Lake Superior Action Research Conservation

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Re: EBR 011-9127 Attention: Sarah Raetsen

The Wind developers claim they will use existing logging roads (where possible)... Individuals who have access to Internet images from Mars Hill or Lowell Mountain where the tops were blown off New England's scenic mountains or those who are familiar with Prince Wind Farm where tons of blast rock raised massive roadbeds which in some instances block old roads, know the truth of the matter.



Thanks to the industrial wind development proposed for Algoma's Bow Lake area we are already seeing the effects of preemptive "logging" road work. Existing access roads have been opened all winter to permit frequent replacement of batteries necessitated by failure of the wind developer's solar-powered monitoring equipment and other project generated activities. Consequently snowbanks on roadsides have blocked ditches prompting gullying and making spring runoff carry greater amounts of sediment from roadways into watercourses.







There has been presumptive widening of the road with ill-considered ditching destined merely to relocate and possibly worsen the sedimentation into waterbodies particularly given the use of light sand as road surfacing material. This dusty sand has been scavenged from hillside deposits adjacent to the road and has involved pushing surface material and brush into vernal pools.



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Heavy traffic on these roads in wet conditions quickly degrades the roadbed into ruts gullies and washouts.





Widening the road also reduces shade trees' ability to keep the ground humid. The area will be exposed to parching by the sun and wind widely disperses small particulates into the atmosphere thus negatively affecting air quality as well as water quality.



In dry conditions this will generate huge clouds of asthma-inducing dust which coats the surrounding forest watershed. This has an adverse health effect on other road users. This unhealthy effect and environmental damage was not acknowledged in the environmental assessment report.



The area's wandering gravelly and naturally "speed-bumped" trails lead to scenic delight. While providing access they still accord Nature some rights. Careful drivers enjoy, at every turn, fresh views which may include flights of colourful Butterflies; Dragonflies shimmering along in formation, infant Grouse toddling after a hen, Sandhill Cranes' slow walk, run, fly, egg- laying Turtles, all manner of wildlife which share this forest/wetland complex. They and other road users will be in peril with increased traffic and speed.





The existing logging roads tend to wind through, what the natural heritage assessors describe as,"strongly rolling hills", rather than scaling high points. This minimizes the risk of massive hillside washouts stemming from destruction of the stabilizing root matrix which holds the highly erosion-prone gravels in place over bedrock.





There are enough disused logging roads to illustrate the fact that even moderately climbing skidder trails tend to become washouts as runoff heads downhill taking the path of least resistance; water watercourses often reroute speeding run off because roads lack the porosity of established stream beds which allows them to continue to flow below grade even in dry conditions.





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The higher the slope and the broader the road the greater volume of water diverted, the deeper the gullying, the more permanent the scar. There will be irreparable damage done to this forest/wetland environment as a result of building access roads to the highest hilltops. It is only greed energy which has motivated this, it is not a part of sustainable forestry.





The re- greening of Sudbury has shown that once soil chemistry and root ecosystems are destroyed on Shield rock even robbing-Peter-to-pay-Paul attempts to replace root mat are only marginally effective. This irreversible environmental damage has not been acknowledged in the assessment report and will for all practical purposes be impossible to mitigate. Culverts only concentrate water flow and therefore oversupply one area while depriving another of slower more consistent water supply.





Little country roads can NOT accommodate giant turbine parts, pretending they can resulted in a rollover accident on Manitoulin Island, here the steepness of the terrain makes that ploy even riskier. The infrastructure of an industrial wind farm in this even more convoluted landscape will irreversibly damage the environment even as it despoils our glacial inheritance. The story of glaciation is carved in the geology of our Canadian Shield and this landscape, with steep rock faces, sloped gravels and glacial erratics, beautifully archives our history in a way which makes it accessible and inspiring in perpetuity.





The benefit to this area of small snow covered logging roads is that they extend the tourist "season" with winter sports enthusiasts using them for access with snow machines, skis and snowshoes thus adding to the attractiveness of this region as a winter "destination". The beauty of this landscape and its value to our sustainable tourism economy is enhanced in winter.

