.2 hectares			Landform: Slope		Landscape Position: Lotic Stream-Confined			
Water flow path: Throughflow				Wetland Origin: Natural								
1	Water Regime			PF	SF	TF	SS	PS	RfT	IfT	AF	
2	# WL's within 30m project area			Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:
3	Is WL part of complex			Yes	No							
4	% each wetland type in complex			SM:	BO: 79	FE: 21	FM:	FS:	SS:	CP:	VP:	
5	Is WL bordering or associated with a lake or pond?			bordering		within 100m		N/A	specify:			
6	Standing water?			Yes	Avg Dep:		% Inundated:		No			
7	Inlet or Outlet (circle all that apply)?			Inlet	Outlet							
8	Adjacent Upland Land Use within 100m (%)			For: 80	Nat: 20	PasHay:	Crop:	UrbCm:	Road:	Other Dev:		
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).			DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify):								
10	Hydrology Altered (circle all that apply)?			Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:		
SF3	Rate the general wetland condition/integrity			H	M	L						
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY												
1	Average width of adjacent naturalized buffer			>1000_m								
2	Widths for water quality			H >1	M 8-15	L <8						
3	Widths for wildlife habitat			H >100	M 15-100	L <15						
4	Adjacent area vegetation condition (list % in each category)			H 100%	M	L						
5	Adjacent area diversity and structure (list % in each category)			H 100%	M	L						
6	Adjacent Upland Slope (list % in each category)			Steep 5%	Mod 45%	Gentle 50%						
7	Adjacent land supports water quality			Yes	No	Specify:						
8	Adjacent land supports wildlife habitat			Yes	No	Specify:						
SF4	Rate the overall condition and integrity land adjacent to wetland			H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no					
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES												
SF5	Is the WL a WSS?			Yes	No							

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No							
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3	N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No		specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No							
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No		specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No							
SF12	Fed/Prov/Municipal area of interest?	Yes	No		specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY										
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No		Specify: Unnamed stream flow throug wetland to the southeast					
2	Is WL geographically isolated?	Yes	No		Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding				
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT __ x, AI __, BT __, AR __, Other:								
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High				
7	Disturbance of WL soils	Low		Med		High				
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay	bedrock			
9	Capacity of WL to alter/retard flows	High		Med		Low				
10	Roughness coefficient for surface water flow path	High		Med		Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low				
12	Water Source	Natural		Mostly natural		Partly altered		Controlled		
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A		
14	Coastal storm surge	Yes	No							
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified						
SF14	WL important for maintaining stream flow?	Yes	No							
SF15	WL ability to detain surface water	High	Med	Low						
SECTION SIX: WATER QUALITY										
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low				
2	Nutrients/sediments from surrounding land	High		Med		Low				
3	Significant flood/stormwater attenuation	Yes	No							
4	Vegetation capacity to settle suspended sediments	High		Med		Low				
5	WL type /landscape position holds/filters runoff?	Yes	No							
SF16	Wetland improves water quality?	Yes	No							
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High						
SF18	WL contributes to water quality in downstream resources	High	Med	Low						
SECTION SEVEN: GROUNDWATER INTERACTIONS										
1	Describe soils in wetland	Recharge		Discharge						
2	Land use / run off in subwatershed upstream	Recharge		Discharge						
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge						
4	Hydroperiod of wetland	Recharge		Discharge						
5	Describe inlet/outlet configuration	Recharge		Discharge						
6	Characterize topographic relief surrounding wetland	Recharge		Discharge						

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth <4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Gaylussacia baccata</i> (30%)/ <i>Morella pensylvanica</i> (20%)/ <i>Eriophorum virginicum</i> (15%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	Specify type(s) below:				
5	Disturbance Types	H __, ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3
									N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	85 %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians, etc)	Yes	No	list: Dragon flies, Passerines					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr	SpC	Red	Yellow	S1	S2	S3
									N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, GB __, E __, HI __, WV __, BO __, HU __, PG __, BP __, F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL15		Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry				Evaluator: Scott Burley			GPS Coordinates: 645265 E x 5023544 N					
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS						
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)												
Evaluation Date: 10-Sep-14				Site Visit Date: 21-Aug-14								
Weather Conditions (past 48 hours): Sun and Clouds												
Seasonal Weather Conditions: Typical												
SECTION ONE: WATERSHED CHARACTERISTICS												
1	Watershed Name (tertiary): 1EQ-SD			Size: 518 km ²								
2	% Watershed Land Cover			For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial		
3	% Watershed WL Cover and by Class			Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1 CP: <1 VP: Present		
SF1	Watershed condition			H	M	L						
SF2	Proportion of WL area in watershed & opportunity for floodwater detention			H	M	L						
SECTION TWO: WETLAND CHARACTERISTICS												
Wetland Type: Fen				WL size: 0.07 hectares			Landform: Slope		Landscape Position: Lotic Stream-Confined			
Water flow path: Throughflow				Wetland Origin: Natural								
1	Water Regime			PF	SF	TF	SS	PS	RfT	IfT	AF	
2	# WL's within 30m project area			Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:
3	Is WL part of complex			Yes	No							
4	% each wetland type in complex			SM:	BO:	FE: 100	FM:	FS:	SS:	CP:	VP:	
5	Is WL bordering or associated with a lake or pond?			bordering		within 100m		N/A	specify			
6	Standing water?			Yes	Avg Dep: 5-10		% Inundated: <5%		No			
7	Inlet or Outlet (circle all that apply)?			Inlet	Outlet							
8	Adjacent Upland Land Use within 100m (%)			For: 30	Nat: 70	PasHay:	Crop:	UrbCm:	Road:	Other Dev:		
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).			DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify): Skidder track though south side of wetland								
10	Hydrology Altered (circle all that apply)?			Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:		
SF3	Rate the general wetland condition/integrity			H	M	L						
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY												
1	Average width of adjacent naturalized buffer			>1000_m								
2	Widths for water quality			H >1	M 8-15	L <8						
3	Widths for wildlife habitat			H >100	M 15-100	L <15						
4	Adjacent area vegetation condition (list % in each category)			H 100%	M	L						
5	Adjacent area diversity and structure (list % in each category)			H 100%	M	L						
6	Adjacent Upland Slope (list % in each category)			Steep 60%	Mod 30%	Gentle 10%						
7	Adjacent land supports water quality			Yes	No	Specify:						
8	Adjacent land supports wildlife habitat			Yes	No	Specify:						
SF4	Rate the overall condition and integrity land adjacent to wetland			H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no					
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES												
SF5	Is the WL a WSS?			Yes	No							

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med	Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	Up to 15cm	No ponding				
5	Signs of surface water retention observed?	SW _cm, WSL_, WCD_, WM _cm, SM _cm, SD_, AD_, ID_, PMT_x_, AI_, BT_, AR_, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med	High				
7	Disturbance of WL soils	Low		Med	High				
8	Predominant soils adjacent to WL	Sand		Silt/loam	Clay, bedrock				
9	Capacity of WL to alter/retard flows	High		Med	Low				
10	Roughness coefficient for surface water flow path	High		Med	Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med	Low				
12	Water Source	Natural		Mostly natural	Partly altered	Controlled			
13	Hydrology of tidal wetlands	Unrestricted		Reduced	Restricted	N/A			
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified					
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med	Low				
2	Nutrients/sediments from surrounding land	High		Med	Low				
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med	Low				
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Nemopantes mucronata</i> (10%)/ <i>Osmunda cinnamomea</i> (20%)/ <i>Myrica gale</i> (20%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __, ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other_x __, Skidder trail							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3 N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_95_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians, etc)	Yes	No	list: Passerines					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, GB __, E __, HI __, WV __, BO __, HU __, PG __, BP __, F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL16											Nova Scotia Wetland Evaluation Technique Field Data Sheet											
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 645920 E x 5022505 N											
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS																
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																						
Evaluation Date: 10-Sep-14						Site Visit Date: 19-Aug-14																
Weather Conditions (past 48 hours): Periods of rain; Sun and Clouds																						
Seasonal Weather Conditions: Typical																						
SECTION ONE: WATERSHED CHARACTERISTICS																						
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²																
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial										
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present								
SF1	Watershed condition					H	M	L														
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L														
SECTION TWO: WETLAND CHARACTERISTICS																						
Wetland Type: Bog						WL size: 0.45 hectares					Landform: Basin					Landscape Position: Terrene						
Water flow path: Isolated						Wetland Origin: Natural																
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF									
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:								
3	Is WL part of complex					Yes	No															
4	% each wetland type in complex					SM:	BO: 100	FE:	FM:	FS:	SS:	CP:	VP:									
5	Is WL bordering or associated with a lake or pond?					bordering		within 100m			N/A	specify										
6	Standing water?					Yes	Avg Dep: 0-10 cm		% Inundated: 5%			No										
7	Inlet or Outlet (circle all that apply)?					Inlet		Outlet														
8	Adjacent Upland Land Use within 100m (%)					For: 90	Nat:	PasHay:	Crop:	UrbCm:	Road:	Other Dev: 10% Power line corridor										
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify):																
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:										
SF3	Rate the general wetland condition/integrity					H	M	L														
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																						
1	Average width of adjacent naturalized buffer					>1000_m																
2	Widths for water quality					H >1	M 8-15	L <8														
3	Widths for wildlife habitat					H >100	M 15-100	L <15														
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L														
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L														
6	Adjacent Upland Slope (list % in each category)					Steep 70%	Mod 20%	Gentle 10%														
7	Adjacent land supports water quality					Yes	No	Specify:														
8	Adjacent land supports wildlife habitat					Yes	No	Specify:														
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no													
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																						
SF5	Is the WL a WSS?					Yes	No															

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No							
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3	N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:						
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No							
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:						
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No							
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:						
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY										
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:						
2	Is WL geographically isolated?	Yes	No	Specify:						
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding				
5	Signs of surface water retention observed?	SW _cm, WSL_, WCD_, WM _cm, SM _cm, SD_, AD_, ID_, PMT_x_, AI_, BT_, AR_, Other:								
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High				
7	Disturbance of WL soils	Low		Med		High				
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock				
9	Capacity of WL to alter/retard flows	High		Med		Low				
10	Roughness coefficient for surface water flow path	High		Med		Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low				
12	Water Source	Natural		Mostly natural		Partly altered		Controlled		
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A		
14	Coastal storm surge	Yes	No							
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified						
SF14	WL important for maintaining stream flow?	Yes	No							
SF15	WL ability to detain surface water	High	Med	Low						
SECTION SIX: WATER QUALITY										
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low				
2	Nutrients/sediments from surrounding land	High		Med		Low				
3	Significant flood/stormwater attenuation	Yes	No							
4	Vegetation capacity to settle suspended sediments	High		Med		Low				
5	WL type /landscape position holds/filters runoff?	Yes	No							
SF16	Wetland improves water quality?	Yes	No							
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High						
SF18	WL contributes to water quality in downstream resources	High	Med	Low						
SECTION SEVEN: GROUNDWATER INTERACTIONS										
1	Describe soils in wetland	Recharge		Discharge						
2	Land use / run off in subwatershed upstream	Recharge		Discharge						
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge						
4	Hydroperiod of wetland	Recharge		Discharge						
5	Describe inlet/outlet configuration	Recharge		Discharge						
6	Characterize topographic relief surrounding wetland	Recharge		Discharge						

