Appendix H.1

Wetland Functional Assessment Summary Table

	Beaver Dam Mine Site																																		
Significant Function	**WL 1**	**WL 2**	**WL 3**	**WL 4**	**WL 5**	**WL 6**	**WL 7**	**WL 8**	**WL 9**	**WL 10**	**WL 11**	**WL 12**	**WL 13**	**WL 14**	**WL 15**	**WL 16**	**WL 17**	**WL 18**	**WL 19**	**WL 20**	**WL 21**	**WL 22**	**WL 23**	**WL 24**	**WL 25**	**WL 26**	**WL 27**	**WL 28**	**WL 29**	**WL 30**	**WL 31**	**WL 32**	**WL 33**	**WL 34**	**WL 35**	**WL 36**	**WL 37**
SF1	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF2	M-L	M-L	M	M	M	M	M	M	L	M	M	M	M	M	M	M	M	M	M	M	L	L	L	L	L	L	L	L	M-L	L	M-L	L	L	M	M-L	L	L
SF3	H	H	H	H	H	M	M	H	M	H	H	H	H	H	M	H	H	H	M	M	M	H	M	L	H	H	L	L	H-M	H	H	H	H	M	M	H	M
SF4	M	H	H	H	H	H	M	H	M	M	M	H	M	H	H	H	M	H	M	M	M	H	M	L	M	M	L	L	M	H	H	H	H	M	M	M	M
SF5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N
SF6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF7	N	SpC, S2S3, S3, S3B, S3S4, S3S4N, S3S4B	N	S2S3	N	N	N	Thr, S3, S3N, S3B, S3S4B	N	S2S3, S3, S3N, S3S4B	N	S3	S3	Thr, SpC	N	S3, S3B, S3S4N, S3S4B	SpC, S3, S3N, S3B, S3S4B	N	S3N, S3B, S3S4N	N	N	N	N	N	N	N	N	N	End, SpC, Thr, S2S3, S3	N	N	N	S3	N	N	N	N
SF8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF13	NAT	NAT	NAT	NAT	NAT	NAT	NAT	MOD	MOD	NAT	NAT	NAT	MOD	NAT	MOD	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	MOD	NAT	MOD	NAT	NAT
SF14	N	Y	N	Y	Y	N	N	Y	N	N	N	N	N	N	Y	Y	N	N	N	Y	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N
SF15	M	H	H	M	M	H	H	M	H	H	L	H	L	L	M	M	M	H	H	L	H	H	H	H	H	H	M	H	H	H	H	H	L	H	H	H	H
SF16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	N	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF17	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF18	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF19	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF20	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF21	NA	NA	NA	H	NA	NA	NA	H	NA	H	M	NA	M	H	L	NA	H	NA	NA	M	NA	NA	NA	NA	NA	NA	NA	H	NA	NA	NA	M	NA	NA	NA	NA
SF22	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF23	H	H	L	H	M	M	M	H	L	M	H	H	H	M	L	M	H	L	M	H	M	M	L	H	H	L	M	M	H	H	M	L	H	H	H	H	M
SF24	H	H	H	H	H	M	M	H	H	H	H	M	H	M	M	H	H	M	M	M	H	H	H	M	L	H	M	L	H	H	H	H	H	M	M	M	H
SF25	N	N	N	Leptogium corticola (S2S3)	N	N	N	N	N	N	N	Carex wiegandii (S3)	N	Degelia plumbea (SARA and COSEWIC SpC, NSESA V)	N	N	Degelia plumbea (SARA and COSEWIC SpC, NSESA V)	N	N	N	N	N	N	N	N	N	N	N	N	Erioderma pedicellatum (SARA/COSEWIC/NSESA End)	N	N	N	Carex wiegandii (S3)	N	N	N	N
SF26	N	Y	N	Y	Y	N	N	Y	N	Y	Y	N	Y	Y	Y	N	Y	N	N	Y	N	N	N	N	N	N	N	N	Y	N	N	N	Y	N	N	N	N
SF27	N	Boreal Chickadee (S3), Gray Jay (S3), American Robin (S5B, S3N), Greater Yellowlegs (S3B, S3S4M), Pine Siskin (S2S3), Purple Finch (S4S5B, S3S4N), Red-breasted Nuthatch (S3), Red Crossbill (S3S4), Ruby-crowned Kinglet (S3S4B), Swainson's Thrush (S3S4B), Wilson's Snipe (S3B), Yellow-bellied Flycatcher (S3S4B)	N	N	N	N	N	Olive-sided Flycatcher (SARA, COSEWIC, NSESA T, S3B), Gray Jay (S3), American Robin (S5B, S3N), Greater Yellowlegs (S3B, S3S4M), Ruby-crowned Kinglet (S3S4B), Yellow-bellied Flycatcher (S3S4B)	N	Gray Jay (S3), American Robin (S5B, S3N), Pine Siskin (S2S3), Swainson's Thrush (S3S4B), Yellow-bellied Flycatcher (S3S4B)	N	N	N	Olive-sided Flycatcher (SARA, COSEWIC, NSESA T, S3B)	N	Gray Jay (S3), Purple Finch (S4S5B, S3S4N), Ruby-crowned Kinglet (S3S4B), Wilson's Snipe (S3B), Yellow-bellied Flycatcher (S3S4B)	Peregrine Falcon (SARA, COSEWIC SC, NSESA V, SIB), American Robin (S5B, S3N), Greater Yellowlegs (S3B, S3S4M), Northern Harrier (S3S4B), Ruby-crowned Kinglet (S3S4B), Swainson's Thrush (S3S4B)	N	American Robin (S5B, S3N), Greater Yellowlegs (S3B, S3S4M), Purple Finch (S4S5B, S3S4N)	N	N	N	N	N	N	N	N	N	Canada Warbler (SARA/COSEWIC T, NSESA E, S3S4B)	N	N	N	N	N	N	N	N
SF28	M	M	M	M	M	M	M	H	M	H	M	M	M	M	M	M	H	M	M	M	M	M	M	M	M	M	M	M	H	M	M	M	M	M	M	M	M
SF29	L	L	L	L	L	L	L	M	L	M	L	L	L	L	L	L	M	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L

Notes:

* SF7/SF25/SF27 is considered a red rated function if a species present is listed by SARA or NSESA as Endangered/Threatened/Special Concern; or Ranked by ACCDC as S1.

Birds included in these results are indicative of point count location within or adjacent to wetland, and does not confirm use of the wetland as crucial supporting habitat.

Cells highlighted in red indicate this function is considered to be critical to the watershed or represent a highly degraded watershed. These functions are typically unique or rare or associated with a high risk to the watershed if lost (NSE 2014c).

Unless otherwise stated: H=High; M=Moderate/Medium; L=Low; Y=Yes; N=No; NAT=Natural; MOD=Modified; Smod= Significantly Modified; Thr=Threatened; SpC=Special Concern; End=Endangered

**SF14, SF21 where hydrologically connected features extend beyond PA boundaries, source of a stream/headwater was inferred from Wet Areas Mapping.

[1] Predicted NSE WSS Layer indicates WL64 is a WSS as a result of the presence of the OSFL in 2009. However, 2016 breeding bird surveys did not confirm the presence of the OSFL. See the SAR/SOCI section in the report for additional information.

	Beaver Dam Mine Site																																				
Significant Function	**WL 38**	**WL 39**	**WL 40**	**WL 41**	**WL 42**	**WL 43**	**WL 44**	**WL 45**	**WL 46**	**WL 47**	**WL 48**	**WL 49**	**WL 50**	**WL 51**	**WL 52**	**WL 53**	**WL 54**	**WL 55**	**WL 56**	**WL 57**	**WL 58**	**WL 59**	**WL 60**	**WL 61**	**WL 62**	**WL 63**	**WL 200**	**WL 201**	**WL 202**	**WL 203**	**WL 204**	**WL 205**	**WL 206**	**WL 207**	**WL 208**	**WL 209**	**WL 210**	**WL 211**	**WL 212**
SF1	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF2	M-L	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	L	M	M	M	M	M	M	M	M	L	M	M	M	M	M	H	M	M	M	M	M	M	M
SF3	H	L	H	M	M	H	M	H	H	M	L	H	H	H	M	H	M	M	M	H-M	H	M	M	H	H	H	H	M	H	H	L	H	H	H	H	M	H	H
SF4	M-L	L	M	M	H	H	H	H	H	H	M	H	H	H	H	H	M	H	M	M	M	M	M	M	H	M	M	H	H	M	M	H	M	M	M	M	M	H	M
SF5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF7	N	N	N	N	S3, S3N, S3S4B	N	N	N	N	N	S3	N	N	Thr, S2S3, S3, S3N	N	Thr, S3, S3S4B	S3, S3N, S3S4B	N	S1, S3, S3B	Thr	N	S2S3, S3, S3N, S3B, S3S4N, S3S4B	N	SpC, S2S3, S3N, S3S4B	N	N	N	N	N	N	N	N	End	N	N	N	End	N	N
SF8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF13	NAT	NAT	NAT	NAT	NAT	NAT	MOD	NAT	NAT	NAT	MOD	NAT	NAT	NAT	NAT	NAT	MOD	MOD	MOD	NAT	NAT	MOD	NAT	NAT	NAT	NAT	MOD	NAT	NAT	NAT	MOD	NAT	NAT	NAT	NAT	NAT	NAT	NAT	MOD
SF14	N	N	N	N	N	N	Y	N	Y	N	N	N	N	N	Y	Y	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N
SF15	H	H	H	H	H	H	M	H	L	H	M	H	H	H	M	M	H	H	M	M	H	H	H	M	M	H	M	H	M	H	M	H	M	M	H	M	M	H	H
SF16	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF17	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF18	H	H	H	H	H	H	H	H	M	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	H	H	M	M	H	H	M	H	H
SF19	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N
SF20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
SF21	NA	NA	NA	NA	NA	NA	H	NA	M	NA	H	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	L	NA	H	L	NA	NA	NA	NA	NA	NA	M	L	NA	NA	NA	NA	NA
SF22	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF23	M	H	H	L	H	M	H	M	M	M	H	M	M	H	M	H	M	H	H	H	M	H	M	H	M	M	M	M	M	H	M	H	M	M	M	L	M	L	M
SF24	H	L	M	H	M	H	M	H	H	M	M	H	H	H	M	M	M	M	M	H	H	M	M	H	H	H	M	M	M	H	M	H	H	H	H	H	M	H	H
SF25	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF26	N	N	N	N	N	N	Y	N	Y	N	Y	N	N	N	Y	Y	N	N	Y	Y	N	Y	N	Y	Y	N	N	Y	N	N	N	N	Y	Y	N	N	N	N	N
SF27	N	N	N	N	Boreal Chickadee (S3), Gray Jay (S3), American Robin (S5B, S3N), Ruby-crowned Kinglet (S3S4B)	N	N	N	N	N	N	N	N	Olive-sided Flycatcher (SARA, COSEWIC, NSESA T, S3B), Gray Jay (S3), American Robin (S5B, S3N), Pine Siskin (S2S3)	N	Chimney Swift(SARA/COSEWIC T, NSESA E, S2B S1M), Boreal Chickadee (S3), Yellow-bellied Flycatcher (S3S4B)	Gray Jay (S3), American Robin (S5B, S3N), Swainson's Thrush (S3S4B)	N	Gray Jay (S3), Greater Yellowlegs (S3B, S3S4M), Red-breasted Nuthatch (S3)	Canada Warbler (SARA/COSEWIC T, NSESA E, S3S4B)	N	Gray Jay (S3), American Robin (S5B, S3N), Greater Yellowlegs (S3B, S3S4M), Pine Siskin (S2S3), Purple Finch (S4S5B, S3S4N), Ruby-crowned Kinglet (S3S4B), Spotted Sandpiper (S3S4B), Swainson's Thrush (S3S4B), Wilson's Snipe (S3B)	N	American Robin (S5B, S3N), Swainson's Thrush (S3S4B)	N	N	N	N	N	N	N	N	Mainland Moose (NSESA Endangered)	N	N	N	Mainland Moose (NSESA Endangered)	N	N
SF28	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	H	M	M	H	M	H	M	M	M	M	M	M	L	M	M	M	M	M	M	M	M
SF29	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	M	L	M	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L

	Beaver Dam Mine Site					Haul Road																												
Significant Function	**WL 213**	**WL 214**	**WL 215**	**WL 216**	**WL 217**	**WL 64**	**WL 65**	**WL 66**	**WL 67**	**WL 68**	**WL 69**	**WL 70**	**WL 71**	**WL 72**	**WL 73**	**WL 74**	**WL 75**	**WL 76**	**WL 77**	**WL 78**	**WL 79**	**WL 80**	**WL 81**	**WL 82**	**WL 83**	**WL 84**	**WL 85**	**WL 86**	**WL 87**	**WL 88**	**WL 89**	**WL 90**	**WL 91**	**WL 92**	**WL 93**	**WL 94**
SF1	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF2	M	M	M	M	M	M	M	M	M	M	M	M	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF3	H	M	H	L	H	M	M	H	H	H	H	H	H	H	H	M	H	M	H	H	H	H	H	H	L	L	M	L	H	M	M	H	M	M	H	M
SF4	M	L	M	L	H	M	M	H	H	M	H	M	M	M	H	M	H	M	H	H	M	M	M	H	H	M	M	M	H	M	M	M	H	H	H	H
SF5	N	N	N	N	N	N[1]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF7	N	N	N	N	S3	S3B, S3S4B	N	Thr, S3, S3N, S3S4B	N	Beaver	N	N	Thr, S3, S3B, S3S4B	Thr, S3, S3B, S3S4B	N	N	N	Thr, S3N, S3S4B	N	N	N	S3	N	N	N	N	S2S3, S3, S3N, S3S4B	N	N	S2S3, S3, S3N	Thr, S3, S3N, S3S4B	N	N	N	N	N
SF8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF11	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF13	NAT	MOD	NAT	MOD	NAT	MOD	NAT	MOD	NAT	NAT	NAT	NAT	NAT	MOD	MOD	MOD	NAT	MOD	NAT	NAT	MOD	MOD	NAT	NAT	NAT	MOD	NAT	NAT	NAT	NAT	NAT	NAT	MOD	NAT	MOD	MOD
SF14	N	N	Y	N	N	Y	N	Y	N	N	N	N	N	Y	Y	Y	N	N	Y	N	N	N	N	N	Y	N	N	N	N	N	N	Y	N	Y	N	Y
SF15	H	M	M	M	M	H	H	M	M	L	H	H	H	M	H	L	H	L	M	H	L	H	H	H	H	H	H	H	H	H	M	H	M	H	M
SF16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF17	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF18	H	H	M	H	H	M	H	M	M	M	M	H	H	L	L	L	H	L	L	H	L	H	H	H	M	H	H	H	H	H	H	H	H	H	H	H
SF19	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	Y	N	N	N	N	N	N
SF20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y
SF21	NA	NA	M	NA	NA	NA	NA	H	L	M	H	NA	NA	NA	NA	H	NA	H	NA	NA	H	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	L
SF22	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF23	M	M	M	M	M	H	L	H	H	H	H	M	M	M	H	H	M	H	M	M	M	H	L	M	L	M	L	L	L	M	M	H	M	M	L	H
SF24	M	M	H	L	H	M	M	M	H	H	H	H	H	H	M	M	H	M	M	M	H	M	L	H	H	L	L	M	L	H	M	M	M	M	M	H
SF25	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	*Listera australis* (S3)	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF26	N	N	N	N	N	Y	N	Y	Y	Y	Y	N	N	N	Y	Y	N	Y	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y
SF27	N	N	N	N	Gray Jay (S3) and Boreal Chickadee (S3)	Northern Goshawk (COSEWIC NAR, S3S4B), Blackpoll Warbler(S3S4B), Greater Yellowlegs (S3B, S3S4M), Swainson's Thrush (S3S4B)	N	Canada Warbler (SARA/COSEWIC T, NSESA E, S3S4B), American Robin (S5B, S3N), Blackpoll Warbler(S3S4B), Red-breasted Nuthatch (S3), Ruby-crowned Kinglet (S3S4B), Swainson's Thrush (S3S4B)	N	N	N	N	Canada Warbler (SARA/COSEWIC T, NSESA E, S3S4B), Gray Jay (S3), Greater Yellowlegs (S3B, S3S4M), Ruby-crowned Kinglet (S3S4B), Swainson's Thrush (S3S4B)	Canada Warbler (SARA/COSEWIC T, NSESA E, S3S4B), Gray Jay (S3), Greater Yellowlegs (S3B, S3S4M), Ruby-crowned Kinglet (S3S4B), Swainson's Thrush (S3S4B)	N	N	N	Canada Warbler (SARA/COSEWIC T, NSESA E, S3S4B), American Robin (S5B, S3N), Ruby-crowned Kinglet (S3S4B), Swainson's Thrush (S3S4B)	N	N	N	N	N	N	N	N	American Robin (S5B, S3N), Evening Grosbeak (S3S4B, S3N), Pine Siskin (S2S3), Red-breasted Nuthatch (S3), Ruby-crowned Kinglet (S3S4B)	Barn Swallow (COSEWIC T, NSESA E, S3B)	N	Gray Jay (S3), American Robin (S5B, S3N), Pine Siskin (S2S3)	American Robin (S5B, S3N), Red-breasted Nuthatch (S3), Swainson's Thrush (S3S4B)	N	N	N	N	N
SF28	M	M	M	L	H	M	M	H	M	H	H	M	M	M	M	M	M	M	M	M	H	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
SF29	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L

	Haul Road															
Significant Function	**WL 95**	**WL 96**	**WL 97**	**WL 98**	**WL 99**	**WL 100**	**WL 101**	**WL 102**	**WL 103**	**WL 104**	**WL 105**	**WL 106**	**WL 107**	**WL 108**	**WL 109**	**WL 110**
SF1	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF2	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF3	H	H	H	H	H	H	H	H	M	M	M	M	H	H	H	H
SF4	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF7	N	N	N	S3B, S3N, S3S4B	N	N	N	N	N	N	N	N	N	N	N	S3, S3S4N, S3S4B
SF8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF13	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT
SF14	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF15	H	H	H	L	H	H	H	H	H	H	H	H	H	H	H	H
SF16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF17	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF18	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF19	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	M
SF22	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF23	M	M	L	M	L	M	M	H	L	L	L	M	L	L	M	L
SF24	H	M	H	H	H	H	M	M	M	M	M	M	H	H	H	H
SF25	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF26	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF27	N	N	N	American Robin (S5B, S3N), Gray Catbird (S3B), Ruby-crowned Kinglet (S3S4B)	N	N	N	N	N	N	N	N	N	N	N	Boreal Chickadee (S3), Purple Finch (S4S5B, S3S4N), Ruby-crowned Kinglet (S3S4B)
SF28	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
SF29	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L

Significant Function	**WL 111**	**WL 112**	**WL 113**	**WL 114**	**WL 115**	**WL 116**	**WL 117**	**WL 118**	**WL 119**	**WL 120**	**WL 121**	**WL 122**	**WL 123**	**WL 124**	**WL 125**	**WL 126**	**WL 127**
SF1	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF2	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF3	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF4	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF7	N	SpC	S3, S3S4, S3S4B, S3S4N	N	S3	N	N	N	N	N	N	N	N	N	N	N	S3
SF8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF13	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT
SF14	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF15	L	L	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF17	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF18	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF19	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SF22	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF23	M	M	M	L	M	M	L	M	M	L	L	L	M	M	M	M	M
SF24	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF25	N	N	N	N	Listera australis (S3)	N	N	N	N	N	N	N	N	N	N	N	Listera australis (S3)
SF26	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF27	N	N	Black-backed Woodpecker (S3S4B), Purple Finch (S4S5B, S3S4N), Red-breasted Nuthatch (S3), Red Crossbill (S3S4), Swainson’s Thrush (S3S4B)	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF28	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
SF29	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L

Significant Function	**WL 128**	**WL 129**	**WL 130**	**WL 131**	**WL 132**	**WL 133**	**WL 134**	**WL 135**	**WL 136**	**WL 137**	**WL 138**	**WL 139**
SF1	L	L	L	L	L	L	L	L	L	L	L	L
SF2	H	H	H	H	H	H	H	H	H	H	H	H
SF3	H	H	H	H	H	H	H	H	H	H	M	H
SF4	H	H	H	H	H	H	H	H	H	H	H	H
SF5	N	N	N	N	N	N	N	N	N	N	N	N
SF6	N	N	N	N	N	N	N	N	N	N	N	N
SF7	N	S3, S3S4B	N	N	Thr, S3, S3N, S3S4B	N	N	S3	S3, S3S4B	S3	N	N
SF8	N	N	N	N	N	N	N	N	N	N	N	N
SF9	N	N	N	N	N	N	N	N	N	N	N	N
SF10	N	N	N	N	N	N	N	N	N	N	N	N
SF11	N	N	N	N	N	N	N	N	N	N	N	N
SF12	N	N	N	N	N	N	N	N	N	N	N	N
SF13	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	MOD	MOD
SF14	N	N	N	N	N	N	N	Y	N	Y	N	N
SF15	H	H	H	H	H	H	H	M	H	L	H	H
SF16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF17	L	L	L	L	L	L	L	L	L	L	L	L
SF18	H	H	H	H	H	H	H	H	H	H	H	H
SF19	N	N	N	N	N	N	N	N	N	N	N	N
SF20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF21	NA	NA	NA	NA	NA	NA	NA	NA	NA	M	NA	NA
SF22	N	N	N	N	N	N	N	N	N	N	N	N
SF23	L	M	L	L	M	L	M	H	M	M	M	L
SF24	H	H	H	H	H	H	H	H	H	H	M	H
SF25	N	Listera australis (S3)	N	N	N	N	N	Listera australis (S3)	N	*Listera australis (S3)*	N	N
SF26	N	N	N	N	N	N	N	Y	N	Y	N	N
SF27	N	Black-backed Woodpecker (S3S4B), Red-breasted Nuthatch (S3)	N	N	Canada Warbler (SARA/COSEWIC T, NSESA E, S3S4B), Gray Jay (S3), American Robin (S5B, S3N), Black-backed Woodpecker (S3S4B), Red-breasted Nuthatch (S3), Ruby-crowned Kinglet (S3S4B), Swainson’s Thrush (S3S4B)	N	N	N	Ruby-crowned Kinglet (S3S4B)	N	N	N
SF28	M	M	M	M	M	M	M	M	M	M	M	L
SF29	L	L	L	L	L	L	L	L	L	L	L	L

	Haul Road																															
Significant Function	**WL 140**	**WL 141**	**WL 142**	**WL 143**	**WL 144**	**WL 145**	**WL 146**	**WL 147**	**WL 148**	**WL 149**	**WL 150**	**WL 151**	**WL 152**	**WL 153**	**WL 154**	**WL 155**	**WL 156**	**WL 157**	**WL 158**	**WL 159**	**WL 160**	**WL 161**	**WL 162**	**WL 163**	**WL 164**	**WL 165**	**WL 166**	**WL 167**	**WL 168**	**WL 169**	**WL 170**	**WL 171**	**WL 172**	**WL 173**
SF1	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF2	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H-M	H-M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
SF3	H	H	H	M	M	M	M	M	M	L	M	M	M	H	M	H	H-M	H	M	H	M	H	M	M	H	M	M	M	H	H	H	M	H	M
SF4	H	H	H	M	H	M	M	M	M	M	M	M	M	M	M	H	H	H	M	H	H	H	H	H	H	M	M	M	M	M	H	H	H	M
SF5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	Y
SF7	N	N	S3S4B	SpC	N	N	N	S3	Thr, S3, S3N, S3S4B	N	N	S3	N	N	N	N	Thr, S3, S3N, S3S4B, S3S4N	Thr, S3, S3S4, S3S4B	N	N	N	N	N	N	S3S4B	S3, S3S4N	N	N	S3N, S3S4B, S3S4N	N	N	N	N	Thr, S3, S3S4B
SF8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF13	NAT	MOD	MOD	MOD	MOD	MOD	MOD	NAT	MOD	MOD	MOD	NAT	NAT	NAT	MOD	NAT	NAT	NAT	MOD	NAT	NAT	NAT	NAT	NAT	NAT	MOD	NAT	NAT	NAT	NAT	NAT	NAT	MOD	NAT
SF14	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	Y	N	N	N
SF15	H	H	M	M	M	H	H	H	H	H	H	H	H	H	H	H	H	H	H	L	L	H	H	H	H	M	H	H	H	H	M	L	H	L
SF16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF17	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF18	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF19	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	Y	N
SF20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
SF21	NA	NA	M	M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	H	M	M	NA	NA	NA	NA	NA	M	NA	NA	NA	NA	NA	H	NA	M
SF22	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF23	L	L	M	H	H	M	H	H	H	H	L	L	M	M	L	M	H	H	H	M	L	M	H	L	M	M	M	M	H	M	M	M	M	M
SF24	H	M	M	M	M	M	M	M	M	M	L	M	M	H	M	M	M	H	L	M	H	M	H	M	H	M	L	M	H	H	M	H	L	H
SF25	N	N	N	N	N	N	N	Listera australis (S3)	N	N	N	N	N	N	N	N	N	*Vaccinium corymbosum (S3S4)*	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF26	N	N	Y	Y	Y	N	Y	N	N	N	N	N	N	N	Y	N	N	N	N	Y	Y	N	N	N	N	Y	N	N	N	N	N	Y	N	Y
SF27	N	N	Ruby-crowned Kinglet (S3S4B)	Eastern Wood-Pewee (COSEWIC SC, NSESA V, S3S4B)	N	N	N	N	Canada Warbler (SARA/COSEWIC T, NSESA E, S3S4B), Gray Jay (S3), American Robin (S5B, S3N), Ruby-crowned Kinglet (S3S4B)	N	N	Red-breasted Nuthatch (S3)	N	N	N	N	Olive-sided Flycatcher (SARA, COSEWIC, NSESA T, S3B), Gray Jay (S3), American Robin (S5B, S3N), Black-backed Woodpecker (S3S4B), Purple Finch (S4S5B, S3S4N), Red-breasted Nuthatch (S3), Ruby-crowned Kinglet (S3S4B), Swainson's Thrush (S3S4B)	Olive-sided Flycatcher (SARA, COSEWIC, NSESA T, S3B), Bay-breasted Warbler (S3S4B), Red-breasted Nuthatch (S3)	N	N	N	N	N	N	Northern Harrier (S3S4B), Ruby-crowned Kinglet (S3S4B)	Boreal Chickadee (S3), Purple Finch (S4S5B, S3S4N)	N	N	American Robin (S5B, S3N), Blackpoll Warbler(S3S4B), Purple Finch (S4S5B, S3S4N), Ruby-crowned Kinglet (S3S4B)	N	N	N	N	Canada Warbler (SARA/COSEWIC T, NSESA E, S3S4B), Gray Jay (S3), Black-backed Woodpecker (S3S4B), Ruby-crowned Kinglet (S3S4B), Swainson's Thrush (S3S4B)
SF28	M	L	M	M	M	M	H	M	M	M	L	M	M	M	H	M	M	H	L	H	H	M	M	M	M	M	L	M	M	M	M	H	L	M
SF29	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	M	L	L

	Haul Road						Preferred Alternative Haul Road												
Significant Function	**WL 174**	**WL 175**	**WL 176**	**WL 177**	**WL 178**	**WL 179**	**WL 180**	**WL 181**	**WL 182**	**WL 183**	**WL 184**	**WL 185**	**WL 186**	**WL 187**	**WL 188**	**WL 189**	**WL 190**	**WL 191**	**WL 192**
SF1	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF2	M	M	M	M	M	M	M	M	H	H	H	H	H	H	H	H	H	H	H
SF3	H	M	H	M	M	M	H	H	H	M	M	M	H	M	H	H	H	M	H
SF4	M	M	M	M	M	M	H	H	H	H	H	H	H	N	H	H	M	M	H
SF5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF6	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF7	N	N	N	S3, S3S4B	N	S3, S3S4B	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SF8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF13	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	NAT	MOD	NAT	NAT	NAT	NAT	NAT	NAT	NAT
SF14	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF15	L	M	H	H	H	H	H	H	H	H	H	M	H	L	H	H	L	H	H
SF16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SF17	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
SF18	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
SF19	N	Y	Y	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N
SF20	Y	N	N	Y	N	N	N	Y	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y
SF21	NA	NA	NA	NA	NA	NA	NA	NA	M	NA	NA	NA	M	M	NA	NA	NA	NA	NA
SF22	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SF23	M	M	M	M	M	H	L	M	M	M	M	M	H	H	H	H	M	M	H
SF24	H	M	H	M	M	M	H	M	H	H	H	L	H	H	H	M	M	H	H
SF25	N	N	N	N	N	N	NA	NA	NA	NA	NA	NA	S1	NA	NA	NA	NA	NA	NA
SF26	Y	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	Y	N	N
SF27	N	N	N	Red-breasted Nuthatch (S3), Ruby-crowned Kinglet (S3S4B), Swainson's Thrush (S3S4B)	N	Red-breasted Nuthatch (S3), Ruby-crowned Kinglet (S3S4B), Swainson's Thrush (S3S4B)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SF28	M	M	M	M	M	M	L	M	M	M	M	L	M	H	M	M	M	M	M
SF29	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L

	Preferred Alternative Haul Road						
Significant Function	**WL 193**	**WL 194**	**WL 195**	**WL 196**	**WL 197**	**WL 198**	**WL 199**
SF1	L	L	L	L	L	L	L
SF2	H	M	M	M	M	M	M
SF3	M	H	M	H	H	H	H
SF4	M	H	M	M	H	H	H
SF5	N	N	N	N	N	N	N
SF6	N	N	N	N	N	N	N
SF7	NA	NA	NA	NA	NA	NA	NA
SF8	N	N	N	N	N	N	N
SF9	N	N	N	N	N	N	N
SF10	N	N	N	N	N	N	N
SF11	N	N	N	N	N	N	N
SF12	N	N	N	N	N	N	N
SF13	NAT	NAT	NAT	NAT	NAT	NAT	NAT
SF14	N	N	N	N	N	N	N
SF15	L	H	M	H	H	H	H
SF16	Y	Y	Y	Y	Y	Y	Y
SF17	L	L	L	L	L	L	L
SF18	H	H	H	H	H	H	H
SF19	N	N	N	N	N	N	N
SF20	Y	Y	Y	Y	Y	Y	Y
SF21	NA	NA	NA	NA	NA	M	NA
SF22	N	N	N	N	N	N	H
SF23	M	H	M	M	H	H	H
SF24	M	H	M	M	M	H	H
SF25	NA	NA	NA	NA	NA	NA	NA
SF26	Y	N	Y	N	N	N	NA
SF27	NA	NA	NA	NA	NA	NA	NA
SF28	M	M	M	M	M	M	M
SF29	L	L	L	L	L	L	L

Appendix H.2

Wetland Characterization Table

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
Beaver Dam Mine Site	WL1.1	Surface Water (A1) High Water Table (A2) Hydrogen Sulphide (C1)	*Carex trisperma* *Osmundastrum cinnamomeum*	*Nemopanthus mucronatus* *Picea mariana*	*Picea mariana* *Acer rubrum*	40-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL1.2	Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*Maianthemum trifolium*	*Picea mariana* *Nemopanthus mucronatus*	*Larix laricina* *Picea mariana*	100-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL1.3	High Water Table (A2) Water-Stained Leaves (B9) Saturation (A3)	*Carex trisperma* *Cornus canadensis*	*Nemopanthus mucronatus*	*Larix laricina* *Picea mariana*	65-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL1.4	High Water Table (A2) Saturation (A3)	*None*	*Nemopanthus mucronatus* *Larix laricina* *Viburnum nudum*	*None*	170-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL2.1	High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*None*	*Picea mariana* *Larix laricina*	*Larix laricina* *Picea mariana*	45-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL2.2	High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*Carex atlantica*	*Picea mariana*	*None*	60-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL2.3	High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*None*	*Picea mariana* *Larix laricina*	*Larix laricinia*	40-0cm	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL2.4	High Water Table (A2) Saturation (A3) Stunted or Stressed Plants (D1)	*None*	*Picea rubens* *Larix laricina* *Pinus strobus*	*None*	80-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL2.5	High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*Kalmia angustifolia* *Gaultheria hispidula*	*Nemopanthus mucronatus* *Viburnum nudum*	*Larix laricina* *Picea rubens*	100-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL2.6	High Water Table (A2) Saturation (A3)	*Carex trisperma* *Osmundastrum cinnamomeum*	*Nemopanthus mucronatus* *Abies balsamea*	*Abies balsamea* *Picea mariana* *Acer rubrum*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL2.7	High Water Table (A2) Saturation (A3)	*Eleocharis tenuis*	*Larix laricina* *Picea rubens* *Juniperus communis*	*Larix laricina*	60-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL2.8	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) **Secondary Indicators:** Drainage Patterns (B10)	*Dryopteris campyloptera* *Oxalis montana*	*Abies balsamea*	*Picea rubens*	18-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Moss Trim Lines (B16) Dry-Season Water Table (C2) Geomorphic Position (D2)					
Beaver Dam Mine Site	WL3	Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*Maianthemum trifolium*	*Abies balsamea* *Gaylussacia baccata*	*Larix laricina* *Acer rubrum*	40-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL4.1	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Aquatic Fauna (B13) Hydrogen Sulphide (C1)	*None*	*Larix laricina* *Picea mariana* *Alnus incana*	*Larix laricina*	100+cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL4.2	Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*Carex trisperma* *Osmundastrum cinnamomeum*	*Picea mariana* *Acer rubrum* *Alnus incana*	*Picea mariana* *Acer rubrum*	100+cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL5	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum*	*Picea mariana* *Nemopanthus mucronatus*	*Abies balsamea* *Picea mariana* *Acer rubrum*	50-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL6	Saturation (A3) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9)	*Rubus pubescens* *Cornus canadensis*	*Abies balsamea*	*Acer rubrum* *Picea mariana* *Betula papyrifera*	20-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL7	Saturation (A3) Algal Mat or Crust (B4) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9)	*Scirpus cyperinus* *Glyceria striata*	*None*	*None*	18-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL8.1	High Water Table (A2) Saturation (A3)	*Carex trisperma* *Cornus canadensis*	*Picea mariana* *Abies balsamea*	*Picea mariana*	35-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL8.2	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Aquatic Fauna (B13)	*Carix stricta* *Chamaedaphne calyculata*	*Larix laricina*	*None*	45-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL8.3	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex stricta* *Chamaedaphne calyculata* *Myrica gale*	*None*	*Larix laricina* *Acer rubrum* *Picea mariana*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL8.4	High Water Table (A2) Saturation (A3)	*Kalmia angustifolia* *Carex trisperma*	*Larix laricina* *Picea mariana*	*Larix laricina* *Picea mariana*	60-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
Beaver Dam Mine Site	WL9	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sparsely Vegetated Concave Surface (B8) **Secondary Indicators:** Stunted or Stressed Plants (D1)	*Kalmia angustifolia*	*Picea mariana*	*Picea mariana* *Acer rubrum*	10-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL10	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex stricta* *Chamaedaphne calyculata*	*Gaylussacia baccata*	*None*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL11.1	Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*Carex stricta* *Chamaedaphne calyculata*	*Picea mariana* *Viburnum nudum* *Acer rubrum*	*None*	65-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL11.2	Surface Water (A1) High Water Table (A2) Saturation (A3) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9)	*Glyceria grandis*	*Alnusincana* *Abies balsamea*	*Acer rubrum* *Picea mariana*	25-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL12.1	High Water Table (A2) Saturation (A3)	*Carex trisperma* *Osmundastrum cinnamomeum*	*Abies balsamea* *Acer rubrum* *Picea mariana*	*Acer rubrum*	35-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL12.2	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) **Secondary Indicators:** Drainage Patterns (B10) Stunted or Stressed Plants (D1)	*Carex trisperma* *Osmundastrum cinnamomeum*	*Abies balsamea* *Picea mariana*	*Abies balsamea* *Picea mariana*	35-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL13.1	High Water Table (A2) Saturation (A3) Water Marks (B1) Algal Mat or Crust (B4) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Thin Muck Surface (C7)	*Glyceria grandis*	*Picea mariana*	*Larix laricina* *Picea mariana*	80-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL13.2	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Glyceria canadensis* *Carex trisperma*	*Acer rubrum* *Abies balsamea*	*Acer rubrum* *Picea mariana*	40+cm Organic	Histosol (A1) Hydrogen Sulphide (A4)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Water-Stained Leaves (B9) Aquatic Fauna (B13) Hyrdrogen Sulphide Secondary Indicators: Moss Trim Lines (B16) Dry-Season Water Table (C2) Geomorphic Position Stunted or Stressed Plants (D1)					
Beaver Dam Mine Site	WL14.1	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Glyceria canadensis* *Osmundastrum cinnamomeum* *Carex trisperma*	*Abies balsamea*	*Picea mariana* *Betula papyrifera*	60-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL14.2	High Water Table (A2) Saturation (A3)	*Carex stricta* *Rosa virginiana*	*Viburnum nudum* *Alnus incana*	*Acer rubrum*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL14.3	Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulfide	*Eriophorum angustifolium* *Chamaedaphne calyculata*	*Viburnum nudum*	*None*	70-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL15	Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulfide	*Glyceria grandis*	*Acer rubrum* *Larix laricina*	*None*	50-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL16	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex atlantica* *Vaccinium oxycoccos*	*Larix laricina* *Viburnum nudum* *Acer rubrum* *Picea mariana*	*None*	5-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL17.1	High Water Table (A2) Saturation (A3)	*Carex stricta* *Carex trisperma*	*Viburnum nudum*	*Larix laricina* *Picea mariana* *Abies balsamea*	35-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL17.2	High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*Juniperus communi* *Grais spp.*	*Larix laricina* *Picea mariana*	*Larix laricina* *Picea mariana*	100+ Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL18	High Water Table (A2) Saturation (A3)	*Carex trisperma* *Gaultheria hispidula*	*Larix laricina* *Picea mariana*	*Larix laricina* *Picea mariana*	35-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL19	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex trisperma* *Scirpus cyperinus*	*Acer rubrum* *Betula populifolia*	*None*	20-0cm Organic 0-12cm Mineral	Histic Epipedon (A2)
Beaver Dam Mine Site	WL20	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Osmunda regalis*	*Acer rubrum* *Ilex verticillata* *Alnus incana*	*Acer rubrum* *Larix laricina*	100cm+ Organic	Histosol (A1) Hydrogen Sulphide (A4)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Moss Trim Lines (B16) Drainage Patterns (B10) Dry-Season Water Table (C2) Stunted or Stressed Plants (D1) Geomorphic Positions (D2)					
Beaver Dam Mine Site	WL21	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Moss Trim Lines (B16) Dry-Season Water Table (C2) Geomorphic Positions (D2)	*Cornus canadensis*	*Abies balsamea* *Betula papyrifera cordifolia*	*Abies balsamea* *Betula papyrifera cordifolia*	22-0cm Organic 0-15cm Mineral	Histic Epipedon (A2)
Beaver Dam Mine Site	WL22	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Moss Trim Lines (B16) Geomorphic Positions (D2)	*Ocemena nemoralis* *Cornus canadensis*	*Abies balsamea* *Nemopanthus mucronatus*	*Abies balsamea* *Acer rubrum*	27-0cm Organic	Histic Epipedon (A2)
Beaver Dam Mine Site	WL23	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Moss Trim Lines (B16) Dry-Season Water Table (C2) Geomorphic Positions (D2)	*Carex trisperma*	*Abies balsamea* *Picea mariana* *Betula papyrifera cordifolia*	*Picea mariana* *Abies balsamea*	22-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL24	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Carex trisperma*	*Abies balsamea* *Picea mariana*	*Abies balsamea* *Picea mariana*	25-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL25	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Moss Trim Lines (B16)	*Carex trisperma* *Osmundastrum cinnamomeum*	*Abies balsamea* *Acer rubrum*	*Abies balsamea* *Picea mariana*	46-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Dry-Season Water Table (C2) Stunted or Stressed Plants (D1) Geomorphic Positions (D2)					
Beaver Dam Mine Site	WL26	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Water Marks (B1) Algal Mat or Crust (B4) Secondary Indicators: Dry-Season Water Table (C2) Geomorphic Positions (D2)	*Osmundastrum cinnamomeum*	*Dead fall*	*Dead fall*	id Assessm	Histosol (A1)
Beaver Dam Mine Site	WL27	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water-Stained Leaves (B9)	*Glyceria striata*	*Acer rubrum* *Abies balsamea*	*Acer rubrum* *Abies balsamea* *Picea mariana*	20-0cm Organic 0-10 Mineral	Histic Epipedon (A2)
Beaver Dam Mine Site	WL28	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Stunted or Stressed Plants (D1) Geomorphic Positions (D2)	*Rubus hispidus* *Carex trisperma*	*Picea mariana* *Betula papyrifera cordifolia*	*Pinus strobus*	42-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL29.1	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum*	*Nemopanthus mucronatus*	*Acer rubrum* *Larix laricina* *Picea mariana*	35-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL29.2	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmunda regalis*	*Nemopanthus mucronatus* *Gaylussacia baccata*	*Acer rubrum* *Larix laricina*	45-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL29.3	Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*Rhynchospora alba*	*Nemopanthus mucronatus* *Larix laricina*	*Larix laricina*	45-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL29.4	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum* *Carex trisperma*	*Picea mariana* *Abies balsamea*	*Abies balsamea* *Picea mariana*	60-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL29.5	High Water Table (A2) Saturation (A3)	*Kalmia angustifolium*	*Nemopanthus mucronatus* *Picea mariana*	*Larix laricina* *Picea mariana*	35-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL29.6	Surface Water (A1) High Water Table (A2)	*Rhynchospora alba* *Chamaedaphne calyculata*	*None*	*None*	50-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Saturation (A3) Water-Stained Leaves (B9) Aquatic Fauna (B13)					
Beaver Dam Mine Site	WL30	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Cornus canadensis* *Gaultheria hispidula*	*Abies balsamea* *Picea mariana*	*Picea rubens*	25-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL31	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Hydrogen Sulphide (C1)	*Osmundastrum cinnamomeum* *Maianthemum canadense*	*Nemopanthus mucronatus* *Picea mariana*	*Picea mariana*	65-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL32	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Dry-Season Water Table (C2) Stunted or Stressed Plants (D1) Geomorphic Positions (D2) Shallow Aquitard (D3)	*Maianthemum trifolium*	*Abies balsamea*	*Picea mariana* *Abies balsamea*	22-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL33	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Stunted or Stressed Plants (D1) Geomorphic Positions (D2)	*Osmundastrum cinnamomeum* *Carex trisperma* *Cornus canadensis*	*Abies balsamea* *Nemopanthus mucronatus*	*Abies balsamea* *Picea mariana*	40+cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL34	High Water Table (A2) Saturation (A3) Iron Deposits (B5) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Stunted or Stressed Plants (D1) Geomorphic Positions (D2) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2)	*Carex trisperma* *Fragaria virginiama*	*Abies balsamea* *Betula alleghaniensis*	*Abies balsamea*	40+cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL35	High Water Table (A2)	*Osmundastrum cinnamomeum*	*Abies balsamea*	*Picea mariana*	42-0cm	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Saturation (A3) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Dry-Season Water Table (C2) Moss Trim Lines (B16) Geomorphic Position (D2)	*Carex trisperma*		*Abies balsamea*	Organic	
Beaver Dam Mine Site	WL36	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Dry-Season Water Table (C2) Geomorphic Position (D2)	*Osmundastrum cinnamomeum*	*Abies balsamea* *Acer rubrum*	*Abies balsamea* *Picea mariana*	32-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL37	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Geomorphic Position (D2)	*Oclemena accuminata* *Oclemena nemoralis*	*Betula papyrifera cordifolia* *Betula alleghaniensis*	*Betula papyrifera cordifolia*	28-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL38	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Dry-Season Water Table (C2) Geomorphic Positions (D2) Stunted or Stressed Plants (D1)	*Thelypteris simulata*	*Abies balsamea* *Ilex verticillata* *Picea mariana*	*Abies balsamea* *Picea mariana*	58-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL39	High Water Table (A2) Water-Stained Leaves (B9) Saturation (A3)	*Osmundastrum cinnamomeum* *Carex trisperma*	*Abies balsamea*	*Acer rubrum* *Picea mariana* *Abies balsamea*	48-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL40	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Dry-Season Water Table (C2) Geomorphic Positions (D2)	*Osmundastrum cinnamomeum*	*Abies balsamea* *Picea mariana*	*Abies balsamea* *Picea mariana*	100+cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL41	High Water Table (A2) Saturation (A3)	*Carex stricta*	*Alnus incana*	*None*	45-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Water Marks (B1) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Secondary Indicators: Drainage Patterns (B10) Stunted or Stressed Plants (D1)					
Beaver Dam Mine Site	WL42	High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1)	*Carix canescens* *Carex stricta*	*Abies balsamea* *Larix laricina*	*Betula cordifolia* *Picea rubens* *Picea mariana*	20-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL43	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Geomorphic Positions (D2)	*None*	*Picea rubens* *Nemopanthus mucronatus*	*Betula papyrifera* *Picea rubens*	15-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL44	High Water Table (A2) Saturation (A3) Drift Deposits (B3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum* *Thelypteris simulata*	*Abies balsamea* *Nemopanthus mucronatus*	*Acer rubrum* *Picea rubens* *Picea mariana*	20-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL45	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Stunted or Stressed Plants (D1)	*Nemopanthus mucronatus*	*Abies balsamea* *Picea mariana*	*Picea mariana*	60-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL46	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Aquatic Fauna (B13) Secondary Indicators: Moss Trim Lines (B16) Dry-Season Water Table (C2) Geomorphic Positions (D2)	*Rubus canadensis* *Glyceria canadensis*	*Acer rubrum* *Betula papyrifera cordifolia*	*Abies balsamea* *Acer rubrum*	22-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL47	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Calamagrostis canadensis* *Iris versicolor*	*Rapid assessment*	*None*	id Assessm	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Water Marks (B1) Sediment Deposits (B2) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Aquatic Fauna (B13) Secondary Indicators: Drainage Patterns (B10) Stunted or Stressed Plants (D1) Geomorphic Positions (D2)					
Beaver Dam Mine Site	WL48.1	Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Secondary Indicators: Drainage Patterns (B10) Stunted or Stressed Plants (D1) Geomorphic Positions (D2)	*Rubus hispidus*	*None*	*Acer rubrum*	60-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL48.2	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Geomorphic Positions (D2)	*Osmundastrum cinnamomeum* *Carex trisperma* *Rubus hispidus*	*Picea mariana* *Betula cordifolia* *Abies balsamea*	*Picea mariana*	55-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL49	Surface Water (A1) High Water Table (A2) Saturation (A3) Sparsely Vegetated Concave Surface (B8) Secondary Indicators: Drainage Patterns (B10) Geomorphic Positions (D2)	*Carex trisperma*	*None*	*Abies balsamea*	50-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL50	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Geomorphic Positions (D2)	*Osmundastrum cinnamomeum*	*Abies balsamea* *Nemopanthus mucronatus*	*None*	40+cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL51	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators:	*None*	*Pinus strobus* *Abies balsamea*	*Betula cordifolia* *Picea rubens*	55-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Drainage Patterns (B10) Geomorphic Positions (D2)					
Beaver Dam Mine Site	WL52	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Drift Deposits (B3) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Aquatic Fauna (B13) Secondary Indicators: Drainage Patterns (B10) Geomorphic Positions (D2) Stunted or Stressed Plants (D1)	*Viola cucullata* *Glyceria striata*	*Abies balsamea*	*Picea rubens*	22-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL53	Surface Water (A1) High Water Table (A2) Saturation (A3) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Secondary Indicators: Drainage Patterns (B10) Geomorphic Positions (D2)	*Osmundastrum cinnamomeum* *Glyceria striata*	*Acer rubrum* *Picea mariana*	*None*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL54	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water-Stained Leaves (B9) Hydrogen Sulphide (C1) Secondary Indicators: Geomorphic Positions (D2)	*Carex trisperma* *Osmundastrum cinnamomeum* *Kalmia angustifolia*	*Acer rubrum* *Betula cordifolia* *Abies balsamea*	*Picea mariana* *Picea rubrum*	60-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL55	High Water Table (A2) Saturation (A3) Water Marks (B1) Algal Mat or Crust (B4) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Secondary Indicators:	*Scirpus cyperinus*	*Salix pyrifolia* *Acer rubrum* *Spiraea tomentosa*	*Acer rubrum* *Abies balsamea*	30-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Drainage Patterns (B10) Stunted or Stressed Plants (D1) Geomorphic Positions (D2)					
Beaver Dam Mine Site	WL56.1	Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Drainage Patterns (B10)	*Dryopteris intermedia* *Rubus hispidus* *Carex trisperma*	*Abies balsamea* *Acer rubrum* *Larix laricina*	*Larix laricina*	80-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL56.2	High Water Table (A2) Saturation (A3) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Secondary Indicators: Surface Soil Cracks (B6) Geomorphic Position (D2) Drainage Patterns (B10)	*Juncus effusus*	*Larix laricina* *Betula papyrifera* *Alnus incana*	*Betula papyrifera*	5-0cm Organic 0-20cm Mineral	Depleted Matrix (F3)
Beaver Dam Mine Site	WL56.3	High Water Table (A2) Saturation (A3) Hydrogen Sulphide (C1) Water-Stained Leaves (B9)	*Kalmia angustifolium*	*Picea mariana*	*Picea mariana*	100cm+ Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL57.1	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Aquatic Fauna (B13) Hydrogen Sulphide (C1) Secondary Indicators: Moss Trim Lines (B16) Dry-Season Water Table (C2) Stunted or Stressed Plants (D1) Geomorphic Positions (D2)	*Osmunda cinnamanea* *Carex trisperma*	*Nemopanthus mucronatus*	*Acer rubum* *Picea mariana* *Abies balsamea*	50+ Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL57.2	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Moss Trim Lines (B16) Dry-Season Water Table (C2) Microtopographical Relief (D4)	*Osmunda cinnamanea* *Cornus canadensis*	*Abies balsamea*	*Abies balsamea*	18-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL57.3	Surface Water (A1) High Water Table (A2)	*Carex leptalia* *Osmunda cinnamanea*	*Betula alleghaniensis*	*None*	10-0cm Organic	Hydrogen Sulphide (A4) Depleted Matrix (F3)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Saturation (A3) Iron Deposits (B5) Thin Muck Surface (C7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Hydrogen Sulphide (C1) Presence of Reduced Iron (C4) Secondary Indicators: Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Microtopographical Relief (D4)	*Glyceria striata*			0-12cm Mineral	Histic Epipedon (A2)
Beaver Dam Mine Site	WL58	High Water Table (A2) Saturation (A3) Water Marks (B1) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Secondary Indicators: Drainage Patterns (B10) Geomorphic Positions (D2) Microtopographical Relief (D4)	*Thelypteris simulata*	*Abies balsamea*	*Acer rubrum*	3-0cm Organic 0-18cm Mineral	Depleted Matrix (F3) Histic Epipedon (A2)
Beaver Dam Mine Site	WL59	Surface Water (A1) High Water Table (A2) Saturation (A3) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Aquatic Fauna (B13) Iron Deposits (B5) Hydrogen Sulphide (C1) Secondary Indicators: Drainage Patterns (B10) Stunted or Stressed Plants (D1)	*None*	*Picea mariana* *Viburnum nudum* *Acer rubrum*	*Picea mariana* *Larix laricina*	30-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL60	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Moss Trim Lines (B16) Dry-Season Water Table (C2) Geomorphic Positions (D2)	*Scirpus cyperinus*	*Picea rubens*	*Picea rubens* *Picea mariana*	24-0cm Organic 0-12cm Mineral	Histic Epipedon (A2)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
Beaver Dam Mine Site	WL61.1	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) Secondary Indicators: Drainage Patterns (B10)	*Osmunda regalis*	*Acer rubrum*	*Acer rubrum*	20-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL61.2	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex stricta*	*Alnus incana*	*Acer rubrum*	40-0cm Organic	Histosol (A1) Hydrogen Sulphide (A4)
Beaver Dam Mine Site	WL61.3	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Osmunda regalis* *Oclemena nemoralis*	*Acer rubrum* *Alnus incana*	*Acer rubrum* *Larix laricina*	5-0cm Organic 0-15cm Mineral	Depleted Matrix (F3)
Beaver Dam Mine Site	WL62	High Water Table (A2) Saturation (A3) Water Marks (B1) Water-Stained Leaves (B9)	*Osmunda regalis*	*Abies balsamea*	*Larix laricina*	16-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL63	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum* *Theypteris noveboracensis* *Carex trisperma*	*Abies balsamea* *Nemopanthus mucronatus* *Viburnum nudum*	*Picea mariana* *Acer rubrum* *Abies balsamea*	23-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL200	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum* *Rubus hispidus* *Eriophorum vaginatum*	*Alnus incana*	*Larix laricina* *Picea mariana* *Abies balsamea*	20-0cm Organic 0-5cm Mineral	Histic Epipedon (A2)
Beaver Dam Mine Site	WL201	Saturation (A3)	*Oxalis montana* *Carex trisperma*	*Acer rubrum*	*Acer rubrum* *Abies balsamea*	40-0cm	Histosol (A1)
Beaver Dam Mine Site	WL202	High Water Table (A2) Saturation (A3)	*Carex trisperma* *Osmundastrum cinnamomeum* *Eriophorum vaginatum*	*Abies balsamea* *Picea mariana*	*Abies balsamea* *Picea mariana*	23-0cm Organic 0-7cm Mineral	Histic Epipedon (A2)
Beaver Dam Mine Site	WL203	High Water Table (A2) Saturation (A3) Aquatic Fauna (B13)	*Carex trisperma* *Osmundastrum cinnamomeum* *Eriophorum virginicum*	*Larix laricina* *Alnus incana*	*Picea mariana* *Acer rubrum*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL204	Saturation (A3)	*Eriophorum vaginatum* *Kalmia angustifolia* *Osmundastrum cinnamomeum*	*Alnus incana*	*Abies balsamea* *Larix laricina*	28-0cm Organic 0-4cm Mineral	Histic Epipedon (A2)
Beaver Dam Mine Site	WL205	Saturation (A3)	*Thelypteris noveboracensis* *Carex trisperma*	*Abies balsamea*	*Abies balsamea*	40-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
			Osmundastrum cinnamomeum				
Beaver Dam Mine Site	WL206	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex trisperma* *Gultheria hispidula* *Cornus canadensis* *Kalmia angustifolia*	*Picea mariana* *Vibirnum nudum*	*Larix laricina*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL207	Saturation (A3)	*Kalmia angustifolia* *Chamadaphane calyculata*	*Picea mariana* *Larix laricina*		100-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL208	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Kalmia angustifolia* *Osmundastrum cinnamomeum* *Cornus canadensis*	*Picea mariana* *Larix laricina*	*Picea mariana*	60-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL209	Saturation (A3)	*Osmundastrum cinnamomeum* *Rhododendron groenlandicum* *Eriophorum virginicum*	*Picea mariana* *Illex verticulata*	*Picea mariana*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL210	Saturation (A3) Hydrogen Sulfide Odor (C1)	*Rhododendron groenlandicum* *Carex trisperma* *Spirea tomentosa* *Cornus canadensis*	*Abies balsamea* *Larix laricina*	*Abies balsamea* *Larix laricina*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL211	Saturation (A3)	*Osmundastrum cinnamomeum*	*Ilex verticulata* *Vibirnum nudum*	*Picea mariana* *Abies balsamea*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL212	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum* *Kalmia angustifolia* *Oclemna nemoralis*	*Ilex verticulata* *Abies balsamea*	*Picea mariana* *Abies balsamea*	40-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL213	Saturation (A3)	*Rubus pubescnes* *Carex crinita* *Rhododendron groenlandicum* *Osmundastrum cinnamomeum*	*Vibirnum nudum* *Larix laricina* *Picea mariana*	*Larix laricina* *Picea mariana* *Acer rubrum*	10-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL214	Saturation (A3)	*Glyceria striata* *Thelypteris noveboracensis* *Solidago uliginosa*	*Betula alleghaniensis*	*Betula alleghaniensis*	30-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL215	Saturation (A3)	*Kalmia angustifolia* *Rosa natida* *Gultheria hispidula*	*Abies balsamea* *Vibirnum nudum*	*Abies balsamea* *Picea mariana*	20-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL216	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	*Juncus effusus* *Vaccinium macrocarpon* *Onoclea sensibilis*	*Larix laricina* *Abies balsamea*		20-0cm Organic	Histosol (A1)
Beaver Dam Mine Site	WL217	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	*Carex trisperma* *Carex leptalea*	*Abies balsamea* *Picea mariana*	*Abies balsamea*	30-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
Haul Road	WL64.1	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water-Stained Leaves (B9)	*Carex trisperma* *Thelypteris noveboracensis*	*Betula alleghaniensis*	*Abies balsamea*	20-0cm Organic	Histosol (A1)
Haul Road	WL64.2	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex trisperma* *Glyceria grandis*	*Abies balsamea*	*Abies balsamea* *Larix laricina*	15-0cm Organic 0-5cm Silt Clay	Histic Epipedon (A2)
Haul Road	WL65	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Carex echinata*	*Abies balsamea*	*None*	5-0cm Organic 0-15cm Mineral	Histic Epipedon (A2)
Haul Road	WL66.1	Surface Water (A1) High Water Table (A2) Saturation (A3) Mark Marks (B1)	*Carex echinata* *Carex magellanica* *Dulichium arundinaceum*	*None*	*None*	120-0cm Organic	Histosol (A1)
Haul Road	WL66.2	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Thelypteris noveboracensis*	*Abies balsamea* *Alnus viridis* *Betula alleghaniensis*	*Abies balsamea*	25-0cm Organic	Histosol (A1)
Haul Road	WL66.3	High Water Table (A2) Saturation (A3)	*Glyceria grandis*	*Larix laricina* *Alnus incana*	*None*	65-0cm Organic	Histosol (A1)
Haul Road	WL67.1	High Water Table (A2) Saturation (A3)	*Chamaedaphne calyculata*	*Picea mariana* *Larix laricina*	*None*	73-0cm Organic	Histosol (A1)
Haul Road	WL67.2	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum*	*Viburnum nudum* *Nemopanthus mucronatus*	*Acer rubrum* *Larix laricina* *Abies balsamea*	32-0cm Organic	Histosol (A1)
Haul Road	WL68	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Carex stricta*	*Spiraea alba* *Rhododendron canadense* *Myrica gale*	*Acer rubrum* *Larix laricina*	72-0cm Organic	Histosol (A1)
Haul Road	WL69	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Carex stricta*	*Myrica gale*	*None*	100-0cm Organic	Histosol (A1)
Haul Road	WL70	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum* *Scirpus cyperinus*	*Acer rubrum* *Alnus incana*	*Acer rubrum*	28-0cm Organic	Histosol (A1)
Haul Road	WL71	High Water Table (A2) Saturation (A3)	*Glyceria grandis* *Trientalis borealis*	*Abies balsamea* *Betula alleghaniensis*	*Betula alleghaniensis*	16-0cm Organic	Histic Epipedon (A2)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Water-Stained Leaves (B9)		*Picea rubens*		0-11cm Mineral	
Haul Road	WL72	High Water Table (A2) Saturation (A3)	*Glyceria grandis* *Carex crinita*	*Acer rubrum*	*Acer rubrum*	40-0cm Organic 0-7cm Sandy Loam	Histic Epipedon (A2)
Haul Road	WL73.1	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Carex trisperma* *Glyceria grandis*	*Alnus incana* *Nemopanthus mucronatus*	*Abies balsamea* *Acer rubrum*	58-0cm Organic	Histosol (A1)
Haul Road	WL73.2	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Maianthemum trifolium*	*Kalmia angustifolia* *Alnus incana*	*Larix laricina*	36-0cm Organic	Histosol (A1)
Haul Road	WL74.1	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Rubus hispidus* *Carex folliculata*	*Abies balsamea*	*Acer rubrum* *Abies balsamea*	35-0cm Organic	Histosol (A1)
Haul Road	WL74.2	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water-Stained Leaves (B9)	*Glyceria grandis*	*None*	*Acer rubrum*	10-0cm Organic	Histosol (A1)
Haul Road	WL75	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Phegopteris connectilis*	*Abies balsamea* *Nemopanthus mucronatus*	*Picea rubens* *Acer rubrum* *Abies balsamea*	60-0cm Organic	Histosol (A1) Hydrogen Sulfide (A4)
Haul Road	WL76.1	Surface Water (A1) High Water Table (A2) Saturation (A3) Sparsely Vegetated Concave Surface (B8)	*Lycopus uniflorus*	*Abies balsamea* *Alnus incana*	*Acer rubrum* *Picea mariana*	70-0cm Organic	Histosol (A1) Hydrogen Sulfide (A4)
Haul Road	WL76.2	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex canescens* *Calamagrostis canadensis*	*Alnus incana* *Acer rubrum*	*Picea rubens*	50-0cm Organic	Histosol (A1)
Haul Road	WL77	High Water Table (A2) Saturation (A3) Hydrogen Sulfide Odor (C1)	*Carex stricta* *Rubus pubsescens*	*Betula papyrifera* *Alnus incana*	*Picea mariana* *Acer rubrum*	28-0cm Organic	Histosol (A1)
Haul Road	WL78	High Water Table (A2) Saturation (A3) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9)	*Glyceria melicaria* *Carex echinata*	*Picea rubens*	*Picea rubens* *Acer rubrum*	25-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
Haul Road	WL79	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Carex gynandra* *Coptis trifolia*	*Abies balsamea* *Nemopanthus mucronatus*	*Abies balsamea* *Picea mariana*	20-0cm Organic	Histosol (A1)
Haul Road	WL80	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Maianthemum trifolium*	*Viburnum nudum* *Picea mariana*	*Picea mariana* *Larix laricina*	36-0cm Organic	Histosol (A1)
Haul Road	WL81	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Glyceria grandis*	*Alnus incana*	*None*	17-0cm Organic	Histosol (A1)
Haul Road	WL82	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Glyceria grandis* *Lycopus uniflorus*	*Abies balsamea* *Acer rubrum*	*Abies balsamea*	20-0 Organic 0-5cm Clay	Histosol (A1) Histic Epipedon (A2)
Haul Road	WL83	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	*Acer rubrum* *Lycopus uniflorus*	*Betula alleghaniensis*	*Betula alleghaniensis* *Abies balsamea*	23-0cm Organic	Histosol (A1)
Haul Road	WL84	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Rubus hispidus* *Scirpus cyperinus*	*Acer rubrum* *Betula alleghiensis*	*None*	35-0cm Organic	Histosol (A1)
Haul Road	WL85	High Water Table (A2) Saturation (A3)	*Carex crinita* *Scirpus cyperinus*	*Abies balsamea* *Alnus incana*	*None*	15-0cm Organic	Histosol (A1)
Haul Road	WL86	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Maianthemum trifolium*	*Betula alleghaniensis*	*Abies balsamea*	40-0cm Organic	Histosol (A1)
Haul Road	WL87	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex trisperma* *Scirpus cyperinus*	*Abies balsamea*	*None*	22-0cm Organic	Histosol (A1)
Haul Road	WL88	High Water Table (A2) Saturation (A3)	*Rubus hispidus* *Carex trisperma*	*Betula papyrifera* *Picea rubens*	*None*	25-0cm Organic	Histosol (A1)
Haul Road	WL89	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum*	*Acer rubrum* *Abies balsamea* *Nemopanthus mucronatus*	*Abies balsamea* *Picea rubens*	25-0cm Organic	Histosol (A1)
Haul Road	WL90	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Calamagrostis canadensis* *Carex trisperma*	*Abies balsamea* *Nemopanthus mucronatus*	*Abies balsamea* *Acer rubrum*	60-0cm Organic	Histosol (A1)
Haul Road	WL91	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Kalmia angustifolia* *Cornus canadensis* *Osmundastrum cinnamomeum*	*Alnus incana*	*Acer rubrum* *Larix laricina*	20-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
			Vaccinium myrtilloides				
Haul Road	WL92	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Cornus canadensis*	*Picea mariana* *Abies balsamea*	*Acer rubrum* *Picea mariana*	30-0cm Organic	Histosol (A1)
Haul Road	WL93	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Scirpus cyperinus*	*Alnus incana*	*None*	10-0cm Organic 0-22cm Mineral	Histosol (A1)
Haul Road	WL94	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex trisperma* *Cornus canadensis*	*Abies balsamea* *Picea mariana*	*Picea mariana* *Acer rubrum*	20-0cm Organic	Histosol (A1)
Haul Road	WL95	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Dryopteris cristata*	*Virburnum nudum* *Abies balsamea*	*Acer rubrum* *Abies balsamea*	25-0cm Organic	Histosol (A1)
Haul Road	WL96	High Water Table (A2) Saturation (A3)	*Carex trisperma* *Rubus hispidus*	*Betulaa populifolia*	*Acer rubrum* *Abies balsamea* *Picea mariana*	24-0cm Organic	Histosol (A1)
Haul Road	WL97	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum* *Lycopus uniflorus*	*Abies balsamea* *Acer rubrum*	*Abies balsamea*	42-0cm Organic	Histosol (A1)
Haul Road	WL98	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Oxalis montana* *Phegopteris connectilis*	*Alnus incana*	*Abies balsamea* *Acer rubrum*	25-0cm Organic	Histosol (A1)
Haul Road	WL99	Surface Water (A1) Water Marks (B1) Water-Stained Leaves (B9)	*Kalmia angustifolia* *Dennstaedtia punctilobula*	*Abies balsamea*	*Abies balsamea* *Picea rubens*	23-0cm Organic 0-3cm Sandy Loam	Histosol (A1)
Haul Road	WL100	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum*	*Nemopanthus mucrantus* *Kalmia angustifolia* *Betula papyrifera*	*None*	68-0cm Organic	Histosol (A1)
Haul Road	WL101	Saturation (A3)	*Carex trisperma* *Osmundastrum cinnamomeum*	*Betula populifolia* *Acer rubrum* *Abies balsamea*	*Abies balsamea* *Acer rubrum*	20-0cm Organic	Histosol (A1)
Haul Road	WL102.1	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Cornus canadensis* *Osmundastrum cinnamomeum*	*Rhododendron groenlandicum*	*Acer rubens* *Picea mariana*	75-0cm Organic	Histosol (A1)
Haul Road	WL102.2	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum* *Thelypteris noveboracensis*	*Picea rubens* *Abies balsamea*	*Abies balsamea* *Picea rubens*	82-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Water-Stained Leaves (B9)					
Haul Road	WL103	High Water Table (A2)	*Cornus canadensis* *Kalmia angustifolia*	*Picea mariana* *Betula papyrifera*	*None*	45-0cm Organic	Histosol (A1)
Haul Road	WL104	Saturation (A3) Stunted or Stressed Plants (D1)	*Rubus hispidus* *Cornus canadensis* *Gaultheria hispidula*	*Abies balsamea* *Acer rubrum*	*None*	35-0cm Organic	Histosol (A1)
Haul Road	WL105	High Water Table (A2)	*Osmundastrum cinnamomeum* *Carex trisperma*	*Populus tremuloides* *Betula papyrifera*	*None*	46-0cm Organic	Histosol (A1)
Haul Road	WL106	Water-Stained Leaves (B9)	*Kalmia angustifolia*	*Viburdnum nudum* *Betula papyrifera*	*None*	25-0cm Organic	Histosol (A1)
Haul Road	WL107	Saturation (A3) Drainage Patterns (B10) Stunted or Stressed Plants (D1)	*Coptis trifolia* *Oxalis montana*	*Picea rubens*	*Abies balsamea*	26-0cm Organic	Histosol (A1)
Haul Road	WL108	Saturation (A3) Drainage Patterns (B10) Stunted or Stressed Plants (D1)	*Rubus hispidus* *Osmundastrum cinnamomeum*	*Betula papyrifera* *Abies balsamea*	*None*	26-0cm Organic	Histosol (A1)
Haul Road	WL109	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum*	*Nemopanthus mucronatus*	*Picea rubens* *Abies balsamea* *Acer rubrum*	15-0cm Organic	Histosol (A1)
Haul Road	WL110	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Water-Stained Leaves (B9)	*Carex trisperma* *Kalmia angustifolia*	*Abies balsamea* *Picea mariana*	*None*	100-0cm Organic	Histosol (A1)
Haul Road	WL111	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum* *Acer rubrum* *Oxalis montana*	*Picea rubrum* *Abies balsamea*	*Abies balsamea* *Picea mariana* *Acer rubrum*	130-0cm Organic	Histosol (A1)
Haul Road	WL112	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Carex trisperma* *Coptis trifolia*	*Abies balsamea*	*Abies balsamea* *Picea mariana* *Acer rubrum*	68-0cm Organic	Histosol (A1)
Haul Road	WL113	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum* *Carex trisperma*	*Abies balsamea* *Picea mariana*	*Abies balsamea* *Acer rubrum*	32-0cm Organic	Histosol (A1)
Haul Road	WL114	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex trisperma*	*Abies balsamea*	*Abies balsamea* *Picea rubens*	68-0cm Organic	Histosol (A1)
Haul Road	WL115	Surface Water (A1) High Water Table (A2)	*Gaylussacia baccata* *Osmundastrum cinnamomeum*	*Picea rubens* *Picea mariana*	*Acer rubrum* *Picea mariana*	67-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Saturation (A3)					
Haul Road	WL116	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Cornus canadensis* *Kalmia augustifolia*	*Picea mariana*	*Picea mariana* *Abies balsamea*	38-0cm Organic	Histosol (A1)
Haul Road	WL117	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Rhododendron groenlandicum* *Nemopanthus mucronatus* *Coptis trifolia* *Kalmia angustifolia*	*Nemopanthus mucronatus* *Picea mariana*	*Abies balsamea* *Larix laricina*	40-0cm Organic	Histosol (A1)
Haul Road	WL118	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum*	*Abies balsamea* *Nemopanthus mucronatus*	*Picea mariana*	87-0cm Organic	Histosol (A1)
Haul Road	WL119	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Kalmia angustifolia* *Vaccinium angustifolium* *Gaylussacia baccata*	*Abies balsamea* *Gaylussacia baccata*	*Abies balsamea*	66-0cm Organic	Histosol (A1)
Haul Road	WL120	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Kalmia angustifolia* *Cornus canadensis* *Carex trisperma*	*Picea rubens* *Picea mariana*	*None*	55-0cm Organic	Histosol (A1)
Haul Road	WL121	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Cornus canadensis* *Vaccinium angustifolium*	*Abies balsamea* *Nemopanthus mucronatus*	*Abies balsamea*	45-0cm Organic	Histosol (A1)
Haul Road	WL122	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum*	*Abies balsamea*	*Picea mariana* *Abies balsamea*	63-0cm Organic	Histosol (A1)
Haul Road	WL123	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum*	*Nemopanthus mucronatus* *Abies balsamea*	*Picea mariana* *Acer rubrum*	125-0cm Organic	Histosol (A1)
Haul Road	WL124	High Water Table (A2) Saturation (A3)	*Dennstaedtia punctilobula*	*Abies balsamea*	*Picea mariana* *Acer rubrum*	90-0cm Organic	Histosol (A1)
Haul Road	WL125	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum* *Picea mariana*	*Abies balsamea*	*Abies balsamea* *Acer rubrum*	60-0cm Organic	Histosol (A1)
Haul Road	WL126	Saturation (A3)	*Kalmia angustifolia*	*Nemopanthus mucronatus* *Abies balsamea*	*Abies balsamea*	45-0cm Organic	Histosol (A1)
Haul Road	WL127	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum*	*Picea mariana* *Nemopanthus mucronatus*	*Picea mariana*	80-0cm Organic	Histosol (A1)
Haul Road	WL128	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum* *Carex trisperma* *Gaylussacia baccata*	*Picea mariana* *Acer rubrum*	*None*	100-0cm Organic	Histosol (A1)
Haul Road	WL129	Surface Water (A1) High Water Table (A2)	*Rhododendron groenlandicum*	*Picea mariana*	*Acer rubrum*	100-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Saturation (A3) Water-Stained Leaves (B9)					
Haul Road	WL130	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Maianthemum trifolium* *Osmundastrum cinnamomeum*	*Picea mariana* *Abies balsamea*	*Picea mariana*	120-0cm Organic	Histosol (A1)
Haul Road	WL131	Surface Water (A1) High Water Table (A2) Saturation (A3) Hydrogen Sulfide Odor (C1)	*Phegopteris connectilis*	*Picea mariana* *Nemopanthus mucronatus*	*Picea mariana* *Acer rubrum*	75-0cm Organic	Histosol (A1)
Haul Road	WL132	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum* *Cornus canadensis*	*Nemopanthus mucronatus* *Picea mariana*	*Picea mariana* *Acer rubrum*	95-0cm Organic	Histosol (A1)
Haul Road	WL133	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Carex trisperma* *Osmundastrum cinnamomeum*	*Kalmia angustifolia* *Rhododendron groenlandicum* *Nemopanthus mucronata*	*None*	22-0cm Organic	Histosol (A1)
Haul Road	WL134	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	*Osmundastrum cinnamomeum* *Carex trisperma*	*Abies balsamea* *Picea mariana*	*Abies balsamea* *Acer rubrum*	125-0cm Organic	Histosol (A1)
Haul Road	WL135	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum*	*Acer rubrum* *Pinus strobus* *Picea mariana*	*None*	68-0cm Organic	Histosol (A1)
Haul Road	WL136	High Water Table (A2) Saturation (A3)	*Thelypteris noveboracensis*	*Acer balsamea* *Acer rubrum*	*Abies balsamea* *Picea rubens*	23-0cm Organic	Histosol (A1)
Haul Road	WL137	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum* *Thelypteris noveboracensis*	*Picea rubens* *Ilex verticillata*	*Acer rubrum* *Picea rubens*	62-0cm Organic	Histosol (A1)
Haul Road	WL138	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	*Vaccinium oxycoccos*	*Acer rubrum*	*None*	10-0cm Organic	Histosol (A1)
Haul Road	WL139	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum*	*Abies balsamea* *Picea mariana*	*None*	65-0cm Organic	Histosol (A1)
Haul Road	WL140	High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Rhododendron groenlandicum* *Coptis trifolium* *Kalmia angustifolia*	*Nemopanthus mucronatus* *Acer rubrum*	*Abies balsamea* *Larix laricina*	20-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
Haul Road	WL141	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Rhododendron groenlandicum* *Rhododendron canadense*	*Abies balsamea* *Picea mariana*	*None*	18-0cm Organic	Histosol (A1)
Haul Road	WL142	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Rhododendron groenlandicum* *Carex projecta*	*Acer rubrum* *Rhododendron groenlandicum*	*None*	26-0cm Organic	Histosol (A1)
Haul Road	WL143.1	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Rhododendron groenlandicum* *Carex projecta*	*Acer rubrum*	*Picea mariana*	65-0cm Organic	Histosol (A1)
Haul Road	WL143.2	Surface Water (A1) High Water Table (A2) Saturation (A3) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Thick Muck Surface (C7)	*Oxalis montana* *Thelypteris noveboracensis*	*Betula alleghaniensis* *Abies balsamea* *Picea rubrum*	*Acer rubrum* *Abies balsamea*	18-0cm Organic	Histosol (A1)
Haul Road	WL144	Surface Water (A1) High Water Table (A2) Saturation (A3) Stunted or Stressed Plants (D1)	*Carex projecta*	*Picea mariana* *Larix laricina*	*None*	55-0cm Organic	Histosol (A1)
Haul Road	WL145	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Vaccinium oxycoccos* *Maianthemum trifolium*	*Picea mariana*	*None*	45-0cm Organic	Histosol (A1)
Haul Road	WL146.1	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Drosera rotundifolia* *Carex canescens* *Dulichium arundinaceum*	*None*	*None*	120-0cm Organic	Histosol (A1)
Haul Road	WL146.2	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	*Lycopus uniflorus* *Triadenum virginicum*	*Abies balsamea*	*Abies balsamea* *Acer rubrum*	45-0cm Organic	Histosol (A1)
Haul Road	WL147.1	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Vaccinium macrocarpon* *Vaccinium oxycoccos* *Carex magellanica*	*None*	*None*	50-0cm Organic	Histosol (A1)
Haul Road	WL147.2	High Water Table (A2) Saturation (A3)	*Carex trisperma*	*Acer rubrum*	*Larix laricina* *Abies balsamea*	50-0cm Organic	Histosol (A1)
Haul Road	WL148	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Chamaedaphne calyculata* *Vaccinium oxycoccos*	*Picea mariana*	*None*	45-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Water Marks (B1)					
Haul Road	WL149	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Scirpus cyperinus* *Carex trisperma* *Carex magellanica*	*Larix laricina* *Picea mariana*	*None*	65-0cm Organic	Histosol (A1)
Haul Road	WL150	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Rhododendron canadense* *Scirpuus cyperinus*	*None*	*None*	5-0cm Organic 0-20cm Sandy Clay	Histic Epipedon (A2)
Haul Road	WL151	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	*Kalmia angustifolia* *Carex trisperma*	*Picea mariana*	*None*	120-0cm Organic	Histosol (A1)
Haul Road	WL152	High Water Table (A2) Saturation (A3)	*Scirpus cyperinus* *Juncus canadensis* *Carex trisperma*	*Acer rubrum* *Picea mariana*	*Picea mariana* *Larix laricina*	40-0cm Organic	Histosol (A1)
Haul Road	WL153	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Maianthemum trifolium*	*Acer rubrum* *Larix laricina*	*None*	65-0cm Organic	Histosol (A1)
Haul Road	WL154	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Chamaedaphne calyculata* *Dulichium arundinaceum*	*None*	*None*	65-0cm Organic	Histosol (A1)
Haul Road	WL155	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum*	*Abies balsamea* *Picea mariana*	*Abies balsamea* *Acer rubrum* *Picea mariana*	20-0cm Organic	Histosol (A1)
Haul Road	WL156	High Water Table (A2) Saturation (A3)	*Rhododendron groenlandicum*	*Nemopanthus mucronatus* *Viburnum nudum*	*None*	65-0cm Organic	Histosol (A1)
Haul Road	WL157.1	High Water Table (A2) Saturation (A3)	*Carex stricta*	*Alnus incana* *Acer rubrum*	*Acer rubrum*	50-0cm Organic	Histosol (A1)
Haul Road	WL157.2	High Water Table (A2) Saturation (A3)	*Rubus pubescens* *Carex folliculata*	*Alnus incana*	*Acer rubrum* *Abies balsamea*	20-0cm Organic 0-5cm Mineral	Histic Epipedon (A2)
Haul Road	WL158	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Juncus effuses* *Carex echinata*	*Larix laricina*	*None*	20-0cm Organic 0-10cm Mineral	Histic Epipedon (A2)
Haul Road	WL159	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex trisperma*	*Abies balsamea* *Viburnum nudum*	*Betula populifolia* *Acer rubrum* *Picea mariana*	20-0cm Organic 0-5cm	Histic Epipedon (A2) Depleted Matrix (F3)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Water-Stained Leaves (B9)				Mineral	
Haul Road	WL160	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Chamaedaphne calyculata* *Glyceria canadensis* *Vaccinium macrocarpon*	*Picea rubens* *Acer rubrum*	*None*	20-0cm Organic	Histosol (A1)
Haul Road	WL161	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum* *Rhododendron groenlandicum* *Carex trisperma*	*Nemopanthus mucronatus* *Picea mariana*	*Picea mariana* *Betula papyrifera*	30-0cm Organic	Histosol (A1)
Haul Road	WL162	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Eleocharis ovata*	*Alnus incana* *Picea mariana*	*Picea mariana* *Acer rubrum*	25-0cm Organic	Histosol (A1)
Haul Road	WL163	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Carex trisperma*	*Picea mariana* *Acer rubrum*	*None (Clear cut)*	5-0cm Organic 0-20cm Mineral	Histic Epipedon (A2)
Haul Road	WL164	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Nemopanthus mucronatus* *Rhododendron groenlandicum*	*Abies balsamea* *Nemopanthus mucronatus*	*Acer rubrum* *Larix laricina* *Picea mariana*	45-0cm Organic	Histosol (A1)
Haul Road	WL165	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Cornus canadensis* *Trientalis borealis* *Carex trisperma*	*Alnus incana* *Abies balsamea*	*Acer rubrum* *Abies balsamea*	3-0cm Organic 0-50cm Mineral	Histic Epipedon (A2)
Haul Road	WL166	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Carex projecta* *Vaccinium macrocarpon*	*Alnus incana* *Acer rubrum*	*None*	40-0cm Organic	Histosol (A1)
Haul Road	WL167	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Osmundastrum cinnamomeum*	*Picea mariana* *Abies balsamea*	*Picea mariana* *Abies balsamea*	50-0cm Organic	Histosol (A1)
Haul Road	WL168	Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Drift Deposits (B3) Sparsely Vegetated Concave Surface (B8) Aquatic Fauna (B13)	*Myrica gale*	*Acer rubrum*	*None*	100-0cm Organic	Histosol (A1)
Haul Road	WL169	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum*	*Nemopanthus mucronatus* *Picea mariana*	*Abies balsamea* *Acer rubrum*	10-0cm Organic	Histic Epipedon (A2)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
						0-5cm Mineral	
Haul Road	WL170	High Water Table (A2) Saturation (A3)	*Osmundastrum cinnamomeum* *Thelypteris noveboracensis*	*Abies balsamea* *Alnus incana* *Picea mariana*	*Acer rubrum* *Picea mariana*	30-0cm Organic	Histosol (A1)
Haul Road	WL171	Surface Water (A1) High Water Table (A2) Saturation (A3) Sediment Deposits (B2) Thin Muck Surface (C7) Stunted or Stressed Plants (D1)	*Coptis trifolia*	*Alnus incana*	*Acer rubrum* *Betula alleghaniensis* *Picea rubens*	17-0cm Organic	Histosol (A1)
Haul Road	WL172	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Solidago canadensis*	*Alnus incana* *Betula populifolia* *Picea mariana*	*Abies balsamea* *Betula populifolia* *Picea mariana*	5-0cm Organic 0-40cm Mineral	Histic Epipedon (A2) Depleted Matrix (F3)
Haul Road	WL173	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Galium pallustre* *Calamagrotis canadensis* *Juncus effusus* *Onoclea sensibilis*	*Alnus incana* *Abies balsamea*	*Picea mariana* *Betula populifolia* *Picea mariana*	40-0cm Organic	Histosol (A1)
Haul Road	WL174	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Cornus canadensis* *Osmunda cinamomea*	*Pices mariana* *Abies balsamea*	*Acer rubrum* *Abies balsamea* *Picea mariana*	17-0cm Organic	Histosol (A1)
Haul Road	WL175	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Osmunda claytoniana* *Osmunda cinamomea* *Thelypteris noveboracensis*	*Abies balsamea* *Alnus incana*	*None*	40-0cm Organic	Histosol (A1)
Haul Road	WL176	High Water Table (A2) Water-Stained Leaves (B9) Sparsely Vegetated Concave Surface (B8)	*Carex trisperma* *Carex stricta*	*Betula populifolia* *Abies balsamea*	*Acer rubrum* *Abies balsamea*	4-0cm Organic 0-5cm Mineral	Histic Epipedon (A2) Depleted Matrix (F3)
Haul Road	WL177	Surface Water (A1) High Water Table (A2)	*Glyceria canadensis*	*Alnus incana*	*None*	7-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
		Saturation (A3) Water-Stained Leaves (B9)					
Haul Road	WL178	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Linnea borealis* *Rubus hispidus*	*Alnus incana* *Picea rubens*	*Larix larcina* *Picea rubens* *Betula papyrifera*	80+ cm Organic	Histosol (A1)
Haul Road	WL179	Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9)	*Maianthemum canadensis*	*Alnus incana* *Acer rubrum*	*Picea mariana* *Acer rubrum*	50-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL180	Saturation (A3)	*Rhododendron groenlandicum* *Ilex mucronata* *Eriophorum virginicum*	*Larix laricina* *Picea mariana*	*Pinus strobus*	15-0cm Organic 0-10cm Minearal	Histic Epipedon (A2)
Preferred Alternative Haul Road	WL181	Saturation (A3)	*Kalmia angustifolia* *Scirpus cyperinus* *Gultheria hispidula*	*Picea mariana* *Vibirnum nudum*	*Picea mariana* *Betula populafolia*	30-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL182	Saturation (A3)	*Osmundastrum cinnamomeum* *Eriophorum virginicum* *Kalmia angustifolia*	*Picea mariana* *Acer rubrum* *Larix laricina*	*Picea mariana* *Larix laricina*	25-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL183	Saturation (A3)	*Carex trisperma* *Kalmia angustifolia* *Cornus canadensis*	*Picea mariana* *Ilex mucronata*	*Picea mariana* *Larix laricina*	40-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL184	Saturation (A3)	*Rhododendron groenlandicum* *Kalmia angustifolia* *Eriophorum vaginatum*	*Picea mariana* *Ilex mucronata*	*Picea mariana*	30-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL185	High Water Table (A2) Saturation (A3)	*Scirpus cyperinus* *Carex trisperma*	*Picea glauca*		25-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL186	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex stricta* *Eriophorum virginicum* *Chamaedaphne calyculata*			90-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL187.1	Saturation (A3)	*Aralia nudicaulis* *Carex trisperma* *Onoclea sensibilis*	*Abies balsamea*	*Abies balsamea*	5-0cm Organic 0-20cm Loam 20-40cm Clay	Redox Dark Surface (F6)
Preferred Alternative Haul Road	WL187.2	High Water Table (A2) Saturation (A3)	*Carex stricta* *Myrica gale* *Chamaedaphne calyculata*	*Picea mariana* *Larix laricina*	*Larix laricina* *Picea mariana*	80-0cm Organic	Histosol (A1)

