STATE OF NATURE 2022

CORPORATE CAPTURE IN THE WABANAKI-ACADIAN FOREST

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A WORD FROM OUR PRESIDENT

It may have been another tough year for nature, but I see hope. Nature Nova Scotia has blossomed from 17 member organizations, in 2021, to 25 organizations (plus individual members) in 2022. Together, we represent more than 10,000 Nova Scotians; hobby naturalists, scientists, hikers, hunters, and other citizens who care about nature.

In 2022, we joined the Flowing Together group to oppose mining threats to several mainland moose wintering sites along the Eastern Shore, laid a formal complaint with the Competition Bureau regarding the forest industry's misleading Sustainable Forestry Initiative (SFI) certification system, joined friends at ECELaw in a new suit to fight for federal piping plover habitat protections, continued with our Court of Appeal action over the secret delisting of Owls Head, launched a research fund for the Mainland Moose, and engaged a new generation of conservation leaders in our BIPOC and new Canadian-focused leadership program, the HRM Naturalist Project.

Nova Scotia still has nature worth fighting for. It's far from too late! I extend sincere thanks to our hard-working Executive Director, Becky Parker, and employees Unity Cooper and Jess Lewis, our board of directors, and especially to our volunteers, donors, and other supporters. Thank you for giving nature a voice this year!

BOB BANCROFT

President, Nature Nova Scotia

Specklebelly lichen (Pseudocyphellaria holarctica), spotted by NatureNS director Becky Parker inside Blue Mountain Birch Cove Lakes Wilderness Area, public lands awaiting designation as a National Park and, in this area, at risk of road development. Specklebelly is uncommon inside the city core.

MAKING ROOM FOR NATURE: MOVING TOWARDS 2030 PROTECTED AREAS GOALS

Following the federal government's example and call from the IUCN to increase the amount of land and oceans under formal protection, in 2021, the province renewed its commitment to nature with a promise to protect a total of 20% of Nova Scotia's public lands by 2030. This a 7% increase from the previous 13% goal, which the province achieved in 2021. We are hopeful that Nova Scotia's contribution will help Canada get to 30% total land and water protection by 2030, but we are also concerned that there is no planning process in place for identifying the next round of protected area parcels, so close to the end of 2022.

The Parks and Protected Areas Plan, released in 2013, built on previous planning documents like the Colin Stewart Forest Forum final report, the Our Wild Spaces discussion paper, and The Path We Share, and the Natural Resources Strategy and set out a path the Nova Scotia government could follow to deliver on its commitment to reach 12% protected area coverage by 2015, as required by the Environmental Goals and Sustainable Prosperity Act. It increased the legally required goal by 1% and identified priority public lands for conservation, drawing on consultation with scientists, conservation planners, and industry, and limited consultation with the Mi'kmaq and general public. It also identified additional areas that would require more planning, restoration, or other work before protection but that could be designated by 2020, bringing total land protection in Nova Scotia to 19%.

It's time Nova Scotia designated all remaining pending protected areas in the current Parks and Protected Areas Plan and started work on a plan that will take us into the next decade. Approximately 125 provincial parks, nature reserves, and wilderness areas across Nova Scotia are pending designation as protected areas. Though we expect these areas will be designated soon, we are reluctant to count our eggs before they're chickens! Write to your MLA and ask them what they're doing to keep Nova Scotia on track with local and global protected areas goals, and get those remaining parcels protected.

Cladonia lichen poking out of the snow in Blue Mountain Birch Cove Lakes Wilderness Area

WHAT'S HAPPENING AT THE FEDERAL LEVEL?

Last year, you helped our friends at Nature Canada put pressure on the federal government to commit to global biodiversity goals. 63,000 Canadians wrote letters to Minister Chrystia Freeland and their local MPs asking that nature be prioritized in the 2021 federal budget. And you did it! In the biggest investment for nature, ever, the federal budget will invest $3.2 billion, over five years, to establish new protected areas on land and inland waters across the country. This will include support for Indigenous Protected and Conserved Areas, Guardians programs, initiatives to recover species at risk, accelerate provincial and terrestrial protected areas, and $200 million over five years to help cities take on natural infrastructure projects including urban parks. We now have a clear path for action on species loss and nature-based climate change adaptation in Canada, and it's all because of action takers like you!

Follow along at Nature Canada for updates on how the budget is being implemented and for ways you can help, and keep an eye on our social media where we are profiling local protected areas stories over the next few months.

Explore Nova Scotia's existing and pending protected areas at: novascotia.ca/parksandprotectedareas/plan/interactive-map. Contact your MLA and MP and tell them you support the 2030 protected areas goals. Tell them you support science-based decision making and community consultation. **Help us #makeroomfornature.**

PREVENTING THE NEXT OWLS HEAD

THE NEED FOR PUBLIC TRUST LAW

In March 2019, the Nova Scotia government secretly removed Owls Head Provincial Park on the Eastern Shore from Our Parks and Protected Areas Plan in order to enter into a Letter of Offer with a private developer. The park had been identified and prioritized as a pending protected area decades earlier, through a process involving scientific planning and consultation with industry and local communities. So it was a shock to many Nova Scotians when news broke that the province had been in discussion with a prospective developer for three years already. At the time, almost half of the public land parcels widely considered to be provincial protected areas (including those with "park" in their name, as in Owls Head Provincial Park) weren't legally protected parks at all, and there seemed to be nothing requiring the province to consult the public when considering a delisting of these parcels.

It wasn't long before a well organized resistance movement formed, though, with lawn signs displaying the owl head logo and "Save Owls Head Provincial Park" popping up in communities across the province. Eastern Shore Forest Watch Association and Nature Nova Scotia President, Bob Bancroft, took the issue to court on behalf of all concerned Nova Scotians in April 2021, citing the delisting and government's entrance into a Letter of Offer with the developer. NS Supreme Court Justice Christa Brothers recognized several important points in the case but ultimately ruled that there was "no recognized common law duty of procedural fairness owed by the Crown to the public at large."

Nature won in the end, though. Public outcry grew so loud that the developer walked away from discussions with the province and, in the summer of 2022, the province (under new PC leadership) finally announced they would designate Owls Head as an official Provincial Park. For real this time.

From a legal perspective, the fight for Owls Head has launched an ongoing case study that is unlikely to be forgotten in Canadian history. Hearing the request for a time extension which allowed the applicants to file the judicial review, NS Supreme Court Justice Kevin Coady stated, “the evidence on this Motion clearly establishes that Owl’s Head was portrayed to the public as a Provincial Park. Government documentation and maps, going back as far as 1978, refer to the area as “Owl’s Head Provincial Park”. Further, it was managed by Lands and Forestry to maintain its reserve status. The public had every reason to assume Owl’s Head was a Provincial Park and, therefore, attracted protections not available on [other] Crown lands.” At the judicial review, Justice Brothers stated that, "If Owls Head had been formally designated as a provincial park, as was represented to the public, any change to its status as protected land would have required an order-in-council, and would therefore have been public knowledge. Ultimately, the government’s own misrepresentation of the status of the lands shielded its actions from scrutiny and allowed purportedly protected lands to be considered for sale, out of the public eye."

The legal system in Nova Scotia includes both civil and common law. Citizens organizing for Owls Head attempted to use both to protect the park: by introducing a bill to remove the legal loophole and/or by setting a new precedent through the courts. The NDP introduced the "Owls Head Act", which would have prevented the rescinding of a pending protected area without consultation, but the bill was defeated by the PCs. In common law, the applicants in the judicial review hoped their success would create a precedent for other protected areas, but were ultimately unsuccessful.

WE THINK IT'S TIME FOR COMMON LAW TO CHANGE

The Eastern Shore Seaside Park System, an initiative linked to the Parks and Protected Areas Plan and that includes Owls Head, remains incomplete even with government's recent success in meeting it's previous 13% protected areas goal. There are still approximately 125 provincial parks, nature reserves, and wilderness areas across Nova Scotia that aren't legally protected. In addition to legally protecting each of these sites with an Order in Council, we believe that legal precedent is needed to ensure that what happened to Owls Head never happens to any other protected area ever again.

Bob and Eastern Shore Forest Watch Association are appealing the decision made at the judicial review and hope that their case will change environmental law in Canada.

"The underlying question in this appeal is whether Nova Scotians ought to be informed before the government makes decisions affecting the fate of ecologically important lands, especially those lands that have been identified as protected," said Jamie Simpson of Juniper Law, who will be representing the applicants. "We believe the answer is yes and that the courts play an inherent role in promoting fair government decision-making." - Jamie Simpson, Juniper Law

"*Governments that renege on a promised park designation and secretly offer public land to developers should understand that concerned citizens and environmental groups will take action."* - Retired government biologist, Bob Bancroft

We hope you will follow along and, in the meantime, take up the call to protect those remaining 125 parcels. Talk to your MLA. Help us protect those remaining parcels and ensure that what happened at Owls Head never happens to another protected area in Nova Scotia, ever again.