SF19	WL serves as a recharge site	Yes	No	Possible recharge wetland			
SF20	WL serves as a discharge site	Yes	No				
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY							
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%			
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m			
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low			
5	Describe shoreline erosion potential	High	Med	Low			
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial		
SF21	WL ability to stabilize shoreline	H	M	L	N/A		
SECTION NINE: PLANT COMMUNITY							
1	Vegetation diversity	High	Med	Low			
1b	Dominant plant species and % cover in the WL	list: <i>Picea mariana</i> (40%)/ <i>Mainanthemum trifolium</i> (20%)					
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %			
4	Vegetation Disturbance	H	M	L	specify type(s) below		
5	Disturbance Types	H __,ATV __,G __,M __,In __, D/D __, Im __, OAH __, li __, Sd __,E __,other __,					
7	Vegetative Integrity of plant community	E	H	M	L		
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:			
SF23	Does the WL contain a diversity of plant communities	H	M	L			
SF24	Rate the overall integrity/quality of plant community?	H	M	L			
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1 S2 S3 N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY							
1	Interspersion of open water and vegetation (open water types only)	H	M	L			
1b	% cover in vegetation versus open water	_95_ %					
2	Interspersion that best fits entire wetland	H	M	L	N/A		
3	Wetland condition related to detritus	H	M	L	N/A		
4	Interspersion of other wetlands in vicinity	H	M	L			
6	Barriers/restriction between wetland and other habitat	L	M	H			
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Passerines, Deer, Dragonflies, Moose tracks			
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A	
9	Fish species observed or evidence seen (list)	Yes	No	list:			
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha		
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish R/E species
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:			
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1 S2 S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L			
SECTION ELEVEN: COMMUNITY USE/VALUE							
1	Describe community use	VV __,CP __,CO __,PO __,PA __,AV __,GB __,E __,HI __, WV __, BO __,HU __, PG __, BP __,F __, E __, R __, Other:					
SF29	Rate the wetland's community use/value	H	M	L			

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL17											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 644193 E x 5021827 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 10-Sep-14						Site Visit Date: 18-Aug-14															
Weather Conditions (past 48 hours): sun and cloud; Periods of rain with clouds																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Bog/Swamp						WL size: 0.74 hectares					Landform: Basin					Landscape Position: Terrene Outflow					
Water flow path: Outflow						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO: 64	FE:	FM:	FS: 36	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering		within 100m			N/A	specify:									
6	Standing water?					Yes	Avg Dep: % Inundated:					No									
7	Inlet or Outlet (circle all that apply)?					Inlet	Outle														
8	Adjacent Upland Land Use within 100m (%)					For: 80	Nat: 20	PasHay:	Crop:	UrbCm:	Road:	Other Dev:									
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F_x __, FA __, other (specify):															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8													
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L													
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L													
6	Adjacent Upland Slope (list % in each category)					Steep 60%	Mod 20%	Gentle 20%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify. <i>Nephroma bellum</i> ; <i>Usnea flammaea</i>	End	Thr	SpC	Red	Yellow	S1	S2	S3 N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low			
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding			
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT __, AI __, BT __, AR __, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High			
7	Disturbance of WL soils	Low		Med		High			
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock			
9	Capacity of WL to alter/retard flows	High		Med		Low			
10	Roughness coefficient for surface water flow path	High		Med		Low			
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low			
12	Water Source	Natural		Mostly natural		Partly altered		Controlled	
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A	
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified					
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low			
2	Nutrients/sediments from surrounding land	High		Med		Low			
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med		Low			
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Mainanthemum trifolium</i> (30%)/ <i>Picea mariana</i> (25%)/ <i>Eriophorum virginicum</i> (15%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	Specify type(s) below:				
5	Disturbance Types	H __,ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3 N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	85 %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Coyote scat, Rabbit droppings, Leopard Frog					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr	SpC	Red	Yellow	S1	S2	S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, GB __, E __, HI __, WV __, BO __, HU __, PG __, BP __, F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL18											Nova Scotia Wetland Evaluation Technique Field Data Sheet											
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 644396 E x 5022050 N											
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS																
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																						
Evaluation Date: 10-Sep-14						Site Visit Date: 18-Aug-14																
Weather Conditions (past 48 hours): Sun and Clouds; Periods of rain																						
Seasonal Weather Conditions: Typical																						
SECTION ONE: WATERSHED CHARACTERISTICS																						
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²																
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial										
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present								
SF1	Watershed condition					H	M	L														
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L														
SECTION TWO: WETLAND CHARACTERISTICS																						
Wetland Type: Bog						WL size: 0.07 hectares					Landform: Basin					Landscape Position: Terrene						
Water flow path: Isolated						Wetland Origin: Natural																
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF									
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:								
3	Is WL part of complex					Yes	No															
4	% each wetland type in complex					SM:	BO: 100	FE:	FM:	FS:	SS:	CP:	VP:									
5	Is WL bordering or associated with a lake or pond?					bordering			within 100m			N/A	specify									
6	Standing water?					Yes	Avg Dep: % Inundated:					No										
7	Inlet or Outlet (circle all that apply)?					Inlet			Outlet													
8	Adjacent Upland Land Use within 100m (%)					For: 80	Nat: 20	PasHay:	Crop:	UrbCm:	Road:	Other Dev:										
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify):																
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:										
SF3	Rate the general wetland condition/integrity					H	M	L														
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																						
1	Average width of adjacent naturalized buffer					>1000_m																
2	Widths for water quality					H >1	M 8-15	L <8														
3	Widths for wildlife habitat					H >100	M 15-100	L <15														
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L														
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L														
6	Adjacent Upland Slope (list % in each category)					Steep 10%	Mod 60%	Gentle 20%														
7	Adjacent land supports water quality					Yes	No	Specify:														
8	Adjacent land supports wildlife habitat					Yes	No	Specify:														
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no													
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																						
SF5	Is the WL a WSS?					Yes	No															

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify. Cladonia stygia; Geocaulon lividum	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low			
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding			
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT_x __, AI __, BT __, AR __, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High			
7	Disturbance of WL soils	Low		Med		High			
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock			
9	Capacity of WL to alter/retard flows	High		Med		Low			
10	Roughness coefficient for surface water flow path	High		Med		Low			
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low			
12	Water Source	Natural		Mostly natural		Partly altered		Controlled	
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A	
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified			Significantly Modified			
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low			
2	Nutrients/sediments from surrounding land	High		Med		Low			
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med		Low			
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No	Possible recharge wetland			
SF20	WL serves as a discharge site	Yes	No				
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY							
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth <4m	WB Exposed	WB Sheltered
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%			
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m			
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low			
5	Describe shoreline erosion potential	High	Med	Low			
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial		
SF21	WL ability to stabilize shoreline	H	M	L	N/A		
SECTION NINE: PLANT COMMUNITY							
1	Vegetation diversity	High	Med	Low			
1b	Dominant plant species and % cover in the WL	list: <i>Picea mariana</i> (30%)/ <i>Kalmia angustifolia</i> (15%)/ <i>Nemopantes mucronata</i> (15%)					
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %			
4	Vegetation Disturbance	H	M	L	specify type(s) below		
5	Disturbance Types	H __,ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,					
7	Vegetative Integrity of plant community	E	H	M	L		
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:			
SF23	Does the WL contain a diversity of plant communities	H	M	L			
SF24	Rate the overall integrity/quality of plant community?	H	M	L			
SF25	Are there any observed rare or endangered plant species? Specify. <i>C.stygia</i>	End	Thr	SpC	Red	Yellow	S1 S2 S3 N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY							
1	Interspersion of open water and vegetation (open water types only)	H	M	L			
1b	% cover in vegetation versus open water	_100_ %					
2	Interspersion that best fits entire wetland	H	M	L	N/A		
3	Wetland condition related to detritus	H	M	L	N/A		
4	Interspersion of other wetlands in vicinity	H	M	L			
6	Barriers/restriction between wetland and other habitat	L	M	H			
7	Noteworthy wildlife or evidence (birds, mammals, amphibians, etc)	Yes	No	list: Passerines			
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A	
9	Fish species observed or evidence seen (list)	Yes	No	list:			
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha		
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish R/E species
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:			
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1 S2 S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L			
SECTION ELEVEN: COMMUNITY USE/VALUE							
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, GB __, E __, HI __, WV __, BO __, HU __, PG __, BP __, F __, E __, R __, Other:					
SF29	Rate the wetland's community use/value	H	M	L			

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL19											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 644440 E x 5022148 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 10-Sep-14						Site Visit Date: 18-Aug-14															
Weather Conditions (past 48 hours): Sun and Clouds; Periods of rain																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Bog						WL size: 0.04 hectares					Landform: Basin			Landscape Position: Terrene							
Water flow path: Isolated						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO: 100	FE:	FM:	FS:	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering		within 100m		N/A	specify										
6	Standing water?					Yes	Avg Dep:		% Inundated:		No										
7	Inlet or Outlet (circle all that apply)?					Inlet		Outlet													
8	Adjacent Upland Land Use within 100m (%)					For: 60	Nat: 40	PasHay:	Crop:	UrbCm:	Road:	Other Dev:									
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify):															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8													
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L													
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L													
6	Adjacent Upland Slope (list % in each category)					Steep 30%	Mod 40%	Gentle 10%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify. <i>Cladonia stygia</i>	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low			
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding			
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT_x __, AI __, BT __, AR __, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High			
7	Disturbance of WL soils	Low		Med		High			
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock			
9	Capacity of WL to alter/retard flows	High		Med		Low			
10	Roughness coefficient for surface water flow path	High		Med		Low			
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low			
12	Water Source	Natural		Mostly natural		Partly altered		Controlled	
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A	
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified					
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low			
2	Nutrients/sediments from surrounding land	High		Med		Low			
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med		Low			
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No	Possible recharge wetland			
SF20	WL serves as a discharge site	Yes	No				
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY							
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth <4m	WB Exposed	WB Sheltered
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%			
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m			
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low			
5	Describe shoreline erosion potential	High	Med	Low			
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial		
SF21	WL ability to stabilize shoreline	H	M	L	N/A		
SECTION NINE: PLANT COMMUNITY							
1	Vegetation diversity	High	Med	Low			
1b	Dominant plant species and % cover in the WL	list: <i>Gaylussacia baccata</i> (30%)/ <i>Nemopantes mucronata</i> (15%)					
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %			
4	Vegetation Disturbance	H	M	L	specify type(s) below		
5	Disturbance Types	H __, ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,					
7	Vegetative Integrity of plant community	E	H	M	L		
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:			
SF23	Does the WL contain a diversity of plant communities	H	M	L			
SF24	Rate the overall integrity/quality of plant community?	H	M	L			
SF25	Are there any observed rare or endangered plant species? Specify. <i>C.stygia</i>	End	Thr	SpC	Red	Yellow	S1 S2 S3 N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY							
1	Interspersion of open water and vegetation (open water types only)	H	M	L			
1b	% cover in vegetation versus open water	_100_ %					
2	Interspersion that best fits entire wetland	H	M	L	N/A		
3	Wetland condition related to detritus	H	M	L	N/A		
4	Interspersion of other wetlands in vicinity	H	M	L			
6	Barriers/restriction between wetland and other habitat	L	M	H			
7	Noteworthy wildlife or evidence (birds, mammals, amphibians, etc)	Yes	No	list: Passerines, Rabbit droppings			
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A	
9	Fish species observed or evidence seen (list)	Yes	No	list:			
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha		
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish R/E species
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:			
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1 S2 S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L			
SECTION ELEVEN: COMMUNITY USE/VALUE							
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, GB __, E __, HI __, WV __, BO __, HU __, PG __, BP __, F __, E __, R __, Other:					
SF29	Rate the wetland's community use/value	H	M	L			

