

Protected on Paper Only:

Evaluation of Nova Scotia's legal obligations to protect and recover mainland moose and other species-at-risk

Jamie Simpson, Steven Evans, & Lisa Mitchell
East Coast Environmental Law Association AND
Environmental Law Students' Society

February 2015



ece law
east coast environmental law



Table of Contents

Executive Summary	1
• Government’s obligations under Nova Scotia’s <i>Endangered Species Act</i>	2
• Examples where government is not meeting obligations under the Act	2
• Case Law on government violations of species-at-risk legislation	3
• Nova Scotia’s endangered mainland moose	4
• Conclusion: Recommendations to better protect species at risk	6
Appendix A: Species at Risk in Nova Scotia, and Potential Breaches of the <i>Endangered Species Act</i> by the Nova Scotia Department of Natural Resources	7
Footnotes	9





EXECUTIVE SUMMARY

The East Coast Environmental Law Association (ECELAW), in conjunction with the Environmental Law Students' Society (ELSS) at the Schulich School of Law, Dalhousie University, assessed whether the Nova Scotia government is fulfilling its legal obligations to species at risk in our province. Under Nova Scotia's *Endangered Species Act* (the "Act"), the Minister of Natural Resources is required to establish recovery teams, and to create recovery plans for each endangered and threatened species, as detailed in section 15(1) of the Act. Among other components, recovery plans must identify the species' core habitat requirements, and chart a course of action to encourage the species' recovery, as described in section 15(4). The Minister must also implement recovery plans to the extent feasible, as per section 15(12).

We are troubled to find that Nova Scotia's Department of Natural Resources (DNR) has not fulfilled its legal obligations under the *Endangered Species Act* with respect to 20 of Nova Scotia's 37 endangered or threatened species, as detailed in Appendix A.¹ DNR has failed to complete recovery plans and to identify core habitat for a number of species at risk, among other requirements. If DNR does not appoint recovery teams and ensure recovery plans are completed by the end of 2015 for 6 recently-listed species, its non-compliance will rise to 26 of Nova Scotia's 37 endangered or threatened species at risk. The Act lists an additional 15 species as vulnerable and 3 species as extirpated from the province; these species do not require recovery efforts under the Act.

ECELAW and ELSS are concerned that the provincial government, by failing to meet its legal obligations, is increasing the risk facing Nova Scotia's most at-risk biodiversity. We are particularly concerned that the province has failed to identify a single hectare of potential core habitat for species at risk in Nova Scotia, despite its legal obligation to do so under the Act, and that DNR has yet to implement any of the recovery actions that have been identified.

Nova Scotia's mainland moose, listed as endangered in 2003, is an example of a species possibly threatened by the province's shortcomings under the Act. In the mainland moose recovery plan, released 3 years later than legally mandated, DNR did not identify the core habitat necessary to sustain the remaining individuals, as is required under the Act. Nor did DNR attempt to chart a course in the plan to increase the number of moose to a sustainable level, also as required under the Act. Further, recovery plans are required to be evaluated every 5 years, and DNR has yet to evaluate the moose recovery plan since releasing it in 2007.

At the same time that DNR has failed to meet certain legal obligations to species at risk, it has moved forward with issuing new forest logging permits to forestry companies on lands that may overlap with habitat for some species at risk. In the absence of identified core habitat, the *Endangered Species Act* provides virtually no protection to species at risk from damaging forestry practices. ECELAW and ELSS are concerned that DNR's resource extraction focus may be interfering with its responsibilities with respect to the province's biodiversity and satisfying its legal obligations with respect to species at risk. Further, we note that Nova Scotia Environment (NSE) does not appear to be working with DNR to ensure species at risk are adequately conserved. As a result, NSE is not meeting its legal mandate to protect biodiversity, as it is required to do under the *Environment Act*.²

We call on the province to take immediate action to comply with the *Endangered Species Act*. Identification of core habitat, and implementing actions already identified, is particularly important to the recovery of Nova Scotia's species at risk. We also recommend that the Nova Scotia government move responsibility for species at risk from DNR to NSE, given NSE's legislative mandate over the province's biodiversity. A new path forward is necessary to give the public greater confidence that conservation laws are not undermined by DNR's resource extraction mandate. Environment would be the logical department to be tasked with protecting biodiversity, given its mandate to do so under section 2 of the *Environment Act*.