FOLLOW ALONG AT SAVEOWLSHEAD.ORG

NatureNS VP Donna Crossland standing in a clearcut in Kespukwitk, South West Nova Scotia

PROTECTED ON PAPER ONLY: THE MAINLAND MOOSE
1 YEAR POST JUDICIAL REVIEW

In 2019, naturalists from Nature Nova Scotia, Blomidon Naturalists Society, and Halifax Field Naturalists launched a judicial review over the province's continued failure to protect several Species At Risk. In Spring 2020, Justice Christa Brothers ruled that years of inaction by the provincial government to adequately protect the Mainland Moose, Wood Turtle, Eastern Wood Pewee, Canada Warbler, Rams Head Lady Slipper, and Black Ash by not appointing Recovery Teams or creating Recovery Plans for the species in question, should be considered a violation of the Endangered Species Act.

In the time since Brothers' ruling, we have been monitoring government's actions to get up to date on their legal responsibilities. The Department of Natural Resources and Renewables is required to establish a Recovery Team and create a Recovery Plan for every listed Species At Risk in Nova Scotia, within one year of listing for Endangered species and within two years for Threatened species, including the identification of Core Habitat. In late 2021, the province released the 9 years-overdue updated Recovery Plan for the Mainland Moose in Nova Scotia. We've reviewed the plan and outlined some actions you can take at home to keep the momentum going. Here's some background on the mainland moose that may help Nova Scotians understand how we got to the concerning point we are at today, and information you can use to take action today and help us #savethemainlandmoose.

WHAT'S HAPPENING TO MOOSE IN MAINLAND NOVA SCOTIA?

There are four subspecies of moose in Canada, living in forested habitats in every province and territory except for Epekwitk, Prince Edward Island: the Alaska/Yukon moose (Alces alces gigas), the Shiras moose (Alces alces shirasi), the Western Canada moose (Alces alces andersoni) and the Eastern Canada moose (Alces alces americana). Moose are boreal species in much of their continental range, making use of conifer-dominated forests for shelter and younger deciduous forests for browsing. In the Dawnlands, they also occupy more temperate, mixed Maritime forest types.

The moose is the largest member of the deer family and only remaining native cervid in Nova Scotia, the woodland caribou having been extirpated from the mainland and Unamaki, Cape Breton Island since 1921. Once abundant and found throughout the province, moose on the mainland are now found only in isolated pockets in the Cumberland/Colchester area, Pictou/Antigonish/Guysborough area, and the Tobeatic. Moose seem to have been declining (though population data is limited) throughout the late 1800s and finally disappeared entirely from Unamaki by the 1930s. Parks Canada introduced 18 Western Canada moose (Alces alces andersoni) from Alberta to the Cape Breton highlands over 1947 and 1948 and effectively reestablished a population on the island, but the Mainland population (Alces Alces americana) has not recovered.

Moose require a large range of diverse habitat, including large mature forests and small, early successional forests or scrubland dotted with open water wetlands, and make differential use of these habitats over the year. Moose are extremely cold tolerant but display heat stress at temperatures over 14°C, seeking out shelter or water access in periods of extended heat. In Nova Scotia, they make use of old hemlock-maple forests and other mature forest types for

thermal protection during hot summers and for cover from heavy snow in the winter. Young deciduous stands provide food in the summer and winter but lakes and wetlands are especially important feeding habitats in summertime. In the boreal forest, moose may frequent the edges of larger, early successional openings like those created by wildfire or clearcut forestry treatments, but will avoid traveling through clearcuts when the distance to dense forest cover exceeds 200m. In the Acadian-Wabanaki forest, fire and large insect outbreaks fueled by homogenous forest composition are rare, so large forest clearings in the Maritimes were unusual until the relatively recent rise of industrial forestry, which has since resulted in many areas of the province being clearcut over 4 times in the last 200 years. Young deciduous browse, therefore, was traditionally found in small wind-thrown early successional patches.

Moose have not had a major natural predator in Nova Scotia since the native Eastern wolf was hunted to extirpation in the mid 1800s. The newly established coyote or "coywolf" (Canis latrans) does not seem to be a significant predator on the Mainland, though, there has been the suggestion that prey-switching behaviour in the Cape Breton highlands may have contributed to recent moose mortality in this area. Black bears may occasionally take a young moose, but predation does not seem to be a limiting factor in Nova Scotian population trends today. In Unama'ki/Cape Breton, where the introduced Western Canada moose is abundant, population trends may depend more on the availability of browse and high altitude refuges from introduced White-tailed deer, which carry brainworm disease (Parelaphostrongylus tenuis). In the 1970s, for example, a spruce budworm outbreak resulted in the deaths of many boreal tree species and effective clearing of the Cape Breton highlands conifer-dominated forests. The regeneration that followed was characterized by early succession species like white birch and balsam fir, preferred browse species for moose. By 2011, Parks Canada estimated that there may be two moose per square kilometre in the National Park. A similar trend may be observed in Newfoundland. Moose were not found on the island until the settler government conducted its

first experimental introduction in 1878. A total of six moose were introduced between 1878 and 1904 and a growing population was well established by 1945. Without wolves or disease-carrying white-tailed deer on the island, moose only started to decline in Newfoundland in the 1960s after two decades of organized but intensive hunting seasons and decreasing food availability resulting from high densities. Historic moose population trends in the Dawnlands are not well understood and current population assessments in Nova Scotia are limited by survey costs, timing requirements, and government and NGO partner capacities. The 2003 Nova Scotia Status Report for the Mainland Moose estimated the pre-European settlement moose population at 15,000 individuals, assuming historic moose densities observed in other areas of Eastern North America and extrapolating across the province. Current estimates, informed by aerial surveys and limited ground surveys, suggest that there may be only 1,000 individuals remaining on the Mainland, isolated in disconnected concentration areas. A combination of related factors are to blame: habitat loss, infection with brainworm, and poaching all contribute to direct mortality and are exaggerated by indirect threats like loss of connectivity and increased summertime heat stress.

John Morrison

In Nova Scotia, the Mainland moose appears to be facing death by a thousand cuts.

Our greatest concern at Nature Nova Scotia is dwindling habitat. Moose seem perfectly capable of co-existing with humans in our managed forests, even being able to navigate areas under intensive forestry, but only if the majority of our forests are managed in ways that provide for the moose's needs at all times of year and all stages of life. Less than 1% of forests in Nova Scotia today are old growth (forests where at least 20% of trees are older than 100 years) and clearcut forestry treatments (including shelterwood) dominate public and private lands under active management. Moose must navigate an increasingly disconnected and juvenile forest type in most of Nova Scotia, scarred with roads and clearings that open the way for poachers and brainworm-carrying white-tailed deer. Even within the areas government called "core concentration areas" before identifying legally required Core Habitat, there are few remaining healthy forest refuges for moose.

WHAT'S BEING DONE TO PREVENT MOOSE FROM BECOMING EXTIRPATED ON THE MAINLAND?

Listing a species at risk on the provincial registry requires the province to produce a Status Report, examining the state of the population, and a Recovery Plan, guiding actions for species recovery. A Status Report was created for the Mainland moose in 2003, as required by the Endangered Species Act, though data informing the population assessment were limited to only a handful of studies and personal correspondence from the 1980s and 90s, and admittedly sparse for Southwest Nova Scotia. A Recovery Plan was released in 2007 (3 years late according to the legislation) which failed to identify Core Habitat or set a goal for recovery, stating only that existing numbers should be maintained. "Core Habitat" means specific areas of habitat essential for the long-term survival and recovery of endangered or threatened species.

Excluding Core Habitat, a decision the Plan justified through “insufficient data”, directly contravened the provisions of the Act, which requires Core Habitat identification and, through the Precautionary Principle, maintains that a lack of information should not preclude conservation action. An Action Plan, created in 2013, offered some additional data, tools for stewardship, and opportunities for partnership, but little was accomplished by the Action Plan “timeline” conclusion in 2018. The incomplete Recovery Plan, Action Plan that wasn't acted upon, and lack of initiative from government in the years following prompted many criticisms from conservation, scientific, and legal organizations in the province, culminating in the judicial review you helped our nature network prepare for in 2020, and which we won in 2021.

IMMMEDIATE ACTION NEEDED ON RESEARCH GAPS & FORESTRY REFORM

The new Recovery Plan that resulted from the judicial review outlines, for the first time ever, a population target assuming recovery of the species and a 20 year goal for increasing moose numbers: 5,000 individuals including 500 breeding individuals, an increase of potentially 4,000 individual moose. The Plan also identifies Core Habitat, using a combination of existing population data and known and projected suitable habitat.