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL20											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 644447 E x 5022225 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 10-Sep-14						Site Visit Date: 18-Aug-14															
Weather Conditions (past 48 hours): Sun and Clouds; Periods of rain																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Bog						WL size: 0.15 hectares					Landform: Basin			Landscape Position: Terrene							
Water flow path: Isolated						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO: 100	FE:	FM:	FS:	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering		within 100m		N/A	specify										
6	Standing water?					Yes	Avg Dep:		% Inundated:		No										
7	Inlet or Outlet (circle all that apply)?					Inlet	Outlet														
8	Adjacent Upland Land Use within 100m (%)					For: 60	Nat: 40	PasHay:	Crop:	UrbCm:	Road:	Other Dev:									
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, DwP __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify):															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8													
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L													
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L													
6	Adjacent Upland Slope (list % in each category)					Steep 30%	Mod 40%	Gentle 10%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify. <i>Cladonia stygia</i>	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3 N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:					
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:					
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:					
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:					
2	Is WL geographically isolated?	Yes	No	Specify:					
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low			
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding			
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT_x __, AI __, BT __, AR __, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High			
7	Disturbance of WL soils	Low		Med		High			
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock			
9	Capacity of WL to alter/retard flows	High		Med		Low			
10	Roughness coefficient for surface water flow path	High		Med		Low			
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low			
12	Water Source	Natural		Mostly natural		Partly altered		Controlled	
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A	
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified					
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low			
2	Nutrients/sediments from surrounding land	High		Med		Low			
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med		Low			
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No	Possible recharge wetland			
SF20	WL serves as a discharge site	Yes	No				
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY							
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth <4m	WB Exposed	WB Sheltered
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%			
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m			
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low			
5	Describe shoreline erosion potential	High	Med	Low			
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial		
SF21	WL ability to stabilize shoreline	H	M	L	N/A		
SECTION NINE: PLANT COMMUNITY							
1	Vegetation diversity	High	Med	Low			
1b	Dominant plant species and % cover in the WL	list: <i>Gaylussacia baccata</i> (20%)/ <i>Nemopantes mucronata</i> (15%)/ <i>Picea mariana</i> (20%)/ <i>Trchoforum cespitosum</i> (30%)					
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %			
4	Vegetation Disturbance	H	M	L	specify type(s) below		
5	Disturbance Types	H __,ATV __, G __, M __, In __, D/D __, Im __, OAH __, li __, Sd __, E __, other __,					
7	Vegetative Integrity of plant community	E	H	M	L		
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:			
SF23	Does the WL contain a diversity of plant communities	H	M	L			
SF24	Rate the overall integrity/quality of plant community?	H	M	L			
SF25	Are there any observed rare or endangered plant species? Specify. <i>C.stygia</i>	End	Thr	SpC	Red	Yellow	S1 S2 S3 N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY							
1	Interspersion of open water and vegetation (open water types only)	H	M	L			
1b	% cover in vegetation versus open water	_100_ %					
2	Interspersion that best fits entire wetland	H	M	L	N/A		
3	Wetland condition related to detritus	H	M	L	N/A		
4	Interspersion of other wetlands in vicinity	H	M	L			
6	Barriers/restriction between wetland and other habitat	L	M	H			
7	Noteworthy wildlife or evidence (birds, mammals, amphibians, etc)	Yes	No	list: Passerines, Rabbit droppings			
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A	
9	Fish species observed or evidence seen (list)	Yes	No	list:			
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha		
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish R/E species
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:			
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1 S2 S3 N/A
SF28	Overall fish and wildlife habitat quality	H	M	L			
SECTION ELEVEN: COMMUNITY USE/VALUE							
1	Describe community use	VV __, CP __, CO __, PO __, PA __, AV __, GB __, E __, HI __, WV __, BO __, HU __, PG __, BP __, F __, E __, R __, Other:					
SF29	Rate the wetland's community use/value	H	M	L			

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL21											Nova Scotia Wetland Evaluation Technique Field Data Sheet												
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 645820 E x 5023684 N												
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS																	
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																							
Evaluation Date: 10-Sep-14						Site Visit Date: 20-Aug-14																	
Weather Conditions (past 48 hours): Sun and Clouds																							
Seasonal Weather Conditions: Typical																							
SECTION ONE: WATERSHED CHARACTERISTICS																							
1 Watershed Name (tertiary): 1EQ-SD						Size: 518 km ²																	
2 % Watershed Land Cover						For: 43		Nat: 36		Past/Hay: <1		Crop: <1		Urb/Com: 2		Road: <1		Other Dev: <1 (Gravel Pit, Landfill, Industrial					
3 % Watershed WL Cover and by Class						Total: 10%		SM: <1		BO: 6		FE: 1		FM: 2		FS: 1		SS: 1		CP: <1		VP: Present	
SF1 Watershed condition						H		M		L													
SF2 Proportion of WL area in watershed & opportunity for floodwater detention						H		M		L													
SECTION TWO: WETLAND CHARACTERISTICS																							
Wetland Type: Fen						WL size: 0.19 hectares					Landform: Slope					Landscape Position: Lotic Stream Confined							
Water flow path: Inflow						Wetland Origin: Natural																	
1 Water Regime						PF		SF		TF		SS		PS		RfT		IfT		AF			
2 # WL's within 30m project area						Total# 0		SM:		BO:		FE:		FM:		FS:		SS:		CP:		VP:	
3 Is WL part of complex						Yes		No															
4 % each wetland type in complex						SM:		BO: 20		FE: 80		FM:		FS:		SS:		CP:		VP:			
5 Is WL bordering or associated with a lake or pond?						bordering				within 100m				N/A		specify							
6 Standing water?						Yes		Avg Dep:				% Inundated:				No							
7 Inlet or Outlet (circle all that apply)?						Inlet		Outlet															
8 Adjacent Upland Land Use within 100m (%)						For: 80		Nat:		PasHay:		Crop:		UrbCm:		Road:		Other Dev: 20 Beach					
9 Are there stressors in WL or WL buffer area? Circle primary stressor(s).						DD __, CW __, WcS __, O/C __, EB __, DP __, F __, M __, ES __, NE __, Dwp __, M __, GC __, ATV __, DG __, EA __, R __, Rr __, U/CD __, F __, FA __, other (specify): Skidder trail through wetland																	
10 Hydrology Altered (circle all that apply)?						Ditching		Dams		Tiles		Culvert		Well		Diversion		Other Specify:					
SF3 Rate the general wetland condition/integrity						H		M		L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																							
1 Average width of adjacent naturalized buffer						>1000_m																	
2 Widths for water quality						H >1		M 8-15		L <8													
3 Widths for wildlife habitat						H >100		M 15-100		L <15													
4 Adjacent area vegetation condition (list % in each category)						H 100%		M		L													
5 Adjacent area diversity and structure (list % in each category)						H 100%		M		L													
6 Adjacent Upland Slope (list % in each category)						Steep 60%		Mod 25%		Gentle 15%													
7 Adjacent land supports water quality						Yes		No		Specify:													
8 Adjacent land supports wildlife habitat						Yes		No		Specify:													
SF4 Rate the overall condition and integrity land adjacent to wetland						H		M		L		is buffer required to maintain red flag functions of wetland? If yes if no											
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																							
SF5 Is the WL a WSS?						Yes		No															

SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No							
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3	N/A
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No	specify:						
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No							
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No	specify:						
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No							
SF12	Fed/Prov/Municipal area of interest?	Yes	No	specify:						
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY										
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No	Specify:						
2	Is WL geographically isolated?	Yes	No	Specify:						
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low				
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding				
5	Signs of surface water retention observed?	SW __ cm, WSL __, WCD __, WM __ cm, SM __ cm, SD __, AD __, ID __, PMT_x __, AI __, BT __, AR __, Other:								
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High				
7	Disturbance of WL soils	Low		Med		High				
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock				
9	Capacity of WL to alter/retard flows	High		Med		Low				
10	Roughness coefficient for surface water flow path	High		Med		Low				
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low				
12	Water Source	Natural		Mostly natural		Partly altered		Controlled		
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A		
14	Coastal storm surge	Yes	No							
SF13	WL hydrologic condition	Natural	Modified	Significantly Modified						
SF14	WL important for maintaining stream flow?	Yes	No							
SF15	WL ability to detain surface water	High	Med	Low						
SECTION SIX: WATER QUALITY										
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low				
2	Nutrients/sediments from surrounding land	High		Med		Low				
3	Significant flood/stormwater attenuation	Yes	No							
4	Vegetation capacity to settle suspended sediments	High		Med		Low				
5	WL type /landscape position holds/filters runoff?	Yes	No							
SF16	Wetland improves water quality?	Yes	No							
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High						
SF18	WL contributes to water quality in downstream resources	High	Med	Low						
SECTION SEVEN: GROUNDWATER INTERACTIONS										
1	Describe soils in wetland	Recharge		Discharge						
2	Land use / run off in subwatershed upstream	Recharge		Discharge						
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge						
4	Hydroperiod of wetland	Recharge		Discharge						
5	Describe inlet/outlet configuration	Recharge		Discharge						
6	Characterize topographic relief surrounding wetland	Recharge		Discharge						