Since Highway 17N is often closed for days at a time due to snow squall conditions and hardly a day goes by from November to March when there is not some type of snow it presents a huge risk for maintenance, repair and spill abatement should turbine collapse in gale conditions. There simply is no reliable rapid response possible in this remote location. The presence of turbines and more power lines could even mean reduced air ambulance extraction options. Keeping roads open throughout the winter would be costly in terms of fossil fuel use and labour as well as impacts on wildlife which are more readily trapped on roads by predators.

As the experience of Prince Wind Farm has shown, there is only short term gain for a few at the expense of long-term pain for many.

The complicity of loggers in the destruction of ecosystem services so highly revered by other stakeholders immediately degrades forestry workers to their historical "enemies of Nature" status. Their role in this industrialization of a recovering forest which contributes as it is to the well-being of so many highlights the hypocrisy of the term "green energy" and lowers social acceptance in a community which relies on sustainable tourism based on the great visual amenity and wilderness allure if an intact ecosystem. This destroys social cohesion, emotional well-being, and long term viability of sustainable life choices as it reintroduces a boom/bust paradigm to this area. This is not in the public's best interests.





Huge roads will themselves harden large areas, reduce the water retention capacity of the terrain and along with hilltops demolished for IWT foundations and aggregate deposits cratered for roads and cement, will drastically alter the hydrology. Less shade = higher temperature = accelerated evaporation = lower ground water levels and higher water temperature.

The difference in air temperature in forest shade and large clearings can easily be 10 degrees C. Water quantity, quality and chemistry will suffer as a result. The forest canopy perhaps already thinned due to logging will not adequately shade the delicate flora of the understory where large opening are cut, this is obvious from the change in character of the plant communities adjacent to wide roads, there is also an observed heating and drying effect in the wake of Industrial Wind Turbines which will contribute to the disruption of the local conditions which already subject the region to protracted fire ban and burning restrictions.. This environmental damage has not been acknowledged nor the hydrological effects properly considered.

Forest openings such as roads and log yarding areas are typically further enlarged by wind throw of the closest trees which have sustained root damage from heavy equipment and then secondary windfall due to the domino effect.

The precarious hold trees have in the porous gravels over bedrock is lost when neighbouring trees are uprooted. This area is subject to "micro-bursts" or sudden intense winds which in winter are responsible for the treacherous "snow streamers" blinding to unwary travellers. They are capable of felling large strips of forest on high ground and exposed areas which increases dry fuel load in lightning prone locations.

No responsible logging operation would situate extensive roads and clearings equivalent to an industrial wind farm in hilltop locations.

This is a drastic change in forest management practices not in accordance with sustainable forest management which:

- means ensuring the long-term health of forest ecosystems while balancing environmental, economic and social benefits both now and in the future
- embodies the need to conserve biodiversity
- involves clearly defining desired future forest conditions and ensuring that actions taken are compatible with maintaining or achieving those conditions during forest management planning.
- depends on the use of a widely accepted framework of sustainable forest management criteria and indicators that together describe forest sustainability.

The approved Forest Management Plan for the Algoma Forest which is supposed to be Forest Sustainability Council certified makes no mention of industrial wind turbines and the FSC has issued a directive which informs that wind farms are NOT FORESTS. The conversion of this area is NOT in keeping with their Principles and Criteria particularly:

Principle 4: Community relations and worker's rights – to maintain or enhance forest workers' and local communities' social and economic well-being.

Principle 5: Benefits from the forest – to maintain or enhance long term economic, social and environmental benefits from the forest.

Principle 6: Environmental impact – to maintain or restore the ecosystem, its biodiversity, resources and landscapes.





Prince Wind Farm has shown us the landscape reality of their roads and infrastructure which has fragmented and industrialized a forest/wetland complex where the waterfowl are now actively discouraged in their former habitat which is quite obviously not restored or enhanced nor is the long-term health of forest ecosystems, per sustainable forest management practices.