Acknowledging that moose need a variety of forest types to feed, raise young, and find shelter, the Recovery Plan recognizes that there is (and will continue be) insufficient suitable habitat available over the next 30 years to support the local populations necessary to achieve recovery objectives, particularly in older forest cover and forests connected enough to facilitate interbreeding. It suggests actions that should be taken to improve forest quality for moose. The Plan also for the first time outlines cost estimates for recovery actions and suggests that the current Special Management Practice for Moose be revised. The Recovery Team doesn’t shy away from expressing the immediacy of their recommendations, either:

“The Recovery Team is of the opinion that, given the critical nature of the Mainland moose population and ineffectiveness of previous recovery/action plans, almost all of the actions identified in Table 3 should be considered High in terms of their priority.”

We commended government for finally committing to meaningful recovery actions for the Mainland moose, but in the time since the plan was released, few of the Recovery Teams' recommendations have been delivered on.

One of the biggest challenges for the ongoing conservation of the Mainland moose, as identified in the updated Recovery Plan, is a lack of understanding around population trends: where the moose are, how many there are, how many are breeding, and what individual long term survival looks like. Volunteered citizen reporting is on the rise, with more people reporting moose sightings than in past years. At Nature Nova Scotia, however, we often hear from supporters who are seeing moose or signs of moose but who choose to not report them to the province for fear that nothing will be done with the information, indicating to us that reports may be falling short of their true potential due to lack of faith in government, not lack of moose sightings. The Recovery Plan strongly recommends the creation of new partnerships and volunteer programs that will improve ecological knowledge across the moose's range.

It also recommends the Minister of Natural Resources and Renewables officially designate Core Habitat, including linkages, and protect these areas through mechanisms like the Parks and Protected Areas system. Under the Endangered Species Act, there is no duty to designate Core Habitat, only to identify it through the planning process, so this recommendation is significant.

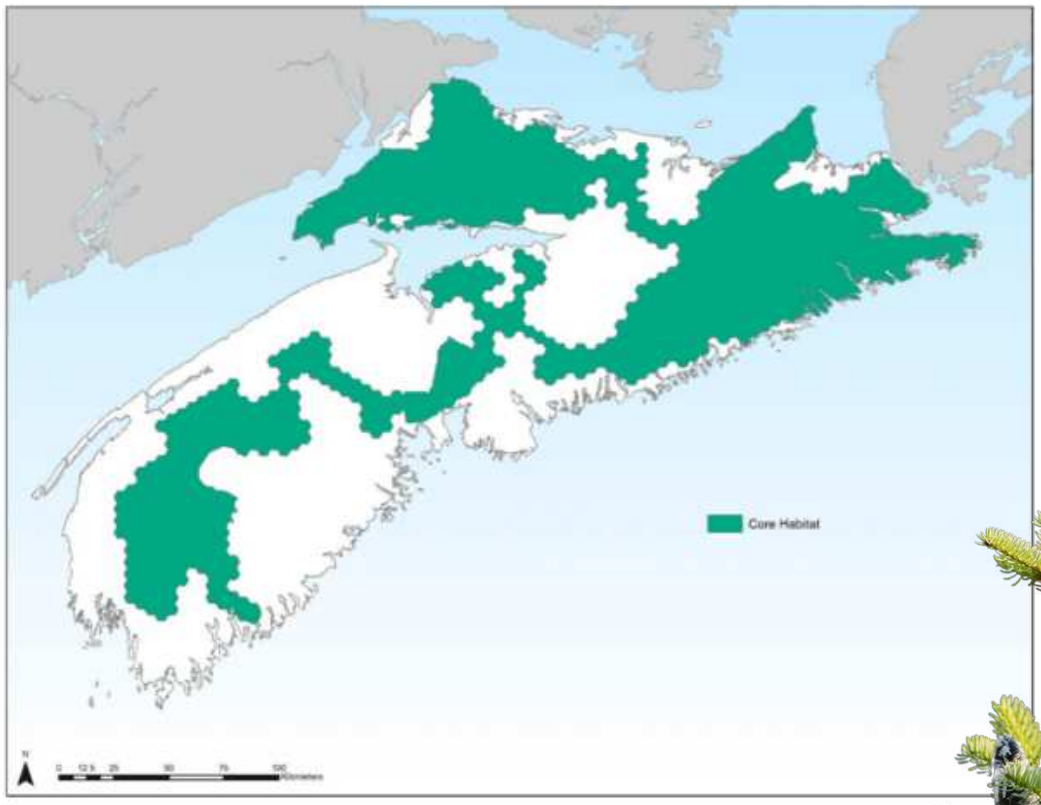


Figure 4. Core Habitat for Mainland moose in Nova Scotia.

Core Habitat has been identified for each of the three localized subgroups (Cumberland/Colchester, Pictou/Antigonish/Guysborough, and Tobeatic) that is necessary to support population and distribution objectives for viable population size

Mainland Moose Core Habitat, as identified in the 2021 Mainland Moose Recovery Plan. NS Department of Natural Resources & Renewables

In “buffer areas” around the Core Habitat, the Recovery Team recommends strengthened forest management techniques. Special Management Practices outline certain accommodations that must be made for listed species during forestry operations on public lands. Though the Plan does not make specific recommendations for how current forest management practices should be altered, it is clear to us that several improvements are necessary:

- The research informing the Mainland Moose SMP recommendations are not cited in the document and likely out of date. At minimum, the "core concentration areas" need to be replaced with the now identified "Core Habitat."
- Moose “shelter”, “retention”, and “buffer” patches likely need to be larger and more closely connected than the current minimum standards.
- Forest type and configuration vary widely in working landscapes, and the SMP provides few alternatives for when the ideal recommendation is simply not possible, simply directing woodlot managers to the appropriate DNR biologist. An updated SMP could include expanded guidance for these cases or, in the interest of transparency and the need for new partnerships, government could direct woodlot managers to designated NGO biologists or staff at ecological woodlot associations for further advice.
- Perhaps most importantly, road development in moose habitat is not currently regulated in any meaningful way, the SMP only asking that forest managers “avoid” it. An updated SMP could create new rules for road closures post harvest that would benefit anti-poaching and deer mitigation measures.

These actions should all be considered high priority considering how slowly the province is delivering on its broader commitments to ecological forestry. One full year after the release of the Mainland Moose Recovery Plan, years beyond the release of the Lahey Report, and decades past routine calls for better forestry practices, it is inconceivable that **moose habitat is not only unprotected but also still being overcut in Nova Scotia.**

YOU CAN HELP

Nature Nova Scotia commends the province for finally producing a sound plan for the Mainland moose and, in particular, for emphasizing the immediate need for additional research and changes to forestry practices in moose habitat. Now, Nova Scotians must hold government to this plan. Help us save the Mainland moose by taking the following actions today:

Demand the Minister of Natural Resources and Renewables **designate Core Habitat for the Mainland moose**, as identified and recommended by the Recovery Team, and implement regulations around it that create meaningful change. These could include:

- The immediate designation of all pending protected areas in moose habitat.
- A policy of no high volume forest harvesting (retaining 60% of forest) in moose habitat.
- A policy of only leasing public lands containing moose habitat to community woodlot cooperatives or other not-for-profit groups with demonstrated expertise in sustainable forestry and species at risk management.
- A Land Back agreement, giving control over public lands within identified moose Core Habitat back to the Mi'kmaq and fostering greater indigenous management of our natural resources.

Demand the Minister **update the Mainland Moose Special Management Practice** with sound science and input from species at risk experts and leaders in sustainable forestry.

Show your support for ecological forestry by putting up one of our **Save Species At Risk lawn signs** and demand Ecological Forestry Now!

Help us fundraise for vital research by making a donation to our **Species At Risk Fund.**

Use our online mailer to send a message today, or call the Minister at 902-424-5935

WWW.NATURENS.CA

NATURE NOVA SCOTIA'S ASSESSMENT OF SPECIES AT RISK RECOVERY PLANNING PROGRESS TO DATE

We reviewed the new or adopted Recovery Plans for each Species At Risk featured in the Bancroft vs Lands and Forestry judicial review and assigned each a grade for conservation outlook - Poor, Fair, or Good - dependent on the knowledge available to inform scientific understanding, the feasibility of recovery given that knowledge, and the likelihood that recovery actions will actually be taken by the stakeholders identified in the plans.

