

Submission on the Management Alternatives for New Brunswick's Public Forest: A Report of the New Brunswick Task Force on Forest Diversity and Wood Supply

Submitted by: Conservation Council of New Brunswick

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Our forest is a critical state. According to a study done by the World Wildlife Fund (2001), the Acadian forest is one of the most endangered forest types in North America.

Our forest management policies need to prioritize protecting and restoring wildlife habitat and streams and rivers, conserving forest diversity in terms of age and species, and taking action to protect our forest and ourselves from the adverse impacts of climate change.

The Conservation Council of New Brunswick therefore supports the conservation-oriented Option B described in the report, *Management Alternatives for New Brunswick's Public Forest*. This option restores some of the natural diversity we have lost from the Acadian forest, while helping it adapt to rapid climate change. It significantly reduces clearcutting, caps the forest area converted to plantations at safe science-based levels, ensures we have an acceptable amount of older forest to sustain the forest's biological diversity – and would have minimal impact on the amount of softwood currently allocated from Crown land to the mills which remain in operation in New Brunswick today.

Only Options A and B are based on scientifically defensible criteria for conserving biodiversity in the Acadian Forest. Only Option B attempts to return New Brunswick's forests to past levels of diversity while managing it to withstand the ravages of climate change. Option B also provides the greatest increase to the wood supply of tolerant hardwood logs of any of the options.

We are very concerned with industry's preferred Option E that recommends reducing conservation areas from 30 to 20 per cent and the massive conversion of our natural forest to unnatural plantations. Conservation areas, which include old forest habitat, deer wintering yards and riparian buffers are currently off limits to clearcutting. Opening up these conservation areas to clearcutting would only degrade our diverse Acadian forest to a point of no return.

The Conservation Council of New Brunswick recommends the government of New Brunswick consider the following in its new forest management policies:

- **Provision of adequate area of older forest to conserve biodiversity, based on the latest science**

Twenty-five per cent of our public forest is now less than 20 years old. The N.B. Department of Natural Resources currently allows companies to maintain only 12 percent

of the forest in an older age class. Today's science says we need to maintain 40 percent of our forest in an older age class.

The Greater Fundy Ecosystem Research Group (GFERG) was established in 1991 to provide the type of ecosystem-based research and science support necessary to manage a sustainable landscape. Its overall objective is to protect ecological structures, functions and processes while providing sustainable flow of goods and services for people. Its 2005 report *Forest Management Guidelines to Protect Native Biodiversity in the Greater Fundy Ecosystem* stated that:

In stand-replacing ecodistricts, 35–40 percent of the landscape should be maintained in late-successional age classes. This mature forest should not be maintained solely at the lower end of the maturity window but should incorporate proportions of forest in very old age classes in accordance with the negative exponential distribution. In gap-replacing ecodistricts and in patch-replacing portions of ecodistricts, 40–85 percent of the landscape should be maintained in late successional age classes. Of this, 10–12 percent should be maintained to have old-growth characteristics.ⁱ

Only options A and B provide such old forest restoration and protection. Option B is the best choice in terms of optimizing the area of old forest. It results in the minimum area of old forest increasing to 51 per cent by 2062, providing critical habitat for species that can only survive or prefer to live in such conditions like pileated woodpeckers, owls and flying squirrels.

Intensive forest management focused on high timber yields relies on clearcutting, plantations, herbicide spraying and short-rotation harvesting. This type of management does not allow forests to reach a mature and overmature state - a habitat type that supports many species not found in young and middle-age stands. Old forest are important habitats, particularly for species requiring large amounts of old and rotting forest like fungi, lichens, beetles and woodpeckers.ⁱⁱ

Of the 432 bird species found in New Brunswick, over half – 52 % - have populations that are not secure.ⁱⁱⁱ The status of many species that inhabit our forest are described as regionally endangered (e.g. Canadian lynx) and sensitive (e.g. a number of forest orchids). The maintenance of biodiversity must be fully considered in New Brunswick's forest management policies because Canada is a signatory to the U.N. Convention on Biodiversity that requires jurisdictions to take action to halt biodiversity loss.