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth<4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Osmunda cinnamomea</i> (20%)/ <i>Calamagrostis canadensis</i> (40%)/ <i>Eriophorum virginicum</i> (30%)/ <i>Juncu effusus</i> (20%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __,ATV __,G __,M __,In __, D/D __, Im __, OAH __, li __, Sd __,E __,other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3
									N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_100_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Passerines, Deer tracks and pellets					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3
									N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __,CP __,CO __,PO __,PA __,AV __,GB __,E __,HI __, WV __, BO __,HU __, PG __, BP __,F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX D: WL22											Nova Scotia Wetland Evaluation Technique Field Data Sheet										
Project Name: Black Point Quarry						Evaluator: Scott Burley					GPS Coordinates: 645630 E x 5023728 N										
PID:35212497, 35212505, 35212521, 35212513, 35044056, 35214014, 35214022, 35214022 and 35213990						Site Address: Black Point, Guysborough County, NS															
Sources and Dates of Mapping/Images: NS Wetlands Inventory (2012); NS Forest Inventory (Current Forest Data - 2004); Google Earth (2003)																					
Evaluation Date: 10-Sep-14						Site Visit Date: 20-Aug-14															
Weather Conditions (past 48 hours): Sun and Clouds																					
Seasonal Weather Conditions: Typical																					
SECTION ONE: WATERSHED CHARACTERISTICS																					
1	Watershed Name (tertiary): 1EQ-SD					Size: 518 km ²															
2	% Watershed Land Cover					For: 43	Nat: 36	Past/Hay: <1	Crop: <1	Urb/Com: 2	Road: <1	Other Dev: <1 (Gravel Pit, Landfill, Industrial									
3	% Watershed WL Cover and by Class					Total: 10%	SM: <1	BO: 6	FE: 1	FM: 2	FS: 1	SS: 1	CP: <1	VP: Present							
SF1	Watershed condition					H	M	L													
SF2	Proportion of WL area in watershed & opportunity for floodwater detention					H	M	L													
SECTION TWO: WETLAND CHARACTERISTICS																					
Wetland Type: Fen						WL size: 0.1 hectares					Landform: Slope					Landscape Position: Lotic Stream Confined					
Water flow path: Throughflow						Wetland Origin: Natural															
1	Water Regime					PF	SF	TF	SS	PS	RfT	IfT	AF								
2	# WL's within 30m project area					Total# 0	SM:	BO:	FE:	FM:	FS:	SS:	CP:	VP:							
3	Is WL part of complex					Yes	No														
4	% each wetland type in complex					SM:	BO:	FE: 100	FM:	FS:	SS:	CP:	VP:								
5	Is WL bordering or associated with a lake or pond?					bordering		within 100m		N/A	specify										
6	Standing water?					Yes	Avg Dep:		% Inundated:		No										
7	Inlet or Outlet (circle all that apply)?					Inlet	Outle														
8	Adjacent Upland Land Use within 100m (%)					For: 95	Nat:	PasHay:	Crop:	UrbCm:	Road:	Other Dev: 5% beach									
9	Are there stressors in WL or WL buffer area? Circle primary stressor(s).					DD__, CW__, WcS__, O/C__, EB__, DP__, F__, M__, ES__, NE__, DwP__, M__, GC__, ATV__, DG__, EA__, R__, Rr__, U/CD__, F__, FA__, other (specify): Skidder trail through wetland															
10	Hydrology Altered (circle all that apply)?					Ditching	Dams	Tiles	Culvert	Well	Diversion	Other Specify:									
SF3	Rate the general wetland condition/integrity					H	M	L													
SECTION THREE: ADJACENT LAND CONDITION AND INTEGRITY																					
1	Average width of adjacent naturalized buffer					>1000_m															
2	Widths for water quality					H >1	M 8-15	L <8													
3	Widths for wildlife habitat					H >100	M 15-100	L <15													
4	Adjacent area vegetation condition (list % in each category)					H 100%	M	L													
5	Adjacent area diversity and structure (list % in each category)					H 100%	M	L													
6	Adjacent Upland Slope (list % in each category)					Steep 70%	Mod 25%	Gentle 5%													
7	Adjacent land supports water quality					Yes	No	Specify:													
8	Adjacent land supports wildlife habitat					Yes	No	Specify:													
SF4	Rate the overall condition and integrity land adjacent to wetland					H	M	L	is buffer required to maintain red flag functions of wetland? If yes if no												
SECTION FOUR: DOCUMENTED IMPORTANT FEATURES																					
SF5	Is the WL a WSS?					Yes	No														

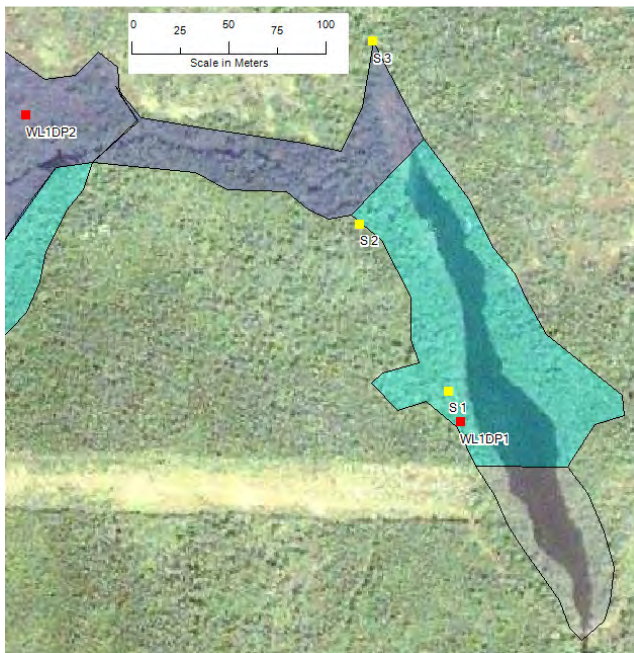
SF6	Does the WL support commercial/recreational fish/shellfish?	Yes	No						
SF7	Species of concern (Fed/Prov)? Specify.	End	Thr - SARA	SpC	Red	Yellow	S1	S2	S3
SF8	Wetland has conservation/compensation agreements/activity?	Yes	No						N/A
SF9	Wetland is calcerous fen, black ash or cedar swamp?	Yes	No						
SF10	Within Drinking Water Protected Area (designated watershed/wellfield)	Yes	No						
SF11	WL within a floodplain and upstream of or within of a populated area?	Yes	No						
SF12	Fed/Prov/Municipal area of interest?	Yes	No						
SECTION FIVE: HYDROLOGIC CONDITION AND INTEGRITY									
1	Is WL source of stream or headwater(wc order 1 or 2)	Yes	No						
2	Is WL geographically isolated?	Yes	No						
3	WL ability to maintain characteristic hydrologic regime	High		Med		Low			
4	Water Storage Depth (list % in each class)	>30cm	15-30cm	up to 15cm		No ponding			
5	Signs of surface water retention observed?	SW_20_cm, WSL_, WCD_, WM_cm, SM_cm, SD_, AD_, ID_, PMT_x_, AI_, BT_, AR_, Other:							
6	Describe observable/historical anthropogenic sediment delivery	Low		Med		High			
7	Disturbance of WL soils	Low		Med		High			
8	Predominant soils adjacent to WL	Sand		Silt/loam		Clay, bedrock			
9	Capacity of WL to alter/retard flows	High		Med		Low			
10	Roughness coefficient for surface water flow path	High		Med		Low			
11	Stormwater/Wastewater/Agricultural runoff detention	High		Med		Low			
12	Water Source	Natural		Mostly natural		Partly altered		Controlled	
13	Hydrology of tidal wetlands	Unrestricted		Reduced		Restricted		N/A	
14	Coastal storm surge	Yes	No						
SF13	WL hydrologic condition	Natural	Modified			Significantly Modified			
SF14	WL important for maintaining stream flow?	Yes	No						
SF15	WL ability to detain surface water	High	Med	Low					
SECTION SIX: WATER QUALITY									
1	Stormwater/Wastewater/Agricultural runoff as water source?	High		Med		Low			
2	Nutrients/sediments from surrounding land	High		Med		Low			
3	Significant flood/stormwater attenuation	Yes	No						
4	Vegetation capacity to settle suspended sediments	High		Med		Low			
5	WL type /landscape position holds/filters runoff?	Yes	No						
SF16	Wetland improves water quality?	Yes	No						
SF17	Evidence of excess nutrient loading/contamination?	Low	Med	High					
SF18	WL contributes to water quality in downstream resources	High	Med	Low					
SECTION SEVEN: GROUNDWATER INTERACTIONS									
1	Describe soils in wetland	Recharge		Discharge					
2	Land use / run off in subwatershed upstream	Recharge		Discharge					
3	Conditions of upland soils within 200m of wetland	Recharge		Discharge					
4	Hydroperiod of wetland	Recharge		Discharge					
5	Describe inlet/outlet configuration	Recharge		Discharge					
6	Characterize topographic relief surrounding wetland	Recharge		Discharge					

SF19	WL serves as a recharge site	Yes	No						
SF20	WL serves as a discharge site	Yes	No						
SECTION EIGHT: SHORELINE STABILIZATION AND INTEGRITY									
1	Wetland fringing ocean/estuary/lake/pond/river/stream?	Yes	No	streamwidth >4m	streamwidth <4m	WB Exposed	WB Sheltered		
2	% cover of rooted vegetation in shallow water zone	H >50%	M 10-50	L <10%					
3	Avg veg WL width b/w shoreline/streambank & 2 m depth contour	H >10m	M 3-10	L <3m					
4	Prevalence of strong-stemmed emerg. veg (shoreline marshes and fens only)	High	Med	Low					
5	Describe shoreline erosion potential	High	Med	Low					
6	Shoreline/streambank veg condition upslope of water level	Low	Med	High	Artificial				
SF21	WL ability to stabilize shoreline	H	M	L	N/A				
SECTION NINE: PLANT COMMUNITY									
1	Vegetation diversity	High	Med	Low					
1b	Dominant plant species and % cover in the WL	list: <i>Osmunda cinnamomea</i> (30%)/ <i>Calamagrostis</i> (40%)/ <i>Oclemena nemoralis</i> (20%)							
3	Dominant Non-native or Invasive species and % cover	Yes	No	specify: %					
4	Vegetation Disturbance	H	M	L	specify type(s) below				
5	Disturbance Types	H __,ATV __,G __,M __,In __, D/D __, Im __, OAH __, li __, Sd __,E __,other __,							
7	Vegetative Integrity of plant community	E	H	M	L				
SF22	Is the plant community unique or rare regionally or provincially?	Yes	no	specify:					
SF23	Does the WL contain a diversity of plant communities	H	M	L					
SF24	Rate the overall integrity/quality of plant community?	H	M	L					
SF25	Are there any observed rare or endangered plant species? Specify.	End	Thr	SpC	Red	Yellow	S1	S2	S3
									N/A
SECTION TEN: FISH AND WILDLIFE HABITAT AND INTEGRITY									
1	Interspersion of open water and vegetation (open water types only)	H	M	L					
1b	% cover in vegetation versus open water	_95_ %							
2	Interspersion that best fits entire wetland	H	M	L	N/A				
3	Wetland condition related to detritus	H	M	L	N/A				
4	Interspersion of other wetlands in vicinity	H	M	L					
6	Barriers/restriction between wetland and other habitat	L	M	H					
7	Noteworthy wildlife or evidence (birds, mammals, amphibians,etc)	Yes	No	list: Passerines, Deer tracks, Leopard Frog					
8	Connected to permanent water (accessible to fish)?	Exceptional	High	Med	Low	N/A			
9	Fish species observed or evidence seen (list)	Yes	No	list:					
10	Wetland part of contiguous upland or wetland:	>50ha	25-50ha	10-25ha	<10ha				
11	WL provides habitat for:	Amphibians	Reptiles	Waterfowl	Waterbirds	Mammals	Fish	R/E species	
SF26	Does wetland support fish/fish habitat?	Yes	No	specify:					
SF27	Rare or endangered fish/wildlife species found in the wetland?	End	Thr-SARA	SpC	Red	Yellow	S1	S2	S3
									N/A
SF28	Overall fish and wildlife habitat quality	H	M	L					
SECTION ELEVEN: COMMUNITY USE/VALUE									
1	Describe community use	VV __,CP __,CO __,PO __,PA __,AV __,GB __,E __,HI __, WV __, BO __,HU __, PG __, BP __,F __, E __, R __, Other:							
SF29	Rate the wetland's community use/value	H	M	L					

SF ratings highlighted in red indicate critical wetland functions or watershed conditions that are highly degraded. Whenever a wetland is found to have red-highlighted SFs the proponent

APPENDIX E
Additional Delineation Data Sheets

Wetland 1



Two streams feed into this large beaver pond from the north. The wetland surrounding the pond is narrow and in some cases non-existent due to steep rock outcrops at the edge of the water. The beaver dam is at the southern end of the open water. Forested wetland is present at the bottom of a steep slope in the southern quadrant near the power line and riparian shrub wetland is associated with both streams.