ECELAW wishes to acknowledge the thoughtful comments provided by several reviewers, and for funding provided by an anonymous donor.





• Government's obligations under the Species at Risk Act

The East Coast Environmental Law Association (ECELaw), in conjunction with the Environmental Law Student Society (ELSS) at the Schulich School of Law, Dalhousie University, assessed whether the Nova Scotia government is fulfilling its legal obligations to species at risk in our province. Under Nova Scotia's *Endangered Species Act*,³ the Minister of Natural Resources must ensure that a recovery plan is created for every endangered and threatened species in the province within the timeframes established in the Act. Provincial recovery plans must, among other requirements, identify the species' core habitat requirements, and chart a course of action to encourage the species' recovery, as described in section 15 of the Act. Once recovery actions are identified, the Minister must ensure that they are implemented to the extent feasible, as per section 12.

We found that Nova Scotia's Department of Natural Resources (DNR) shows a pattern of failure with respect to its legal obligations under the *Endangered Species Act*, particularly with respect to appointing recovery teams, completing plans within the required timeframes, identifying core habitat, and implementing recovery actions. In failing to meet its legal obligations, ECELaw and ELSS are concerned that the provincial government is increasing the risk facing Nova Scotia's most at-risk biodiversity.

There are currently 52 at-risk species listed under Nova Scotia's *Endangered Species Act*: 28 are endangered, 9 are threatened, and 15 are vulnerable.⁴ Additionally, 3 species are listed as extirpated from the province, and there are 5 documented extinct species that once lived in Nova Scotia.⁵ Endangered species include mainland moose, Canada lynx, chimney swifts and boreal felt lichen. Threatened species include black ash, wood turtle and eastern ribbonsnake. Vulnerable species include peregrine falcon, eastern white cedar and sweet pepperbush. The species extirpated from Nova Scotia are woodland caribou, eastern wolf, and Atlantic walrus; the documented extinct species that once lived in Nova Scotia include sea mink and Labrador duck.

Nova Scotia created the *Endangered Species Act* in 1998 (and proclaimed it into effect in 1999) to provide for the protection and recovery of species at risk in the province. The Act provides a mechanism to identify and list species at risk, to classify them as endangered, threatened or vulnerable, and to assess whether their status has improved or deteriorated, as described in sections 9 and 10. Its purpose includes the conservation of the habitat of species at risk,⁶ and it endorses the precautionary principle that a lack of full scientific certainty must not be used as a reason to postpone measures to avoid or minimize the threat facing a species at risk.⁷ The Act prohibits people from directly harming species at risk, or their immediate habitat, such as a nest or den site, as described in section 13. It also prohibits trade in species at risk.

The Act places certain legal obligations on the Minister of Natural Resources. Within one year of listing an endangered species, and within two years of listing a threatened species, the Minister must appoint a recovery team for the species, and prepare a recovery plan for it.⁸ Among other requirements, the recovery plan must identify the habitat of the species at risk,⁹ and identify areas to be considered for designation as core habitat.¹⁰ When core habitat is designated, the Minister must notify the owners of the lands affected.¹¹ Furthermore, the Act requires the Minister to ensure the implementation of those portions of recovery or management plans that fall under provincial jurisdiction, to the extent feasible according to the Minister's discretion.¹²

While DNR has not identified core habitat requirements of species at risk, ECELaw recognizes that DNR has identified critical habitat for some species at risk, through its work on national recovery plans under the federal *Species at Risk Act*. Please see Appendix A for a list of species for which the province has created national recovery plans.