➤ **Reduction of clearcutting and the capping of plantations**

The Conservation Council of New Brunswick recommends reducing clearcutting by half and restricting plantations to help restore our Acadian forest, protect animal and plant habitats, and safeguard our streams and rivers. Besides being ecologically not sustainable, the practices of clearcutting and conversion of natural forest to plantations are not socially acceptable.

Many of our native tree species are declining in number or becoming rare. The GFERG noted that tree species that are rare (Eastern White-cedar, Eastern Hemlock, Bur Oak, Red Oak, Basswood, Butternut, Ironwood, Black Cherry, and Black Ash) should be retained in forests by limiting their harvest and creating the conditions needed for regeneration. It was also noted that Red Spruce and American Beech are common but require selection harvest to promote regeneration. The identification and regeneration of disease-resistant American Beech trees was also noted as critical.^{iv}

The 2005 GFERG report recommended that hemlock, healthy butternut, disease-free beech and bur oak should be excluded from forest harvesting in the Fundy forest. It also recommended that harvesting should mimic natural disturbance regimes so that late successional forest is maintained. It also recommended that forest stands containing rare or uncommon plants should be left undisturbed with a 170 m buffer surrounding these sites. No plantations or other high-impact forest practices should occur within buffer area of protected areas. Further, the GFERG report recommends capping plantations at 15% of the forest area.^v

Similar types of ecosystem-based management need to be applied in every ecodistrict of the province.

Plantations have a number of deleterious impacts to the environment, especially when a large area of land is converted from natural forest to plantation.^{vi} Plantations should therefore be capped as recommended in the GFERG report. Option B recommends capping plantations to 13 % while industry supports a conversion of 37 % which would be absolutely detrimental to forest diversity.

➤ **Adequate water quality and aquatic habitat protection**

1. *Watershed-level planning*

Other jurisdictions are exploring watershed-level planning^{vii} because they understand the important role that forests play in ensuring safe, secure drinking water, healthy aquatic ecosystems, and reliable quality water supplies. Techniques for calculating the effects of forest operations on water have been developed^{viii} to facilitate a holistic approach to reducing the effects of forest operations on water systems. We recommend that New Brunswick Department of Natural Resources (NBDNR) explore an integrated watershed planning approach that uses watersheds as the forest management unit on Crown Lands. In the meantime, we recommend implementing the forest-conservation based targets of Option B in the Erdle Task Force report, since this prudent approach will not adversely affect water systems in the province.

2. *Ephemeral and intermittent streams.*

Intermittent, ephemeral, and very small first order streams are suppliers of invertebrates and detritus to permanently flowing, receiving streams that support juvenile salmonids (and other important species), and this warrants their protection during timber harvest^{ix}. In New Brunswick under current forest management guidelines, ephemeral streams are

not explicitly protected because they are not mapped^x. We urge NBDNR to implement the recommendations from the GFERG guidelines^{xi} with regards to ephemeral streams that read:

When delineating buffer zones, existing ephemerals should be treated like perennial streams <0.5 m wide with at least a 15 m equipment exclusion zone (EEZ) [i.e. no travel zone]. Furthermore, forest planners should extend this EEZ another 100 m uphill from the highest point of the pre-harvest ephemeral. Not all ephemerals are clearly visible, especially in the fall, so spring delineation should be considered.

Options D and E from within the Erdle Task Force report, as well as the recommendation from the Roberts report to increase wood supply, will not accommodate protection of crucial aquatic habitats like river headwaters. Only the options that provide large, contiguous protected areas and conservation forest (like Option B) can adequately insure water quality and flow regulation in our rivers.

3. *No-harvest buffers and steep slopes*

In fact, we would have the NBDNR follow recommendations made for Maine and place at least 10 m no-harvest buffers on all salmon rivers, streams, associated wetlands, and ephemeral streams^{xii}. In addition to the no-harvest zone, there should be an additional buffer of 10 to 100 metres (depending on presence of adjacent wetlands) permitting only selective harvesting, or up to 300 meters in areas where the slope is greater than 25%. This is similar to GFERG recommendations to start measuring the 30 to 60 meter buffer from the top of the slope^{xiii}.