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators
Preferred Alternative Haul Road	WL188	Saturation (A3)	*Osmundastrum cinnamomeum* *Thelypteris noveboracensis*	*Betula allaghaniensis*	*Acer rubrum* *Betula allaghaniensis* *Abies balsamea*	30-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL189	Saturation (A3)	*Scirpus cyperinus* *Rubus hispidus* *Carex trisperma*	*Abies balsamea*	*Acer rubrum*	25-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL190	Saturation (A3)	*Carex trisperma* *Thelypteris noveboracensis* *Iris versicolor* *Sarracenia purpurea*	*Abies balsamea*	*Abies balsamea* *Picea mariana*	20-0cm Organic 0-3cm Loam	Histic Epipedon (A2)
Preferred Alternative Haul Road	WL191	Saturation (A3)	*Scirpus cyperinus* *Carex trisperma* *Rosa natida* *Eriophorum virginicum*	*Acer rubrum*		20-0cm Organic 0-5cm Loam	Histic Epipedon (A2)
Preferred Alternative Haul Road	WL192	Saturation (A3) Aquatic Fauna (B13) Drainage Patterns (B10)	*Aralia nudicaulis* *Thelypteris noveboracensis* *Carex trisperma*	*Abies balsamea*	*Abies balsamea* *Acer rubrum*	25-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL193	Surface Water (A1) High Water Table (A2) Saturation (A3)	*Carex trisperma* *Carex crinita* *Iris versicolor*	*Abies balsamea*	*Abies balsamea* *Betula populafolia*	0-20cm Loam	Depleated Matrix (F3)
Preferred Alternative Haul Road	WL194	Saturation (A3) Drainage Patterns (B10)	*Osmundastrum cinnamomeum* *Rhododendron groenlandicum* *Kalmia angustifolia*	*Abies balsamea* *Ilex verticulata* *Acer rubrum*	*Picea mariana* *Larix laricina*	40-0cm	Histosol (A1)
Preferred Alternative Haul Road	WL195	Saturation (A3)	*Carex trisperma* *Kalmia angustifolia*	*Acer rubrum* *Abies balsamea*	*Abies balsamea* *Acer rubrum*	20-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL196	Saturation (A3)	*Kalmia angustifulia* *Scirpus cyperinus*	*Acer rubrum* *Abies balsamea*		20-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL197	Saturation (A3)	*Osmundastrum cinnamomeum* *Linnaea borealis* *Carex trisperma*	*Acer rubrum* *Abies balsamea*	*Abies balsamea* *Picea mariana*	20-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL198	High Water Table (A2) Saturation (A3) Aquatic Fauna (B13)	*Carex trisperma* *Osmundastrum cinnamomeum* *Oclemena nemoralis*	*Abies balsamea*	*Picea mariana* *Larix laricina*	20-0cm Organic	Histosol (A1)
Preferred Alternative Haul Road	WL199	High Water Table (A2) Saturation (A3)	*Carex stricta* *Calamagrostis canadensis* *Osmundastrum cinnamomeum*	*Acer rubrum* *Vibirnum nudum*	*Acer rubrum* *Picea mariana*	50-0cm Organic	Histosol (A1)

Notes

* Wetland complex: data has been divided into separate vegetated communities which represents the variation in wetland characteristics.

FOOTPRINT	WETLAND ID*	SURFACE HYDROLOGY	DOMINANT VEGETATION			HYDRIC SOILS	
			Herbs	Shrubs	Trees	Depth	Hydric Soil Indicators

Appendix H.3

Preliminary Wetland Compensation Plan

Preliminary Wetland Compensation Plan
Beaver Dam Mine Project

Name of Project:
Beaver Dam Mine Project
Location: Marinette, Nova Scotia
Proponent: Atlantic Gold Corporation
6749 Moose River Road, RR#2
Middle Musquodoboit, NS
B0N 1X0

Report Prepared by:

McCallum Environmental Ltd.

McCallum Environmental Ltd.

2 Bluewater Road, Suite 115
Bedford, Nova Scotia
B4B 1G7

Date: December 2018

Atlantic Gold is committed to implementing primary (on the ground) methods of wetland compensation to satisfy the Nova Scotia Wetland Conservation Policy's (2011) objective of preventing no net loss of wetland habitat and function. However, Atlantic Gold acknowledges that Nova Scotia Environment (NSE) considers restoration of wetland function as a focus of wetland compensation in Nova Scotia, and as such, this objective will be integral to wetland compensation efforts associated with this Project.

Given the scope of wetland compensation required for the Project (i.e. ~ 46 ha), wetland compensation will be designed to run concurrent with the wetland alteration timeline and be implemented via an adaptive approach. Atlantic Gold is committed to implementing valuable, and functionally significant wetland restoration opportunities. Therefore, the objective of the restoration site selection process will be to secure valuable Projects, which aim to replace wetland function and extend over multiple years, concurrent with wetland alteration activities.

The Proponent proposes that annual wetland alteration and compensation updates be provided to NSE throughout the lifetime of the Project. The annual update will include the following information:

- Atlantic Gold will complete an annual survey of the Project site to identify the exact alteration footprint as a result of Project related activities completed that year;
- An updated schedule for the alteration areas expected for the forthcoming year will be provided;
- Wetland Compensation Plan (WCP): The WCP will exist as a living document and will be updated annually. In its infancy (i.e. years 1-2), the WCP will focus on identification of suitable wetland restoration activities, and project design (see details in section below). Implementation of the wetland restoration projects would be initiated within 3 years of the first wetland alteration activity occurring on the site; and,
- Atlantic Gold is committed to engaging one (or more), wetland restoration professionals (WRP), to support them in fulfilling the wetland restoration tasks associated with this Project. Details related to the agreements between Atlantic Gold and the WRP will be provided in the annual update.

Based on recent consultation with NSE, Atlantic Gold understands that NSE's preferred method of compensation is restoration of highly degraded wetland habitats or wetlands previously lost to historic conversion in close proximity to the wetland losses (within the same or adjacent watersheds). Atlantic Gold will endeavor to ensure that the restoration objectives are upheld as part of the site identification process.

The following sections identify the main steps Atlantic Gold will implement during the wetland restoration process.

1) **Engagement**: As part of the wetland compensation process, Atlantic Gold will engage with key stakeholders to ensure avenues have been explored in the site identification process. Stakeholder engagement presents opportunity for Atlantic Gold to understand what opportunities there may be in the local area, and as well, to learn about other interest groups who may have concepts and objectives

related to wetland restoration. Stakeholder engagement could involve the following types of groups and organizations:

- Nova Scotia Environment;
- Nova Scotia Department of Lands and Forestry;
- Mi'kmaq communities and First Nations Groups;
- Private Forestry Lands Groups and Cooperatives;
- Local Municipalities; and,
- Environmental Non-Governmental Organizations such as:
    - Eastern Shore Forest Watch;
    - Nova Scotia Nature Trust;
    - Nature Conservancy of Canada; and,
    - Ecology Action Centre.

2) **Site Identification Process:** The process to select a suitable wetland compensation site will initiate during the provincial alteration permitting process (i.e. during the first year of wetland alteration). With the support of a wetland restoration professional (WRP), Atlantic Gold will complete feasibility studies and preliminary design concepts to determine the scope of work, and wetland compensation objectives. An evaluation of the value of the Project will be determined by comparing the proposed outcomes of the Project to the broader objectives of the Nova Scotia Wetland Conservation Policy, as well as local watershed benefits and support of any initiatives of stakeholders and local communities that the Project would provide.

   In tandem with defining Project objectives and a preliminary concept, collaboration and discussions with landowners of potential compensation sites will take place. This process is a crucial element of determining the feasibility of a site for wetland compensation purposes. The process includes written agreements with landowners which outline agreed upon Project goals and objectives, and in some cases, could include land purchase agreements.

3) **Project Design:** Preliminary Project design will initiate during the site selection process concurrent with engagement activities. However, as discussions with landowners advance, and securing of land appears feasible to implement the Project, Project design will advance into a more detailed stage.

   Preliminary Design

   A desktop review process will be initiated on potential sites to determine existing characteristics (*i.e.* level of historical disturbance), hydrological conditions (inflows and outflows of water), and soil characteristics. The desktop review process is followed up with a field assessment and feasibility study to identify landscape characteristics and refine the preliminary design further. As well as evaluating the Project site for characteristics discussed above, details relating to vegetative composition, habitat, species at risk presence and potential fish habitat is also evaluated. In addition, information regarding adjacent land use and its potential interaction with a compensation Project is obtained. Based on these conditions, a preliminary Project design can be put in place.

   Detailed Design

The detailed design process includes the modelling of specific hydrological conditions and detailing the ground work activities that are required to be implemented at the site to meet the objectives of the restoration Project. Tasks completed as part of this process include water budgeting and design, construction methodology, seeding and planting techniques, management of herbivory challenges and monitoring requirements. Utilization of a hydrograph will aid this process by facilitating the determination of available water to the restoration site and water should be managed on the site to restore conditions that resemble pre-degraded conditions. The exact scope required for the detailed design process will be determined in consultation with NSE.

Areas of Interest

Atlantic Gold will prioritize identification of functionally valuable wetland restoration projects within the affected watershed, or where restoration would restore shoreline stabilization functions (see below). Stakeholder engagement may also prioritize some Project locations over others.

Ideally, wetland restoration would occur at the site of impact. However, the nature of the alteration at the Beaver Dam Mine Site (open pit and stockpiles) may limit the overall opportunity for on-site restoration. With this being said, on-site options for wetland restoration will be considered during the reclamation process and could include restoration of wetlands once infilled by temporary stockpiles (for example). Other opportunities could include expansion of unaltered, existing wetlands, which could aim to detain water previously stored by wetlands and since lost (altered) by mine activities. This process would satisfy restoring wetland function.

Most wetlands within the Beaver Dam Mine Site proposed for alteration drain into Cameron Flowage (Killag River). Restoration of wetlands which provide shoreline stabilization functions will therefore be investigated along these aquatic features, including their tributaries and wetlands which drain into them. Much of the surrounding landscape comprises undeveloped forested land, and it appears that most landscape degradation has likely occurred as a result of timber harvesting activities. Wetland degradation as a result of tree harvesting often occurs by disturbing soils, vegetation, and altering hydrological inflows, outflows and wetland hydrological surface conditions. Installation of artificial drainage ditches, rutting and alteration of natural flow paths can often interrupt shoreline stabilization functions of a wetland, especially when they drain into, or lie adjacent to natural tributaries or open water features. A concerted effort will be afforded by Atlantic Gold to determine whether instances such as described above have occurred in aquatic features draining into the Killag River, and restoration opportunities investigated.

Should it be determined that valuable wetland restoration opportunities do not exist within the affected watersheds, with support of the WRP and in consultation with NSE, Atlantic Gold will identify other areas within the province where valuable wetland restoration opportunities are required. As can be expected, wetland degradation occurs in areas of concentrated development and land disturbance. Urban development acts as the largest contributor to wetland degradation and associated decline in watershed health. Wetland restoration within urban areas is challenging due to lack of available space, availability of land, and in some cases municipal infrastructure requirements. Through the wetland compensation process associated with the Beaver Dam Mine Site, Atlantic Gold is eager to explore the challenges facing urban wetland restoration and are committed to investigating ways to work with local

municipalities to implement valuable wetland restoration on the ground. Atlantic Gold is open to consider any other wetland compensation projects as identified by NSE, ECCC, First Nations groups, or consultation with stakeholders.

Historical water management and wetland degradation within agricultural areas has also contributed to watershed health issues in rural areas of Nova Scotia. Atlantic Gold will investigate restoration opportunities in the Musquodoboit River Secondary watershed (approximately 20km from the Beaver Dam Mine Site) as well as other areas such as the Shubenacadie Secondary Watershed in lands adjacent the Stewiacke River.

<Original signed by>

Appendix I.1

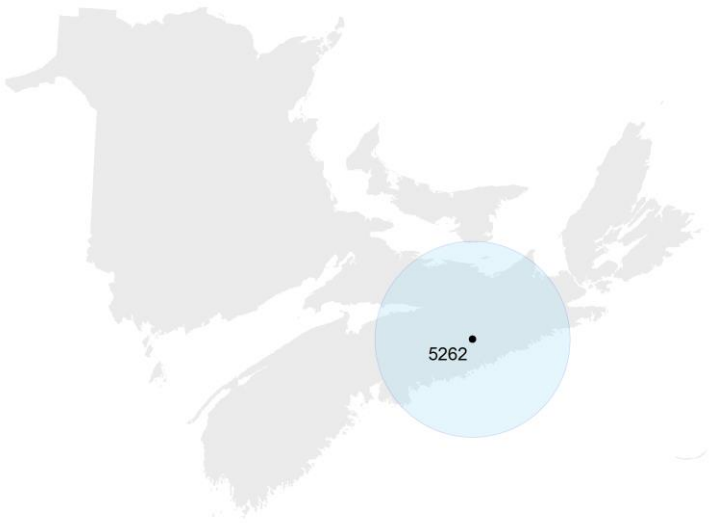
ACCDC Report Beaver Dam Mine Site (Data Report 5262: Marinette, NS)

Atlantic Canada Conservation Data Centre
Centre de données sur la conservation du Canada Atlantique

DATA REPORT 5262: Marinette, NS

Prepared 8 September 2014
by J. Churchill, Data Manager

CONTENTS OF REPORT



Map 1. A 100 km buffer around the study area

1.0 PREFACE

The Atlantic Canada Conservation Data Centre (ACCDC) is part of a network of NatureServe data centres and heritage programs serving 50 states in the U.S.A, 10 provinces and 1 territory in Canada, plus several Central and South American countries. The NatureServe network is more than 30 years old and shares a common conservation data methodology. The ACCDC was founded in 1997, and maintains data for the jurisdictions of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador. Although a non-governmental agency, the ACCDC is supported by 6 federal agencies and 4 provincial governments, as well as through outside grants and data processing fees. URL: www.ACCDC.com.

Upon request and for a fee, the ACCDC queries its database and produces customized reports of the rare and endangered flora and fauna known to occur in or near a specified study area. As a supplement to that data, the ACCDC includes locations of managed areas with some level of protection, and known sites of ecological interest or sensitivity.

1.1 DATA LIST

Included datasets:

Filename	Contents
MarinetteNS_5262ob.xls	All Rare and legally protected *Flora and Fauna* within 5 km of your study area
MarinetteNS_5262ob100km.xls	A list of Rare and legally protected *Flora and Fauna* within 100 km of your study area

1.2 RESTRICTIONS

The ACCDC makes a strong effort to verify the accuracy of all the data that it manages, but it shall not be held responsible for any inaccuracies in data that it provides. By accepting ACCDC data, recipients assent to the following limits of use:

a) Data is restricted to use by trained personnel who are sensitive to landowner interests and to potential threats to rare and/or endangered flora and fauna posed by the information provided.
b) Data is restricted to use by the specified Data User; any third party requiring data must make its own data request.
c) The ACCDC requires Data Users to cease using and delete data 12 months after receipt, and to make a new request for updated data if necessary at that time.
d) ACCDC data responses are restricted to the data in our Data System at the time of the data request.
e) Each record has an estimate of locational uncertainty, which must be referenced in order to understand the record's relevance to a particular location. Please see attached Data Dictionary for details.
f) ACCDC data responses are not to be construed as exhaustive inventories of taxa in an area.
g) The absence of a taxon cannot be inferred by its absence in an ACCDC data response.

1.3 ADDITIONAL INFORMATION

The attached file DataDictionary 2.1.pdf provides metadata for the data provided.

Please direct any additional questions about ACCDC data to the following individuals:

Plants, Lichens, Ranking Methods, All other Inquiries
Sean Blaney, Botanist, Executive Director (effective 10 June, 2014)
Tel: (506) 364-2658
sblaney@mta.ca

Animals (Fauna)
John Klymko, Zoologist
Tel: (506) 364-2660
jklymko@mta.ca

Plant Communities
Sarah Robinson , Community Ecologist
Tel: (506) 364-2664
srobinson@mta.ca

Data Management, GIS
James Churchill, Data Manager
Tel: (902) 679-6146
jlchurchill@mta.ca

Billing
Cindy Spicer
Tel: (506) 364-2665
cspicer@mta.ca

Questions on the biology of Federal Species at Risk can be directed to ACCDC: (506) 364-2657, with questions on Species at Risk regulations to: Samara Eaton, Canadian Wildlife Service (NB and PE): (506) 364-5060 or Julie McKnight, Canadian Wildlife Service (NS): (902) 426-4196.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in New Brunswick, please contact Stewart Lusk, Natural Resources: (506) 453-7110.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in Nova Scotia, please contact Sherman Boates, NSDNR: (902) 679-6146. To determine if location-sensitive species (section 4.3) occur near your study site please contact a NSDNR Regional Biologist:

Western: Duncan Bayne
(902) 648-3536
baynedz@gov.ns.ca

Western: Donald Sam
(902) 634-7525
samdx@gov.ns.ca

Central: Shavonne Meyer
(902) 893-6353
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Central: Kimberly George
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Eastern: Mark Pulsifer
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Eastern: Donald Anderson
(902) 295-3949
andersdg@gov.ns.ca

Eastern: Terry Power
(902) 563-3370
powertd@gov.ns.ca

For provincial information about rare taxa and protected areas, or information about game animals, fish habitat etc., in Prince Edward Island, please contact Rosemary Curley, PEI Dept. of Agriculture and Forestry: (902) 368-4807.

2.0 RARE AND ENDANGERED SPECIES

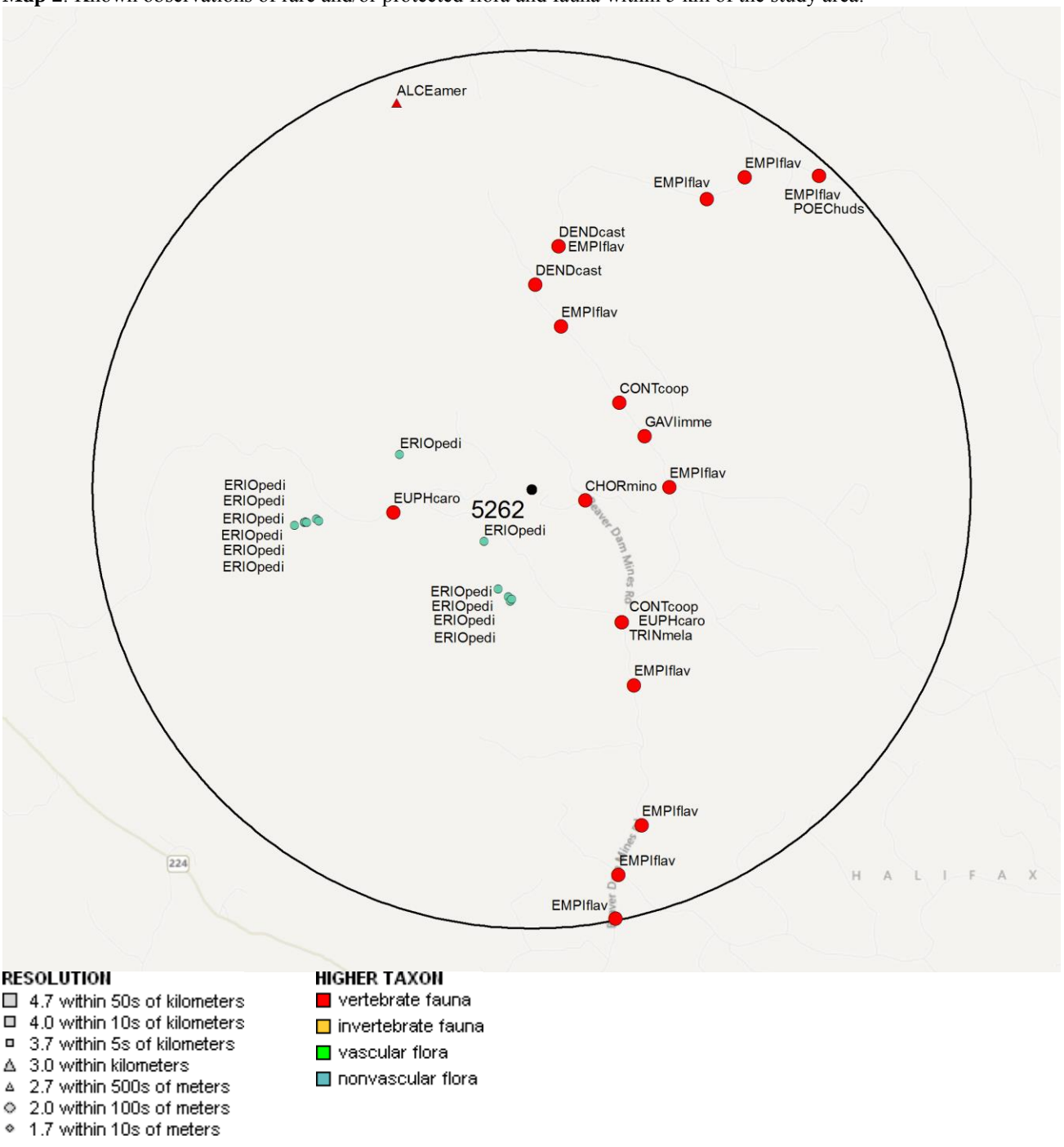
2.1 FLORA

A 5 km buffer around the study area contains no records of vascular, 14 records of 1 nonvascular flora (Map 2 and attached: *ob.xls).

2.2 FAUNA

A 5 km buffer around the study area contains 28 records of 9 vertebrate, no records of invertebrate fauna (Map 2 and attached data files - see 1.1 Data List). Please see section 4.3 to determine if 'location-sensitive' species occur near your study site.

Map 2: Known observations of rare and/or protected flora and fauna within 5 km of the study area.

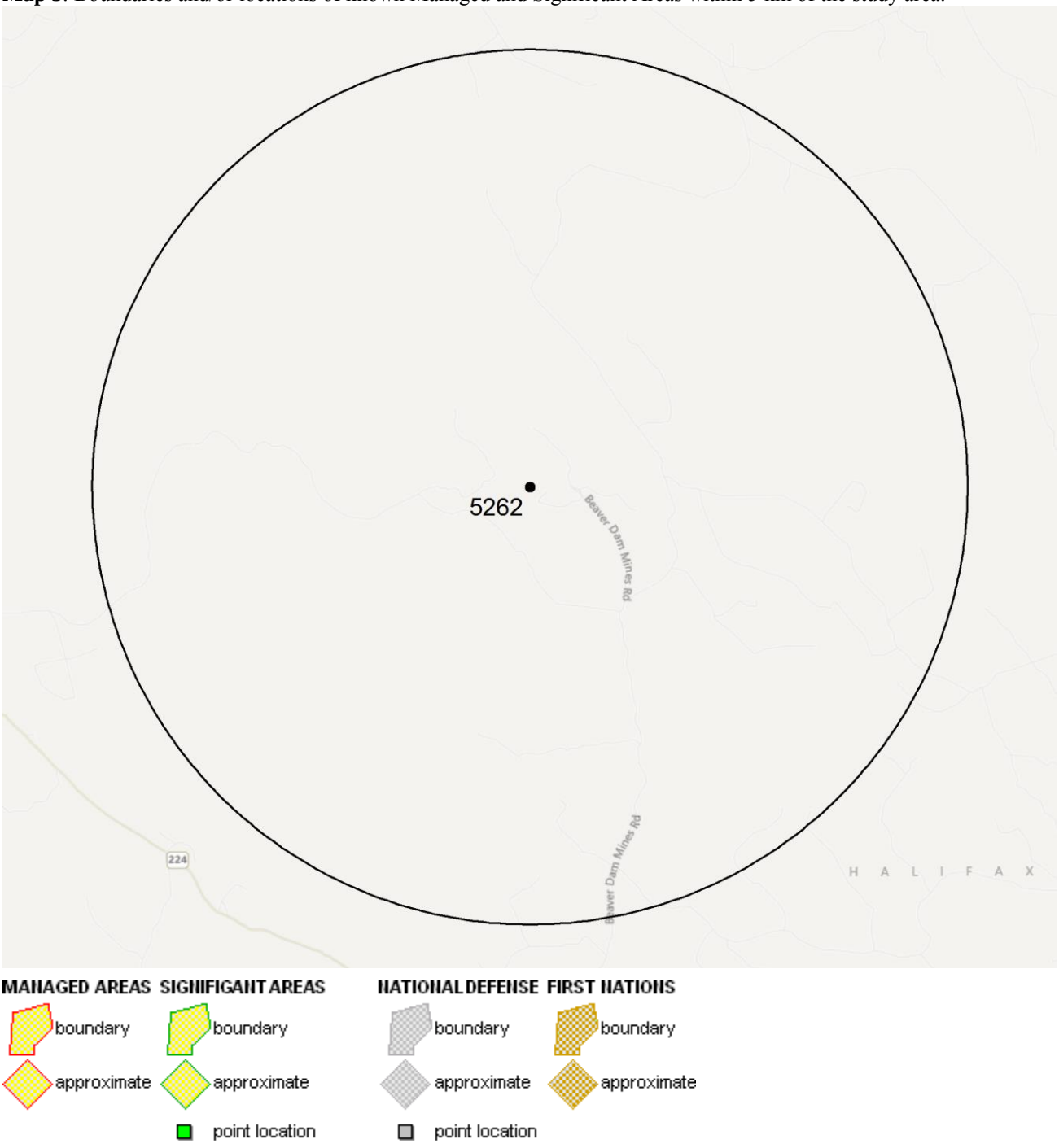


3.0 SPECIAL AREAS

3.1 MANAGED AREAS
The GIS scan identified no managed areas in the vicinity of the study area (Map 3)

3.2 SIGNIFICANT AREAS
The GIS scan identified no biologically significant sites in the vicinity of the study area (Map 3)

Map 3: Boundaries and/or locations of known Managed and Significant Areas within 5 km of the study area.



4.0 RARE SPECIES LISTS

Rare and/or endangered taxa within the 5 km-buffered area listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation. [P] = vascular plant, [N] = nonvascular plant, [A] = vertebrate animal, [I] = invertebrate animal, [C] = community.

4.1 FLORA

	Scientific *Name*	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
N	*Erioderma pedicellatum (Atlantic pop.)*	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	S1S2	1 At Risk	14	0.8 ± 0.01

4.2 FAUNA

	Scientific *Name*	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Gavia immer*	Common Loon	Not At Risk			S3B,S4N	2 May Be At Risk	1	1.4 ± 0.15
A	*Euphagus carolinus*	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2S3B	2 May Be At Risk	2	1.6 ± 0.15
A	*Chordeiles minor*	Common Nighthawk	Threatened	Threatened	Threatened	S3B	1 At Risk	3	0.6 ± 0.15
A	*Contopus cooperi*	Olive-sided Flycatcher	Threatened	Threatened	Threatened	S3B	1 At Risk	4	1.8 ± 0.15
A	*Alces americanus*	Moose			Endangered	S1	1 At Risk	2	4.7 ± 0.5
A	*Tringa melanoleuca*	Greater Yellowlegs				S3B,S5M	3 Sensitive	3	1.8 ± 0.15
A	*Empidonax flaviventris*	Yellow-bellied Flycatcher				S3S4B	3 Sensitive	10	2.5 ± 0.15
A	*Poecile hudsonica*	Boreal Chickadee				S3	3 Sensitive	1	4.8 ± 0.15
A	*Dendroica castanea*	Bay-breasted Warbler				S3S4B	3 Sensitive	2	2.3 ± 0.15

4.3 LOCATION SENSITIVE SPECIES

The Department of Natural Resources in each Maritimes province considers a number of species “location sensitive”. Concern about exploitation of location-sensitive species precludes inclusion of precise coordinates in this report. Those intersecting your study area are indicated below.

Nova Scotia

Scientific *Name*	Common Name	SARA	Prov Legal Prot	Known within 5 km of Study Site?
Fraxinus nigra	Black Ash		Threatened	No
Glyptemys insculpta	Wood Turtle	Threatened	Threatened	No
Emydoidea blandingii	*Blanding's Turtle - Nova Scotia pop.*	Endangered	Vulnerable	No
Falco peregrinus pop. 1	Peregrine Falcon - anatum/tundrius pop.	Special Concern	Vulnerable	No
Bat Hibernaculum			[Endangered][1]	No

1 *Myotis lucifugus* (Little Brown Myotis), *Myotis septentrionalis* (Long-eared Myotis), and *Perimyotis subflavus* (Tri-colored Bat or Eastern Pipistrelle) are all Endangered under the NS Endangered Species Act.

4.4 SOURCE BIBLIOGRAPHY

The recipient of these data shall acknowledge the ACCDC and the data sources listed below in any documents, reports, publications or presentations, in which this dataset makes a significant contribution.

# recs	CITATION
26	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
10	Neily, T.M. & Pepper, C.; Toms, B. 2013. Nova Scotia lichen location database. Mersey Tobeatic Research Institute, 1301 records.
2	Benjamin, L.K. 2009. Boreal Felt Lichen, Mountain Avens, Orchid and other recent records. Nova Scotia Dept Natural Resources, 105 recs.
2	Benjamin, L.K. 2012. NSDNR fieldwork & consultant reports 2008-2012. Nova Scotia Dept Natural Resources, 196 recs.
1	Benjamin, L.K. (compiler). 2001. Significant Habitat & Species Database. Nova Scotia Dept of Natural Resources, 15 spp, 224 recs.
1	Benjamin, L.K. (compiler). 2007. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 8439 recs.

5.0 RARE SPECIES WITHIN 100 KM

A 100 km buffer around the study area contains 15757 records of 114 vertebrate and 924 records of 65 invertebrate fauna; 3145 records of 269 vascular, 467 records of 30 nonvascular flora (attached: *ob100km.xls).

Rare and/or endangered taxa within the 100 km-buffered area listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation.

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Myotis lucifugus*	Little Brown Myotis	Endangered		Endangered	S1	1 At Risk	35	31.6 ± 0.5
A	*Myotis septentrionalis*	Northern Long-eared Myotis	Endangered		Endangered	S1	1 At Risk	4	31.8 ± 0.15
A	*Perimyotis subflavus*	Eastern Pipistrelle	Endangered		Endangered	S1	1 At Risk	5	57.0 ± 0.2
A	*Morone saxatilis pop. 2*	Striped Bass- Bay of Fundy pop.	Endangered			S1	2 May Be At Risk	2	56.2 ± 0.5
A	*Charadrius melodus melodus*	Piping Plover melodus ssp	Endangered	Endangered	Endangered	S1B	1 At Risk	774	28.5 ± 0.5
A	*Sterna dougallii*	Roseate Tern	Endangered	Endangered	Endangered	S1B	1 At Risk	56	34.0 ± 0.5
A	*Salmo salar pop. 1*	Atlantic Salmon - Inner Bay of Fundy pop.	Endangered	Endangered		S2	2 May Be At Risk	18	34.9 ± 0.5
A	*Calidris canutus rufa*	Red Knot rufa ssp	Endangered		Endangered	S2S3M	1 At Risk	101	51.9 ± 0.5
A	*Colinus virginianus*	Northern Bobwhite	Endangered	Endangered				1	47.1 ± 0.15
A	*Acipenser oxyrinchus*	Atlantic Sturgeon	Threatened			S1?	2 May Be At Risk	2	53.3 ± 0.5
A	*Caprimulgus vociferus*	Whip-Poor-Will	Threatened	Threatened	Threatened	S1?B	1 At Risk	11	37.0 ± 7.07
A	*Hylocichla mustelina*	Wood Thrush	Threatened			S1B	5 Undetermined	35	22.6 ± 0.15
A	*Glyptemys insculpta*	Wood Turtle	Threatened	Threatened	Threatened	S2	3 Sensitive	202	16.6 ± 1.0
A	*Chaetura pelagica*	Chimney Swift	Threatened	Threatened	Endangered	S2S3B	1 At Risk	137	5.7 ± 7.07
A	*Hirundo rustica*	Barn Swallow	Threatened		Endangered	S3B	1 At Risk	731	5.7 ± 7.07
A	*Wilsonia canadensis*	Canada Warbler	Threatened	Threatened	Endangered	S3B	1 At Risk	633	5.7 ± 7.07
A	*Chordeiles minor*	Common Nighthawk	Threatened	Threatened	Threatened	S3B	1 At Risk	339	0.6 ± 0.15
A	*Contopus cooperi*	Olive-sided Flycatcher	Threatened	Threatened	Threatened	S3B	1 At Risk	723	1.4 ± 0.15
A	*Riparia riparia*	Bank Swallow	Threatened			S3B	2 May Be At Risk	282	16.0 ± 7.07
A	*Dolichonyx oryzivorus*	Bobolink	Threatened		Vulnerable	S3S4B	3 Sensitive	390	18.7 ± 0.15
A	*Anguilla rostrata*	American Eel	Threatened			S5	4 Secure	5	45.8 ± 0.5
A	*Morone saxatilis pop. 1*	Striped Bass- Southern Gulf of St Lawrence pop.	Special Concern			S1	2 May Be At Risk	1	89.2 ± 1.0
A	*Falco peregrinus pop. 1*	Peregrine Falcon - anatum/tundrius	Special Concern	Special Concern	Vulnerable	S1B	3 Sensitive	2	66.2 ± 0.15
A	*Passerculus sandwichensis princeps*	Savannah Sparrow princeps ssp	Special Concern	Special Concern		S1B	3 Sensitive	3	32.0 ± 0.15
A	*Bucephala islandica (Eastern pop.)*	Barrow's Goldeneye - Eastern pop.	Special Concern	Special Concern		S1N	1 At Risk	1	71.4 ± 0.1
A	*Asio flammeus*	Short-eared Owl	Special Concern	Special Concern		S1S2	2 May Be At Risk	8	54.7 ± 7.07
A	*Histrionicus histrionicus pop. 1*	Harlequin Duck - Eastern pop.	Special Concern	Special Concern	Endangered	S2N	1 At Risk	21	30.9 ± 2.45
A	*Euphagus carolinus*	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2S3B	2 May Be At Risk	226	1.6 ± 0.15
A	*Chelydra serpentina*	Snapping Turtle	Special Concern	Special Concern	Vulnerable	S3	3 Sensitive	66	15.4 ± 0.1
A	*Contopus virens*	Eastern Wood-Pewee	Special Concern		Vulnerable	S3S4B	3 Sensitive	490	8.5 ± 7.07
A	*Tryngites subruficollis*	Buff-breasted Sandpiper	Special Concern			SNA	8 Accidental	2	63.9 ± 0.5
A	*Sorex dispar*	Long-tailed Shrew	Not At Risk	Special Concern		S1	3 Sensitive	2	90.7 ± 0.2
A	*Accipiter cooperii*	Cooper's Hawk	Not At Risk			S1?B,SNAN	5 Undetermined	4	54.5 ± 0.15
A	*Fulica americana*	American Coot	Not At Risk			S1B	5 Undetermined	7	68.2 ± 7.07
A	*Aegolius funereus*	Boreal Owl	Not At Risk			S1B	5 Undetermined	13	39.7 ± 7.07
A	*Globicephala melas*	Long-finned Pilot Whale	Not At Risk			S2S3		1	22.9 ± 100.0
A	*Hemidactylium scutatum*	Four-toed Salamander	Not At Risk			S3	4 Secure	25	51.4 ± 5.0
A	*Sterna hirundo*	Common Tern	Not At Risk			S3B	3 Sensitive	244	25.6 ± 7.07
A	*Sialia sialis*	Eastern Bluebird	Not At Risk			S3B	3 Sensitive	41	27.1 ± 7.07
A	*Gavia immer*	Common Loon	Not At Risk			S3B,S4N	2 May Be At Risk	599	1.4 ± 0.15

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Accipiter gentilis*	Northern Goshawk	Not At Risk			S3S4	4 Secure	92	5.7 ± 7.07
A	*Puma concolor pop. 1*	Cougar - Eastern pop.	Data Deficient			SH	5 Undetermined	69	6.0 ± 1.0
A	*Alces americanus*	Moose			Endangered	S1	1 At Risk	26	4.7 ± 0.5
A	*Lasiurus cinereus*	Hoary Bat				S1	2 May Be At Risk	2	58.7 ± 0.5
A	*Toxostoma rufum*	Brown Thrasher				S1?B	5 Undetermined	12	54.7 ± 7.07
A	*Vireo gilvus*	Warbling Vireo				S1?B	5 Undetermined	17	30.4 ± 7.07
A	*Tringa solitaria*	Solitary Sandpiper				S1?B,S4S5M	4 Secure	11	58.8 ± 0.5
A	*Larus delawarensis*	Ring-billed Gull				S1?B,S5N	4 Secure	5	28.7 ± 7.07
A	*Nycticorax nycticorax*	Black-crowned Night-heron				S1B	2 May Be At Risk	1	97.9 ± 7.07
A	*Gallinula chloropus*	Common Moorhen				S1B	5 Undetermined	6	69.9 ± 7.07
A	*Progne subis*	Purple Martin				S1B	2 May Be At Risk	3	53.7 ± 7.07
A	*Fratercula arctica*	Atlantic Puffin				S1B,S4S5N	3 Sensitive	2	36.8 ± 7.07
A	*Calidris minutilla*	Least Sandpiper				S1B,S5M	4 Secure	296	51.9 ± 0.5
A	*Picoides dorsalis*	American Three-toed Woodpecker				S1S2	5 Undetermined	4	53.7 ± 7.07
A	*Passerina cyanea*	Indigo Bunting				S1S2B	5 Undetermined	9	53.7 ± 7.07
A	*Eremophila alpestris*	Horned Lark				S1S2B,S4N	4 Secure	4	28.7 ± 7.07
A	*Charadrius semipalmatus*	Semipalmated Plover				S1S2B,S5M	4 Secure	464	51.9 ± 0.5
A	*Asio otus*	Long-eared Owl				S2	2 May Be At Risk	32	29.4 ± 0.15
A	*Salmo salar*	Atlantic Salmon				S2	2 May Be At Risk	73	6.2 ± 0.5
A	*Vireo philadelphicus*	Philadelphia Vireo				S2?B	5 Undetermined	27	6.4 ± 7.07
A	*Anas acuta*	Northern Pintail				S2B	2 May Be At Risk	11	53.7 ± 7.07
A	*Anas clypeata*	Northern Shoveler				S2B	2 May Be At Risk	6	49.1 ± 7.07
A	*Anas strepera*	Gadwall				S2B	2 May Be At Risk	21	37.9 ± 0.15
A	*Rallus limicola*	Virginia Rail				S2B	5 Undetermined	26	56.8 ± 7.07
A	*Empidonax traillii*	Willow Flycatcher				S2B	3 Sensitive	20	37.0 ± 7.07
A	*Myiarchus crinitus*	Great Crested Flycatcher				S2B	2 May Be At Risk	14	55.0 ± 7.07
A	*Piranga olivacea*	Scarlet Tanager				S2B	5 Undetermined	13	30.3 ± 7.07
A	*Rissa tridactyla*	Black-legged Kittiwake				S2B,S4S5N	3 Sensitive	1	71.4 ± 0.15
A	*Bucephala clangula*	Common Goldeneye				S2B,S5N	4 Secure	108	5.7 ± 7.07
A	*Cathartes aura*	Turkey Vulture				S2S3B	3 Sensitive	8	47.1 ± 0.15
A	*Tringa semipalmata*	Willet				S2S3B	2 May Be At Risk	516	25.6 ± 7.07
A	*Pooecetes gramineus*	Vesper Sparrow				S2S3B	2 May Be At Risk	23	46.6 ± 7.07
A	*Molothrus ater*	Brown-headed Cowbird				S2S3B	4 Secure	80	17.2 ± 7.07
A	*Icterus galbula*	Baltimore Oriole				S2S3B	2 May Be At Risk	43	24.0 ± 7.07
A	*Phalaropus lobatus*	Red-necked Phalarope				S2S3M	3 Sensitive	3	71.5 ± 0.5
A	*Phalaropus fulicarius*	Red Phalarope				S2S3M	3 Sensitive	1	78.0 ± 0.5
A	*Phalacrocorax carbo*	Great Cormorant				S3	3 Sensitive	78	28.7 ± 7.07
A	*Poecile hudsonica*	Boreal Chickadee				S3	3 Sensitive	585	4.8 ± 0.15
A	*Coccyzus erythropthalmus*	Black-billed Cuckoo				S3?B	2 May Be At Risk	78	17.2 ± 7.07
A	*Dendroica tigrina*	Cape May Warbler				S3?B	3 Sensitive	112	6.4 ± 7.07
A	*Pinicola enucleator*	Pine Grosbeak				S3?B,S5N	2 May Be At Risk	114	5.7 ± 7.07
A	*Podilymbus podiceps*	Pied-billed Grebe				S3B	3 Sensitive	90	30.3 ± 7.07
A	*Anas discors*	Blue-winged Teal				S3B	2 May Be At Risk	93	14.5 ± 7.07
A	*Sterna paradisaea*	Arctic Tern				S3B	2 May Be At Risk	57	27.2 ± 0.5
A	*Petrochelidon pyrrhonota*	Cliff Swallow				S3B	2 May Be At Risk	208	22.1 ± 7.07
A	*Dumetella carolinensis*	Gray Catbird				S3B	2 May Be At Risk	314	5.7 ± 7.07
A	*Mimus polyglottos*	Northern Mockingbird				S3B	4 Secure	23	54.7 ± 7.07
A	*Tringa melanoleuca*	Greater Yellowlegs				S3B,S5M	3 Sensitive	466	1.8 ± 0.15
A	*Mergus serrator*	Red-breasted Merganser				S3B,S5N	4 Secure	70	28.7 ± 7.07
A	*Larus argentatus*	Herring Gull				S3B,S5N	4 Secure	4	94.8 ± 7.07
A	*Pluvialis dominica*	American Golden-Plover				S3M	3 Sensitive	52	58.1 ± 0.5
A	*Numenius phaeopus hudsonicus*	Hudsonian Whimbrel				S3M	3 Sensitive	52	51.9 ± 0.5
A	*Limosa haemastica*	Hudsonian Godwit				S3M	3 Sensitive	28	63.9 ± 0.5
A	*Calidris pusilla*	Semipalmated Sandpiper				S3M	3 Sensitive	425	51.9 ± 0.5
A	*Calidris maritima*	Purple Sandpiper				S3N	3 Sensitive	24	35.4 ± 12.9
A	*Cepphus grylle*	Black Guillemot				S3S4	4 Secure	57	28.7 ± 7.07