SPECIES	PROGRESS TO DATE	OUTLOOK
Rams Head Lady Slipper	• Recovery Plan updated, 11 years overdue, in Fall 2020. • Core habitat defined and dependent on the presence of known populations, which is suitable considering Lady Slipper ecology and how naturally rare and clumped populations of this species tend to be in the landscape. The Plan also states that this definition may be updated as more information becomes available. • Protection of species going forward depends on forest stewardship, particularly on private lands: limits on mining leases, use of low-impact selective harvest practices, and monitoring of existing populations.	Good

YOU CAN HELP!

Report sightings to the province or iNaturalist → www.speciesatrisk.ca or www.inaturalist.org

Join the call for ecological forestry on public lands → www.naturens.ca

Ask your MLA and councillor to protect local stands → www.westhants.ca/mayor-and-council-contacts

See our full review at: www.naturens.ca/an-update-on-the-rams-head-lady-slipper

Canada Warbler	• Federal Recovery Plan adopted , 7 years overdue, in Spring 2021. • Core habitat not identified due to knowledge gaps in habitat use. • Protection of species going forward depends on improved understanding of ecology, implementation of sustainable forestry, and strengthened wetland policy.	Poor

YOU CAN HELP!

Join the Nova Scotia Bird Society and practice your ID skills → @ Nova Scotia Bird Society or www.nsbirdsociety.ca

Join the call for ecological forestry on Crown lands → www.naturens.ca

Watch for our next call to action, for strengthened wetland policy, in 2023

See our full review at www.naturens.ca/recovery-planning-update-canada-warbler

Wood Turtle

- Federal Recovery Plan adopted, 6 years overdue, in Spring 2021.
- Core habitat depends on the presence of turtles, not on the presence of wetlands. Existing set back requirements, local monitoring, stewardship programs such as SARPAL, and existing special management practices may offer sufficient protections despite this enforcement gap.
- Protection of species going forward depends on continued stewardship effort by local groups, implementation of ecological forestry practices, and strengthened wetland policy.

Fair

YOU CAN HELP!

@ Nova Scotia Turtle Patrol

Join the Turtle Patrol

www.naturens.ca

Join the call for ecological forestry on public lands

Watch for our next call to action, for strengthened wetland policy

See our full review at www.naturens.ca/an-update-on-the-wood-turtle-progress-for-species-at-risk-in-ns

COMING IN 2023

Black Ash

- Overdue (by 2 years) for Recovery Plan review as of 2022. However, recent identification of Core Habitat may indicate a reviewed Plan is soon to be released.
- Core habitat amendment includes only known occurrences and a varying buffer around each, leaving all other small forested wetlands, where Black Ash may occur, unidentified and potentially unprotected.
- Protection of species going forward depends on continued monitoring, empowerment of local Mi'kmaq stewards, implementation of ecological forestry, and strengthened wetland policy.

Poor

We'll release a full review for this species in 2023

Eastern Wood Pewee

- Management Plan released in 2022.
- Core habitat is still not identified
- Protection of species going forward depends on conservation of mature, open understory deciduous/mixed forests and conservation of prey insect habitats, including wetlands, through strengthened stewardship initiative, implementation of ecological forestry, and strengthened wetland policy

Fair

We'll release a full review for this species in 2023

YOU CAN HELP!

www.nswooa.ca or
www.medwaycommunityforest.com

Join an ecological woodlot association!

www.naturens.ca

Join the call for ecological forestry on public lands

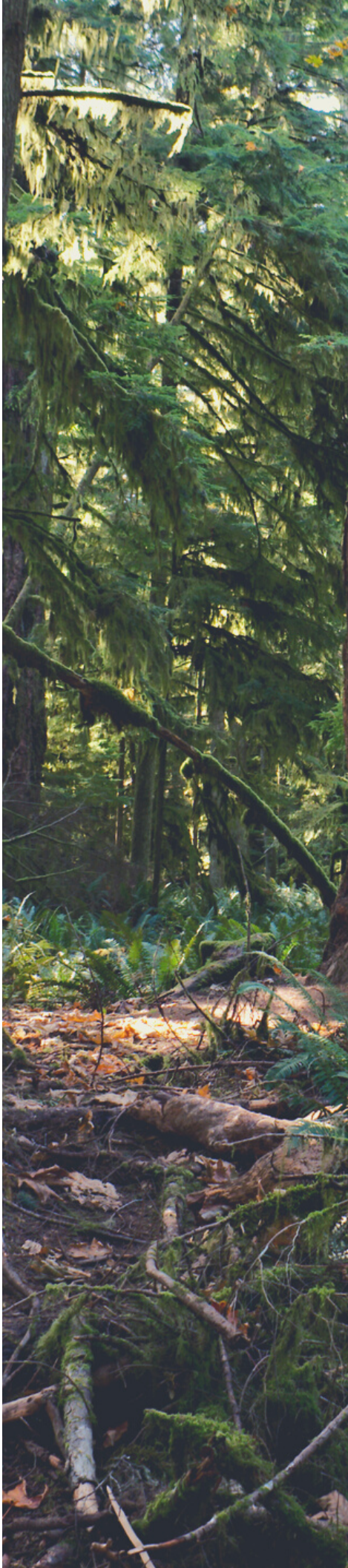
Watch for our next call to action, for strengthened wetland policy

CHANGES TO OLD GROWTH FOREST POLICY

The Nova Scotia government released a draft of the updated Old Growth Forest Policy for Nova Scotia for a short public comment period in late 2021. This update was intended to replace the earlier policy from 2012, which itself was an updated version of a policy dating back to 1999, intended to "maintain old forest associated biodiversity in the forested landscape." It committed to identifying a minimum of 8% public land area that was either already in an old growth state or contained opportunities for restoring old growth forest and would protect them from detrimental human activities, including timber harvesting, a goal the province achieved in 2020. Including both old-growth forest areas (less than 1%) and old-growth restoration opportunity areas across the province, there are currently over 280,000ha identified in existing protected areas and just over 30,000ha on other public lands (18.7% of the total area of public land in Nova Scotia and 7.6% of the total forest area of Nova Scotia.)

Though there were some changes made that improved the 2022 policy from its earlier form, including language about the ecological importance of old forests, a commitment to work with private landowners, and a five-year schedule for review, several points concerned advocates from the naturalist and scientific communities:

- Strangely, the conservation of "old forest biodiversity" is not listed as a policy goal in the 2022 version as it was in the 2012 version. This omission is suspicious, as there should not have been any reason to remove it.



- The original 8% public lands goal never had any justification in the previous policy and a new goal was not set in the 2022 version. How much land should be managed for transition to old growth status is not easily answered by the existing scientific literature, but we do think we know how much forest in Nova Scotia was old growth before European settlement - at least 50%. If we truly value the economic and ecosystem values of old growth forests, why aim so low as 7.6% of forests?

- Ironically for a policy devoted to old forests, neither the 2012 or 2022 documents used forest age class as the primary prioritization tool for inclusion in the policy. Forests identified as potential old growth restoration opportunities may be as young as 40 years old and many of them are located in protected areas where they are already protected, while other public forests not included in the policy are older than this and, left out of the policy, are vulnerable to harvest.

- The updated policy increased the age at which certain forest types can be considered old growth. For some hardwood-dominated forests, this age is now 125-140 years, potentially eliminating some still-rare forests that are, for example, *only* 100 years old from protection if they aren't in an area designated for old growth restoration. It also set a minimum forest size of 1 ha, leaving many small forests with the potential to become larger old growth forests outside the policy. Nova Scotia's forests have already been reduced to a patchwork of forest clumps. If forests under 1ha are not protected, what's to stop clearcuts from entirely destroying a forest matrix made up of several (but disconnected) 1 ha patches?

- The 2022 policy and its previous versions estimate forest age based on the age of the individual trees. For some old forest types, like the pit-and-mound forests of Hemlock-Maple, this age estimation method is flawed. An individual tree growing in a pit-and-mound forest may only be 110 years old, but the fact that it's growing on a mound means the forest itself is much older, even if this particular tree is the oldest one left at this point in time. Pit-and-mound forests form via wind-throw action over hundreds and thousands of years, so even young trees in this forest are growing in what might be considered an old growth forest. They still contain old forest soils, old forest understory plants, and old forest seed banks. At minimum, such forest types should automatically be considered old growth restoration opportunities.

- Alarmingly, the policy excludes lands that have received any kind of silvicultural treatment or forest harvest within the last 30 years, meaning that working forests cannot be considered old growth or old growth restoration opportunities. It also gives the Minister the discretion to remove any forest from the policy if the removal is "in the public interest." After the debacle at Owls Head, how can the public be expected to trust an internal assessment of whether old growth forest destruction is in "public interest?"