4. *Vernal pools*

Vernal pools are temporary pools of water, mostly located on forested lands that are used almost exclusively by certain amphibian and insect species for breeding and other activities^{xiv}. Vernal pools are worth protecting for four reasons: they provide special breeding habitat, they act as habitat for other wildlife and increasingly threatened species, they are an excellent educational resource, and they are vulnerable to loss^{xv}. New Brunswick is lagging behind other jurisdictions considerably in vernal pool protection. Maine has for several years had regulations in place for identifying, marking, and protecting significant vernal pools^{xvixvii}. We urge the NBDNR to follow the state of Maine and develop a program to identify, map, and protect vernal pools. We highly recommend that NBDNR first adopt the conservation targets outlined for Option B in the Erdle Task Force report, as only these targets contain the flexibility to include a vernal pools protection program.

➤ **Due consideration of climate change impacts**

If we are serious about adapting to the effects of climate change, then we need to choose forest diversity over plantations. Option B focuses on ensuring our forest can withstand the ravages of climate change by restoring the diversity of species, which will be unaffected by global warming. Many tree species that are part of New Brunswick's

diverse forests are replaced in plantations but these species are projected to adapt better in a future of climate change. Climate change is going to make spruce and fir uncompetitive in the forest in the coming decades and only Option B manages to favour those species that will be unaffected or thrive with climate change.

Options D and E would decimate forest diversity and weaken the forest's ability to recover from disturbances that are increasing in frequency due to climate change, including: fires, pest outbreaks, droughts and floods.

Our forests play an important role in climate change adaptation, and it is crucial that enormous reductions in greenhouse gas emissions occur in the next 20 years. Carbon sequestration and protection of old-growth forests go hand in hand.

Researchers have concluded that forests continue to accumulate carbon at a much greater rate than researchers had previously thought, making them more important as carbon sinks that must be factored into global climate models. Very old forests are capable of storing carbon due to tree growth, the addition of new trees and a decreased rate of respiration in old trees.^{xviii}

The conservation-oriented options A and B would produce up to 20 per cent more carbon sequestration than scenarios that emphasize increasing plantations.

Conservation and Jobs

By not conserving the diversity of a forest, we limit options for a diversity of jobs as well.

It is important to note that the job estimates presented in the *Management Alternatives for New Brunswick's Public Forest* were calculated based on figures from before the wave of mill closures and were calculated based on the assumption that high employment levels are directly produced by a high annual allowable cut on Crown lands; this has proven not to be the case. In the last few years we have seen the annual allowable cut remain steady and a record volume of timber cut from Crown lands from 2006 to 2007, but thousands of jobs lost in the forestry sector. Those job estimates are also based on wood product opportunities that were dynamic before 2005, many of which have been identified as declining or undesirable in the CIBC/Woodbridge report *Future Opportunities for the Forest Products Industry in New Brunswick*. Likewise those job estimates ignore new emerging forest markets that are not based on wood supply.

An increased wood supply would not ensure that mills stay open. On August 28, 2008, a Telegraph-Journal article quoted a UPM executive saying that a greater wood supply would not have made a difference in his company's decision to close its Miramichi mill. Company officials attributed the mill's closure to rapid appreciation of the Canadian dollar and a surplus of magazine paper on the market.

The unallocated Annual Allowable Cut (AAC) that has been freed up as a result of mill closures provides us with an opportunity to cut less spruce and fir from Crown land, without having significant impacts on the historical allocations of those mills still operating in the province.

We clearly need a new path.

A new report called "Dollars and Sense" looks at the value of timber in old-growth forest in British Columbia. The report concludes that, "in 72 of 81 scenarios, increased forest conservation yields better economic returns than does status quo logging and limited conservation."

Our diverse forest provides diverse products and services including but not limited to wild ginseng, maple sap products (e.g., syrup and candy), fiddleheads, balsam fir wreaths, paclitaxel from ground hemlock (the active ingredient in the cancer-fighting drug Taxol), edible mushrooms, cedar leaf oil, as well as recreation and eco-tourism opportunities. Non-timber forest product and services provide needed income to help supplement income and sustain many rural households in New Brunswick.

What the Public Wants for the Public Forest

Public hearings conducted in 2004 and a public survey done in 2007 revealed that New Brunswickers think that too much timber is being cut, and that environmental protection should supersede ensuring more wood supply for the forest industry.