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Picoides arcticus*	Black-backed Woodpecker				S3S4	3 Sensitive	143	5.7 ± 7.07
A	*Perisoreus canadensis*	Gray Jay				S3S4	3 Sensitive	405	5.7 ± 7.07
A	*Cardinalis cardinalis*	Northern Cardinal				S3S4	4 Secure	38	44.7 ± 7.07
A	*Botaurus lentiginosus*	American Bittern				S3S4B	3 Sensitive	223	15.0 ± 7.07
A	*Charadrius vociferus*	Killdeer				S3S4B	3 Sensitive	395	15.8 ± 7.07
A	*Actitis macularius*	Spotted Sandpiper				S3S4B	3 Sensitive	525	5.7 ± 7.07
A	*Gallinago delicata*	Wilson's Snipe				S3S4B	3 Sensitive	401	5.7 ± 7.07
A	*Empidonax flaviventris*	Yellow-bellied Flycatcher				S3S4B	3 Sensitive	550	1.6 ± 0.15
A	*Sayornis phoebe*	Eastern Phoebe				S3S4B	3 Sensitive	159	29.7 ± 7.07
A	*Tyrannus tyrannus*	Eastern Kingbird				S3S4B	3 Sensitive	171	16.0 ± 7.07
A	*Vermivora peregrina*	Tennessee Warbler				S3S4B	3 Sensitive	281	5.7 ± 7.07
A	*Dendroica castanea*	Bay-breasted Warbler				S3S4B	3 Sensitive	391	2.3 ± 0.15
A	*Dendroica striata*	Blackpoll Warbler				S3S4B	3 Sensitive	97	5.7 ± 7.07
A	*Wilsonia pusilla*	Wilson's Warbler				S3S4B	3 Sensitive	77	14.5 ± 7.07
A	*Pheucticus ludovicianus*	Rose-breasted Grosbeak				S3S4B	3 Sensitive	290	20.4 ± 7.07
A	*Passerella iliaca*	Fox Sparrow				S3S4B	4 Secure	78	25.6 ± 7.07
A	*Carduelis pinus*	Pine Siskin				S3S4B,S5N	3 Sensitive	311	5.7 ± 7.07
A	*Morus bassanus*	Northern Gannet				SHB,S5M	4 Secure	1	95.4 ± 12.1
I	*Gomphus ventricosus*	Skillet Clubtail	Endangered	Endangered		S1	2 May Be At Risk	2	65.5 ± 0.5
I	*Barnea truncata*	Atlantic Mud-piddock	Threatened					1	90.9 ± 1.0
I	*Alasmidonta varicosa*	Brook Floater	Special Concern		Threatened	S1S2	3 Sensitive	17	50.5 ± 0.1
I	*Danaus plexippus*	Monarch	Special Concern	Special Concern		S2B	3 Sensitive	57	27.9 ± 0.3
I	*Lycaena hyllus*	Bronze Copper				S1	4 Secure	5	69.9 ± 1.0
I	*Satyrium acadica*	Acadian Hairstreak				S1	5 Undetermined	6	68.5 ± 1.0
I	*Plebejus saepiolus*	Greenish Blue				S1	1 At Risk	1	85.4 ± 1.0
I	*Polygonia satyrus*	Satyr Comma				S1	3 Sensitive	2	86.4 ± 1.0
I	*Polygonia gracilis*	Hoary Comma				S1	3 Sensitive	2	54.0 ± 1.0
I	*Oeneis jutta*	Jutta Arctic				S1	2 May Be At Risk	6	60.9 ± 0.01
I	*Ophiogomphus mainensis*	Maine Snaketail				S1	2 May Be At Risk	2	26.2 ± 0.05
I	*Neurocordulia michaeli*	Broadtailed Shadowdragon				S1		26	26.8 ± 0.05
I	*Somatochlora brevicincta*	Quebec Emerald				S1	2 May Be At Risk	1	60.0 ± 0.1
I	*Somatochlora franklini*	Delicate Emerald				S1	3 Sensitive	1	91.8 ± 1.0
I	*Williamsonia fletcheri*	Ebony Boghaunter				S1	2 May Be At Risk	4	96.9 ± 0.5
I	*Coenagrion resolutum*	Taiga Bluet				S1	2 May Be At Risk	2	74.2 ± 0.1
I	*Enallagma signatum*	Orange Bluet				S1	2 May Be At Risk	3	73.7 ± 0.1
I	*Callophrys lanoraieensis*	Bog Elfin				S1S2	2 May Be At Risk	6	27.1 ± 0.01
I	*Nymphalis l-album*	Compton Tortoiseshell				S1S2	4 Secure	9	54.0 ± 1.0
I	*Ophiogomphus rupinsulensis*	Rusty Snaketail				S1S2	2 May Be At Risk	18	45.6 ± 0.5
I	*Somatochlora kennedyi*	Kennedy's Emerald				S1S2	2 May Be At Risk	3	78.1 ± 1.0
I	*Stylurus scudderi*	Zebra Clubtail				S1S2	2 May Be At Risk	4	45.6 ± 0.5
I	*Thorybes pylades*	Northern Cloudywing				S2	3 Sensitive	14	40.6 ± 0.01
I	*Amblyscirtes hegon*	Pepper and Salt Skipper				S2	4 Secure	22	23.3 ± 0.5
I	*Amblyscirtes vialis*	Common Roadside-Skipper				S2	4 Secure	12	14.2 ± 0.5
I	*Pieris oleracea*	Mustard White				S2	3 Sensitive	53	18.9 ± 0.01
I	*Lycaena dospassosi*	Salt Marsh Copper				S2	1 At Risk	10	74.3 ± 0.01
I	*Satyrium calanus*	Banded Hairstreak				S2	5 Undetermined	9	71.0 ± 1.0
I	*Satyrium calanus falacer*	Banded Hairstreak				S2	1 At Risk	2	85.7 ± 0.5
I	*Callophrys henrici*	Henry's Elfin				S2	4 Secure	15	29.9 ± 0.01
I	*Callophrys niphon*	Eastern Pine Elfin				S2	4 Secure	15	75.1 ± 1.0
I	*Boloria chariclea*	Arctic Fritillary				S2	3 Sensitive	3	71.0 ± 1.0
I	*Polygonia comma*	Eastern Comma				S2	1 At Risk	8	83.2 ± 1.0
I	*Aglais milberti*	Milbert's Tortoiseshell				S2	4 Secure	7	68.1 ± 1.0
I	*Gomphus descriptus*	Harpoon Clubtail				S2	3 Sensitive	1	99.6 ± 1.0
I	*Epitheca princeps*	Prince Baskettail				S2	3 Sensitive	9	68.0 ± 0.05
I	*Somatochlora forcipata*	Forcipate Emerald				S2	2 May Be At Risk	3	78.1 ± 1.0
I	*Lampsilis radiata*	Eastern Lampmussel				S2	3 Sensitive	40	36.1 ± 0.1
I	*Pantala hymenaea*	Spot-Winged Glider				S2B	3 Sensitive	7	51.5 ± 1.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
I	*Erynnis juvenalis*	Juvenal's Duskywing				S2S3	4 Secure	32	71.0 ± 1.0
I	*Alasmidonta undulata*	Triangle Floater				S2S3	4 Secure	24	17.4 ± 0.1
I	*Hesperia comma*	Common Branded Skipper				S3	4 Secure	34	25.9 ± 1.0
I	*Satyrium liparops*	Striped Hairstreak				S3	5 Undetermined	5	28.5 ± 0.2
I	*Satyrium liparops strigosum*	Striped Hairstreak				S3	3 Sensitive	2	85.7 ± 0.5
I	*Euphydryas phaeton*	Baltimore Checkerspot				S3	4 Secure	20	23.2 ± 0.5
I	*Polygonia faunus*	Green Comma				S3	4 Secure	15	27.4 ± 0.01
I	*Lethe anthedon*	Northern Pearly-Eye				S3	4 Secure	51	15.2 ± 7.07
I	*Lanthus parvulus*	Northern Pygmy Clubtail				S3	4 Secure	32	36.0 ± 0.05
I	*Ophiogomphus carolus*	Riffle Snaketail				S3	4 Secure	25	39.8 ± 1.0
I	*Aeshna clepsydra*	Mottled Darner				S3	4 Secure	12	45.9 ± 1.0
I	*Aeshna constricta*	Lance-Tipped Darner				S3	4 Secure	17	44.1 ± 1.0
I	*Boyeria grafiana*	Ocellated Darner				S3	3 Sensitive	7	40.5 ± 1.0
I	*Gomphaeschna furcillata*	Harlequin Darner				S3	3 Sensitive	3	80.0 ± 1.0
I	*Somatochlora tenebrosa*	Clamp-Tipped Emerald				S3	4 Secure	12	59.7 ± 1.0
I	*Nannothemis bella*	Elfin Skimmer				S3	4 Secure	13	62.0 ± 0.5
I	*Sympetrum danae*	Black Meadowhawk				S3	3 Sensitive	5	62.3 ± 1.0
I	*Amphiagrion saucium*	Eastern Red Damsel				S3	4 Secure	2	43.3 ± 0.01
I	*Polygonia interrogationis*	Question Mark				S3B	4 Secure	105	28.5 ± 0.2
I	*Vanessa virginiensis*	American Lady				S3B	8 Accidental	1	99.0 ± 0.01
I	*Feniseca tarquinius*	Harvester				S3S4	4 Secure	45	53.1 ± 1.0
I	*Callophrys polios*	Hoary Elfin				S3S4	4 Secure	17	71.4 ± 1.0
I	*Speyeria cybele*	Great Spangled Fritillary				S3S4	4 Secure	1	66.8 ± 5.0
I	*Speyeria cybele cybele*	Great Spangled Fritillary				S3S4	4 Secure	1	67.8 ± 0.01
I	*Speyeria aphrodite*	Aphrodite Fritillary				S3S4	4 Secure	13	53.4 ± 100.0
I	*Polygonia progne*	Grey Comma				S3S4	4 Secure	22	23.4 ± 10.0
N	*Erioderma mollissimum*	Graceful Felt Lichen	Endangered		Endangered	S1S2	2 May Be At Risk	5	16.4 ± 0.1
N	*Erioderma pedicellatum (Atlantic pop.)*	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	S1S2	1 At Risk	360	0.8 ± 0.01
N	*Fissidens exilis*	Pygmy Pocket Moss	Special Concern			S1?	1 At Risk	1	97.3 ± 1.5
N	*Sclerophora peronella (Nova Scotia pop.)*	Frosted Glass-whiskers Lichen - Nova Scotia pop.	Special Concern	Special Concern		S1?		3	20.1 ± 0.01
N	*Degelia plumbea*	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S2	4 Secure	33	13.4 ± 0.01
N	*Pseudevernia cladonia*	Ghost Antler Lichen	Not At Risk			S2S3	3 Sensitive	6	34.5 ± 0.01
N	*Aloina rigida*	Aloe-Like Rigid Screw Moss				S1	2 May Be At Risk	1	90.2 ± 0.1
N	*Bryohaplocladium microphyllum*	Tiny-leaved Haplocladium Moss				S1		1	66.8 ± 5.0
N	*Fuscopannaria leucosticta*	Rimmed Shingles Lichen				S1S2	2 May Be At Risk	3	5.9 ± 0.01
N	*Leptogium subtile*	Appressed Jellyskin Lichen				S1S3	3 Sensitive	1	22.2 ± 0.01
N	*Eurhynchium hians*	Light Beaked Moss				S2?	3 Sensitive	2	38.1 ± 25.0
N	*Paludella squarrosa*	Tufted Fen Moss				S2?	3 Sensitive	1	98.1 ± 0.1
N	*Sematophyllum marylandicum*	a Moss				S2?	3 Sensitive	1	75.1 ± 3.0
N	*Sphagnum subnitens*	Lustrous Peat Moss				S2?	3 Sensitive	1	37.7 ± 2.0
N	*Timmia megapolitana*	Metropolitan Timmia Moss				S2?	3 Sensitive	1	85.2 ± 0.01
N	*Zygodon conoideus*	a Moss				S2?	3 Sensitive	1	21.3 ± 5.0
N	*Cyrtomnium hymenophylloides*	Short-pointed Lantern Moss				S2?	3 Sensitive	1	80.3 ± 5.0
N	*Sphagnum wulfianum*	Wulf's Peat Moss				S2S3	3 Sensitive	7	52.9 ± 0.01
N	*Tetraplodon angustatus*	Toothed-leaved Nitrogen Moss				S2S3	3 Sensitive	1	37.7 ± 2.0
N	*Hylocomiastrum pyrenaicum*	a Feather Moss				S2S3	3 Sensitive	1	84.2 ± 0.5
N	*Collema nigrescens*	Blistered Tarpaper Lichen				S2S3	3 Sensitive	3	23.6 ± 0.1
N	*Leptogium teretiusculum*	Beaded Jellyskin Lichen				S2S3	3 Sensitive	2	39.7 ± 0.01
N	*Leptogium corticola*	Blistered Jellyskin Lichen				S2S3	3 Sensitive	13	7.8 ± 0.01
N	*Physconia detersa*	Bottlebrush Frost Lichen				S2S3	3 Sensitive	1	17.8 ± 0.01
N	*Peltigera collina*	Tree Pelt Lichen				S2S3	3 Sensitive	1	28.3 ± 0.1
N	*Usnea flammea*	Coastal Bushy Beard Lichen				S2S3	3 Sensitive	1	93.4 ± 1.0
N	*Anzia colpodes*	Black-foam Lichen				S3?	3 Sensitive	2	17.8 ± 0.01
N	*Sticta fuliginosa*	Peppered Moon Lichen				S3?	3 Sensitive	10	13.4 ± 0.01

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N	*Nephroma bellum*	Naked Kidney Lichen				S3?	3 Sensitive	1	31.1 ± 0.01
N	*Collema furfuraceum*	Blistered Tarpaper Lichen				S3?	3 Sensitive	2	13.4 ± 0.01
P	*Juglans cinerea*	Butternut	Endangered	Endangered		SNA	7 Exotic	1	95.1 ± 0.01
P	*Bartonia paniculata ssp. paniculata*	Branched Bartonia	Threatened	Threatened		SNA		1	16.0 ± 10.0
P	*Liatris spicata*	Dense Blazing Star	Threatened	Threatened				1	82.2 ± 0.03
P	*Clethra alnifolia*	Coast Pepper-Bush	Special Concern	Special Concern	Vulnerable	S1	3 Sensitive	2	81.1 ± 0.1
P	*Isoetes prototypus*	Prototype Quillwort	Special Concern	Special Concern	Vulnerable	S2	3 Sensitive	7	89.6 ± 0.05
P	*Floerkea proserpinacoides*	False Mermaidweed	Not At Risk			S2	3 Sensitive	3	50.4 ± 7.07
P	*Helianthemum canadense*	Long-branched Frostweed			Endangered	S1	1 At Risk	2	96.4 ± 1.6
P	*Cypripedium arietinum*	Ram's-Head Lady's-Slipper			Endangered	S1	1 At Risk	8	97.3 ± 0.01
P	*Angelica lucida*	Seaside Angelica				S1	2 May Be At Risk	1	98.4 ± 0.5
P	*Sanicula odorata*	Clustered Sanicle				S1	2 May Be At Risk	7	52.6 ± 0.01
P	*Zizia aurea*	Golden Alexanders				S1	2 May Be At Risk	41	19.3 ± 1.0
P	*Antennaria parlinii*	a Pussytoes				S1	2 May Be At Risk	4	69.9 ± 0.01
P	*Bidens hyperborea*	Estuary Beggarticks				S1	2 May Be At Risk	1	90.7 ± 1.0
P	*Ageratina altissima*	White Snakeroot				S1	2 May Be At Risk	2	90.5 ± 7.07
P	*Cardamine maxima*	Large Toothwort				S1	2 May Be At Risk	1	64.6 ± 0.01
P	*Cochlearia tridactylites*	Limestone Scurvy-grass				S1	2 May Be At Risk	8	45.4 ± 0.01
P	*Lobelia spicata*	Pale-Spiked Lobelia				S1	2 May Be At Risk	1	75.0 ± 7.07
P	*Suaeda maritima ssp. richii*	White Sea-blite				S1	5 Undetermined	2	95.3 ± 1.0
P	*Hudsonia tomentosa*	Woolly Beach-heath				S1	2 May Be At Risk	6	66.0 ± 7.07
P	*Hypericum majus*	Large St John's-wort				S1	2 May Be At Risk	2	79.9 ± 0.01
P	*Cuscuta cephalanthi*	Buttonbush Dodder				S1	2 May Be At Risk	5	63.2 ± 1.2
P	*Desmodium canadense*	Canada Tick-trefoil				S1	2 May Be At Risk	20	48.7 ± 0.01
P	*Desmodium glutinosum*	Large Tick-Trefoil				S1	2 May Be At Risk	3	96.3 ± 0.01
P	*Ribes americanum*	Wild Black Currant				S1	5 Undetermined	2	55.3 ± 5.0
P	*Proserpinaca intermedia*	Intermediate Mermaidweed				S1	2 May Be At Risk	1	45.7 ± 0.9
P	*Fraxinus pennsylvanica*	Red Ash				S1	2 May Be At Risk	3	89.2 ± 5.0
P	*Polygala polygama*	Racemed Milkwort				S1	5 Undetermined	1	82.8 ± 1.0
P	*Polygonum careyi*	Carey's Smartweed				S1	5 Undetermined	1	40.8 ± 3.0
P	*Montia fontana*	Water Blinks				S1	2 May Be At Risk	1	84.4 ± 1.0
P	*Ranunculus pensylvanicus*	Pennsylvania Buttercup				S1	2 May Be At Risk	1	94.6 ± 0.01
P	*Galium aparine*	Common Bedstraw				S1	7 Exotic	4	41.6 ± 0.3
P	*Dirca palustris*	Eastern Leatherwood				S1	2 May Be At Risk	8	56.8 ± 7.07
P	*Pilea pumila*	Dwarf Clearweed				S1	2 May Be At Risk	4	45.6 ± 0.01
P	*Viola canadensis*	Canada Violet				S1	0.1 Extirpated	1	50.4 ± 7.07
P	*Carex alopecoidea*	Foxtail Sedge				S1	2 May Be At Risk	2	97.1 ± 0.5
P	*Carex garberi*	Garber's Sedge				S1	2 May Be At Risk	4	47.1 ± 0.01
P	*Carex haydenii*	Hayden's Sedge				S1	2 May Be At Risk	2	56.6 ± 1.0
P	*Carex pellita*	Woolly Sedge				S1	2 May Be At Risk	10	17.2 ± 10.0
P	*Carex plantaginea*	Plantain-Leaved Sedge				S1	2 May Be At Risk	3	28.3 ± 0.01
P	*Carex tincta*	Tinged Sedge				S1	2 May Be At Risk	2	97.1 ± 1.0
P	*Carex tuckermanii*	Tuckerman's Sedge				S1	2 May Be At Risk	12	59.8 ± 0.05
P	*Carex viridula ssp. brachyrrhyncha*	Greenish Sedge				S1	2 May Be At Risk	3	32.0 ± 0.3
P	*Carex wiegandii*	Wiegand's Sedge				S1	2 May Be At Risk	2	40.8 ± 2.0
P	*Carex grisea*	Inflated Narrow-leaved Sedge				S1	2 May Be At Risk	5	86.9 ± 0.01
P	*Cyperus lupulinus ssp. macilentus*	Hop Flatsedge				S1	2 May Be At Risk	10	68.6 ± 0.7
P	*Scirpus pedicellatus*	Stalked Bulrush				S1	5 Undetermined	5	31.0 ± 0.01
P	*Iris prismatica*	Slender Blue Flag				S1	2 May Be At Risk	2	58.8 ± 7.07
P	*Juncus vaseyi*	Vasey Rush				S1	2 May Be At Risk	1	47.7 ± 0.02
P	*Allium tricoccum*	Wild Leek				S1	2 May Be At Risk	8	51.9 ± 0.5
P	*Bromus latiglumis*	Broad-Glumed Brome				S1	2 May Be At Risk	28	26.6 ± 0.01
P	*Cinna arundinacea*	Sweet Wood Reed Grass				S1	2 May Be At Risk	19	28.6 ± 0.01
P	*Elymus wiegandii*	Wiegand's Wild Rye				S1	2 May Be At Risk	17	28.6 ± 0.01
P	*Elymus hystrix var. bigeloviana*	Spreading Wild Rye				S1	2 May Be At Risk	8	41.2 ± 1.6
P	*Festuca subverticillata*	Nodding Fescue				S1	2 May Be At Risk	2	71.4 ± 1.0
P	*Potamogeton nodosus*	Long-leaved Pondweed				S1	2 May Be At Risk	1	57.7 ± 5.0

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P	*Adiantum pedatum*	Northern Maidenhair Fern				S1	2 May Be At Risk	6	57.1 ± 1.0
P	*Botrychium lunaria*	Common Moonwort				S1	2 May Be At Risk	3	68.3 ± 2.0
P	*Hieracium kalmii var. fasciculatum*	Kalm's Hawkweed				S1?	5 Undetermined	2	67.5 ± 1.0
P	*Solidago hispida*	Hairy Goldenrod				S1?	2 May Be At Risk	2	19.8 ± 7.07
P	*Atriplex acadiensis*	Maritime Saltbush				S1?	5 Undetermined	2	54.1 ± 0.5
P	*Chenopodium rubrum*	Red Pigweed				S1?	2 May Be At Risk	5	34.4 ± 2.0
P	*Suaeda rolandii*	Roland's Sea-Blite				S1?	2 May Be At Risk	1	99.6 ± 2.0
P	*Crataegus robinsonii*	Robinson's Hawthorn				S1?	5 Undetermined	3	55.3 ± 5.0
P	*Crataegus submollis*	Quebec Hawthorn				S1?	5 Undetermined	6	66.8 ± 7.07
P	*Dichanthelium acuminatum var. lindheimeri*	Woolly Panic Grass				S1?	5 Undetermined	1	57.0 ± 0.05
P	*Thuja occidentalis*	Eastern White Cedar			Vulnerable	S1S2	1 At Risk	6	53.7 ± 0.2
P	*Anemone virginiana var. alba*	Virginia Anemone				S1S2	3 Sensitive	5	50.6 ± 5.0
P	*Hepatica nobilis var. obtusa*	Round-lobed Hepatica				S1S2	2 May Be At Risk	24	30.7 ± 1.5
P	*Ranunculus sceleratus*	Cursed Buttercup				S1S2	2 May Be At Risk	20	78.2 ± 0.5
P	*Gratiola neglecta*	Clammy Hedge-Hyssop				S1S2	3 Sensitive	3	36.5 ± 0.1
P	*Carex bebbii*	Bebb's Sedge				S1S2	2 May Be At Risk	9	49.5 ± 0.01
P	*Carex pensylvanica*	Pennsylvania Sedge				S1S2	5 Undetermined	1	66.9 ± 0.05
P	*Carex tenera*	Tender Sedge				S1S2	3 Sensitive	6	53.9 ± 1.5
P	*Juncus greenei*	Greene's Rush				S1S2	2 May Be At Risk	4	65.9 ± 1.0
P	*Najas gracillima*	Thread-Like Naiad				S1S2	2 May Be At Risk	2	95.5 ± 0.45
P	*Platanthera flava var. herbiola*	Pale Green Orchid				S1S2	4 Secure	7	52.4 ± 0.1
P	*Sparganium hyperboreum*	Northern Burreed				S1S2	3 Sensitive	2	87.7 ± 0.1
P	*Carex vacillans*	Estuarine Sedge				S1S3	5 Undetermined	1	97.1 ± 0.5
P	*Huperzia selago*	Northern Firmoss				S1S3	5 Undetermined	5	61.0 ± 5.0
P	*Huperzia appalachiana*	Appalachian Fir-Clubmoss				S1S3	5 Undetermined	1	83.8 ± 1.0
P	*Conioselinum chinense*	Chinese Hemlock-parsley				S2	3 Sensitive	2	53.6 ± 5.0
P	*Osmorhiza longistylis*	Smooth Sweet Cicely				S2	2 May Be At Risk	12	40.8 ± 0.01
P	*Erigeron philadelphicus*	Philadelphia Fleabane				S2	3 Sensitive	3	17.6 ± 5.0
P	*Hieracium robinsonii*	Robinson's Hawkweed				S2	3 Sensitive	3	53.0 ± 0.5
P	*Lactuca hirsuta var. sanguinea*	Hairy Lettuce				S2	3 Sensitive	1	58.5 ± 7.07
P	*Rudbeckia laciniata*	Cut-Leaved Coneflower				S2	5 Undetermined	8	43.6 ± 7.07
P	*Senecio pseudoarnica*	Seabeach Ragwort				S2	3 Sensitive	14	28.0 ± 7.07
P	*Symphyotrichum undulatum*	Wavy-leaved Aster				S2	3 Sensitive	2	84.4 ± 7.07
P	*Impatiens pallida*	Pale Jewelweed				S2	3 Sensitive	2	72.2 ± 7.07
P	*Caulophyllum thalictroides*	Blue Cohosh				S2	2 May Be At Risk	44	25.6 ± 0.01
P	*Betula michauxii*	Michaux's Dwarf Birch				S2	3 Sensitive	22	13.6 ± 0.5
P	*Arabis drummondii*	Drummond's Rockcress				S2	3 Sensitive	6	48.5 ± 0.03
P	*Minuartia groenlandica*	Greenland Stitchwort				S2	3 Sensitive	21	44.6 ± 7.07
P	*Stellaria humifusa*	Saltmarsh Starwort				S2	3 Sensitive	5	30.6 ± 0.1
P	*Hudsonia ericoides*	Pinebarren Golden Heather				S2	3 Sensitive	11	80.6 ± 7.07
P	*Triosteum aurantiacum*	Orange-fruited Tinker's Weed				S2	3 Sensitive	49	40.8 ± 0.01
P	*Shepherdia canadensis*	Soapberry				S2	3 Sensitive	1	97.8 ± 7.07
P	*Vaccinium boreale*	Northern Blueberry				S2	2 May Be At Risk	3	38.4 ± 0.01
P	*Vaccinium caespitosum*	Dwarf Bilberry				S2	3 Sensitive	55	26.1 ± 0.01
P	*Vaccinium uliginosum*	Alpine Bilberry				S2	3 Sensitive	3	88.5 ± 1.0
P	*Myriophyllum farwellii*	Farwell's Water Milfoil				S2	3 Sensitive	9	27.2 ± 0.1
P	*Myriophyllum verticillatum*	Whorled Water Milfoil				S2	3 Sensitive	3	29.0 ± 0.01
P	*Oenothera fruticosa ssp. glauca*	Narrow-leaved Evening Primrose				S2	5 Undetermined	4	51.9 ± 7.07
P	*Polygonum arifolium*	Halberd-leaved Tearthumb				S2	3 Sensitive	3	97.5 ± 0.5
P	*Plantago rugelii*	Rugel's Plantain				S2	5 Undetermined	7	30.9 ± 0.03
P	*Primula mistassinica*	Mistassini Primrose				S2	3 Sensitive	16	27.2 ± 1.0
P	*Samolus valerandi ssp. parviflorus*	Seaside Brookweed				S2	3 Sensitive	5	81.3 ± 5.0
P	*Pyrola minor*	Lesser Pyrola				S2	3 Sensitive	1	66.1 ± 0.01
P	*Anemone canadensis*	Canada Anemone				S2	2 May Be At Risk	1	97.8 ± 7.07
P	*Anemone quinquefolia*	Wood Anemone				S2	3 Sensitive	16	27.3 ± 0.1
P	*Anemone virginiana*	Virginia Anemone				S2	3 Sensitive	22	50.6 ± 0.01

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P	*Anemone virginiana var. virginiana*	Virginia Anemone				S2	3 Sensitive	2	52.7 ± 7.07
P	*Caltha palustris*	Yellow Marsh Marigold				S2	3 Sensitive	1	68.4 ± 0.1
P	*Galium boreale*	Northern Bedstraw				S2	2 May Be At Risk	2	94.3 ± 5.0
P	*Galium labradoricum*	Labrador Bedstraw				S2	3 Sensitive	10	29.3 ± 0.01
P	*Salix pedicellaris*	Bog Willow				S2	3 Sensitive	35	18.6 ± 1.5
P	*Salix sericea*	Silky Willow				S2	2 May Be At Risk	1	68.4 ± 1.0
P	*Comandra umbellata*	Bastard's Toadflax				S2	2 May Be At Risk	10	94.6 ± 5.0
P	*Parnassia palustris var. parviflora*	Marsh Grass-of-Parnassus				S2	2 May Be At Risk	1	88.7 ± 1.5
P	*Tiarella cordifolia*	Heart-leaved Foamflower				S2	3 Sensitive	217	28.9 ± 5.0
P	*Viola nephrophylla*	Northern Bog Violet				S2	3 Sensitive	8	19.2 ± 1.0
P	*Carex atlantica ssp. capillacea*	Atlantic Sedge				S2	5 Undetermined	10	44.5 ± 0.01
P	*Carex castanea*	Chestnut Sedge				S2	2 May Be At Risk	1	95.7 ± 0.01
P	*Carex comosa*	Bearded Sedge				S2	3 Sensitive	2	65.9 ± 0.1
P	*Carex hystericina*	Porcupine Sedge				S2	2 May Be At Risk	3	66.3 ± 0.05
P	*Eriophorum gracile*	Slender Cottongrass				S2	3 Sensitive	4	54.3 ± 10.0
P	*Vallisneria americana*	Wild Celery				S2	2 May Be At Risk	4	44.6 ± 7.07
P	*Allium schoenoprasum var. sibiricum*	Wild Chives				S2	2 May Be At Risk	1	58.0 ± 7.07
P	*Cypripedium parviflorum var. pubescens*	Yellow Lady's-slipper				S2	3 Sensitive	4	74.9 ± 7.07
P	*Cypripedium reginae*	Showy Lady's-Slipper				S2	2 May Be At Risk	13	19.3 ± 1.0
P	*Goodyera pubescens*	Downy Rattlesnake-Plantain				S2	2 May Be At Risk	4	51.2 ± 1.0
P	*Listera australis*	Southern Twayblade				S2	2 May Be At Risk	84	22.8 ± 0.01
P	*Platanthera blephariglottis*	White Fringed Orchid				S2	3 Sensitive	1	98.2 ± 5.0
P	*Platanthera flava var. flava*	Southern Rein Orchid				S2	3 Sensitive	1	51.9 ± 7.07
P	*Platanthera macrophylla*	Large Round-Leaved Orchid				S2	3 Sensitive	11	62.3 ± 1.0
P	*Spiranthes lucida*	Shining Ladies'-Tresses				S2	2 May Be At Risk	22	48.5 ± 0.02
P	*Piptatherum canadense*	Canada Rice Grass				S2	3 Sensitive	8	40.8 ± 3.0
P	*Potamogeton friesii*	Fries' Pondweed				S2	2 May Be At Risk	2	52.8 ± 5.0
P	*Asplenium trichomanes-ramosum*	Green Spleenwort				S2	3 Sensitive	1	94.1 ± 7.07
P	*Dryopteris fragrans var. remotiuscula*	Fragrant Wood Fern				S2	3 Sensitive	4	57.7 ± 7.07
P	*Woodsia glabella*	Smooth Cliff Fern				S2	3 Sensitive	1	84.4 ± 1.0
P	*Equisetum pratense*	Meadow Horsetail				S2	3 Sensitive	10	46.1 ± 0.01
P	*Hieracium kalmii*	Kalm's Hawkweed				S2?	5 Undetermined	7	65.1 ± 1.0
P	*Hieracium kalmii var. kalmii*	Kalm's Hawkweed				S2?	5 Undetermined	2	65.3 ± 5.0
P	*Symphyotrichum boreale*	Boreal Aster				S2?	3 Sensitive	3	58.0 ± 7.07
P	*Ceratophyllum echinatum*	Prickly Hornwort				S2?	2 May Be At Risk	2	30.0 ± 0.01
P	*Epilobium coloratum*	Purple-veined Willowherb				S2?	3 Sensitive	4	63.6 ± 1.0
P	*Carex houghtoniana*	Houghton's Sedge				S2?	3 Sensitive	1	47.4 ± 1.2
P	*Carex peckii*	White-Tinged Sedge				S2?	2 May Be At Risk	2	57.7 ± 0.1
P	*Eleocharis ovata*	Ovate Spikerush				S2?	3 Sensitive	4	63.2 ± 0.5
P	*Juncus canadensis*	Canada Rush				S2?	3 Sensitive	1	98.2 ± 5.0
P	*Juncus dudleyi*	Dudley's Rush				S2?	3 Sensitive	37	15.8 ± 1.0
P	*Dichanthelium linearifolium*	Narrow-leaved Panic Grass				S2?	3 Sensitive	4	48.4 ± 0.03
P	*Fraxinus nigra*	Black Ash			Threatened	S2S3	3 Sensitive	51	26.9 ± 0.01
P	*Asclepias incarnata ssp. pulchra*	Swamp Milkweed				S2S3	5 Undetermined	5	32.9 ± 1.0
P	*Symphyotrichum ciliolatum*	Fringed Blue Aster				S2S3	3 Sensitive	9	33.2 ± 3.5
P	*Honckenya peploides ssp. robusta*	Seabeach Sandwort				S2S3	3 Sensitive	1	99.6 ± 5.0
P	*Sagina nodosa*	Knotted Pearlwort				S2S3	4 Secure	26	31.7 ± 0.2
P	*Suaeda calceoliformis*	Horned Sea-blite				S2S3	4 Secure	4	66.7 ± 2.5
P	*Hypericum dissimulatum*	Disguised St John's-wort				S2S3	3 Sensitive	3	78.2 ± 0.5
P	*Empetrum eamesii ssp. atropurpureum*	Pink Crowberry				S2S3	3 Sensitive	4	80.5 ± 7.07
P	*Empetrum eamesii ssp. eamesii*	Pink Crowberry				S2S3	3 Sensitive	5	80.5 ± 7.07
P	*Halenia deflexa*	Spurred Gentian				S2S3	3 Sensitive	1	57.8 ± 1.0
P	*Hedeoma pulegioides*	American False Pennyroyal				S2S3	3 Sensitive	4	22.8 ± 5.0
P	*Polygala sanguinea*	Blood Milkwort				S2S3	3 Sensitive	13	30.4 ± 5.0
P	*Polygonum buxiforme*	Small's Knotweed				S2S3	5 Undetermined	3	58.0 ± 7.07
P	*Salix pellita*	Satiny Willow				S2S3	5 Undetermined	4	36.8 ± 0.3
P	*Veronica serpyllifolia ssp. humifusa*	Thyme-Leaved Speedwell				S2S3	3 Sensitive	1	37.9 ± 0.01

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	*Carex adusta*	Lesser Brown Sedge				S2S3	3 Sensitive	7	39.4 ± 7.07
P	*Carex hirtifolia*	Pubescent Sedge				S2S3	3 Sensitive	37	26.7 ± 0.01
P	*Carex swanii*	Swan's Sedge				S2S3	3 Sensitive	2	75.7 ± 0.5
P	*Eleocharis olivacea*	Yellow Spikerush				S2S3	3 Sensitive	6	32.4 ± 0.01
P	*Juncus filiformis*	Thread Rush				S2S3	3 Sensitive	1	98.2 ± 5.0
P	*Lilium canadense*	Canada Lily				S2S3	3 Sensitive	92	25.7 ± 0.01
P	*Coeloglossum viride var. virescens*	Long-bracted Frog Orchid				S2S3	2 May Be At Risk	1	89.7 ± 0.05
P	*Cypripedium parviflorum*	Yellow Lady's-slipper				S2S3	3 Sensitive	18	50.4 ± 0.25
P	*Spiranthes ochroleuca*	Yellow Ladies'-tresses				S2S3	3 Sensitive	6	66.8 ± 0.5
P	*Alopecurus aequalis*	Short-awned Foxtail				S2S3	3 Sensitive	11	51.1 ± 1.0
P	*Panicum tuckermanii*	Tuckerman's Panic Grass				S2S3	3 Sensitive	3	95.0 ± 0.01
P	*Poa glauca*	Glaucous Blue Grass				S2S3	3 Sensitive	1	96.3 ± 1.0
P	*Potamogeton obtusifolius*	Blunt-leaved Pondweed				S2S3	3 Sensitive	8	59.8 ± 0.5
P	*Potamogeton richardsonii*	Richardson's Pondweed				S2S3	2 May Be At Risk	5	56.9 ± 1.5
P	*Potamogeton zosteriformis*	Flat-stemmed Pondweed				S2S3	3 Sensitive	13	16.8 ± 7.07
P	*Botrychium lanceolatum var. angustisegmentum*	Lance-Leaf Grape-Fern				S2S3	3 Sensitive	5	40.0 ± 5.0
P	*Botrychium simplex*	Least Moonwort				S2S3	3 Sensitive	2	52.2 ± 0.1
P	*Ophioglossum pusillum*	Northern Adder's-tongue				S2S3	3 Sensitive	4	65.1 ± 7.07
P	*Asclepias incarnata*	Swamp Milkweed				S3	4 Secure	40	17.2 ± 7.07
P	*Erigeron hyssopifolius*	Hyssop-leaved Fleabane				S3	3 Sensitive	11	66.0 ± 1.0
P	*Hieracium paniculatum*	Panicled Hawkweed				S3	4 Secure	6	56.9 ± 0.01
P	*Megalodonta beckii*	Water Beggarticks				S3	3 Sensitive	11	37.0 ± 10.0
P	*Packera paupercula*	Balsam Groundsel				S3	4 Secure	25	48.0 ± 0.1
P	*Xanthium strumarium var. canadense*	Rough Cocklebur				S3	4 Secure	2	99.2 ± 3.5
P	*Campanula aparinoides*	Marsh Bellflower				S3	3 Sensitive	34	30.1 ± 0.01
P	*Stellaria longifolia*	Long-leaved Starwort				S3	3 Sensitive	12	27.9 ± 0.01
P	*Viburnum edule*	Squashberry				S3	3 Sensitive	2	59.3 ± 0.01
P	*Empetrum eamesii*	Pink Crowberry				S3	3 Sensitive	76	80.6 ± 7.07
P	*Vaccinium corymbosum*	Highbush Blueberry				S3	4 Secure	2	80.2 ± 0.01
P	*Chamaesyce polygonifolia*	Seaside Spurge				S3	4 Secure	5	73.5 ± 2.5
P	*Bartonia virginica*	Yellow Bartonia				S3	4 Secure	23	68.4 ± 7.07
P	*Geranium bicknellii*	Bicknell's Crane's-bill				S3	4 Secure	1	97.7 ± 2.0
P	*Proserpinaca palustris*	Marsh Mermaidweed				S3	4 Secure	11	19.8 ± 1.0
P	*Proserpinaca palustris var. crebra*	Marsh Mermaidweed				S3	4 Secure	19	29.2 ± 0.01
P	*Proserpinaca pectinata*	Comb-leaved Mermaidweed				S3	3 Sensitive	3	19.7 ± 1.0
P	*Teucrium canadense*	Canada Germander				S3	3 Sensitive	12	59.1 ± 5.0
P	*Epilobium strictum*	Downy Willowherb				S3	3 Sensitive	3	54.5 ± 5.0
P	*Polygonum pensylvanicum*	Pennsylvania Smartweed				S3	4 Secure	12	18.5 ± 1.0
P	*Polygonum scandens*	Climbing False Buckwheat				S3	3 Sensitive	29	27.9 ± 0.1
P	*Moneses uniflora*	One-flowered Wintergreen				S3	4 Secure	1	98.9 ± 3.5
P	*Pyrola asarifolia*	Pink Pyrola				S3	4 Secure	8	41.2 ± 0.01
P	*Ranunculus gmelinii*	Gmelin's Water Buttercup				S3	4 Secure	28	19.5 ± 5.0
P	*Rhamnus alnifolia*	Alder-leaved Buckthorn				S3	3 Sensitive	17	18.6 ± 1.0
P	*Agrimonia gryposepala*	Hooked Agrimony				S3	4 Secure	75	25.7 ± 0.01
P	*Rosa palustris*	Swamp Rose				S3	4 Secure	25	29.0 ± 0.01
P	*Salix petiolaris*	Meadow Willow				S3	4 Secure	18	27.6 ± 0.01
P	*Geocaulon lividum*	Northern Comandra				S3	3 Sensitive	2	22.1 ± 5.0
P	*Agalinis neoscotica*	Nova Scotia Agalinis				S3	4 Secure	2	77.6 ± 0.01
P	*Limosella australis*	Southern Mudwort				S3	3 Sensitive	4	39.0 ± 5.0
P	*Laportea canadensis*	Canada Wood Nettle				S3	3 Sensitive	28	26.6 ± 0.01
P	*Verbena hastata*	Blue Vervain				S3	4 Secure	85	45.4 ± 0.01
P	*Carex eburnea*	Bristle-leaved Sedge				S3	3 Sensitive	19	62.1 ± 0.1
P	*Carex lupulina*	Hop Sedge				S3	4 Secure	20	27.9 ± 0.01
P	*Carex rosea*	Rosy Sedge				S3	4 Secure	18	36.7 ± 0.01
P	*Eleocharis nitida*	Quill Spikerush				S3	4 Secure	1	84.6 ± 5.0
P	*Schoenoplectus americanus*	Olney's Bulrush				S3	3 Sensitive	2	76.1 ± 5.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	*Juncus subcaudatus var. planisepalus*	Woods-Rush				S3	3 Sensitive	11	19.7 ± 1.0
P	*Corallorhiza trifida*	Early Coralroot				S3	4 Secure	20	53.2 ± 0.5
P	*Platanthera grandiflora*	Large Purple Fringed Orchid				S3	4 Secure	93	29.0 ± 0.01
P	*Platanthera hookeri*	Hooker's Orchid				S3	4 Secure	2	89.0 ± 0.01
P	*Platanthera orbiculata*	Small Round-leaved Orchid				S3	4 Secure	18	54.3 ± 0.01
P	*Dichanthelium clandestinum*	Deer-tongue Panic Grass				S3	4 Secure	156	40.6 ± 0.01
P	*Sparganium natans*	Small Burreed				S3	4 Secure	9	30.4 ± 0.01
P	*Equisetum variegatum*	Variegated Horsetail				S3	4 Secure	23	42.9 ± 0.01
P	*Isoetes acadiensis*	Acadian Quillwort				S3	3 Sensitive	4	56.1 ± 14.0
P	*Botrychium dissectum*	Cut-leaved Moonwort				S3	4 Secure	4	40.1 ± 1.0
P	*Schizaea pusilla*	Little Curlygrass Fern				S3	4 Secure	5	55.1 ± 1.0
P	*Amelanchier stolonifera*	Running Serviceberry				S3?	4 Secure	2	67.9 ± 2.0
P	*Carex cryptolepis*	Hidden-scaled Sedge				S3?	4 Secure	8	29.3 ± 0.01
P	*Carex tribuloides*	Blunt Broom Sedge				S3?	4 Secure	4	58.1 ± 5.0
P	*Carex foenea*	Fernald's Hay Sedge				S3?	4 Secure	10	44.6 ± 0.01
P	*Elodea canadensis*	Canada Waterweed				S3?	4 Secure	3	63.2 ± 0.3
P	*Potamogeton praelongus*	White-stemmed Pondweed				S3?	3 Sensitive	9	42.3 ± 1.0
P	*Lycopodium sabinifolium*	Ground-Fir				S3?	4 Secure	3	58.3 ± 1.0
P	*Lycopodium sitchense*	Sitka Clubmoss				S3?	4 Secure	2	55.3 ± 1.0
P	*Polypodium appalachianum*	Appalachian Polypody				S3?	5 Undetermined	10	23.8 ± 0.01
P	*Angelica atropurpurea*	Purple-stemmed Angelica				S3S4	4 Secure	1	32.5 ± 0.01
P	*Pseudognaphalium obtusifolium*	Eastern Cudweed				S3S4	4 Secure	3	62.9 ± 3.5
P	*Atriplex franktonii*	Frankton's Saltbush				S3S4	4 Secure	1	86.0 ± 2.5
P	*Myriophyllum sibiricum*	Siberian Water Milfoil				S3S4	4 Secure	5	29.3 ± 0.01
P	*Utricularia gibba*	Humped Bladderwort				S3S4	4 Secure	4	34.0 ± 0.1
P	*Sanguinaria canadensis*	Bloodroot				S3S4	4 Secure	85	25.7 ± 5.0
P	*Polygonum robustius*	Stout Smartweed				S3S4	4 Secure	6	29.9 ± 0.01
P	*Rumex fueginus*	Tierra del Fuego Dock				S3S4	4 Secure	5	32.0 ± 2.0
P	*Lindernia dubia*	Yellow-seeded False Pimperel				S3S4	4 Secure	13	49.0 ± 0.01
P	*Viola sagittata var. ovata*	Arrow-Leaved Violet				S3S4	4 Secure	3	79.1 ± 0.01
P	*Eleocharis obtusa*	Blunt Spikerush				S3S4	4 Secure	1	98.2 ± 3.5
P	*Eriophorum chamissonis*	Russet Cotton-Grass				S3S4	4 Secure	2	48.0 ± 5.0
P	*Sisyrinchium angustifolium*	Narrow-leaved Blue-eyed-grass				S3S4	4 Secure	57	26.1 ± 0.01
P	*Juncus acuminatus*	Sharp-Fruit Rush				S3S4	3 Sensitive	1	79.9 ± 0.01
P	*Juncus nodosus*	Knotted Rush				S3S4	4 Secure	1	98.9 ± 3.5
P	*Luzula parviflora*	Small-flowered Woodrush				S3S4	4 Secure	3	38.2 ± 0.01
P	*Liparis loeselii*	Loesel's Twayblade				S3S4	4 Secure	2	70.1 ± 5.0
P	*Dichanthelium spretum*	Eaton's Witchgrass				S3S4	4 Secure	1	63.6 ± 0.5
P	*Trisetum spicatum*	Narrow False Oats				S3S4	4 Secure	10	48.1 ± 0.03
P	*Cystopteris bulbifera*	Bulblet Bladder Fern				S3S4	4 Secure	86	23.7 ± 0.01
P	*Equisetum hyemale var. affine*	Common Scouring-rush				S3S4	4 Secure	31	46.4 ± 0.1
P	*Equisetum scirpoides*	Dwarf Scouring-Rush				S3S4	4 Secure	43	49.1 ± 0.01
P	*Lycopodium complanatum*	Northern Clubmoss				S3S4	4 Secure	4	33.1 ± 0.16
P	*Lycopodiella appressa*	Southern Bog Clubmoss				S3S4	4 Secure	4	31.3 ± 1.0
P	*Solidago simplex var. randii*	Sticky Goldenrod				SH	0.1 Extirpated	1	57.5 ± 1.0

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The recipient of these data shall acknowledge the ACCDC and the data sources listed below in any documents, reports, publications or presentations, in which this dataset makes a significant contribution.

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Appendix I.2

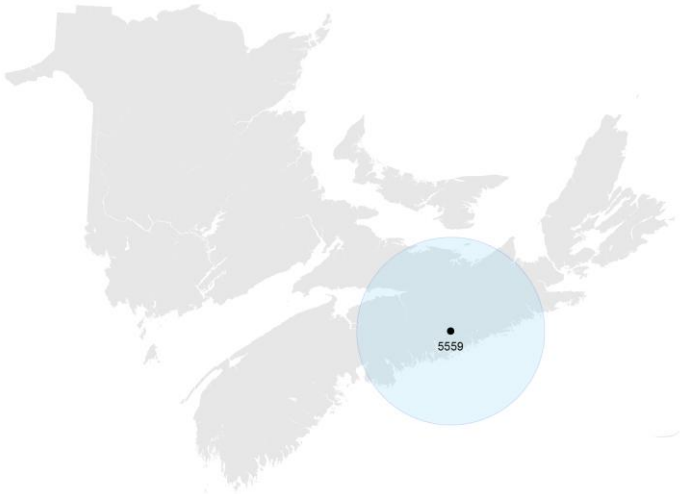
ACCDC Report Haul Road (Data Report 5559: Mooseland, NS)

Atlantic Canada Conservation Data Centre
Centre de données sur la conservation du Canada atlantique

DATA REPORT 5559: Mooseland, NS

Prepared 3 June 2016
by J. Churchill, Data Manager

CONTENTS OF REPORT



Map 1. A 100 km buffer around the study area

1.0 PREFACE

The Atlantic Canada Conservation Data Centre (ACCDC) is part of a network of NatureServe data centres and heritage programs serving 50 states in the U.S.A, 10 provinces and 1 territory in Canada, plus several Central and South American countries. The NatureServe network is more than 30 years old and shares a common conservation data methodology. The ACCDC was founded in 1997, and maintains data for the jurisdictions of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador. Although a non-governmental agency, the ACCDC is supported by 6 federal agencies and 4 provincial governments, as well as through outside grants and data processing fees. URL: www.ACCDC.com.

Upon request and for a fee, the ACCDC queries its database and produces customized reports of the rare and endangered flora and fauna known to occur in or near a specified study area. As a supplement to that data, the ACCDC includes locations of managed areas with some level of protection, and known sites of ecological interest or sensitivity.

1.1 DATA LIST

Included datasets:

Filename	Contents
MooselandNs_5559ob.xls	All Rare and legally protected *Flora and Fauna* within 5 km of your study area
MooselandNs_5559ob100km.xls	A list of Rare and legally protected *Flora and Fauna* within 100 km of your study area

1.2 RESTRICTIONS

The ACCDC makes a strong effort to verify the accuracy of all the data that it manages, but it shall not be held responsible for any inaccuracies in data that it provides. By accepting ACCDC data, recipients assent to the following limits of use:

a) Data is restricted to use by trained personnel who are sensitive to landowner interests and to potential threats to rare and/or endangered flora and fauna posed by the information provided.
b) Data is restricted to use by the specified Data User; any third party requiring data must make its own data request.
c) The ACCDC requires Data Users to cease using and delete data 12 months after receipt, and to make a new request for updated data if necessary at that time.
d) ACCDC data responses are restricted to the data in our Data System at the time of the data request.
e) Each record has an estimate of locational uncertainty, which must be referenced in order to understand the record's relevance to a particular location. Please see attached Data Dictionary for details.
f) ACCDC data responses are not to be construed as exhaustive inventories of taxa in an area.
g) The absence of a taxon cannot be inferred by its absence in an ACCDC data response.

1.3 ADDITIONAL INFORMATION

The attached file DataDictionary 2.1.pdf provides metadata for the data provided.

Please direct any additional questions about ACCDC data to the following individuals:

Plants, Lichens, Ranking Methods, All other Inquiries
Sean Blaney, Senior Scientist, Executive Director
Tel: (506) 364-2658
sblaney@mta.ca

Animals (Fauna)
John Klymko, Zoologist
Tel: (506) 364-2660
jklymko@mta.ca

Plant Communities
Sarah Robinson , Community Ecologist
Tel: (506) 364-2664
srobinson@mta.ca

Data Management, GIS
James Churchill, Data Manager
Tel: (902) 679-6146
jlchurchill@mta.ca

Billing
Jean Breau
Tel: (506) 364-2657
jrbreau@mta.ca

Questions on the biology of Federal Species at Risk can be directed to ACCDC: (506) 364-2658, with questions on Species at Risk regulations to: Samara Eaton, Canadian Wildlife Service (NB and PE): (506) 364-5060 or Julie McKnight, Canadian Wildlife Service (NS): (902) 426-4196.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in New Brunswick, please contact Stewart Lusk, Natural Resources: (506) 453-7110.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in Nova Scotia, please contact Sherman Boates, NSDNR: (902) 679-6146. To determine if location-sensitive species (section 4.3) occur near your study site please contact a NSDNR Regional Biologist:

Western: Duncan Bayne
(902) 648-3536
Duncan.Bayne@novascotia.ca

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Eastern: Donald Anderson
(902) 295-3949
Donald.Anderson@novascotia.ca

Eastern: Terry Power
(902) 563-3370
Terrance.Power@novascotia.ca

For provincial information about rare taxa and protected areas, or information about game animals, fish habitat etc., in Prince Edward Island, please contact Garry Gregory, PEI Dept. of Communities, Land and Environment: (902) 569-7595.

2.0 RARE AND ENDANGERED SPECIES

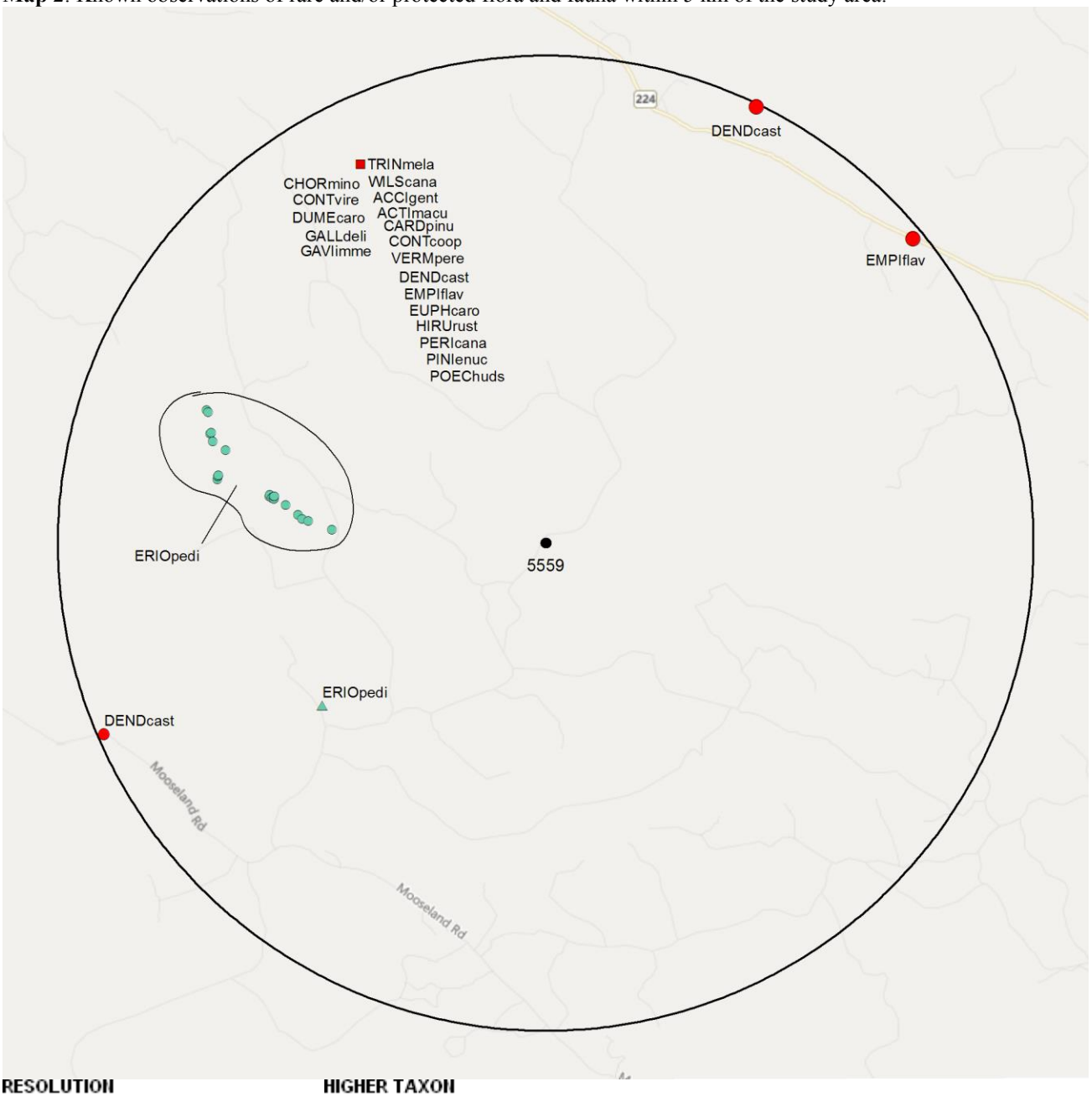
2.1 FLORA

A 5 km buffer around the study area contains no records of vascular, 25 records of 1 nonvascular flora (Map 2 and attached: *ob.xls).

2.2 FAUNA

A 5 km buffer around the study area contains 45 records of 19 vertebrate, no records of invertebrate fauna (Map 2 and attached data files - see 1.1 Data List). Please see section 4.3 to determine if 'location-sensitive' species occur near your study site.

Map 2: Known observations of rare and/or protected flora and fauna within 5 km of the study area.

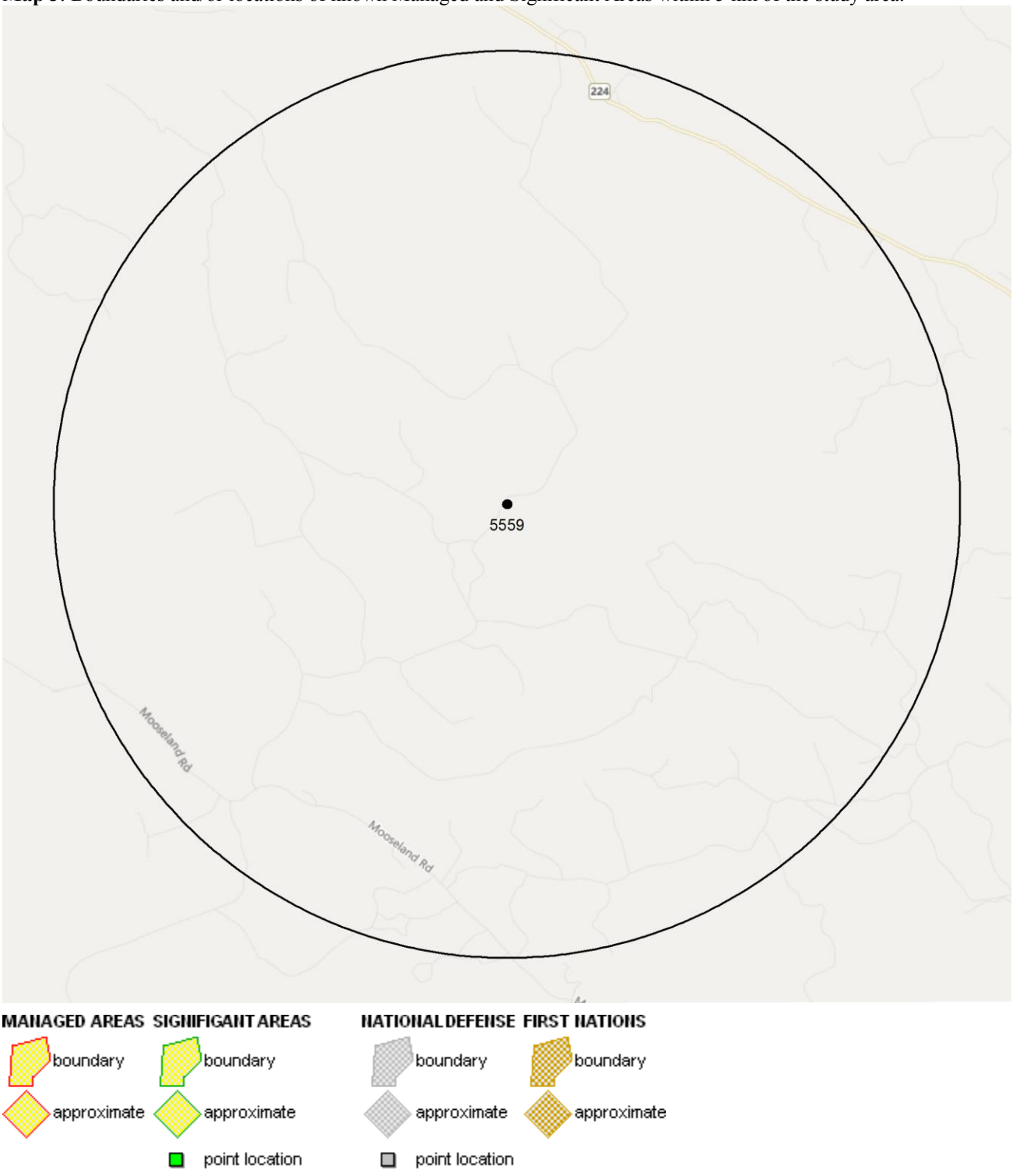


3.0 SPECIAL AREAS

3.1 MANAGED AREAS
The GIS scan identified no managed areas in the vicinity of the study area (Map 3)

3.2 SIGNIFICANT AREAS
The GIS scan identified no biologically significant sites in the vicinity of the study area (Map)

Map 3: Boundaries and/or locations of known Managed and Significant Areas within 5 km of the study area.



4.0 RARE SPECIES LISTS

Rare and/or endangered taxa (excluding "location-sensitive" species, section 4.3) within the 5 km-buffered area listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation (± the precision, in km, of the record). [P] = vascular plant, [N] = nonvascular plant, [A] = vertebrate animal, [I] = invertebrate animal, [C] = community. Note: records are from attached files *ob.xls/*ob.shp only.

4.1 FLORA

	Scientific *Name*	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
N	*Erioderma pedicellatum (Atlantic pop.)*	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	S1S2	1 At Risk	25	2.2 ± 0.0

4.2 FAUNA

	Scientific *Name*	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Euphagus carolinus*	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2S3B	2 May Be At Risk	3	4.3 ± 7.0
A	*Poecile hudsonica*	Boreal Chickadee				S3	3 Sensitive	4	4.3 ± 7.0
A	*Pinicola enucleator*	Pine Grosbeak				S3?B,S5N	2 May Be At Risk	2	4.3 ± 7.0
A	*Hirundo rustica*	Barn Swallow	Threatened		Endangered	S3B	1 At Risk	3	4.3 ± 7.0
A	*Wilsonia canadensis*	Canada Warbler	Threatened	Threatened	Endangered	S3B	1 At Risk	2	4.3 ± 7.0
A	*Chordeiles minor*	Common Nighthawk	Threatened	Threatened	Threatened	S3B	1 At Risk	2	4.3 ± 7.0
A	*Contopus cooperi*	Olive-sided Flycatcher	Threatened	Threatened	Threatened	S3B	1 At Risk	2	4.3 ± 7.0
A	*Dumetella carolinensis*	Gray Catbird				S3B	2 May Be At Risk	1	4.3 ± 7.0
A	*Gavia immer*	Common Loon	Not At Risk			S3B,S4N	2 May Be At Risk	2	4.3 ± 7.0
A	*Tringa melanoleuca*	Greater Yellowlegs				S3B,S5M	3 Sensitive	4	4.3 ± 7.0
A	*Accipiter gentilis*	Northern Goshawk	Not At Risk			S3S4	4 Secure	1	4.3 ± 7.0
A	*Perisoreus canadensis*	Gray Jay				S3S4	3 Sensitive	2	4.3 ± 7.0
A	*Contopus virens*	Eastern Wood-Pewee	Special Concern		Vulnerable	S3S4B	3 Sensitive	1	4.3 ± 7.0
A	*Actitis macularius*	Spotted Sandpiper				S3S4B	3 Sensitive	2	4.3 ± 7.0
A	*Gallinago delicata*	Wilson's Snipe				S3S4B	3 Sensitive	1	4.3 ± 7.0
A	*Empidonax flaviventris*	Yellow-bellied Flycatcher				S3S4B	3 Sensitive	4	4.3 ± 7.0
A	*Vermivora peregrina*	Tennessee Warbler				S3S4B	3 Sensitive	2	4.3 ± 7.0
A	*Dendroica castanea*	Bay-breasted Warbler				S3S4B	3 Sensitive	6	4.3 ± 7.0
A	*Carduelis pinus*	Pine Siskin				S3S4B,S5N	3 Sensitive	1	4.3 ± 7.0

4.3 LOCATION SENSITIVE SPECIES

The Department of Natural Resources in each Maritimes province considers a number of species "location sensitive". Concern about exploitation of location-sensitive species precludes inclusion of precise coordinates in this report. Those intersecting a 5 km buffer of your study area are indicated below with "YES".

Nova Scotia

Scientific *Name*	Common Name	SARA	Prov Legal Prot	Known within 5 km of Study Site?
Fraxinus nigra	Black Ash		Threatened	No
Emydoidea blandingii	*Blanding's Turtle - Nova Scotia pop.*	Endangered	Vulnerable	No
Glyptemys insculpta	Wood Turtle	Threatened	Threatened	No
Falco peregrinus pop. 1	Peregrine Falcon - anatum/tundrius pop.	Special Concern	Vulnerable	No
Bat Hibernaculum		[Endangered][1]	[Endangered][1]	No

1 *Myotis lucifugus* (Little Brown Myotis), *Myotis septentrionalis* (Long-eared Myotis), and *Perimyotis subflavus* (Tri-colored Bat or Eastern Pipistrelle) are all Endangered under the Federal Species at Risk Act and the NS Endangered Species Act.

4.4 SOURCE BIBLIOGRAPHY

The recipient of these data shall acknowledge the ACCDC and the data sources listed below in any documents, reports, publications or presentations, in which this dataset makes a significant contribution.

# recs	CITATION
28	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
24	Neily, T.H. & Pepper, C.; Toms, B. 2013. Nova Scotia lichen location database. Mersey Tobeatic Research Institute, 1301 records.
16	Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82,125 recs.
1	Cameron, R.P. 2009. Erioderma pedicellatum database, 1979-2008. Dept Environment & Labour, 103 recs.
1	Pepper, C. 2013. 2013 rare bird and plant observations in Nova Scotia. , 181 records.

5.0 RARE SPECIES WITHIN 100 KM

A 100 km buffer around the study area contains 14766 records of 110 vertebrate and 727 records of 54 invertebrate fauna; 3569 records of 253 vascular, 518 records of 52 nonvascular flora (attached: *ob100km.xls).

Taxa within 100 km of the study site that are rare and/or endangered in the province in which the study site occurs. All ranks correspond to the province in which the study site falls, even for out-of-province records. Taxa are listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation (± the precision, in km, of the record).