The development of new law, rather than policy, would likely offer better protection to old growth forests, today and in the future. Old growth legislation would carry consequences for government violation and promote greater opportunities for public engagement. With less than 1% of forests currently in an old growth state, restoration forests falling almost entirely within existing protected areas, and working lands excluded from being identified as old growth, it's clear we have much work to do before old forests are actually protected in Nova Scotia.

READ OUR SUMMARY OF THE NATURAL HISTORY COMMUNITY'S RESPONSE TO THE NEW POLICY AT

www.naturens.ca/nova-scotian-naturalists-respond-to-the-draft-old-growth-forest-policy/

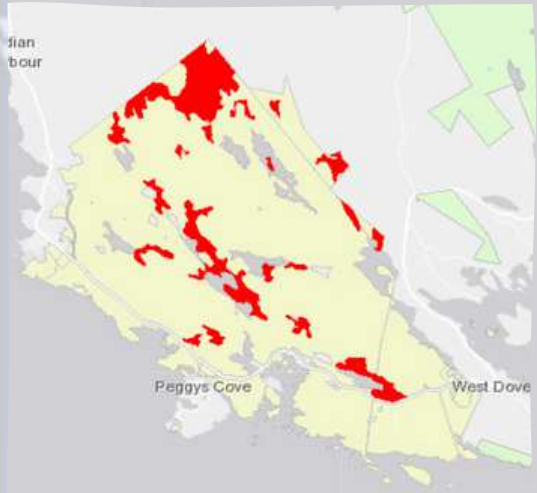
Get involved! Learn more about forest issues and the ways you can help at www.naturens.ca/projects

AN EXAMPLE OF OLD GROWTH FOREST POLICY FAILURE

Old Forest Policy parcels (red), protected areas (dark greens and blues), and public lands (light green) as illustrated by the province's protected areas viewer.
Visit novascotia.ca/ parksandprotectedareas/plan/interactive-map to explore and learn more

Left: Old Forest Policy parcels at Peggy's Cove preservation area. The "forests" identified here are actually naturally stunted coastal barrens spruce patches. These forests are considered "old growth restoration opportunities" and count towards the province's policy area goals, even though they obviously do not need the additional protection and are an entirely different forest type from the hemlock-dominated stands this policy should protect

Bottom Left: an example of the "old growth restoration opportunities" at Peggy's Cove



HALIFAX REGIONAL MUNICIPALITY'S JOURNEY TO BECOMING CANADA'S 18TH BIRD FRIENDLY CITY

In the last 50 years, North American bird populations have dropped by more than 25%, with particularly sharp declines in shorebirds, aerial insectivores, and forest birds. Three billion of our birds, including common species that live in our towns and cities, are simply gone. Nature Canada has developed a certification standard to certify eligible cities as a “Bird Friendly City”, to recognize and celebrate the contributions they have made to save bird lives in their municipalities. In 2021, they reached out to Nature Nova Scotia and asked if we knew anybody who would consider assessing Halifax Regional Municipality. So, our director Becky Parker, Nova Scotia Bird Society board member Sylvia Craig, and City Councilor Kathryn Morse gathered a group of bird-loving citizens, researchers, and conservation professionals and started working through the lengthy scoring rubric.

Some strengths and weaknesses stood out immediately. The City scored particularly high in areas related to recreational birding opportunities (having active citizen science groups, adequate bird watching "hot spots" and infrastructure, etc) and in areas like bird education opportunities (again because of the presence of citizen groups and NGOs).

Halifax had also already updated street lights and adopted an integrated pest management guideline before our group came together to work through Nature Canada's Bird Friendly Cities guideline. In other areas the City only scored a few points. Halifax has a large urban forest, but little strategy around wildlife habitat needs that would more likely promote shrubby and herbaceous plantings in addition to city-appropriate trees. Halifax already has a GreenNetwork Plan, but few clauses that would meaningfully incorporate biodiversity considerations into the creation of new green spaces. The weakest scores were obtained in areas related to threat reduction, particularly around cat predation and habitat loss mitigation measures. Existing sustainable city works initiatives do not include bird threat reduction measures, like a commitment to bird-safe windows or reduced night-time lights. HalifACT, the city's plan to achieve a net-zero economy by 2050, is light on nature-based climate solutions and, at this time, does not include metrics for tracking success or a detailed timeline for action conclusion.

Still, Halifax scored a total of 28/50 points in Nature Canada's rubric, just enough for Entry Level status as a Bird Friendly City. Now, the Bird Friendly Halifax coalition is planning a series of spring events to celebrate this achievement and, in 2023, will begin work on initiatives that will improve the City's score over time.

We are so grateful for the work our bird-loving friends have given this effort over the last year. The Bird Friendly Halifax coalition includes representatives from Ecology Action Centre, Dalhousie University, Halifax Regional Municipality, Hope for Wildlife, Nature Nova Scotia, the Nova Scotia Bird Society, and private citizens.

JOIN US!

WWW.NATURENS.CA/ACTIONS/BIRD-FRIENDLY-HALIFAX

Piping plover juvenile and parent, photographed by NatureNS board member Jason Dain

PLOVERS AT COURT: FIGHTING FOR HABITAT-BASED CONSERVATION

"Canada's Ocean Playground" has a problem. Our coastline is increasingly developed into private vacation homes and tourism attractions, while local access, traditional use, and wildlife habitat are pushed to the side. Nova Scotia has 13,000 km of coastline and sea levels are expected to rise at least 1 m over the next 80 years. Over 70% of Nova Scotia's population lives in coastal communities, but we aren't alone. We share these unforgiving seascapes with an increasingly threatened biodiversity, including species like the quintessential piping plover.

Shorebirds face a number of threats on our beaches and many of them are related to human development; habitat loss resulting directly from coastal development, increased predation due to human garbage attracting raccoons and foxes, and breeding season disturbance due to off-leash dogs are just a few of the stressors keeping many shorebird species from recovering their pre-colonization numbers. The 2019 State of Canada's Birds report estimates a national historic loss of 40-60% of our shorebirds, overall, and the most recent federal piping plover Status Report estimates a decline in this species of at least 13% since the 1990s, 23% over just the last 10 years (approximately 3 generations).

Over a third of the global piping plover population breeds in Canada. When the first Status Report was released, piping plovers no longer nested on Sable Island, on islands in the Bay of Fundy, or along Chaleur Bay in Quebec, and their breeding range on the Great Lakes was restricted to Long Point on Lake Erie. By 2001, piping plovers had been extirpated as a breeding population from the North Shore of the Gulf of St. Lawrence, the Canadian side of the Great Lakes, and Northeast Newfoundland. There were also fewer breeding sites in the Canadian prairies than there were in 1990, and populations dropped to extremely low levels in Ontario and Manitoba.

Human disturbance reduces Piping Plover productivity in several ways, both directly through the destruction of nests and eggs, and indirectly through the birds' behaviour. Even well-intentioned people and dogs with good recall can flush birds from their nests and increase vigilance behaviour by the plovers, reducing time spent feeding, tending eggs, or raising chicks. Birds that are flushed from their shelter are also more vulnerable to other threats like bad weather, predation (of themselves or their eggs), and off-road vehicles. These are issues on Plover beaches across Nova Scotia.

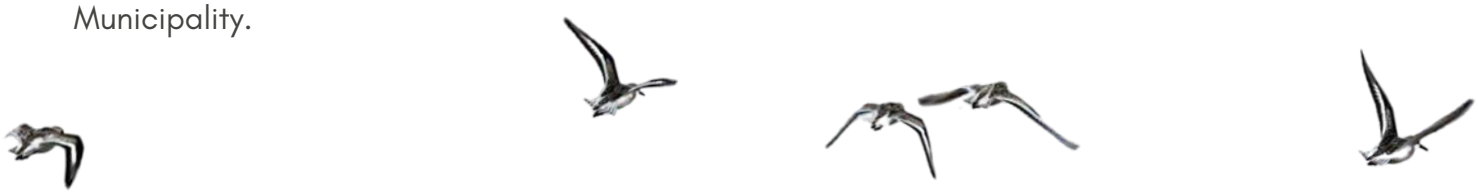
The latest Plover beach to experience a major threatening event, though, is Cherry Hill Beach in Lunenburg county. A developer owning property on Henry Conrad Road plans to create a new RV park adjacent to the beach, attracting more tourists, predator-luring garbage, and beach-venturing dogs to the area. The particular area of the Municipality the beach is located in has no zoning regulations, so there is no opportunity for the locals or larger public to sound their concerns for coastal integrity or wildlife habitat and prevent the destructive development.

How is this possible, after Nova Scotia just weathered the strongest hurricane in Canadian history and only two years after passing new coastal legislation designed to protect these places from poor planning decisions like ocean-side RV parks?

