

Feedback High Production Forestry Phase 1 - Discussion Paper

1. McGuigan,K.,Webster,T.,Kevin and Collins,K.(2015,September 22). A Flood Risk Assessment of the LaHave River Watershed,Canada Using GIS Techniques and an Unstructured Grid Combined River-Coastal Hydrodynamic Model. *Journal of Marine Science and Engineering*. (2015). Applied Geomatics Research Group, Nova Scotia Community College, Middleton, NS B0S 1M0, Canada. Available: <https://www.mdpi.com/2077-1312/3/3/1093>
2. Municipality of the District of Lunenburg. (2014). 2014 Flood Study LaHave River. Available: https://www.modl.ca/images/MODL_FloodStudy2014.pdf
3. Phillips,B.,(2014). Climate Change Resiliency of Tree Species in the Fundy Biosphere Reserve Region. (Forests of the Future in the Fundy Biosphere Reserve). Available: <http://www.fundy-biosphere.ca/en/home/forests-of-the-future.html>
4. Tutton,M.,(2020,February 21).Global warming to drastically reduce regrowth of key softwood species in Maritimes. *The Canadian Press*. Available: <https://atlantic.ctvnews.ca/mobile/global-warming-to-drastically-reduce-regrowth-of-key-softwood-species-in-maritimes-1.4822544>
5. Heiri,C.,(2017,August 10). Climate change: Silver fir beats Norway spruce and European beech. *Science Daily*. Available: <https://www.sciencedaily.com/releases/2017/08/170810082151.htm>
6. Clouston,P., (2020,February 27), Two NE tree species can be used in new sustainable building material Eastern white pine and Eastern hemlock. *Science Daily*. Available: <https://www.sciencedaily.com/releases/2020/02/200227160550.htm>
7. Kilkelly,M., (2018, October 25), Support for Tall Timber Reaches New Heights in the Building Code. *Architect*. Available: https://www.architectmagazine.com/technology/support-for-tall-timber-reaches-new-heights-in-the-building-code_o
8. Brown,C.,Corday,C.,(2016, March 1)), Wood highrises designed in B.C. are sustainable and safe. *CBC News*. Available: <https://www.cbc.ca/news/canada/british-columbia/b-c-wood-highrises-1.3469605>

Concerns with High Production Forestry

The most concerning omission from the High Production Forestry Phase 1 - Discussion Paper is how the current species at risk and Nova Scotia's ecosystem take priority over the lands earmarked for High

Production Forestry. There are formulas to ensure nothing happens to our current large scale sawmills and forest industry, but how do we ensure the survival of our critical species at risk and guarantee continuous ecosystems for them? This paper is stating that Lands and Forests will divide up our lands to give the best to the status quo. In paragraph two of Dr. William Lahey's executive summary he states the following:

“In other words, I have concluded that protecting ecosystems and biodiversity should **not** be balanced against other objectives and values as if they were of equal weight or importance to those other objectives or values. Instead, **protecting and enhancing ecosystems should be the objective** (the outcome) of how we balance environmental, social, and economic objectives and values in practising forestry in Nova Scotia.”

We are at this juncture in time as a direct result of past poor forestry practises. Dr. Lahey's findings are clear and our government has agreed to implement his conclusions. This entire process of dividing up 333,000 ha of prime Nova Scotia forest can not happen until Nova Scotia's forest environment is properly protected in accordance with Dr. Lahey. There is no sense dividing up land now since proper environmental stewardship may eventually eliminate those lands from the available pool. The status quo that drives Lands and Forests is what got us to this frightening state of poor forest management. Implementing the Lahey report must begin with the biological and environmental aspects before maximum forest harvests are considered. Allow time for our biologists and environmentalist to do their job before the industrialists claim the best. The High Production Forestry as identified in the Lahey report is subservient to environmental requirements. This phase must be delayed and a new biology based phase must be embraced and completed first.

As residents of high elevation (150m+) north Lunenburg county we witness daily how our area benefits from the forests and numerous established large Christmas tree, cattle and food farms. This area is also famous for its hundreds, if not thousands of cottages. Sherbrooke Lake is one of Nova Scotia's largest fresh water lakes and supports many cottages. Nearly every lake in our area is full of cottages. This area generates considerable revenue for the county and province through taxes and retail sales from cottagers, fishing/hunting licensing, snow mobile, ATV and hiking. Every year many non-Canadian residents spend thousands of dollars getting to their cottage to be with nature. Many of our resident and non-resident cottagers are directly adjacent to high elevation crown land.