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)	Prov
A	*Myotis lucifugus*	Little Brown Myotis	Endangered	Endangered	Endangered	S1	1 At Risk	38	21.7 ± 0.0	NS
A	*Myotis septentrionalis*	Northern Long-eared Myotis	Endangered	Endangered	Endangered	S1	1 At Risk	5	21.9 ± 0.0	NS
A	*Perimyotis subflavus*	Eastern Pipistrelle	Endangered	Endangered	Endangered	S1	1 At Risk	7	51.8 ± 0.0	NS
A	*Alces americanus*	Moose			Endangered	S1	1 At Risk	26	14.1 ± 0.0	NS
A	*Acipenser oxyrinchus*	Atlantic Sturgeon	Threatened			S1?	2 May Be At Risk	2	50.8 ± 0.0	NS
A	*Caprimulgus vociferus*	Whip-Poor-Will	Threatened	Threatened	Threatened	S1?B	1 At Risk	10	32.1 ± 7.0	NS
A	*Toxostoma rufum*	Brown Thrasher				S1?B	5 Undetermined	9	60.7 ± 7.0	NS
A	*Vireo gilvus*	Warbling Vireo				S1?B	5 Undetermined	16	20.0 ± 7.0	NS
A	*Tringa solitaria*	Solitary Sandpiper				S1?B,S4S5M	4 Secure	10	25.3 ± 0.0	NS
A	*Larus delawarensis*	Ring-billed Gull				S1?B,S5N	4 Secure	4	21.6 ± 0.0	NS
A	*Accipiter cooperii*	Cooper's Hawk	Not At Risk			S1?B,SNAN	5 Undetermined	4	63.5 ± 0.0	NS
A	*Charadrius melodus melodus*	Piping Plover melodus ssp	Endangered	Endangered	Endangered	S1B	1 At Risk	570	22.3 ± 0.0	NS
A	*Sterna dougallii*	Roseate Tern	Endangered	Endangered	Endangered	S1B	1 At Risk	58	26.8 ± 0.0	NS
A	*Morone saxatilis pop. 2*	Striped Bass- Bay of Fundy pop.	Endangered			S1B	2 May Be At Risk	2	51.0 ± 0.0	NS
A	*Hylocichla mustelina*	Wood Thrush	Threatened			S1B	5 Undetermined	32	13.4 ± 7.0	NS
A	*Passerculus sandwichensis princeps*	Savannah Sparrow princeps ssp	Special Concern	Special Concern		S1B	3 Sensitive	3	26.6 ± 0.0	NS
A	*Fulica americana*	American Coot	Not At Risk			S1B	5 Undetermined	7	66.3 ± 7.0	NS
A	*Aegolius funereus*	Boreal Owl	Not At Risk			S1B	5 Undetermined	13	32.5 ± 7.0	NS
A	*Gallinula chloropus*	Common Moorhen				S1B	5 Undetermined	5	77.1 ± 7.0	NS
A	*Progne subis*	Purple Martin				S1B	2 May Be At Risk	3	58.2 ± 7.0	NS
A	*Fratercula arctica*	Atlantic Puffin				S1B,S4S5N	3 Sensitive	2	38.6 ± 7.0	NS
A	*Calidris minutilla*	Least Sandpiper				S1B,S5M	4 Secure	287	42.0 ± 0.0	NS
A	*Bucephala islandica (Eastern pop.)*	Barrow's Goldeneye - Eastern pop.	Special Concern	Special Concern		S1N	1 At Risk	1	81.3 ± 0.0	NS
A	*Morone saxatilis pop. 1*	Striped Bass- Southern Gulf of St Lawrence pop.	Special Concern			S1N	2 May Be At Risk	1	99.2 ± 1.0	NS
A	*Asio flammeus*	Short-eared Owl	Special Concern	Special Concern		S1S2	2 May Be At Risk	8	64.4 ± 7.0	NS
A	*Picoides dorsalis*	American Three-toed Woodpecker				S1S2	5 Undetermined	4	58.2 ± 7.0	NS
A	*Passerina cyanea*	Indigo Bunting				S1S2B	5 Undetermined	7	53.7 ± 7.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)	Prov
A	*Eremophila alpestris*	Horned Lark				S1S2B,S4N	4 Secure	4	24.2 ± 7.0	NS
A	*Charadrius semipalmatus*	Semipalmated Plover				S1S2B,S5M	4 Secure	431	23.5 ± 0.0	NS
A	*Salmo salar pop. 1*	Atlantic Salmon - Inner Bay of Fundy pop.	Endangered	Endangered		S2	2 May Be At Risk	19	40.2 ± 0.0	NS
A	*Glyptemys insculpta*	Wood Turtle	Threatened	Threatened	Threatened	S2	3 Sensitive	201	23.4 ± 1.0	NS
A	*Sorex dispar*	Long-tailed Shrew	Not At Risk	Special Concern		S2	3 Sensitive	2	92.0 ± 5.0	NS
A	*Asio otus*	Long-eared Owl				S2	2 May Be At Risk	28	20.0 ± 7.0	NS
A	*Salmo salar*	Atlantic Salmon				S2	2 May Be At Risk	71	8.1 ± 0.0	NS
A	*Vireo philadelphicus*	Philadelphia Vireo				S2?B	5 Undetermined	26	5.6 ± 0.0	NS
A	*Anas acuta*	Northern Pintail				S2B	2 May Be At Risk	9	53.7 ± 7.0	NS
A	*Anas clypeata*	Northern Shoveler				S2B	2 May Be At Risk	5	42.3 ± 7.0	NS
A	*Anas strepera*	Gadwall				S2B	2 May Be At Risk	19	27.5 ± 0.0	NS
A	*Rallus limicola*	Virginia Rail				S2B	5 Undetermined	24	53.7 ± 7.0	NS
A	*Empidonax traillii*	Willow Flycatcher				S2B	3 Sensitive	19	32.1 ± 7.0	NS
A	*Myiarchus crinitus*	Great Crested Flycatcher				S2B	2 May Be At Risk	13	57.1 ± 7.0	NS
A	*Piranga olivacea*	Scarlet Tanager				S2B	5 Undetermined	15	32.4 ± 7.0	NS
A	*Rissa tridactyla*	Black-legged Kittiwake				S2B,S4S5N	3 Sensitive	1	76.3 ± 0.0	NS
A	*Bucephala clangula*	Common Goldeneye				S2B,S5N	4 Secure	111	16.1 ± 7.0	NS
A	*Histrionicus histrionicus pop. 1*	Harlequin Duck - Eastern pop.	Special Concern	Special Concern	Endangered	S2N	1 At Risk	31	27.0 ± 0.0	NS
A	*Globicephala melas*	Long-finned Pilot Whale	Not At Risk			S2S3		1	17.0 ± 100.0	NS
A	*Chaetura pelagica*	Chimney Swift	Threatened	Threatened	Endangered	S2S3B	1 At Risk	137	16.1 ± 7.0	NS
A	*Euphagus carolinus*	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2S3B	2 May Be At Risk	220	4.3 ± 7.0	NS
A	*Cathartes aura*	Turkey Vulture				S2S3B	3 Sensitive	10	42.5 ± 0.0	NS
A	*Tringa semipalmata*	Willet				S2S3B	2 May Be At Risk	445	18.0 ± 7.0	NS
A	*Pooecetes gramineus*	Vesper Sparrow				S2S3B	2 May Be At Risk	22	54.3 ± 7.0	NS
A	*Molothrus ater*	Brown-headed Cowbird				S2S3B	4 Secure	74	18.3 ± 7.0	NS
A	*Icterus galbula*	Baltimore Oriole				S2S3B	2 May Be At Risk	41	28.4 ± 7.0	NS
A	*Calidris canutus rufa*	Red Knot rufa ssp	Endangered		Endangered	S2S3M	1 At Risk	97	42.0 ± 0.0	NS
A	*Phalaropus lobatus*	Red-necked Phalarope	Special Concern			S2S3M	3 Sensitive	3	62.1 ± 0.0	NS
A	*Phalaropus fulicarius*	Red Phalarope				S2S3M	3 Sensitive	1	68.3 ± 0.0	NS
A	*Chelydra serpentina*	Snapping Turtle	Special Concern	Special Concern	Vulnerable	S3	3 Sensitive	67	14.8 ± 0.0	NS
A	*Hemidactylium scutatum*	Four-toed Salamander	Not At Risk			S3	4 Secure	26	55.2 ± 5.0	NS
A	*Phalacrocorax carbo*	Great Cormorant				S3	3 Sensitive	53	24.2 ± 7.0	NS
A	*Poecile hudsonica*	Boreal Chickadee				S3	3 Sensitive	547	4.3 ± 7.0	NS
A	*Coccyzus erythropthalmus*	Black-billed Cuckoo				S3?B	2 May Be At Risk	71	13.4 ± 7.0	NS
A	*Dendroica tigrina*	Cape May Warbler				S3?B	3 Sensitive	112	9.0 ± 7.0	NS
A	*Pinicola enucleator*	Pine Grosbeak				S3?B,S5N	2 May Be At Risk	115	4.3 ± 7.0	NS
A	*Hirundo rustica*	Barn Swallow	Threatened		Endangered	S3B	1 At Risk	700	4.3 ± 7.0	NS
A	*Wilsonia canadensis*	Canada Warbler	Threatened	Threatened	Endangered	S3B	1 At Risk	600	4.3 ± 7.0	NS
A	*Chordeiles minor*	Common Nighthawk	Threatened	Threatened	Threatened	S3B	1 At Risk	344	4.3 ± 7.0	NS
A	*Contopus cooperi*	Olive-sided Flycatcher	Threatened	Threatened	Threatened	S3B	1 At Risk	682	4.3 ± 7.0	NS
A	*Riparia riparia*	Bank Swallow	Threatened			S3B	2 May Be At Risk	251	18.0 ± 7.0	NS
A	*Sterna hirundo*	Common Tern	Not At Risk			S3B	3 Sensitive	225	18.0 ± 7.0	NS
A	*Sialia sialis*	Eastern Bluebird	Not At Risk			S3B	3 Sensitive	40	22.2 ± 7.0	NS
A	*Podilymbus podiceps*	Pied-billed Grebe				S3B	3 Sensitive	84	32.1 ± 7.0	NS
A	*Anas discors*	Blue-winged Teal				S3B	2 May Be At Risk	77	18.5 ± 7.0	NS
A	*Sterna paradisaea*	Arctic Tern				S3B	2 May Be At Risk	53	21.4 ± 0.0	NS
A	*Petrochelidon pyrrhonota*	Cliff Swallow				S3B	2 May Be At Risk	197	18.0 ± 7.0	NS
A	*Dumetella carolinensis*	Gray Catbird				S3B	2 May Be At Risk	303	4.3 ± 7.0	NS
A	*Mimus polyglottos*	Northern Mockingbird				S3B	4 Secure	21	55.3 ± 7.0	NS
A	*Gavia immer*	Common Loon	Not At Risk			S3B,S4N	2 May Be At Risk	623	4.3 ± 7.0	NS
A	*Tringa melanoleuca*	Greater Yellowlegs				S3B,S5M	3 Sensitive	441	4.3 ± 7.0	NS
A	*Mergus serrator*	Red-breasted Merganser				S3B,S5N	4 Secure	63	20.0 ± 7.0	NS

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A	*Pluvialis dominica*	American Golden-Plover				S3M	3 Sensitive	48	48.3 ± 0.0	NS
A	*Numenius phaeopus hudsonicus*	Hudsonian Whimbrel				S3M	3 Sensitive	49	27.7 ± 0.0	NS
A	*Limosa haemastica*	Hudsonian Godwit				S3M	3 Sensitive	25	54.0 ± 0.0	NS
A	*Calidris pusilla*	Semipalmated Sandpiper				S3M	3 Sensitive	390	42.0 ± 0.0	NS
A	*Calidris maritima*	Purple Sandpiper				S3N	3 Sensitive	28	25.9 ± 12.0	NS
A	*Accipiter gentilis*	Northern Goshawk	Not At Risk			S3S4	4 Secure	86	4.3 ± 7.0	NS
A	*Cepphus grylle*	Black Guillemot				S3S4	4 Secure	51	23.7 ± 2.0	NS
A	*Picoides arcticus*	Black-backed Woodpecker				S3S4	3 Sensitive	149	12.5 ± 7.0	NS
A	*Perisoreus canadensis*	Gray Jay				S3S4	3 Sensitive	416	4.3 ± 7.0	NS
A	*Cardinalis cardinalis*	Northern Cardinal				S3S4	4 Secure	37	54.3 ± 7.0	NS
A	*Dolichonyx oryzivorus*	Bobolink	Threatened		Vulnerable	S3S4B	3 Sensitive	350	22.2 ± 0.0	NS
A	*Contopus virens*	Eastern Wood-Pewee	Special Concern		Vulnerable	S3S4B	3 Sensitive	473	4.3 ± 7.0	NS
A	*Botaurus lentiginosus*	American Bittern				S3S4B	3 Sensitive	210	19.1 ± 7.0	NS
A	*Charadrius vociferus*	Killdeer				S3S4B	3 Sensitive	350	10.2 ± 7.0	NS
A	*Actitis macularius*	Spotted Sandpiper				S3S4B	3 Sensitive	462	4.3 ± 7.0	NS
A	*Gallinago delicata*	Wilson's Snipe				S3S4B	3 Sensitive	370	4.3 ± 7.0	NS
A	*Empidonax flaviventris*	Yellow-bellied Flycatcher				S3S4B	3 Sensitive	535	4.3 ± 7.0	NS
A	*Sayornis phoebe*	Eastern Phoebe				S3S4B	3 Sensitive	153	32.4 ± 7.0	NS
A	*Tyrannus tyrannus*	Eastern Kingbird				S3S4B	3 Sensitive	165	18.3 ± 7.0	NS
A	*Vermivora peregrina*	Tennessee Warbler				S3S4B	3 Sensitive	280	4.3 ± 7.0	NS
A	*Dendroica castanea*	Bay-breasted Warbler				S3S4B	3 Sensitive	382	4.3 ± 7.0	NS
A	*Dendroica striata*	Blackpoll Warbler				S3S4B	3 Sensitive	102	16.1 ± 7.0	NS
A	*Wilsonia pusilla*	Wilson's Warbler				S3S4B	3 Sensitive	74	13.4 ± 7.0	NS
A	*Pheucticus ludovicianus*	Rose-breasted Grosbeak				S3S4B	3 Sensitive	270	16.2 ± 7.0	NS
A	*Passerella iliaca*	Fox Sparrow				S3S4B	4 Secure	81	18.0 ± 7.0	NS
A	*Carduelis pinus*	Pine Siskin				S3S4B,S5N	3 Sensitive	308	4.3 ± 7.0	NS
A	*Anguilla rostrata*	American Eel	Threatened			S5	4 Secure	7	38.1 ± 0.0	NS
A	*Leucophaeus atricilla*	Laughing Gull				SHB	4 Secure	1	30.1 ± 0.0	NS
A	*Morus bassanus*	Northern Gannet				SHB,S5M	4 Secure	2	27.8 ± 0.0	NS
A	*Tryngites subruficollis*	Buff-breasted Sandpiper	Special Concern			SNA	8 Accidental	2	54.0 ± 0.0	NS
A	*Colinus virginianus*	Northern Bobwhite	Endangered	Endangered				1	42.5 ± 0.0	NS
I	*Gomphus ventricosus*	Skillet Clubtail	Endangered			S1	2 May Be At Risk	2	59.3 ± 0.0	NS
I	*Barnea truncata*	Atlantic Mud-piddock	Threatened			S1	1 At Risk	1	91.0 ± 1.0	NS
I	*Satyrium acadica*	Acadian Hairstreak				S1	5 Undetermined	6	78.0 ± 1.0	NS
I	*Neurocordulia michaeli*	Broadtailed Shadowdragon				S1		26	37.3 ± 0.0	NS
I	*Somatochlora brevicincta*	Quebec Emerald				S1	2 May Be At Risk	1	50.6 ± 0.0	NS
I	*Polygonia comma*	Eastern Comma				S1?	1 At Risk	8	74.3 ± 1.0	NS
I	*Polygonia satyrus*	Satyr Comma				S1?	3 Sensitive	2	77.5 ± 1.0	NS
I	*Alasmidonta varicosa*	Brook Floater	Special Concern		Threatened	S1S2	3 Sensitive	15	47.8 ± 1.0	NS
I	*Nymphalis l-album*	Compton Tortoiseshell				S1S2	4 Secure	9	56.9 ± 1.0	NS
I	*Somatochlora kennedyi*	Kennedy's Emerald				S1S2	2 May Be At Risk	3	68.8 ± 1.0	NS
I	*Coenagrion resolutum*	Taiga Bluet				S1S2	2 May Be At Risk	2	67.4 ± 1.0	NS
I	*Stylurus scudderi*	Zebra Clubtail				S1S2	2 May Be At Risk	4	39.0 ± 0.0	NS
I	*Lycaena hyllus*	Bronze Copper				S2	4 Secure	4	63.6 ± 1.0	NS
I	*Lycaena dospassosi*	Salt Marsh Copper				S2	1 At Risk	9	83.6 ± 0.0	NS
I	*Satyrium calanus*	Banded Hairstreak				S2	5 Undetermined	9	71.7 ± 5.0	NS
I	*Satyrium calanus falacer*	Banded Hairstreak				S2	1 At Risk	2	76.7 ± 0.0	NS
I	*Boloria chariclea*	Arctic Fritillary				S2	3 Sensitive	3	73.2 ± 1.0	NS
I	*Aglais milberti*	Milbert's Tortoiseshell				S2	4 Secure	7	59.1 ± 1.0	NS
I	*Epitheca princeps*	Prince Baskettail				S2	3 Sensitive	7	61.9 ± 0.0	NS
I	*Enallagma signatum*	Orange Bluet				S2	2 May Be At Risk	3	66.9 ± 0.0	NS
I	*Lampsilis radiata*	Eastern Lampmussel				S2	3 Sensitive	34	36.4 ± 0.0	NS

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I	*Pantala hymenaea*	Spot-Winged Glider				S2?B	3 Sensitive	7	59.1 ± 1.0	NS
I	*Danaus plexippus*	Monarch	Special Concern	Special Concern		S2B	3 Sensitive	59	23.7 ± 0.0	NS
I	*Thorybes pylades*	Northern Cloudywing				S2S3	3 Sensitive	14	50.9 ± 0.0	NS
I	*Amblyscirtes hegon*	Pepper and Salt Skipper				S2S3	4 Secure	22	19.4 ± 0.0	NS
I	*Satyrium liparops*	Striped Hairstreak				S2S3	5 Undetermined	5	24.2 ± 0.0	NS
I	*Satyrium liparops strigosum*	Striped Hairstreak				S2S3	3 Sensitive	2	76.7 ± 0.0	NS
I	*Euphydryas phaeton*	Baltimore Checkerspot				S2S3	4 Secure	19	22.3 ± 0.0	NS
I	*Ophiogomphus aspersus*	Brook Snaketail				S2S3	2 May Be At Risk	2	98.4 ± 0.0	NS
I	*Ophiogomphus mainensis*	Maine Snaketail				S2S3	2 May Be At Risk	14	35.4 ± 0.0	NS
I	*Ophiogomphus rupinsulensis*	Rusty Snaketail				S2S3	2 May Be At Risk	56	39.0 ± 0.0	NS
I	*Somatochlora forcipata*	Forcipate Emerald				S2S3	2 May Be At Risk	3	68.8 ± 1.0	NS
I	*Somatochlora franklini*	Delicate Emerald				S2S3	3 Sensitive	1	85.8 ± 1.0	NS
I	*Alasmidonta undulata*	Triangle Floater				S2S3	4 Secure	24	21.5 ± 0.0	NS
I	*Callophrys henrici*	Henry's Elfin				S3	4 Secure	17	25.8 ± 0.0	NS
I	*Callophrys lanoraieensis*	Bog Elfin				S3	2 May Be At Risk	6	33.1 ± 0.0	NS
I	*Speyeria aphrodite*	Aphrodite Fritillary				S3	4 Secure	12	56.9 ± 1.0	NS
I	*Polygonia faunus*	Green Comma				S3	4 Secure	15	37.7 ± 0.0	NS
I	*Oeneis jutta*	Jutta Arctic				S3	2 May Be At Risk	6	70.2 ± 0.0	NS
I	*Aeshna clepsydra*	Mottled Darner				S3	4 Secure	12	42.6 ± 1.0	NS
I	*Aeshna constricta*	Lance-Tipped Darner				S3	4 Secure	18	34.8 ± 1.0	NS
I	*Boyeria grafiana*	Ocellated Darner				S3	3 Sensitive	10	44.6 ± 1.0	NS
I	*Gomphaeschna furcillata*	Harlequin Darner				S3	3 Sensitive	3	71.3 ± 1.0	NS
I	*Somatochlora tenebrosa*	Clamp-Tipped Emerald				S3	4 Secure	12	49.8 ± 1.0	NS
I	*Nannothemis bella*	Elfin Skimmer				S3	4 Secure	13	52.3 ± 0.0	NS
I	*Sympetrum danae*	Black Meadowhawk				S3	3 Sensitive	4	71.4 ± 1.0	NS
I	*Enallagma vernale*	Vernal Bluet				S3	5 Undetermined	5	47.1 ± 0.0	NS
I	*Amphiagrion saucium*	Eastern Red Damsel				S3	4 Secure	2	49.4 ± 0.0	NS
I	*Polygonia interrogationis*	Question Mark				S3B	4 Secure	105	24.2 ± 0.0	NS
I	*Erynnis juvenalis*	Juvenal's Duskywing				S3S4	4 Secure	34	65.5 ± 0.0	NS
I	*Amblyscirtes vialis*	Common Roadside-Skipper				S3S4	4 Secure	12	13.3 ± 0.0	NS
I	*Polygonia progne*	Grey Comma				S3S4	4 Secure	22	23.0 ± 0.0	NS
I	*Lanthus parvulus*	Northern Pygmy Clubtail				S3S4	4 Secure	33	45.8 ± 0.0	NS
I	*Bombus terricola*	Yellow-banded Bumblebee	Special Concern			SNR	3 Sensitive	1	88.8 ± 0.0	NS
N	*Aloina brevirostris*	Short-Beaked Rigid Screw Moss				S1		1	98.5 ± 2.0	NS
N	*Aloina rigida*	Aloe-Like Rigid Screw Moss				S1	2 May Be At Risk	3	93.8 ± 0.0	NS
N	*Bryohaplocladium microphyllum*	Tiny-leaved Haplocladium Moss				S1		1	67.3 ± 5.0	NS
N	*Fissidens exilis*	Pygmy Pocket Moss	Special Concern			S1?	1 At Risk	1	92.7 ± 1.0	NS
N	*Sclerophora peronella (Nova Scotia pop.)*	Frosted Glass-whiskers Lichen - Nova Scotia pop.	Special Concern	Special Concern		S1?		9	8.5 ± 0.0	NS
N	*Erioderma mollissimum*	Graceful Felt Lichen	Endangered		Endangered	S1S2	2 May Be At Risk	5	6.0 ± 0.0	NS
N	*Erioderma pedicellatum (Atlantic pop.)*	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	S1S2	1 At Risk	360	2.2 ± 0.0	NS
N	*Peltigera hydrothyria*	Eastern Waterfan	Threatened			S1S2	2 May Be At Risk	2	43.5 ± 1.0	NS
N	*Fuscopannaria leucosticta*	Rimmed Shingles Lichen				S1S2	2 May Be At Risk	4	7.7 ± 0.0	NS
N	*Leptogium subtile*	Appressed Jellyskin Lichen				S1S3	3 Sensitive	1	28.2 ± 0.0	NS
N	*Degelia plumbea*	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S2	4 Secure	33	6.0 ± 0.0	NS

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N	*Anacamptodon splachnoides*	a Moss				S2?	3 Sensitive	1	74.6 ± 30.0	NS
N	*Anomodon viticulosus*	a Moss				S2?	3 Sensitive	1	96.6 ± 5.0	NS
N	*Atrichum angustatum*	Lesser Smoothcap Moss				S2?	3 Sensitive	3	58.3 ± 2.0	NS
N	*Aulacomnium heterostichum*	One-sided Groove Moss				S2?	3 Sensitive	1	98.5 ± 2.0	NS
N	*Bryum algovicum*	a Moss				S2?	3 Sensitive	1	98.5 ± 2.0	NS
N	*Ditrichum rhynchostegium*	a Moss				S2?	3 Sensitive	1	78.7 ± 1.0	NS
N	*Eurhynchium hians*	Light Beaked Moss				S2?	3 Sensitive	2	33.0 ± 25.0	NS
N	*Fissidens taxifolius*	Yew-leaved Pocket Moss				S2?	3 Sensitive	1	98.5 ± 2.0	NS
N	*Anomodon tristis*	a Moss				S2?	3 Sensitive	2	26.3 ± 15.0	NS
N	*Kiaeria starkei*	Starke's Fork Moss				S2?	3 Sensitive	1	32.1 ± 10.0	NS
N	*Paludella squarrosa*	Tufted Fen Moss				S2?	3 Sensitive	2	93.3 ± 0.0	NS
N	*Saelania glaucescens*	Blue Dew Moss				S2?	3 Sensitive	1	81.2 ± 0.0	NS
N	*Sematophyllum demissum*	a Moss				S2?	3 Sensitive	1	67.6 ± 2.0	NS
N	*Sematophyllum marylandicum*	a Moss				S2?	3 Sensitive	2	64.1 ± 6.0	NS
N	*Sphagnum subnitens*	Lustrous Peat Moss				S2?	3 Sensitive	1	27.3 ± 2.0	NS
N	*Timmia megapolitana*	Metropolitan Timmia Moss				S2?	3 Sensitive	1	88.4 ± 0.0	NS
N	*Zygodon conoideus*	a Moss				S2?	3 Sensitive	1	20.4 ± 5.0	NS
N	*Cyrto-hypnum minutulum*	Tiny Cedar Moss				S2?	3 Sensitive	1	23.9 ± 0.0	NS
N	*Cyrtomnium hymenophylloides*	Short-pointed Lantern Moss				S2?	3 Sensitive	2	71.5 ± 5.0	NS
N	*Pseudevernia cladonia*	Ghost Antler Lichen	Not At Risk			S2S3	3 Sensitive	6	24.5 ± 0.0	NS
N	*Calliergon giganteum*	Giant Spear Moss				S2S3	3 Sensitive	1	93.9 ± 3.0	NS
N	*Ephemerum serratum*	a Moss				S2S3	3 Sensitive	1	87.8 ± 3.0	NS
N	*Leucodon andrewsianus*	a Moss				S2S3	3 Sensitive	6	23.9 ± 0.0	NS
N	*Myurella julacea*	Small Mouse-tail Moss				S2S3	3 Sensitive	1	81.2 ± 0.0	NS
N	*Pleuridium subulatum*	a Moss				S2S3	3 Sensitive	1	72.3 ± 10.0	NS
N	*Tortula truncata*	a Moss				S2S3	3 Sensitive	1	38.3 ± 300.0	NS
N	*Sphagnum wulfianum*	Wulf's Peat Moss				S2S3	3 Sensitive	10	13.4 ± 0.0	NS
N	*Tetraplodon angustatus*	Toothed-leaved Nitrogen Moss				S2S3	3 Sensitive	1	27.3 ± 2.0	NS
N	*Limprichtia revolvens*	a Moss				S2S3	3 Sensitive	1	93.3 ± 0.0	NS
N	*Hylocomiastrum pyrenaicum*	a Feather Moss				S2S3	3 Sensitive	1	75.2 ± 0.0	NS
N	*Collema nigrescens*	Blistered Tarpaper Lichen				S2S3	3 Sensitive	3	15.7 ± 0.0	NS
N	*Leptogium teretiusculum*	Beaded Jellyskin Lichen				S2S3	3 Sensitive	2	49.7 ± 0.0	NS
N	*Leptogium corticola*	Blistered Jellyskin Lichen				S2S3	3 Sensitive	13	6.3 ± 0.0	NS
N	*Physconia detersa*	Bottlebrush Frost Lichen				S2S3	3 Sensitive	1	8.5 ± 0.0	NS
N	*Peltigera collina*	Tree Pelt Lichen				S2S3	3 Sensitive	4	20.9 ± 0.0	NS
N	*Cladina stygia*	Black-footed Reindeer Lichen				S2S3	3 Sensitive	2	9.7 ± 0.0	NS
N	*Usnea flammea*	Coastal Bushy Beard Lichen				S2S3	3 Sensitive	1	83.6 ± 1.0	NS
N	*Anzia colpodes*	Black-foam Lichen	Threatened			S3?	3 Sensitive	2	8.5 ± 0.0	NS
N	*Sticta fuliginosa*	Peppered Moon Lichen				S3?	3 Sensitive	11	6.0 ± 0.0	NS
N	*Nephroma bellum*	Naked Kidney Lichen				S3?	3 Sensitive	1	38.4 ± 0.0	NS
N	*Collema furfuraceum*	Blistered Tarpaper Lichen				S3?	3 Sensitive	2	23.8 ± 0.0	NS
P	*Clethra alnifolia*	Coast Pepper-Bush	Special Concern	Special Concern	Vulnerable	S1	1 At Risk	2	71.8 ± 0.0	NS
P	*Helianthemum canadense*	Long-branched Frostweed			Endangered	S1	1 At Risk	2	88.2 ± 1.0	NS
P	*Cypripedium arietinum*	Ram's-Head Lady's-Slipper			Endangered	S1	1 At Risk	56	95.6 ± 2.0	NS
P	*Thuja occidentalis*	Eastern White Cedar			Vulnerable	S1	1 At Risk	7	56.6 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)	Prov
P	*Sanicula odorata*	Clustered Sanicle				S1	2 May Be At Risk	7	61.9 ± 0.0	NS
P	*Zizia aurea*	Golden Alexanders				S1	2 May Be At Risk	41	21.4 ± 1.0	NS
P	*Antennaria parlinii*	a Pussytoes				S1	2 May Be At Risk	6	73.2 ± 7.0	NS
P	*Cynoglossum virginianum var. boreale*	Wild Comfrey				S1	2 May Be At Risk	3	99.5 ± 1.0	NS
P	*Cochlearia tridactylites*	Limestone Scurvy-grass				S1	2 May Be At Risk	8	47.1 ± 0.0	NS
P	*Lobelia spicata*	Pale-Spiked Lobelia				S1	2 May Be At Risk	1	75.9 ± 7.0	NS
P	*Hudsonia tomentosa*	Woolly Beach-heath				S1	2 May Be At Risk	5	76.1 ± 7.0	NS
P	*Desmodium canadense*	Canada Tick-trefoil				S1	2 May Be At Risk	20	54.2 ± 0.0	NS
P	*Desmodium glutinosum*	Large Tick-Trefoil				S1	2 May Be At Risk	4	91.8 ± 0.0	NS
P	*Ribes americanum*	Wild Black Currant				S1	5 Undetermined	3	58.1 ± 5.0	NS
P	*Proserpinaca intermedia*	Intermediate Mermaidweed				S1	2 May Be At Risk	1	40.4 ± 0.0	NS
P	*Fraxinus pennsylvanica*	Red Ash				S1	2 May Be At Risk	3	83.0 ± 5.0	NS
P	*Polygala polygama*	Racemed Milkwort				S1	5 Undetermined	1	73.9 ± 1.0	NS
P	*Polygonum careyi*	Carey's Smartweed				S1	5 Undetermined	1	40.5 ± 3.0	NS
P	*Montia fontana*	Water Blinks				S1	2 May Be At Risk	1	75.3 ± 1.0	NS
P	*Lysimachia quadrifolia*	Whorled Yellow Loosestrife				S1	5 Undetermined	1	93.5 ± 0.0	NS
P	*Ranunculus pensylvanicus*	Pennsylvania Buttercup				S1	2 May Be At Risk	1	98.2 ± 0.0	NS
P	*Salix myrtillifolia*	Blueberry Willow				S1	2 May Be At Risk	1	31.3 ± 0.0	NS
P	*Salix serissima*	Autumn Willow				S1	2 May Be At Risk	1	31.3 ± 0.0	NS
P	*Dirca palustris*	Eastern Leatherwood				S1	2 May Be At Risk	14	53.4 ± 1.0	NS
P	*Boehmeria cylindrica*	Small-spike False-nettle				S1	2 May Be At Risk	2	52.7 ± 0.0	NS
P	*Pilea pumila*	Dwarf Clearweed				S1	2 May Be At Risk	4	47.3 ± 0.0	NS
P	*Carex garberi*	Garber's Sedge				S1	2 May Be At Risk	4	53.1 ± 0.0	NS
P	*Carex gynocrates*	Northern Bog Sedge				S1	2 May Be At Risk	2	31.3 ± 0.0	NS
P	*Carex haydenii*	Hayden's Sedge				S1	2 May Be At Risk	2	59.5 ± 1.0	NS
P	*Carex pellita*	Woolly Sedge				S1	2 May Be At Risk	10	18.3 ± 10.0	NS
P	*Carex plantaginea*	Plantain-Leaved Sedge				S1	2 May Be At Risk	3	35.9 ± 0.0	NS
P	*Carex viridula var. saxilittoralis*	Greenish Sedge				S1	2 May Be At Risk	4	25.0 ± 0.0	NS
P	*Carex grisea*	Inflated Narrow-leaved Sedge				S1	2 May Be At Risk	6	96.8 ± 0.0	NS
P	*Cyperus lupulinus ssp. macilentus*	Hop Flatsedge				S1	2 May Be At Risk	3	78.4 ± 0.0	NS
P	*Iris prismatica*	Slender Blue Flag				S1	2 May Be At Risk	2	67.3 ± 7.0	NS
P	*Juncus vaseyi*	Vasey Rush				S1	2 May Be At Risk	1	52.7 ± 0.0	NS
P	*Allium tricoccum*	Wild Leek				S1	2 May Be At Risk	8	58.0 ± 0.0	NS
P	*Bromus latiglumis*	Broad-Glumed Brome				S1	2 May Be At Risk	28	32.4 ± 0.0	NS
P	*Cinna arundinacea*	Sweet Wood Reed Grass				S1	2 May Be At Risk	19	31.8 ± 0.0	NS
P	*Elymus wiegandii*	Wiegand's Wild Rye				S1	2 May Be At Risk	17	31.8 ± 0.0	NS
P	*Elymus hystrix var. bigeloviana*	Spreading Wild Rye				S1	2 May Be At Risk	10	46.5 ± 1.0	NS
P	*Festuca subverticillata*	Nodding Fescue				S1	2 May Be At Risk	2	69.9 ± 1.0	NS
P	*Potamogeton nodosus*	Long-leaved Pondweed				S1	2 May Be At Risk	1	62.0 ± 5.0	NS
P	*Adiantum pedatum*	Northern Maidenhair Fern				S1	2 May Be At Risk	7	59.8 ± 1.0	NS
P	*Botrychium lunaria*	Common Moonwort				S1	2 May Be At Risk	3	58.6 ± 2.0	NS
P	*Selaginella rupestris*	Rock Spikemoss				S1	2 May Be At Risk	1	98.8 ± 0.0	NS
P	*Solidago hispida*	Hairy Goldenrod				S1?	2 May Be At Risk	2	30.0 ± 7.0	NS
P	*Suaeda rolandii*	Roland's Sea-Blite				S1?	2 May Be At Risk	2	99.1 ± 2.0	NS
P	*Crataegus robinsonii*	Robinson's Hawthorn				S1?	5 Undetermined	3	58.1 ± 5.0	NS
P	*Crataegus submollis*	Quebec Hawthorn				S1?	5 Undetermined	7	62.0 ± 7.0	NS
P	*Carex pensylvanica*	Pennsylvania Sedge				S1?	2 May Be At Risk	1	59.9 ± 0.0	NS

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P	*Dichanthelium acuminatum var. lindheimeri*	Woolly Panic Grass				S1?	5 Undetermined	1	67.0 ± 0.0	NS
P	*Fraxinus nigra*	Black Ash			Threatened	S1S2	1 At Risk	64	30.8 ± 0.0	NS
P	*Rudbeckia laciniata*	Cut-Leaved Coneflower				S1S2	2 May Be At Risk	8	49.0 ± 7.0	NS
P	*Chenopodium rubrum*	Red Pigweed				S1S2	2 May Be At Risk	4	25.6 ± 2.0	NS
P	*Anemone virginiana var. alba*	Virginia Anemone				S1S2	3 Sensitive	5	54.9 ± 5.0	NS
P	*Hepatica nobilis var. obtusa*	Round-lobed Hepatica				S1S2	2 May Be At Risk	23	31.2 ± 1.0	NS
P	*Ranunculus sceleratus*	Cursed Buttercup				S1S2	2 May Be At Risk	20	68.6 ± 0.0	NS
P	*Parnassia palustris var. parviflora*	Marsh Grass-of-Parnassus				S1S2	2 May Be At Risk	1	99.1 ± 1.0	NS
P	*Gratiola neglecta*	Clammy Hedge-Hyssop				S1S2	3 Sensitive	5	38.2 ± 0.0	NS
P	*Juncus greenei*	Greene's Rush				S1S2	2 May Be At Risk	4	65.0 ± 1.0	NS
P	*Sparganium hyperboreum*	Northern Burreed				S1S2	3 Sensitive	1	94.0 ± 0.0	NS
P	*Carex vacillans*	Estuarine Sedge				S1S3	5 Undetermined	2	32.3 ± 0.0	NS
P	*Isoetes prototypus*	Prototype Quillwort	Special Concern	Special Concern	Vulnerable	S2	3 Sensitive	6	91.5 ± 0.0	NS
P	*Floerkea proserpinacoides*	False Mermaidweed	Not At Risk			S2	3 Sensitive	2	54.3 ± 7.0	NS
P	*Conioselinum chinense*	Chinese Hemlock-parsley				S2	3 Sensitive	2	61.7 ± 5.0	NS
P	*Osmorhiza longistylis*	Smooth Sweet Cicely				S2	2 May Be At Risk	17	51.1 ± 0.0	NS
P	*Erigeron philadelphicus*	Philadelphia Fleabane				S2	3 Sensitive	3	21.1 ± 1.0	NS
P	*Hieracium robinsonii*	Robinson's Hawkweed				S2	3 Sensitive	3	55.8 ± 0.0	NS
P	*Lactuca hirsuta var. sanguinea*	Hairy Lettuce				S2	3 Sensitive	1	49.4 ± 7.0	NS
P	*Senecio pseudoarnica*	Seabeach Ragwort				S2	3 Sensitive	23	23.9 ± 0.0	NS
P	*Symphyotrichum undulatum*	Wavy-leaved Aster				S2	3 Sensitive	5	76.5 ± 7.0	NS
P	*Symphyotrichum ciliolatum*	Fringed Blue Aster				S2	3 Sensitive	15	29.1 ± 3.0	NS
P	*Impatiens pallida*	Pale Jewelweed				S2	3 Sensitive	1	81.0 ± 7.0	NS
P	*Caulophyllum thalictroides*	Blue Cohosh				S2	2 May Be At Risk	52	32.4 ± 0.0	NS
P	*Betula michauxii*	Michaux's Dwarf Birch				S2	3 Sensitive	22	13.2 ± 0.0	NS
P	*Arabis drummondii*	Drummond's Rockcress				S2	3 Sensitive	6	53.3 ± 0.0	NS
P	*Cardamine parviflora var. arenicola*	Small-flowered Bittercress				S2	3 Sensitive	4	25.5 ± 0.0	NS
P	*Stellaria humifusa*	Saltmarsh Starwort				S2	3 Sensitive	5	20.2 ± 0.0	NS
P	*Stellaria longifolia*	Long-leaved Starwort				S2	3 Sensitive	11	29.3 ± 0.0	NS
P	*Hudsonia ericoides*	Pinebarren Golden Heather				S2	3 Sensitive	11	71.3 ± 2.0	NS
P	*Hypericum majus*	Large St John's-wort				S2	3 Sensitive	2	71.7 ± 7.0	NS
P	*Myriophyllum farwellii*	Farwell's Water Milfoil				S2	3 Sensitive	9	31.2 ± 0.0	NS
P	*Myriophyllum verticillatum*	Whorled Water Milfoil				S2	3 Sensitive	3	32.4 ± 0.0	NS
P	*Oenothera fruticosa ssp. glauca*	Narrow-leaved Evening Primrose				S2	5 Undetermined	4	58.2 ± 7.0	NS
P	*Rumex salicifolius var. mexicanus*	Triangular-valve Dock				S2	3 Sensitive	2	41.0 ± 0.0	NS
P	*Primula mistassinica*	Mistassini Primrose				S2	3 Sensitive	16	31.1 ± 1.0	NS
P	*Anemone canadensis*	Canada Anemone				S2	2 May Be At Risk	1	92.1 ± 7.0	NS
P	*Anemone quinquefolia*	Wood Anemone				S2	3 Sensitive	17	31.3 ± 0.0	NS
P	*Anemone virginiana*	Virginia Anemone				S2	3 Sensitive	19	54.9 ± 0.0	NS
P	*Anemone virginiana var. virginiana*	Virginia Anemone				S2	3 Sensitive	2	53.9 ± 7.0	NS

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P	*Caltha palustris*	Yellow Marsh Marigold				S2	3 Sensitive	1	78.7 ± 0.0	NS
P	*Galium boreale*	Northern Bedstraw				S2	2 May Be At Risk	2	96.8 ± 5.0	NS
P	*Galium labradoricum*	Labrador Bedstraw				S2	3 Sensitive	34	30.8 ± 0.0	NS
P	*Salix pedicellaris*	Bog Willow				S2	3 Sensitive	35	20.5 ± 1.0	NS
P	*Salix sericea*	Silky Willow				S2	2 May Be At Risk	1	62.2 ± 1.0	NS
P	*Tiarella cordifolia*	Heart-leaved Foamflower				S2	3 Sensitive	217	29.6 ± 5.0	NS
P	*Agalinis maritima*	Saltmarsh Agalinis				S2	3 Sensitive	1	68.8 ± 0.0	NS
P	*Viola nephrophylla*	Northern Bog Violet				S2	3 Sensitive	8	21.4 ± 1.0	NS
P	*Carex bebbii*	Bebb's Sedge				S2	3 Sensitive	9	54.3 ± 0.0	NS
P	*Carex castanea*	Chestnut Sedge				S2	2 May Be At Risk	3	31.3 ± 0.0	NS
P	*Carex comosa*	Bearded Sedge				S2	3 Sensitive	2	67.9 ± 0.0	NS
P	*Carex hystericina*	Porcupine Sedge				S2	2 May Be At Risk	1	86.2 ± 0.0	NS
P	*Carex tenera*	Tender Sedge				S2	3 Sensitive	6	62.2 ± 1.0	NS
P	*Carex tuckermanii*	Tuckerman's Sedge				S2	3 Sensitive	22	68.7 ± 0.0	NS
P	*Eriophorum gracile*	Slender Cottongrass				S2	3 Sensitive	4	55.3 ± 7.0	NS
P	*Vallisneria americana*	Wild Celery				S2	2 May Be At Risk	4	35.7 ± 7.0	NS
P	*Allium schoenoprasum var. sibiricum*	Wild Chives				S2	2 May Be At Risk	1	60.7 ± 7.0	NS
P	*Lilium canadense*	Canada Lily				S2	2 May Be At Risk	97	32.7 ± 0.0	NS
P	*Najas gracillima*	Thread-Like Naiad				S2	3 Sensitive	2	89.9 ± 0.0	NS
P	*Cypripedium parviflorum var. pubescens*	Yellow Lady's-slipper				S2	3 Sensitive	7	73.7 ± 7.0	NS
P	*Cypripedium reginae*	Showy Lady's-Slipper				S2	2 May Be At Risk	27	21.4 ± 1.0	NS
P	*Goodyera pubescens*	Downy Rattlesnake-Plantain				S2	3 Sensitive	7	46.2 ± 1.0	NS
P	*Platanthera flava var. herbiola*	Pale Green Orchid				S2	5 Undetermined	8	58.2 ± 7.0	NS
P	*Platanthera macrophylla*	Large Round-Leaved Orchid				S2	3 Sensitive	11	66.6 ± 1.0	NS
P	*Spiranthes lucida*	Shining Ladies'-Tresses				S2	2 May Be At Risk	23	50.8 ± 1.0	NS
P	*Dichanthelium linearifolium*	Narrow-leaved Panic Grass				S2	3 Sensitive	4	53.3 ± 0.0	NS
P	*Piptatherum canadense*	Canada Rice Grass				S2	3 Sensitive	8	40.5 ± 3.0	NS
P	*Potamogeton friesii*	Fries' Pondweed				S2	2 May Be At Risk	2	56.0 ± 5.0	NS
P	*Potamogeton richardsonii*	Richardson's Pondweed				S2	2 May Be At Risk	5	65.3 ± 1.0	NS
P	*Asplenium trichomanes-ramosum*	Green Spleenwort				S2	3 Sensitive	1	96.2 ± 7.0	NS
P	*Dryopteris fragrans var. remotiuscula*	Fragrant Wood Fern				S2	3 Sensitive	4	62.6 ± 7.0	NS
P	*Woodsia glabella*	Smooth Cliff Fern				S2	3 Sensitive	1	86.4 ± 1.0	NS
P	*Symphyotrichum boreale*	Boreal Aster				S2?	3 Sensitive	3	60.7 ± 7.0	NS
P	*Cuscuta cephalanthi*	Buttonbush Dodder				S2?	5 Undetermined	2	72.8 ± 1.0	NS
P	*Epilobium coloratum*	Purple-veined Willowherb				S2?	3 Sensitive	2	73.5 ± 1.0	NS
P	*Carex peckii*	White-Tinged Sedge				S2?	2 May Be At Risk	4	46.3 ± 0.0	NS
P	*Eleocharis ovata*	Ovate Spikerush				S2?	3 Sensitive	5	69.4 ± 0.0	NS
P	*Scirpus pedicellatus*	Stalked Bulrush				S2?	3 Sensitive	7	33.9 ± 0.0	NS
P	*Potamogeton pulcher*	Spotted Pondweed			Vulnerable	S2S3	3 Sensitive	3	20.6 ± 2.0	NS
P	*Sagina nodosa*	Knotted Pearlwort				S2S3	4 Secure	38	24.7 ± 0.0	NS
P	*Sagina nodosa ssp. borealis*	Knotted Pearlwort				S2S3	4 Secure	7	23.8 ± 0.0	NS
P	*Ceratophyllum echinatum*	Prickly Hornwort				S2S3	3 Sensitive	2	32.8 ± 0.0	NS
P	*Hypericum dissimulatum*	Disguised St John's-wort				S2S3	3 Sensitive	3	70.6 ± 0.0	NS

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P	*Triosteum aurantiacum*	Orange-fruited Tinker's Weed				S2S3	3 Sensitive	82	51.1 ± 0.0	NS
P	*Shepherdia canadensis*	Soapberry				S2S3	3 Sensitive	19	92.1 ± 7.0	NS
P	*Empetrum eamesii ssp. atropurpureum*	Pink Crowberry				S2S3	3 Sensitive	4	71.5 ± 7.0	NS
P	*Empetrum eamesii ssp. eamesii*	Pink Crowberry				S2S3	3 Sensitive	5	71.5 ± 7.0	NS
P	*Chamaesyce polygonifolia*	Seaside Spurge				S2S3	3 Sensitive	1	83.9 ± 2.0	NS
P	*Halenia deflexa*	Spurred Gentian				S2S3	3 Sensitive	4	64.5 ± 1.0	NS
P	*Hedeoma pulegioides*	American False Pennyroyal				S2S3	3 Sensitive	4	16.9 ± 5.0	NS
P	*Polygala sanguinea*	Blood Milkwort				S2S3	3 Sensitive	16	33.4 ± 5.0	NS
P	*Polygonum buxiforme*	Small's Knotweed				S2S3	5 Undetermined	3	60.7 ± 7.0	NS
P	*Plantago rugelii*	Rugel's Plantain				S2S3	4 Secure	7	34.3 ± 0.0	NS
P	*Potentilla canadensis*	Canada Cinquefoil				S2S3	3 Sensitive	1	61.5 ± 5.0	NS
P	*Galium aparine*	Common Bedstraw				S2S3	3 Sensitive	17	22.1 ± 0.0	NS
P	*Salix pellita*	Satiny Willow				S2S3	3 Sensitive	3	38.5 ± 0.0	NS
P	*Veronica serpyllifolia ssp. humifusa*	Thyme-Leaved Speedwell				S2S3	3 Sensitive	1	47.5 ± 0.0	NS
P	*Carex adusta*	Lesser Brown Sedge				S2S3	3 Sensitive	7	39.8 ± 7.0	NS
P	*Carex hirtifolia*	Pubescent Sedge				S2S3	3 Sensitive	47	31.0 ± 4.0	NS
P	*Carex houghtoniana*	Houghton's Sedge				S2S3	3 Sensitive	1	46.8 ± 1.0	NS
P	*Carex swanii*	Swan's Sedge				S2S3	3 Sensitive	2	66.7 ± 0.0	NS
P	*Eleocharis olivacea*	Yellow Spikerush				S2S3	3 Sensitive	6	35.4 ± 0.0	NS
P	*Elodea canadensis*	Canada Waterweed				S2S3	4 Secure	5	52.9 ± 0.0	NS
P	*Coeloglossum viride var. virescens*	Long-bracted Frog Orchid				S2S3	2 May Be At Risk	1	90.9 ± 0.0	NS
P	*Cypripedium parviflorum*	Yellow Lady's-slipper				S2S3	3 Sensitive	124	60.8 ± 0.0	NS
P	*Poa glauca*	Glaucous Blue Grass				S2S3	3 Sensitive	1	91.8 ± 1.0	NS
P	*Potamogeton zosteriformis*	Flat-stemmed Pondweed				S2S3	3 Sensitive	13	6.4 ± 7.0	NS
P	*Botrychium lanceolatum var. angustisegmentum*	Lance-Leaf Grape-Fern				S2S3	3 Sensitive	4	38.5 ± 5.0	NS
P	*Botrychium simplex*	Least Moonwort				S2S3	3 Sensitive	2	42.0 ± 0.0	NS
P	*Ophioglossum pusillum*	Northern Adder's-tongue				S2S3	3 Sensitive	4	55.3 ± 7.0	NS
P	*Angelica atropurpurea*	Purple-stemmed Angelica				S3	4 Secure	1	35.0 ± 0.0	NS
P	*Erigeron hyssopifolius*	Hyssop-leaved Fleabane				S3	3 Sensitive	19	65.1 ± 0.0	NS
P	*Hieracium paniculatum*	Panicled Hawkweed				S3	4 Secure	6	64.1 ± 0.0	NS
P	*Megalodonta beckii*	Water Beggarticks				S3	4 Secure	12	35.5 ± 5.0	NS
P	*Packera paupercula*	Balsam Groundsel				S3	4 Secure	36	53.1 ± 0.0	NS
P	*Campanula aparinoides*	Marsh Bellflower				S3	3 Sensitive	34	32.9 ± 0.0	NS
P	*Minuartia groenlandica*	Greenland Stitchwort				S3	3 Sensitive	21	35.7 ± 7.0	NS
P	*Viburnum edule*	Squashberry				S3	3 Sensitive	2	67.0 ± 0.0	NS
P	*Empetrum eamesii*	Pink Crowberry				S3	3 Sensitive	78	71.7 ± 7.0	NS
P	*Vaccinium boreale*	Northern Blueberry				S3	3 Sensitive	3	28.1 ± 0.0	NS
P	*Vaccinium caespitosum*	Dwarf Bilberry				S3	4 Secure	55	36.4 ± 0.0	NS
P	*Vaccinium uliginosum*	Alpine Bilberry				S3	3 Sensitive	3	78.8 ± 1.0	NS
P	*Bartonia virginica*	Yellow Bartonia				S3	4 Secure	24	62.2 ± 7.0	NS
P	*Proserpinaca palustris*	Marsh Mermaidweed				S3	4 Secure	10	21.0 ± 1.0	NS
P	*Proserpinaca palustris var. crebra*	Marsh Mermaidweed				S3	4 Secure	25	29.4 ± 2.0	NS
P	*Proserpinaca pectinata*	Comb-leaved Mermaidweed				S3	4 Secure	3	28.9 ± 1.0	NS
P	*Teucrium canadense*	Canada Germander				S3	3 Sensitive	8	49.9 ± 5.0	NS

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P	*Epilobium strictum*	Downy Willowherb				S3	3 Sensitive	2	55.6 ± 0.0	NS
P	*Polygonum pensylvanicum*	Pennsylvania Smartweed				S3	4 Secure	13	26.4 ± 1.0	NS
P	*Polygonum scandens*	Climbing False Buckwheat				S3	3 Sensitive	29	30.9 ± 0.0	NS
P	*Samolus valerandi ssp. parviflorus*	Seaside Brookweed				S3	3 Sensitive	7	72.5 ± 5.0	NS
P	*Pyrola asarifolia*	Pink Pyrola				S3	4 Secure	8	35.7 ± 50.0	NS
P	*Pyrola minor*	Lesser Pyrola				S3	3 Sensitive	1	73.1 ± 0.0	NS
P	*Ranunculus gmelinii*	Gmelin's Water Buttercup				S3	4 Secure	24	21.4 ± 5.0	NS
P	*Rhamnus alnifolia*	Alder-leaved Buckthorn				S3	4 Secure	51	19.5 ± 1.0	NS
P	*Agrimonia gryposepala*	Hooked Agrimony				S3	4 Secure	102	31.4 ± 5.0	NS
P	*Salix petiolaris*	Meadow Willow				S3	4 Secure	18	30.4 ± 0.0	NS
P	*Geocaulon lividum*	Northern Comandra				S3	4 Secure	2	21.0 ± 5.0	NS
P	*Agalinis neoscotica*	Nova Scotia Agalinis				S3	4 Secure	4	69.2 ± 0.0	NS
P	*Limosella australis*	Southern Mudwort				S3	4 Secure	6	28.7 ± 5.0	NS
P	*Lindernia dubia*	Yellow-seeded False Pimperel				S3	4 Secure	14	58.7 ± 0.0	NS
P	*Laportea canadensis*	Canada Wood Nettle				S3	3 Sensitive	33	33.7 ± 0.0	NS
P	*Verbena hastata*	Blue Vervain				S3	4 Secure	107	47.1 ± 0.0	NS
P	*Carex eburnea*	Bristle-leaved Sedge				S3	3 Sensitive	6	61.7 ± 0.0	NS
P	*Carex lupulina*	Hop Sedge				S3	4 Secure	34	30.8 ± 0.0	NS
P	*Carex rosea*	Rosy Sedge				S3	4 Secure	22	38.5 ± 0.0	NS
P	*Carex wiegandii*	Wiegand's Sedge				S3	3 Sensitive	2	39.2 ± 2.0	NS
P	*Eleocharis nitida*	Quill Spikerush				S3	4 Secure	1	80.3 ± 5.0	NS
P	*Juncus subcaudatus var. planisepalus*	Woods-Rush				S3	3 Sensitive	12	19.1 ± 1.0	NS
P	*Juncus dudleyi*	Dudley's Rush				S3	4 Secure	40	22.2 ± 1.0	NS
P	*Goodyera repens*	Lesser Rattlesnake-plantain				S3	3 Sensitive	2	23.9 ± 0.0	NS
P	*Listera australis*	Southern Twayblade				S3	4 Secure	83	29.1 ± 0.0	NS
P	*Platanthera grandiflora*	Large Purple Fringed Orchid				S3	4 Secure	96	31.5 ± 0.0	NS
P	*Platanthera hookeri*	Hooker's Orchid				S3	4 Secure	4	90.6 ± 0.0	NS
P	*Platanthera orbiculata*	Small Round-leaved Orchid				S3	4 Secure	17	60.7 ± 7.0	NS
P	*Spiranthes ochroleuca*	Yellow Ladies'-tresses				S3	4 Secure	7	72.2 ± 0.0	NS
P	*Alopecurus aequalis*	Short-awned Foxtail				S3	4 Secure	10	54.9 ± 1.0	NS
P	*Dichanthelium clandestinum*	Deer-tongue Panic Grass				S3	4 Secure	158	44.6 ± 4.0	NS
P	*Potamogeton obtusifolius*	Blunt-leaved Pondweed				S3	4 Secure	8	69.7 ± 0.0	NS
P	*Sparganium natans*	Small Burreed				S3	4 Secure	10	29.1 ± 1.0	NS
P	*Equisetum pratense*	Meadow Horsetail				S3	3 Sensitive	10	47.7 ± 0.0	NS
P	*Equisetum variegatum*	Variegated Horsetail				S3	4 Secure	23	37.4 ± 0.0	NS
P	*Isoetes acadiensis*	Acadian Quillwort				S3	3 Sensitive	4	51.5 ± 14.0	NS
P	*Huperzia appalachiana*	Appalachian Fir-Clubmoss				S3	3 Sensitive	6	65.4 ± 5.0	NS
P	*Botrychium dissectum*	Cut-leaved Moonwort				S3	4 Secure	4	49.8 ± 1.0	NS
P	*Schizaea pusilla*	Little Curlygrass Fern				S3	4 Secure	5	45.7 ± 1.0	NS
P	*Asclepias incarnata ssp. pulchra*	Swamp Milkweed				S3?	5 Undetermined	33	29.1 ± 1.0	NS
P	*Polygonum amphibium var. emersum*	Water Smartweed				S3?	5 Undetermined	1	51.1 ± 0.0	NS
P	*Amelanchier stolonifera*	Running Serviceberry				S3?	4 Secure	3	23.8 ± 0.0	NS
P	*Carex cryptolepis*	Hidden-scaled Sedge				S3?	4 Secure	8	31.3 ± 0.0	NS
P	*Carex tribuloides*	Blunt Broom Sedge				S3?	4 Secure	5	65.6 ± 0.0	NS
P	*Carex foenea*	Fernald's Hay Sedge				S3?	4 Secure	11	35.5 ± 0.0	NS
P	*Triglochin gaspensis*	Gasp ├⌐ Arrowgrass				S3?	5 Undetermined	21	23.3 ± 0.0	NS
P	*Potamogeton praelongus*	White-stemmed Pondweed				S3?	3 Sensitive	9	52.3 ± 1.0	NS
P	*Lycopodium*	Ground-Fir				S3?	4 Secure	4	62.8 ± 0.0	NS

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)	Prov
	sabinifolium									
P	*Lycopodium sitchense*	Sitka Clubmoss				S3?	4 Secure	2	61.5 ± 5.0	NS
P	*Polypodium appalachianum*	Appalachian Polypody				S3?	5 Undetermined	10	29.1 ± 0.0	NS
P	*Atriplex franktonii*	Frankton's Saltbush				S3S4	4 Secure	1	93.5 ± 2.0	NS
P	*Suaeda calceoliformis*	Horned Sea-blite				S3S4	4 Secure	7	23.7 ± 0.0	NS
P	*Vaccinium corymbosum*	Highbush Blueberry				S3S4	4 Secure	2	72.2 ± 0.0	NS
P	*Myriophyllum sibiricum*	Siberian Water Milfoil				S3S4	4 Secure	5	32.8 ± 0.0	NS
P	*Sanguinaria canadensis*	Bloodroot				S3S4	4 Secure	113	29.6 ± 5.0	NS
P	*Polygonum fowleri*	Fowler's Knotweed				S3S4	4 Secure	3	23.8 ± 0.0	NS
P	*Rumex maritimus*	Sea-Side Dock				S3S4		5	25.5 ± 0.0	NS
P	*Rumex maritimus var. fueginus*	Tierra del Fuego Dock				S3S4	4 Secure	12	25.0 ± 2.0	NS
P	*Fragaria vesca ssp. americana*	Woodland Strawberry				S3S4	4 Secure	47	29.0 ± 0.0	NS
P	*Viola sagittata var. ovata*	Arrow-Leaved Violet				S3S4	4 Secure	5	70.8 ± 0.0	NS
P	*Eriophorum russeolum*	Russet Cottongrass				S3S4	4 Secure	5	24.5 ± 0.0	NS
P	*Juncus acuminatus*	Sharp-Fruit Rush				S3S4	4 Secure	2	53.0 ± 0.0	NS
P	*Luzula parviflora*	Small-flowered Woodrush				S3S4	4 Secure	3	47.7 ± 0.0	NS
P	*Liparis loeselii*	Loesel's Twayblade				S3S4	4 Secure	3	62.8 ± 5.0	NS
P	*Panicum tuckermanii*	Tuckerman's Panic Grass				S3S4	4 Secure	3	91.3 ± 0.0	NS
P	*Trisetum spicatum*	Narrow False Oats				S3S4	4 Secure	10	53.1 ± 0.0	NS
P	*Cystopteris bulbifera*	Bulblet Bladder Fern				S3S4	4 Secure	68	28.9 ± 0.0	NS
P	*Equisetum hyemale var. affine*	Common Scouring-rush				S3S4	4 Secure	26	42.1 ± 0.0	NS
P	*Equisetum scirpoides*	Dwarf Scouring-Rush				S3S4	4 Secure	43	45.7 ± 0.0	NS
P	*Lycopodium complanatum*	Northern Clubmoss				S3S4	4 Secure	5	24.5 ± 0.0	NS
P	*Solidago simplex var. randii*	Sticky Goldenrod				SH	0.1 Extirpated	1	62.3 ± 1.0	NS
P	*Viola canadensis*	Canada Violet				SH	0.1 Extirpated	1	54.3 ± 7.0	NS
P	*Juglans cinerea*	Butternut	Endangered	Endangered		SNA	7 Exotic	1	90.2 ± 0.0	NS
P	*Liatris spicata*	Dense Blazing Star	Threatened	Threatened		SNA		1	73.1 ± 0.0	NS
P	*Bartonia paniculata ssp. paniculata*	Branched Bartonia	Threatened	Threatened		SNA		1	24.0 ± 10.0	NS

5.1 SOURCE BIBLIOGRAPHY (100 km)

The recipient of these data shall acknowledge the ACCDC and the data sources listed below in any documents, reports, publications or presentations, in which this dataset makes a significant contribution.

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1	Sollows, M.C,. 2009. NBM Science Collections databases: molluscs. New Brunswick Museum, Saint John NB, download Jan. 2009, 6951 recs (2957 in Atlantic Canada).
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Appendix I.3

ACCDC Report Touquoy Mine Site (Data Report 5433:Moose River Mines, NS)

Atlantic Canada Conservation Data Centre
Centre de données sur la conservation du Canada Atlantique

DATA REPORT 5433: Moose River Mines, NS

Prepared 10 September 2015
by J. Churchill, Data Manager

CONTENTS OF REPORT

Map 1. A 100 km buffer around the study area

1.0 PREFACE

The Atlantic Canada Conservation Data Centre (ACCDC) is part of a network of NatureServe data centres and heritage programs serving 50 states in the U.S.A, 10 provinces and 1 territory in Canada, plus several Central and South American countries. The NatureServe network is more than 30 years old and shares a common conservation data methodology. The ACCDC was founded in 1997, and maintains data for the jurisdictions of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador. Although a non-governmental agency, the ACCDC is supported by 6 federal agencies and 4 provincial governments, as well as through outside grants and data processing fees. URL: www.ACCDC.com.

Upon request and for a fee, the ACCDC queries its database and produces customized reports of the rare and endangered flora and fauna known to occur in or near a specified study area. As a supplement to that data, the ACCDC includes locations of managed areas with some level of protection, and known sites of ecological interest or sensitivity.

1.1 DATA LIST

Included datasets:

Filename	Contents
MooseRvMinesNS_5433ob.xls	All Rare and legally protected *Flora and Fauna* within 5 km of your study area
MooseRvMinesNS_5433ob100km.xls	A list of Rare and legally protected *Flora and Fauna* within 100 km of your study area
MooseRvMinesNS_5433ma.xls	All *Managed Areas* in your study area

1.2 RESTRICTIONS

The ACCDC makes a strong effort to verify the accuracy of all the data that it manages, but it shall not be held responsible for any inaccuracies in data that it provides. By accepting ACCDC data, recipients assent to the following limits of use:

a) Data is restricted to use by trained personnel who are sensitive to landowner interests and to potential threats to rare and/or endangered flora and fauna posed by the information provided.
b) Data is restricted to use by the specified Data User; any third party requiring data must make its own data request.
c) The ACCDC requires Data Users to cease using and delete data 12 months after receipt, and to make a new request for updated data if necessary at that time.
d) ACCDC data responses are restricted to the data in our Data System at the time of the data request.
e) Each record has an estimate of locational uncertainty, which must be referenced in order to understand the record's relevance to a particular location. Please see attached Data Dictionary for details.
f) ACCDC data responses are not to be construed as exhaustive inventories of taxa in an area.
g) The absence of a taxon cannot be inferred by its absence in an ACCDC data response.

1.3 ADDITIONAL INFORMATION

The attached file DataDictionary 2.1.pdf provides metadata for the data provided.

Please direct any additional questions about ACCDC data to the following individuals:

Plants, Lichens, Ranking Methods, All other Inquiries
Sean Blaney, Senior Scientist, Executive Director
Tel: (506) 364-2658
sblaney@mta.ca

Animals (Fauna)
John Klymko, Zoologist
Tel: (506) 364-2660
jklymko@mta.ca

Plant Communities
Sarah Robinson , Community Ecologist
Tel: (506) 364-2664
srobinson@mta.ca

Data Management, GIS
James Churchill, Data Manager
Tel: (902) 679-6146
jlchurchill@mta.ca

Billing
Jean Breau
Tel: (506) 364-2659
jrbreau@mta.ca

Questions on the biology of Federal Species at Risk can be directed to ACCDC: (506) 364-2657, with questions on Species at Risk regulations to: Samara Eaton, Canadian Wildlife Service (NB and PE): (506) 364-5060 or Julie McKnight, Canadian Wildlife Service (NS): (902) 426-4196.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in New Brunswick, please contact Stewart Lusk, Natural Resources: (506) 453-7110.

