WILDLANDS LEAGUE
A chapter of the Canadian Parks and Wilderness Society

February 9, 2018

Sasha McLeod, Special Project Officer
Ministry of the Environment and Climate Change
Environmental Approvals Branch
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario M4V 1P5
Sent by email to Sasha.McLeod@ontario.ca

Dear Ms. McLeod,

RE: Wildlands League's comments on Wataynikaneyap's Final Environmental Assessment Report

Thank you for providing us with an extension to review Wataynikaneyap's (Watay) Final Environmental Assessment Report. Please find attached our comments to aid the Minister of Environment and Climate Change in deciding whether the proposed undertaking "can proceed in the public interest while ensuring the environment is protected" (p. 1, Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario).

We support decision making that is environmentally responsible decision making and consistent with the purpose of the *Environmental Assessment Act.* We look forward to the opportunity to meet with you to discuss our submission and to assist the Minister in deciding whether the undertaking can proceed as is in the public interest while ensuring the environment is protected.

Sincerely,

Anna Baggio
Director, Conservation Planning

Trevor Hesselink
Director, Research and Policy

Submission - Wildlands League comments on Watay Power Final EA

February 9, 2018

Summary

The purpose of the Phase 1 Watay power project is to enable Phase 2 by reinforcing the grid increasing electrical supply capacity at the Pickle Lake substation ES-1. This is an important objective and one that has been supported by two Long Term Energy Plans in Ontario. Our concerns are not related to the goal of the project. We do not object to this priority.

Wildlands League, however, raises serious concerns and deficiencies with Watay's Final Environmental Assessment Report as circulated in this public consultation.

As further explained herein, it is our opinion that this Final EA Report fails to meet the appropriate level of quality expected of environmental assessment in Ontario. These deficiencies range from the overall approach used, including space for a problematic interpretation of the Terms of Reference (TOR), the criteria used to compare Alternatives, and the traceability and logic of the assessments, to key gaps and inappropriate conclusions for central sources of probable impacts for this project, including relative Caribou range impacts and Greenhouse Gas profiles for the subject corridor alternatives.

Approach and findings of this EA fundamentally flawed - This Environmental Assessment (EA) failed to limit its scope to an assessment of the relative environmental impacts of the chosen Alternatives. It is demonstrably pre-occupied with the final selection of a route that includes the considering many other criteria which go beyond the role of EA, which introduce confusion and distraction to the more focused subject assessment at hand, and severely limits and eclipses the summary EA conclusions expected.

What limited references for the use of multiple criteria are included in the TOR are vague and inconsistent, and peripheral to the aspects of the TOR that pertain to the EA. It is now inappropriate to simply defer consistency with the TOR the meaning that it has been given in the EA Act, without some further distinction of which part of the TOR has meaning under the Act.

Use of out-of-scope criteria has also negatively impacted quality of EA criteria - These extraneous criteria also patently confound the clarity, traceability, logic, and overall quality of the assessment at hand. Confusion amongst multiple criteria employed leave gaps and confusion in environmental assessment criteria, and where the proponent has elected to introduce out-of-scope criteria into the Report conclusions demonstrate an opaque weighting scheme that has no place in this particular process.

The Boreal Caribou assessment is demonstrably inadequate - The case for recovering boreal caribou has strengthened and urgency heightened since our special report in 2013. Disturbance is increasing in both the Churchill and Brightsand Ranges. Both have already exceeded the management threshold. Both have a declining population trend and evidence suggests range recession has already occurred in the ranges. Good environmental planning and consideration of the range condition means these ranges cannot tolerate further permanent alterations to habitat at the landscape scale. The proponent has not provided a rationale to

explain why Churchill, a non self-sustaining range, should absorb more permanent alteration of its habitat thereby preventing this range from moving toward achieving self-sustaining status. The proposed project along the proponent's preferred route would pose very high risk to caribou in the Churchill Range and high risk to caribou in the Kinloch Range thereby. We have identified significant flaws in the scoring system for caribou in this EA. It omits consideration of range condition; includes a scale mismatch between the type of information and the needs of caribou; and employs a reductionist approach to considering habitat, among other problems. This resulted in the environmental score of the Preferred Corridor being artificially elevated while several of the scores for the alternatives were incorrectly depressed. For these reasons we find the Final EA with respect to the handling of the assessment of caribou between EA alternatives insufficient as submitted.