This entire northern area of Lunenburg county sits on the LaHave drumlin. It is the watershed area where physics of elevation and ecology of local forests regulate the water discharged into numerous streams that ultimately flow into the LaHave river. We have in the past suffered flood events from the LaHave river. Climate change is accelerating and the probability of more severe flood events in the future is guaranteed. Every single tree removed from these highlands will increase the probability of flood disaster at lower elevations. An increase in flood scale rain events will most certainly have an adverse effect on our costly infrastructures from New Germany and south along provincial Highway 10. This highway and all the small communities along it down to Bridgewater will be exposed to this threat. Climate change induced flood fear is not new. Lunenburg county (MODL) has already commissioned science based studies[1] [2] that did confirm these fears. Another adverse consequence of farming high elevation forest is logging road washouts. These hastily constructed logging roads will require more and more non-productive and costly maintenance.

Climate change is accelerating and fears that our prized red spruce will not flourish are well founded. Red, white, black spruce and balsam fir have been identified as species not expected to thrive [3] [4] in a warming Nova Scotia. A very pronounced decline in the vigour of these species is occurring at the present time. Science is now predicting the same poor performance for Norway spruce [5] as a direct result of global warming. Another recent science paper [6] concludes that engineered building composites using eastern white pine and/or salvaged hemlock would meet construction standards. Pine's growth rate is expected to peak in 2040, then lose a small amount of vigour. This decline is predicted to be so small that an intervention through Outcomes-based Forestry may not be required.

On the other hand, native hardwoods such as maples, red oak and American beech are thriving on crown lands. These species are also predicted to thrive in a warmer Nova Scotia. Native production hardwoods will not require any fertilizer interventions. Outcomes-based Forestry would lose its meaning and life cycle costs would be greatly reduced by switching to a hardwood crop. The highly prized white oak and black cherry thrive in Maine and are predicted to do well in Nova Scotia and even better as our province warms. Both oaks (red and white) and black cherry are species that support a high diversity of other life including numerous caterpillar species critical for nesting birds to feed their young. Approximately 96% of migratory birds raise their young on protein and high fat caterpillars/insects. Planting red, white and/or Norway spruce and sanctioning Outcomes-based Forestry to effect High Production Forestry will require tonnes of expensive polluting fertilizer and poisonous glyphosate or similar herbicides. These toxic chemicals will leach into every lake and stream in the highlands of Lunenburg, Kings and Annapolis counties. The pollutants will do what physics dictates and will flow downhill exacerbating the LaHave's pollution problems. Fertilizer runoff coupled with warming temperatures will result in algae/slime buildup in our lakes and rivers. This would be environmentally irresponsible.

Nova Scotia has implemented a cap and trade carbon control system. The government of Canada, like many other governments around this planet are setting a rapidly escalating price on carbon. With each passing year living trees will become more valuable. The larger the tree, the greater amount of carbon it will sequester in a year. Once a tree's carbon intake starts to slow, it should be considered for harvesting. This is the value based mechanism that should be driving our forestry for both soft and hardwood harvests. Wood lot owners, including all Nova Scotians (who are the actual owners of crown land) would annually receive a financial return for offsetting carbon emitted by our major carbon polluting industries. Lands and Forests must publish how to calculate annual carbon sequestration in tonnes for our land owners. Use returns from the High Production Forestry allotment of crown lands (333,000 ha) to help our major softwood lumber mills to diversify to hardwood and other products. Nova Scotia must produce enough softwood building lumber to meet only Nova Scotia's needs (possibly PEI). We are too small of a province to even consider exports in light of carbon sequestration needs. Climate change has propelled the requirement to sequester carbon from our atmosphere to a critical level. Investing heavily in future softwoods lumber is a losing scenario. Engineered hardwoods and white pine construction products would be much more valuable as an export.

The Canadian Press, Public Opinion and the Way Ahead

As you are well aware, Canadians (read Nova Scotians) will not take ecology, environment and climate inaction or misguided action lying down. The press has recognized that its past negligent under-

reporting on climate change and environmental issues was a mistake and they are collectively righting these past wrongs. People are not accepting the “my way or the highway” or “status quo” leadership from politicians. We have recently witnessed game changing negative public response to major projects such as the Teck Frontier Tar Sands proposal to Coastal GasLink gas pipeline and locally with Owl’s Head. As our climate worsens, the concern for our children and grandchildren’s future will increase rapidly. Politicians will constantly have an angry public in their face. The more governments neglect our children's future over short term profit, the more confrontational and disruptive the public-politician interface will become. Governments that continue to rely on back room deals to progress unethical reckless action will be publicly, legally and completely dealt with by the public. The resolve of Nova Scotians to take action and correct government wrong doing will grow the more desperate our children's futures become.