For provincial information about rare taxa and protected areas, or information about game animals, deer yards, old growth forests, archeological sites, fish habitat etc., in Nova Scotia, please contact Sherman Boates, NSDNR: (902) 679-6146. To determine if location-sensitive species (section 4.3) occur near your study site please contact a NSDNR Regional Biologist:

Western: Duncan Bayne
(902) 648-3536
baynedz@gov.ns.ca

Western: Donald Sam
(902) 634-7525
samdx@gov.ns.ca

Central: Shavonne Meyer
(902) 893-6353
meyersj@gov.ns.ca

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georgeka@gov.ns.ca

Eastern: Mark Pulsifer
(902) 863-7523
pulsifmd@gov.ns.ca

Eastern: Donald Anderson
(902) 295-3949
andersdg@gov.ns.ca

Eastern: Terry Power
(902) 563-3370
powertd@gov.ns.ca

For provincial information about rare taxa and protected areas, or information about game animals, fish habitat etc., in Prince Edward Island, please contact Rosemary Curley, PEI Dept. of Agriculture and Forestry: (902) 368-4807.

2.0 RARE AND ENDANGERED SPECIES

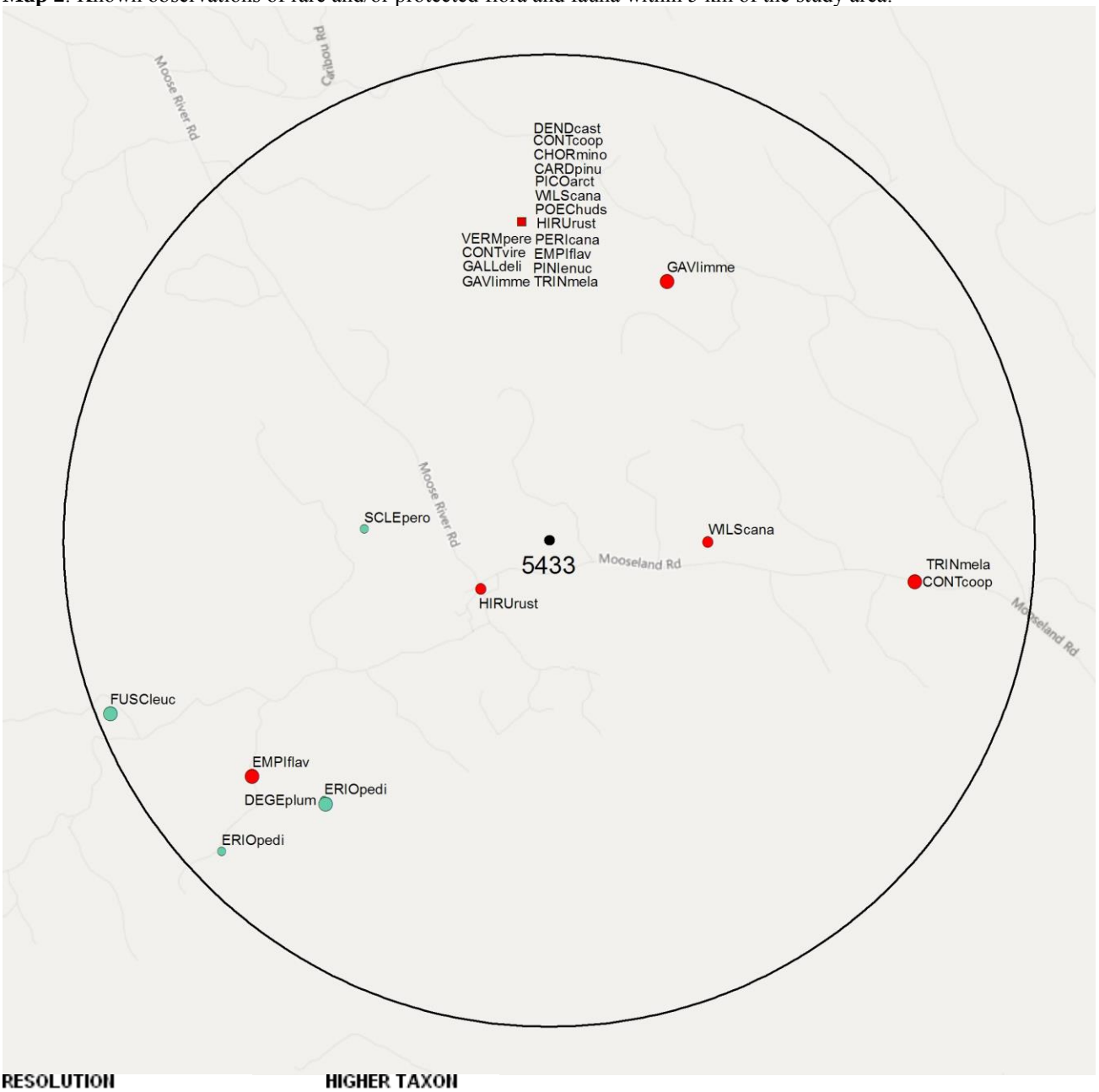
2.1 FLORA

A 5 km buffer around the study area contains no records of vascular, 9 records of 4 nonvascular flora (Map 2 and attached: *ob.xls).

2.2 FAUNA

A 5 km buffer around the study area contains 27 records of 16 vertebrate, no records of invertebrate fauna (Map 2 and attached data files - see 1.1 Data List). Please see section 4.3 to determine if 'location-sensitive' species occur near your study site.

Map 2: Known observations of rare and/or protected flora and fauna within 5 km of the study area.

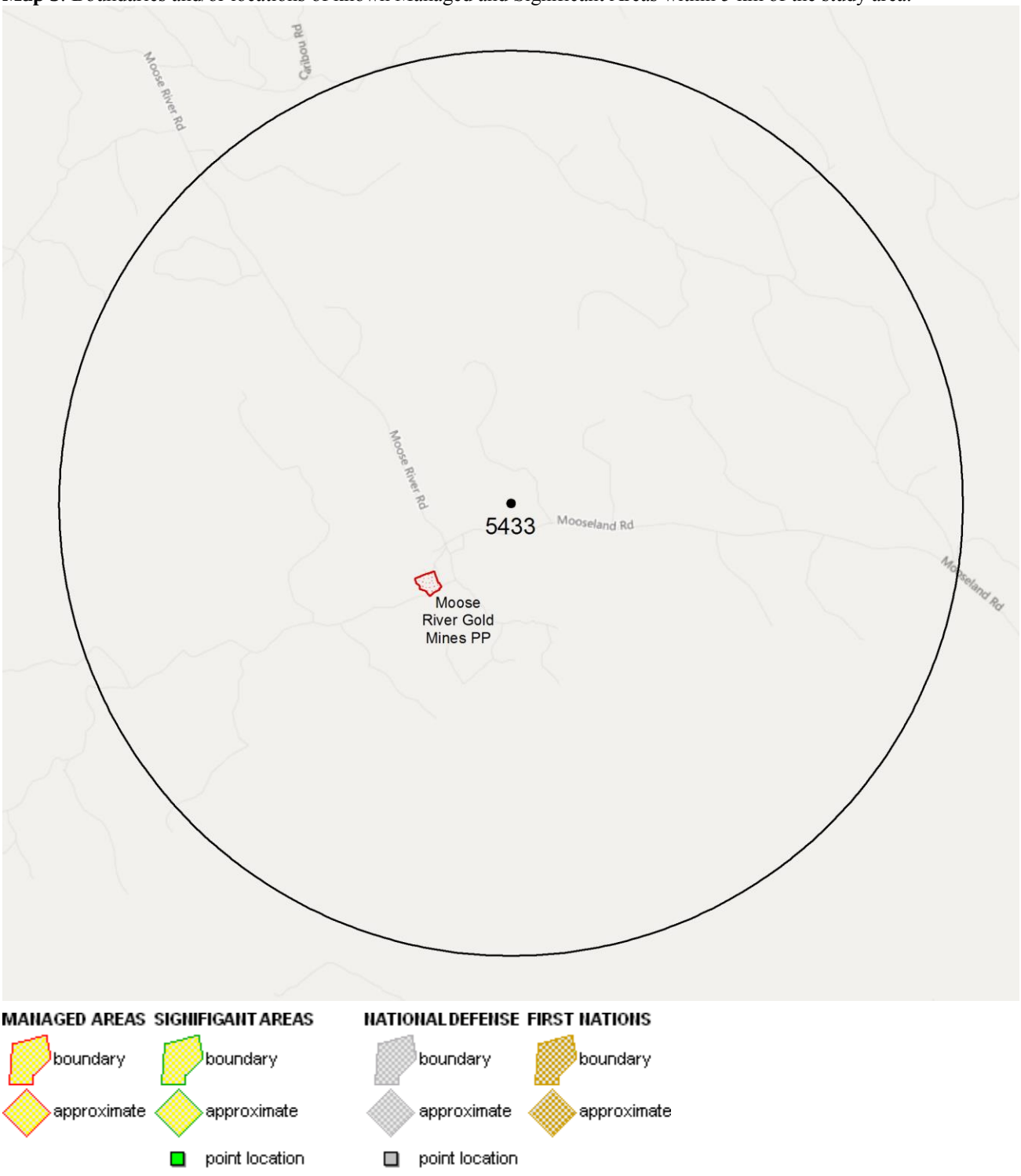


3.0 SPECIAL AREAS

3.1 MANAGED AREAS
The GIS scan identified 1 managed area in the vicinity of the study area (Map 3 and attached file: *ma*.xls)

3.2 SIGNIFICANT AREAS
The GIS scan identified no biologically significant sites in the vicinity of the study area (Map 3)

Map 3: Boundaries and/or locations of known Managed and Significant Areas within 5 km of the study area.



4.0 RARE SPECIES LISTS

Rare and/or endangered taxa (excluding "location-sensitive" species, section 4.3) within the 5 km-buffered area listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation (± the precision, in km, of the record). [P] = vascular plant, [N] = nonvascular plant, [A] = vertebrate animal, [I] = invertebrate animal, [C] = community.

4.1 FLORA

	Scientific *Name*	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
N	*Erioderma pedicellatum (Atlantic pop.)*	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	S1S2	1 At Risk	6	3.5 ± 0.0
N	*Sclerophora peronella (Nova Scotia pop.)*	Frosted Glass-whiskers Lichen - Nova Scotia pop.	Special Concern	Special Concern		S1?		1	1.9 ± 0.0
N	*Degelia plumbea*	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S2	4 Secure	1	3.6 ± 0.0
N	*Fuscopannaria leucosticta*	Rimmed Shingles Lichen				S1S2	2 May Be At Risk	1	4.9 ± 0.0

4.2 FAUNA

	Scientific *Name*	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Hirundo rustica*	Barn Swallow	Threatened		Endangered	S3B	1 At Risk	3	0.9 ± 0.0
A	*Wilsonia canadensis*	Canada Warbler	Threatened	Threatened	Endangered	S3B	1 At Risk	2	1.6 ± 0.0
A	*Chordeiles minor*	Common Nighthawk	Threatened	Threatened	Threatened	S3B	1 At Risk	1	3.3 ± 7.0
A	*Contopus cooperi*	Olive-sided Flycatcher	Threatened	Threatened	Threatened	S3B	1 At Risk	2	3.3 ± 7.0
A	*Contopus virens*	Eastern Wood-Pewee	Special Concern		Vulnerable	S3S4B	3 Sensitive	1	3.3 ± 7.0
A	*Gavia immer*	Common Loon	Not At Risk			S3B,S4N	2 May Be At Risk	3	2.9 ± 0.0
A	*Poecile hudsonica*	Boreal Chickadee				S3	3 Sensitive	3	3.3 ± 7.0
A	*Pinicola enucleator*	Pine Grosbeak				S3?B,S5N	2 May Be At Risk	1	3.3 ± 7.0
A	*Tringa melanoleuca*	Greater Yellowlegs				S3B,S5M	3 Sensitive	2	3.3 ± 7.0
A	*Picoides arcticus*	Black-backed Woodpecker				S3S4	3 Sensitive	1	3.3 ± 7.0
A	*Perisoreus canadensis*	Gray Jay				S3S4	3 Sensitive	1	3.3 ± 7.0
A	*Gallinago delicata*	Wilson's Snipe				S3S4B	3 Sensitive	1	3.3 ± 7.0
A	*Empidonax flaviventris*	Yellow-bellied Flycatcher				S3S4B	3 Sensitive	2	3.3 ± 7.0
A	*Vermivora peregrina*	Tennessee Warbler				S3S4B	3 Sensitive	1	3.3 ± 7.0
A	*Dendroica castanea*	Bay-breasted Warbler				S3S4B	3 Sensitive	2	3.3 ± 7.0
A	*Carduelis pinus*	Pine Siskin				S3S4B,S5N	3 Sensitive	1	3.3 ± 7.0

4.3 LOCATION SENSITIVE SPECIES

The Department of Natural Resources in each Maritimes province considers a number of species "location sensitive". Concern about exploitation of location-sensitive species precludes inclusion of precise coordinates in this report. Those intersecting a 5 km buffer of your study area are indicated below with "YES".

Nova Scotia

Scientific *Name*	Common Name	SARA	Prov Legal Prot	Known within 5 km of Study Site?
Fraxinus nigra	Black Ash		Threatened	No
Emydoidea blandingii	*Blanding's Turtle - Nova Scotia pop.*	Endangered	Vulnerable	No
Glyptemys insculpta	Wood Turtle	Threatened	Threatened	No
Falco peregrinus pop. 1	Peregrine Falcon - anatum/tundrius pop.	Special Concern	Vulnerable	No
Bat Hibernaculum		[Endangered][1]	[Endangered][1]	No

1 *Myotis lucifugus* (Little Brown Myotis), *Myotis septentrionalis* (Long-eared Myotis), and *Perimyotis subflavus* (Tri-colored Bat or Eastern Pipistrelle) are all Endangered under the Federal Species at Risk Act and the NS Endangered Species Act.

4.4 SOURCE BIBLIOGRAPHY

The recipient of these data shall acknowledge the ACCDC and the data sources listed below in any documents, reports, publications or presentations, in which this dataset makes a significant contribution.

# recs	CITATION
23	Lepage, D. 2014. Maritime Breeding Bird Atlas Database. Bird Studies Canada, Sackville NB, 407,838 recs.
3	Neily, T.H. & Pepper, C.; Toms, B. 2013. Nova Scotia lichen location database. Mersey Tobeatic Research Institute, 1301 records.
3	Pepper, C. 2013. 2013 rare bird and plant observations in Nova Scotia. , 181 records.
2	Cameron, R.P. 2009. Cyanolichen database. Nova Scotia Environment & Labour, 1724 recs.
2	Cameron, R.P. 2009. Erioderma pedicellatum database, 1979-2008. Dept Environment & Labour, 103 recs.
2	Neily, T.H. 2010. Erioderma Pedicellatum records 2005-09. Mersey Tobiatic Research Institute, 67 recs.
1	Benjamin, L.K. (compiler). 2012. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 4965 recs.
1	Staff, DNR 2007. Restricted & Limited Use Land Database (RLUL).

5.0 RARE SPECIES WITHIN 100 KM

A 100 km buffer around the study area contains 15214 records of 114 vertebrate and 938 records of 65 invertebrate fauna; 4281 records of 260 vascular, 541 records of 64 nonvascular flora (attached: *ob100km.xls).

Rare and/or endangered taxa within the 100 km-buffered area listed in order of concern, beginning with legally listed taxa, with the number of observations per taxon and the distance in kilometers from study area centroid to the closest observation (± the precision, in km, of the record).

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Myotis lucifugus*	Little Brown Myotis	Endangered	Endangered	Endangered	S1	1 At Risk	44	15.7 ± 0.0
A	*Myotis septentrionalis*	Northern Long-eared Myotis	Endangered	Endangered	Endangered	S1	1 At Risk	5	15.7 ± 0.0
A	*Perimyotis subflavus*	Eastern Pipistrelle	Endangered	Endangered	Endangered	S1	1 At Risk	7	40.2 ± 0.0
A	*Morone saxatilis pop. 2*	Striped Bass- Bay of Fundy pop.	Endangered			S1	2 May Be At Risk	2	39.4 ± 0.0
A	*Charadrius melodus melodus*	Piping Plover melodus ssp	Endangered	Endangered	Endangered	S1B	1 At Risk	577	29.0 ± 0.0
A	*Sterna dougallii*	Roseate Tern	Endangered	Endangered	Endangered	S1B	1 At Risk	49	31.5 ± 0.0
A	*Dermochelys coriacea (Atlantic pop.)*	Leatherback Sea Turtle - Atlantic pop.	Endangered	Endangered		S1S2N		2	95.3 ± 5.0
A	*Salmo salar pop. 1*	Atlantic Salmon - Inner Bay of Fundy pop.	Endangered	Endangered		S2	2 May Be At Risk	25	33.3 ± 0.0
A	*Calidris canutus rufa*	Red Knot rufa ssp	Endangered		Endangered	S2S3M	1 At Risk	106	35.2 ± 0.0
A	*Colinus virginianus*	Northern Bobwhite	Endangered	Endangered				1	30.9 ± 0.0
A	*Acipenser oxyrinchus*	Atlantic Sturgeon	Threatened			S1?	2 May Be At Risk	3	39.4 ± 0.0
A	*Caprimulgus vociferus*	Whip-Poor-Will	Threatened	Threatened	Threatened	S1?B	1 At Risk	9	20.5 ± 7.0
A	*Hylocichla mustelina*	Wood Thrush	Threatened			S1B	5 Undetermined	30	6.1 ± 0.0
A	*Glyptemys insculpta*	Wood Turtle	Threatened	Threatened	Threatened	S2	3 Sensitive	209	15.5 ± 1.0
A	*Chaetura pelagica*	Chimney Swift	Threatened	Threatened	Endangered	S2S3B	1 At Risk	148	21.4 ± 7.0
A	*Hirundo rustica*	Barn Swallow	Threatened		Endangered	S3B	1 At Risk	729	0.9 ± 0.0
A	*Wilsonia canadensis*	Canada Warbler	Threatened	Threatened	Endangered	S3B	1 At Risk	606	1.6 ± 0.0
A	*Chordeiles minor*	Common Nighthawk	Threatened	Threatened	Threatened	S3B	1 At Risk	351	3.3 ± 7.0
A	*Contopus cooperi*	Olive-sided Flycatcher	Threatened	Threatened	Threatened	S3B	1 At Risk	672	3.3 ± 7.0
A	*Riparia riparia*	Bank Swallow	Threatened			S3B	2 May Be At Risk	266	10.8 ± 7.0
A	*Dolichonyx oryzivorus*	Bobolink	Threatened		Vulnerable	S3S4B	3 Sensitive	356	10.8 ± 7.0
A	*Anguilla rostrata*	American Eel	Threatened			S5	4 Secure	7	27.3 ± 0.0
A	*Falco peregrinus pop. 1*	Peregrine Falcon - anatum/tundrius	Special Concern	Special Concern	Vulnerable	S1B	3 Sensitive	5	94.6 ± 0.0
A	*Passerculus sandwichensis princeps*	Savannah Sparrow princeps ssp	Special Concern	Special Concern		S1B	3 Sensitive	3	35.7 ± 0.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Bucephala islandica (Eastern pop.)*	Barrow's Goldeneye - Eastern pop.	Special Concern	Special Concern		S1N	1 At Risk	1	83.2 ± 0.0
A	*Asio flammeus*	Short-eared Owl	Special Concern	Special Concern		S1S2	2 May Be At Risk	6	59.4 ± 0.0
A	*Histrionicus histrionicus pop. 1*	Harlequin Duck - Eastern pop.	Special Concern	Special Concern	Endangered	S2N	1 At Risk	33	32.0 ± 0.0
A	*Euphagus carolinus*	Rusty Blackbird	Special Concern	Special Concern	Endangered	S2S3B	2 May Be At Risk	219	10.3 ± 7.0
A	*Phalaropus lobatus*	Red-necked Phalarope	Special Concern			S2S3M	3 Sensitive	3	53.5 ± 0.0
A	*Chelydra serpentina*	Snapping Turtle	Special Concern	Special Concern	Vulnerable	S3	3 Sensitive	69	5.2 ± 0.0
A	*Contopus virens*	Eastern Wood-Pewee	Special Concern		Vulnerable	S3S4B	3 Sensitive	489	3.3 ± 7.0
A	*Tryngites subruficollis*	Buff-breasted Sandpiper	Special Concern			SNA	8 Accidental	2	46.8 ± 0.0
A	*Sorex dispar*	Long-tailed Shrew	Not At Risk	Special Concern		S1	3 Sensitive	2	82.6 ± 5.0
A	*Accipiter cooperii*	Cooper's Hawk	Not At Risk			S1?B,SNAN	5 Undetermined	4	64.0 ± 0.0
A	*Fulica americana*	American Coot	Not At Risk			S1B	5 Undetermined	7	55.4 ± 7.0
A	*Aegolius funereus*	Boreal Owl	Not At Risk			S1B	5 Undetermined	8	21.4 ± 7.0
A	*Globicephala melas*	Long-finned Pilot Whale	Not At Risk			S2S3		1	5.4 ± 100.0
A	*Hemidactylium scutatum*	Four-toed Salamander	Not At Risk			S3	4 Secure	27	44.2 ± 0.0
A	*Sterna hirundo*	Common Tern	Not At Risk			S3B	3 Sensitive	224	25.9 ± 7.0
A	*Sialia sialis*	Eastern Bluebird	Not At Risk			S3B	3 Sensitive	42	10.8 ± 7.0
A	*Gavia immer*	Common Loon	Not At Risk			S3B,S4N	2 May Be At Risk	650	2.9 ± 0.0
A	*Accipiter gentilis*	Northern Goshawk	Not At Risk			S3S4	4 Secure	88	9.1 ± 0.0
A	*Lagenorhynchus acutus*	Atlantic White-sided Dolphin	Not At Risk			S3S4		1	96.0 ± 1.0
A	*Puma concolor pop. 1*	Cougar - Eastern pop.	Data Deficient			SH	5 Undetermined	72	9.2 ± 1.0
A	*Alces americanus*	Moose			Endangered	S1	1 At Risk	27	18.1 ± 0.0
A	*Lasiurus cinereus*	Hoary Bat				S1	2 May Be At Risk	2	40.2 ± 0.0
A	*Toxostoma rufum*	Brown Thrasher				S1?B	5 Undetermined	9	52.8 ± 7.0
A	*Vireo gilvus*	Warbling Vireo				S1?B	5 Undetermined	15	16.7 ± 7.0
A	*Tringa solitaria*	Solitary Sandpiper				S1?B,S4S5M	4 Secure	13	31.5 ± 0.0
A	*Larus delawarensis*	Ring-billed Gull				S1?B,S5N	4 Secure	6	28.9 ± 0.0
A	*Gallinula chloropus*	Common Moorhen				S1B	5 Undetermined	8	74.0 ± 7.0
A	*Progne subis*	Purple Martin				S1B	2 May Be At Risk	3	69.8 ± 7.0
A	*Fratercula arctica*	Atlantic Puffin				S1B,S4S5N	3 Sensitive	2	50.2 ± 7.0
A	*Calidris minutilla*	Least Sandpiper				S1B,S5M	4 Secure	307	35.2 ± 0.0
A	*Picoides dorsalis*	American Three-toed Woodpecker				S1S2	5 Undetermined	3	69.8 ± 7.0
A	*Passerina cyanea*	Indigo Bunting				S1S2B	5 Undetermined	7	42.4 ± 7.0
A	*Eremophila alpestris*	Horned Lark				S1S2B,S4N	4 Secure	4	34.1 ± 7.0
A	*Charadrius semipalmatus*	Semipalmated Plover				S1S2B,S5M	4 Secure	442	31.0 ± 0.0
A	*Asio otus*	Long-eared Owl				S2	2 May Be At Risk	26	16.7 ± 7.0
A	*Salmo salar*	Atlantic Salmon				S2	2 May Be At Risk	66	9.1 ± 50.0
A	*Vireo philadelphicus*	Philadelphia Vireo				S2?B	5 Undetermined	25	10.3 ± 0.0
A	*Anas acuta*	Northern Pintail				S2B	2 May Be At Risk	10	42.4 ± 7.0
A	*Anas clypeata*	Northern Shoveler				S2B	2 May Be At Risk	6	31.0 ± 7.0
A	*Anas strepera*	Gadwall				S2B	2 May Be At Risk	19	24.5 ± 0.0
A	*Rallus limicola*	Virginia Rail				S2B	5 Undetermined	25	42.4 ± 7.0
A	*Empidonax traillii*	Willow Flycatcher				S2B	3 Sensitive	17	20.5 ± 7.0
A	*Myiarchus crinitus*	Great Crested Flycatcher				S2B	2 May Be At Risk	14	46.5 ± 7.0
A	*Piranga olivacea*	Scarlet Tanager				S2B	5 Undetermined	15	25.5 ± 7.0
A	*Rissa tridactyla*	Black-legged Kittiwake				S2B,S4S5N	3 Sensitive	1	70.3 ± 0.0
A	*Bucephala clangula*	Common Goldeneye				S2B,S5N	4 Secure	118	23.8 ± 7.0
A	*Cathartes aura*	Turkey Vulture				S2S3B	3 Sensitive	10	30.9 ± 0.0
A	*Tringa semipalmata*	Willet				S2S3B	2 May Be At Risk	468	25.9 ± 7.0
A	*Pooecetes gramineus*	Vesper Sparrow				S2S3B	2 May Be At Risk	24	43.6 ± 7.0
A	*Molothrus ater*	Brown-headed Cowbird				S2S3B	4 Secure	74	10.8 ± 7.0
A	*Icterus galbula*	Baltimore Oriole				S2S3B	2 May Be At Risk	43	30.5 ± 7.0
A	*Phalaropus fulicarius*	Red Phalarope				S2S3M	3 Sensitive	1	60.3 ± 0.0
A	*Phalacrocorax carbo*	Great Cormorant				S3	3 Sensitive	56	28.6 ± 7.0
A	*Poecile hudsonica*	Boreal Chickadee				S3	3 Sensitive	545	3.3 ± 7.0
A	*Coccyzus erythropthalmus*	Black-billed Cuckoo				S3?B	2 May Be At Risk	74	6.7 ± 7.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
A	*Dendroica tigrina*	Cape May Warbler				S3?B	3 Sensitive	115	10.8 ± 7.0
A	*Pinicola enucleator*	Pine Grosbeak				S3?B,S5N	2 May Be At Risk	119	3.3 ± 7.0
A	*Podilymbus podiceps*	Pied-billed Grebe				S3B	3 Sensitive	89	20.5 ± 7.0
A	*Anas discors*	Blue-winged Teal				S3B	2 May Be At Risk	76	20.5 ± 7.0
A	*Sterna paradisaea*	Arctic Tern				S3B	2 May Be At Risk	40	30.4 ± 0.0
A	*Petrochelidon pyrrhonota*	Cliff Swallow				S3B	2 May Be At Risk	210	10.8 ± 7.0
A	*Dumetella carolinensis*	Gray Catbird				S3B	2 May Be At Risk	313	10.3 ± 7.0
A	*Mimus polyglottos*	Northern Mockingbird				S3B	4 Secure	24	47.6 ± 7.0
A	*Tringa melanoleuca*	Greater Yellowlegs				S3B,S5M	3 Sensitive	467	3.3 ± 7.0
A	*Mergus serrator*	Red-breasted Merganser				S3B,S5N	4 Secure	59	16.7 ± 7.0
A	*Pluvialis dominica*	American Golden-Plover				S3M	3 Sensitive	57	40.7 ± 0.0
A	*Numenius phaeopus hudsonicus*	Hudsonian Whimbrel				S3M	3 Sensitive	49	31.4 ± 0.0
A	*Limosa haemastica*	Hudsonian Godwit				S3M	3 Sensitive	31	46.8 ± 0.0
A	*Calidris pusilla*	Semipalmated Sandpiper				S3M	3 Sensitive	411	35.2 ± 0.0
A	*Calidris maritima*	Purple Sandpiper				S3N	3 Sensitive	31	29.2 ± 12.0
A	*Cepphus grylle*	Black Guillemot				S3S4	4 Secure	46	28.4 ± 7.0
A	*Picoides arcticus*	Black-backed Woodpecker				S3S4	3 Sensitive	156	3.3 ± 7.0
A	*Perisoreus canadensis*	Gray Jay				S3S4	3 Sensitive	423	3.3 ± 7.0
A	*Cardinalis cardinalis*	Northern Cardinal				S3S4	4 Secure	38	47.8 ± 7.0
A	*Botaurus lentiginosus*	American Bittern				S3S4B	3 Sensitive	201	10.8 ± 7.0
A	*Charadrius vociferus*	Killdeer				S3S4B	3 Sensitive	359	10.8 ± 7.0
A	*Actitis macularius*	Spotted Sandpiper				S3S4B	3 Sensitive	489	6.7 ± 7.0
A	*Gallinago delicata*	Wilson's Snipe				S3S4B	3 Sensitive	365	3.3 ± 7.0
A	*Empidonax flaviventris*	Yellow-bellied Flycatcher				S3S4B	3 Sensitive	546	3.3 ± 7.0
A	*Sayornis phoebe*	Eastern Phoebe				S3S4B	3 Sensitive	157	21.4 ± 7.0
A	*Tyrannus tyrannus*	Eastern Kingbird				S3S4B	3 Sensitive	174	10.8 ± 7.0
A	*Vermivora peregrina*	Tennessee Warbler				S3S4B	3 Sensitive	290	3.3 ± 7.0
A	*Dendroica castanea*	Bay-breasted Warbler				S3S4B	3 Sensitive	394	3.3 ± 7.0
A	*Dendroica striata*	Blackpoll Warbler				S3S4B	3 Sensitive	104	18.8 ± 0.0
A	*Wilsonia pusilla*	Wilson's Warbler				S3S4B	3 Sensitive	71	6.7 ± 7.0
A	*Pheucticus ludovicianus*	Rose-breasted Grosbeak				S3S4B	3 Sensitive	264	8.9 ± 0.0
A	*Passerella iliaca*	Fox Sparrow				S3S4B	4 Secure	84	25.9 ± 7.0
A	*Carduelis pinus*	Pine Siskin				S3S4B,S5N	3 Sensitive	314	3.3 ± 7.0
A	*Leucophaeus atricilla*	Laughing Gull				SHB	4 Secure	1	29.9 ± 0.0
A	*Morus bassanus*	Northern Gannet				SHB,S5M	4 Secure	2	31.7 ± 0.0
I	*Gomphus ventricosus*	Skillet Clubtail	Endangered			S1	2 May Be At Risk	2	47.8 ± 0.0
I	*Barnea truncata*	Atlantic Mud-piddock	Threatened					1	80.9 ± 1.0
I	*Alasmidonta varicosa*	Brook Floater	Special Concern		Threatened	S1S2	3 Sensitive	16	36.2 ± 1.0
I	*Danaus plexippus*	Monarch	Special Concern	Special Concern		S2B	3 Sensitive	59	12.5 ± 0.0
I	*Lycaena hyllus*	Bronze Copper				S1	4 Secure	4	52.2 ± 1.0
I	*Satyrium acadica*	Acadian Hairstreak				S1	5 Undetermined	6	79.0 ± 1.0
I	*Plebejus saepiolus*	Greenish Blue				S1	1 At Risk	1	67.0 ± 1.0
I	*Polygonia satyrus*	Satyr Comma				S1	3 Sensitive	2	68.0 ± 1.0
I	*Polygonia gracilis*	Hoary Comma				S1	3 Sensitive	2	49.5 ± 1.0
I	*Oeneis jutta*	Jutta Arctic				S1	2 May Be At Risk	6	74.3 ± 1.0
I	*Ophiogomphus aspersus*	Brook Snaketail				S1	2 May Be At Risk	2	86.7 ± 0.0
I	*Ophiogomphus mainensis*	Maine Snaketail				S1	2 May Be At Risk	2	41.0 ± 0.0
I	*Neurocordulia michaeli*	Broadtailed Shadowdragon				S1		26	43.0 ± 0.0
I	*Somatochlora brevicincta*	Quebec Emerald				S1	2 May Be At Risk	1	42.0 ± 0.0
I	*Somatochlora franklini*	Delicate Emerald				S1	3 Sensitive	2	74.3 ± 1.0
I	*Williamsonia fletcheri*	Ebony Boghaunter				S1	2 May Be At Risk	4	94.8 ± 0.0
I	*Coenagrion resolutum*	Taiga Bluet				S1	2 May Be At Risk	2	56.6 ± 1.0
I	*Enallagma signatum*	Orange Bluet				S1	2 May Be At Risk	3	55.6 ± 0.0
I	*Callophrys lanoraieensis*	Bog Elfin				S1S2	2 May Be At Risk	7	30.4 ± 0.0
I	*Nymphalis l-album*	Compton Tortoiseshell				S1S2	4 Secure	9	49.5 ± 1.0
I	*Ophiogomphus rupinsulensis*	Rusty Snaketail				S1S2	2 May Be At Risk	19	27.6 ± 0.0
I	*Somatochlora kennedyi*	Kennedy's Emerald				S1S2	2 May Be At Risk	3	60.0 ± 1.0

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I	*Stylurus scudderi*	Zebra Clubtail				S1S2	2 May Be At Risk	4	27.6 ± 0.0
I	*Thorybes pylades*	Northern Cloudywing				S2	3 Sensitive	13	57.6 ± 0.0
I	*Amblyscirtes hegon*	Pepper and Salt Skipper				S2	4 Secure	22	8.8 ± 0.0
I	*Amblyscirtes vialis*	Common Roadside-Skipper				S2	4 Secure	12	24.9 ± 0.0
I	*Pieris oleracea*	Mustard White				S2	3 Sensitive	55	13.0 ± 0.0
I	*Lycaena dospassosi*	Salt Marsh Copper				S2	1 At Risk	10	84.2 ± 0.0
I	*Satyrium calanus falacer*	Banded Hairstreak				S2	1 At Risk	2	67.4 ± 0.0
I	*Callophrys henrici*	Henry's Elfin				S2	4 Secure	17	14.6 ± 0.0
I	*Callophrys niphon*	Eastern Pine Elfin				S2	4 Secure	15	56.7 ± 1.0
I	*Boloria chariclea*	Arctic Fritillary				S2	3 Sensitive	3	64.8 ± 1.0
I	*Polygonia comma*	Eastern Comma				S2	1 At Risk	9	64.8 ± 1.0
I	*Aglais milberti*	Milbert's Tortoiseshell				S2	4 Secure	7	49.8 ± 1.0
I	*Gomphus descriptus*	Harpoon Clubtail				S2	3 Sensitive	1	95.4 ± 1.0
I	*Epitheca princeps*	Prince Baskettail				S2	3 Sensitive	9	50.4 ± 0.0
I	*Somatochlora forcipata*	Forcipate Emerald				S2	2 May Be At Risk	3	60.0 ± 1.0
I	*Lampsilis radiata*	Eastern Lampmussel				S2	3 Sensitive	41	26.6 ± 0.0
I	*Pantala hymenaea*	Spot-Winged Glider				S2B	3 Sensitive	7	60.0 ± 1.0
I	*Erynnis juvenalis*	Juvenal's Duskywing				S2S3	4 Secure	33	54.2 ± 0.0
I	*Alasmidonta undulata*	Triangle Floater				S2S3	4 Secure	24	18.8 ± 0.0
I	*Hesperia comma*	Common Branded Skipper				S3	4 Secure	34	23.4 ± 1.0
I	*Satyrium liparops*	Striped Hairstreak				S3	5 Undetermined	5	13.0 ± 0.0
I	*Satyrium liparops strigosum*	Striped Hairstreak				S3	3 Sensitive	2	67.4 ± 0.0
I	*Euphydryas phaeton*	Baltimore Checkerspot				S3	4 Secure	21	33.7 ± 0.0
I	*Polygonia faunus*	Green Comma				S3	4 Secure	16	42.7 ± 0.0
I	*Lethe anthedon*	Northern Pearly-Eye				S3	4 Secure	54	13.0 ± 0.0
I	*Lanthus parvulus*	Northern Pygmy Clubtail				S3	4 Secure	30	49.2 ± 5.0
I	*Ophiogomphus carolus*	Riffle Snaketail				S3	4 Secure	26	22.4 ± 1.0
I	*Aeshna clepsydra*	Mottled Darner				S3	4 Secure	12	31.2 ± 1.0
I	*Aeshna constricta*	Lance-Tipped Darner				S3	4 Secure	18	26.3 ± 1.0
I	*Boyeria grafiana*	Ocellated Darner				S3	3 Sensitive	7	56.2 ± 1.0
I	*Gomphaeschna furcillata*	Harlequin Darner				S3	3 Sensitive	5	61.6 ± 1.0
I	*Somatochlora tenebrosa*	Clamp-Tipped Emerald				S3	4 Secure	12	42.3 ± 0.0
I	*Nannothemis bella*	Elfin Skimmer				S3	4 Secure	13	44.3 ± 0.0
I	*Sympetrum danae*	Black Meadowhawk				S3	3 Sensitive	4	80.7 ± 1.0
I	*Amphiagrion saucium*	Eastern Red Damsel				S3	4 Secure	2	45.7 ± 0.0
I	*Satyrium calanus*	Banded Hairstreak				S3B	4 Secure	9	62.3 ± 5.0
I	*Polygonia interrogationis*	Question Mark				S3B	4 Secure	104	13.0 ± 0.0
I	*Feniseca tarquinius*	Harvester				S3S4	4 Secure	45	38.3 ± 1.0
I	*Callophrys polios*	Hoary Elfin				S3S4	4 Secure	16	53.3 ± 1.0
I	*Speyeria cybele*	Great Spangled Fritillary				S3S4	4 Secure	1	50.4 ± 5.0
I	*Speyeria cybele cybele*	Great Spangled Fritillary				S3S4	4 Secure	1	84.6 ± 0.0
I	*Speyeria aphrodite*	Aphrodite Fritillary				S3S4	4 Secure	12	49.5 ± 1.0
I	*Polygonia progne*	Grey Comma				S3S4	4 Secure	23	11.9 ± 0.0
N	*Erioderma mollissimum*	Graceful Felt Lichen	Endangered		Endangered	S1S2	2 May Be At Risk	5	10.9 ± 0.0
N	*Erioderma pedicellatum (Atlantic pop.)*	Boreal Felt Lichen - Atlantic pop.	Endangered	Endangered	Endangered	S1S2	1 At Risk	350	3.5 ± 0.0
N	*Peltigera hydrothyria*	Eastern Waterfan	Threatened			S1S2	2 May Be At Risk	3	54.3 ± 1.0
N	*Fissidens exilis*	Pygmy Pocket Moss	Special Concern			S1?	1 At Risk	3	81.1 ± 1.0
N	*Sclerophora peronella (Nova Scotia pop.)*	Frosted Glass-whiskers Lichen - Nova Scotia pop.	Special Concern	Special Concern		S1?		9	1.9 ± 0.0
N	*Degelia plumbea*	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S2	4 Secure	30	3.6 ± 0.0
N	*Pseudevernia cladonia*	Ghost Antler Lichen	Not At Risk			S2S3	3 Sensitive	6	18.6 ± 0.0
N	*Aloina brevirostris*	Short-Beaked Rigid Screw Moss				S1		1	86.9 ± 2.0
N	*Aloina rigida*	Aloe-Like Rigid Screw Moss				S1	2 May Be At Risk	3	86.4 ± 0.0
N	*Bryohaplocladium microphyllum*	Tiny-leaved Haplocladium Moss				S1		1	57.6 ± 5.0

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N	*Solorina saccata*	Woodland Owl Lichen				S1	2 May Be At Risk	4	90.5 ± 0.0
N	*Fuscopannaria leucosticta*	Rimmed Shingles Lichen				S1S2	2 May Be At Risk	4	4.9 ± 0.0
N	*Leptogium lichenoides*	Tattered Jellyskin Lichen				S1S2	2 May Be At Risk	5	90.7 ± 0.0
N	*Peltigera lepidophora*	Scaly Pelt Lichen				S1S2	2 May Be At Risk	1	91.2 ± 0.0
N	*Leptogium subtile*	Appressed Jellyskin Lichen				S1S3	3 Sensitive	1	39.3 ± 0.0
N	*Anacamptodon splachnoides*	a Moss				S2?	3 Sensitive	1	65.1 ± 30.0
N	*Anomodon viticulosus*	a Moss				S2?	3 Sensitive	1	89.4 ± 5.0
N	*Weissia muhlenbergiana*	a Moss				S2?	3 Sensitive	4	91.7 ± 1.0
N	*Atrichum angustatum*	Lesser Smoothcap Moss				S2?	3 Sensitive	2	52.0 ± 2.0
N	*Aulacomnium heterostichum*	One-sided Groove Moss				S2?	3 Sensitive	2	86.9 ± 2.0
N	*Bryum algovicum*	a Moss				S2?	3 Sensitive	1	86.9 ± 2.0
N	*Conardia compacta*	Coast Creeping Moss				S2?	3 Sensitive	1	95.0 ± 2.0
N	*Ditrichum rhynchostegium*	a Moss				S2?	3 Sensitive	1	68.5 ± 1.0
N	*Drummondia prorepens*	a Moss				S2?	3 Sensitive	1	97.9 ± 5.0
N	*Eurhynchium hians*	Light Beaked Moss				S2?	3 Sensitive	3	21.4 ± 25.0
N	*Fissidens taxifolius*	Yew-leaved Pocket Moss				S2?	3 Sensitive	2	86.9 ± 2.0
N	*Anomodon tristis*	a Moss				S2?	3 Sensitive	2	23.6 ± 15.0
N	*Kiaeria starkei*	Starke's Fork Moss				S2?	3 Sensitive	1	25.9 ± 10.0
N	*Mnium thomsonii*	Thomson's Leafy Moss				S2?	3 Sensitive	1	91.7 ± 2.0
N	*Paludella squarrosa*	Tufted Fen Moss				S2?	3 Sensitive	2	81.6 ± 0.0
N	*Saelania glaucescens*	Blue Dew Moss				S2?	3 Sensitive	1	76.1 ± 0.0
N	*Sematophyllum demissum*	a Moss				S2?	3 Sensitive	1	56.7 ± 2.0
N	*Sematophyllum marylandicum*	a Moss				S2?	3 Sensitive	2	52.6 ± 6.0
N	*Sphagnum subnitens*	Lustrous Peat Moss				S2?	3 Sensitive	1	26.6 ± 2.0
N	*Thelia hirtella*	a Moss				S2?	3 Sensitive	1	92.8 ± 12.0
N	*Timmia megapolitana*	Metropolitan Timmia Moss				S2?	3 Sensitive	3	80.6 ± 0.0
N	*Zygodon conoideus*	a Moss				S2?	3 Sensitive	1	31.8 ± 5.0
N	*Cyrto-hypnum minutulum*	Tiny Cedar Moss				S2?	3 Sensitive	1	31.5 ± 0.0
N	*Cyrtomnium hymenophylloides*	Short-pointed Lantern Moss				S2?	3 Sensitive	2	61.9 ± 5.0
N	*Platylomella lescurii*	a Moss				S2?	3 Sensitive	3	98.5 ± 0.0
N	*Calliergon giganteum*	Giant Spear Moss				S2S3	3 Sensitive	1	82.3 ± 3.0
N	*Ephemerum serratum*	a Moss				S2S3	3 Sensitive	2	86.9 ± 3.0
N	*Hygrohypnum luridum*	Drab Brook Moss				S2S3	3 Sensitive	1	98.5 ± 1.0
N	*Leucodon andrewsianus*	a Moss				S2S3	3 Sensitive	7	31.5 ± 0.0
N	*Myurella julacea*	Small Mouse-tail Moss				S2S3	3 Sensitive	1	76.1 ± 0.0
N	*Orthotrichum anomalum*	Anomalous Bristle Moss				S2S3	3 Sensitive	1	96.6 ± 2.0
N	*Pleuridium subulatum*	a Moss				S2S3	3 Sensitive	1	69.9 ± 10.0
N	*Tortula truncata*	a Moss				S2S3	3 Sensitive	1	28.5 ± 300.0
N	*Sphagnum wulfianum*	Wulf's Peat Moss				S2S3	3 Sensitive	10	8.0 ± 0.0
N	*Tetraplodon angustatus*	Toothed-leaved Nitrogen Moss				S2S3	3 Sensitive	1	26.6 ± 2.0
N	*Limprichtia revolvens*	a Moss				S2S3	3 Sensitive	2	81.6 ± 0.0
N	*Hylocomiastrum pyrenaicum*	a Feather Moss				S2S3	3 Sensitive	1	65.9 ± 0.0
N	*Collema nigrescens*	Blistered Tarpaper Lichen				S2S3	3 Sensitive	4	5.4 ± 0.0
N	*Leptogium teretiusculum*	Beaded Jellyskin Lichen				S2S3	3 Sensitive	3	45.7 ± 0.0
N	*Leptogium corticola*	Blistered Jellyskin Lichen				S2S3	3 Sensitive	13	9.1 ± 0.0
N	*Physconia detersa*	Bottlebrush Frost Lichen				S2S3	3 Sensitive	1	5.6 ± 0.0
N	*Peltigera collina*	Tree Pelt Lichen				S2S3	3 Sensitive	3	9.8 ± 0.0
N	*Cladina stygia*	Black-footed Reindeer Lichen				S2S3	3 Sensitive	2	10.7 ± 0.0
N	*Evernia prunastri*	Valley Oakmoss Lichen				S2S3	3 Sensitive	1	90.6 ± 2.0
N	*Usnea flammea*	Coastal Bushy Beard Lichen				S2S3	3 Sensitive	1	75.9 ± 1.0
N	*Anzia colpodes*	Black-foam Lichen				S3?	3 Sensitive	2	5.6 ± 0.0
N	*Sticta fuliginosa*	Peppered Moon Lichen				S3?	3 Sensitive	12	9.3 ± 0.0
N	*Nephroma bellum*	Naked Kidney Lichen				S3?	3 Sensitive	1	37.0 ± 0.0
N	*Collema furfuraceum*	Blistered Tarpaper Lichen				S3?	3 Sensitive	2	18.0 ± 0.0
P	*Juglans cinerea*	Butternut	Endangered	Endangered		SNA	7 Exotic	1	78.6 ± 0.0
P	*Bartonia paniculata ssp. paniculata*	Branched Bartonia	Threatened	Threatened		SNA		1	25.2 ± 10.0
P	*Liatris spicata*	Dense Blazing Star	Threatened	Threatened				1	63.9 ± 0.0

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P	*Clethra alnifolia*	Coast Pepper-Bush	Special Concern	Special Concern	Vulnerable	S1	1 At Risk	2	63.0 ± 0.0
P	*Isoetes prototypus*	Prototype Quillwort	Special Concern	Special Concern	Vulnerable	S2	3 Sensitive	13	82.5 ± 0.0
P	*Floerkea proserpinacoides*	False Mermaidweed	Not At Risk			S2	3 Sensitive	1	47.8 ± 7.0
P	*Helianthemum canadense*	Long-branched Frostweed			Endangered	S1	At Risk	2	77.9 ± 1.0
P	*Cypripedium arietinum*	Ram's-Head Lady's-Slipper			Endangered	S1	1 At Risk	157	84.0 ± 2.0
P	*Thuja occidentalis*	Eastern White Cedar			Vulnerable	S1	At Risk	6	49.2 ± 0.0
P	*Sanicula odorata*	Clustered Sanicle				S1	2 May Be At Risk	7	54.1 ± 10.0
P	*Zizia aurea*	Golden Alexanders				S1	2 May Be At Risk	36	16.5 ± 1.0
P	*Antennaria parlinii*	a Pussytoes				S1	2 May Be At Risk	8	61.7 ± 7.0
P	*Cynoglossum virginianum var. boreale*	Wild Comfrey				S1	2 May Be At Risk	3	87.9 ± 1.0
P	*Cardamine maxima*	Large Toothwort				S1	2 May Be At Risk	1	59.0 ± 0.0
P	*Cochlearia tridactylites*	Limestone Scurvy-grass				S1	2 May Be At Risk	8	58.7 ± 0.0
P	*Lobelia spicata*	Pale-Spiked Lobelia				S1	2 May Be At Risk	1	66.3 ± 7.0
P	*Hudsonia tomentosa*	Woolly Beach-heath				S1	2 May Be At Risk	5	79.1 ± 7.0
P	*Desmodium canadense*	Canada Tick-trefoil				S1	2 May Be At Risk	20	48.7 ± 0.0
P	*Desmodium glutinosum*	Large Tick-Trefoil				S1	2 May Be At Risk	6	80.2 ± 0.0
P	*Ribes americanum*	Wild Black Currant				S1	5 Undetermined	4	50.5 ± 5.0
P	*Proserpinaca intermedia*	Intermediate Mermaidweed				S1	2 May Be At Risk	1	28.8 ± 0.0
P	*Fraxinus pennsylvanica*	Red Ash				S1	2 May Be At Risk	3	71.6 ± 5.0
P	*Polygala polygama*	Racemed Milkwort				S1	5 Undetermined	1	64.5 ± 1.0
P	*Polygonum careyi*	Carey's Smartweed				S1	5 Undetermined	1	30.9 ± 3.0
P	*Montia fontana*	Water Blinks				S1	2 May Be At Risk	1	66.1 ± 1.0
P	*Lysimachia quadrifolia*	Whorled Yellow Loosestrife				S1	5 Undetermined	1	82.8 ± 0.0
P	*Ranunculus pensylvanicus*	Pennsylvania Buttercup				S1	2 May Be At Risk	1	90.7 ± 0.0
P	*Salix serissima*	Autumn Willow				S1	2 May Be At Risk	1	19.7 ± 0.0
P	*Dirca palustris*	Eastern Leatherwood				S1	2 May Be At Risk	47	41.8 ± 1.0
P	*Boehmeria cylindrica*	Small-spike False-nettle				S1	2 May Be At Risk	2	41.0 ± 0.0
P	*Pilea pumila*	Dwarf Clearweed				S1	2 May Be At Risk	4	38.9 ± 0.0
P	*Carex garberi*	Garber's Sedge				S1	2 May Be At Risk	4	48.0 ± 0.0
P	*Carex gynocrates*	Northern Bog Sedge				S1	2 May Be At Risk	2	19.7 ± 0.0
P	*Carex haydenii*	Hayden's Sedge				S1	2 May Be At Risk	2	51.9 ± 1.0
P	*Carex pellita*	Woolly Sedge				S1	2 May Be At Risk	10	13.3 ± 10.0
P	*Carex livida var. radicaulis*	Livid Sedge				S1	2 May Be At Risk	1	95.0 ± 10.0
P	*Carex plantaginea*	Plantain-Leaved Sedge				S1	2 May Be At Risk	3	35.2 ± 0.0
P	*Carex viridula var. saxilittoralis*	Greenish Sedge				S1	May Be At Risk	4	30.6 ± 2.0
P	*Cyperus lupulinus ssp. macilentus*	Hop Flatsedge				S1	2 May Be At Risk	2	80.0 ± 0.0
P	*Iris prismatica*	Slender Blue Flag				S1	2 May Be At Risk	2	77.3 ± 7.0
P	*Juncus vaseyi*	Vasey Rush				S1	2 May Be At Risk	1	47.5 ± 0.0
P	*Allium tricoccum*	Wild Leek				S1	2 May Be At Risk	8	53.9 ± 0.0
P	*Malaxis brachypoda*	White Adder's-Mouth				S1	2 May Be At Risk	1	99.2 ± 1.0
P	*Bromus latiglumis*	Broad-Glumed Brome				S1	2 May Be At Risk	28	26.3 ± 0.0
P	*Cinna arundinacea*	Sweet Wood Reed Grass				S1	2 May Be At Risk	19	26.1 ± 0.0
P	*Elymus wiegandii*	Wiegand's Wild Rye				S1	2 May Be At Risk	17	26.1 ± 0.0
P	*Elymus hystrix var. bigeloviana*	Spreading Wild Rye				S1	2 May Be At Risk	10	35.4 ± 1.0
P	*Festuca subverticillata*	Nodding Fescue				S1	2 May Be At Risk	5	59.1 ± 1.0
P	*Potamogeton nodosus*	Long-leaved Pondweed				S1	2 May Be At Risk	1	73.6 ± 5.0
P	*Adiantum pedatum*	Northern Maidenhair Fern				S1	2 May Be At Risk	9	52.0 ± 1.0
P	*Botrychium lunaria*	Common Moonwort				S1	2 May Be At Risk	3	50.7 ± 2.0
P	*Selaginella rupestris*	Rock Spikemoss				S1	2 May Be At Risk	1	87.2 ± 0.0
P	*Solidago hispida*	Hairy Goldenrod				S1?	2 May Be At Risk	2	37.8 ± 7.0
P	*Suaeda rolandii*	Roland's Sea-Blite				S1?	2 May Be At Risk	2	88.2 ± 2.0
P	*Crataegus robinsonii*	Robinson's Hawthorn				S1?	5 Undetermined	3	50.5 ± 5.0
P	*Crataegus submollis*	Quebec Hawthorn				S1?	5 Undetermined	7	50.4 ± 7.0
P	*Carex pensylvanica*	Pennsylvania Sedge				S1?	May Be At Risk	1	48.8 ± 0.0
P	*Dichanthelium acuminatum var. lindheimeri*	Woolly Panic Grass				S1?	5 Undetermined	1	69.7 ± 0.0
P	*Huperzia selago*	Northern Firmoss				S1?	May Be At Risk	5	59.0 ± 5.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	*Fraxinus nigra*	Black Ash			Threatened	S1S2	At Risk	103	19.1 ± 0.0
P	*Rudbeckia laciniata*	Cut-Leaved Coneflower				S1S2	May Be At Risk	8	44.5 ± 7.0
P	*Chenopodium rubrum*	Red Pigweed				S1S2	May Be At Risk	4	30.6 ± 2.0
P	*Anemone virginiana var. alba*	Virginia Anemone				S1S2	3 Sensitive	5	48.9 ± 5.0
P	*Hepatica nobilis var. obtusa*	Round-lobed Hepatica				S1S2	May Be At Risk	39	22.9 ± 1.0
P	*Ranunculus sceleratus*	Cursed Buttercup				S1S2	2 May Be At Risk	20	60.4 ± 0.0
P	*Gratiola neglecta*	Clammy Hedge-Hyssop				S1S2	3 Sensitive	5	30.4 ± 0.0
P	*Juncus greenei*	Greene's Rush				S1S2	2 May Be At Risk	5	54.5 ± 1.0
P	*Cryptogramma stelleri*	Steller's Rockbrake				S1S2	May Be At Risk	3	90.3 ± 0.0
P	*Carex vacillans*	Estuarine Sedge				S1S3	5 Undetermined	2	33.6 ± 0.0
P	*Conioselinum chinense*	Chinese Hemlock-parsley				S2	3 Sensitive	2	60.5 ± 5.0
P	*Osmorhiza longistylis*	Smooth Sweet Cicely				S2	May Be At Risk	18	49.4 ± 5.0
P	*Erigeron philadelphicus*	Philadelphia Fleabane				S2	3 Sensitive	2	16.1 ± 1.0
P	*Hieracium robinsonii*	Robinson's Hawkweed				S2	3 Sensitive	3	48.2 ± 0.0
P	*Iva frutescens ssp. oraria*	Big-leaved Marsh-elder				S2	Sensitive	2	94.0 ± 1.0
P	*Lactuca hirsuta var. sanguinea*	Hairy Lettuce				S2	3 Sensitive	1	40.4 ± 7.0
P	*Senecio pseudoarnica*	Seabeach Ragwort				S2	3 Sensitive	20	29.1 ± 0.0
P	*Symphyotrichum undulatum*	Wavy-leaved Aster				S2	3 Sensitive	5	65.9 ± 7.0
P	*Symphyotrichum ciliolatum*	Fringed Blue Aster				S2	Sensitive	16	17.7 ± 3.0
P	*Impatiens pallida*	Pale Jewelweed				S2	3 Sensitive	1	90.7 ± 7.0
P	*Caulophyllum thalictroides*	Blue Cohosh				S2	2 May Be At Risk	54	30.9 ± 0.0
P	*Betula michauxii*	Michaux's Dwarf Birch				S2	3 Sensitive	22	9.0 ± 0.0
P	*Arabis drummondii*	Drummond's Rockcress				S2	3 Sensitive	7	47.9 ± 0.0
P	*Cardamine parviflora var. arenicola*	Small-flowered Bittercress				S2	3 Sensitive	6	30.0 ± 0.0
P	*Stellaria humifusa*	Saltmarsh Starwort				S2	3 Sensitive	7	19.6 ± 0.0
P	*Stellaria longifolia*	Long-leaved Starwort				S2	Sensitive	12	17.7 ± 0.0
P	*Hudsonia ericoides*	Pinebarren Golden Heather				S2	3 Sensitive	20	62.3 ± 7.0
P	*Hypericum majus*	Large St John's-wort				S2	Sensitive	3	61.4 ± 0.0
P	*Crassula aquatica*	Water Pygmyweed				S2	3 Sensitive	1	95.5 ± 0.0
P	*Myriophyllum farwellii*	Farwell's Water Milfoil				S2	3 Sensitive	9	26.4 ± 0.0
P	*Myriophyllum verticillatum*	Whorled Water Milfoil				S2	3 Sensitive	3	26.8 ± 0.0
P	*Oenothera fruticosa ssp. glauca*	Narrow-leaved Evening Primrose				S2	5 Undetermined	5	52.8 ± 7.0
P	*Polygonum arifolium*	Halberd-leaved Tearthumb				S2	3 Sensitive	3	95.6 ± 0.0
P	*Rumex salicifolius var. mexicanus*	Triangular-valve Dock				S2	3 Sensitive	2	33.1 ± 0.0
P	*Primula mistassinica*	Mistassini Primrose				S2	3 Sensitive	16	26.2 ± 1.0
P	*Anemone canadensis*	Canada Anemone				S2	2 May Be At Risk	1	80.6 ± 7.0
P	*Anemone quinquefolia*	Wood Anemone				S2	3 Sensitive	17	26.4 ± 0.0
P	*Anemone virginiana*	Virginia Anemone				S2	3 Sensitive	17	48.9 ± 0.0
P	*Anemone virginiana var. virginiana*	Virginia Anemone				S2	3 Sensitive	2	45.0 ± 7.0
P	*Caltha palustris*	Yellow Marsh Marigold				S2	3 Sensitive	1	82.6 ± 0.0
P	*Galium boreale*	Northern Bedstraw				S2	2 May Be At Risk	3	88.2 ± 5.0
P	*Galium labradoricum*	Labrador Bedstraw				S2	3 Sensitive	34	19.2 ± 0.0
P	*Salix pedicellaris*	Bog Willow				S2	3 Sensitive	35	14.7 ± 0.0
P	*Salix sericea*	Silky Willow				S2	2 May Be At Risk	1	50.7 ± 1.0
P	*Tiarella cordifolia*	Heart-leaved Foamflower				S2	3 Sensitive	217	21.7 ± 5.0
P	*Agalinis maritima*	Saltmarsh Agalinis				S2	Sensitive	1	59.9 ± 0.0
P	*Viola nephrophylla*	Northern Bog Violet				S2	3 Sensitive	8	16.5 ± 1.0
P	*Carex bebbii*	Bebb's Sedge				S2	Sensitive	12	48.7 ± 0.0
P	*Carex castanea*	Chestnut Sedge				S2	2 May Be At Risk	3	19.7 ± 0.0
P	*Carex comosa*	Bearded Sedge				S2	3 Sensitive	4	59.3 ± 0.0
P	*Carex hystericina*	Porcupine Sedge				S2	2 May Be At Risk	2	83.6 ± 0.0
P	*Carex tenera*	Tender Sedge				S2	Sensitive	6	52.3 ± 0.0
P	*Carex tuckermanii*	Tuckerman's Sedge				S2	Sensitive	24	68.6 ± 0.0
P	*Eriophorum gracile*	Slender Cottongrass				S2	3 Sensitive	4	47.6 ± 7.0
P	*Vallisneria americana*	Wild Celery				S2	2 May Be At Risk	4	26.3 ± 7.0
P	*Allium schoenoprasum var. sibiricum*	Wild Chives				S2	2 May Be At Risk	1	52.8 ± 7.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	*Lilium canadense*	Canada Lily				S2	May Be At Risk	98	28.2 ± 1.0
P	*Najas gracillima*	Thread-Like Naiad				S2	Sensitive	2	78.3 ± 0.0
P	*Cypripedium parviflorum var. pubescens*	Yellow Lady's-slipper				S2	3 Sensitive	9	62.6 ± 7.0
P	*Cypripedium parviflorum var. makasin*	Small Yellow Lady's-Slipper				S2	3 Sensitive	3	90.3 ± 0.0
P	*Cypripedium reginae*	Showy Lady's-Slipper				S2	2 May Be At Risk	28	16.5 ± 1.0
P	*Goodyera pubescens*	Downy Rattlesnake-Plantain				S2	Sensitive	7	34.6 ± 1.0
P	*Platanthera flava var. herbiola*	Pale Green Orchid				S2	3 Sensitive	8	54.3 ± 7.0
P	*Platanthera macrophylla*	Large Round-Leaved Orchid				S2	3 Sensitive	11	60.1 ± 1.0
P	*Spiranthes lucida*	Shining Ladies'-Tresses				S2	May Be At Risk	25	39.3 ± 1.0
P	*Dichanthelium linearifolium*	Narrow-leaved Panic Grass				S2	Sensitive	5	47.9 ± 0.0
P	*Piptatherum canadense*	Canada Rice Grass				S2	3 Sensitive	8	30.9 ± 3.0
P	*Potamogeton friesii*	Fries' Pondweed				S2	2 May Be At Risk	2	48.9 ± 5.0
P	*Potamogeton richardsonii*	Richardson's Pondweed				S2	May Be At Risk	5	64.1 ± 7.0
P	*Asplenium trichomanes-ramosum*	Green Spleenwort				S2	3 Sensitive	1	87.4 ± 7.0
P	*Dryopteris fragrans var. remotiuscula*	Fragrant Wood Fern				S2	3 Sensitive	4	57.0 ± 7.0
P	*Woodsia glabella*	Smooth Cliff Fern				S2	3 Sensitive	1	77.6 ± 1.0
P	*Symphyotrichum boreale*	Boreal Aster				S2?	3 Sensitive	4	52.8 ± 7.0
P	*Cuscuta cephalanthi*	Buttonbush Dodder				S2?	Undetermined	3	74.4 ± 1.0
P	*Epilobium coloratum*	Purple-veined Willowherb				S2?	3 Sensitive	2	68.5 ± 0.0
P	*Carex peckii*	White-Tinged Sedge				S2?	2 May Be At Risk	4	34.8 ± 0.0
P	*Eleocharis ovata*	Ovate Spikerush				S2?	3 Sensitive	6	65.1 ± 0.0
P	*Scirpus pedicellatus*	Stalked Bulrush				S2?	Sensitive	7	27.6 ± 0.0
P	*Potamogeton pulcher*	Spotted Pondweed			Vulnerable	S2S3	Sensitive	3	15.4 ± 2.0
P	*Sagina nodosa*	Knotted Pearlwort				S2S3	4 Secure	38	30.2 ± 0.0
P	*Sagina nodosa ssp. borealis*	Knotted Pearlwort				S2S3	4 Secure	6	31.8 ± 0.0
P	*Ceratophyllum echinatum*	Prickly Hornwort				S2S3	Sensitive	2	26.6 ± 0.0
P	*Hypericum dissimulatum*	Disguised St John's-wort				S2S3	3 Sensitive	3	59.8 ± 0.0
P	*Triosteum aurantiacum*	Orange-fruited Tinker's Weed				S2S3	Sensitive	79	47.8 ± 7.0
P	*Shepherdia canadensis*	Soapberry				S2S3	Sensitive	71	80.6 ± 7.0
P	*Empetrum eamesii ssp. atropurpureum*	Pink Crowberry				S2S3	3 Sensitive	5	62.1 ± 7.0
P	*Empetrum eamesii ssp. eamesii*	Pink Crowberry				S2S3	3 Sensitive	5	62.1 ± 7.0
P	*Chamaesyce polygonifolia*	Seaside Spurge				S2S3	Sensitive	1	88.5 ± 2.0
P	*Halenia deflexa*	Spurred Gentian				S2S3	3 Sensitive	4	75.6 ± 1.0
P	*Hedeoma pulegioides*	American False Pennyroyal				S2S3	3 Sensitive	5	5.4 ± 5.0
P	*Polygala sanguinea*	Blood Milkwort				S2S3	3 Sensitive	18	27.2 ± 5.0
P	*Polygonum buxiforme*	Small's Knotweed				S2S3	5 Undetermined	5	52.8 ± 7.0
P	*Plantago rugelii*	Rugel's Plantain				S2S3	Secure	7	28.5 ± 0.0
P	*Potentilla canadensis*	Canada Cinquefoil				S2S3	Sensitive	1	51.3 ± 5.0
P	*Galium aparine*	Common Bedstraw				S2S3	Sensitive	15	29.0 ± 0.0
P	*Salix pellita*	Satiny Willow				S2S3	Sensitive	4	30.7 ± 0.0
P	*Veronica serpyllifolia ssp. humifusa*	Thyme-Leaved Speedwell				S2S3	Sensitive	1	56.3 ± 0.0
P	*Carex adusta*	Lesser Brown Sedge				S2S3	3 Sensitive	7	30.9 ± 7.0
P	*Carex hirtifolia*	Pubescent Sedge				S2S3	Sensitive	47	25.9 ± 4.0
P	*Carex houghtoniana*	Houghton's Sedge				S2S3	Sensitive	1	36.7 ± 1.0
P	*Carex swanii*	Swan's Sedge				S2S3	3 Sensitive	2	57.4 ± 0.0
P	*Eleocharis olivacea*	Yellow Spikerush				S2S3	3 Sensitive	5	29.1 ± 0.0
P	*Elodea canadensis*	Canada Waterweed				S2S3	Secure	5	41.3 ± 0.0
P	*Coeloglossum viride var. virescens*	Long-bracted Frog Orchid				S2S3	2 May Be At Risk	1	81.5 ± 0.0
P	*Cypripedium parviflorum*	Yellow Lady's-slipper				S2S3	3 Sensitive	506	65.1 ± 0.0
P	*Poa glauca*	Glaucous Blue Grass				S2S3	3 Sensitive	1	80.2 ± 1.0
P	*Potamogeton zosteriformis*	Flat-stemmed Pondweed				S2S3	Sensitive	13	11.8 ± 7.0
P	*Botrychium lanceolatum var. angustisegmentum*	Lance-Leaf Grape-Fern				S2S3	3 Sensitive	7	28.2 ± 5.0
P	*Botrychium simplex*	Least Moonwort				S2S3	3 Sensitive	4	36.3 ± 0.0
P	*Ophioglossum pusillum*	Northern Adder's-tongue				S2S3	3 Sensitive	4	47.6 ± 7.0
P	*Angelica atropurpurea*	Purple-stemmed Angelica				S3	Secure	1	28.2 ± 0.0
P	*Erigeron hyssopifolius*	Hyssop-leaved Fleabane				S3	3 Sensitive	20	54.6 ± 1.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	*Hieracium paniculatum*	Panicled Hawkweed				S3	4 Secure	7	61.3 ± 0.0
P	*Megalodonta beckii*	Water Beggarticks				S3	Secure	12	26.4 ± 5.0
P	*Packera paupercula*	Balsam Groundsel				S3	4 Secure	35	47.9 ± 0.0
P	*Campanula aparinoides*	Marsh Bellflower				S3	3 Sensitive	34	26.5 ± 0.0
P	*Minuartia groenlandica*	Greenland Stitchwort				S3	Sensitive	24	26.3 ± 7.0
P	*Viburnum edule*	Squashberry				S3	3 Sensitive	2	64.9 ± 0.0
P	*Empetrum eamesii*	Pink Crowberry				S3	3 Sensitive	83	62.3 ± 7.0
P	*Vaccinium boreale*	Northern Blueberry				S3	Sensitive	3	23.8 ± 0.0
P	*Vaccinium caespitosum*	Dwarf Bilberry				S3	Secure	55	37.2 ± 0.0
P	*Vaccinium uliginosum*	Alpine Bilberry				S3	Sensitive	3	70.9 ± 1.0
P	*Bartonia virginica*	Yellow Bartonia				S3	4 Secure	25	50.7 ± 7.0
P	*Geranium bicknellii*	Bicknell's Crane's-bill				S3	4 Secure	4	94.6 ± 3.0
P	*Proserpinaca palustris*	Marsh Mermaidweed				S3	4 Secure	12	15.2 ± 1.0
P	*Proserpinaca palustris var. crebra*	Marsh Mermaidweed				S3	4 Secure	27	17.9 ± 2.0
P	*Proserpinaca pectinata*	Comb-leaved Mermaidweed				S3	Secure	3	31.5 ± 1.0
P	*Teucrium canadense*	Canada Germander				S3	3 Sensitive	5	41.0 ± 5.0
P	*Epilobium strictum*	Downy Willowherb				S3	3 Sensitive	2	45.1 ± 0.0
P	*Polygonum pensylvanicum*	Pennsylvania Smartweed				S3	4 Secure	14	28.1 ± 0.0
P	*Polygonum scandens*	Climbing False Buckwheat				S3	3 Sensitive	27	25.0 ± 0.0
P	*Samolus valerandi ssp. parviflorus*	Seaside Brookweed				S3	Sensitive	2	62.9 ± 5.0
P	*Pyrola asarifolia*	Pink Pyrola				S3	4 Secure	9	25.8 ± 50.0
P	*Pyrola minor*	Lesser Pyrola				S3	Sensitive	1	70.0 ± 0.0
P	*Ranunculus gmelinii*	Gmelin's Water Buttercup				S3	4 Secure	28	16.4 ± 5.0
P	*Rhamnus alnifolia*	Alder-leaved Buckthorn				S3	Secure	51	13.8 ± 1.0
P	*Agrimonia gryposepala*	Hooked Agrimony				S3	4 Secure	99	23.4 ± 5.0
P	*Salix petiolaris*	Meadow Willow				S3	4 Secure	18	24.4 ± 0.0
P	*Geocaulon lividum*	Northern Comandra				S3	Secure	2	32.3 ± 5.0
P	*Agalinis neoscotica*	Nova Scotia Agalinis				S3	4 Secure	7	59.1 ± 0.0
P	*Limosella australis*	Southern Mudwort				S3	Secure	6	24.1 ± 5.0
P	*Lindernia dubia*	Yellow-seeded False Pimperel				S3	Secure	14	60.9 ± 0.0
P	*Laportea canadensis*	Canada Wood Nettle				S3	3 Sensitive	33	32.1 ± 0.0
P	*Verbena hastata*	Blue Vervain				S3	Secure	106	38.8 ± 0.0
P	*Carex eburnea*	Bristle-leaved Sedge				S3	3 Sensitive	6	51.5 ± 0.0
P	*Carex lupulina*	Hop Sedge				S3	4 Secure	37	19.2 ± 0.0
P	*Carex rosea*	Rosy Sedge				S3	4 Secure	24	30.7 ± 0.0
P	*Carex wiegandii*	Wiegand's Sedge				S3	Sensitive	3	28.8 ± 2.0
P	*Eleocharis nitida*	Quill Spikerush				S3	4 Secure	4	68.7 ± 5.0
P	*Schoenoplectus pungens*	Three-square Bulrush				S3	3 Sensitive	1	94.3 ± 5.0
P	*Juncus subcaudatus var. planisepalus*	Woods-Rush				S3	3 Sensitive	13	11.8 ± 1.0
P	*Juncus dudleyi*	Dudley's Rush				S3	Secure	40	33.1 ± 1.0
P	*Goodyera repens*	Lesser Rattlesnake-plantain				S3	3 Sensitive	2	32.2 ± 0.0
P	*Listera australis*	Southern Twayblade				S3	Secure	80	20.8 ± 0.0
P	*Platanthera grandiflora*	Large Purple Fringed Orchid				S3	4 Secure	94	19.9 ± 0.0
P	*Platanthera hookeri*	Hooker's Orchid				S3	4 Secure	4	79.0 ± 0.0
P	*Platanthera orbiculata*	Small Round-leaved Orchid				S3	4 Secure	17	52.8 ± 7.0
P	*Spiranthes ochroleuca*	Yellow Ladies'-tresses				S3	Secure	7	66.9 ± 0.0
P	*Alopecurus aequalis*	Short-awned Foxtail				S3	Secure	11	46.1 ± 0.0
P	*Dichanthelium clandestinum*	Deer-tongue Panic Grass				S3	4 Secure	158	33.0 ± 4.0
P	*Potamogeton obtusifolius*	Blunt-leaved Pondweed				S3	Secure	7	77.8 ± 0.0
P	*Sparganium natans*	Small Burreed				S3	4 Secure	12	17.8 ± 1.0
P	*Equisetum pratense*	Meadow Horsetail				S3	Sensitive	10	39.3 ± 0.0
P	*Equisetum variegatum*	Variegated Horsetail				S3	4 Secure	23	25.7 ± 0.0
P	*Isoetes acadiensis*	Acadian Quillwort				S3	3 Sensitive	5	39.9 ± 14.0
P	*Huperzia appalachiana*	Appalachian Fir-Clubmoss				S3	Sensitive	1	77.2 ± 1.0
P	*Botrychium dissectum*	Cut-leaved Moonwort				S3	4 Secure	5	52.0 ± 1.0
P	*Schizaea pusilla*	Little Curlygrass Fern				S3	4 Secure	6	37.4 ± 1.0
P	*Asclepias incarnata ssp. pulchra*	Swamp Milkweed				S3?	Undetermined	36	17.8 ± 1.0