Open water seen from the south with some riparian Shrub Wetland



Beaver dam seen from the north.



Beaver lodge



Forested Wetland at Wetland 1



Upland habitat adjacent to Forested Wetland at the base of the steep incline at Wetland 1



Shrub Riparian Wetland where Wetland 1 joins Wetland 17

Project Site: Point Black	Date: July, 2011	Sample Point: WL1DP1	Job #:
Client/owner:	Field Investigator(s): Theo Popma, Candice, Carrie B.		
County: Guysborough	Coordinates: 645779 5022433		
PID 35092063	Do normal environmental conditions exist on-site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

If no, explain:

Atypical Situation? Yes No Explain: Beaver Dam

Is this a potential Problem Area? Yes No Explain:

Wetland Determination

(Check One Only For Each Criteria)

Dominant Hydrophytic Vegetation (50/20 rule)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Wetland Hydrology	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Hydric Soils	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

Wetland Type: Riparian | Forested Wetland

Rational for Determination:

Wetland Determination	
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO

Vegetation

Tree Stratum: (Plot size: 9m2)	%Cover	Dominant Species	Indicator Status
1 <i>Osmunda cinnamomea</i>	5	x	FACW
2 <i>Oxalis montana</i>	5	x	FAC-
3 <i>Carex trisperma</i>	5	x	OBL
4 <i>Aralia nudicaulis</i>	5	x	FACU
5			
6			

Dominance Test Worksheet:

# of Dominant Species that are OBL,FACW,FAC:	6
Total # of Dominant Species across all strata:	7
% of Dominant Species that are OBL,FACW,FAC:	85.7

Shrub Stratum: (Plot size: 5m2)	%Cover	Dominant Species	Indicator Status
1 <i>Nemopanthus mucronatus</i>	5	x	OBL
2 <i>Abies balsamea</i>	10	x	FAC
3			
4			
5			
15 = Total Cover			

Prevalence Index Worksheet:

Total %Cover of:	Multiply by:	
OBL Species	x 1 =	0
FACW Species	x 2 =	0
FAC Species	x 3 =	0
FACU Species	x 4 =	0
ULP Species	x 5 =	0
Column Totals:		0
Prevalence Index = B/A =		##

Herb Stratum: (Plot Size: 1m2)	%Cover	Dominant Species	Indicator Status
1 <i>Abies balsamea</i>	50	x	FAC
2 <i>Picea mariana</i>	20		
3 <i>Larix laricina</i>	10		
4			
5			
80 = Total Cover			

Hydrophytic Vegetation Indicators:

- Rapid Test for Hydrologic Vegetation
- Dominance Test is >50%
- Prevalence Index is ≤3.0 ¹
- Morphological Adaptations¹ (explain)
- Problematic Hydrophytic Vegetation¹(explain)

Comments

Sphagnum common

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes No

Hydrology

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

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Watermarks	<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 of 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)	

Secondary Indicators: (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth		
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth	10	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth	0	

Comments:

Soil Profile

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

Depth(cm)	Matrix		Redox Features				Texture	Remarks
	Color(moist)	%	Color(moist)	%	Type ¹	Loc ²		
								Organic to 30cm

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

Hydric Soil Indicators:

<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surfaces (S7)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<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"/> 5cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

Restrictive Layer Type (if observed) _____ Depth: _____ **Hydric Soil Present?** Yes No

Comments:

Raining

Project Site: Point Black Date: July, 2011 Sample Point: WL1DP2 Job #:
 Client/owner: Field Investigator(s): Theo Popma, Candice, Carrie B.
 County: Guysborough Coordinates: 645555 5022591
 PID 35092063 Do normal environmental conditions exist on-site? Yes No

If no, explain:

Atypical Situation? Yes No Explain:
 Is this a potential Problem Area? Yes No Explain:

Wetland Determination
 (Check One Only For Each Criteria)

Dominant Hydrophytic Vegetation (50/20 rule) Yes No
 Wetland Hydrology Yes No
 Hydric Soils Yes No

Wetland Determination	
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO

Wetland Type: Riparian Shrub Wetland
Rational for Determination:

Vegetation		%Cover	Dominant Species	Indicator Status	Dominance Test Worksheet:
Tree Stratum: (Plot size: 9m2)					
1	<i>Sarracenia purpurea</i>	5	x	OBL	# of Dominant Species that are OBL,FACW,FAC: 9 Total # of Dominant Species across all strata: 9 % of Dominant Species that are OBL,FACW,FAC: 100
2	<i>Maianthemum trifolium</i>	5	x	FACW+	
3	<i>Kalmia angustifolia</i>	5	x	FAC	
4	<i>Aster radula</i>	5	x	OBL	
5					
6					
		20	= Total Cover		
Shrub Stratum: (Plot size: 5m2)					
1	<i>Viburnum nudum</i>	10	x	OBL	Prevalence Index Worksheet: Total %Cover of: Multiply by: OBL Species x 1 = 0 FACW Species x 2 = 0 FAC Species x 3 = 0 FACU Species x 4 = 0 ULP Species x 5 = 0 Column Totals: 0 0 Prevalence Index = B/A = ##
2	<i>Nemopanthus mucronatus</i>	15	x	OBL	
3	<i>Abies balsamea</i>	15	x	FAC	
4					
5					
		40	= Total Cover		
Herb Stratum: (Plot Size: 1m2)					
1	<i>Larix laricina</i>	20	x	FACW	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid Test for Hydrolic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (explain) Problematic Hydrophytic Vegetation ¹ (explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2	<i>Abies balsamea</i>	20	x	FAC	
3					
4					
5					
		40	= Total Cover		
Comments					

Hydrophytic Vegetation Present? Yes No

Hydrology

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

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Watermarks	<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 of 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)	

Secondary Indicators: (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth	<input type="checkbox"/>			
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth	<input type="checkbox"/>	20	Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth	<input type="checkbox"/>	0		

Comments:

Soil Profile

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

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

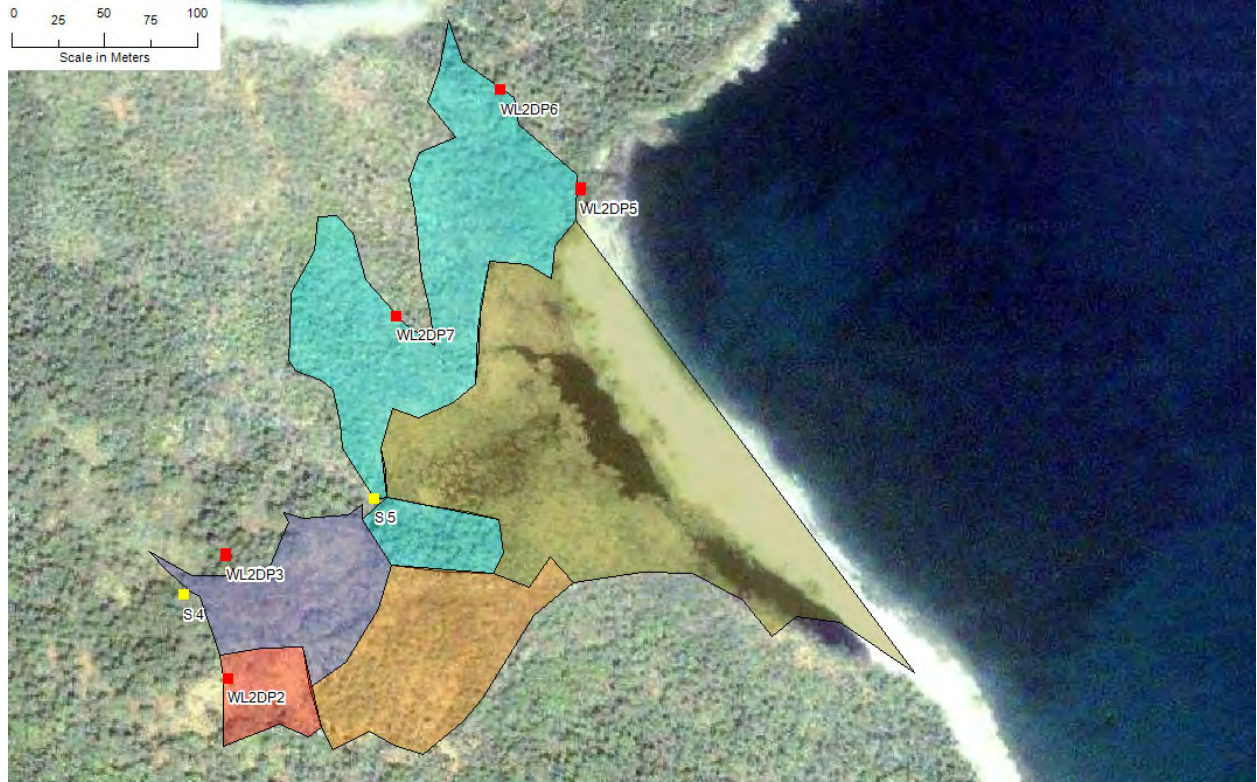
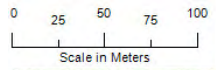
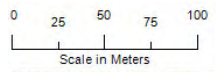
¹Type:C=Concentration,D=Depletion,RM=Reduced Matrix,CS=Covered or Coated Sand Grains.²Location:PL=Pore Lining,M=Matrix

Hydric Soil Indicators:

<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surfaces (S7)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<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"/> 5cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
Restrictive Layer Type (if observed)	Depth: <input type="checkbox"/>
	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Comments:

Wetland 2



Wetland 2 is a complex of habitat types including marsh, swamp, forested wetland and riparian wetland. This delineation was problematic because of transitional habitat which stretched between the two coastlines behind the headland. Historic habitation was also present but had little effect on wetland habitat although some fern-dominated wet meadow habitat was identified in isolated areas. Some microtopographical relief was present along the western and southern edges of the complex. Open water was found not to be brackish.