Our large softwood mills deserve to know that their huge production requirements will not survive. It is time to scale back and give “going local” a priority. Exports of wood lumber should be this province’s lowest priority. After all, we have been a wood producing province for hundreds of years and are still Canada’s poorest with the highest taxes. Harvested wood has not, is not and never will be our saviour. This is now not the case with living wood and its lifesaving carbon sequestration properties. Provinces that rely on basic resources will never reap great rewards. Put an effort into Halifax, Truro and Sydney for economic growth and tertiary products and services. We require high tech to make money, not raw basic forest products. High Production Forestry will be the first eliminated as protecting future generations (our grandchildren) escalates in priority. Companies and individuals that base their livelihood on what is now perceived as dangerous activities such as fossil fuel extraction, over fishing, unsound farming practises and forest destruction will not have an easy go of it as we move forward.

The poor performance of our spruces and fir in light of climate change and Outcomes-based Forestry is an environmental disaster in the making. White pine will do much better. Reapplication of fertilizer and flora targeted poisons will continue to grow year after year. This will eventually degrade the LaHave and other vulnerable Nova Scotia river systems. We have many cattle farms in higher elevations in Lunenburg county that do not have any hedge rows around their fields. This we suspect is adding unwanted chemicals into the LaHave from unabated runoff. High Production Forestry in higher elevations on the LaHave drumlin, coupled with our already large scale clear cuts for Christmas trees and farms, will make the LaHave ever more vulnerable to pollution and large rain event flooding. Long time residents in New Germany have now observed how fast the river crests and how quickly it recedes after a heavy rainfall. This is thought to be a function of the large amount of clear cuts that have and still are occurring in the LaHave headwaters. The last thing any town needs is more pollution, bad publicity and increased flooding.

The concept of starting with this phase (High Performance Forestry) of the Lahey report before we even know the value of carbon offsets that our living forests will provide is reckless. We hope that this timing is not driven by the current forest industry and forest industrialists in our government. This would be considered as just another back room deal. We know that Canada has set a rapidly increasing value on carbon. Yet we cannot use our forests with our own cap and trade system. The timing of this discussion paper is premature since carbon sequestration requirements must be known to make the required informed decisions on High Production Forestry.

Summary

Presently the recommendations made by Dr Lahey to give priority to conservation of ecosystems and habitat of species at risk is effectively being ignored. This must be immediately remediated by putting wildlife biologists in the field in order to establish core habitat of endangered species, especially where High Production Forestry is being proposed. Until core habitat is resolved, non scientific personnel ought not to have access to these crown lands.

Application of toxic chemicals (fertilizer and herbicide) will be required if spruce is used for High Production Forestry. This will poison the runoff, polluting down stream habitats. Climate change is real and accelerating. Climate models must be used to guide the best selection of tree species. Since the return on investment is 30 to 40 or more years away there is no room for error. The old ways will no longer work. Climate tolerant species will protect the watershed and not require Outcomes-based Forestry. Canada's building code is under revision now and wooden structures up to possibly 18 stories are part of the new specifications. These new wooden buildings will lock up carbon for another 75 or more years. This is a big game changer for wood since it will greatly increase the demand for local supply [7][8]. Unfortunately this Phase 1 - Discussion Paper demonstrates that Lands and Forests is still being run by industrialists that are not able to change. This paper has been written with the mindset that was present a hundred years ago with the sole aim of making spruce studs. We desperately need strong leadership at the ministerial level to see us through these changing times. Red maple's building characteristics are surprisingly similar to red spruce, except that it excels at holding nails and has greater overall strength. The new specifications will be using engineered fundamental wooden components and we must completely understand what will be required so wasted clear cuts and mass tree plantings do not occur.

The LaHave drumlin is currently undergoing massive forest devastation at its highest elevation. The East Dalhousie Road between Aylsford Road and Highway 10 is a mess with massive clear cuts. The Aylsford Road from the top of the South Mountain through to the start of the valley is absolutely disgusting. The crown lands along the Forties Road have been raped for over two years now. Wood lot owners are continuing this trend. The tree loss is enormous and increased rain runoff is guaranteed. This is occurring in Nova Scotia's cottage country. Our forest industry does not respect any other industry in Nova Scotia. Any further rape of the LaHave drumlin will affect local tourism, destabilize hydraulic dynamics which in turn will worsen any future floods. This first phase discussion paper completely fails to account for these collateral concerns.

An economy based on raw material and resource extraction for export has not proved beneficial to Nova Scotia. We are still the poorest province with high debt and taxes and the way out is not to practice the same destructive "business as usual" model. The time has come to recognize the value of our forests as carbon sinks that will have great value to land owners and Nova Scotians both financially and with mitigating climate change. Carbon prices will be increasing at a great rate and offsets from healthy forests must be weighed against the value of future lumber. We need to be regenerating and protecting our forests. Lands and Forests must provide Nova Scotians with a formula defining our living forest's value for carbon sequestration. It is no longer feasible to divide up our forest in a way that does not consider the carbon sequestration value. We suspect that if the carbon value is factored in, the High Production Forestry land allocation will be much less.

Trees are a long term, safe investment for our tiny province.

Addie and Fred Campaign
March 2020