The greenhouse gas profile assessment is also demonstrably inadequate - In this Environmental Assessment, we expected (a) a far more focused and comprehensive assessment of predictable environmental effects associated with land use and ongoing forest conversion, and (b) an appropriate sensitivity of such assessment, able to effectively compare the relative impacts of the alternatives being assessed, for such a key aspect of environmental impact for such a project along a highly topical and relevant theme.

It is important to note that these are selected from the very large body of material prepared in this EA - as key examples of what concerns us most. We did not have sufficient time or resources to do a comprehensive review of all the materials, so we strategically selected these themes to focus our comments. We therefore do not present these as a comprehensive review, but would suggest that the deficiencies that we have identified are not comprehensive. We would therefore also encourage the Ministry, in its review, further keep these important themes in mind during their own process.

Our detailed submissions on the above themes follow.

Summary Recommendation

It is our opinion, from the very significant deficiencies we encountered in reviewing these key themes, that this EA does not meet the purpose or quality expected of EA in Ontario, and would pose an undesirable precedent if approved. **We urge the Ministry, in its review, to recognize these deficiencies and not approve this EA as submitted**. Our complete rationale for this summary recommendation are included below.

Detailed comments

Our comments are organized into 4 sections on the following pages:

Section 1 - Environmental Assessment conclusions fundamentally flawed

Section 2 - Out-of-Scope assessment criteria negatively affects quality of EA criteria used

Section 3 - Boreal Caribou assessment is demonstrably inadequate

Section 4 - Greenhouse Gas profile assessment demonstrably inadequate

Wildlands League interest and involvement in this project

Wildlands League is a not-for-profit charity that has been working in the public interest to protect public lands and resources in Ontario since 1968, beginning with a campaign to protect Algonquin Park from development. We have extensive knowledge of land use in Ontario and history of working with government, communities, Indigenous peoples, scientists, the public and resource industries on progressive conservation initiatives. We have a specific expertise and experience with impacts of industrial development on boreal forests and wildlife that depend on them. We act in the public interest and provide a means for the public voice to be expressed as it relates to issues of conservation and natural resource use within the province. We build solutions collaboratively –- solutions that work for people, communities and the environment.

As part of our mandate, we examine and monitor new proposals for any new proposed linear disturbance (roads or transmission lines) in the boreal forest of Ontario because it is often the precursor to additional developments and opens up new areas for industrial activities which in turn have ramifications for at risk wildlife sensitive to disturbances such as forest dwelling woodland caribou.

Wildlands League has a long and demonstrated interest in this file going back to 2009 and it is appropriate to briefly recap our involvement on the file. In 2009 and 2010, we commented on the predecessor to this project, the Northwest Transmission Expansion Project. That proposed project would have eroded the remoteness of the Lake Nipigon Signature Site and severed caribou habitat in Wabikimi Provincial Park from the intact habitat further north. It is widely acknowledged that Wabakimi is not nearly big enough to support healthy caribou populations and as one scientist lamented, this new permanent disturbance “will only help to hasten the demise of caribou in this part of Ontario”. Finally, that hydro corridor was being narrowly scoped in a piecemeal and ad hoc manner, in the absence of comprehensive, big-picture planning for the region and in the absence of a cumulative impacts analysis of all developments (existing and proposed).

We were pleased to see Ontario announce the re-routing of that line along existing roads and infrastructure in northwestern Ontario in November 2010. Then Minister of Energy announced that one of the Long Term Plan’s priority projects would focus on “supplying Pickle Lake from the Ignace/Dryden area immediately”. We considered this a win-win for healthy boreal forests, caribou and the economy. This priority was reconfirmed by Ontario in 2013. In 2013, we also

published a special report assessing the impacts of new transmission line routes on threatened caribou in northwestern Ontario. That report titled *Crossing Caribou Country* is available on line at www.wildlandsleague.org.