• Examples where government is not meeting obligations under the Act

There are 28 species listed as endangered in Nova Scotia.¹³ DNR has released recovery plans for only 3 of these species (moose,¹⁴ Blanding's turtle,¹⁵ and Canada lynx¹⁶), and completed a partial recovery plan for 1 other (American marten¹⁷). National recovery strategies have been released for 6 of Nova Scotia's endangered species. Recovery plans are past due for the remaining 18 species; some have missed the legislative deadline by as much as 13 years.¹⁸

There are also 9 species listed as threatened in Nova Scotia, 6 of which were added in 2013.¹⁹ Recovery plans are late for 2 of these species at present (5 years late for one, and 6 years late for the other). If no new plans are created by end of 2015, then DNR will have missed its legislated deadline with respect to an additional 6 species. A national recovery strategy is in place for 1 of Nova Scotia's threatened species.





With respect to the 3 recovery plans that have been released by DNR (for mainland moose, Canada lynx, and American marten) none identifies core habitat, which is a mandatory requirement under the Act. To be clear, to date the province has not identified a single hectare of core habitat for Nova Scotia's species at risk since the Act came into effect in 1999, despite the province's legal obligation to do so. ECELAW recognizes that DNR has identified portions of habitat for species at risk that fall under national recovery plans, under the federal *Species at Risk Act*.

A tally of missed statutory deadlines and omissions from recovery plans indicates that the province has not met its legal obligations under the *Endangered Species Act* with respect to 20 of Nova Scotia's species at risk.

Identification of Core Habitat under the Act:

Core habitat is the land required to ensure the survival and recovery of a species at risk. The province is required to identify core habitat in species recovery plans, as described in section 15 of the Act. Identification of core habitat is mandatory, but the designation of core habitat is subject to the Minister's discretion and the limitations specified in the Act. Once the Minister designates land as core habitat, the Minister may control, restrict, or prohibit

activities within core habitat areas, to aid in the recovery of the species at risk.²⁰ The Minister cannot designate the entire geographical range of a species, unless its inclusion is considered essential for the continued survival in Nova Scotia of the species in question.²¹ Furthermore, the Minister can only designate private land if the available public land is considered insufficient for the species' recovery.²² The Minister can also enter into stewardship or management agreements with landowners.²³ If private lands that are being put to a particular use are designated as core habitat, and that particular use is prohibited by regulations, then the Minister must compensate the landowner for any resulting financial loss.²⁴

Scotia of the species in question. Furthermore, the Minister can only designate private land if the available public land is considered insufficient for the species' recovery. The Minister can also enter into stewardship or management agreements with landowners. If private lands that are being put to a particular use are designated as core habitat, and that particular use is prohibited by regulations, then the Minister must compensate the landowner for any resulting financial loss.

• Case law on government violations of Species at Risk Acts

The following are examples of Canadian case law on two aspects of governments' legal obligations with respect to species at risk: timely recovery strategies and identification of core habitat.

Late Recovery Strategies:

Past-due recovery strategies were the focus of *Western Canada Wilderness Committee v Canada (Minister of Fisheries and Oceans)*, in which a group of environmental NGOs sought judicial review of the decisions of two federal Ministers in failing to post recovery strategies for one endangered species (the Nechako White Sturgeon) and three threatened species (the Pacific Humpback Whale, Marbled Murrelet and Southern Mountain Caribou) within the statutory timelines.²⁵ The applicants sought a declaration stating that the Ministers' ongoing failure or refusal to post these recovery strategies was unlawful, and an order of mandamus compelling the Ministers to post the proposed and final recovery strategies. After submitting the application, and before the Court's judgment was handed down, the Ministers posted the four proposed recovery strategies. The Court granted the applicants' request for a declaration, but found that the request for mandamus had become moot.

Failure to Identify Core Habitat:

The federal *Species at Risk Act* (SARA) uses the term "critical habitat" rather than "core habitat," and requires only that it be identified in recovery strategies "to the extent possible, based on the best available information."²⁶ Despite this qualification, which makes the identification of critical habitat under SARA more discretionary than the identification of core habitat under Nova Scotia's *Endangered Species Act*, the federal government has been successfully challenged when it has failed to identify critical habitat in recovery strategies.