In April 2019, the province passed the Coastal Protection Act, attempting to clarify rules around coastal activities and sort out when the various jurisdictions responsible for them

should get involved. It aims to address development and related activity along the coast and mitigate the risk from sea level rise, storm surge, and coastal flooding, while also addressing erosion in sensitive coastal ecosystems that provide invaluable ecological functions. The Coastal Protection Act regulations will set out site-specific horizontal and vertical setbacks that dictate how close private property owners can build to the coast. But the act does not address setbacks for the septic systems and wells associated with those developments, which some worry could dampen the legislations' ability to safeguard our shorelines from climate change. It also doesn't delve into habitat-specific considerations for wildlife, which may require setbacks of their own, and it's important to note that mobile homes are not currently covered by the Act's regulations.

The Act is also not yet in force. The province is still working on regulations that will detail how the legislation operates on the ground. Even when the Act and its regulations do come into effect, though, much of the responsibility for coastal protection will fall with the Municipality.



Nova Scotia is mandating a Minimum Planning Standards within the next two years, where municipalities will be required to provide a plan detailing their own coastal protection measures. Zoning will come to the Cherry Hill Beach area as part of Lunenburgs' MODL 2040 project, but this does little to protect coasts, people, and shorebirds threatened by large and sudden developments right now.

This isn't just a Lunenburg issue, either. West Mabou Beach provincial park is also one of these rare remaining homes for the piping plover. Earlier this year, Cabot Cape Breton expressed interest leasing one-third of the adjacent 275-hectare West Mabou park to develop a third 18-hole coastal golf course, a proposal government seems to be considering. Hunt's Point in Queen's county made the news last year when concerned citizens sounded the alarm on a similarly outdated coastal development. Nancy Anningson, then coastal adaptation senior coordinator at the Ecology Action Centre, suggested that the controversy was representative of a broader pattern across Nova Scotia, as the pandemic building boom and delays in legislation have intensified a rush to develop the coast.

Still, some municipalities are taking proactive measures. Queen's Municipality has since passed new bylaws requiring 100-foot horizontal setbacks from the shore. "There are a few lots that are too small for anything, and with the new bylaws, they won't be able to build on. And we had a few complaints about that. But we're trying to protect the coastline," said Deputy Mayor Kevin Muise speaking to CBC News. Though not specifically meant to protect species like the piping plover, it's easy to see how smart decision making for human welfare can also benefit our rarest wildlife.

How is it possible to develop the coast adjacent to a known piping plover beach anyway?

Federal legislation protects plover habitat from certain kinds of human activities but only in defined plover habitat. Until 2022, that habitat was considered to be the entire beach, not enough to prevent an RV park development on forested land adjacent to the beach, but enough to protect the beach itself from direct destruction. Now, a new danger threatens plovers across Nova Scotia.

Under the federal Species at Risk Act (SARA), the Minister of Environment and Climate Change is responsible for the preparation of Recovery Strategies and Action Plans for species listed as Extirpated, Endangered and Threatened in Canada. In 2022, the federal government released an updated Recovery Strategy and Action Plan for the piping plover in Atlantic Canada that changed conservation measures recommended in the original document draft, prompting criticism from nature groups like ours. On behalf of East Coast Environmental Law and Nature Nova Scotia, Ecojustice launched an application for a review of the federal minister's and government's decision to amend the original recovery strategy for the rare shorebird.

There are two piping plover populations in Canada, the melodus subspecies on the Atlantic coast and the circumcinctus subspecies in the prairies and great lakes region. The melodus population was placed on SARA's Schedule 1, which is the official list of all species at risk in Canada, in 2003 and was listed as Endangered by the Nova Scotia government shortly after. The piping plover first started to decline in the early 1900s, before hunting of migratory birds was controlled and the birds were given formal monitoring and protection. Numbers are thought to have risen until the 1940s when recreational use of beaches increased in the Maritimes. They have not recovered in the time since, though numbers in the Atlantic United States have increased. Plovers declined in Atlantic Canada by more than 30% between 2006

Plovers and sandpipers are often seen together during the breeding season

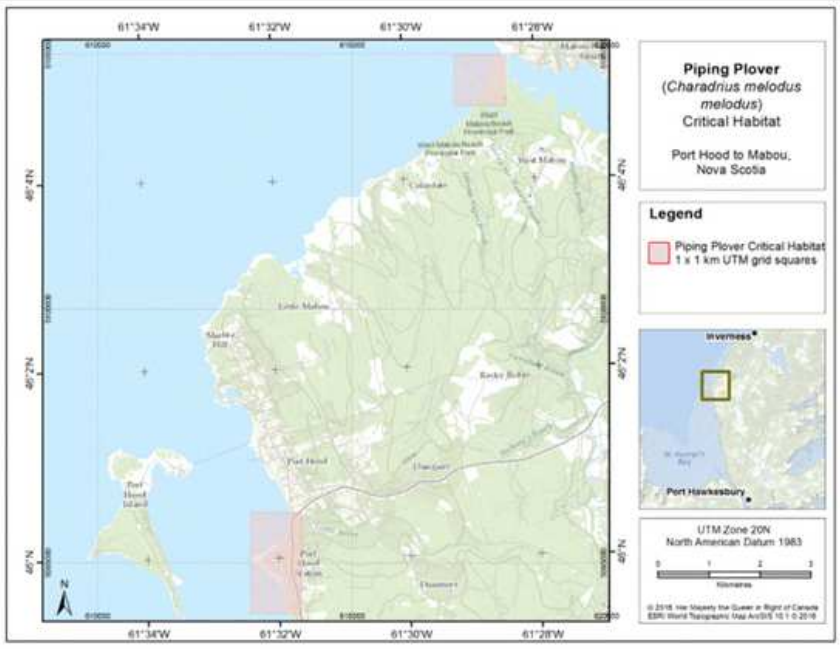
and 2016, threatened by residential and commercial development near beaches, human disturbance such as ATV use, off-leash dogs, and dense beach visitation, climate change-related disturbances, and terrestrial and marine pollution. There may be less than 400 plovers remaining in the Atlantic population today.

As part of the Recovery Planning process for species like the piping plover, government must identify an area of Critical Habitat: "habitat that is necessary for the survival or recovery of a listed wildlife species." In the 2022 update, the department has adopted a “bounding box” approach to habitat identification, meaning that instead of protecting the whole beach for piping plover habitat, only small areas that meet a certain set of criteria will be protected. The original strategy, released in 2012, identified 212 entire beaches across Atlantic Canada and Quebec as critical habitat but the new strategy protects only ~40 and only in the 1x1 km squares used by the bounding box method, *and then* only under certain biophysical attributes. The suit we and East Coast Environmental Law are bringing forward through EcoJustice argues that this new approach makes enforcement, and consequently protection, of beach habitats more difficult and leaves unprotected areas of sandy beaches open for development and construction.

Beaches change over time, sometimes dramatically. Plovers like to nest in the disturbed areas where sand and small rocks have accumulated, so when an event like Fiona happens and that disturbed areas shifts, the plovers returning next year will move with the beach and nest in areas where there is suitable habitat. What happens when the biophysical attributes necessary for plover habitat are pushed outside of the bounding box identified in this new Recovery Strategy? Or when an inexperienced plover pair decides they're going to nest in the less desirable gravel? Are these habitats not important enough to protect from development now? The change in the federal strategy holds concerning consequences for provincial protections too. Nova Scotia adopts critical habitat as outlined in in the federal strategies, in lieu of identifying our own core habitat. In a province where the coast already faces such high development pressure and our government has a reputation for secret public land sales, weakened federal protections for the piping plover puts the entire Eastern population at risk.

It’s 2022. We know that climate change will continue to threaten and, in some cases, dramatically change our coasts. It’s time we acted like we have known about this risk for over 50 years. The plovers, and our coastal communities, depend on it.