Taxonomic Group	Scientific Name	Common Name	COSEWIC	SARA	Prov Legal Prot	Prov Rarity Rank	Prov GS Rank	# recs	Distance (km)
P	*Polygonum amphibium var. emersum*	Water Smartweed				S3?	Undetermined	1	39.5 ± 0.0
P	*Amelanchier stolonifera*	Running Serviceberry				S3?	4 Secure	8	32.1 ± 0.0
P	*Carex cryptolepis*	Hidden-scaled Sedge				S3?	4 Secure	8	19.7 ± 0.0
P	*Carex tribuloides*	Blunt Broom Sedge				S3?	4 Secure	6	55.0 ± 0.0
P	*Carex foenea*	Fernald's Hay Sedge				S3?	4 Secure	13	26.5 ± 0.0
P	*Triglochin gaspensis*	Gasp ├ Arrowgrass				S3?	Undetermined	14	32.0 ± 0.0
P	*Potamogeton praelongus*	White-stemmed Pondweed				S3?	3 Sensitive	9	55.2 ± 1.0
P	*Lycopodium sabinifolium*	Ground-Fir				S3?	4 Secure	4	58.1 ± 0.0
P	*Lycopodium sitchense*	Sitka Clubmoss				S3?	4 Secure	2	54.9 ± 5.0
P	*Polypodium appalachianum*	Appalachian Polypody				S3?	5 Undetermined	11	25.8 ± 0.0
P	*Atriplex franktonii*	Frankton's Saltbush				S3S4	4 Secure	1	90.5 ± 2.0
P	*Suaeda calceoliformis*	Horned Sea-blite				S3S4	Secure	9	31.9 ± 0.0
P	*Vaccinium corymbosum*	Highbush Blueberry				S3S4	Secure	2	61.7 ± 0.0
P	*Myriophyllum sibiricum*	Siberian Water Milfoil				S3S4	4 Secure	5	27.1 ± 0.0
P	*Sanguinaria canadensis*	Bloodroot				S3S4	4 Secure	109	18.3 ± 5.0
P	*Polygonum fowleri*	Fowler's Knotweed				S3S4	Secure	2	33.8 ± 0.0
P	*Rumex maritimus*	Sea-Side Dock				S3S4		5	31.9 ± 0.0
P	*Rumex maritimus var. fueginus*	Tierra del Fuego Dock				S3S4	4 Secure	12	29.8 ± 0.0
P	*Fragaria vesca ssp. americana*	Woodland Strawberry				S3S4	Secure	47	25.8 ± 0.0
P	*Viola sagittata var. ovata*	Arrow-Leaved Violet				S3S4	4 Secure	5	60.7 ± 0.0
P	*Eriophorum chamissonis*	Russet Cotton-Grass				S3S4	4 Secure	9	33.0 ± 0.0
P	*Juncus acuminatus*	Sharp-Fruit Rush				S3S4	Secure	2	41.3 ± 0.0
P	*Luzula parviflora*	Small-flowered Woodrush				S3S4	4 Secure	4	56.6 ± 0.0
P	*Liparis loeselii*	Loesel's Twayblade				S3S4	4 Secure	3	51.8 ± 5.0
P	*Panicum tuckermanii*	Tuckerman's Panic Grass				S3S4	Secure	3	79.7 ± 0.0
P	*Trisetum spicatum*	Narrow False Oats				S3S4	4 Secure	10	45.3 ± 0.0
P	*Cystopteris bulbifera*	Bulblet Bladder Fern				S3S4	4 Secure	66	25.8 ± 0.0
P	*Equisetum hyemale var. affine*	Common Scouring-rush				S3S4	4 Secure	27	30.5 ± 0.0
P	*Equisetum scirpoides*	Dwarf Scouring-Rush				S3S4	4 Secure	45	34.1 ± 0.0
P	*Lycopodium complanatum*	Northern Clubmoss				S3S4	4 Secure	6	29.6 ± 0.0
P	*Solidago simplex var. randii*	Sticky Goldenrod				SH	0.1 Extirpated	1	73.9 ± 1.0
P	*Viola canadensis*	Canada Violet				SH	Extirpated	2	47.8 ± 7.0

5.1 SOURCE BIBLIOGRAPHY (100 km)

The recipient of these data shall acknowledge the ACCDC and the data sources listed below in any documents, reports, publications or presentations, in which this dataset makes a significant contribution.

# recs	CITATION
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2567	Erskine, A.J. 1992. Maritime Breeding Bird Atlas Database. NS Museum & Nimbus Publ., Halifax, 82,125 recs.
2210	Morrison, Guy. 2011. Maritime Shorebird Survey (MSS) database. Canadian Wildlife Service, Ottawa, 15939 surveys. 86171 recs.
623	Cameron, E. 2008. Canadian Gypsum Co. survey 2007-08. Conestoga-Rovers & Assoc., 623 recs.
486	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2014. Atlantic Canada Conservation Data Centre Fieldwork 2014. Atlantic Canada Conservation Data Centre, # recs.
406	Blaney, C.S.; Mazerolle, D.M. 2010. Fieldwork 2010. Atlantic Canada Conservation Data Centre. Sackville NB, 15508 recs.
325	Benjamin, L.K. (compiler). 2012. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 4965 recs.
320	Amirault, D.L. & Stewart, J. 2007. Piping Plover Database 1894-2006. Canadian Wildlife Service, Sackville, 3344 recs, 1228 new.
293	Blaney, C.S.; Mazerolle, D.M. 2012. Fieldwork 2012. Atlantic Canada Conservation Data Centre, 13,278 recs.
261	Benjamin, L.K. (compiler). 2007. Significant Habitat & Species Database. Nova Scotia Dept Natural Resources, 8439 recs.
260	Layberry, R.A. & Hall, P.W., LaFontaine, J.D. 1998. The Butterflies of Canada. University of Toronto Press. 280 pp+plates.
256	Newell, R.E. 2000. E.C. Smith Herbarium Database. Acadia University, Wolfville NS, 7139 recs.
245	Klymko, J.J.D. 2014. Maritimes Butterfly Atlas, 2012 submissions. Atlantic Canada Conservation Data Centre, 8552 records.
241	Hicks, Andrew. 2009. Coastal Waterfowl Surveys Database, 2000-08. Canadian Wildlife Service, Sackville, 46488 recs (11149 non-zero).
221	Blaney, C.S & Spicer, C.D.; Popma, T.M.; Basquill, S.P. 2003. Vascular Plant Surveys of Northumberland Strait Rivers & Amherst Area Peatlands. Nova Scotia Museum Research Grant, 501 recs.
217	LaPaix, R.W.; Crowell, M.J.; MacDonald, M. 2011. Stantec rare plant records, 2010-11. Stantec Consulting, 334 recs.
216	Neily, T.H. & Pepper, C.; Toms, B. 2013. Nova Scotia lichen location database. Mersey Tobeatic Research Institute, 1301 records.

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184	Pronych, G. & Wilson, A. 1993. Atlas of Rare Vascular Plants in Nova Scotia. Nova Scotia Museum, Halifax NS, I:1-168, II:169-331. 1446 recs.
182	Blaney, C.S.; Mazerolle, D.M.; Hill, N.M. 2011. Nova Scotia Crown Share Land Legacy Trust Fieldwork. Atlantic Canada Conservation Data Centre, 5022 recs.
178	Newell, R. E. E.C. Smith Digital Herbarium. E.C. Smith Herbarium, Irving Biodiversity Collection, Acadia University. 2013.
170	Bryson, I. 2013. Nova Scotia rare plant records. CBCL Ltd., 180 records.
157	Brunelle, P.-M. (compiler). 2009. ADIP/MDDS Odonata Database: data to 2006 inclusive. Atlantic Dragonfly Inventory Program (ADIP), 24200 recs.
150	Scott, F.W. 2002. Nova Scotia Herpetofauna Atlas Database. Acadia University, Wolfville NS, 8856 recs.
149	Pepper, C. 2013. 2013 rare bird and plant observations in Nova Scotia. , 181 records.
118	Munro, Marian K. Nova Scotia Provincial Museum of Natural History Herbarium Database. Nova Scotia Provincial Museum of Natural History, Halifax, Nova Scotia. 2013.
114	Blaney, C.S.; Mazerolle, D.M. 2011. Fieldwork 2011. Atlantic Canada Conservation Data Centre. Sackville NB.
105	Klymko, J.J.D. 2012. Maritimes Butterfly Atlas, 2010 and 2011 records. Atlantic Canada Conservation Data Centre, 6318 recs.
101	Blaney, C.S. 2000. Fieldwork 2000. Atlantic Canada Conservation Data Centre. Sackville NB, 1265 recs.
100	Newell, R.E. 2005. E.C. Smith Digital Herbarium. E.C. Smith Herbarium, Irving Biodiversity Collection, Acadia University, Web site: http://luxor.acadiau.ca/library/Herbarium/project/. 582 recs.
78	Wilhelm, S.I. et al. 2011. Colonial Waterbird Database. Canadian Wildlife Service, Sackville, 2698 sites, 9718 recs (8192 obs).
72	Scott, Fred W. 1998. Updated Status Report on the Cougar (Puma Concolor couguar) [Eastern population]. Committee on the Status of Endangered Wildlife in Canada, 298 recs.
66	Zinck, M. & Roland, A.E. 1998. Roland's Flora of Nova Scotia. Nova Scotia Museum, 3rd ed., rev. M. Zinck; 2 Vol., 1297 pp.
64	Cameron, R.P. 2009. Erioderma pedicellatum database, 1979-2008. Dept Environment & Labour, 103 recs.
54	Klymko, J.J.D. 2012. Insect fieldwork & submissions, 2011. Atlantic Canada Conservation Data Centre. Sackville NB, 760 recs.
53	Roland, A.E. & Smith, E.C. 1969. The Flora of Nova Scotia, 1st Ed. Nova Scotia Museum, Halifax, 743pp.
52	Porter, C.J.M. 2014. Field work data 2007-2014. Nova Scotia Nature Trust, 96 recs.
48	Benjamin, L.K. (compiler). 2001. Significant Habitat & Species Database. Nova Scotia Dept of Natural Resources, 15 spp, 224 recs.
48	Nova Scotia Nature Trust. 2013. Nova Scotia Nature Trust 2013 Species records. Nova Scotia Nature Trust, 95 recs.
42	Blaney, C.S.; Spicer, C.D.; Popma, T.M.; Hanel, C. 2002. Fieldwork 2002. Atlantic Canada Conservation Data Centre. Sackville NB, 2252 recs.
41	Amirault, D.L. & McKnight, J. 2003. Piping Plover Database 1991-2003. Canadian Wildlife Service, Sackville, unpublished data. 7 recs.
39	Belland, R.J. Maritimes moss records from various herbarium databases. 2014.
37	Blaney, C.S.; Mazerolle, D.M.; Belliveau, A.B. 2013. Atlantic Canada Conservation Data Centre Fieldwork 2013. Atlantic Canada Conservation Data Centre, 9000+ recs.
37	Cameron, E. 2007. Canadian Gypsum Co. survey 2005-07. Dillon Consulting Ltd, 40 recs.
33	Cameron, R.P. 2009. Cyanolichen database. Nova Scotia Environment & Labour, 1724 recs.
33	Canadian Wildlife Service, Dartmouth. 2010. Piping Plover censuses 2007-09, 304 recs.
32	Blaney, C.S.; Spicer, C.D.; Rothfels, C. 2004. Fieldwork 2004. Atlantic Canada Conservation Data Centre. Sackville NB, 1343 recs.
31	Cameron, R.P. 2011. Lichen observations, 2011. Nova Scotia Environment & Labour, 731 recs.
30	Popma, T.M. 2003. Fieldwork 2003. Atlantic Canada Conservation Data Centre. Sackville NB, 113 recs.
29	Benjamin, L.K. 2011. NSDNR fieldwork & consultant reports 1997, 2009-10. Nova Scotia Dept Natural Resources, 85 recs.
29	Cameron, R.P. 2014. 2013-14 rare species field data. Nova Scotia Department of Environment, 35 recs.
28	Cameron, R.P. 2013. 2013 rare species field data. Nova Scotia Department of Environment, 71 recs.
28	Neily, T.H. 2010. Erioderma Pedicellatum records 2005-09. Mersey Tobiatic Research Institute, 67 recs.
28	Pepper, Chris. 2012. Observations of breeding Canada Warbler's along the Eastern Shore, NS. Pers. comm. to S. Blaney, Jan. 20, 28 recs.
25	Belliveau, A.G. 2014. Plant Records from Southern and Central Nova Scotia. Atlantic Canada Conservation Data Centre, 919 recs.
24	Belliveau, A. 2013. Rare species records from Nova Scotia. Mersey Tobeatic Research Institute, 296 records. 296 recs.
22	Nelly, T.H. 2006. Cypripedium arietinum in Hants Co. Pers. comm. to C.S. Blaney. 22 recs, 22 recs.
20	Blaney, C.S.; Mazerolle, D.M.; Oberndorfer, E. 2007. Fieldwork 2007. Atlantic Canada Conservation Data Centre. Sackville NB, 13770 recs.
19	Powell, B.C. 1967. Female sexual cycles of Chrysemy spicta & Clemmys insculpta in Nova Scotia. Can. Field-Nat., 81:134-139. 26 recs.
18	Neily, T.H. 2012. 2012 Erioderma pedicellatum records in Nova Scotia.
18	Pulsifer, M.D. 2002. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 369 recs.
17	Robinson, S.L. 2014. 2013 Field Data. Atlantic Canada Conservation Data Centre.
16	Klymko, J.J.D.; Robinson, S.L. 2012. 2012 field data. Atlantic Canada Conservation Data Centre, 447 recs.
15	Adams, J. & Herman, T.B. 1998. Thesis, Unpublished map of C. insculpta sightings. Acadia University, Wolfville NS, 88 recs.
15	Edsall, J. 2007. Personal Butterfly Collection: specimens collected in the Canadian Maritimes, 1961-2007. J. Edsall, unpubl. report, 137 recs.
15	Gilhen, J. 1984. Amphibians & Reptiles of Nova Scotia, 1st Ed. Nova Scotia Museum, 164pp.
14	Blaney, C.S.; Mazerolle, D.M. 2008. Fieldwork 2008. Atlantic Canada Conservation Data Centre. Sackville NB, 13343 recs.
14	Munro, Marian K. Nova Scotia Provincial Museum of Natural History Herbarium Database. Nova Scotia Provincial Museum of Natural History, Halifax, Nova Scotia. 2014.
13	Archibald, D.R. 2003. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 213 recs.
13	Chaput, G. 2002. Atlantic Salmon: Maritime Provinces Overview for 2001. Dept of Fisheries & Oceans, Atlantic Region, Science Stock Status Report D3-14. 39 recs.
13	Nova Scotia Nature Trust. 2014. Ladyslipper records from Saint Croix Nova Scotia, JLC Ed. Nova Scotia Nature Trust.
12	Basquill, S.P. 2012. 2012 rare vascular plant field data. Nova Scotia Department of Natural Resources, 37 recs.
12	Goltz, J.P. & Bishop, G. 2005. Confidential supplement to Status Report on Prototype Quillwort (Isoetes prototypus). Committee on the Status of Endangered Wildlife in Canada, 111 recs.
12	Neily, T.H. 2013. Email communication to Sean Blaney regarding Listera australis observations made from 2007 to 2011 in Nova Scotia. , 50.
11	Cameron, R.P. 2012. Rob Cameron 2012 vascular plant data. NS Department of Environment, 30 recs.
11	Hall, R.A. 2003. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 189 recs.

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10	Benjamin, L.K. (compiler). 2002. Significant Habitat & Species Database. Nova Scotia Dept of Natural Resources, 32 spp, 683 recs.
9	Benjamin, L.K. 2006. Cypripedium arietinum. Pers. comm. to D. Mazerolle. 9 recs, 9 recs.
9	Benjamin, L.K. 2012. NSDNR fieldwork & consultant reports 2008-2012. Nova Scotia Dept Natural Resources, 196 recs.
9	Cameron, R.P. 2005. Erioderma pedicellatum unpublished data. NS Dept of Environment, 9 recs.
9	Cameron, R.P. 2006. Erioderma pedicellatum 2006 field data. NS Dept of Environment, 9 recs.
9	Hall, R.A. 2001. S.. NS Freshwater Mussel Fieldwork. Nova Scotia Dept Natural Resources, 178 recs.
8	O'Neil, S. 1998. Atlantic Salmon: Northumberland Strait Nova Scotia part of SFA 18. Dept of Fisheries & Oceans, Atlantic Region, Science. Stock Status Report D3-08. 9 recs.
7	Benjamin, L.K. 2009. Boreal Felt Lichen, Mountain Avens, Orchid and other recent records. Nova Scotia Dept Natural Resources, 105 recs.
7	Cameron, B. 2006. Hepatica americana Survey at Scotia Mine Site in Gays River, and Discovery of Three Yellow-listed Species. Conestoga-Rovers and Associates, (a consulting firm), october 25. 7 recs.
7	Downes, C. 1998-2000. Breeding Bird Survey Data. Canadian Wildlife Service, Ottawa, 111 recs.
6	Hall, R. 2008. Rare plant records in old fieldbook notes from Truro area. Pers. comm. to C.S. Blaney. 6 recs, 6 recs.
6	Matthew Smith. 2010. Field trip report from Avon Caving Club outlining the discovery of Cyrpipedium arietinum and Hepatica nobilis populations. Public Works and Government Services Canada.
6	Olsen, R. Herbarium Specimens. Nova Scotia Agricultural College, Truro. 2003.
5	Basquill, S.P. 2003. Fieldwork 2003. Atlantic Canada Conservation Data Centre, Sackville NB, 69 recs.
5	Blaney, C.S.; Spicer, C.D.; Mazerolle, D.M. 2005. Fieldwork 2005. Atlantic Canada Conservation Data Centre. Sackville NB, 2333 recs.
5	Cameron, R.P. 2009. Nova Scotia nonvascular plant observations, 1995-2007. Nova Scotia Dept Natural Resources, 27 recs.
5	Cameron, R.P. 2012. Additional rare plant records, 2009. , 7 recs.
5	Oldham, M.J. 2000. Oldham database records from Maritime provinces. Oldham, M.J; ONHIC, 487 recs.
5	Towell, C. 2014. 2014 Northern Goshawk and Common Nighthawk email reports, NS. NS Department of Natural Resources.
4	Blaney, C.S. 2003. Fieldwork 2003. Atlantic Canada Conservation Data Centre. Sackville NB, 1042 recs.
4	Blaney, C.S.; Spicer, C.D. 2001. Fieldwork 2001. Atlantic Canada Conservation Data Centre. Sackville NB, 981 recs.
4	Boyne, A.W. & Grecian, V.D. 1999. Tern Surveys. Canadian Wildlife Service, Sackville, unpublished data. 23 recs.
4	Bredin, K.A. 2002. NS Freshwater Mussel Fieldwork. Atlantic Canada Conservation Data Centere, 30 recs.
4	Brunelle, P.-M. (compiler). 2010. ADIP/MDDS Odonata Database: NB, NS Update 1900-09. Atlantic Dragonfly Inventory Program (ADIP), 935 recs.
4	Clayden, S.R. 1998. NBM Science Collections databases: vascular plants. New Brunswick Museum, Saint John NB, 19759 recs.
4	Clayden, S.R. 2005. Confidential supplement to Status Report on Ghost Antler Lichen (Pseudevernia cladonia). Committee on the Status of Endangered Wildlife in Canada, 27 recs.
4	Doucet, D.A. 2009. Census of Globally Rare, Endemic Butterflies of Nova Scotia Gulf of St Lawrence Salt Marshes. Nova Scotia Dept of Natural Resources, Species at Risk, 155 recs.
4	Forsythe, B. 2006. Cypripedium arietinum at Meadow Pond, Hants Co. Pers. comm. to C.S. Blaney. 4 recs, 4 recs.
4	Frittaion, C. 2012. NSNT 2012 Field Observations. Nova Scotia Nature Trust, Pers comm. to S. Blaney Feb. 7, 34 recs.
4	Klymko, J.J.D.; Robinson, S.L. 2014. 2013 field data. Atlantic Canada Conservation Data Centre.
4	O'Neil, S. 1998. Atlantic Salmon: Eastern Shore Nova Scotia SFA 20. Dept of Fisheries & Oceans, Atlantic Region, Science. Stock Status Report D3-10. 4 recs.
4	Whittam, R.M. 1999. Status Report on the Roseate Tern (update) in Canada. Committee on the Status of Endangered Wildlife in Canada, 36 recs.
3	Blaney, C.S. Miscellaneous specimens received by ACCDC (botany). Various persons. 2001-08.
3	Doubt, J. 2013. Email to Sean Blaney with Nova Scotia records of Fissidens exilis at Canadian Museum of Nature. pers. comm., 3 records.
3	LaPaix, R.; Parker, M. 2013. email to Sean Blaney regarding Listera australis observations near Kearney Lake. East Coast Aquatics, 2.
3	Porter, K. 2013. 2013 rare and non-rare vascular plant field data. St. Mary's University, 57 recs.
3	Sollows, M.C,. 2008. NBM Science Collections databases: mammals. New Brunswick Museum, Saint John NB, download Jan. 2008, 4983 recs.
3	Stewart, J.I. 2010. Peregrine Falcon Surveys in New Brunswick, 2002-09. Canadian Wildlife Service, Sackville, 58 recs.
3	WIlliams, M. Cape Breton University Digital Herbarium. Cape Breton University Digital Herbarium. 2013.
2	Bagnell, B.A. 2001. New Brunswick Bryophyte Occurrences. B&B Botanical, Sussex, 478 recs.
2	Basquill, S.P. 2009. 2009 field observations. Nova Scotia Dept of Natural Resources.
2	Basquill, S.P. 2011. Field observations & specimen collections, 2010. Nova Scotia Department of Natural Resources, Pers. comm. , 8 Recs.
2	Benjamin, L.K. 2009. NSDNR Fieldwork & Consultants Reports. Nova Scotia Dept Natural Resources, 143 recs.
2	Christie, D.S. 2000. Christmas Bird Count Data, 1997-2000. Nature NB, 54 recs.
2	Doucet, D.A. 2007. Lepidopteran Records, 1988-2006. Doucet, 700 recs.
2	Macaulay, M. Notes on newly discovered Hepatica nobilis var. obtusa population in Cumberland Co. NS. Pers. comm. to S. Blaney, 1 rec.
2	Macauley, M. 2008. Email to Sean Blaney regarding rich hardwood floodplain site at Howards Pool, Wallace River, NS.
2	Munro, M. 2003. Caulophyllum thalictroides & Carex hirtifolia at Herbert River, Brooklyn, NS. , Pers. comm. to C.S. Blaney. 2 recs.
2	Munro, M. 2003. Dirca palustris & Hepatica nobilis var. obtusa at Cogmagun River, NS. , Pers. comm. to C.S. Blaney . 2 recs.
2	Neily, T.H.; Smith, C.; Whitman, E. 2011. NCC Logging Lake (Halifax Co. NS) properties baseline survey data. Nature Conservancy of Canada, 2 recs.
2	Newell, R.E. 2006. Rare plant observations in Digby Neck. Pers. comm. to S. Blaney, 6 recs.
2	Plissner, J.H. & Haig, S.M. 1997. 1996 International piping plover census. US Geological Survey, Corvallis OR, 231 pp.
2	Robinson, S.L. 2011. 2011 ND dune survey field data. Atlantic Canada Conservation Data Centre, 2715 recs.
2	Sabine, D.L. 2013. Dwaine Sabine butterfly records, 2009 and earlier.
2	Standley, L.A. 2002. Carex haydenii in Nova Scotia. , Pers. comm. to C.S. Blaney. 4 recs.
1	Amiro, Peter G. 1998. Atlantic Salmon: Inner Bay of Fundy SFA 22 & part of SFA 23. Dept of Fisheries & Oceans, Atlantic Region, Science Stock Status Report D3-12. 4 recs.
1	Basquill, S. P. 2008. Nova Scotia Dept of Natural Resources.
1	Basquill, S.P. 2012. 2012 Bryophyte specimen data. Nova Scotia Department of Natural Resources, 37 recs.

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1	Benedict, B. Connell Herbarium Specimens (Data) . University New Brunswick, Fredericton. 2003.
1	Benedict, B. Connell Herbarium Specimens, Digital photos. University New Brunswick, Fredericton. 2005.
1	Benjamin, L.K. 2003. Cypripedium arietinum in Cogmagun River NS. Pers. comm. to S. Blaney, 1 rec.
1	Bruce, J. 2014. 2014 Wood Turtle email report, Nine Mile River, NS. NS Department of Natural Resources.
1	Clayden, S.R. 2006. Pseudevernia cladonia records. NB Museum. Pers. comm. to S. Blaney, Dec, 4 recs.
1	Crowell, A. 2004. Cypripedium arietinum in Weir Brook, Hants Co. Pers. comm. to S. Blaney, 1 rec.
1	Daury, R.W. & Bateman, M.C. 1996. The Barrow's Goldeneye (Bucephala islandica) in the Atlantic Provinces and Maine. Canadian Wildlife Service, Sackville, 47pp.
1	Jacques Whitford Ltd. 2003. Cananda Lily location. Pers. Comm. to S. Blaney. 2pp, 1 rec, 1 rec.
1	Lautenschlager, R.A. 2010. Miscellaneous observations reported to ACCDC (zoology). Pers. comm. from various persons, 2 recs.
1	MacKinnon, D.; Wright, P.; Smith, D. 2014. 2014 Common Tern email report, Eastern Passage, NS. NS Department of Environment.
1	McAlpine, D.F. 1998. NBM Science Collections databases to 1998. New Brunswick Museum, Saint John NB, 241 recs.
1	Neily, P.D. Plant Specimens. Nova Scotia Dept Natural Resources, Truro. 2006.
1	Neily, T.H. & Anderson, F. 2011. Lichen observations from NRC site at Sandy Cove. , 97.
1	Neily, T.H. 2004. Hepatica nobilis var. obtusa record for Falmouth NS. Pers. comm. to C.S. Blaney, 1 rec.
1	Newell, R.E. 2004. Hepatica nobilis var. obtusa record. Pers. comm. to S. Blaney, 1 rec.
1	Robinson, C.B. 1907. Early intervale flora of eastern Nova Scotia. Transactions of the Nova Scotia Institute of Science, 10:502-506. 1 rec.
1	Sollows, M.C,. 2009. NBM Science Collections databases: molluscs. New Brunswick Museum, Saint John NB, download Jan. 2009, 6951 recs (2957 in Atlantic Canada).
1	Speers, L. 2008. Butterflies of Canada database: New Brunswick 1897-1999. Agriculture & Agri-Food Canada, Biological Resources Program, Ottawa, 2048 recs.
1	Wilson, G. 2013. 2013 Snapping Turtle email report, Wentworth, NS. Pers. comm.

Appendix I.4

Environmental Screening Beaver Dam Mine Site – Nova Scotia Communities, Culture, & Heritage

NOVA SCOTIA

Communities, Culture & Heritage

1741 Brunswick Street
3rd Floor
P.O. Box 456
Halifax, NS
B3J 2R5

Tel: (902) 424-6475
Fax: (902) 424-0560

April 21, 2015

Melanie MacDonald
McCallum Environmental Ltd.
135, 2 Bluewater Road
Bedford Nova Scotia
B4B 1G7

Dear Ms. MacDonald:

RE: Environmental Screening 15-03-30a
Beaver Dam Gold Mine

Further to your request of March 30, 2015 staff at Communities, Culture and Heritage has reviewed their files for reference to the presence of natural resources in the study area. Please be aware that the information is not comprehensive, and may include varying degrees of accuracy with respect to the precise location and condition of natural resources.

It should be noted that the amount and degree of disturbance from previous developments could have a significant role in establishing the presence, absence or condition of natural resources in this area.

Botany

Staff has reviewed the records for plant species-at-risk. The following plants are known from the vicinity of Tent and Kent Lakes in the Beaver Dam area listed and should be considered prior to any development of the site or access roads. Presence or absence of these or any species at risk encountered should be stated in the reports generated.

Betula michauxii (provincially Yellow listed)
Bidens beckii (provincially Yellow listed)
Cypridpedium reginae (provincially Orange listed)
Potamogeton zosteriiformis (provincially Yellow listed)
Rhamnus alnifolia (provincially Orange listed)
Viola nephrophylla (provincially Yellow listed)
Zizia aurea (provincially Orange listed)

The presence/absence of the above species should be determined when identification is certain and the results should be stated in the final report.

Zoology

Staff has reviewed the zoological records for species of concern for the site indicated. There are no records for the foot-printed site. However, there are records and reports of the following species with conservation concern in the area.

There are nesting records or probable nesting records for the following bird species of concern in the immediate area:

Blue-winged Teal
Common Nighthawk
Spotted Sandpiper
Greater Yellowlegs
Common Loon
Gray Jay
Pine Siskin
Barn Swallow
Tree Swallow
Rusty Blackbird
Boreal Chickadee
Bay-breasted Warbler
Cape May Warbler
Canada Warbler
Ruby-crowned Kinglet
Golden-crowned Kinglet
Olive-sided Flycatcher
Yellow-bellied Flycatcher
Black-backed Woodpecker

If you have any questions, please contact me at 424-6475.

Sincerely,
<Original signed by>

Sean Weseloh-McKeane
Coordinator, Special Places

Enclosure

Appendix I.5

Priority Species List

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Birds						
Botaurus lentiginosus	American Bittern				S3S4B	Preferred habitats of the American Bittern include freshwater wetlands with tall emergent vegetation. In Nova Scotia, it occurs widely in most regions, but is scarce on the Atlantic slope and Cape Breton Island, where marshes are few and relatively infertile.
Turdus migratorius	American Robin				S5B, S3N	American Robins are common across the continent in gardens, parks, yards, golf courses, fields, pastures, tundra, as well as deciduous woodlands, pine forests, shrublands, and forests regenerating after fires or logging.
Icterus galbula	Baltimore Oriole				S2S3B	The Baltimore Oriole is an adaptable species (found breeding in diverse habitats), but typically favors woodland edge (especially riparian) and open areas with scattered trees; strong preference for deciduous over coniferous trees. During spring and fall migration, it is found in variety of habitats, but generally favors open woodlands, woodland margins, hedgerows, and urban parks.
Dendroica castanea	Bay-breasted Warbler				S3S4B	The Bay-breasted is one of the less widespread warblers, breeding in a narrow band across the closed boreal forests from northeast British Columbia to western Newfoundland, and south just into the U.S.A. Although during migrations and while foraging it is often seen in mixed stands, this bird nests only in conifers. Reaching highest densities in Balsam Fir forest infested with spruce budworm.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Picoides arcticus	Black-backed Woodpecker				S3S4	In the Maritimes, the Black-backed Woodpecker is widely but thinly distributed in conifer forests throughout, becoming more common farther north. The Black-backed Woodpecker is very local in southwest Nova Scotia. These birds forage on trees damaged by forest insects, especially bark beetles, and their characteristic flaking-off bark fragments in search of food can be an aid in detecting them. Nests here are often in quite open situations, such as cut-over areas, open Jack Pine stands, and the edges of woodland gardens.
Poecile hudsonica	Boreal Chickadee				S3	The Boreal Chickadee prefers conifer, and especially spruce, forests across the northern regions of Canada. Boreal Chickadees are found in all parts of the Maritimes. Most are residents, but some wander after breeding season.
Dendroica tigrina	Cape May Warbler				S2B	In summer, the Cape May Warbler is found in northern conifer forests. One of several warbler species that attain high densities during spruce budworm outbreaks, but is more usual in mature spruces than in Balsam Fir stands. Activity is mostly at the tops of tall spruces. Rarely observed in the southwest of Nova Scotia due to unsuitable habitat.
Wilsonia canadensis	Canada Warbler	T	T	Endangered	S3S4B	In Nova Scotia, the Canada Warbler has only been found sparsely on Cape Breton Island and in the extreme southwest of the province. They are less predictable from habitat than most warblers, they are usually found in dense understory vegetation of mature to mid-aged mixed forest, most closely associated with broad-leafed trees and shrubs, but with conifers usually present too.
Chordeiles minor	Common Nighthawk	T	T	Threatened	S2S3B	Common Nighthawks nest on sparsely vegetated or bare ground in open "wastelands" such as pine barrens, forest cut-overs, or burns, and secondarily on flat roofs of buildings.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Sialia sialis	Eastern Bluebird		NAR		S3B	The Eastern Bluebird nests in woodpecker holes, as well as nest-boxes. They forage in open areas of low vegetation with scattered trees for nesting.
Tyrannus tyrannus	Eastern Kingbird				S3B	In its breeding range, the Eastern Kingbird uses open environments; usually breeds in fields with scattered shrubs and trees, orchards, along shelterbelts, and especially along woodland edges in forested regions. A “savannah species”, but given suitable nest sites and perches, will nest in many other habitats—e.g., desert riparian, quaking aspen (Populus tremuloides) parkland, recently burned forest, beaver ponds, golf courses and forested river valleys, and urban environments with tall trees and scattered open spaces. Also, appears drawn to water; often nests densely in trees that overhang water or in dead, standing snags surrounded by water.
Coccothraustes vespertinus	Evening Grosbeak				S3S4B, S3N	Evening Grosbeaks breed in mature and second-growth coniferous forests of northern North America and the Rocky Mountains, including spruce-fir, pine-oak, pinyon-juniper, and aspen forests. Less commonly, they nest in deciduous woodlands, parks, and orchards. They breed as far south as Mexico at 5,000–10,000 feet of elevation in pine and pine-oak woodlands. In winter Evening Grosbeaks live in coniferous forest and deciduous forest as well as in urban and suburban areas. When wintering in urban environments they are most abundant in small woodlots near bird feeders.
Dumetella carolinensis	Gray Catbird				S3	The gray catbird inhabits shrubbery in both upland and river-edge situations, mostly in areas where tree cover is of broad-leafed species. The Maritimes are at the northeast edge of its range, and catbirds are nearly absent in upland areas of Cape Breton Island, as well as in regions with extensive conifer forest cover.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Perisoreus canadensis	Gray Jay				S3	The Gray Jay breeds in boreal regions and occurs year-round in the conifer forests. These birds are found all over the Maritimes except where extensive conifer forests are lacking. They seldom leave the spruce and fir forests where they nest.
Tringa melanoleuca	Greater Yellowlegs				S3B, S3S4M	During migration, the Greater Yellowlegs is a familiar sight in salt marshes and around ponds and rivers, but their breeding habitat is very different. Yellowlegs breed in wooded bogs and muskegs access the boreal forest from northern British Columbia and Mackenzie to Labrador, Newfoundland and eastern Nova Scotia.
Charadrius vociferus	Killdeer				S3B	Killdeer are found throughout Nova Scotia, but scarce on the Atlantic slope and on Cape Breton Island. Breed in farmlands, gravel pits, forest clear-cut areas, and open lands along the coast.
Accipiter gentilis	Northern Goshawk		NAR		S3S4	Though it is more generally found in the boreal forest region, likely because less often disturbed there, the Northern Goshawk is also widespread in more temperate habitats. It nests in most forest types found throughout its geographic range. In eastern deciduous forests, Goshawks prefer nesting in mature, mixed hardwood–hemlock stands of birch (Betula sp.), beech (Fagus sp.), maple (Acer sp.), and Eastern Hemlock. Found scattered throughout the forests of the Maritimes. Hunts in diverse habitats ranging from open-sage steppes to dense forests, including riparian areas.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Mimus polyglottos	Northern Mockingbird				S1B	The Northern Mockingbird uses open habitats with scattered shrubs and small trees. In the East, typical habitats are parkland, cultivated lands, and early successional habitat at low elevations. Throughout its range found in suburban and urban habitats such as gardens and cemeteries, especially favoring mowed lawns adjacent to bare areas (e.g. concrete, asphalt, and sidewalks) with access to shrubs or hedges for cover and nesting. Absent from the interior of all forested habitat but frequents forest edge. Found in the same habitat year-round.
Contopus cooperi	Olive-sided Flycatcher	T	T	Threatened	S3B	The Olive-sided Flycatcher is found in open woodlands and other places where scattered trees remain after cutting or fire in forested regions. Found throughout the Maritimes, but not abundantly.
Vireo philadelphicus	Philadelphia Vireo				S2?B	This Philadelphia Vireo is found mainly in broad-leafed trees, in pure or mixed woods, but it sings and forages more often in young stands and in the sub-canopy. Breeding has never been proven in Nova Scotia.
Pinicola enucleator	Pine Grosbeak				S2S3B, SN5	In the Maritimes, the Pine Grosbeak approaches the southern limit of its range, they are found generally in Nova Scotia. In general, they avoid warmer, hardwood-dominated regions.
Carduelis pinus	Pine Siskin				S2S3	The Pine Siskin is primarily found in open coniferous forests. Also breeds in ornamental conifers in parks, cemeteries, and the like, and in mixed coniferous-deciduous and even deciduous tree associations. May forage in trees, shrubs, and grassy areas.
Haemorhous purpureus	Purple Finch				S4S5B, S3S4N	Purple Finches are mostly found in moist, cool conifer forests. They are also found in mixed forests along streams and in tree-lined suburbs.
Sitta canadensis	Red-breasted Nuthatch				S3	Red-breasted Nuthatches live mainly in deciduous woods and in coniferous forests.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Loxia curvirostra	Red Crossbill				S3S4	Red Crossbills are found in mature coniferous forests.
Pheucticus ludovicianus	Rose-breasted Grosbeak				S2S3B	Rose-breasted Grosbeaks use a wide variety of habitats, including deciduous and mixed wooded uplands and lowlands; often at shrubby ecotones at the edge of woods at streams, ponds, marshes, roads, or pastures. Commonly uses second-growth woodlands and well-vegetated suburban areas, parks, gardens, and orchards. Exhibits a preference for mesic woodlands, swamp forests, riparian corridors; avoids dry oak (Quercus spp.) woodlands. Uses a wide variety of habitats during spring and fall migration.
Regulus calendula	Ruby-crowned Kinglet				S3S4B	Ruby-crowned Kinglets prefer spruce-fir forests, however they also live in mixed wood forests, isolated trees in meadows, coniferous and deciduous forests, mountain-shrub habitat, and floodplain forests of oak, pine, spruce or aspen.
Euphagus carolinus	Rusty Blackbird	SC	SC	Endangered	S2B	Rusty Blackbirds use wet coniferous and mixed forests from northern edge of tundra southward to beginning of deciduous forests and grasslands. Frequents fens, alder (Alnus)–willow (Salix) bogs, muskegs, beaver ponds, and other openings in the forest such as swampy shores along lakes and streams. Exceptionally, on Cape Breton Island, Nova Scotia, drier sites such as pasture edges are used. During spring and fall migration, it forages in stubble, pasture, plowed fields, and edges of swamps. Fall migrants also frequent wooded areas, particularly for roosting. Occasionally roosts on the ground in open fields.
Catharus ustulatus	Swainson's Thrush				S3S4B	Swainson's Thrush are predominantly found in closed-canopy forests. Breeding habitat includes deciduous and coniferous forests.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Vermivora peregrina	Tennessee Warbler				S3S4B	In its breeding range, the Tennessee Warbler is associated with Boreal zone in deciduous, mixed, and coniferous forests from near sea level to 450 m. Associated with open areas that contain grasses, dense shrubs, and scattered clumps of young deciduous trees.
Empidonax traillii	Willow Flycatcher				S2B	In general, the Willow Flycatcher prefers moist, shrubby areas, often with standing or running water. During spring and fall migration, it uses areas similar to its breeding habitat.
Gallinago delicata	Wilson's Snipe				S3B	The Wilson's Snipe breeds in sedge bogs, fens, willow (Salix spp.) and alder (Alnus spp.) swamps, and marshy edges of ponds, rivers, and brooks. Requires soft organic soil rich in food organisms just below surface, with clumps of vegetation offering both cover and good view of approaching predators. Avoids marshes with tall, dense vegetation (cattails [Typha], reeds [Phragmites], etc.). In Canada, they use four primary types of breeding habitat: sedge bogs, fens, swamps, and pond and river edges. During spring and fall migration, they use marshes (including cattails), swamps, wet meadows, wet pastures, wet fallow fields, and marshy edges of streams and ditches. As during the breeding season, they require wet organic soils rich in food with clumps of cover.
Wilsonia pusilla	Wilson's Warbler				S3B	Western montane, northern, and northeastern populations of Wilson's Warbler are restricted to mesic shrub thickets of riparian habitats, edges of beaver ponds, lakes, bogs, and overgrown clear-cuts of montane and boreal zone; may reach into alpine zone. During spring and fall migration, occurs in most deciduous shrub habitats, but primarily riparian shrub understory. Also, found in most other woodlands, suburban habitats, agricultural areas, desert scrub, and montane forests.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Empidonax flaviventris	Yellow-bellied Flycatcher				S3S4B	The Yellow-bellied Flycatcher is a characteristic breeding bird of Canadian boreal conifer forests and peatlands. It nests in typically cool, moist conifer or mixed forests, bogs, swamps, and muskegs; landscapes often flat or poorly drained. Breeding habitat is usually well stratified, with open canopy, saplings and seedlings, shrubs, and abundant, thick moss cover. Shade is provided by conifer trees and saplings, as well as layers of shrubs, ferns, and herbs; undergrowth is usually dense.
Other Vertebrates						
Perimyotis subflavus	Eastern Pipistrelle	E	E	Endangered	S1	Prefers partly open country with large trees and woodland edges. Avoids deep woods and open fields. Probably roosts in the summer in tree foliage and occasionally in buildings; may use cave as night roost between foraging forays. Usually hibernates in caves and mines with high humidity. Generally, maternity colonies utilize manmade structures or tree cavities; often in open sites that would not be tolerated by most other bats.
Lasiurus borealis	Eastern Red Bat				S1	The Eastern Red Bat lives in forests, forest edges and hedgerows. It roosts among foliage, usually in deciduous trees, but it will sometimes roost in coniferous trees.
Lasiurus cinereus	Hoary Bat				S1	Hoary Bats are thought to be rare in Nova Scotia. Insectivorous, migratory. Poorly understood. Authorities disagree as to the bat's preference for coniferous versus broadleaf trees. Hoary Bats are thought to prefer trees at the edge of clearings, but have been found in trees in heavy forests, open wooded glades, and shade trees along urban streets and in city parks.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Myotis lucifugus	Little Brown Myotis	E	E	Endangered	S1	For Little Brown Myotis, the maternity colonies often exist in warm sites that facilitate pup growth rates, such as attics of buildings and under bridges, in rock crevices, or in cavities of canopy trees in forests. Males roost during daytime in a wide variety of structures, including buildings and bridges (mainly M. lucifugus), rock crevices, behind flaking bark, and within tree cavities, often at many different sites during the summer. Myotis species generally roost in tall, large-diameter snags that are in the early to middle stages of decay and located in open areas within mature-over mature forest. Myotis lucifugus congregates in caves and abandoned mines used for hibernation through the winter. About 16 hibernation sites are known in Nova Scotia.
Sorex maritimensis	Maritime Shrew				S3	The Maritime Shrew is most often found in marshes and wet meadows. It is only found in two provinces in Canada: New Brunswick and Nova Scotia.
Alces americanus	Mainland Moose			Endangered	S1	Mainland Moose are herbivores who live in boreal and mixed-wood forests. They are often found where there is an abundance of food (twigs, stems, and foliage of young deciduous trees and shrubs). In spring, islands and peninsulas are often used by cows when giving birth. In summer, access to wetlands (and aquatic vegetation) is important.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Myotis septentrionalis	Northern Long-eared Myotis	E	E	Endangered	S1	The Northern Long-eared Bat is found in many regions of Canada. Although there are numerous records of its presence in eastern Canada and the United States, it has only been recorded sporadically in the west. This bat has two habitats: a winter hibernation habitat as well as a summer roosting and foraging habitat. The Northern Long-eared Bat hibernates in caves or abandoned mines during the cold winter months. During the summer months, the bats commonly use crevices behind peeling bark or cavities in partially-decayed trees as summer day roosts. Within thick forests, summer activity may be focused along watercourses and small ponds.
Microtus chrotorrhinus	Rock Vole				S2	Optimal habitat for the Rock Vole is ferns/mossy debris near flowing water in coniferous forests. It also occupies deciduous forest/spruce clear cuts (mainly recent cuts), forest ecotones, grassy balds near forest, and sterile-looking rocky road fills. Occupies shallow burrows and runways. Nests probably are placed under logs or in similar protected sites. They are made of moss with a lining of grass and have multiple entrance tunnels. Breeding season is from March to mid-October.
Lasionycteris noctivagans	Silver-haired Bat				S1	Scarce in eastern Canada. During the summer months, Silver-haired Bats are found in forested habitats, particularly coniferous woodlands, adjacent to aquatic habitats like ponds, lakes and streams. Both sexes fly south between the middle of August and early October.
Chelydra serpentina	Snapping Turtle	SC	SC	Vulnerable	S3	southern New Brunswick and parts of mainland Nova Scotia in ponds, lakes, slow-moving streams and sometimes in brackish water if these water bodies have soft mud bottoms and abundant aquatic vegetation.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Glyptemys insculpta	Wood Turtle	T	T	Threatened	S2	Habitat destruction and fragmentation due to intense development and accompanying stream alterations are serious problems in the southeastern portion of the Wood Turtle's range. Protection of wooded stream corridors, nesting, feeding, basking, and overwintering sites, and an upland buffer would be necessary to include in preserve design
						Lives along permanent streams during much of each year, but in summer may roam widely overland and can be found in a variety of terrestrial habitats adjacent to streams, from deciduous woods, cultivated fields, and woodland bogs, to marshy pastures. Use of woodland bogs and marshy fields is most common in the northern part of the range.
Fish						
Anguilla rostrata	American Eel		T		S5	The American Eel moves from salt water into fresh water when quite young and spend their adult life in fresh water returning to spawn in tropical oceans up to several decades later. Widely distributed in freshwaters, estuaries and coastal marine waters connected to the Atlantic Ocean. Although small streams may be critical to the persistence of eels in a watershed, they may use these streams only once or twice a year, while moving to and from more preferred habitats.
Salmo salar	Atlantic Salmon – Southern Uplands Population		E		S2	Found in freshwater rivers and streams that are clear, cool, and well oxygenated, with gravel, cobble, or boulder bottoms.
~~*Rhinichthys atratulus*~~	~~Blacknose Dace~~				~~S3~~	~~The Blacknose Dace is common in cool, clear, gravel bottom rivers and streams, however it can survive in slow moving or stagnant waters.~~