New Brunswick has the opportunity to become a leader in sustainable forest management while being responsible to its communities and its environment. In order to do this, we need to choose the conservation-oriented options.

ⁱ Betts, M.G. and G.J. Forbes (eds.) 2005. Forest Management Guidelines to Protect Native Biodiversity in the Fundy Model Forest. The Greater Fundy Ecosystem Research Group.

ⁱⁱ Woodley, S. and G.J. Forbes (eds.) 1997. Forest Management Guidelines to Protect Native Biodiversity in the Fundy Model Forest. The Greater Fundy Ecosystem Research Group.

ⁱⁱⁱ New Brunswick Department of Natural Resources. Birds. Accessed online on October 3, 2008 at: <http://www.gnb.ca/0078/WildlifeStatus/birds-e.asp>

^{iv} Woodley, S. and G.J. Forbes (eds.) 1997. Forest Management Guidelines to Protect Native Biodiversity in the Fundy Model Forest. The Greater Fundy Ecosystem Research Group.

^v Betts, M.G. and G.J. Forbes (eds.) 2005. Forest Management Guidelines to Protect Native Biodiversity in the Fundy Model Forest. The Greater Fundy Ecosystem Research Group.

^{vi} Freedman, B., S. Woodley and J. Loo. 1994. Forestry practices and biodiversity with particular reference to the Maritime provinces. *Environmental Reviews*. 2:33-77. *Res.* 7:285-294.

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- ^{vii} Alberta Government. *Water For Life: Alberta's Strategy for Sustainability*. See <http://www.waterforlife.gov.ab.ca/>
- ^{viii} Langevin, R. and Plamondon, A. P. 2004. *Méthode de calcul de l'aire équivalente de coupe d'un bassin versant en relation avec le débit de pointe des cours d'eau dans la forêt à dominance résineuse*. Ministère des Ressources naturelles, de la Faune et des Parcs (MRNFP) du Québec.
- ^{ix} Cummins, K.W. and M.A. Wilzbach. 2005. *The inadequacy of the fish-bearing criterion for stream management*. *Aquatic Sciences*. Vol. 67: 486–491.
- ^x New Brunswick Department of Natural Resources (NBDNR). 2004. *Forest Management Manual for New Brunswick Crown Land (Interim Manual)*.
- ^{xi} Stanley, B. and G. J. Forbes. 2005. *Watercourse and Wetland Management*. In: Betts, M. G. and G. J. Forbes (Eds.). *Forest Management Guidelines to Protect Native Biodiversity in the Greater Fundy Ecosystem*. Greater Fundy Ecosystem Research Group, Fredericton, New Brunswick.
- ^{xii} Haberstock, A. E., H. G. Nichols, M. P. DesMeules, J. Wright, J. M. Christensen, and D. H. Hudnut. 2000. *Method to Identify Effective Riparian Buffer Widths for Atlantic Salmon Habitat Protection*. *Journal of the American Water Resources Association*, Vol. 36, No.6: 1271–1286.
- ^{xiii} Stanley, B. and G. J. Forbes. 2005. *Watercourse and Wetland Management*. In: Betts, M. G. and G. J. Forbes (Eds.). *Forest Management Guidelines to Protect Native Biodiversity in the Greater Fundy Ecosystem*. Greater Fundy Ecosystem Research Group, Fredericton, New Brunswick.
- ^{xiv} Calhoun, A. J. K. and P. deMaynardier (Eds). 2008. *Science and Conservation of Vernal Pools*. CRC Press, Boca Raton, Florida.
- ^{xv} *Maine Citizen's Guide to Locating and Documenting Vernal Pools*. 1997. Maine Audubon Society. Maine Audubon Society. Falmouth, ME.
- ^{xvi} Calhoun, A. J. K. and P. deMaynadier. 2004. *Forestry habitat management guidelines for vernal pool wildlife*. MCA Technical Paper No. 6, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York.
- ^{xvii} Maine Bureau of Land and Water Quality. *Significant Wildlife Habitat: Significant Vernal Pools*. See: <http://www.state.me.us/dep///blwq/docstand/nrpa/vernalpools/index.htm>.
- ^{xviii} Luysaert, S. et al. (2008) Old-growth forests as global carbon sinks. *Nature*. 455, 213-215. 11 September 2008.