In *Alberta Wilderness Assn v Canada (Minister of Environment)* (the "Greater Sage-Grouse" case), a group of non-profit environmental and natural history organizations argued that the Minister of Environment's failure to identify critical habitat in its Greater Sage-Grouse recovery strategy was unlawful and that sufficient information was known in order to identify part of the bird's habitat.²⁷ The court examined the information that was available and found that the Minister's decision to not identify any critical habitat was unreasonable. As a remedy, the recovery strategy's section on critical habitat was struck and the Minister was given a deadline to redraft it.





• Species Spotlight: Nova Scotia's Endangered Mainland Moose

The mainland (eastern) moose was listed in 2003 as endangered under the *Endangered Species Act*. The species was once found in large numbers throughout Nova Scotia, but it is now limited to a few isolated populations on the mainland. The Cape Breton population arguably disappeared entirely in the late 19th or early 20th century and was replaced by a different subspecies from Alberta.²⁸ While the species' population on the mainland is not known with certainty, provincial researchers estimate that there are only 1,000 to 1,200 individuals remaining, far short of what is needed for long-term viability.²⁹ At the time of European colonization, researchers estimate that the moose population was approximately 15,000 individuals.

With colonization came habitat loss and over-hunting, leading to a serious decline in the total eastern moose population and a reduction of its range. In the late 19th century, laws were enacted in Nova Scotia and New Brunswick to restrict hunting, and the populations (with the exception of the Cape Breton population³⁰) began to recover.

The twentieth century saw another serious decline in the mainland Nova Scotia moose population. In the 1960s, aerial surveys helped give an estimate of between 2,500 and 4,000 moose. A decade later, the mainland population was estimated at only 1,600-1,700 individuals. While moose hunting has been prohibited on the mainland since 1981, the population has failed to rebound. In 2003, the most recent estimate, the population was estimated at between 1,000 and 1,200 individuals. This population is concentrated in the Cobequid Hills and Pictou-Antigonish Highlands, the south-western interior in and around the Tobetic Wildlife Management Area, and scattered pockets of Shelburne, Queens and Yarmouth Counties, and the Eastern Shore of Guysborough and Halifax Counties. In 2000, the eastern moose was assigned "RED" status in Nova Scotia, signalling that the species was at risk of extirpation. The mainland population was removed from aboriginal harvest, and the forest industry was issued cutting guidelines that claimed to enhance moose habitat.³¹

Moose are herbivores that live in boreal and mixed-wood forests. They require large areas and diverse habitats, including deciduous shrubs found most abundantly in forests recently disturbed by fire, wind, disease or timber harvesting. In the summer, their

preferred habitat includes wetlands, while in the winter they prefer recently disturbed forest, or mature hardwood forest with an abundant sapling component, bordered by mature conifers where they can seek shelter and escape predators. The availability of suitable habitat is critical for keeping moose in optimum physical and reproductive condition, and for maintaining population productivity.³² While timber harvesting can provide eastern moose with a good supply of young, regenerating forests, it eliminates mature conifer stands and reduces the cover needed for calving and to manage heat stress in summer and extreme cold in winter. As well, forest cutting introduces logging roads, which leads to increased potential of poaching.

The 2003 Status Report commissioned by DNR identified the following threats and limiting factors affecting the eastern moose in Nova Scotia.³³ The Status Report indicates that the extent to which each of these factors may be contributing to the eastern moose's decline is unknown.

- **Disease** – moose fatalities are occurring as a result of a parasite carried by white-tailed deer and an unknown viral disease. Moose have also been found with high levels of toxic heavy metals in their organs, a situation that needs more research.
- **Illegal kill** – an increase in forest roads increases the potential for poaching of mainland moose
- **Predation** – there is little or no evidence that black bears kill moose in Nova Scotia, but combined with other threats like disease, predation by bears could be an outside factor hindering population growth.
- **Habitat alteration/loss** – forest harvesting has replaced much of Nova Scotia's mature forest with young forest and has caused a proliferation of edge habitat. Moose rely on mature coniferous forest for shelter during the winter. Younger and more fragmented forest also increases the penetration of white-tailed deer (and thus brainworm) into moose areas and increases road access for illegal hunting. Habitat fragmentation also isolates moose populations and increases their vulnerability to random population declines and genetic problems.