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Culaea inconstans	Brook Stickleback				S3	This species generally occupies cool, clear, heavily weeded, spring-fed creeks, small rivers, lakes, and ponds, usually in shallow, quiet to flowing pools and backwaters over sand or mud. Sometimes it burrows into soft bottoms. Occasionally this fish can be found in brackish water. In a lake in Manitoba, adults were most abundant at the outer margin of emergent vegetation (Moodie 1986). Eggs are deposited in a nest made of plant material by the male just above the bottom in shallow water.
Invertebrates						
Euphydryas phaeton	Baltimore Checkerspot				S3	Found in fresh-water marshes, wet roadsides and meadows. Larvae found feeding on Turtlehead (Chelone glabra) and has been reported to feed on Beardtongue (Penstemon digitalis).
Amblyscirtes vialis	Common Roadside-Skipper				S2	Found in trails, roads in wooded areas and often near streams. Larvae are found feeding off of a variety of grass species.
Polygonia progne	Grey Comma				S3S4	Found in woods and aspen parklands. Larvae found feeding on currants and gooseberries (Ribes sp.) and sometimes Elm (Ulmus sp.).
Danaus plexippus	Monarch	SC	SC		S2B	Almost anywhere during the spring (northward) migration; near the larval foodplains during the breeding season; in the fall commonly near the coast, often in large numbers, all heading south. Larvae are found feeding on the following Milkweed species: Common Milkweed (Ascelpias syriaca) and Swamp Milkweed (A. incarnata), neither of which are abundant plants in Nova Scotia. Common Milkweed is very common in lower Saint John river valley (NB) and possibly north central Nova Scotia.
Pieris oleracea	Mustard White				S2	Found in deciduous woods and bogs. Larvae feed off of various plants belonging to the Brassicaceae (mustard) family.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Lethe anthedon	Northern Pearly-Eye				S3	Found in moist woods and dominated by graminoids in the herbaceous layer of forests. Larvae feed off of woodland grasses such as Bearded Shortgrass (Brachyelytrum erectum) and False Melic Grass (Schizachne purpurascens).
Amblyscirtes hegon	Pepper and Salt Skipper				S2	Found on the edges of forests and streams. Larvae found feeding on a variety of grass species.
Gomphus ventricosus	Skillet Clubtail	E	E		S1	In the Northeast, the larvae inhabit large rivers where they burrow in the soft mud of deep pools.
Satyrium liparops	Striped Hairstreak				S3	Found in deciduous forest edges, gardens and roadsides. Larvae found feeding off of members of the Rosaceae family such as plum and cherries (Prunus spp.). Occurrences with Oak (Quercus spp.), Willow (Salix spp.) and Blueberry (Vaccinium spp.).
Alasmidonta undulata	Triangle Floater				S2S3	Frequently found in stream and rivers in sand and gravel substrates.
Vascular Plants						
Isoetes acadiensis	Acadian Quillwort				S3	In water up to depth of 1m, bordering lakes, ponds or along rivers, infrequent but scattered through province.
Rhamnus alnifolia	Alder-leaved Buckthorn				S3	Grows in wooded swamps or bogs, meadows or alluvial soils in the alkaline regions, in Hants, Cumberland and Inverness Counties.
Vaccinium uliginosum	Alpine Bilberry				S3	Wide tolerance of moisture and fertility, but generally acidic soils in Halifax, Digby & Cape Breton.
Barbarea orthoceras	American Yellow Rocket				S1	Alpine or subalpine zones, shores of rivers or lakes, talus and rocky slopes.
Polypodium appalachianum	Appalachian Polypody				S3?	Cliffs and rocky slopes, distribution unclear.
Viola sagittata	Arrow-Leaved Violet				S3S4	Sterile woods, clearing and fields, common from Yarmouth to Halifax and Hants Counties.
Viola sagittata var. ovata	Arrow-Leaved Violet				S3S4	Sterile woods, clearing and fields, common from Yarmouth to Halifax and Hants Counties.
Salix serissima	Autumn Willow				S1	Fens (calcium-rich wetlands), meadows and fields, swamps.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Geranium bicknellii	Bicknell's Crane's-bill				S3	Colonizes recently burned or cleared land; recently exposed lakeshores, Sporadic from southern counties to central Nova Scotia.
Fraxinus nigra	Black Ash			Threatened	S1S2	Typical habitat includes poorly drained soils and swampy woods.
Polygala sanguinea	Blood Milkwort				S2S3	Prefers acidic or run-out soil as found in fallow fields or brushlands, scattered through central portion of province.
Caulophyllum thalictroides	Blue Cohosh				S2	Shade-tolerant, restricted to river floodplain deciduous forests. A wide and patchy distribution over northern portion of the province from Annapolis River to River Denys in Cape Breton.
Carex tribuloides	Blunt Broom Sedge				S3?	Found in wet forest soils and swales. Collected from Kings and Queens counties to Cape Breton.
Carex tribuloides var. tribuloides	Blunt Broom Sedge				S3?	Found in wet forest soils and swales.
Galium obtusum ssp. obtusum	Blunt-leaved Bedstraw				S2S3	Swamps, swampy grounds, wet areas of prairies, wet woods and thickets, roadside ditches.
Potamogeton obtusifolius	Blunt-leaved Pondweed				S3	Ponds, pools, lakes and sluggish streams often over deep mucky substrate. Northern from Cumberland Co., to northern Cape Breton.
Betula pumila var. renifolia	Bog Birch				S1?	Bogs and meadows amongst alders.
Betula pumila var. pumila	Bog Birch				S2S3	Bogs and meadows amongst alders.
Salix pedicellaris	Bog Willow				S2	Grows in acidic substrate as in bogs; nutrient-rich marshes and in sphagnous lacustrine habitats.
Symphyotrichum boreale	Boreal Aster				S2?	Lacustrine gravels, streamsides and edges of peatlands. Scattered from Yarmouth to Cape Breton and uncommon.
Bromus latiglumis	Broad-Glumed Brome				S1	Floodplain (river or stream floodplains), forests, shores of rivers or lakes.
Anemone canadensis	Canada Anemone				S2	In thickets, meadows and stony shores. Grows in alluvial soils in calcareous regions.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Potentilla canadensis	Canada Cinquefoil				S2S3	Found on dry rock barrens and other open areas in Yarmouth, Halifax, Kings, Shelburne and Hants Co.
Potentilla canadensis var. canadensis	Canada Cinquefoil				S2S3	Found on dry rock barrens and other open areas in Yarmouth, Halifax, Kings, Shelburne and Hants Co.
Piptatherum canadense	Canada Rice Grass				S2	Grows in dry sandy soils. Local and scattered from Shelburne to Halifax and Colchester counties.
Polygonum careyi	Carey's Smartweed				S1	Anthropogenic (man-made or disturbed habitats), meadows and fields, shores of rivers or lakes.
Sisyrinchium fuscatum	Coastal Plain Blue-eyed-grass				S1	Grows on sandy soils. Collected only from western counties.
Eupatorium dubium	Coastal Plain Joe-pye-weed				S2	Found in wet meadows, damp thickets, shores, and along the roadside. It grows best in full sun but can also grow in semi-shade and enjoys grows well-drained soil that is moisture retentive.
Galium aparine	Common Bedstraw				S2S3	Pastures, fields, ditches and streamsides. Very common throughout.
Humulus lupulus var. lupuloides	Common Hop				S1?	Anthropogenic (man-made or disturbed habitats), floodplain (river or stream floodplains), forests, shrublands or thickets.
Botrychium lunaria	Common Moonwort				S1	Open slopes. Sand or gravel; shores and meadows. Basic soils. Known from Conrad's Beach, Halifax County and from New Campbellton and Indian Brook in northern Cape Breton.
Equisetum hyemale	Common Scouring-rush				S3S4	Grows in sandy, gravelly soil, on banks or in low areas; often in calcareous regions. Scattered, mostly from Digby County, through the Annapolis Valley, northward to Cape Breton.
Equisetum hyemale var. affine	Common Scouring-rush				S3S4	Grows in sandy, gravelly soil, on banks or in low areas; often in calcareous regions. Scattered, mostly from Digby County, through the Annapolis Valley, northward to Cape Breton.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Cardamine pratensis var. angustifolia	Cuckoo Flower				S1	Moist soil as in meadows, damp fields and other low ground. Scattered in the province, frequent along the Annapolis River and even spreading into roadsides ditches, north to Cape Breton.
Ranunculus sceleratus	Cursed Buttercup				S1S2	Anthropogenic (man-made or disturbed habitats), fresh tidal marshes or flats, marshes, swamps.
Ranunculus sceleratus var. sceleratus	Cursed Buttercup				S1S2	Anthropogenic (man-made or disturbed habitats), fresh tidal marshes or flats, marshes, swamps.
Rudbeckia laciniata	Cut-Leaved Coneflower				S1S2	Floodplain (river or stream floodplains), forests, shores of rivers or lakes, swamps, wetland margins (edges of wetlands).
Rudbeckia laciniata var. gaspereauensis	Cut-Leaved Coneflower				S1S2	Floodplain (river or stream floodplains), forests, shores of rivers or lakes, swamps, wetland margins (edges of wetlands).
Hypericum dissimulatum	Disguised St John's-wort				S2S3	Wet mucky soils in lacustrine habitats; historically collected from Digby to Halifax Co. with a single specimen from each of Pictou and Guysborough counties.
Goodyera pubescens	Downy Rattlesnake-Plantain				S2	Forms large colonies in woodlands and thickets; Only recently discovered in Nova Scotia (1963) and so far known from Queens, Kings, Annapolis, Hants and Halifax counties.
Epilobium strictum	Downy Willowherb				S3	Bogs and other peatlands; Scattered throughout Cape Breton, infrequent elsewhere.
Arabis drummondii	Drummond's Rockcress				S2	Cliff or talus slope.
Juncus dudleyi	Dudley's Rush				S3	A habitat generalist; known from Annapolis, Hants and Lunenburg counties.
Vaccinium caespitosum	Dwarf Bilberry				S3	Cliff or talus slope, disturbed sites, field meadow.
Vaccinium caespitosum var. caespitosum	Dwarf Bilberry				S3	Cliff or talus slope, disturbed sites, field meadow.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Pilea pumila	Dwarf Clearweed				S1	Usually grows in cool shady habitats as found on forested slopes of maple-beech, in the centre of the province. So far, only known from West Branch, Pictou Co.; Little River, near Brookfield, Halifax Co.; and along the Herbert River, Hants Co. at Woodville.
Pilea pumila var. pumila	Dwarf Clearweed				S1	Usually grows in cool shady habitats as found on forested slopes of maple-beech, in the centre of the province. So far, only known from West Branch, Pictou Co.; Little River, near Brookfield, Halifax Co.; and along the Herbert River, Hants Co. at Woodville.
Baccharis halimifolia	Eastern Baccharis		T	Threatened	S1	Anthropogenic (man-made or disturbed habitats), brackish or salt marshes and flats, coastal beaches (sea beaches), marshes.
Sisyrinchium atlanticum	Eastern Blue-Eyed-Grass				S3S4	Found in damp peat, sandy soils that are poorly drained. Common from Yarmouth and Shelburne counties east to Lunenberg Co. Scattered elsewhere.
Solidago latissimifolia	Elliott's Goldenrod				S3S4	Clearings, thickets and bogs, swales and lakeshores. Common in Yarmouth Co., east to Halifax Co.
Carex vacillans	Estuarine Sedge				S1S3	Brackish or salt marshes and flats, intertidal, subtidal or open ocean, shores of rivers or lakes.
Panicum dichotomiflorum var. puritanorum	Fall Panic Grass				S1?	Anthropogenic (man-made or disturbed habitats), shores of rivers or lakes.
Myriophyllum farwellii	Farwell's Water Milfoil				S2	Ponds and slow-flowing fresh water. Scattered across the mainland.
Carex foenea	Fernald's Hay Sedge				S3?	Preferred habitat is dry and sandy soils as on barrens. Scattered from Yarmouth to northern Cape Breton.
Potamogeton zosteriformis	Flat-stemmed Pondweed				S2S3	Lacustrine (in lakes or ponds), riverine (in rivers or streams).
Stellaria crassifolia and var. crassifolia	Fleshy Stitchwort				S1	Frequents pond edges and wet seepy slopes.
Trichostema dichotomum	Forked Bluecurls				S1	Anthropogenic (man-made or disturbed habitats), grassland, meadows and fields, sandplains and barrens.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Carex alopecoidea	Foxtail Sedge				S1	Anthropogenic (man-made or disturbed habitats), floodplain (river or stream floodplains), forests, marshes.
Ranunculus gmelinii+	Gmelin's Water Buttercup				S3	Riverine (in rivers or streams), swamps.
Zizia aurea	Golden Alexanders				S1	Meadows, shores, thickets and even wooded swamps. Occasionally reported: Pomquet and South River, Antigonish Co., Upper Musquodoboit, Halifax Co.
Veratrum viride	Green False Hellebore				S1	Open moist meadows. Found once in the meadow along the stream at the Kentville Research Station and to be expected elsewhere. This is possibly native.
Carex viridula var. elatior	Greenish Sedge				S1	Crins of alkaline, lime-rich soils.
Minuartia groenlandica	Greenland Stitchwort				S3	Granite ledges, crevices and gravels, coastal headlands. Halifax and Lunenburg counties; French Mountain, Inverness County. Recently collected from White's Cove, Digby Co.
Lycopodium sabinifolium	Ground-Fir				S3?	Alpine or subalpine zones, anthropogenic (man-made or disturbed habitats), meadows and fields.
Carex haydenii	Hayden's Sedge				S1	Marshes, meadows and fields, shores of rivers or lakes.
Cyperus lupulinus and ssp. macilentus	Hop Flatsedge				S1	Anthropogenic (man-made or disturbed habitats), grassland, meadows and fields.
Carex grisea	Inflated Narrow-leaved Sedge				S1	Floodplain (river or stream floodplains), forests.
Botrychium lanceolatum var. angustisegmentum	Lance-Leaf Grape-Fern				S2S3	Fertile soils on woodland hillsides.
Carex lapponica	Lapland Sedge				S1?	Sphagnum bogs, wet, nutrient-poor areas, mostly lowlands
Platanthera grandiflora	Large Purple Fringed Orchid				S3	Favours wet meadows and riparian habitats - More often found in north-central Nova Scotia. Infrequent in southwestern NS.
Hypericum majus	Large St John's-wort				S2	Wet or dry open soil. Widely scattered locations. Until recently, only known from Halifax area and Big Baddeck, Victoria County, and thought to be historic.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Carex adusta	Lesser Brown Sedge				S2S3	Found in dry, open forest or recent clearings on acidic, gravelly soils. Most frequent after fire - Scattered and not common, from Kejimkujik National Park to Cumberland Co.; northern Cape Breton. Recently collected from Williams Lake area of Halifax Co.
Carex granularis	Limestone Meadow Sedge				S1	Anthropogenic (man-made or disturbed habitats), meadows and fields, shores of rivers or lakes, wetland margins (edges of wetlands).
Schizaea pusilla	Little Curlygrass Fern				S3	Sphagnous wet areas, upper peaty lakeshores and undrained depressions. Scattered throughout the Atlantic counties and frequent in the northern plateau of Cape Breton.
Rhinanthus minor ssp. groenlandicus	Little Yellow Rattle				S1	Alpine or subalpine zones, anthropogenic (man-made or disturbed habitats), meadows and fields, mountain summits and plateaus, talus and rocky slopes
Liparis loeselii	Loesel's Twayblade				S3S4	Anthropogenic (man-made or disturbed habitats), fens (calcium-rich wetlands), lacustrine (in lakes or ponds), meadows and fields, shores of rivers or lakes.
Stellaria longifolia and var. longifolia	Long-leaved Starwort				S2	Damp grassy habitats, in sandy or mucky soils. Locally abundant along the Salmon River at Truro and Kemptown, Colchester Co.; along the Musquodoboit and Stewiacke rivers; Isle Haute.
Equisetum palustre	Marsh Horsetail				S1	Of wetlands, marshes and swamps. A single collection each from Kings County and Halifax Co.
Proserpinaca palustris	Marsh Mermaidweed				S3	Lakeshore fens and streamsides.
Hordeum brachyantherum and ssp. brachyantherum	Meadow Barley				S1	Anthropogenic (man-made or disturbed habitats).
Betula michauxii	Michaux's Dwarf Birch				S2	Limited to peat bogs. Scattered localities from Brier Island, Digby Co., east to Guysborough, Cape Breton and Inverness counties.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Amelanchier nantucketensis	Nantucket Serviceberry				S1	Found in disturbed habitats such as roadsides, fields, sandplains, riparian meadows and barrens. Its NS distribution is limited to Cumberland, Shelburne and Halifax counties. No collection for the Halifax Co. locality.
Trisetum spicatum	Narrow False Oats				S3S4	Grows in rocky soils on outcrops, cliffs, streamsides. Found on Cape Blomidon, Cape d'Or and scattered from Halifax and Hants counties to northern Cape Breton.
Allium burdickii	Narrow-Leaved Wild Leek				S1?	Rich deciduous woodlands, wooded bluffs, wooded areas along rivers and streams, and cemetery prairies
Saxifraga cernua	Nodding Saxifrage				S1	Alpine or subalpine zones, cliffs, balds, or ledges.
Ophioglossum pusillum	Northern Adder's-tongue				S2S3	Sterile soils, swamps and sandy or cobbly lakeshores. Known from Yarmouth and Digby Counties; scattered east to Halifax and Amherst; a single Cape Breton record from George River.
Betula borealis	Northern Birch				S2	Bogs and wooded swamps.
Viola nephrophylla	Northern Bog Violet				S2	Cool, mossy sites: bogs, streamsides and wet woods. Rare in Shelburne Co., Colchester and Cumberland counties northward. Generally, a northern ranging species within NS.
Lycopodium complanatum	Northern Clubmoss				S3S4	Open woodlands, thickets, heathland and rocky slopes;
Geocaulon lividum	Northern Comandra				S3	Damp sands and other sterile soils, especially in acid or peaty sites. Disjunct sites in Halifax, Kings and Cumberland counties; widespread but local in Cape Breton.
Thalictrum venulosum	Northern Meadow-rue				S1	Shores of rivers or lakes.
Spiraea septentrionalis	Northern Meadowsweet				S1?	Open, moist areas
Vaccinium ovalifolium	Oval-leaved Bilberry				S1	Sterile and dry soils in barrens, thickets and coniferous woods
Eleocharis ovata	Ovate Spikerush				S2?	Grows on muddy streamsides, streambeds and lakeshores, often in subsiding water.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Torreyochloa pallida var. pallida	Pale False Manna Grass				S1	Lacustrine (in lakes or ponds), riverine (in rivers or streams), swamps.
Platanthera flava var. herbiola	Pale Green Orchid				S2	Anthropogenic (man-made or disturbed habitats), floodplain (river or stream floodplains), forest edges, forests, fresh tidal marshes or flats, grassland, meadows and fields, riverine (in rivers or streams), shrublands or thickets, swamps, wetland margins (edges of wetlands), woodlands.
Impatiens pallida	Pale Jewelweed				S2	Alluvial soils as along intervales and in thickets. Uncommon from Kings Co,.Isle Haute, to northern Cape Breton and more frequent eastward.
Hieracium paniculatum	Panicled Hawkweed				S3	Mixed forest on dryish soils, especially oak. Occasional from Yarmouth east to Kings and Halifax counties. Common about Kentville and at Kejimkujik.
Rumex persicarioides	Peach-leaved Dock				S2?	Anthropogenic (man-made or disturbed habitats), brackish or salt marshes and flats, coastal beaches (sea beaches), meadows and fields.
Ranunculus pensylvanicus	Pennsylvania Buttercup				S1	Anthropogenic (man-made or disturbed habitats), marshes, shores of rivers or lakes, swamps.
Erigeron philadelphicus	Philadelphia Fleabane				S2	Habitats include fields, meadows and springy slopes. Not common, scattered stations from Digby and Cumberland counties to central Cape Breton.
Erigeron philadelphicus var. philadelphicus	Philadelphia Fleabane				S2	Habitats include fields, meadows and springy slopes. Not common, scattered stations from Digby and Cumberland counties to central Cape Breton.
Empetrum eamesii ssp. atropurpureum	Pink Crowberry				S2S3	Barrens, beach or coastal shore, bog, exposed rock or sand, headland
Empetrum eamesii ssp. eamesii	Pink Crowberry				S2S3	Barrens, beach or coastal shore, bog, exposed rock or sand, headland
Empetrum eamesii	Pink Crowberry				S3	Barrens, beach or coastal shore, bog, exposed rock or sand, headland
Pyrola asarifolia and ssp. asarifolia	Pink Pyrola				S3	Found in moist and riparian forests and in swamps dominated by northern white-cedar (Thuja occidentalis).

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Carex plantaginea	Plantain-Leaved Sedge				S1	Forests.
Rosa acicularis and ssp. sayi	Prickly Rose				S1	Cliffs, balds, or ledges, ridges or ledges. Inhabits areas of calcareous rock or rich sediments.
Festuca prolifera	Proliferous Fescue				S1S2	Alpine or subalpine zones, cliffs, balds, or ledges, talus and rocky slopes.
Crataegus submollis	Quebec Hawthorn				S1?	edges of fields and thickets, Antigonish and Lunenburg Co. to Cape Breton.
Fraxinus pennsylvanica	Red Ash				S1	Floodplain (river or stream floodplains), forests, shores of rivers or lakes, swamps.
Lachnanthes caroliniana	Redroot	SC	SC	Vulnerable	S2	Shores of rivers or lakes.
Eleocharis erythropoda	Red-stemmed Spikerush				S1	Fens (calcium-rich wetlands), marshes, shores of rivers or lakes, wetland margins (edges of wetlands).
Crataegus robinsonii	Robinson's Hawthorn				S1?	Prairie, meadows, fields.
Carex rosea	Rosy Sedge				S3	Grows in dry soils beneath deciduous forests and thickets. Common from Annapolis Co. to northern Cape Breton.
Hieracium scabrum var. leucocaule	Rough Hawkweed				S1	Usually in poor soils in pastures, fields and fallow sites. Common throughout.
Plantago rugelii	Rugel's Plantain				S2S3	Anthropogenic (man-made or disturbed habitats), grassland, meadows and fields.
Plantago rugelii var. rugelii	Rugel's Plantain				S2S3	Anthropogenic (man-made or disturbed habitats), grassland, meadows and fields.
Cypripedium reginae	Showy Lady's-Slipper				S2	Bog, swamp. Widely scattered localities in province
Salix sericea	Silky Willow				S2	LOake or pond shore, riparian zones. Rare only reported from western NS. Parr Lake and Lake Fanning, Yarmouth Co.; Queens and Lunenburg counties to Halifax County
Eriophorum gracile and var. gracile	Slender Cottongrass				S2	Wet peat and inundated shores. Scattered eastward from Annapolis and Halifax counties.
Agalinis paupercula	Small-flowered Agalinis				S1	Meadows and fields, shores of rivers or lakes, wetland margins.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Limosella australis	Southern Mudwort				S3	Beach or coastal shore, coastal island, lake or pond shore, river or stream. Yarmouth, Shelburne, Queens and Cumberland counties; Sable Island; Cape Breton and likely elsewhere.
Listera australis	Southern Twayblade				S3	Bog, mixed wood forest, swamps. Scattered from Shelburne, to Halifax, to Kings to Cape Breton counties.
Potamogeton pulcher	Spotted Pondweed			Vulnerable	S2S3	Aquatic perennial herb that grows in standing water. Yarmouth, Queens and Halifax Counties, reported in Digby Co.
Halenia deflexa ssp. brentoniana	Spurred Gentian				S1?	Forest edge, forests, meadows and fields
Asclepias incarnata ssp. pulchra	Swamp Milkweed				S3?	Rocky soils along lakeshores, marshes, streamsides or peatland edges. Infrequently found from Yarmouth to Cape Breton.
Veronica serpyllifolia ssp. humifusa	Thyme-Leaved Speedwell				S2S3	Moist soils, fields and roadsides. Common throughout.
Panicum tuckermanii	Tuckerman's Panic Grass				S3S4	Meadows and fields, shores of rivers and lakes.
Equisetum variegatum and var. variegatum	Variegated Horsetail				S3	Wetlands or wet seeps. Wide ranging in NS, with disjunct localities: Halifax County, Cumberland Co., Victoria Co.
Symphyotrichum undulatum	Wavy-leaved Aster				S2	Edges of fields and forests. Lunenburg Co. Queens, Hants, Kings and Halifax counties
Carex peckii	White-Tinged Sedge				S2?	Fry or mesic slopes, mixed deciduous forests, rocky outcrops, old quarries. King's Co., Rhodes Co., Lunenburg Co. Halifax and the Pennants area.
Lysimachia quadrifolia	Whorled Yellow Loosestrife				S1	Disturbed habitat, grassland, woodlands
Vallisneria americana	Wild Celery				S2	Ponds, lakes, and quiet streams at depths of 1 to 4 m. Colchester Co., Halifax Co., Cumberland Co. Reported from Northern Cape Breton.
Allium schoenoprasum and var. sibiricum	Wild Chives				S2	Disturbed habitats, floodplain, meadows and fields, ridges or ledges, shores of rivers and lakes.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Allium tricoccum	Wild Leek				S1	Hardwood forest, intervale
Juncus subcaudatus	Woods-Rush				S3	Conifer woods and spruce swamps, where substrate is soggy. Yarmouth to Kings and Halifax Counties. Richmond County
Juncus subcaudatus var. planisepalus	Woods-Rush				S3	Conifer woods and spruce swamps, where substrate is soggy. Yarmouth to Kings, Halifax Counties and Richmond County.
Dichanthelium acuminatum var. lindheimeri	Woolly Panic Grass				S1?	Open sites and sandy soils. Widespread and common.
Bartonia virginica	Yellow Bartonia				S3	Dry barrens, sandy or peaty soils, bogs, lakeshores. Common in southwestern counties becoming scarcer eat to Annapolis and Halifax; St. Peter's area of Cape Breton
Cypripedium parviflorum	Yellow Lady's-slipper				S2S3	Occasionally under mixed deciduous trees
Utricularia ochroleuca	Yellowish-white Bladderwort				S1	Rooted free floating plant
Lichens						
Cladina stygia	Black-footed Reindeer Lichen				S2S3	Most frequent in peatlands, particularly treeless bogs
Anzia colpodes	Black-foam Lichen				S3	This species occurs on the bark of hardwoods, and more rarely conifers, in humid forested habitats throughout temperate eastern North America.
Leptogium corticola	Blistered Jellyskin Lichen				S2S3	This lichen species is widespread and grows on the bases of hardwoods and occasionally on rocks in moist woods.
Collema furfuraceum	Blistered Tarpaper Lichen				S3	On bark of hardwood and sometimes coniferous trees, especially in old forests
Degelia plumbea	Blue Felt Lichen		SC	Vulnerable	S2	Mature forests within varying moisture regimes. Typically located in hardwood stands, with Red maple, Sugar maple, or Yellow Birch.

Scientific Name	Common Name	SARA[i]	COSEWIC[ii]	NSESA[iii]	SRank[iv]	Habitat Requirements
Erioderma pedicellatum (Atlantic pop.)	Boreal Felt Lichen - Atlantic pop.	E	E	Endangered	S1S2	Mature to over mature Balsam Fir trees in open softwood forests with little to no regenerating understory. Typically, though not necessarily found in or near wetlands or wetland margins.
Physconia detersa	Bottlebrush Frost Lichen				S2S3	On bark and wood; occasionally on rock
Erioderma mollissimum	Graceful Felt Lichen	E	E	Endangered	S1S2	Mature to over mature Balsam Fir trees in open softwood forests with little to no regenerating understory. Typically, though not necessarily found in or near wetlands or wetland margins.
Sticta fuliginosa	Peppered Moon Lichen				S3	Grows on mossy bark
Fuscopannaria leucosticte	Rimmed Shingles Lichen				S1S2	On bark or occasionally rocks often among mosses.

[i] Government of Canada. 2015. Species at Risk Public Registry. Accessed online, 11 December 2015. https://www.registrelep-sararegistry.gc.ca/default.asp?lang=En&n=24F7211B-1

[ii] Government of Canada. 2015. Committee on the Status of Endangered Wildlife in Canada. Accessed online, 11 December 2015. http://www.cosewic.gc.ca/eng/sct5/index_e.cfm

[iii] Province of Nova Scotia. 2015. Categorized List of Species at Risk made under Section 12 of the Endangered Species Act S.N.S. 1998, c. 11, N.S. Reg. 21/2015 (March 26, 2013). Accessed online, 11 December 2015. https://www.novascotia.ca/just/regulations/regs/eslist.htm

[iv] Atlantic Canada Conservation Data Centre. 2015. Status Ranks. Accessed online, 11 December 2015. http://accdc.com/en/ranks.html

Appendix J.1

Photographic Log of Watercourses and Fish Habitat

PHOTO 1 - WATERCOURSE 4

PHOTO 2 - WATERCOURSE 5 NEAR WETLAND 2

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MARINETTE, HALIFAX COUNTY, NOVA SCOTIA
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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

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PHOTO 3 - WATERCOURSE 5 NEAR WETLAND 14

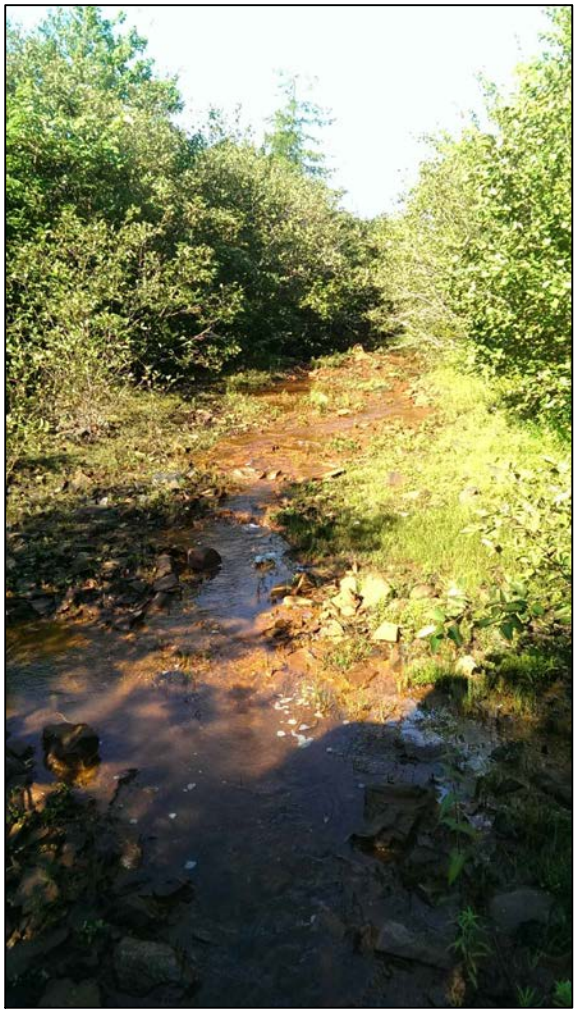

PHOTO 4 - WATERCOURSE 12

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H2

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PHOTO 5 - WATERCOURSE 13

PHOTO 6 - WATERCOURSE 14

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FIGURE H3

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PHOTO 7 - CAMERON FLOWAGE

PHOTO 8 - MUD LAKE

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H4

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PHOTO 9 - CRUSHER LAKE

PHOTO 10 - WATERCOURSE A

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H5

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PHOTO 11 - WATERCOURSE B

PHOTO 12 - WATERCOURSE D

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H6

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PHOTO 13 - WATERCOURSE E

PHOTO 14 - WATERCOURSE L

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H7

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PHOTO 15 - WATERCOURSE J

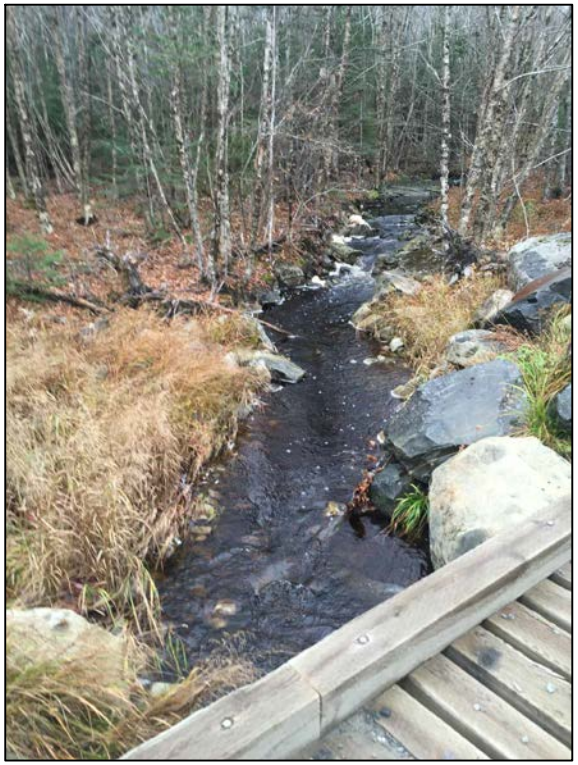

PHOTO 16 - WATERCOURSE H

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H8

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PHOTO 17 - WATERCOURSE N - WEST RIVER SHEET HARBOUR

PHOTO 18 - WATERCOURSE Q

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H9

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PHOTO 19 - WATERCOURSE T

PHOTO 20 - WATERCOURSE V

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H10

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PHOTO 21 - WATERCOURSE O

PHOTO 22 - WATERCOURSE AD - MORGAN RIVER

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H11

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PHOTO 23 - WATERCOURSE AA

PHOTO 24 - WATERCOURSE W

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H12

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PHOTO 25 - WATERCOURSE AH

PHOTO 26 - WATERCOURSE AE

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H13

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PHOTO 27 - WATERCOURSE AG

PHOTO 28 - WATERCOURSE 4 INLET TO WETLAND 13

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H14

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA014.dwg

PHOTO 29 - WATERCOURSE 4 OUTLET FROM WETLAND 13

PHOTO 30 - WATERCOURSE 5 INSIDE WETLAND 17

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H15

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA015.dwg

PHOTO 31 - WATERCOURSE 3 IN WETLAND 20

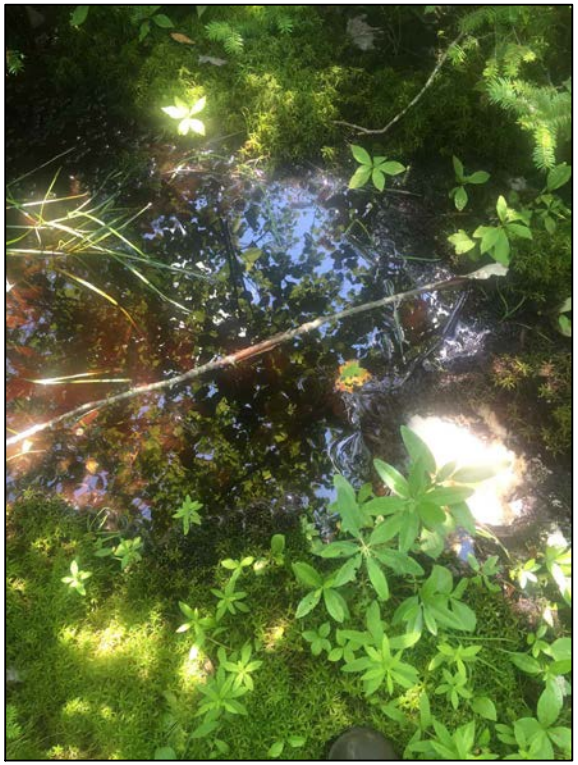

PHOTO 32 - WATERCOURSE 10 IN WETLAND 29

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H16

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PHOTO 33 - WATERCOURSE 11 IN WETLAND 29

PHOTO 34 - WATERCOURSE 11 IN WETLAND 33

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H17

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA017.dwg

PHOTO 35 - WATERCOURSE 5 IN WETLAND 44
(IMPOUNDED BY BEAVER ACTIVITY)

PHOTO 36 - WATERCOURSE 12 INLET INTO
WETLAND 56

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BEAVER DAM MINE PROJECT

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H18

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA018.dwg

PHOTO 37 - WATERCOURSE 13 IN WETLAND 61

PHOTO 38 - WATERCOURSE A IN WETLAND 64

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H19

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA019.dwg

PHOTO 39 - WATERCOURSE B IN WETLAND 66

PHOTO 40 - WATERCOURSE E IN WETLAND 73

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H20

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA020.dwg

PHOTO 41 - WATERCOURSE F IN WETLAND 74

PHOTO 42 - WATERCOURSE G IN WETLAND 76

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H21

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA021.dwg

PHOTO 43 - WATERCOURSE Z IN WETLAND 146

PHOTO 44 - WETLAND 154

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H22

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA022.dwg

PHOTO 45 - WATERCOURSE AA IN WETLAND 159

PHOTO 46 - WATERCOURSE AA IN WETLAND 160

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PHOTOGRAPHIC LOG OF WATERCOURSES AND FISH HABITAT

FIGURE H23

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA023.dwg

PHOTO 47 - PREFERRED ALTERNATIVE HAUL ROAD
WATERCOURSE AI

PHOTO 48 - PREFERRED ALTERNATIVE HAUL ROAD
WATERCOURSE AJ

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FIGURE H24

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA024.dwg

PHOTO 49 - PREFERRED ALTERNATIVE HAUL ROAD
WATERCOURSE AK

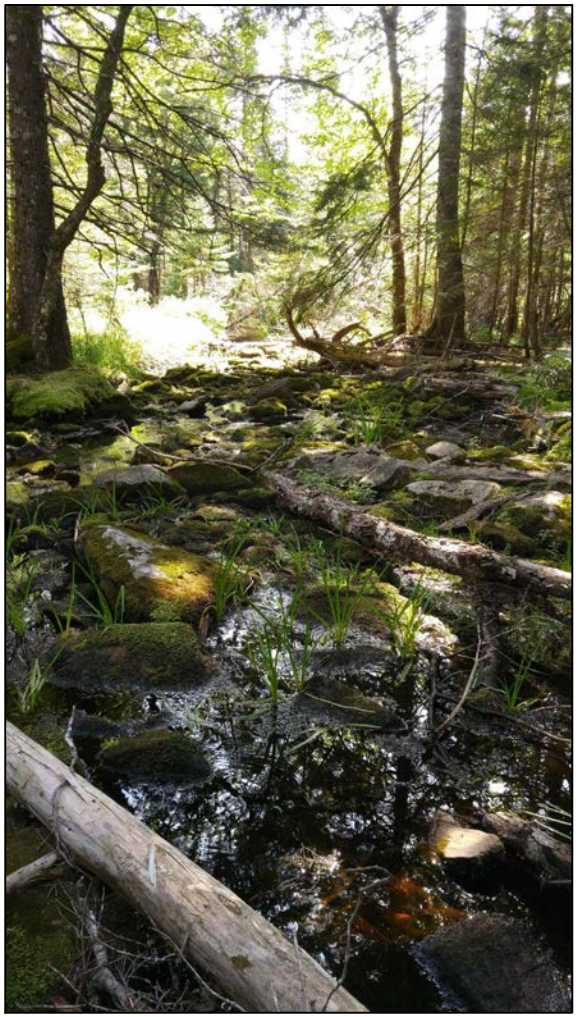

PHOTO 50 - PREFERRED ALTERNATIVE HAUL ROAD
WATERCOURSE AL

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FIGURE H25

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA025.dwg

PHOTO 51 - PREFERRED ALTERNATIVE HAUL ROAD
WATERCOURSE AM

PHOTO 52 - PREFERRED ALTERNATIVE HAUL ROAD
WATERCOURSE AN

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FIGURE H26

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA026.dwg

PHOTO 53 - PREFERRED ALTERNATIVE HAUL ROAD
WATERCOURSE AO

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FIGURE H27

CAD File: I:\Drafting\6-chars\08----\0886--\088664\Dec18\088664 GN-DA027.dwg

Appendix K.1

Master Plant List

Latin Name	Common Name	Indicator Status	S-Rank
Abies balsamea	Balsam Fir	FAC	S5
Acer rubrum	Red Maple	FAC	S5
Agrostis capillaris	Brown Top	FAC	SE
Agrostis gigantea	Black Bentgrass	FAC	SNA
Agrostis perennans	Perennial Bentgrass	FAC	S5
Agrostis scabra	Rough Bentgrass	FAC	S5
Agrostis stolonifera	Spreading Bentgrass	FACW	S5
Alnus incana	Speckled Alder	FACW	S5
Alnus viridis	Green Alder	FACU	S5
Amelanchier laevis	Serviceberry	FAC	S5
Anaphalis margaritacea	Pearly Everlasting	UPL	S5
Andromeda polifolia	Bog Rosemary	OBL	S5
Aralia hispida	Bristly Sasparilla	UPL	S5
Aralia nudicaulis	Wild Sarsaparilla	FAC	S5
Arethusa bulbosa	Dragon's Mouth	OBL	S4
Athyrium filix-femina	Common Lady Fern	FAC	S5
Bartonia paniculata	Branched Bartonia	OBL	S4S5
Betula alleghaniensis	Yellow Birch	FAC	S5
Betula papyrifera	Paper Birch	FACU	S5
Betula papyrifera cordifolia	Heart-Leaved Paper Birch	FACU	S5
Betula populifolia	Gray Birch	FAC	S5
Calamagrostis canadensis	Bluejoint Reed Grass	FACW	S4S5
Calamagrostis pickeringii	Pickering's Bluejoint	OBL	S5
Calla palustris	Wild Calla	OBL	S4
Calopogon tuberosus	Tuberous Grass Pink	FACW+	S4
Carex arctata	Drooping Woodland Sedge	FAC	S5
Carex atlantica ssp. atlantica	Atlantic Sedge	FACW+	S4
Carex billingsii	Billing's sedge	OBL	S4
Carex brunnescens	Brownish Sedge	FAC	S5
Carex buxbaumii	Buxsbaum's Sedge	OBL	S4
Carex canescens	Silvery Sedge	OBL	S5
Carex crawfordii	Cawford Sedge	FAC	S5
Carex crinita	Fringed Sedge	OBL	S5
Carex debilis	White Edge Sedge	FAC	S5
Carex disperma	Two-seeded Sedge	FACW	S5
Carex echinata	Star Sedge	OBL	S5
Carex exilis	Coastal Sedge	OBL	S4
Carex folliculata	Northern Long Sedge	OBL	S5
Carex gracillima	Graceful Sedge	FAC	S4S5
Carex gynandra	Nodding Sedge	FACW	S5

Latin Name	Common Name	Indicator Status	S-Rank
Carex intumescens	Bladder Sedge	FAC	S5
Carex lasiocarpa	Slender Sedge	OBL	S5
Carex leptalea	Bristly Stalk Sedge	FACW+	S5
Carex lurida	Sallow Sedge	OBL	S5
Carex magellanica	Boreal Bog Sedge	OBL	S5
Carex novae-angliae	New-England Sedge	FACU	S5
Carex oligosperma	Few-Seeded Sedge	OBL	S5
Carex pauciflora	Few-Flowered Sedge	OBL	S4
Carex projecta	Necklace Sedge	FACW	S5
Carex scoparia	Broom Sedge	FAC	S5
Carex stipata	Awl-fruited Sedge	OBL	S5
Carex stricta	Tussock's Sedge	OBL	S5
Carex trisperma	Three-seeded Sedge	OBL	S4?
Carex umbellata	Hidden Sedge	UPL	S5
Carex utriculata	Bear Sedge	OBL	S5
Carex viridula	Little Green Sedge	OBL	S5
Carex wiegandii	Wiegand's Sedge	OBL	S3
Carex echinata	Little Prickly Sedge	OBL	S5
Centaurea nigra	Black Knapweed	SNA	SE
Chamaedaphne calyculata	Leatherleaf	OBL	S5
Chelone glabra	Turtlehead	FACW+	S5
Circaea alpina	Small Enchanter's Nightshade	FAC	S5
Cladium mariscoides	Twigrush	OBL	S5
Clintonia borealis	Yellow Bluebead Lily	FAC	S5
Comarum palustre	Marsh Cinquefoil	OBL	S5
Coptis trifolia	Goldthread	FAC	S5
Cornus canadensis	Bunchberry	FAC	S5
Corylus cornuta	Beaked Hazel	FAC	S5
Cypripedium acaule	Pink Lady's-Slippers	FAC	S5
Danthonia compressa	Flattened Oat Grass	FACU	S5
Danthonia spicata	Poverty Oat Grass	FACU	S5
Dennstaedtia punctilobula	Hay-scented Fern	FAC	S5
Dicanthelium acuminatum	Panic Grass	FAC	S5
Dichanthelium boreale	Northern Panic Grass	FACW	S5
Diervilla lonicera	Northern Bush Honeysuckle	FACU	S5
Doellingeria umbellata	Hairy Flat-top White Aster	FAC	S5
Drosera intermedia	Spoon-Leaved Sundew	OBL	S5
Drosera rotundifolia	Round-leaved Sundew	OBL	SNR
Dryopteris campyloptera	Mountain Wood Fern	FAC	S5
Dryopteris carthusiana	Spinulose Wood Fern	FAC	S5

Latin Name	Common Name	Indicator Status	S-Rank
Dryopteris cristata	Crested Wood Fern	FACW	S5
Dryopteris intermedia	Evergreen Wood Fern	FAC	S5
Dulichium arundinaceum	Three-Way Sedge	OBL	S5
Eleocharis acicularis	Needle Spikerush	OBL	S5
Eleocharis palustris	Common Spikerush	OBL	S5
Eleocharis robbinsii	Robbin's Spikerush	OBL	S4
Eleocharis tenuis	Slender Spikerush	FACW	S5
Empetrum nigrum	Black Crowberry	FAC	S5
Epigaea repens	Trailing Arbutus	FACU	S5
Epilobium leptophyllum	Bog Willowherb	FACW+	S5
Epilobium palustre	Marsh Willowherb	OBL	S5
Equisetum arvense	Field Horsetail	FAC	S5
Equisetum fluviatile	Water Horsetail	OBL	S5
Equisetum sylvaticum	Woodland Horsetail	FAC	S5
Erechtites hieracifolia	Fireweed	FAC	S5
Eriocaulon aquaticum	White Buttons	OBL	S5
Eriophorum angustifolium	Narrow-leaved Cottongrass	OBL	S5
Eriophorum tenellum	Rough Cottongrass	OBL	S4S5
Eriophorum vaginatum	Tussock Cottongrass	OBL	S5
Eriophorum virginicum	Tawny Cottongrass	OBL	S5
Eupatorium perfoliatum	Common Boneset	FACW	S5
Euphrasia officinalis	European Eyebright	FAC	S5
Eurybia radula	Low Rough Aster	OBL	S5
Euthamia graminifolia	Grass-leaved Goldenrod	FAC	S5
Fallopia japonica	Japanese Knotweed	FACU	SNA
Fragaria virginiana	Wild Strawberry	FAC	S5
Fraxinus americana	White Ash	FAC	S5
Galium asprellum	Rough Bedstraw	OBL	S5
Galium palustre	Common Marsh Bedstraw	FACW+	S5
Galium tinctorium	Stiff-Marsh Bedstraw	OBL	S5
Gaultheria hispidula	Creeping Snowberry	FAC	S5
Gaultheria procumbens	Eastern Teaberry	FAC	S5
Gaylussacia baccata	Black Huckleberry	FAC	S5
Gaylussacia bigeloviana	Dwarf Huckleberry	OBL	S5
Gaylussacia dumosa	Bog Huckleberry	OBL	S5
Glyceria borealis	Small Floating Mannagrass	OBL	S5
Glyceria canadensis	Canada Manna Grass	FACW	S5
Glyceria grandis	Common Tall Manna Grass	OBL	S4S5
Glyceria laxa	Northern Manna Grass	OBL	S4?
Glyceria melicaria	Slender Manna-grass	OBL	S4

Latin Name	Common Name	Indicator Status	S-Rank
Glyceria striata	Fowl Manna Grass	FACW	S5
Goodyera repens	Dwarf Rattlesnake Plantain	FAC	S3
Gratiola aurea	Golden Pert	OBL	S5
Hieracium lachenalii	Common hawkweed	UPL	SE
Hieracium pilosella	Mouse-eared hawkweed	UPL	SE
Hieracium piloselloides	Tall hawkweed	FACU	SE
Huperzia lucidulum	Shining Clubmoss	UPL	S5
Hydrocotyle americana	American Marsh Pennywort	OBL	S5
Hypericum boreale	Northern St. John's-Wort	OBL	S5
Hypericum canadense	Canada St. John's-Wort	FACW	S5
Hypericum ellipticum	Pale St. John's-wort	OBL	S5
Hypericum perforatum	St. John's-Wort	FAC	SE
Ilex verticillata	Common Winterberry	FACW+	S5
Iris versicolor	Harlequin Blue Flag	FACW+	S5
Juncus balticus	Baltic Rush	FACW	S5
Juncus brevicaudatus	Narrow Panicled Rush	OBL	S5
Juncus canadensis	Canada Rush	OBL	S5
Juncus effusus	Soft Rush	FACW	S5
Juncus filiformis	Thread Rush	OBL	S5
Juncus militaris	Military Rush	OBL	S5
Juncus pelocarpus	Bog Rush	OBL	S5
Juncus tenuis	Slender Rush	FAC	S5
Juniperus communis	Common Juniper	FAC	S5
Kalmia angustifolia	Sheep Laurel	FAC	S5
Kalmia polifolia	Pale Bog Laurel	OBL	S5
Lactuca canadensis	Canada lettuce	UPL	S5
Larix laricina	Larch	FAC	S5
Leersia oryzoides	Rice Cutgrass	OBL	S5
Linnaea borealis	Northern Twinflower	FAC	S5
Listera australis	Southern Twayblade	OBL	S3
Listera cordata	Heart-Leaved Twayblade	FACW	S4
Lonicera canadensis	Canada Fly Honeysuckle	FAC	S5
Lonicera villosa	Mountain Fly Honeysuckle	FACW	S4S5
Luzula multiflora	Common Woodrush	FACU	S5
Lycopodiella inundata	Bog Clubmoss	FACW+	S5
Lycopodium annotinum	Stiff Clubmoss	FAC	S5
Lycopodium clavatum	Running Pine	FAC	S5
Lycopodium obscurum	Tree Clubmoss	FACU	S4S5
Lycopus americanus	American Bugleweed	OBL	S5
Lycopus uniflorus	Northern Bugleweed	OBL	S5

Latin Name	Common Name	Indicator Status	S-Rank
Lysimachia terrestris	Swamp Yellow Loosestrife	FACW+	S5
Maianthemum canadense	False Lily-of-the-valley	FAC	S5
Maianthemum trifolium	Three-leaved False Solomon's Seal	OBL	S5
Mitchella repens	Partridgeberry	FACU	S5
Moneses uniflora	One-flowered Wintergreen	FAC	S5
Monotropa hypopithys	Pinesap	FACU	S4
Monotropa uniflora	Indian Pipe	FACU	S4
Muhlenbergia uniflora	Bog Muhly	FACW	S5
Myrica gale	Sweet Gale	OBL	S5
Myrica pensylvanica	Northern Bayberry	FAC	S5
Nemopanthus mucronatus	Mountain Holly	FAC	S5
Nymphaea odorata	American Waterlily	OBL	S5
Oclemena acuminata	Whorled Wood Aster	FACU	S5
Oclemena nemoralis	Bog Aster	OBL	S5
Oclemena x blakei	a hybrid White Panicled American-Aster	FACW	S4S5
Onoclea sensibilis	Sensitive Fern	FACW	S5
Orthilia secunda	One-sided Wintergreen	FAC	S5
Osmunda claytoniana	Interrupted Fern	FAC	S5
Osmunda regalis	Royal Fern	OBL	S5
Osmundastrum cinnamomeum	Cinnamon Fern	FAC	S5
Oxalis montana	Common Wood Sorrel	FAC	S5
Persicaria sagittata	Arrow-leaved Smartweed	OBL	S5
Phegopteris connectilis	Northern Beech Fern	FAC	S5
Phleum pratense	Common Timothy	FAC	SNA
Photinia melanocarpa	Black Chokeberry	FACW	S5
Photinia pyrifolia	Red Chokeberry	FACW	S4
Picea glauca	White Spruce	FAC	S5
Picea mariana	Black Spruce	FACW	S5
Picea rubens	Red Spruce	FAC	S5
Pinus strobus	Eastern White Pine	FAC	S5
Platanthera clavellata	Small Green Woodland Orchid	FACW	S5
Poa compressa	Canada Bluegrass	FACW	SE
Pogonia ophioglossoides	Rose Pogonia	OBL	S4
Polypodium apalachianum	Appalachian Polypody	UPL	S3?
Pontedaria cordata	Pickerel Weed	OBL	S5
Populus grandidentata	Large-toothed Aspen	FACU-	S5
Populus tremuloides	Trembling Aspen	FAC	S5
Potamogeton pusillus	Small Pondweed	OBL	S5
Potentilla simplex	Old Field Cinquefoil	UPL	S5
Prenanthes trifoliolata	Three-leaved Rattlesnakeroot	FACU	S5

Latin Name	Common Name	Indicator Status	S-Rank
Prunus pensylvanica	Pin Cherry	FACU	S5
Prunus viriginana	Chokecherry	FAC	S5
Pteridium aquilinum	Bracken Fern	FACU	S5
Radiola linoides	Allseed	FACU	SNA
Ranunculus acris	Common Buttercup	FAC	SNA
Rhododendron canadense	Rhodora	FAC	S5
Rhododendron groenlandicum	Common Labrador Tea	FACW+	S5
Rhynchospora alba	White Beakrush	OBL	S5
Rhynchospora capitellata	Small-headed Beakrush	FACW+	S4
Rhynchospora fusca	Brown Beakrush	OBL	S5
Ribes glandulosum	Skunk Currant	FAC	S5
Ribes lacustre	Bristly Black Currant	FACW	S5
Ribes triste	Swamp Red Currant	FACW+	S4
Rosa nitida	Shining Rose	OBL	S4
Rosa palustris	Swamp Rose	OBL	S4
Rosa virginiana	Virginia Rose	FAC	S5
Rubus alleghaniensis	Blackberry	FACU	S5
Rubus canadensis	Smooth Blackberry	FACU	S5
Rubus chamaemorus	Cloudberry	OBL	S4
Rubus hispidus	Bristly Dewberry	FACW	S5
Rubus ideaus	Red Raspberry	FAC	S5
Rubus pensylvanicus	Pennsylvania Blackberry	FACU	S4
Rubus pubescens	Dwarf Red Raspberry	FAC	S5
Rubus setosus	Small Bristleberry	FACW	S4?
Rumex acetosella	Sheep Sorrel	FACU	SNA
Salix bebbiana	Bebb's Willow	FAC	S5
Salix discolor	Pussy Willow	FAC	S5
Salix pyrifolia	Balsam Willow	FACW	S5
Sarracenia purpurea	Northern Pitcher Plant	OBL	S5
Scheuchzeria palustris	Podgrass	OBL	S4S5
Schoenoplectus subterminalis	Water Bulrush	OBL	S5
Scirpus atrocinctus	Black-girdled Bulrush	FACW	S5
Scirpus cyperinus	Common Woolly Bulrush	FACW	S5
Scirpus microcarpus	Small-fruited Bulrush	OBL	S5
Scirpus cyperinus	Cottongrass Bulrush	OBL	S5
Sium suave	Common Water Parsnip	OBL	S5
Solidago canadensis	Canada Goldenrod	FAC	S5
Solidago gigantea	Giant Goldenrod	FAC	S5
Solidago nemoralis	Field Goldenrod	UPL	S4S5
Solidago puberula	Downy Goldenrod	UPL	S5

Latin Name	Common Name	Indicator Status	S-Rank
Solidago rugosa	Rough-stemmed Goldenrod	FAC	S5
Solidago uliginosa	Northern Bog Goldenrod	OBL	S5
Solidago rugosa	Rough-Leaf Goldenrod	FAC	S5
Sorbus americana	American Mountain Ash	FAC	S5
Sparganium americanum	American Burreed	OBL	S5
Sparganium angustifolium	American Burred	OBL	S5
Sparganium fluctuans	Floating Burreed	OBL	S4
Sphagnum capilifolium	sphagnum moss	OBL	S5
Sphagnum fuscum	sphagnum moss	OBL	S5
Sphagnum girgensohnii	sphagnum moss	OBL	S5
Sphagnum macrophyllum	Largeleaf Sphagnum	OBL	S4
Sphagnum magellanicum	sphagnum moss	OBL	S5
Spiraea alba	White Meadowsweet	FAC	S5
Spiraea tomentosa	Steeplebush	FAC	S5
Spiranthes cernua	Nodding Ladies' Tresses	FACW	S5
Spiranthes romanzoffiana	Hooded Ladies'-tresses	OBL	S4
Symphyotrichum lateriflorum	Calico Aster	FAC	S5
Symphyotrichum novi-belgii	New Belgium American-Aster	FAC	S5
Symphyotrichum puniceum	Swamp Aster	OBL	S5
Taxus canadensis	Canada Yew	FAC	S5
Thalictrum pubescens	Tall Meadow Rue	FACW	S5
Thelypteris noveboracensis	New York Fern	FAC	S5
Thelypteris palustris	Eastern Marsh Fern	OBL	S5
Thelypteris simulata	Bog Fern	OBL	S4S5
Triadenum virginicum	Virginia St John's-wort	OBL	S5
Trichophorum cespitosum	Tufted Clubrush	OBL	S5
Tridenum fraseri	Marsh-St. John's wort	OBL	S5
Trientalis borealis	Northern Starflower	FAC	S5
Trifolium dubium	Suckling Clover	UPL	SE
Trillium undulatum	Painted Trillium	FAC	S5
Tussilago farfara	Coltsfoot	FAC	SE
Typha latifolia	Broad-leaved Cat-tail	OBL	S5
Utricularia geminiscapa	Twin-stemmed Bladderwort	OBL	S4
Utricularia cornuta	Horned Bladder-wort	OBL	S5
Utricularia intermedia	Flatleaf Bladderwort	OBL	S5
Utricularia macrorhiza	Flatleaf Bladderwort	OBL	S5
Utricularia purpurea	Eastern Purple Bladderwort	OBL	S5
Utricularia vulgaris	Common Bladderwort	OBL	S5
Vaccinium angustifolium	Late Low-bush Blueberry	FAC	S5
Vaccinium corymbosum	High-bush Blueberry	FACW+	S3S4

Latin Name	Common Name	Indicator Status	S-Rank
Vaccinium macrocarpon	Large Cranberry	FACW+	S5
Vaccinium myrtilloides	Velvet-leaved Blueberry	FAC	S5
Vaccinium oxycoccos	Small Cranberry	OBL	S5
Vaccinium vitis-idaea ssp. minus	Mountain Cranberry	FAC	S5
Vaccinium angustifolium	Late Lowbush Blueberry	FAC	S5
Vaccinium macrocarpon	Large Cranberry	FACW+	S5
Vaccinium myrtilloides	Velvetleaf Blueberry	FAC	S5
Veronica officinalis	Common Speedwell	FACU	S5
Viburnum lantanoides	Hobblebush	FAC	S5
Viburnum nudum	Northern Wild Raisin	FAC	S5
Viola cucullata	Marsh Blue Violet	FAC	S5
Viola lanceolata	Lance-leaf Violet	OBL	S5
Viola macloskeyi	Small White Violet	FACW	S5
Viola renifolia	Kidney-leaved White Violet	FAC	S4

Note: Species names in red are Priority Species.

Appendix L.1

Maritime Breeding Bird Atlas (MMBA) Data Summaries

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Species list for square 20NQ17 (number of entries returned: 73)

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
20	20NQ17	Canada Goose	H	POSS	1	2 participants				
20	20NQ17	American Black Duck	FY	CONF	1	Chris M Pepper				
20	20NQ17	Mallard	FY	CONF	1	Chris M Pepper				
20	20NQ17	Ring-necked Duck	P	PROB	1	Chris M Pepper				
20	20NQ17	Hooded Merganser	P	PROB	1	Chris M Pepper				
20	20NQ17	Common Merganser	FY	CONF	1	Chris M Pepper				
20	20NQ17	Ruffed Grouse	S	POSS	1	Chris M Pepper				
20	20NQ17	Spruce Grouse	FY	CONF	1	Harry Brennan				
20	20NQ17	Common Loon	P	PROB	1	Chris M Pepper				
20	20NQ17	Northern Harrier	P	PROB	1	Chris M Pepper				
20	20NQ17	Broad-winged Hawk	H	POSS	1	Chris M Pepper				
20	20NQ17	Greater Yellowlegs	H	POSS	1	Chris M Pepper				
20	20NQ17	American Woodcock	S	POSS	1	Patricia L Chalmers				
20	20NQ17	Great Horned Owl	S	POSS	1	4 participants				
20	20NQ17	Barred Owl	P	PROB	1	2 participants				
20	20NQ17	Northern Saw-whet Owl	S	POSS	1	4 participants				
20	20NQ17	Common Nighthawk	DD	CONF	1	Chris M Pepper				
20	20NQ17	Ruby-throated Hummingbird	H	POSS	1	Chris M Pepper				
20	20NQ17	Belted Kingfisher	H	POSS	1	2 participants				
20	20NQ17	Yellow-bellied Sapsucker	H	POSS	1	Chris M Pepper				
20	20NQ17	Downy Woodpecker	CF	CONF	1	Chris M Pepper				
20	20NQ17	Hairy Woodpecker	H	POSS	1	Chris M Pepper				
20	20NQ17	Northern Flicker	FY	CONF	1	Chris M Pepper				
20	20NQ17	Pileated Woodpecker	H	POSS	1	Chris M Pepper				
20	20NQ17	Merlin	H	POSS	1	Chris M Pepper				
20	20NQ17	Olive-sided Flycatcher	S	POSS	1	Chris M Pepper				
20	20NQ17	Eastern Wood-Pewee	S	POSS	1	Chris M Pepper				
20	20NQ17	Yellow-bellied Flycatcher	T	PROB	1	Chris M Pepper				
20	20NQ17	Alder Flycatcher	S	POSS	1	Chris M Pepper				
20	20NQ17	Least Flycatcher	A	PROB	1	Chris M Pepper				
20	20NQ17	Blue-headed Vireo	CF	CONF	1	Chris M Pepper				
20	20NQ17	Red-eyed Vireo	S	POSS	1	Chris M Pepper				
20	20NQ17	Gray Jay	FY	CONF	1	Chris M Pepper				
20	20NQ17	Blue Jay	S	POSS	1	Chris M Pepper				
20	20NQ17	American Crow	H	POSS	1	Chris M Pepper				

20	20NQ17	Tree Swallow	FS	CONF	1	Chris M Pepper				
20	20NQ17	Barn Swallow	NY	CONF	1	Chris M Pepper				
20	20NQ17	Black-capped Chickadee	FY	CONF	1	Chris M Pepper				
20	20NQ17	Boreal Chickadee	P	PROB	1	Chris M Pepper				
20	20NQ17	Winter Wren	S	POSS	1	Chris M Pepper				
20	20NQ17	Golden-crowned Kinglet	P	PROB	1	Chris M Pepper				
20	20NQ17	Ruby-crowned Kinglet	CF	CONF	1	Chris M Pepper				
20	20NQ17	Swainson's Thrush	FY	CONF	1	Chris M Pepper				
20	20NQ17	Hermit Thrush	FY	CONF	1	Chris M Pepper				
20	20NQ17	American Robin	H	POSS	1	Chris M Pepper				
20	20NQ17	European Starling	FY	CONF	1	Chris M Pepper				
20	20NQ17	Cedar Waxwing	P	PROB	1	Chris M Pepper				
20	20NQ17	Ovenbird	FY	CONF	1	Chris M Pepper				
20	20NQ17	Black-and-white Warbler	S	POSS	1	Chris M Pepper				
20	20NQ17	Nashville Warbler	S	POSS	1	Chris M Pepper				
20	20NQ17	Common Yellowthroat	CF	CONF	1	Chris M Pepper				
20	20NQ17	American Redstart	P	PROB	1	Chris M Pepper				
20	20NQ17	Northern Parula	S	POSS	1	Chris M Pepper				
20	20NQ17	Magnolia Warbler	S	POSS	1	Chris M Pepper				
20	20NQ17	Bay-breasted Warbler	P	PROB	1	Chris M Pepper				
20	20NQ17	Blackburnian Warbler	S	POSS	1	Chris M Pepper				
20	20NQ17	Yellow Warbler	S	POSS	1	Chris M Pepper				
20	20NQ17	Palm Warbler	CF	CONF	1	Chris M Pepper				
20	20NQ17	Yellow-rumped Warbler	CF	CONF	1	Chris M Pepper				
20	20NQ17	Black-throated Green Warbler	CF	CONF	1	Chris M Pepper				
20	20NQ17	Canada Warbler	T	PROB	1	Chris M Pepper				
20	20NQ17	Chipping Sparrow	H	POSS	1	Chris M Pepper				
20	20NQ17	Savannah Sparrow	CF	CONF	1	Chris M Pepper				
20	20NQ17	Song Sparrow	S	POSS	1	Chris M Pepper				
20	20NQ17	Lincoln's Sparrow	CF	CONF	1	Chris M Pepper				
20	20NQ17	Swamp Sparrow	FY	CONF	1	Chris M Pepper				
20	20NQ17	White-throated Sparrow	FY	CONF	1	Chris M Pepper				
20	20NQ17	Dark-eyed Junco	FY	CONF	1	Chris M Pepper				
20	20NQ17	Red-winged Blackbird	S	POSS	1	Chris M Pepper				
20	20NQ17	Common Grackle	P	PROB	1	Chris M Pepper				
20	20NQ17	Pine Grosbeak	P	PROB	1	Chris M Pepper				
20	20NQ17	Purple Finch	S	POSS	1	Chris M Pepper				
20	20NQ17	American Goldfinch	P	PROB	1	Chris M Pepper				

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Species list for square 20NQ18 (number of entries returned: 82)

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
20	20NQ18	Canada Goose	FY	CONF	1	Jim A Elliott				
20	20NQ18	Wood Duck	H	POSS	1	Jim A Elliott				
20	20NQ18	American Black Duck	FY	CONF	1	Jim A Elliott				
20	20NQ18	Green-winged Teal	P	PROB	1	Jim A Elliott				
20	20NQ18	Ring-necked Duck	FY	CONF	1	2 participants				
20	20NQ18	Hooded Merganser	FY	CONF	1	Jim A Elliott				
20	20NQ18	Common Merganser	H	POSS	1	Jim A Elliott				
20	20NQ18	Ruffed Grouse	FY	CONF	1	Jim A Elliott				
20	20NQ18	Spruce Grouse	H	POSS	1	Jim A Elliott				
20	20NQ18	Common Loon	NE	CONF	1	Jim A Elliott				
20	20NQ18	Northern Harrier	FY	CONF	1	Jim A Elliott				
20	20NQ18	Northern Goshawk	FY	CONF	1	Jim A Elliott				
20	20NQ18	Red-tailed Hawk	T	PROB	1	Jim A Elliott				
20	20NQ18	Spotted Sandpiper	FY	CONF	1	Jim A Elliott				
20	20NQ18	Greater Yellowlegs	FY	CONF	1	Jim A Elliott				
20	20NQ18	Wilson's Snipe	H	POSS	1	Doug Ross Archibald				
20	20NQ18	American Woodcock	DD	CONF	1	Jim A Elliott				
20	20NQ18	Mourning Dove	S	POSS	1	Jim A Elliott				
20	20NQ18	Great Horned Owl	FY	CONF	1	Jim A Elliott				
20	20NQ18	Barred Owl	FY	CONF	1	Jim A Elliott				
20	20NQ18	Northern Saw-whet Owl	S	POSS	1	2 participants				
20	20NQ18	Common Nighthawk	P	PROB	1	Chris M Pepper				
20	20NQ18	Ruby-throated Hummingbird	FY	CONF	1	Jim A Elliott				
20	20NQ18	Belted Kingfisher	FY	CONF	1	Jim A Elliott				
20	20NQ18	Downy Woodpecker	H	POSS	1	Jim A Elliott				
20	20NQ18	Hairy Woodpecker	NY	CONF	1	Jim A Elliott				
20	20NQ18	Northern Flicker	FY	CONF	1	Jim A Elliott				
20	20NQ18	Pileated Woodpecker	T	PROB	1	Jim A Elliott				
20	20NQ18	American Kestrel	FY	CONF	1	Jim A Elliott	1	6.25	0.0625	1
20	20NQ18	Merlin	NY	CONF	1	Jim A Elliott	1	6.25	0.0625	1
20	20NQ18	Olive-sided Flycatcher	T	PROB	1	Jim A Elliott	1	6.25	0.0625	1
20	20NQ18	Eastern Wood-Pewee	S	POSS	1	Jim A Elliott				
20	20NQ18	Yellow-bellied Flycatcher	CF	CONF	1	Jim A Elliott	3	18.75	0.1875	1
20	20NQ18	Alder Flycatcher	T	PROB	1	Jim A Elliott	5	31.25	0.3125	1
20	20NQ18	Least Flycatcher	T	PROB	1	Jim A Elliott	2	12.5	0.125	1

20	20NQ18	Blue-headed Vireo	CF	CONF	1	Jim A Elliott	1	6.25	0.0625	1
20	20NQ18	Red-eyed Vireo	NY	CONF	1	Jim A Elliott	10	62.5	0.625	1
20	20NQ18	Gray Jay	FY	CONF	1	Jim A Elliott	1	6.25	0.0625	1
20	20NQ18	Blue Jay	H	POSS	1	Jim A Elliott				
20	20NQ18	American Crow	FY	CONF	1	Jim A Elliott	4	25.0	0.25	1
20	20NQ18	Common Raven	FY	CONF	1	Jim A Elliott				
20	20NQ18	Tree Swallow	AE	CONF	1	Jim A Elliott				
20	20NQ18	Barn Swallow	NY	CONF	1	Jim A Elliott				
20	20NQ18	Black-capped Chickadee	CF	CONF	1	Jim A Elliott	2	12.5	0.125	1
20	20NQ18	Boreal Chickadee	CF	CONF	1	Jim A Elliott				
20	20NQ18	Red-breasted Nuthatch	FY	CONF	1	Jim A Elliott	1	6.25	0.0625	1
20	20NQ18	Winter Wren	FY	CONF	1	Jim A Elliott	1	6.25	0.0625	1
20	20NQ18	Golden-crowned Kinglet	CF	CONF	1	Chris M Pepper				
20	20NQ18	Ruby-crowned Kinglet	CF	CONF	1	Jim A Elliott	6	37.5	0.375	1
20	20NQ18	Swainson's Thrush	FY	CONF	1	Jim A Elliott	7	43.75	0.5	1
20	20NQ18	Hermit Thrush	FY	CONF	1	Jim A Elliott	2	12.5	0.125	1
20	20NQ18	American Robin	FY	CONF	1	Jim A Elliott	3	18.75	0.1875	1
20	20NQ18	Gray Catbird	T	PROB	1	Jim A Elliott				
20	20NQ18	European Starling	FY	CONF	1	Jim A Elliott				
20	20NQ18	Cedar Waxwing	T	PROB	1	Jim A Elliott				
20	20NQ18	Ovenbird	CF	CONF	1	Jim A Elliott	2	12.5	0.125	1
20	20NQ18	Northern Waterthrush	T	PROB	1	Jim A Elliott	1	6.25	0.0625	1
20	20NQ18	Black-and-white Warbler	CF	CONF	1	Jim A Elliott	2	12.5	0.125	1
20	20NQ18	Tennessee Warbler	T	PROB	1	2 participants				
20	20NQ18	Nashville Warbler	T	PROB	1	Jim A Elliott				
20	20NQ18	Common Yellowthroat	FY	CONF	1	Jim A Elliott	6	37.5	0.4375	1
20	20NQ18	American Redstart	CF	CONF	1	Jim A Elliott	4	25.0	0.25	1
20	20NQ18	Northern Parula	FY	CONF	1	Jim A Elliott	3	18.75	0.1875	1
20	20NQ18	Magnolia Warbler	FY	CONF	1	Jim A Elliott	13	81.25	0.875	1
20	20NQ18	Bay-breasted Warbler	D	PROB	1	Chris M Pepper	1	6.25	0.0625	1
20	20NQ18	Blackburnian Warbler	T	PROB	1	Jim A Elliott				
20	20NQ18	Black-throated Blue Warbler	T	PROB	1	Jim A Elliott	1	6.25	0.125	1
20	20NQ18	Palm Warbler	CF	CONF	1	Jim A Elliott	1	6.25	0.0625	1
20	20NQ18	Yellow-rumped Warbler	FY	CONF	1	Jim A Elliott	5	31.25	0.375	1
20	20NQ18	Black-throated Green Warbler	CF	CONF	1	Jim A Elliott	7	43.75	0.4375	1
20	20NQ18	Song Sparrow	CF	CONF	1	Jim A Elliott				
20	20NQ18	Lincoln's Sparrow	FY	CONF	1	2 participants				
20	20NQ18	Swamp Sparrow	NY	CONF	1	Jim A Elliott				
20	20NQ18	White-throated Sparrow	FY	CONF	1	Jim A Elliott	13	81.25	0.875	1

20	20NQ18	Dark-eyed Junco	FY	CONF	1	Jim A Elliott	7	43.75	0.625	1
20	20NQ18	Red-winged Blackbird	S	POSS	1	Jim A Elliott				
20	20NQ18	Common Grackle	T	PROB	1	Jim A Elliott	1	6.25	0.0625	1
20	20NQ18	Pine Grosbeak	T	PROB	1	Jim A Elliott				
20	20NQ18	Purple Finch	P	PROB	1	Jim A Elliott				
20	20NQ18	White-winged Crossbill	FY	CONF	1	Jim A Elliott				
20	20NQ18	Pine Siskin	H	POSS	1	Jim A Elliott				
20	20NQ18	American Goldfinch	T	PROB	1	Jim A Elliott	1	6.25	0.125	1