Seepy fern-dominated slope near western wetland edge



Upland habitat near wetland 2 dominated by coniferous forest



Transitional wetland habitat dominated by shrubs and blown down conifers behind the headland west of the main estuary



Upland near Wetland 2



Marshy fen portion of the Wetland 2 complex

Project Site: Point Black		Date: July, 2011	Sample Point: CBWL2DP1	Job #:	
Client/owner:		Field Investigator(s): Theo Popma, Candice, Carrie B.			
County: Guysborough		Coordinates: 645276 5024015			
PID 35092063		Do normal environmental conditions exist on-site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
If no, explain:					
Atypical Situation? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain: Post-Settlement clearing on slope and probably in wetland					
Is this a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Explain:					
Wetland Determination (Check One Only For Each Criteria)					
Dominant Hydrophytic Vegetation (50/20 rule)		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Wetland Determination <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
Wetland Hydrology		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Hydric Soils		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Wetland Type: Shrub Swamp					
Rational for Determination:					
Vegetation					
<u>Tree Stratum: (Plot size: 9m2)</u>		%Cover	Dominant Species	Indicator Status	Dominance Test Worksheet:
1	<i>Osmunda cinnamomea</i>	20	x	FACW	# of Dominant Species
2	<i>Carex nigra</i>	20	x	FACW+	that are OBL,FACW,FAC: 9
3	<i>thelypteris noveboracensis</i>	15	x	FAC	Total # of Dominant Species across all strata: 10
4					% of Dominant Species that are OBL,FACW,FAC: 90
5					
6					
		55	= Total Cover		
<u>Shrub Stratum: (Plot size: 5m2)</u>					Prevalence Index Worksheet:
1	<i>Nemopanthus mucronatus</i>	10	x	OBL	<u>Total %Cover of:</u> <u>Multiply by:</u>
2	<i>Kalmia angustifolia</i>	5	x	FAC	OBL Species x 1 = 0
3	<i>Alnus crispa</i>	5	x	FAC	FACW Species x 2 = 0
4	<i>Rubus allegheniensis</i>	5	x	FACU-	FAC Species x 3 = 0
5	<i>Ilex verticillata</i>	5	x	FACW+	FACU Species x 4 = 0
		30	= Total Cover		ULP Species x 5 = 0
<u>Herb Stratum: (Plot Size: 1m2)</u>					Column Totals: 0 0
1	none				Prevalence Index = B/A = ##
2					
3					
4					Hydrophytic Vegetation Indicators:
5					x Rapid Test for Hydrolic Vegetation
		0	= Total Cover		x Dominance Test is >50%
					Prevalence Index is <=3.0 ¹
					Morphological Adaptations ¹ (explain)
					Problematic Hydrophytic Vegetation ¹ (explain)
Comments					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Sphagnum - 100%					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Hydrology

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

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Watermarks	<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 of 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)	

Secondary Indicators: (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth	<input type="checkbox"/>		
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth	22	Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth	0		

Comments:

Soil Profile

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

Depth(cm)	Matrix		Redox Features				Texture	Remarks
	Color(moist)	%	Color(moist)	%	Type ¹	Loc ²		
30cm							Organic	

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

Hydric Soil Indicators:

<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surfaces (S7)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<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"/> 5cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
Restrictive Layer Type (if observed)	Depth:

Hydric Soil Present? Yes No

Comments:

Project Site: Point Black	Date: July, 2011	Sample Point: CBWL2DP2	Job #:
Client/owner:	Field Investigator(s): Theo Popma, Candice, Carrie B.		
County: Guysborough	Coordinates:		
PID 35092063	Do normal environmental conditions exist on-site? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

If no, explain:

Atypical Situation? Yes No Explain: Slope was habitated/cleared

Is this a potential **Problem Area?** Yes No Explain:

Wetland Determination

(Check One Only For Each Criteria)

Dominant Hydrophytic Vegetation (50/20 rule)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Wetland Hydrology	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Hydric Soils	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

Wetland Determination	
<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO

Wetland Type:

Rational for Determination:

Vegetation

	Tree Stratum: (Plot size: 9m2)	%Cover	Dominant Species	Indicator Status
1	<i>Dennstaedtia punctilobula</i>	##	x	FAC
2	<i>Rubus allegheniensis</i>	20	x	FACU-
3	<i>Calamagrostis canadensis</i>	10	x	FACW+
4				
5				
6				

Dominance Test Worksheet:

of Dominant Species that are OBL,FACW,FAC: 3

Total # of Dominant Species across all strata: 6

% of Dominant Species that are OBL,FACW,FAC: 50

= Total Cover

Shrub Stratum: (Plot size: 5m2)

1	<i>Alnus crispa</i>	5	x	FAC
2	<i>Picea glauca</i>	5	x	FACU
3	<i>Betula papyrifera</i>	10		FACU
4				
5				
		20		

Prevalence Index Worksheet:

Total %Cover of: Multiply by:

OBL Species x 1 = 0

FACW Species x 2 = 0

FAC Species x 3 = 0

FACU Species x 4 = 0

ULP Species x 5 = 0

Column Totals: 0 0

Herb Stratum: (Plot Size: 1m2)

1				
2				
3				
4				
5				
		0		

Prevalence Index = B/A = ##

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrolic Vegetation

Dominance Test is >50%

Prevalence Index is ≤ 3.0 ¹

Morphological Adaptations¹ (explain)

Problematic Hydrophytic Vegetation¹ (explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Comments

Hydrophytic Vegetation Present? Yes No

Hydrology

Primary Hydrological 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"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Watermarks	<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 of 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)	

Secondary Indicators: (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	

Field Observations:

Surface Water Present?	Yes	No <input checked="" type="checkbox"/>	Depth		
Water Table Present?	Yes	No <input checked="" type="checkbox"/>	Depth		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Saturation Present?	Yes	No <input checked="" type="checkbox"/>	Depth		

Comments:

Soil Profile

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

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

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surfaces (S7)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<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"/> 5cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
Restrictive Layer Type (if observed)	Depth:

Hydric Soil Present? Yes No

Comments:

No depletion

Project Site: Point Black	Date: July, 2011	Sample Point: WL2DP3	Job #:
Client/owner:	Field Investigator(s): Theo Popma, Candice, Carrie B.		
County: Guysborough	Coordinates:		
PID 35092063	Do normal environmental conditions exist on-site?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

If no, explain:

Atypical Situation? Yes No Explain:

Is this a potential **Problem Area?** Yes No Explain:

Wetland Determination
(Check One Only For Each Criteria)

Dominant Hydrophytic Vegetation (50/20 rule)	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Wetland Hydrology	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Hydric Soils	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

Wetland Determination	
<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO

Wetland Type:

Rational for Determination:

Vegetation			Dominant Species	Indicator Status	Dominance Test Worksheet:	
Tree Stratum: (Plot size: 9m2)						
1	<i>Maianthemum canadense</i>	80		FAC-	# of Dominant Species that are OBL,FACW,FAC:	2
2	<i>Aralia nudicaulis</i>	20		FACU	Total # of Dominant Species across all strata:	6
3					% of Dominant Species that are OBL,FACW,FAC:	33.3
4						
5						
6						
		##	=	Total Cover		
Shrub Stratum: (Plot size: 5m2)						
1	<i>Sorbus americana</i>	15		FACU	Prevalence Index Worksheet:	
2	<i>Picea glauca</i>	5		FACU	Total %Cover of:	Multiply by:
3	<i>Abies balsamea</i>	5		FAC	OBL Species	x 1 = 0
4					FACW Species	x 2 = 0
5					FAC Species	x 3 = 0
		25	=	Total Cover	FACU Species	x 4 = 0
					ULP Species	x 5 = 0
					Column Totals:	0
					Prevalence Index = B/A = ##	
Herb Stratum: (Plot Size: 1m2)						
1	<i>Picea glauca</i>	60		FACU	Hydrophytic Vegetation Indicators:	
2					Rapid Test for Hydrolyc Vegetation	
3					Dominance Test is >50%	
4					Prevalence Index is ≤3.0 ¹	
5					Morphological Adaptations ¹ (explain)	
		60	=	Total Cover	Problematic Hydrophytic Vegetation ¹ (explain)	
Comments					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Hydrology										
Primary Hydrological Indicators: (minimum of one is required; check all that apply)										
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Watermarks	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Algal Mat of Crust (B4)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<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)			
Secondary Indicators: (minimum of two required)										
<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)
Field Observations:										
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth				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							
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth							
Comments:										
Soil Profile										
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)										
Depth(cm)	Matrix		Redox Features				Texture	Remarks		
	Color(moist)	%	Color(moist)	%	Type ¹	Loc ²				
	5YR 4/4									
¹ Type:C=Concentration,D=Depletion,RM=Reduced Matrix,CS=Covered or Coated Sand Grains. ² Location:PL=Pore Lining,M=Matrix										
Hydric Soil Indicators:										
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> 5cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Restrictive Layer Type (if observed)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surfaces (S7)	<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)	<input type="checkbox"/> Depth:
							Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Comments:										
No depletion										

Project Site: Point Black	Date: July, 2011	Sample Point: WL2DP4	Job #:
Client/owner:	Field Investigator(s): Theo Popma, Candice, Carrie B.		
County: Guysborough	Coordinates: 645467 5024212		
PID 35092063	Do normal environmental conditions exist on-site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

If no, explain:

Atypical Situation? Yes No Explain:

Is this a potential Problem Area? Yes No Explain:

Wetland Determination

(Check One Only For Each Criteria)

Dominant Hydrophytic Vegetation (50/20 rule)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Wetland Hydrology	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Hydric Soils	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

Wetland Determination	
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO

Wetland Type:

Rational for Determination:

Vegetation			Dominant Species	Indicator Status	Dominance Test Worksheet:
Tree Stratum: (Plot size: 9m2)			%Cover		
1	<i>Aster umbellatus</i>	20	x	FACW	# of Dominant Species that are OBL,FACW,FAC: 7
2	<i>Rubus allegheniensis</i>	10		FACU-	
3	<i>Rubus idaeus</i>	20	x	FAC-	Total # of Dominant Species across all strata: 9
4	<i>Calamagrostis canadensis</i>	20	x	FACW+	
5	<i>Thalictrum pubescens</i>	10		FACW+	% of Dominant Species that are OBL,FACW,FAC: 77.8
6					
		80	= Total Cover		
Shrub Stratum: (Plot size: 5m2)					
1	<i>Abies balsamea</i>	20	x	FAC	Prevalence Index Worksheet: Total %Cover of: Multiply by: OBL Species x 1 = 0 FACW Species x 2 = 0 FAC Species x 3 = 0 FACU Species x 4 = 0 ULP Species x 5 = 0 Column Totals: 0 0 Prevalence Index = B/A = ##
2	<i>Alnus viridis</i>	20	x	FAC	
3	<i>Nemopanthus mucronatus</i>			OBL	
4					
5					
		40	= Total Cover		
Herb Stratum: (Plot Size: 1m2)					
1	<i>Picea rubens</i>	50	x	FACU	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid Test for Hydric Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is <=3.0 ¹ Morphological Adaptations ¹ (explain) Problematic Hydrophytic Vegetation ¹ (explain)
2					
3					
4					
5					
		50	= Total Cover		