The Recovery Team for mainland moose was formed in 2003, and together with DNR produced a Recovery Plan for mainland moose in 2007 (three years later than required under the Act). The Recovery Plan identifies the needs, threats and habitat requirements of mainland moose, and it recommends a number of actions to aid the moose's recovery.³⁴



The *Recovery Plan*, however, contains a number of deficiencies:

- ***It fails to identify the essential habitat that moose require to survive.***

The *Endangered Species Act* requires DNR to identify core habitat in a recovery plan. The majority of the threats listed in the *Recovery Plan* relate to some extent to the availability and suitability of moose habitat. However, the *Recovery Plan* fails to identify any core habitat, providing only the more limited “specific dwelling place or area” protection of s13(1)(c) in place of the broader regulatory protection that a core habitat designation is intended to provide. DNR might defend the decision not to identify core habitat on the basis of insufficient information, but this argument may not hold in light of the Act’s recognition of the precautionary principle, and in light of the outcome in the *Greater Sage-Grouse* case, as described above. Essentially, incomplete information is not a valid excuse to not move forward with identifying core habitat to the extent possible.

- ***It omits cost estimates.***

The Act requires DNR to identify in a recovery plan the costs (and benefits) of each recovery option. The eastern moose *Recovery Plan* fails to identify any costs. This absence of costs presumably makes it more difficult for the Minister to establish the feasibility of implementing the *Recovery Plan*, or any portion thereof, pursuant to s15(6). And it makes it more difficult for members of the public to determine whether the Minister has used his or her discretion reasonably in implementing only those portions that the Minister considers feasible, pursuant to s15(12).

- ***It sets a recovery goal that falls short of recovery of the species.***

The *Recovery Plan*’s stated recovery goal is not to increase the number of mainland moose, but to maintain the population within its current range, estimated at between 1,000 and 1,200 individuals.³⁵ This cannot reasonably be considered “recovery,” given that Beazley *et al.* have identified the current population as being likely not viable,³⁶

and the *Recovery Plan* states that at the current estimated numbers, mainland moose are in a precarious state.³⁷ A recovery plan must provide direction for the recovery of the species because there is no obligation under the Act to produce any further plans, only to review the recovery plan after five years.

- ***DNR failed to conduct a five-year review of the Recovery Plan as it is required to do under the Act.***

The Act requires DNR to review recovery plans every five years “to determine the progress of the recovery of the species and whether any changes or modifications are required.”³⁸ DNR was required to review the *Recovery Plan* in 2012, but it did not. This may not be as significant as the failure to identify core habitat or costs, but it does point to the extent to which DNR is neglecting mandatory requirements of the Act.

The 2007 *Recovery Plan* for Nova Scotia’s mainland moose states that insufficient information exists in order to identify core habitat.³⁹ However, unlike critical habitat under SARA, the identification of areas to be considered for designation as core habitat in a provincial recovery plan is mandatory. The Minister does not have the discretion to argue that exclusion of core habitat is reasonable based on the evidence. Even if this argument were available, the Act’s recognition of the precautionary principle and the court’s decision in the federal *Greater Sage-Grouse* case show that it would be a difficult argument to defend in court.

In summary, DNR has failed to satisfy its obligations under the *Endangered Species Act* with respect to mainland moose. It published a recovery plan that was late, which failed to include mandatory elements, and which was not adequate for recovery of the species. DNR then failed to review the *Recovery Plan* after five years, as required under the Act.