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Species list for square 20NQ28 (number of entries returned: 69)

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
20	20NQ28	American Black Duck	FY	CONF	1	Jim A Elliott				
20	20NQ28	Green-winged Teal	FY	CONF	1	Jim A Elliott				
20	20NQ28	Ring-necked Duck	T	PROB	1	Jim A Elliott				
20	20NQ28	Hooded Merganser	FY	CONF	1	Jim A Elliott				
20	20NQ28	Ruffed Grouse	H	POSS	1	Jim A Elliott				
20	20NQ28	Spruce Grouse	H	POSS	1	Jim A Elliott				
20	20NQ28	Osprey	H	POSS	1	Jim A Elliott				
20	20NQ28	Sharp-shinned Hawk	AE	CONF	1	Fulton L. Lavender				
20	20NQ28	Northern Goshawk	H	POSS	1	Jim A Elliott				
20	20NQ28	Red-tailed Hawk	T	PROB	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Spotted Sandpiper	FY	CONF	1	Jim A Elliott				
20	20NQ28	Greater Yellowlegs	A	PROB	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Wilson's Snipe	D	PROB	1	Jim A Elliott				
20	20NQ28	American Woodcock	D	PROB	1	Jim A Elliott				
20	20NQ28	Great Horned Owl	T	PROB	1	Jim A Elliott				
20	20NQ28	Barred Owl	S	POSS	1	2 participants				
20	20NQ28	Northern Saw-whet Owl	H	POSS	1	Doug Ross Archibald				
20	20NQ28	Ruby-throated Hummingbird	H	POSS	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Belted Kingfisher	P	PROB	1	Jim A Elliott				
20	20NQ28	Yellow-bellied Sapsucker	H	POSS	1	Jim A Elliott				
20	20NQ28	Northern Flicker	FY	CONF	1	2 participants	1	5.88	0.0588	1
20	20NQ28	Pileated Woodpecker	S	POSS	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Merlin	FY	CONF	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Olive-sided Flycatcher	T	PROB	1	Jim A Elliott	2	11.76	0.1176	1
20	20NQ28	Yellow-bellied Flycatcher	T	PROB	1	Jim A Elliott	7	41.18	0.4118	1
20	20NQ28	Alder Flycatcher	S	POSS	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Least Flycatcher	T	PROB	1	Jim A Elliott	6	35.29	0.5294	1
20	20NQ28	Blue-headed Vireo	T	PROB	1	Jim A Elliott	2	11.76	0.1176	1
20	20NQ28	Philadelphia Vireo	T	PROB	1	Jim A Elliott				
20	20NQ28	Red-eyed Vireo	T	PROB	1	Jim A Elliott	4	23.53	0.2941	1
20	20NQ28	Common Raven	P	PROB	1	Jim A Elliott				
20	20NQ28	Tree Swallow	FY	CONF	1	Jim A Elliott				
20	20NQ28	Black-capped Chickadee	FY	CONF	1	Jim A Elliott	3	17.65	0.2353	1
20	20NQ28	Red-breasted Nuthatch	S	POSS	1	Jim A Elliott				

20	20NQ28	Winter Wren	T	PROB	1	Jim A Elliott	5	29.41	0.2941	1
20	20NQ28	Golden-crowned Kinglet	S	POSS	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Ruby-crowned Kinglet	T	PROB	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Swainson's Thrush	CF	CONF	1	Jim A Elliott	5	29.41	0.3529	1
20	20NQ28	Hermit Thrush	T	PROB	1	Jim A Elliott	3	17.65	0.1765	1
20	20NQ28	American Robin	CF	CONF	1	Jim A Elliott	3	17.65	0.1765	1
20	20NQ28	Gray Catbird	S	POSS	1	Jim A Elliott				
20	20NQ28	Cedar Waxwing	T	PROB	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Ovenbird	T	PROB	1	Jim A Elliott				
20	20NQ28	Northern Waterthrush	S	POSS	1	Jim A Elliott				
20	20NQ28	Black-and-white Warbler	T	PROB	1	Jim A Elliott	4	23.53	0.2941	1
20	20NQ28	Tennessee Warbler	S	POSS	1	Jim A Elliott				
20	20NQ28	Mourning Warbler	S	POSS	1	Jim A Elliott				
20	20NQ28	Common Yellowthroat	FY	CONF	1	Jim A Elliott	8	47.06	0.4706	1
20	20NQ28	American Redstart	T	PROB	1	Jim A Elliott	6	35.29	0.3529	1
20	20NQ28	Cape May Warbler	S	POSS	1	Jim A Elliott				
20	20NQ28	Northern Parula	T	PROB	1	Jim A Elliott	2	11.76	0.1765	1
20	20NQ28	Magnolia Warbler	FY	CONF	1	2 participants	8	47.06	0.5882	1
20	20NQ28	Bay-breasted Warbler	T	PROB	1	Jim A Elliott	2	11.76	0.1176	1
20	20NQ28	Blackburnian Warbler	T	PROB	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Black-throated Blue Warbler	T	PROB	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Palm Warbler	FY	CONF	1	2 participants	2	11.76	0.1765	1
20	20NQ28	Yellow-rumped Warbler	CF	CONF	1	Jim A Elliott	3	17.65	0.2353	1
20	20NQ28	Black-throated Green Warbler	T	PROB	1	Jim A Elliott	7	41.18	0.5294	1
20	20NQ28	Canada Warbler	S	POSS	1	Jim A Elliott	1	5.88	0.0588	1
20	20NQ28	Song Sparrow	T	PROB	1	Jim A Elliott				
20	20NQ28	Swamp Sparrow	FY	CONF	1	2 participants				
20	20NQ28	White-throated Sparrow	FY	CONF	1	Jim A Elliott	10	58.82	0.5882	1
20	20NQ28	Dark-eyed Junco	FY	CONF	1	2 participants	8	47.06	0.4706	1
20	20NQ28	Red-winged Blackbird	H	POSS	1	Jim A Elliott				
20	20NQ28	Rusty Blackbird	FY	CONF	1	Jim A Elliott				
20	20NQ28	Common Grackle	P	PROB	1	Jim A Elliott				
20	20NQ28	Purple Finch	H	POSS	1	Jim A Elliott				
20	20NQ28	White-winged Crossbill	FY	CONF	1	Jim A Elliott				
20	20NQ28	Pine Siskin	FY	CONF	1	Jim A Elliott				

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Species list for square 20NQ29 (number of entries returned: 77)

Region	Square	Species	Breeding Evidence				Point Counts			
			Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq
20	20NQ29	Canada Goose	FY	CONF	1	2 participants	1	5.26	0.0526	1
20	20NQ29	Wood Duck	H	POSS	1	Ken McKenna				
20	20NQ29	American Black Duck	H	POSS	1	2 participants				
20	20NQ29	Common Goldeneye	FY	CONF	1	Ken McKenna				
20	20NQ29	Common Merganser	H	POSS	1	Jim A Elliott				
20	20NQ29	Ruffed Grouse	D	PROB	1	Jim A Elliott	1	5.26	0.0526	1
20	20NQ29	Spruce Grouse	FY	CONF	1	2 participants				
20	20NQ29	Common Loon	T	PROB	1	Ken McKenna	1	5.26	0.0526	1
20	20NQ29	Osprey	AE	CONF	1					
20	20NQ29	Northern Goshawk	H	POSS	1	Ken McKenna				
20	20NQ29	Red-tailed Hawk	T	PROB	1	Jim A Elliott				
20	20NQ29	Spotted Sandpiper	NE	CONF	1	Jim A Elliott				
20	20NQ29	Wilson's Snipe	D	PROB	1	Jim A Elliott				
20	20NQ29	American Woodcock	D	PROB	1	Jim A Elliott				
20	20NQ29	Great Horned Owl	H	POSS	1	Jim A Elliott				
20	20NQ29	Common Nighthawk	D	PROB	1	Jim A Elliott				
20	20NQ29	Chimney Swift	P	PROB	1	Jim A Elliott				
20	20NQ29	Belted Kingfisher	FY	CONF	1	Jim A Elliott				
20	20NQ29	Downy Woodpecker	H	POSS	1	Ken McKenna				
20	20NQ29	Hairy Woodpecker	FY	CONF	1	Ken McKenna	2	10.53	0.1053	1
20	20NQ29	Black-backed Woodpecker	H	POSS	1	Ken McKenna				
20	20NQ29	Northern Flicker	FY	CONF	1	Jim A Elliott	1	5.26	0.0526	1
20	20NQ29	Pileated Woodpecker	S	POSS	1	Jim A Elliott				
20	20NQ29	American Kestrel	FY	CONF	1	Ken McKenna				
20	20NQ29	Olive-sided Flycatcher	S	POSS	1	Jim A Elliott				
20	20NQ29	Yellow-bellied Flycatcher	T	PROB	1	Jim A Elliott	6	31.58	0.3158	1
20	20NQ29	Alder Flycatcher	FY	CONF	1	Jim A Elliott	4	21.05	0.2632	1
20	20NQ29	Least Flycatcher	T	PROB	1	Jim A Elliott	1	5.26	0.1053	1
20	20NQ29	Blue-headed Vireo	FY	CONF	1	Ken McKenna	4	21.05	0.2105	1

20	20NQ29	Red-eyed Vireo	P	PROB	1	Jim A Elliott	4	21.05	0.2632	1
20	20NQ29	Gray Jay	FY	CONF	1	Jim A Elliott				
20	20NQ29	Blue Jay	H	POSS	1	Ken McKenna				
20	20NQ29	American Crow	P	PROB	1	Jim A Elliott	3	15.79	0.2105	1
20	20NQ29	Common Raven	S	POSS	1	Jim A Elliott	1	5.26	0.0526	1
20	20NQ29	Tree Swallow	FY	CONF	1	Jim A Elliott				
20	20NQ29	Barn Swallow	H	POSS	1	Jim A Elliott				
20	20NQ29	Black-capped Chickadee	FY	CONF	1	3 participants				
20	20NQ29	Boreal Chickadee	FY	CONF	1	Ken McKenna	1	5.26	0.0526	1
20	20NQ29	Red-breasted Nuthatch	FY	CONF	1	Ken McKenna	1	5.26	0.0526	1
20	20NQ29	Winter Wren	FY	CONF	1	Ken McKenna				
20	20NQ29	Golden-crowned Kinglet	S	POSS	1	3 participants				
20	20NQ29	Ruby-crowned Kinglet	FY	CONF	1	Ken McKenna	10	52.63	0.5789	1
20	20NQ29	Swainson's Thrush	D	PROB	1	Ken McKenna	2	10.53	0.1053	1
20	20NQ29	Hermit Thrush	T	PROB	1	Jim A Elliott	4	21.05	0.2632	1
20	20NQ29	American Robin	CF	CONF	1	Jim A Elliott	1	5.26	0.1053	1
20	20NQ29	Gray Catbird	T	PROB	1	Jim A Elliott				
20	20NQ29	Cedar Waxwing	CF	CONF	1	Jim A Elliott				
20	20NQ29	Ovenbird	S	POSS	1	Jim A Elliott				
20	20NQ29	Northern Waterthrush	FY	CONF	1	Ken McKenna				
20	20NQ29	Black-and-white Warbler	FY	CONF	1	2 participants	2	10.53	0.1053	1
20	20NQ29	Tennessee Warbler	H	POSS	1	Ken McKenna				
20	20NQ29	Mourning Warbler	A	PROB	1	Ken McKenna				
20	20NQ29	Common Yellowthroat	FY	CONF	1	Ken McKenna	7	36.84	0.3684	1
20	20NQ29	American Redstart	T	PROB	1	Jim A Elliott	7	36.84	0.4211	1
20	20NQ29	Magnolia Warbler	T	PROB	1	Jim A Elliott	8	42.11	0.5263	1
20	20NQ29	Bay-breasted Warbler	D	PROB	1	Ken McKenna	2	10.53	0.1053	1
20	20NQ29	Blackburnian Warbler	H	POSS	1	Ken McKenna				
20	20NQ29	Yellow Warbler	T	PROB	1	Jim A Elliott	1	5.26	0.1053	1
20	20NQ29	Blackpoll Warbler	S	POSS	1	Jim A Elliott				
20	20NQ29	Black-throated Blue Warbler	S	POSS	1	Jim A Elliott	1	5.26	0.0526	1
20	20NQ29	Palm Warbler	CF	CONF	1	Ken McKenna	1	5.26	0.0526	1

20	20NQ29	Yellow-rumped Warbler	CF	CONF	1	3 participants	1	5.26	0.0526	1
20	20NQ29	Black-throated Green Warbler	CF	CONF	1	Jim A Elliott	7	36.84	0.4211	1
20	20NQ29	Canada Warbler	CF	CONF	1	Ken McKenna				
20	20NQ29	Song Sparrow	T	PROB	1	Jim A Elliott	1	5.26	0.0526	1
20	20NQ29	Lincoln's Sparrow	FY	CONF	1	Ken McKenna				
20	20NQ29	Swamp Sparrow	FY	CONF	1	2 participants				
20	20NQ29	White-throated Sparrow	CF	CONF	1	Ken McKenna	11	57.89	0.7368	1
20	20NQ29	Dark-eyed Junco	CF	CONF	1	2 participants	8	42.11	0.4737	1
20	20NQ29	Red-winged Blackbird	T	PROB	1	Jim A Elliott	1	5.26	0.0526	1
20	20NQ29	Rusty Blackbird	FY	CONF	1	Jim A Elliott				
20	20NQ29	Common Grackle	CF	CONF	1	Ken McKenna	1	5.26	0.0526	1
20	20NQ29	Purple Finch	S	POSS	1	Jim A Elliott				
20	20NQ29	White-winged Crossbill	FY	CONF	1	Jim A Elliott				
20	20NQ29	Pine Siskin	S	POSS	1	Ken McKenna				
20	20NQ29	American Goldfinch	FY	CONF	1	Jim A Elliott	1	5.26	0.0526	1
20	20NQ29	Evening Grosbeak	P	PROB	1	Jim A Elliott				

Appendix L.2

Relative Abundance of Avian Species

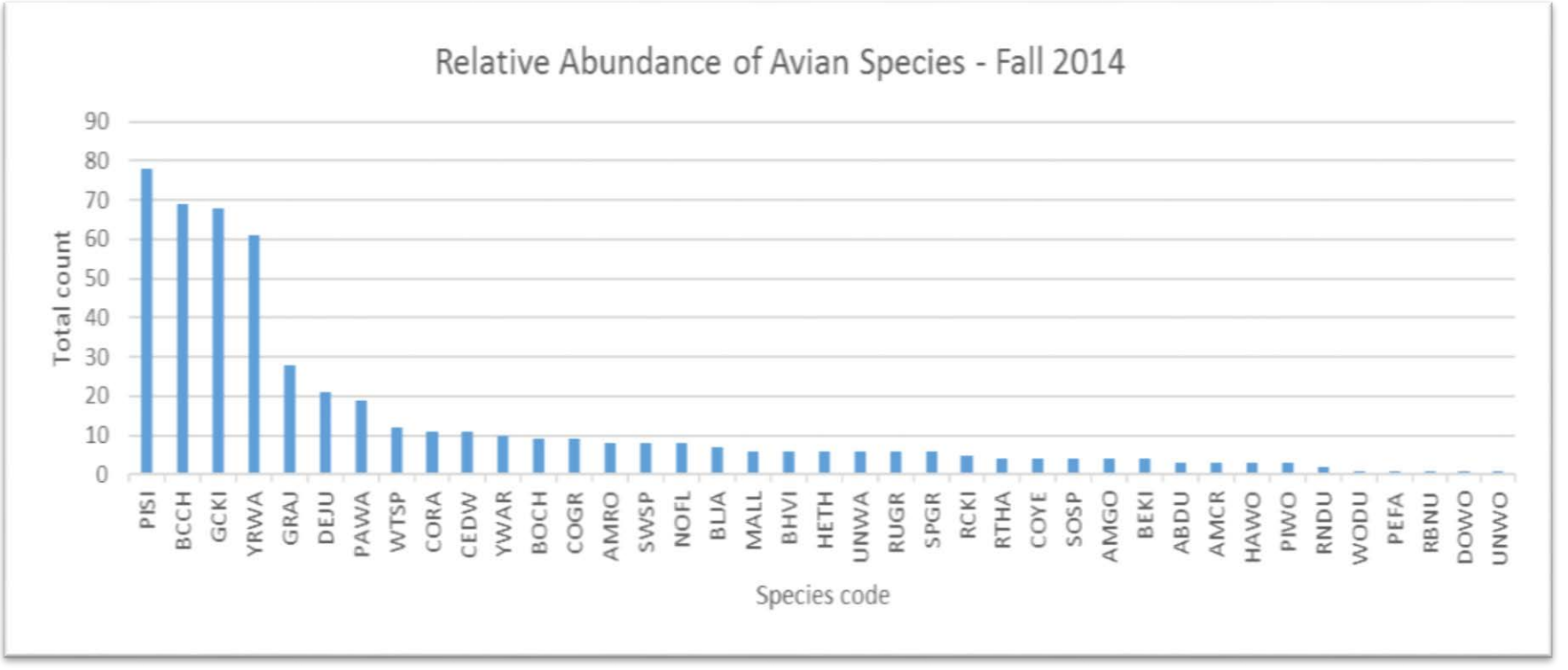

Figure 1: Relative abundance of avian species observed during dedicated fall migration surveys in 2014. This chart presents the four-letter (English Name) alpha codes in accordance with the 56th supplement to the AOU Check-list of North American Birds (Chesser et al., 2015). Unknown species codes are: UNWA (Unknown Warbler) and UNWO (Unknown Woodpecker).

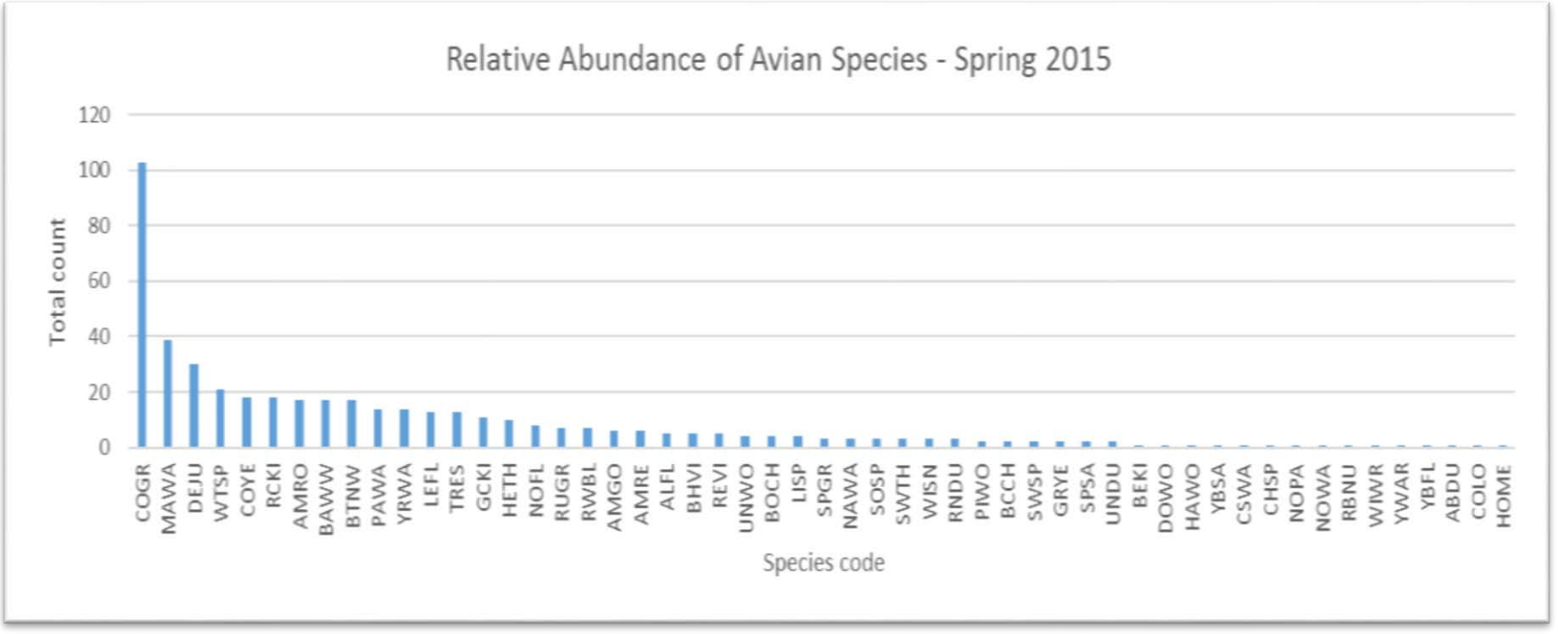

Figure 2: Relative abundance of avian species observed during spring migration surveys in 2015 within the mine footprint PA. This chart presents the four-letter (English Name) alpha codes in accordance with the 56th supplement to the AOU Check-list of North American Birds (Chesser et al., 2015). Unknown species code is: UNWO (Unknown Woodpecker).

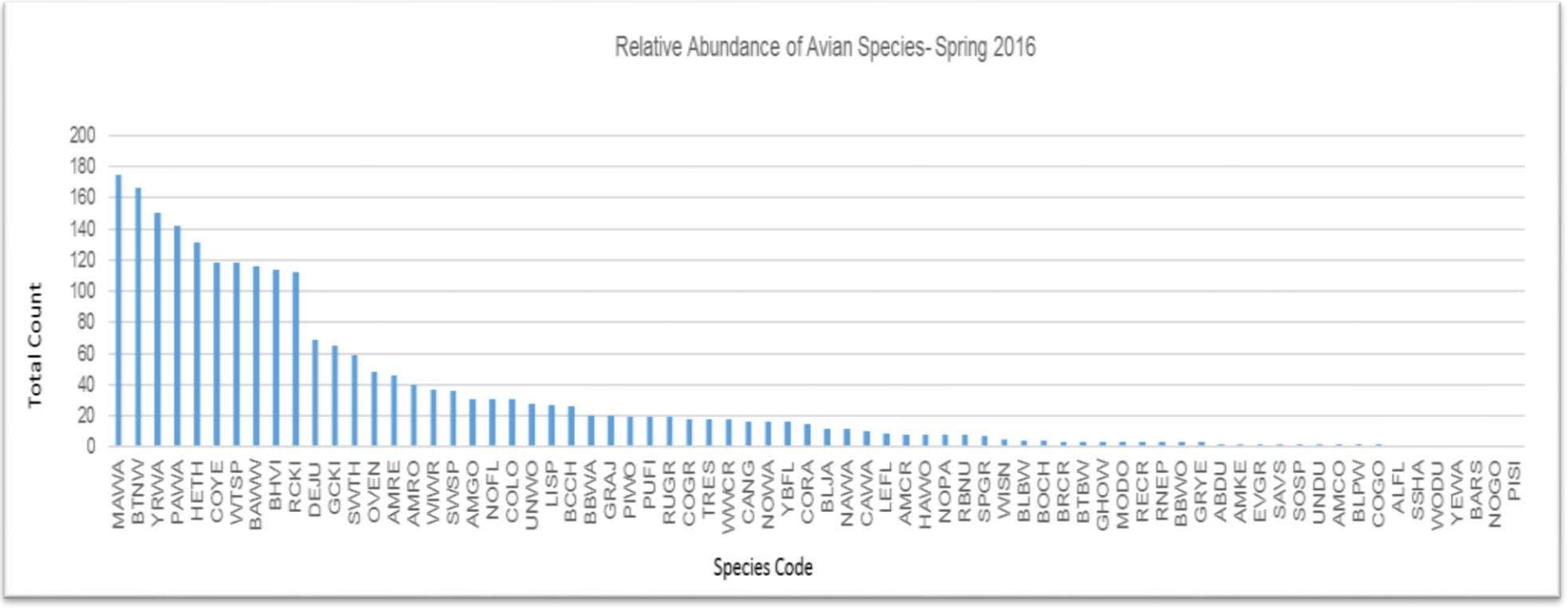

Figure 3: Relative abundance of avian species observed during spring migration surveys in 2016 within the haul road PA. This chart presents the four-letter (English Name) alpha codes in accordance with the 56th supplement to the AOU *Check-list of North American Birds* (Chesser et al., 2015). Unknown species codes are: UNDU (Unknown Duck) and UNWO (Unknown Woodpecker).

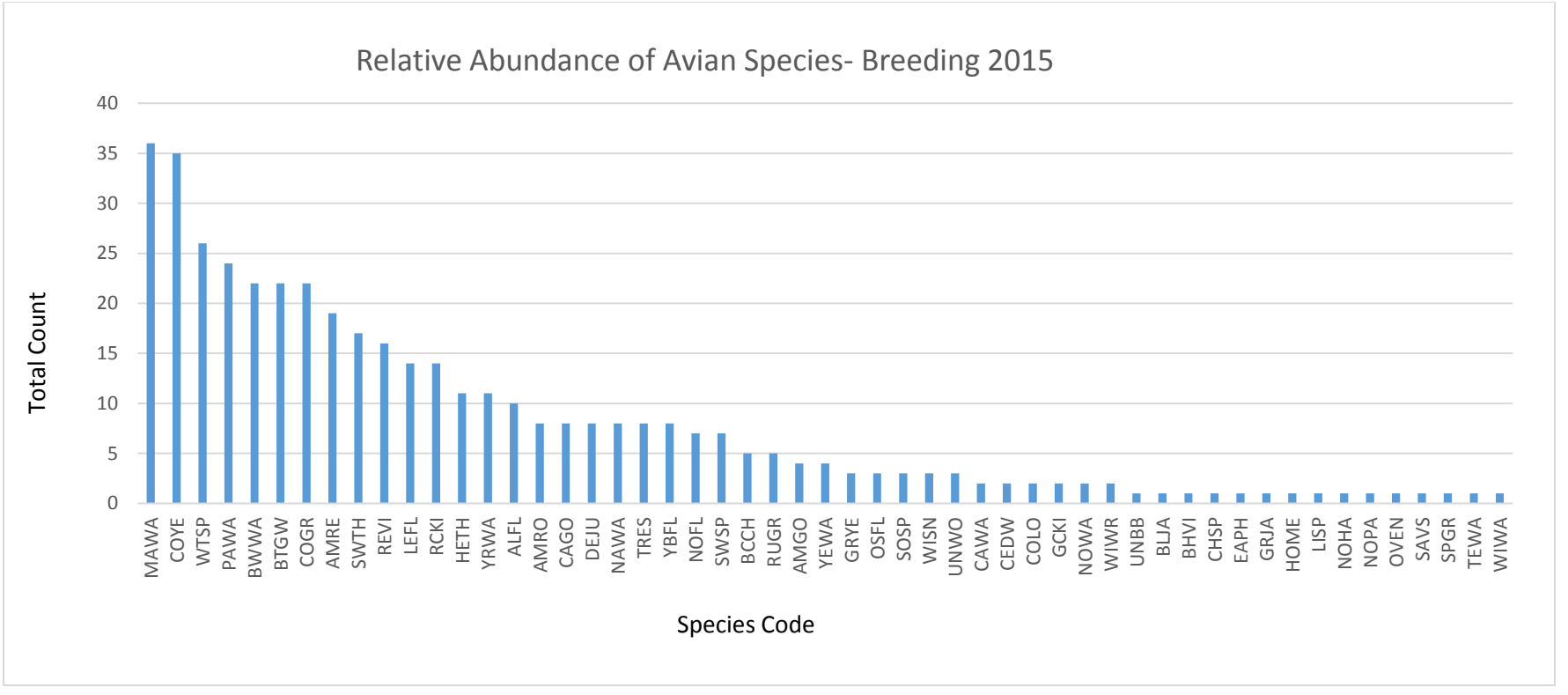

Figure 4: Relative abundance of avian species observed during breeding bird point count surveys in 2015. This chart presents the four-letter (English Name) alpha codes in accordance with the 56th supplement to the AOU *Check-list of North American Birds* (Chesser et al., 2015).

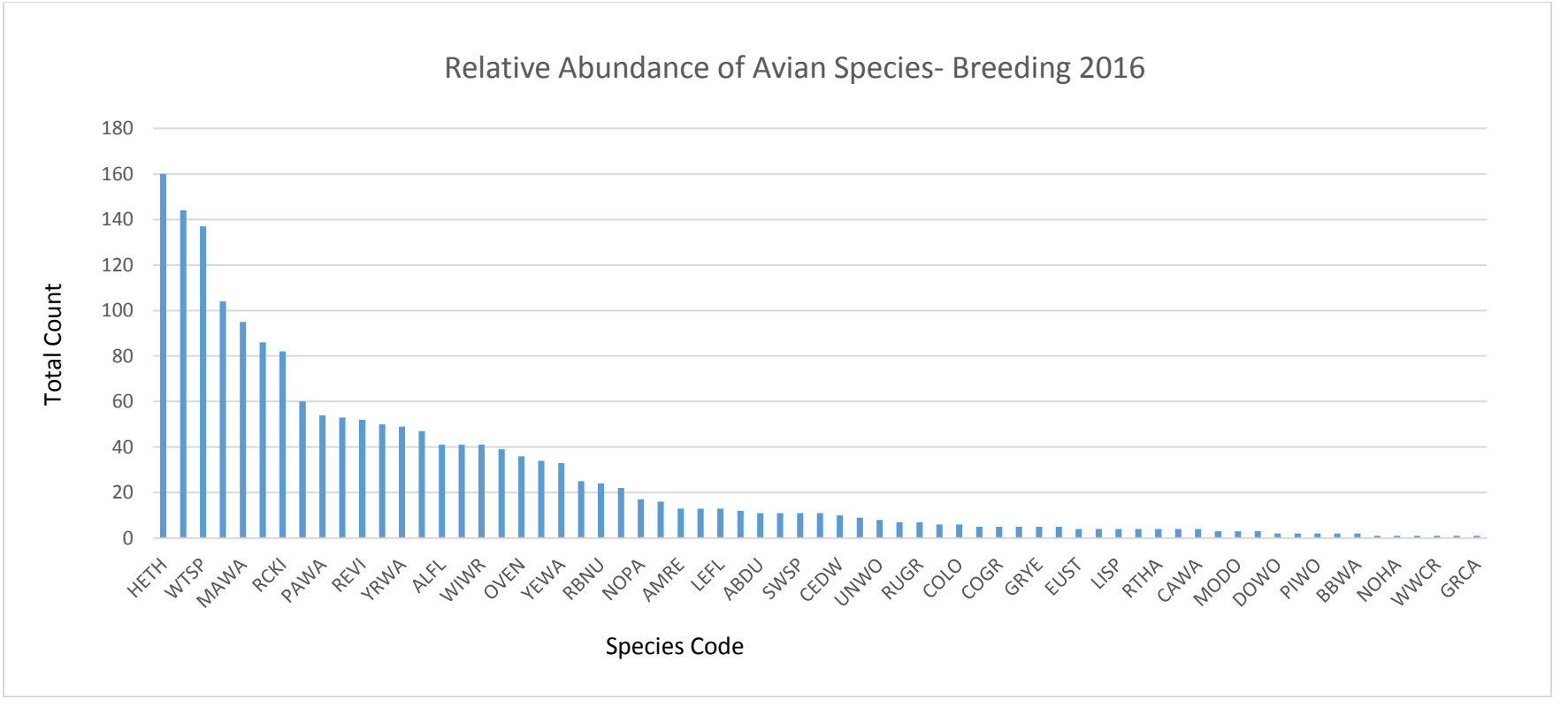

Figure 5: Relative abundance of avian species observed during breeding bird point count surveys in 2016. This chart presents the four-letter (English Name) alpha codes in accordance with the 56th supplement to the AOU Check-list of North American Birds (Chesser et al., 2015).

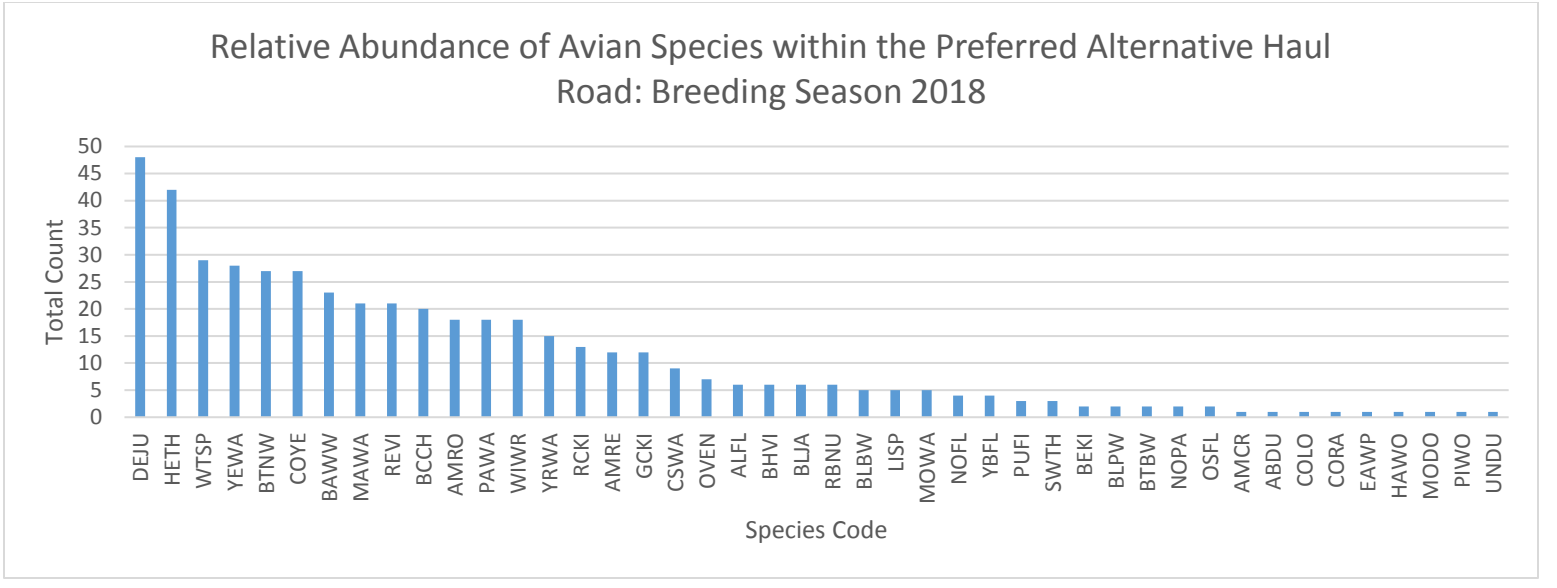

Figure 6: Relative abundance of avian species observed during breeding bird point count surveys along the Preferred Alternative Haul Road in 2018. This chart presents the four-letter (English Name) alpha codes in accordance with the 56th supplement to the AOU Check-list of North American Birds (Chesser et al., 2015).

Appendix M.1

Mi'kmaq Ecological Study (MEKS)

Mi'kmaq Ecological Knowledge Study

Beaver Dam Gold Mine Expansion Project -
Beaver Dam Mines Road Marinette, NS

Prepared for Atlantic Gold Corporation
6479 Moose River Road,
RR2 Middle Musquodoboit, NS, B0N 1X0

Prepared by
Mainland Mi'kmaq Development Inc.
P.O. Box 1590
57 Martin Crescent, Truro, Nova Scotia, B2N 5V3
Tel: (902) 895-6385
Fax: (902) 893-1520

The Confederacy of Mainland Mi'kmaq

November, 2016

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TABLES & FIGURES

1.0 INTRODUCTION

1.1 Mainland Mi'kmaq Development Inc.

The Confederacy of Mainland Mi'kmaq (CMM) Environmental Services is a program operated by the Lands, Environment, and Natural Resources, that provides fee for service in environmental consulting; this division is currently known as Mainland Mi'kmaq Developments Incorporated (MMDI). The CMM provides advisory services to seven Mi'kmaq communities in the province of Nova Scotia: Paqtnkek Mi'kmaw Nation, Annapolis Valley First Nation, Bear River First Nation, Glooscap First Nation, Millbrook First Nation, Pictou Landing and Sipekne'katik First Nation.

The MMDI had been successful in the contract to complete a second Mi'kmaq Ecological Knowledge Study (MEKS) for the Beaver Dam Gold Mine Expansion Project, for The Atlantic Gold Corporation.

The CMM Lands, Environment & Natural Resources, MMDI contact information:

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(902) 893-1520
Lynn@cmmns.com

1.2 Project Description

The Mainland Mi'kmaq Development Inc. has been selected to complete a second MEKS for the Beaver Dam Gold Mine Project Study of 2009. The project site is located in Halifax County, between Sheet Harbour and Upper Musquodoboit, off of Highway 224 near Cameron Flowage, near Beaver Lake IR #17.

The New Proponent, Atlantic Gold Corporation, has since replaced the Acadian Mining Corporation is the current proponent and an updated MEKS for 2016, includes the same study area as the original project area for the Expansion Project, with two additional road expansions near Beaver Lake (IR #17).

2.0 DEFINITION OF TERMS

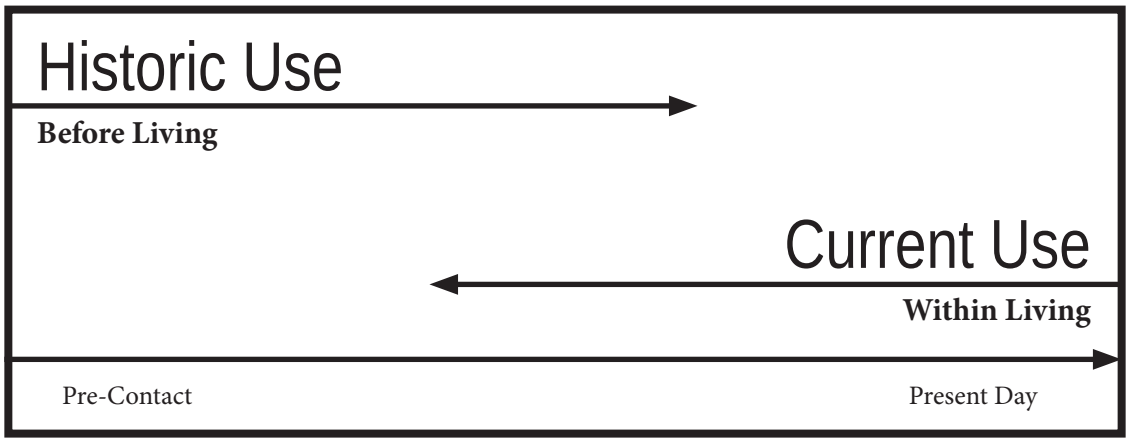
Living Memory is the memory of living Mi'kmaw. The period of time included in living memory varies from knowledge holder to knowledge holder. Living memory often extends to the parent and grandparent of the

knowledge holder and can be estimated at three to four generations.

Current Mi'kmaq Land and Resource Use occurred within living memory or is occurring at the present day (Figure 1)

Historic Mi'kmaq Land and Resource Use occurred before living memory (Figure 1)

Figure 1: Historic and Current Use Timeline



Mi'kmaw Ecological Knowledge (MEKS) is the collective body of knowledge which Mi'kmaq possess based on their intimate relationship with their natural surroundings, which involves exploitation, conservation and spiritual ideologies, and has been passed on from generation to generation, *"kisaku kinutemuatel mijuijij"*, elder to child.

Mi'kmaq Land and Resource Use Sites are locations where Mi'kmaq land and resource use activities have taken place or are taking place at present day. These sites may or may not display physical evidence of Mi'kmaq use.

Mi'kmaq/Mi'kmaw: *Mi'kmaq* means the Family and is an undeclined form. The variant form, *Mi'kmaw*, plays two grammatical roles: 1) it is the singular of Mi'kmaq and 2) it is an adjective in circumstances where it precedes a noun.

Mi'kma'ki is the Mi'kmaw homeland (Atlantic Provinces and Gaspé Peninsula)

Specific Land Claim arises when a First Nation alleges that the federal government has not honoured its treaties, agreements or legal responsibilities. According to federal policy, a valid specific claim exists when a First Nation can prove the government has an "outstanding lawful obligation". The Mi'kmaq are currently pursuing several specific land claims in Nova Scotia.

Comprehensive Claim is based on underlying Aboriginal Title to traditional territory that has not been dealt with by treaty or other means. Aboriginal Title to lands exists as a legal right derived from First Nations

historical occupation and possession of their tribal lands. The process of negotiating the settlement of comprehensive claims, which is known as modern-day treaty making, clarifies access and ownership to land and resources. Currently, the Mi'kmaq has a comprehensive claim to all lands within the province of Nova Scotia including all inland and adjacent waters.

3.0 PURPOSE AND SCOPE OF THE MI'KMAQ ECOLOGICAL KNOWLEDGE STUDY

3.1 Purpose of the Mi'kmaq Ecological Knowledge Study

The purpose of the Mi'kmaq Ecological Knowledge Study is to support the integration of Mi'kmaq knowledge of use and occupation of Mi'kma'ki into development decisions via the environmental assessment process.

3.2 Scope of the Mi'kmaq Ecological Knowledge Study

The MEKS includes:

1) a study of historic and current Mi'kmaq land and resource use;
2) an evaluation of the potential impacts of the Project on Mi'kmaq use and occupation and constitutionally based rights;
3) an evaluation of the significance of the potential impacts of the Project on Mi'kmaq use and occupation; and
4) Recommendations to proponents and regulators that may include recommendations for mitigation measures, further study, or consultation with Mi'kmaq.

3.3 Not included in the scope of the Mi'kmaq Ecological Knowledge Study

3.3.1 Section 35 Consultation

This study is not consultation for justification of the infringement of constitutionally protected aboriginal and treaty rights. If the project involves possible infringements of Mi'kmaq constitutional rights, the MEKS recommends further action.

3.3.2 Archaeological Screening and Resource Impact Assessment

The study is not an Archaeological Screening or Archaeological Resource Impact Assessment. Results presented in the study can inform and be informed by archaeological screenings and assessments.

3.3.3 Notification of Mi'kmaw individuals or communities of the Project

The study is not intended to inform or notify Mi'kmaw individuals or communities of the Project, solicit the opinions or concerns of Mi'kmaw individuals or communities on the Project, or promote the Project to Mi'kmaw individuals or communities.

4.0 METHODOLOGY

4.1 Historic Mi'kmaq Land and Resource Use

Historic Mi'kmaq land and resource use occurred before living memory. The study of historic land and resource use paints a broad portrait of Mi'kmaq use and occupation of Mi'kma'ki in centuries past.

4.1.1 Study Area

This study encompasses the area surrounding Cameron Flowage located in Beaver Dam, Halifax County, Nova Scotia. The study area is adjacent to Beaver Lake I.R. #17 and is located about 30 kms north of Sheet Harbour I.R. #36, which are part of the Millbrook First Nation. A broader scope of research has been included to show Mi'kmaq use and occupation within Halifax County. Included within the study area, are the lands adjacent to the road expansion projects, Moose River Cross road and the Beaver Dam Mine road.

4.1.2 Methods

Research was completed from within The Confederacy of Mainland Mi'kmaq research department library as well as external sources from the Nova Scotia Public Archives, Nova Scotia Museum, Cape Breton University's Mi'kmaq Resource Centre and the Colchester library. Secondary sources include Crown Land index sheets, church records, cemetery record, maps and published papers and books on Nova Scotia History.

4.1.3 Limitations

Recorded documents are the primary source of information for the study of historic Mi'kmaq land and resource use. There are no recorded documents in the pre-contact period and recorded documents in the post-contact period are not comprehensive. Furthermore, existing documentation has largely been written by people of a different culture. This means that information may either not be completely accurate or may be incomplete.

4.2 Current Mi'kmaq Land and Resource Use

Current Mi'kmaq land and resource use occurred within living memory or is presently occurring. The MEKS includes a study of:

1) Current Mi'kmaq land and resource use sites
2) Species of Significance to Mi'kmaq
3) Mi'kmaw Communities

4.2.1 Study Areas

The study areas are described in Figure 2.

4.2.1.1 Current Mi'kmaq Land and Resource Use Sites

The study area for current Mi'kmaq land and resource use sites is the proposed area of development – five-kilometer radius surrounding proposed project site.

4.2.1.2 Species of Significance to Mi'kmaq

Study areas are marked on Figure 2.

4.2.1.3 Mi'kmaw Communities

The study area for Mi'kmaw communities is a 5 km radius surrounding the proposed development area.

4.2.2 Methods

4.2.2.1 Current Mi'kmaq Land and Resource Use Sites

Mi'kmaq knowledge on current land and resource sites will be gathered through a review of information collected through oral interviews with Mi'kmaw knowledge holders.

All individuals, whom will be interviewed, will sign consent forms. Knowledge will be gathered in accordance within the spirit of the *Mi'kmaq Ecological Knowledge Protocol.*

Knowledge collected is reported in a general format only. No names or specific locations are published. Collected knowledge will be digitized and compiled to allow for an analysis of potential impacts of the project on current Mi'kmaq land and resource use.

4.2.2.2 Species of Significance to Mi'kmaq

A system of stratified random sampling was employed to identify flora species present in the study areas of significance to Mi'kmaq. Plants were surveyed in the summer of 2016. Information collected is reported in a general format only. The names of the species are not recorded.

4.2.2.3 Mi'kmaw Communities

A review of outstanding specific land claims within the study area was undertaken by CMM. There are three specific land claims identified within the project area, however, the records of outstanding specific land claims are not currently fully researched.

4.2.3 Limitations

While every attempt was made to document all available Mi'kmaw knowledge, the knowledge gathering process may not have captured some available Mi'kmaw knowledge. It is also recognized that over generations of cultural and political suppression, much Mi'kmaq knowledge has been irretrievably lost.

5.0 RESULTS

Results of the study are divided into two categories:

1) Historic land and resource use, that is, use that occurred before living memory, and
2) Current land and resource use, or use that occurred within living memory or is occurring at the present day.

Land and resource use may be for hunting, burial/birth, ceremonial, gathering, or habitation purposes.

5.1 Historic Mi'kmaq Land and Resource Use

5.1.1 Pre-Contact Introduction

Mi'kmaq traditional use of the land in Nova Scotia involved semi-permanent and permanent settlements. Summer villages of the Mi'kmaq were usually located on the banks of streams or rivers. The most important factor in the choice of a site was the proximity of the site to a navigable body of water. Sites around the mouths of rivers with heavy spawning runs were highly favourable for use, as well as smaller rivers running back into a system of lakes.[1] It is therefore likely that the Mi'kmaq settled in the study area, which exhibits these types of natural features.

Beaver Dam lies within *Eskikewa'kik* or the "skin dressing territory". This particular district spans from Halifax County across to Guysborough County. Various authors and historians have differed in their description of how far this territory expands, but all have agreed that Beaver Dam lies within this district.

Eskikewa'kik lies within the Meguma Terrane in the Atlantic Uplands of Nova Scotia. The Meguma Zone occupies the southern mainland of Nova Scotia and extends seaward beneath younger sedimentary rocks.[2] It is a mix of fine sandstone, shale, quartz rich sand and mud. "The Mi'kmaq and their ancestors acquired an impressive knowledge of the geology of their land by using rocks and minerals to develop one of the first technologies – the working of stone."[3] Certain stones would have been used as grinding tools on other types of stone, bone, antlers and wood. Other hard stones such as quartz would have been used as hammers, choppers, knives and arrowheads. (Natalie Stoddard; pg. 2)

The area contains a variety of spruce, fir, birch, ash, maple pine and shrubs inland, which would have been used in making baskets and building shelter. "Small mammal diversity is moderately high in well drained mixed and hardwood forest habitats, especially along rivers and streams",[4] drawing lynx, moose, beaver, deer, marten and hare to the area, all harvested food by the Mi'kmaq.

There is no recorded archaeological activity recorded within the study area. A further investigation into areas that border Fifteen Mile Stream has been included later on in this report. Stephen Davis has commented on the lack of archaeological evidence with Maritime Coastal areas. "Unfortunately for the archaeologists, the shorelines of 10,000 to 5,000 years ago no longer exist. The demise was related to ongoing geological events."[5] The harsh winters, strong winds, and erosion have left little evidence of early use and occupation.

Although little historical information has been written about Mi'kmaq inhabiting these areas in large numbers, there is some documentation that suggests that they mainly inhabited Halifax and Port Mulgrave. Bernard Hoffman has noted that there were seven main sites within Eskikewa'kik; including sites at Ship Harbour, Spry Bay Harbour and Liscomb Harbour near the study area.

Mi'kmaq cultures hunted land and marine mammals and fish for sustenance and some trading until the late sixteenth century, when traditional activities began to change in

1 Donald M. Julien, Historical Perspective of Micmac Indians Pre & Post Contact Period, p. 3.
2 Davis, Derek S and Sue Browne. Natural History of Nova Scotia, Volume 1: Topics, page 20
3 Davis, Derek S and Sue Browne. Natural History of Nova Scotia, Volume 1: Topics, page 322
4 Davis, Derek S and Sue Browne. Natural History of Nova Scotia, Volume 1: Topics, page 57
5 Davis, Stephen. The Micmac, page 12.
6 Davis, Derek S and Sue Browne. Natural History of Nova Scotia, Volume 1: Topics, page 368

response to contact with the Europeans.[6] Settlements, although not permanent, were located near major waterways and harbours, providing accessibility to trade with the Europeans. The Mi'kmaq traveled inland through minor streams and rivers, either by canoe or on foot.

5.1.2 Post Contact

Nicholas Denys gives a brief description of the area "Bay de Toutes Isles" which would cover the area along the Eastern Shore know as the Bay of Islands running from Ship Harbour along the coast to Liscomb Harbour. "This bay has nearly four leagues of depth, and there are several rivers which discharge into it. These are small and are only, as it were, large brooks, [though] by them the Indians come and go."[7] He stated that there seems to be a large number of Indians living in that area in order to hunt the moose.

Mi'kmaq at Beaver Dam

The Mi'kmaq referred to this area as *Kopitewey Kwimuti*[8] literally meaning Beaver Harbour. In 1852, 100 acres had been set-aside for Simon Francis on the Sheet Harbour Road at the head of Beaver Lake. There is little written prior to the setting aside of this reserve under Samuel Fairbanks' Return of Land report in 1866.

The reference plan from Natural Resources Canada shows a parcel of ten acres adjacent to the Beaver Dam reserve as being allotted to Peter Paul in 1930. The original letters patent and grant was not located, but Peter Paul's name again comes up in lands held by himself and his brother adjacent to the Sheet Harbour Reserve.

In the *Old Man Told Us* by Ruth Holmes Whitehead, reference is made to John Cope killing 18 moose at Beaver Dam and selling them to the men at Fifteen Mile Stream Goldmine in 1918.

In 1973, John Covert conducted another survey at Beaver Lake and found that the reserve contained 122 acres instead of the initial one hundred acres granted to Simon. The reserve was formally set-aside to Millbrook Band in 1960.

Mi'kmaq at Sheet Harbour

Around the seventeen hundreds, the Mi'kmaq lived along the eastern coast, at Spry Bay Harbour, Ship Harbour and Sheet Harbour. In 1762, Jonathan Belcher issued a proclamation protecting the traditional hunting and fishing territories of the Indians. This area included all that portion of Canso and running westerly as far as Musquodoboit.

Following the American Revolution in 1776, an influx of loyalists induced on settling in Nova Scotia, were given gratuitous land grants and most of the land laid out for the Indians was encroached upon. In 1783 a license of occupation was issued to the Indians for 11,520 acres in order to protect their fishing and hunting rights. James E. Rutledge

[7] Ganong, William F. The Description and Natural History of Coasts of North America (Acadia) by Nicholas Denys p. 157

[8] Stevens, Arlene. Mi'kmaq Place Names, pg.

[9] Rutledge, James E. A History of Sheet Harbour, pg. 13

mentioned in his book *History of Sheet Harbour* that when a number of soldiers had moved to the area in 1784, "there was an encampment of Indians in the maple grove now the property of the heirs of Robert Rutledge at Watt Section"[9] . This in all likelihood was the section of land included within the license of occupation.

A large portion of the areas given under these licenses, were encroached upon by European settlers but Mi'kmaq occupation continued at Sheet Harbour prior to the establishment of the formal reserve in 1915. The white settlers, angered by Belcher's proclamation for protecting Mi'kmaq hunting territories, ignored his rule, and continued to settler there. The lands set aside for the Indians were eventually abandoned, but some continued to return there to hunt and fish.

In Frank Speck's work, *Beothuk and Micmacs*, he describes the hunting territories. "The Micmac, like the rest of the northern and eastern Algonkian, whose subsistence was gained by hunting and fishing, had their country subdivided into more or less well recognized districts in which certain individual proprietors or families enjoyed the inherited privileges of hunting. [10]

Contained within Speck's list of territories, predominantly Cope surnames continued to hunt and fish at Ship Harbour, Jeddore, Ten and Fifteen Mile Lake, Sheet Harbour and Liscomb. See part of Speck's list below. [11]

Shubenacadie and Sheet Harbour Bands		
27	Frank Paul	Stewiacke river valley
28	John Newell Cope	Musquodoboit river between Middle Musquodoboit and Musquodoboit.
29	Andrew Francis	North of Ship Harbour lake, Gould Lake
30	Joe Cope	North of Jeddore
31	Young Joe Cope (Son of No. 30)	Northeast of Jeddore
32	Andrew Paul	Grassy lake north of Killag river
33	(Territory supposed to have belonged to Pauls).	
34	Sandy Cope	Tangier lake and Scraggy lakes
35	Frank Cope	Hunting lake, Governor's lake, and Ten Mile lake
36	Peter Joe Cope	Fifteen Mile lake, Rocky lake
37	Michael Tom (Toney)	Moser River
38	Young Peter Joe Cope	Large district north of Sheet Harbour
39	Mathew Salome	Big Liscomb lake
40	Jim Paul	Hunting lake and Liscomb river
41	Abram Paul (son of No. 32)	Lake Mooin, back of Liscomb
46	Abram Gould	Neighbourhood of Sheet harbour, (He came originally from Cape Breton Island, where his family had territory and received a tract from the Cope family in Nova Scotia

[10] Speck, Frank G. Beothuks and Micmac, pg 86.
[11] Speck, Frank G. Beothuks and Micmac, pg. 103-105

Mi'kmaq at Ship Harbour

The Mi'kmaq referred to the area at Ship Harbour as *Tetmnipukwek*[12] meaning blunt harbour. In 1813, a petition came from Francis Coop for land at Ship Harbour for himself, his wife and seven children as outlined in document RG 20 A – Coop Francis. The petition stated that 200 acres of land be laid out for him, as he was sober and industrious, on the proviso that it could only be passed on to his children at the head of the Ship Harbour River.

In 1848, John Spry Morris laid out 500 acres of land in 100-acre lots, with a small lot measuring 47 acres being reserved for fishing. The five lots were laid off to Francis Paul, Joseph Paul, Lewis Paul, Lewis Newal and Lewis Brooks. Two additional lots were allotted to Francis Paul's sons, James Paul and Joseph Paul. A survey of the area in 1853 had referred to 700 acres of land but did not mention the 47 acres reserved for fishing.

After 1855 little correspondence is written about the Mi'kmaq living at Ship Harbour. There are a few bills for provisions and aid given to them in 1856 (MG 15 Volume 6 no. 14). Various requests for blankets had dropped from 1861 onward, as they believed that an outbreak of smallpox had serious effect on the numbers living at Musquodoboit, Sheet Harbour and Ship Harbour. Joseph Browner had requested that four dollars worth of blankets be sent to him for Indians living at Tangier, but no mention of Ship Harbour. (Journal of Assembly: 1863, No. 16, p.5.)

In 1893, J. Lewis & Sons inquired into the possibility of purchasing land at Ship Harbour Reserve in order to locate a factory and use the timber on the land. The Superintendent General then wrote to the Indian agent to inquire any Indians lived there, and would be willing to surrender the reserve. Joseph Cope's letter to the Superintendent General stated: "the said or supposed Reserve has been abandoned by the Indians thirty or forty years ago. Although a good number of us are there every summer for the [?] work purposes…"[13].

In 1919, the government wanted to centralize the Mi'kmaq on two main reserves at Shubenacadie and Indian Brook. They had made several attempts with the Halifax County Indians to either settle permanently on Ship Harbour, or to dispose of the land. The property was eventually surrendered along with Sambro and Ingram River, but the Mi'kmaq continued to use that area as shown in Frank Speck's *Beothuks and Micmac*. He pointed out that Andrew Francis was allotted hunting territory #29 in 1922, which covered land at the Great Ship Harbour: whether or not that fell into the lands originally set aside as an Indian Reserve is unknown.

5.1.3 Archaeology

Nova Scotia Museum records did not contain any archaeological sites within the study area. The adjoining areas have had some activity recorded in the Maritime Archaeological Resource Inventory. The information collected from that research has shown that Mi'kmaq presence occurred all around the study area.

[12] Stevens, Arlene. Mi'kmaq Place Names, pg. 35

[13] DIAND file 274/30-1, Volume 1.

5.2 Current Mi'kmaq Land and Resource Use

The study of current Mi'kmaq land and resource use is comprised of a study of current Mi'kmaq land and resource use sites, species of significance to Mi'kmaq, and Mi'kmaw communities.

5.2.1 Current Mi'kmaq Land and Resource Use Sites

Current Mi'kmaq land and resource use activities are divided into five categories:

1) Kill/hunting
2) Burial/birth
3) Ceremonial
4) Gathering food/ medicinal
5) Occupation/habitation

Table 1 provides a description of activities undertaken at the sites.

Table 1: Description of Activities Undertaken in Current Mi'kmaq Land and Resource Use Site

TYPE OF SITE	DESCRIPTION OF ACTIVITIES IN STUDY AREA
HUNTING/KILL	Trout, Eel, Bear, Rabbit, Deer, Porcupine, Partridge, Coyote, Mink, Muskrat, Weasels, Racoon, Fox, Otter, Beaver
BURIAL/BIRTH	Potential Burial sites
CEREMONIAL	
GATHERING	Wild Fruit, Berries, H2O, Food Plant, Specialty wood, logs, feathers, quills
HABITATION	Anchored boat, Travel route, Overnight Site

Potential Burial Sites were recorded within the study area on the Western side of the Beaver Dam Mine road, but not within the project area.

5.2.2 Species of Significance to Mi'kmaq present in study area

Species of significance to Mi'kmaq in the study area are divided into three categories:

1) Medicinal
2) Food/Beverage
3) Craft/Art

The following table describes the number of plants of significance present in the study areas during the summer survey of 2016.

Table 2: Number of Species of Significance to Mi'kmaq Present in the Study Areas Summer 2016

TYPE OF USE	NUMBER OF SPECIES PRESENT SUMMER 2016
MEDICINAL	49
FOOD/BEVERAGE	27
CRAFT/ART	11

5.2.3 Mi'kmaw Communities

There are two Indian Reserves located near the study area: these reserves were set aside under the Indian Act for the use and benefit of the Indians under federal legislation.

Beaver Lake is located in Halifax County along Highway 224 and is a satellite community belonging to Millbrook First Nation. The reserve was established on March 2, 1867, is approximately 49.4 hectares in size. There are a small number of homes and hunting camps located on the property. The estimated population on reserve is 22, with a total of five homes and 4 small cottages/camps.

Sheet Harbour is located along Highway #7, approximately 112 kms from Halifax, and is comprised of 2 lots amounting to 32.7 hectares. The land was purchased from William Tupper in 1915, for the purpose of creating an Indian Reserve. The reserve was set aside under the administration of Millbrook First Nation in 1960. There are approximately 75 members living on reserve with nine homes, and two trailers, as well as a community hall and a convenience/gas bar.

<u>The following is a list of Mi'kmaq place names:</u>

Nukumkiaq – Moser River (Gravelly Stream)

Ktuaqati – Quoddy Head (Place of War Whoop)

Nutaqati – New Quoddy (Place of Seal Hunting)

Kopitewey kwimuti – Beaver Harbour (literal translation)

Nikanaputik – Beaver Point (Foresight)

Waijuik – Sheet Harbour River (Deceitfully flowing)

Kiso'quetek – Sheet Harbour Road (Going up in the Country)

Kuimutijk – Spry Bay Harbour

Amaqopskikek – Tangier River (Tumbling over rocks)

Kisna Kopilk – Moose River

Tetmnipukwek – Ship Harbour

Eski'kewa'kik – Skin Dressers Territory

Sikna'qiknek – Taylor's Head (A spread sail)

6.0 POTENTIAL PROJECT IMPACTS ON MI'KMAQ LAND AND RESOURCE USE

The following table presents potential project impacts on historic and current Mi'kmaq land and resource use.

Table 3: Potential Project Impacts on Mi'kmaq Land and Resource Use

POTENTIAL IMPACTS ON MI'KMAQ LAND AND RESOURCE USE	
6.01	The historic review of Mi'kmaq use and occupation documents historic Mi'kmaq use and occupation in the study area, and potentially the project area. A potential impact of the project is the disturbance of archaeological resources and Burial sites.
6.02	Several species of significance to Mi'kmaq have been identified in the study area. Permanent loss of some species is an impact of the project.
6.03	Current Hunting, Gathering and Trapping activities have been identified in the study area. Permanent loss of habitat is a potential impact.

7.0 SIGNIFICANCE OF POTENTIAL PROJECT IMPACTS ON MI'KMAQ LAND AND RESOURCE USE

The concept of significance in the Mi'kmaq Ecological Knowledge Study is distinct from the concept of significance under the *Canadian Environmental Assessment Act* or the *Nova Scotia Environmental Assessment Regulations*. Significance to Mi'kmaq is evaluated only in accordance with the criteria listed below. The MEKS evaluation of the significance of the potential project impacts on Mi'kmaq should be used by regulators to inform their determination of the significance of the environmental effects of the Project.

7.1 Significance Criteria

The following criteria are used to analyze the significance of the potential project impacts on Mi'kmaq use:

1) Uniqueness of land or resource
2) Culture or spiritual meaning of land or resource
3) Nature of Mi'kmaq use of land or resource
4) Mi'kmaq constitutionally protected rights in relation to land or resource.

7.2 Evaluation of Significance

Table 4: Significance of Potential Project Impacts on Mi'kmaq Land and Resource Use

POTENTIAL IMPACT		EVALUATION OF SIGNIFICANCE	
6.01	The historic review of Mi'kmaq use and occupation documents Mi'kmaq use and occupation in the study area, and potentially the project area. A potential impact of the project is the disturbance of archaeological resources and burial site.	7.2.01	Mi'kmaq archaeological resources are extremely important to Mi'kmaq as a method of determining Mi'kmaq use and occupation of Mi'kma'ki and as an enduring record of the Mi'kmaq nation and culture across the centuries. Archaeological resources are irreplaceable. Any disturbance of Mi'kmaq archaeological resources is significant. The potential Burial sites are not located within the proposed project site, therefore, impact of the project is not likely significant.
6.02	Several species of significance to Mi'kmaq have been identified in the study areas. Permanent loss of some specimens is an impact of the Project.	7.2.02	The plant species of significance to Mi'kmaq identified within the study area exists within the surrounding area. The destruction of some specimens within the study areas does not pose a threat to Mi'kmaq use of the species. The impact of the permanent loss of some specimens of plant species of significance to Mi'kmaq is evaluated as not likely significant.
6.03	Hunting, gathering and trapping activities have been identified in the study area. Permanent loss of habitat is an impact of the project.	7.2.03	The potential habitat loss located in and around the wetlands and lakes of the projects can be evaluated as significant.

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.01 In the event that Mi'kmaw archaeological deposits are encountered during construction or operation of the Project, all work should be halted and immediate contact should be made Laura Bennett, Special Places Coordinator, at the Nova Scotia Museum, Kwilmu'kw Maw-klusagn Negotiation Office (KMKNO) and the Sipekne'katik and Millbrook Community.

8.02 There are three identified potential claims within the project site according to The Confederacy of Mainland Mi'kmaq research department. The potential claims include loss of reserve lands, a department of highway road allowance, and a Nova Scotia Power easement. Locations of these potential claims are adjacent to the Beaver Lake IR #17 foot print. More research is needed on these potential claims.

8.03 The project includes two road expansion along the Beaver Dam Mine Road and the Moose River Cross road, which is located adjacent to Beaver Lake IR #17. Concerns of increased traffic, loss of wetland

habitat and the potential loss of areas with the study area including Tent lake and Cope Pond, Rocky, Otter, Como, Grassy and Beaver lakes, Killag River and the West River and the West River Sheet Harbour, where the majority of hunting, gather and trapping activity has and continues to take place. Any rights-based issues relating to loss of access to traditional use would have to involve the Kwilmu'ku Maw-klusuaqn Negotiations Office, Sipekne'katik and Millbrook Communities.

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Figure 2: Map of Current Mi'kmaq Land and Resource Use Study Area