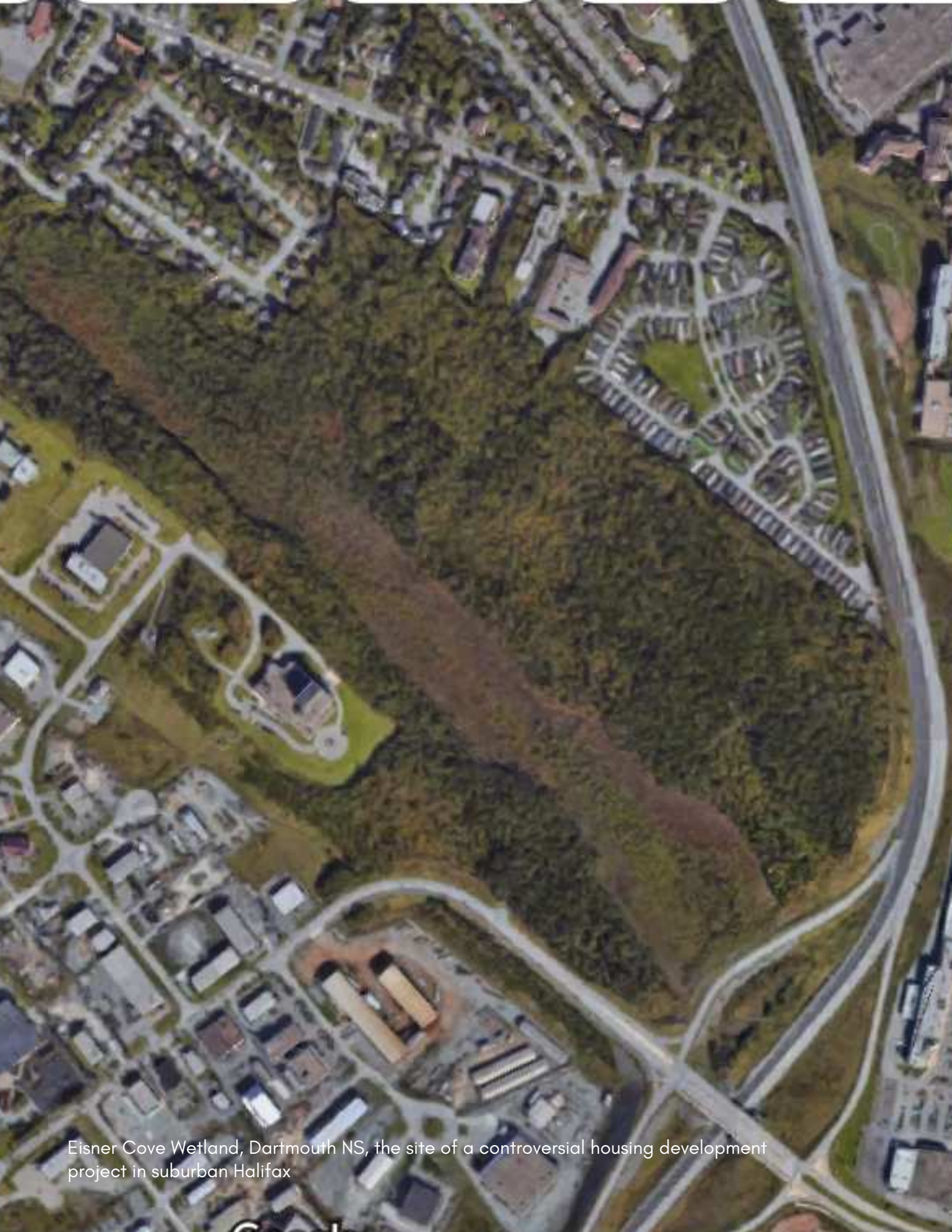
FOLLOW ALONG AT WWW.NATURENS.CA OR @NATURENS FOR UPDATES ON THE PENDING LEGAL BATTLE



C-73. Grid squares containing critical habitat for Piping Plover in Nova Scotia. Critical Habitat for Piping Plover occurs within these 1km x 1km UTM grid squares (red shaded squares), where the criteria and methodology set out in section 7.1 of the recovery strategy are met. Areas outside of the shaded polygon do not contain critical habitat.

Above: Piping plover breeding beaches in Atlantic Canada,

Left: Updated Critical Habitat at Port Hood, Nova Scotia. Piping Plover Recovery Strategy and Action Plan, 2022. Department of Environment and Climate Change



Eisner Cove Wetland, Dartmouth NS, the site of a controversial housing development project in suburban Halifax

GAPS IN WETLAND PROTECTIONS

Wetlands provide important ecological, social, and economic functions that are beneficial to Nova Scotians. They minimize erosion and sedimentation of watercourses, provide a buffer against storm runoff and storm surge, store and sequestering carbon, sustain biodiversity by serving as important habitats for fauna and flora, support medicinal and ceremonial plants that are important to the Mi'kmaq, and provide hunting and recreation opportunities for the communities that have developed around them.

Wetlands are defined in Nova Scotia by the Environment Act. They are temporarily or permanently wet environments characterized by poorly draining soils, wet-adapted plants, and other biological activities adapted to wet conditions. They are often the intermediate area between environments like lakes, rivers, or streams and drier uplands, though they also include wet areas with no or only temporary open water, such as bogs and vernal pools. Some have rich mineral soils while others are acidic and dominated by peatmoss. Nova Scotia recognizes five general wetland types: marshes (including saltmarshes), bogs, fens, swamps, and vernal pools. Many wetlands exist in a complex of two or more types and may change from one type to another given natural or human-mediated inputs, especially those that change the local hydrology.

An estimated 80% of the saltmarshes on the Bay of Fundy and 50% of saltmarshes across the province have been lost since European settlement, when many were dyked for farmland. Historic freshwater wetland loss is thought to be higher in the Annapolis Valley, Northumberland Strait, and Shubenacadie River areas, where some of the earliest European farms were created on top of appropriated Mi'kmaq lands. As a result, Nova Scotia has lost many of the significant ecosystem services wetlands previously provided, with the loss of saltmarshes in particular estimated to have cost Nova Scotians $400million in lost services like flood mitigation and water quality control. Today, remaining wetlands provide an estimated

$7.9 billion worth of ecosystem goods and services to Nova Scotians, annually. And some of them are still disappearing...

Nova Scotia has had a provincial Wetland Conservation Policy since 2011, created following the creation of the 2007 Environmental Goals and Sustainable Prosperity Act (EGSPA,) which set a goal of preventing the net loss of wetlands in the province. It serves as a framework for wetland protection and draws many of its prescriptions from wetland related clauses in several pieces of legislation, including EGPSA. Wetlands receive legal protection through legislation like the Environment Act, which defines what wetlands are and sets out Regulations for alteration approval and environmental assessment, in wetlands not designated as Special Significance. Similarly, all wetlands receive protection from ATV use via the Off Highway Vehicle Act. Wetlands with open water receive some protection through the use of a buffer (or Special Management Zone) under the Forests Act, though this only applies to forestry operations in wetlands and only for wetlands containing open water. Under the Wetland Policy, some wetlands are protected from all kinds of development and more destructive human uses through designation as a Wetland of Special Significance. All saltmarshes, for example, are Wetlands of Special Significance, as are wetlands within protected areas and some wetlands known to support Species At Risk or sensitive wildlife habitat. Other wetlands may be altered by development or other uses, under certain conditions detailed in the policy and related to wetland size and function.

A province-wide but technically limited inventory of wetlands was completed by the Department of Natural Resources in 2004 and serves as the basis for wetland mapping in the province. Most of Nova Scotia's wetlands (>75%) are peatlands (bogs and fens), found along the coasts and forming the headwaters of many inland watersheds, followed by swamps and saltmarshes. Remaining large saltmarshes are found mostly on the Fundy and South Shore coasts. Freshwater marshes and large floodplain swamps are our rarest wetland types. Forested wetlands were likely underestimated in the inventory to begin with because of the difficulty inherent in detecting them through aerial imagery and LIDAR applications, but are found throughout the province.

"Net loss", according to EGSPA, includes the loss of wetland area *and* function. EGSPA's legislated targets have since passed and changes made in other relevant legislation, still cited by the policy, render the context found within the policy out of date. There is no process

A boardwalk running through a freshwater marsh-swamp complex in Enfield NS

for monitoring or evaluating progress towards the goal of no net loss within the policy and no date set for when this goal or the policy itself should be reviewed. In some cases, it may be straightforward to estimate the area of wetlands lost and gained since the policy came into effect, but the net loss of ecosystem services such as flood mitigation, wildlife habitat, and carbon sequestration is more difficult to assess. There is also no provincial mechanism that considers or evaluates how wetland development approvals may be hindering the province's other policy or legislative goals, such as climate change commitments made through the Environmental Goals and Climate Change Reduction Act or Coastal Protection Act.

Wetlands in Nova Scotia may be altered by development if certain conditions can be met, within the policy, under the overarching goal of no net loss. The Minister of Environment and Climate Change has the discretionary power to authorize, restrict, or prohibit the alteration of wetlands, and this approval must happen before development takes place, according to the Environment Act. The Wetland Policy provides guidance for the Minister and Department on how to implement the approval process, protecting certain wetlands (like designated "Wetlands of Special Significance", saltmarshes, and wetlands known to support at-risk species) from all kinds of development and exempting some wetlands (like those under 100sq m) from needing an alteration approval. Approvals are also not required for forestry activities in wetlands, apart from already existing buffer requirements for open water mandated by the Forests Act. On paper, this protects large wetlands of high ecosystem service values while sacrificing some small wetlands but, in practice, there are several gaps that leave all wetlands at risk:

What is a Wetland of Special Significance?