Comments

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes No

Hydrology

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Watermarks	<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 of 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)	

Secondary Indicators: (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth	<u>5</u>	
Water Table Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth	<u>0</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Saturation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Depth	<u>0</u>	

Comments:

Soil Profile

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

Depth(cm)	Matrix		Redox Features				Texture	Remarks
	Color(moist)	%	Color(moist)	%	Type ¹	Loc ²		
			Histosol					

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

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surfaces (S7)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<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"/> 5cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

Restrictive Layer Type (if observed) _____ Depth: _____ **Hydric Soil Present?** Yes No

Comments:

Project Site: Point Black	Date: July, 2011	Sample Point: WL2DP5	Job #:
Client/owner:	Field Investigator(s): Theo Popma, Candice, Carrie B.		
County: Guysborough	Coordinates:		
PID 35092063	Do normal environmental conditions exist on-site?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

If no, explain:

Atypical Situation? Yes No Explain:
 Is this a potential **Problem Area?** Yes No Explain: Transitional habitat behind headland

Wetland Determination

(Check One Only For Each Criteria)

Dominant Hydrophytic Vegetation (50/20 rule)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Wetland Hydrology	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Hydric Soils	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

Wetland Determination	
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO

Wetland Type:

Rational for Determination:

Vegetation			Dominant Species	Indicator Status	Dominance Test Worksheet:
<u>Tree Stratum: (Plot size: 9m2)</u>			%Cover		
1	<i>Maianthemum trifolium</i>	25		FACW	# of Dominant Species that are OBL,FACW,FAC: <input type="text"/> Total # of Dominant Species across all strata: <input type="text"/> % of Dominant Species that are OBL,FACW,FAC: <input type="text"/> ####
2	<i>Aralia nudicaulis</i>	10		FACU	
3	<i>Carex trisperma</i>	5		OBL	
4					
5					
6					
		40	= Total Cover		
<u>Shrub Stratum: (Plot size: 5m2)</u>					Prevalence Index Worksheet: Total %Cover of: <input type="text"/> Multiply by: OBL Species x 1 = 0 FACW Species x 2 = 0 FAC Species x 3 = 0 FACU Species x 4 = 0 ULP Species <input type="text"/> x 5 = 0 Column Totals: 0 0 Prevalence Index = B/A = <input type="text"/> ##
1	<i>Ilex verticillata</i>	15		FACW+	
3					
4					
5					
		15	= Total Cover		
<u>Herb Stratum: (Plot Size: 1m2)</u>					Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrolic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (explain) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<i>Larix laricina</i>	30		FACW	
2	<i>Picea rubens</i>	5		FACU	
4					
5					
		35	= Total Cover		
Comments					
Sphagnum - 80%			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Hydrology

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

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Watermarks	<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 of 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)	

Secondary Indicators: (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	

Field Observations:

Surface Water Present?	Yes	No	<input checked="" type="checkbox"/>	Depth		
Water Table Present?	Yes	<input checked="" type="checkbox"/>	No	Depth	10	
Saturation Present?	Yes	<input checked="" type="checkbox"/>	No	Depth	0	

Wetland Hydrology Present? Yes No

Comments:

Soil Profile

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

Depth(cm)	Matrix		Redox Features				Texture	Remarks
	Color(moist)	%	Color(moist)	%	Type ¹	Loc ²		
			Organic					

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

Hydric Soil Indicators:

<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surfaces (S7)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<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"/> 5cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

Restrictive Layer Type (if observed) Depth: **Hydric Soil Present?** Yes No

Comments:

Project Site: Point Black	Date: July, 2011	Sample Point: WL2DP6	Job #:
Client/owner:	Field Investigator(s): Theo Popma, Candice, Carrie B.		
County: Guysborough	Coordinates: 645424 5024265		
PID 35092063	Do normal environmental conditions exist on-site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

If no, explain:

Atypical Situation? Yes No Explain: _____

Is this a potential **Problem Area?** Yes No Explain: Exposure and erosion of headland affecting drainage behind estuary

Wetland Determination

(Check One Only For Each Criteria)

Dominant Hydrophytic Vegetation (50/20 rule)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Wetland Hydrology	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Hydric Soils	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

Wetland Determination	
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO

Wetland Type:

Rational for Determination:

Vegetation			Dominant Species	Indicator Status	Dominance Test Worksheet:
Tree Stratum: (Plot size: 9m2)	%Cover				
1 <i>Cornus canadensis</i>	20	x	FAC-		# of Dominant Species that are OBL,FACW,FAC: 3
2 <i>Rubus pubescens</i>	30	x	FACW		
3					
4					
5					
6					
	50	= Total Cover			Total # of Dominant Species across all strata: 5
Shrub Stratum: (Plot size: 5m2)					% of Dominant Species that are OBL,FACW,FAC: 60
1 <i>Picea glauca</i>	20	x	FACU		Prevalence Index Worksheet: Total %Cover of: Multiply by: OBL Species x 1 = 0 FACW Species x 2 = 0 FAC Species x 3 = 0 FACU Species x 4 = 0 ULP Species x 5 = 0 Column Totals: 0 0 Prevalence Index = B/A = ##
2 <i>Betula papyrifera</i>	5	x	FACU		
3 <i>Abies balsamea</i>	20	x	FAC		
4					
5					
	45	= Total Cover			
Herb Stratum: (Plot Size: 1m2)					Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid Test for Hydrolic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (explain) Problematic Hydrophytic Vegetation ¹ (explain)
1					
2					
3					
4					
5					
	0	= Total Cover			
Comments			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
Abundant Sphagnum, deadwood			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Hydrology									
Primary Hydrological 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"/>	High Water Table (A2)	<input type="checkbox"/>	Aquatic Fauna (B13)						
<input type="checkbox"/>	Saturation (A3)	<input type="checkbox"/>	Marl Deposits (B15)						
<input type="checkbox"/>	Watermarks	<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 of 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)								
Secondary Indicators: (minimum of two required)									
<input type="checkbox"/>	Surface Soil Cracks (B6)	<input type="checkbox"/>	Stunted or Stressed Plants (D1)						
<input type="checkbox"/>	Drainage Patterns (B10)	<input type="checkbox"/>	Geomorphic Position (D2)						
<input type="checkbox"/>	Moss Trim Lines (B16)	<input type="checkbox"/>	Shallow Aquitard (D3)						
<input type="checkbox"/>	Dry-Season Water Table (C2)	<input type="checkbox"/>	Microtopographic Relief (D4)						
<input type="checkbox"/>	Crayfish Burrows (C8)	<input type="checkbox"/>	FAC-Neutral Test (D5)						
<input type="checkbox"/>	Saturation Visible on Aerial Imagery (C9)								
Field Observations:									
Surface Water Present?	Yes	No	x	Depth		Wetland Hydrology Present?		Yes	No
Water Table Present?	Yes	x	No	Depth	20			x	
Saturation Present?	Yes	x	No	Depth	0				
Comments:									
Soil Profile									
Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)									
<u>Depth(cm)</u>	<u>Matrix</u>		<u>Redox Features</u>				<u>Texture</u>	<u>Remarks</u>	
	<u>Color(moist)</u>	<u>%</u>	<u>Color(moist)</u>	<u>%</u>	<u>Type¹</u>	<u>Loc²</u>			
0 to 10cm	organic								
refusal (gravel)									
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix									
Hydric Soil Indicators:									
<input checked="" type="checkbox"/>	Histosol (A1)	<input type="checkbox"/>	Sandy Redox (S5)						
<input type="checkbox"/>	Histic Epipedon (A2)	<input type="checkbox"/>	Stripped Matrix (S6)						
<input type="checkbox"/>	Black Histic (A3)	<input type="checkbox"/>	Dark Surfaces (S7)						
<input type="checkbox"/>	Hydrogen Sulfide (A4)	<input type="checkbox"/>	Polyvalue Below Surface (S8)						
<input type="checkbox"/>	Stratified Layers (A5)	<input type="checkbox"/>	Thin Dark Surface (S9)						
<input type="checkbox"/>	Depleted Below Dark Surface (A11)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)						
<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"/>	5cm Mucky Peat or Peat (S3)	<input type="checkbox"/>	Depleted Dark Surface (F7)						
<input type="checkbox"/>	Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	Redox Depressions (F8)						
Restrictive Layer Type (if observed)			Depth:			Hydric Soil Present?		Yes	No
Comments:									
Soils are problematic due to historic erosion near coast in estuary behind headland.									

Project Site: Point Black	Date: July, 2011	Sample Point: WL2DP7	Job #:
Client/owner:	Field Investigator(s): Theo Popma, Candice, Carrie B.		
County: Guysborough	Coordinates: 645368 5024143		
PID 35092063	Do normal environmental conditions exist on-site?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

If no, explain:

Atypical Situation? Yes No Explain:

Is this a potential **Problem Area?** Yes No Explain: Erosion and sedimentation behind coastal headlands

Wetland Determination
(Check One Only For Each Criteria)

Dominant Hydrophytic Vegetation (50/20 rule)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Wetland Hydrology	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Hydric Soils	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

Wetland Determination

YES NO

Wetland Type:
Rational for Determination:

Vegetation			Dominant Species	Indicator Status	Dominance Test Worksheet:	
Tree Stratum: (Plot size: 9m2)	%Cover					
1 <i>Osmunda cinnamomea</i>	90		x	FACW	# of Dominant Species that are OBL,FACW,FAC:	5
2 <i>Thelypteris noveboracensis</i>	5		x	FAC	Total # of Dominant Species across all strata:	6
3					% of Dominant Species that are OBL,FACW,FAC:	83.3
4						
5						
6						
	95	= Total Cover				
Shrub Stratum: (Plot size: 5m2)					Prevalence Index Worksheet:	
1 <i>Alnus viridis</i>	5		x	FAC	Total %Cover of:	Multiply by:
2 <i>Abies balsamea</i>	5		x	FAC	OBL Species	x 1 = 0
3 <i>Picea glauca</i>	5		x	FACU	FACW Species	x 2 = 0
4 <i>Picea mariana</i>	5		x	FACW-	FAC Species	x 3 = 0
5					FACU Species	x 4 = 0
	20	= Total Cover			ULP Species	x 5 = 0
					Column Totals:	0
Herb Stratum: (Plot Size: 1m2)					Prevalence Index = B/A = ##	
1 <i>deadwood</i>						
2						
3						
4						
5						
	0	= Total Cover				
Comments					Hydrophytic Vegetation Indicators:	
					x Rapid Test for Hydric Vegetation	
					x Dominance Test is >50%	
					<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
					<input type="checkbox"/> Morphological Adaptations ¹ (explain)	
					<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (explain)	
					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Hydrology

Primary Hydrological 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"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Watermarks	<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 of 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)	

Secondary Indicators: (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	

Field Observations:

Surface Water Present?	Yes	No	<input checked="" type="checkbox"/>	Depth			
Water Table Present?	Yes	<input checked="" type="checkbox"/>	No	Depth	30		
Saturation Present?	Yes	<input checked="" type="checkbox"/>	No	Depth	0		

Wetland Hydrology Present? Yes No

Comments:

Soil Profile

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

Depth(cm)	Matrix		Redox Features				Texture	Remarks
	Color(moist)	%	Color(moist)	%	Type ¹	Loc ²		
0 to 15cm	organic							
15 to 30cm	mineral		less than 50% depleted					

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

Hydric Soil Indicators:

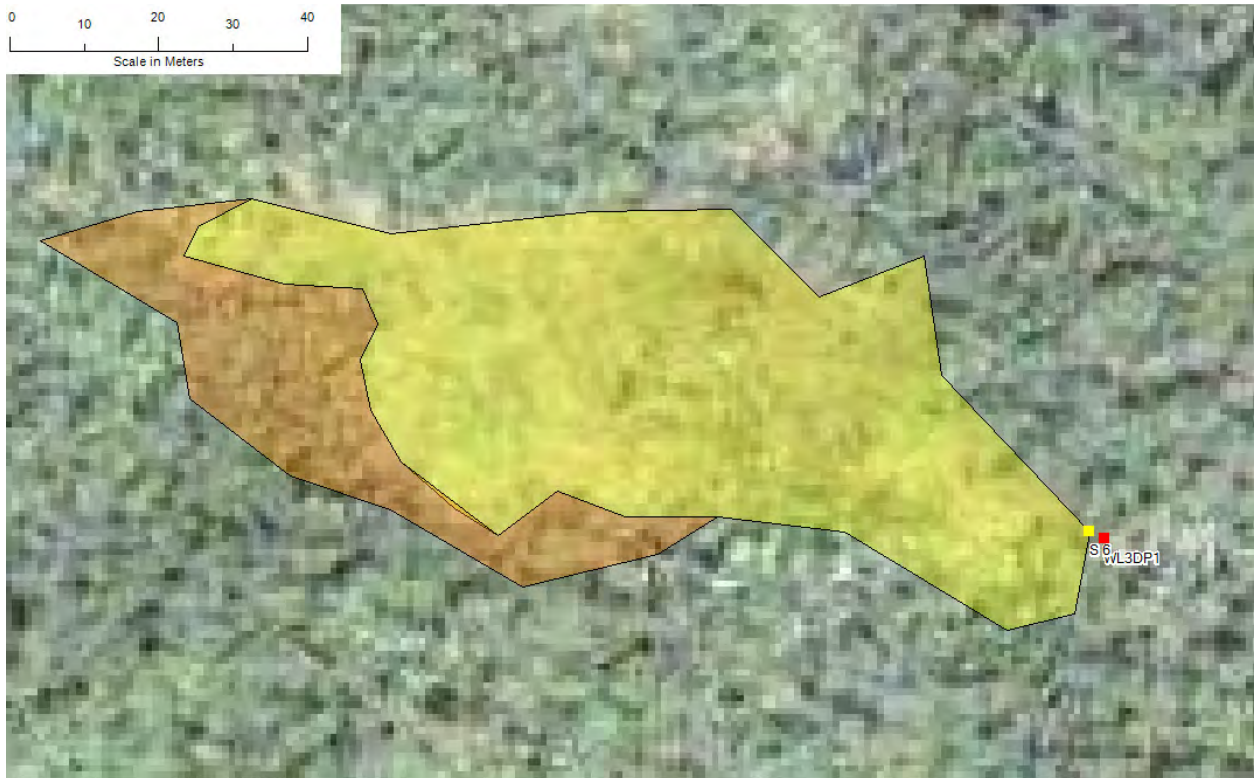
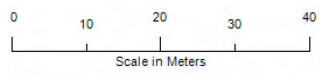
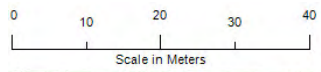
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surfaces (S7)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<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"/> 5cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

Restrictive Layer Type (if observed) _____ Depth: _____ **Hydric Soil Present?** Yes No

Comments:

insufficient depletion

Wetland 3



Wetland 3 is a fen dominated by typical bog/fen species of wetland plants and surrounded by steep rock outcroppings covered with a thin layer of organic soil. A small stream runs along the side of the wetland at the base of one of these steep banks and some transitional shrub wetland occupies the edge of the clearing.



Open Fen at Wetland 3



Shrub cover and small stream flowing along the edge of wetland 3

Project Site: Point Black	Date: July, 2011	Sample Point: WL3DP1	Job #:
Client/owner:	Field Investigator(s): Theo Popma, Candice		
County: Guysborough	Coordinates: 645147 5024038		
PID 35092063	Do normal environmental conditions exist on-site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

If no, explain:

Atypical Situation? Yes No Explain:

Is this a potential Problem Area? Yes No Explain:

Wetland Determination

(Check One Only For Each Criteria)

Dominant Hydrophytic Vegetation (50/20 rule)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Wetland Hydrology	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Hydric Soils	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

Wetland Determination	
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO

Wetland Type:

Rational for Determination:

Vegetation

	Tree Stratum: (Plot size: 9m2)	%Cover	Dominant Species	Indicator Status
1	<i>Arethusa bulbosa</i>	5	x	OBL
2	<i>Rhynchospora alba</i>	5	x	OBL
3				
4				
5				
6				
		10	= Total Cover	
Shrub Stratum: (Plot size: 5m2)				
1	<i>Picea mariana</i>	20	x	FACW-
2	<i>Larix laricina</i>	20	x	FACW
3				
4				
5				
		40	= Total Cover	
Herb Stratum: (Plot Size: 1m2)				
1				
2				
3				
4				
5				
		0	= Total Cover	

Dominance Test Worksheet:

# of Dominant Species that are OBL,FACW,FAC:	4
Total # of Dominant Species across all strata:	4
% of Dominant Species that are OBL,FACW,FAC:	100

Prevalence Index Worksheet:

Total %Cover of:	Multiply by:
OBL Species	x 1 = 0
FACW Species	x 2 = 0
FAC Species	x 3 = 0
FACU Species	x 4 = 0
ULP Species	x 5 = 0
Column Totals:	0
Prevalence Index = B/A = ##	

Hydrophytic Vegetation Indicators:

Rapid Test for Hydric Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (explain)

Problematic Hydrophytic Vegetation¹(explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Comments

Hydrophytic Vegetation Present? Yes No

Hydrology

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

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Watermarks	<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 of 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)	

Secondary Indicators: (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Dry-Season Water Table (C2)	<input checked="" type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	

Field Observations:

Surface Water Present?	Yes	No	<input checked="" type="checkbox"/>	Depth			
Water Table Present?	Yes	<input checked="" type="checkbox"/>	No	Depth	15		
Saturation Present?	Yes	<input checked="" type="checkbox"/>	No	Depth	0		

Wetland Hydrology Present? Yes No

Comments:

Soil Profile

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

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

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

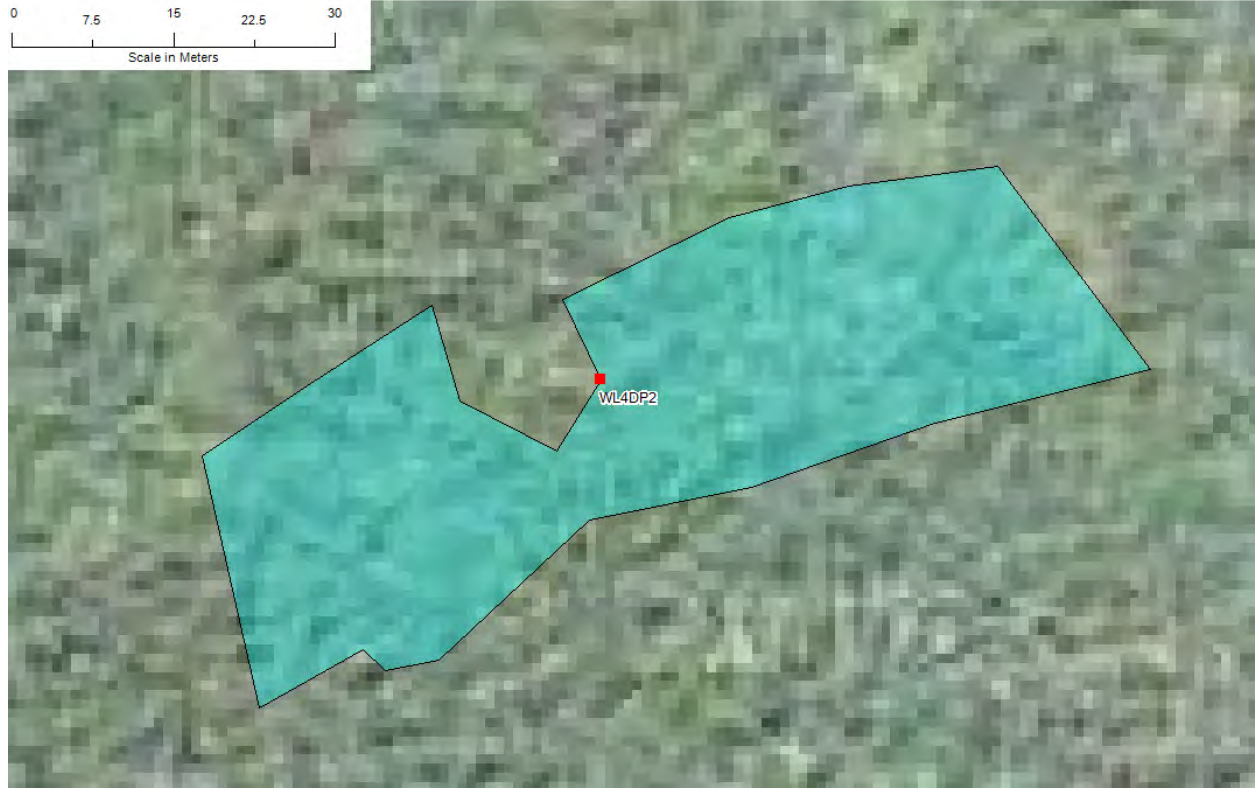
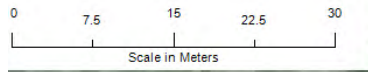
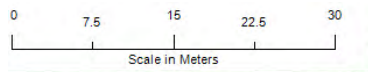
Hydric Soil Indicators:

<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Dark Surfaces (S7)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Polyvalue Below Surface (S8)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Thin Dark Surface (S9)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<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"/> 5cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

Restrictive Layer Type (if observed) Depth: **Hydric Soil Present?** Yes No

Comments:

Wetland 4



Wetland 4 is a Forested Wetland dominated by Red Spruce (*Picea rubens*) and with an open understory dominated mostly by Sphagnum and by only a few species of herbs and shrubs. This is a relatively small wetland which has formed amongst the variable contours of bedrock and can be distinguished by the surrounding forest largely by the presence of Sphagnum and organic soils.



Forested Wetland with open understory dominated by few herbaceous plant species and abundant mosses



Forested Wetland and adjacent upland differ in hydrology, soil profile and bryophyte flora