We have submitted comments in 2013 on Watay's Final Terms of Reference and also in 2014 on Watay's modified Terms of Reference. We also met with representatives of Watay power in November 2015. Unfortunately, we did not feel that we were respectfully engaged at that meeting.

SECTION 1

1.0 Environmental Assessment conclusions fundamentally flawed

We have a range of concerns about this EA, ranging from the general approach to the manner in which several specific key environmental impacts are addressed. We are presenting these concerns in that order, with a general overall concern with the traceability and logic of how the summary findings were generated.

The conclusion of this Final EA demonstrates the evolution of a fundamental problem we had previously flagged in our 2014 comments on the TOR that was never remedied.[1] It has now further ballooned into a central flaw of this EA that can also be clearly traced back to the amended Terms of Reference (TOR). This persistent problem is the inappropriate use of out-of-scope criteria.

This out-of-scope criteria is centrally showcased in the Final EA Summary Conclusion, and then traced back through the EA development as a persistent distraction, that we continue to argue renders this EA untenable as prepared:

> *"Wataynikaneyap identified three corridors for the Project (Preliminary Proposed Corridor, Corridor Alternative Around Mishkeegogamang, and Corridor Alternative Through Mishkeegogamang) based on the outcome of a preliminary corridor routing analysis and the results of engagement. Each corridor was assessed in the Final EA Report using the environmental assessment criteria described in Table 4.1-1 and cost, constructability, and technical criteria. The Final EA Report allows Aboriginal communities, stakeholders, and regulators to understand the potential negative net effects of each corridor. However, ultimately only one corridor will be approved and selected for development (i.e., the preferred undertaking)." (Golder and Associates (2017) Final EA, Section 13.0 Conclusion. pg 13-1, emphasis added)*

The risks of lumping these activities are amply demonstrated through this subject EA. Beyond their original use to select the Alternatives, the proponent has inexplicably chosen to aggregate the financial and practical aspects of alternative corridor selection concurrently with the environmental assessment of the alternatives into the Final EA Report as well. The Final EA Report, in our opinion and understanding of the process, is intended to report on the EA between the selected alternatives. It is not the place for ancillary dialogue, which are welcome to occur beyond the covers of an EA Report.

Setting aside any more detailed critique of the EA criteria employed, the over-arching flaw in this Final EA is in its confounding weighting scheme and co-mingling of out-of-scope criteria. This Final EA Report's primary finding is advancing the preferred corridor alternative. The problem, within the covers of an EA, is how this conclusion was arrived at - and how much of it had to do with environmental impacts. Here, it was clearly not even on the weight of the subject EA criteria chosen, as the preferred alternative is actually inferior on the environmental assessment metrics chosen to other alternatives. Rather, it is apparently a result of adding two additional sets if criteria of "cost and constructability (sic)", and "technical aspects," and a weighted scoring scheme. This scheme results in an essential dilution of the assessment weight of the environmental assessment aspects from 100%, to only 50%. Reasonable rationale for presenting the findings in this manner, relative to the process at hand are not provided anywhere.

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[1] *Letter: 2014-04-28-WL comments WPower Transmission TOR, submitted to TOR process*

The TOR, as amended, is untenable and confusing and contributes to the problem

> *"The final corridor routing analysis will be based on the comparative analysis completed for each discipline of the adverse net effects (direct, indirect and cumulative), using EA criteria and indicators, as well as cost and constructability (sic), and technical criteria and indicators."* [2]

With this statement, the problematic idea of a "final corridor routing analysis" that somehow combines "three baskets" of distinct criteria, of which only one basket of criteria is in-scope to the EA, is first introduced. It is the role of this extra analysis, relative to the subject analyses of the environmental impacts of the alternatives being considered in this Environmental Assessment (EA) is at the centre of the problem. Its inclusion is at best confusing, and out of scope with the purpose of the process and as such should have been left out of the TOR.