• Conclusion

The Nova Scotia provincial government has failed to meet its legal obligations to species at risk in Nova Scotia, pursuant to the *Endangered Species Act*. The Minister of Natural Resources, responsible for administering the Act, has failed to meet his legal obligations with respect to 20 of Nova Scotia's 37 identified endangered and threatened species. The remaining 15 of the total 52 identified species at risk are ranked as vulnerable, for which the government is not obligated to create recovery plans.

ECELAW and ELSS focused on the government's legal obligations to create recovery plans, and to identify core habitat, as described in section 15 of the Act. We found that recovery plans are past due for 20 endangered and threatened species, some of which are as much as 13 years late. If no new plans are created by the end of 2015, DNR will have missed its legal deadline for an additional 6 species. With respect to core habitat, we found that while DNR has completed habitat identification work for some species under the federal Species at Risk Act, DNR has yet to identify any core habitat, despite its legal obligation to do so under the province's *Endangered Species Act*.

Nova Scotia's mainland moose is an example of a species at risk likely put at further risk by DNR's failure to meet its legal obligations. ECELAW and ELSS found that the province published a recovery plan for mainland moose that was late, that failed to include mandatory elements, and that was not adequate to provide for the species' recovery. DNR then failed to review the recovery plan after five years, as required under the Act. Identification of core habitat was one of the mandatory elements that DNR did not include in the plan.

A review of case law in Canada with respect to species at risk shows that courts will hold governments accountable for their legal obligations under species at risk legislation.

ECELAW and ELSS urge the province to take action to comply with its legal obligations under the *Endangered Species Act*. Continued delays mean increased risk for species such as Nova Scotia's mainland moose, especially in light of forest harvesting pressure. Further, given DNR's failures to meet its legal obligations with respect to species at risk, and given Nova Scotia Environment's (NSE) mandate to conserve the province's biodiversity under the *Environment Act*, we recommend that the province move responsibility for species at risk from DNR to NSE.

Appendix A: Species at Risk in Nova Scotia, and Potential Breaches of the Endangered Species Act by the Nova Scotia Department of Natural Resources

Endangered	Progress	Violations?
Little brown myotis (2013)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Northern myotis (2013)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Tri-colored bat (2013)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Hoary willow (2013)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Macropis cuckoo bee (2013)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Vole ears (2013)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Barn swallow (2013)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Canada warbler (2013)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Rusty blackbird (2013)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Bicknell's thrush (2013)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Plymouth gentian (2013)	Recovery team; national recovery strategy	National recovery strategy
Red knot (2007)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Rockrose (2007)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Ram's-head lady slipper (2007)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Chimney swift (2007)	Recovery team not finalized	>1yr – s15(1)(a): team and plan
Moose (mainland pop) (2003)	Recovery team not finalized	s15(1)(a): Core habitat not identified in recovery plan
Boreal felt lichen (2003)	Recovery team; national recovery strategy; national management plan	National recovery strategy and management plan
Atlantic whitefish (2002)	Recovery team; no plan	>1yr – s15(1)(a): plan
Canada lynx (2002)	Recovery team; recovery plan	s15(1)(a): Broad special management zone identified, but core habitat not identified
American Marten (CB pop) (2001)	Recovery team; recovery plan	s15(1)(a): Broad habitat management zone identified, along with home ranges (Special Management Practices report, 2012), but core habitat not identified
Water-pennywort (2001)	Recovery team; national recovery strategy	National recovery strategy
Blanding's turtle (2000)	Recovery team; national recovery plan	National recovery plan
Roseate tern (2000)	Recovery team; national recovery strategy and action plan	National recovery strategy and action plan
Piping plover (2000)	Recovery team; national recovery strategy	National recovery strategy
Harlequin duck (2000)	Recovery team; national management plan	National management plan
Pink coreopsis (2000)	Recovery team; national recovery strategy	National recovery strategy
Thread-leaved sundew (2000)	Recovery team; national recovery strategy	National recovery strategy
Eastern mountain avens (2000)	Recovery team; national recovery strategy	National recovery strategy
Threatened		
Black ash (2013)	Recovery team not finalized	NA (plan required by end of 2015)
Brook floater (2013)	Recovery team not finalized	NA (plan required by end of 2015)
Eastern baccharis (2013)	Recovery team not finalized	NA (plan required by end of 2015)
Olive-sided flycatcher (2013)	Recovery team not finalized	NA (plan required by end of 2015)
Eastern whip-poor-will (2013)	Recovery team not finalized	NA (plan required by end of 2015)
Wood turtle (2013)	Recovery team; management plan	NA (plan required by end of 2015)
Common nighthawk (2007)	Recovery team not finalized	>2yr – s15(1)(b): team and plan
Yellow lampmussel (2006)	Recovery team	>2yr – s15(1)(b): plan