There is little guidance on when or how a "Wetland of Special Significance" should be designated. There is also no process within the policy for how the public may engage in the identification and designation of Wetlands of Special Significance, even though the province actively collaborates on programs like the Treasured Wetlands of Nova Scotia.

What is Policy and what is Law?

Furthermore, the practice of giving some wetlands seemingly 100% protection while allowing for the alteration of other wetlands is only detailed in the Wetland Policy and not in any related legislation, meaning that these practices are not law. The protections offered by designation of Special Significance status, therefore, may be easily changed by government without public recourse.

When is an Environmental Assessment required?

Under the Environment Act, wetland alterations that will disrupt wetlands whose total area is 2 or more hectares must go through an Environmental Assessment. It is unclear how this prescription should be taken when multiple wetlands are being assessed for development. Is a development that disrupts two adjacent wetlands, each 1ha in size, considered to be the same as a development that disrupts one wetland of 2ha?

How Many Small Wetlands Can We Sacrifice?

As written, the Nova Scotia Wetland Policy could allow for the loss of every small peatland in the province as long as an equivalent amount of saltmarsh was restored or created. Without an updated wetland inventory and meaningful protection for small wetlands, swamps and vernal pools will continue to disappear.

How Many Wetlands are Unintentionally Impacted by Upland Development?

Buffers are not legally mandated for wetlands, apart from the buffer already mandated by the Forests Act and implemented by the Special Management Plan for open water bodies. A buffer zone may be prescribed in the conditions of an alteration approval for a housing or mine development, but forestry activities do not require an approval. For example, forests upland of a closed bog may be clearcut without a wetland alteration approval. Swamps may, themselves, be clearcut. Buffer zones not being mandatory for coastal wetland development leaves the coast at risk of the worst effects of sea level rise, as many of Nova Scotia's wetlands may need 20, 50, or 100+m to recede inland over the coming decades.

It's time for a review of Nova Scotia's wetland protections and the "no net loss" goal. Join us in 2023 when we'll work with partners to dig into these issues some more and present recommendations for the province, municipalities, and citizens to help close these gaps.

Black River Fen, a "Treasured Wetland" designated in 2018 through the province and Ducks Unlimited Canada's Treasured Wetlands Program. Designation as a Treasured Wetland does not offer the wetland any additional protection.

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WE'D LOVE TO BRING THE HRM NATURALIST PROJECT BACK IN 2023!

DONATE TODAY

DIVERSIFYING THE NATURE NETWORK: HRM NATURALIST PROJECT ENGAGES BIPOC AND NEW CANADIAN NATURALISTS IN SKILLS AND LEADERSHIP DEVELOPMENT

We've taken steps to diversify our own network at Nature Nova Scotia, targeting young, fem-identifying, and black, indigenous, and people of colour (BIPOC) Nova Scotians through online content and our event series over 2020-2021. We have seen some success in these initiatives, witnessing significant growth among young women stepping forward to take action for nature. However, engagement with BIPOC Nova Scotians and new Canadians in particular has only occurred at a surficial level. This has resulted in many of our events and initiatives being created and led by white settler members of the nature network, which may not always be culturally relevant or appropriate for the broad audience they are offered to. And this is a problem...

The natural sciences have long suffered from a lack of diversity. Status quo hiring and volunteer engagement only widens the societal divides that contribute to inequality in our province, but it's also bad for nature. The nature network is aging. Volunteers are retiring and the niche natural history knowledge and skills that help us protect our natural spaces are going with them. Effective conservation requires meaningful public participation. We cannot expect Nova Scotians to take action for nature if they haven't experienced it or don't have the tools to make change.

So, in 2022, we set out to connect a network of young BIPOC and new Canadian Nova Scotians and fostered environments where they could pick up the natural history, communications, and culturally-relevant skills required to lead nature engagement initiatives for members of their own communities, and beyond. Education and Outreach Assistant Unity Cooper led a series of on-site natural history skill-building workshops for BIPOC and newly immigrated Nova Scotians (aged 16-30) over 5 months, and helped interested participants plan and lead a capstone event or educational resource of their choosing at project end. So far, capstone projects have included a plant walk for queer youth and an ultrasound workshop at Dalhousie University. We can't wait to see what projects 2023 might have in store for this blooming network of young leaders!

OTHER NATURE NEWS
AND THINGS TO BE AWARE OF

Logging Activity in Annapolis County Paused After Discovery Rare Lichen Species

Arlington Forest Protection Society identified one blue felt lichen and six frosted glass whiskers lichen, as well as a rare black ash tree, during surveys in public lands slated for high volume cutting this year. WestFor Management Inc. was given approval last spring to harvest 343 hectares on public lands around Goldsmith Lake, about 175 kilometres west of Halifax. Society member Lisa Proulx said the discovery is significant because it signals the presence of old-growth forest. We join Arlington Forest Protection Society's call to protect the forest permanently, recognizing the rarity of such forest types and the need for improved forestry practices on public lands. Join the community at www.arlingtonforestprotection.ca

Rare Fern Discovered at West Mabou Beach

Biologist Alain Belliveau surveyed West Mabou Beach in 2018 and found 17 rare and endangered animals, plants and lichens in the park. Alain recently got confirmation of an 18th species after sending pictures to fern experts - the upswept moonwort, a first for Nova Scotia. The upswept moonwort normally grows in western North America and has only been found on the East Coast in Newfoundland and in New England. Moonworts are thought to rely on a specific fungal symbiont in the soil and are notoriously difficult to recognize.

Hemlock Wooly Adelgid Treatment Piloted in SW Nova Scotia

Last fall, a group of volunteers fundraised and received permission to inoculate old growth hemlock trees in Sporting Lake Nature Reserve with insecticide to protect them from the invasive hemlock woolly adelgid (HWA). Saving an entire stand of old growth hemlock through injecting pesticides was unprecedented, but it is

the only interim tool for keeping old growth alive. Since this successful treatment in the Tobeatic, funding was secured by NS Environment and Climate Change to continue treatments in other Protected Areas. Efforts this fall turned to saving hemlocks at sites in Queens and Annapolis County. Learn more at www.medwaycommunityforest.com

Province and Forest Industry Groups Interfere in Federal Species At Risk Planning

In March, the Nova Scotia Department of Natural Resources and Renewables posted 103 hectares of forested land near Minamkeak Lake on the Harvest Plans Map Viewer, an area that supports the last surviving wild population of endangered Atlantic whitefish. After public outcry, DNRR announced in May that it was placing an "indefinite hold" on the proposed logging plan. Documents obtained through an Access to Information request reveal that the 2006 version of the Recovery Strategy for Atlantic whitefish was cleansed of references to logging, soil erosion, siltation, and the productivity and quality of aquatic ecosystems before it was circulated in a consultation process. Journalist Linda Pannozzo reached out to Kim Robichaud-LeBlanc, the lead recovery biologist with the Species at Risk Program of the Department of Fisheries and Oceans (DFO) for the Maritimes Region to find out what happened to the logging references and discovered that the change was made prior to the strategy being sent out for review. Read Linda's entire piece at: www.lindapannozzo.substack.com

Blue Felt Lichen Declared Nova Scotian's Official Provincial Lichen

Nova Scotia has declared blue felt as its official lichen, after Bill 230 passed at the Nova Scotia Legislature. Pectenia plumbea, is relatively common in Nova Scotia but exceedingly rare elsewhere in the Maritimes, making our province an unusual refuge for this rare funal-algae symbiont. It tends to grow on mature hardwood trees in wet mixed woods on the Atlantic side of the province. The idea for an official lichen was inspired by the work of Troy McMullin, a lichenologist at the Canadian Museum of Nature in Ottawa, who organized a public vote for a national lichen in 2019. Nova Scotia's voted on several lichens but the Blue Felt Lichen won.

Concerns Over Proposed Warship Testing Site at Bird Hotspot in Halifax Area

It may surprise people to know that the seemingly wild expanse at Hartlen Point in Eastern Passage is actually owned by Canada's Department of National Defense. DND has designs for a $65-million facility for testing combat systems and is considering Hartlen Point for the development. Birders, who have completed citizen science monitoring at the site for years, are concerned about the developments potential impact on the areas unusually rich diversity. Learn more and sign the petition at: www.facebook.com/groups/protecthartlenpoint

OUR DEEPEST THANKS TO OUR SUPPORTERS THIS YEAR

We are grateful for the support of the Echo Foundation, Nature Canada's Naturehood and Make Room for Nature programs, the NS Community Development Fund, and the many concerned nature lovers across the province who donated and volunteered on our projects this year. We couldn't do it without you.

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