With its persistence somehow evolving to a controlling role in the Final EA, this ancillary analysis functionally alters the findings from what seems the core EA of the document. The findings from the "EA" section of the Final EA Report are demonstrably buried in the conclusion of the Final EA Report, where it instead advances the poorer environmentally performing preferred corridor alternative (based on the chosen environmental criteria) into the summary recommendation. Such manipulation of the EA analysis and findings simply has no place in an EA, and runs contrary to the Act and its supporting policy.

What credible EA constrains its actual assessment of environmental impacts into a subordinate section that is then counter-assessed with non-environmental criteria in its conclusion?

It is noteworthy that "EA criteria and indicators" are kept distinct and severable. This is interesting for two reasons: (a) it (appropriately) supports the notion that the other criteria are not EA criteria, and (b) does not explicitly indicate here that this final routing analysis is a functional component of the EA being designed. Later in this TOR though, this desired outcome of including a final corridor routing as a product of the EA evolves further, and later still, this lumping together of these "three baskets" of criteria morphs somehow into an integral part of the Final EA as prepared, and its core findings.

The problem is compound:

(a) **Environmental criteria are the only appropriate primary assessment filters for the EA.** This is how the EA process is designed - to explicitly focus on comparing the environmental performance of the Alternatives; and

(b) **In EA the use of additional criteria is limited for alternative development.** By contrast, the only appropriate place associated with the EA for considering the cost and constructibility and technical criteria of the alternatives is in the preliminary decision-making around which alternatives are to be considered in the EA (which occurred) - to ensure that all the alternatives are at least reasonably practical; so therefore:

(c) **The central role of the Final Routing Analysis, which relies upon the two additional "baskets" of criteria, in the submitted Final EA is entirely out of scope.** While it is reasonable that some follow-up process for how to incorporate the findings of the EA into other subsequent decision-making will no doubt be necessary for the project, it is clear from

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[2] *amended TOR, p. 14*

Ontario's EA scheme read together that this does not fall in the scope of the EA process. The TOR for the EA is not the place to be outlining how an ancillary decision-making process is to be undertaken, nor including factors that distract from the purpose of carefully comparing the environmental effects of the selected Alternatives; and further

(d) **The TOR fails to clearly distinguish the role of this Final Routing Analysis, or rationalize its use relative to the requirements at hand.** The TOR is not even clear on the supposed role of this out-of-scope approach, as it (a) seems to thread its way through the document in an inconsistent, and bolt-on fashion that (b) sometimes reads like a reference to another parallel or subsequent process, and only sometimes alluding to a role in this EA, all the while (c) avoiding explicit rationale for why this approach is considered a sound way of carrying out and concluding an EA relative to the requirements.

Tracing the multiple-criteria thread through the amended TOR:

No mention of multiple criteria for the EA in description of how the EA is to be prepared
This main section of the TOR for an Environmental Assessment (How the Environmental Assessment is to be prepared) lists all of the environmental studies to be carried out in the EA, and discusses all the core aspects of the assessment including baseline, geographic scope etc… Yet, it contains no mention of arraying the cost and constructibility and technical feasibility against the environmental criteria, nor of the Final Corridor Routing Assessment weighing scheme that was used to conclude the final EA.

The only indirect reference to where these additional criteria may have had a role is that a description and statement of the rationale used for selecting the alternative methods included in the EA would be provided. Notably, this requires a documentation inclusion:

> *"In summary, the EA for this proposed Project will consist of: a description of the purpose of the undertaking; a description of and a statement of the rationale for: the undertaking; the alternative methods of carrying out the undertaking; …"* [3]

Proponent demonstrates an understanding of what the purpose of the EA is
In Section 3.3.1, the proponent seems to clearly understand what EA is for. The challenge to the reader of the Final EA, and the challenge in front of the Minister at this time, is how to reconcile this commonly understood purpose with what transpired in arriving at the conclusions of the Final EA:

> *"Environmental assessment (EA) is a planning and environmental management tool that is used to predict, analyze and interpret the effects of a project on the environment and to identify the impact management measures that will be used to avoid or otherwise mitigate net effects. An EA is a process through which the potential environmental effects of a proposed project or set of activities can be predicted and managed in advance of carrying out the project. Through the process, the existing environmental features of the lands that will support the project are described in detail, possible environmental effects of the project are described, impact management measures are proposed to mitigate the possible environmental effects, and an assessment is made as to whether the project will cause net effects despite implementation of the identified impact management measures."* [4]

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[3] *Amended TOR, p. 23*

[4] *Final EA Report. p. 25*

Inappropriately included in the TOR under Section 5.0 - Project Description
The "cost and constructability (sic) and "technical" criteria next show up under the Project Description (Section 5.0), where it again positions them alongside the EA criteria for the purposes of a "Final Corridor Routing Analysis". If this were an additional analysis, under separate cover, it would have no place in the TOR for the EA. As a reader, **if** this was a central element of the EA, it is difficult to understand why this detailing of methodology in the EA would be revealed in the Project Description and not the How the Environmental Assessment is to be prepared. So, again, it could reasonably be interpreted as a reference to a parallel or subsequent process.

> *"The final corridor routing analysis will be based on the comparative analysis completed for each discipline of the adverse net effects (direct, indirect and cumulative), using EA criteria and indicators, as well as cost and constructability (sic), and technical criteria and indicators."* [5]

Not made clear until Section 6.0 of the TOR that the proponent intends for the EA itself to host the competing weight of the extra criteria.
It is not until Section 6.0 (Alternative Methods of Carrying out the Undertaking) that it is apparent that the proponent's intent is to (a) include a final corridor routing analysis in the EA, and (b) that it will continue to use the three basket weighing scheme (previously used in its selection of alternatives), for determining a final corridor within the Final EA:

> *"Wataynikaneyap is addressing corridor alternatives in the EA Report. Appendix B: Preliminary Corridor Routing Analysis presents and discusses the preliminary alternatives analysis for the 2-km-wide corridors. As a result of this analysis, a preliminary proposed corridor, C-D-E-G, and two corridor alternatives, H-K-I-G and H-K-J-G, were identified for the EA and a final corridor routing analysis to identify a preferred corridor will be completed **in** the EA Report."* [6]

> *"A final corridor routing analysis will be completed in the EA Report that builds upon the preliminary corridor routing analysis, and will be based on the comparative evaluation for each discipline of the adverse net effects (direct, indirect and cumulative), using EA criteria and indicators, as well as cost and constructability (sic) and technical criteria and indicators."* [7]

This approach defies the purpose of the TOR under the EA Act and policy. It is not reasonable for the TOR, as required under the process, to include both specifications for how the EA is to be undertaken, as well as a scheme for how to summarily alter its findings.

This is a particularly important tension that has been allowed to creep through this particular EA, apparently unchecked. In our opinion, while it is highly problematic as prepared and approved, it simply shifts more weight to this current decision on the Final EA approval. Importantly, as the TOR (a) maintains EA elements distinctly, (b) includes references of the use of multiple-criteria as both ancillary and prerequisite criteria, and only (c) peripherally introduces the inclusion of an out-of-scope Final Corridor Routing Analysis as a component of the Final EA, we highlight that the TOR is an inconsistent and partially out-of-scope referent for the Final EA. This means that it

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5 *Amended TOR. p. 30-31, emphasis added.*

6 *Amended TOR, pg 41, emphasis added*

7 *ibid, pg 41-42, emphasis added*

is inappropriate to simply defer consistency with the TOR the meaning that it has been given in the EA Act, without further distinction of which part of the TOR has meaning under the Act.

This is a very unfortunate position to be in at this late stage of this EA. It makes the decision at hand more complex, and makes stakeholders such as us - who raised this caution in 2014 - feel unheard and insignificant to the process.