Endangered Species Act by the Nova Scotia Department of Natural Resources

Eastern Ribbonsnake (2003)	Recovery team; national recovery strategy	National recovery plan
Vulnerable		
Spotted pondweed (2013)	Recovery team not required under NS ESA	NA
Snapping turtle (2013)	Recovery team not required under NS ESA	NA
Blue felt lichen (2013)	Recovery team not required under NS ESA	NA
Eastern wood peewee (2013)	Recovery team not required under NS ESA	NA
Bobolink (2013)	Recovery team not required under NS ESA	NA
Gold-crest (2013)	Recovery team not required under NS ESA; Federal management plan	NA
Redroot (2013)	Recovery team not required under NS ESA; national management plan	NA
Tubercled spikerush (2013)	Recovery team not required under NS ESA; national management plan	NA
Peregrine falcon (2007)	Recovery team not required under NS ESA	NA
Eastern white cedar (2006)	Recovery team not required under NS ESA	NA
Eastern lilaeopsis (2006)	Recovery team not required under NS ESA; national management plan	NA
Prototype quillwort (2006)	Recovery team not required under NS ESA	NA
New Jersey rush (2001)	Recovery team not required under NS ESA; national management plan	NA
Long's bulrush (2001)	Recovery team not required under NS ESA	NA
Sweet pepperbrush (2000)	Recovery team not required under NS ESA; national management plan	NA
Species Extirpated from NS		
Eastern wolf	Not seen since mid-1800s / never abundant, perhaps over-hunted	
Woodland caribou	Last one shot in NS in 1921 / loss of habitat, over hunting, climate change, disease associated with incoming white-tailed deer	
Atlantic walrus	Last seen in NS in 1800s / toxins and over harvest	
Known NS Extinct Species		
Sea mink	Last seen in 1894 / over hunted	
Labrador duck	Last one seen in 1878 / reasons for extinction not known	
Passenger pigeon	Last one died in captivity in 1914 / over hunted	
Great auk	Last one killed in 1844 / hunted to extinction	
Eelgrass limpet	Not seen since 1929 / due to loss of eelgrass	