FSC Principle 6 is also stipulated in many other agreements, treaties and strategies and therefore raises issues in

Principle 1: Compliance with laws and FSC Principles – to comply with all laws, regulations, treaties, conventions and agreements, together with all FSC Principles and Criteria.

"Through the 2012 Agreement, Canada and the United States have established a shared vision and common objectives and commitments to science, governance and action that will help to restore and protect Great Lakes water quality and ecosystem health.

The Great Lakes Water Quality Agreement (GLWQA) is an agreement between Canada and the United States, first signed in 1972. It contributes to the quality of life of millions of Canadians by identifying shared priorities and coordinating actions to restore and protect the chemical, physical and biological integrity of the waters of the Great Lakes.

In amending the agreement in 2012, the Governments of Canada and the United States have committed to a shared vision of a healthy and prosperous Great Lakes region in which the waters of the Great Lakes, through their sound management, use, and enjoyment, provide benefits to present and future generations. To this end, Canada and the United States recognize the importance of taking action, resolving existing environmental issues and anticipating and **preventing** future problems.

Why is action on habitat and species important?

Objective: To provide valuable ecosystem services that will prevent the further loss of habitat and species that contribute to the protection of Great Lakes water quality.

This new annex of the Canada-United States Great Lakes Water Quality Agreement (GLWQA) was created to strengthen collaborative actions in order to contribute to the recovery of native species populations and to achieve a net gain in habitat.

The Great Lakes ecosystem provides a critical source of income, water, food and energy, key transport routes and important spaces for recreation and tourism. Thriving habitats and native fish and wildlife communities contribute to the social and economic vitality of the Great Lakes.

Unfortunately, many human activities put pressure on the ecosystem that results in the loss or degradation of some habitats and threatens the species that those ecosystems support. For example, many coastal habitats such as wetlands are degraded due to shoreline development and hardening and other stressors." http://www.ec.gc.ca/grandslacs-greatlakes/default.asp? lang=En&n=B274CBC1-1





Promises of mitigation are worth nothing here. We already have evidence of the behaviour typical of those who plunder the North. Garbage left behind, ruptured cement bag and skid discarded at Wind Project worker's base and the remains of the Natural Heritage Assessment camp strewn in the forest.





The workers who have already come here have been tragically unprepared for the ruggedness and wildness of the area. This scenic route was the last section of the Trans-Canada Highway to be completed and for good reason. Now the contractors for the wind developers have experienced bankrupting overruns and there is a generally unhealthy fiscal culture at work which will increase the potential for underbidding with substandard work and materials used throughout. The stage is set for the same old trashing of our cherished land.

"Much of the needed work is being done as stewardship of the Great Lakes ecosystem orients itself towards the goal of protecting and restoring ecosystem health. This is important in both environmental and economic terms. Fishing, hunting, bird-watching and other wildlife-related recreation continue to be enjoyed by 77 million Americans annually, with wildlife remaining a remarkable engine for economic growth and job creation, accounting for approximately \$104 billion (1.4 percent of the U.S. economy) in 1996." http://www.epa.gov/glnpo/glwqa/usreport/part4.html

The Bow Lake Wind Farm project is not in compliance with the GLWQA Annex on stated habitat and species objectives and will not contribute to the recovery of native species populations, it will further endanger our threatened and endangered bat species and for all flora and fauna it will constitute a serious loss in habitat, there is no proven environmental benefit to be had from wind farms in general and this one in particular should not be permitted because the roads alone are injurious to this ecosystem and the turbines themselves are insult added.

This project should not be approved, it is inconsistent with our 'Vision for Superior'

"We see a Lake Superior watershed...

That is a clean, safe environment where diverse life forms exist in harmony; where the environment can support and sustain economic development and where the citizens are committed to regional cooperation and personal philosophy of stewardship.".

(Developed by the "stakeholder committee" called for in the Binational Program to restore and protect the Lake Superior Basin "A Vision for Lake Superior" was, in 1992 endorsed and adopted by the Government agencies of the the Lake Superior Binational Program.)