Footnotes

- 1 ECELAW did not evaluate whether federal species at risk plans relieve the Nova Scotia government from its legal obligations with respect to species at risk in Nova Scotia. As a result, we did not count species which are addressed in national plans or strategies amongst the 20 species and breaches that we have reported. ECELAW recognizes that s15(9) of the *Endangered Species Act* permits the province to adopt recovery plans created in other jurisdictions in lieu of creating provincial plans for those species.
- 2 *Environment Act*, SNS 1994--95, c1, s2(b)(1).
- 3 *Endangered Species Act*, SNS 1998, c11, s2(1).
- 4 At present, not all 52 species are found in the Species at Risk List Regulation, as per sections 10 and 12 of the Act; the additional species have been identified by the Species at Risk Working Group and submitted to the province, thus are deemed to be listed as per section 12 of the Act: personal communication, Dr Sherman Boates, NS DNR, December 2014.
- 5 Species are listed according to the following criteria: an endangered species faces imminent extinction or extirpation; a threatened species is likely to become endangered if the factors affecting its status are not reversed; a vulnerable species is one with characteristics that make it particularly sensitive to human activities or natural events. Species are listed by the Species-at-risk Working Group, consisting of scientific experts appointed by the Minister of Natural Resources.
- 6 *Endangered Species Act*, *supra* note 3, s2(1).
- 7 *Ibid* s2(1)(h).
- 8 *Ibid* s15(1).
- 9 *Ibid* s15(4)(g).
- 10 *Ibid* s15(4)(h).
- 11 *Ibid* s17(1).
- 12 *Ibid* s15(12).
- 13 List of Nova Scotia's species at risk: <http://novascotia.ca/natr/wildlife/biodiversity/species-list.asp>.
- 14 Nova Scotia Department of Natural Resources, "Recovery Plan for Moose (*Alces alces Americana*) in Mainland Nova Scotia" (2007) online: <<http://novascotia.ca/natr/wildlife/biodiversity/species-recovery.asp#moose>>.
- 15 The Blanding's Turtle Recovery Team, "National Recovery Plan for the Blanding's Turtle (*Emydoidea blandingii*) Nova Scotia Population" (2002) online: <<http://novascotia.ca/natr/wildlife/biodiversity/species-recovery.asp#blandings>>.
- 16 Nova Scotia Lynx Recovery Team, "Provincial Recovery Plan for the Canada Lynx (*Lynx canadensis*)" (2006) online: <<http://novascotia.ca/natr/wildlife/biodiversity/pdf/recoveryplans/LynxRecoveryPlan2007.pdf>>.
- 17 Nova Scotia American Marten Recovery Team, "Recovery Strategy for American marten (*Martes americana*) on Cape Breton Island, Nova Scotia in Canada" (2006) online: <<http://novascotia.ca/natr/wildlife/biodiversity/pdf/recoveryplans/martenstrategy07.pdf>>.
- 18 The remaining 11 were listed in 2013, which means that their recovery teams and plans were due in 2014.
- 19 A stewardship plan was prepared for the Wood Turtle in 2003 when the species was listed as vulnerable.
- 20 *Endangered Species Act*, *supra* note 3, s15(5).
- 21 *Ibid* s 16(2), (3).
- 22 *Ibid* s 16(4).
- 23 *Ibid* s 16(1).
- 24 *Ibid* s 16(7).
- 25 *Western Canada Wilderness Committee v Canada (Minister of Fisheries and Oceans)*, 2014 FCJ No 151.
- 26 *Species at Risk Act*, SC 2002, C29, s41(1)(c).
- 27 *Alberta Wilderness Assn v Canada (Minister of Environment)*, 2009 FCJ No 876.
- 28 Gerry Parker, "Status Report on The Eastern Moose (*Alces alces americana Clinton*) in Mainland Nova Scotia" (2003) online: <<http://novascotia.ca/NATR/wildlife/biodiversity/pdf/statusreports/StatusReportMooseNSComplete.pdf>> [Parker].
- 29 Nova Scotia Department of Natural Resources, "Recovery Plan for Moose (*Alces alces Americana*) in Mainland Nova Scotia" (2007) online: <<http://novascotia.ca/natr/wildlife/biodiversity/species-recovery.asp#moose>> at 19 [DNR].
- 30 The moose that currently inhabit Cape Breton are of a different subspecies than the eastern moose. In 1948 and 1949, moose from Alberta were introduced on Cape Breton to replace the eastern moose, which had become extirpated from there in the late 1800s or early 1900s. These moose, which now outnumber the native mainland population, are not endangered.
- 31 Parker, *supra* note 28 at 8.
- 32 *Ibid* at 7.
- 33 *Ibid* at 34-36.
- 34 DNR, *Supra* note 29.
- 35 DNR, *supra* note 29 at 22.
- 36 Beazley et al, "Complexity and Information Gaps in Recovery Planning for Moose (*Alces alces americana*) in Nova Scotia, Canada" (2006) 42 *Alces* 89 at 93 [Beazley et al].
- 37 DNR, *supra* note 29 at 19.
- 38 *Endangered Species Act*, *supra* note 2 s 15(11).