Technical, cost and constructibility criteria used for Alternative development

Section 6.2.2.1 of the TOR (Identification of Transmission Corridor Alternatives and Options), states that Technical, and Cost and Constructibility criteria were previously used to identify Alternatives to be considered in the EA. This is the appropriate role - and limit - of such criteria in the EA process.

> *"The proposed corridor alternatives considered by Wataynikaneyap for the Project are identified below and illustrated in Figure 7. The proposed corridor alternatives were identified primarily on technical, and cost and constructability (sic) criteria."* [8]

The section continues with a discussion of the discounting of two transmission line options, but confirms that "the remaining corridor alternatives were determined to be technically and economically feasible and were carried forward for analysis" (emphasis added), which fits the understanding provided in the Code of Practice that such evaluations are distinct from the purposes of the EA.

On page 53 of the TOR, the "three basket" criteria and weighing scheme are further described, in association with a description of the "Preliminary Corridor Assessment" and how the Alternatives were arrived at. But again it does not indicate here that this scheme was intended to be carried into the process of the final EA, but confirms that these criteria had already been relied upon to screen the Alternatives to be included in the Final EA.

> *"A category weighting was applied to each of the cost and constructability (sic), environmental, land use and technical categories. The rationale for each category weighting was based on the relative magnitude of each category that contributes to the feasibility and potential effects of the proposed Project and professional judgement, as well as input received from stakeholders and Aboriginal participants during engagement activities on the Draft ToR. Based on the rationale, the cost and constructability (sic) category is weighted 30%, the environmental and land use categories are each weighted 25%, and the technical category is weighted 20%.*
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> *In addition to the category weightings, a rank from 1 to 3 was assigned to each criterion to denote relative importance. In general, criteria assigned a rank of 3 are considered to be the high relative importance among and/or have a high potential for effects. The individual criterion ranking was also based on professional judgement, as well as stakeholder and Aboriginal participant input received during engagement activities on the Draft ToR. More details on the individual category weightings and criterion rankings are provided in Appendix B: Preliminary Corridor Routing Analysis, Attachment 2: Criteria Ranking and Category Weighting Rationale."* [9]

Determining Alternatives is a separate prerequisite task

The purpose of an environmental assessment is to assess the relative environmental impacts of the project alternatives (including doing nothing) against environmental criteria. It is not intended to, nor is it reasonable to, also concurrently assess technical and financial viability alongside

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8 *Amended TOR, p. 42, emphasis added*

9 *ibid, p. 53, emphasis added*

those criteria, as it would predictably confound the purpose of environmental focus. While these are relevant to choosing alternatives to include, they are separate, prerequisite activities.

In the Code of Practice, it is made clear that the selection of alternatives requires separate pre-consideration, and intended to occur before comparing the environmental impacts of each alternative in the Environmental Assessment itself. For example, in section 4.2.2 it notes the requirements for adding additional alternatives. Of particular note is the clear indication that "technical feasibility" and "financial/economic viability" are specifically identified among these prerequisite criteria:

> *"In choosing any further alternatives, the proponent should, at a minimum, consider the following:*
> *Do they provide a viable solution to the problem or opportunity to be addressed?*
> *Are they proven technologies?*
> *Are they **technically** feasible?*
> *Are they consistent with other relevant planning objectives, policies and decisions (for example, Official Plan, Provincial Policy Statement, Growth Plans under the Places to Grow Act, 2005)? Are they consistent with provincial government priority initiatives (for example, waste diversion, energy efficiency, source water protection, reducing greenhouse gas emissions)?*
> *Could they affect any sensitive environmental features (for example, provincially significant wetlands, prime agricultural area, endangered species habitat, floodplains, archaeological resources, built heritage)?*
> *Are they practical, **financially realistic and economically viable**?*
> *Are they within the ability of the proponent to implement?*
> *Can they be implemented within the defined study area?*
> *Are they appropriate to the proponent doing the study?*
> *Are they able to meet the purpose of the Environmental Assessment Act?"* [10]

In this respect, the screening of alternatives for such things as technical and economic feasibility is a separate and prerequisite activity, for this specific purpose of considering which alternatives to assess in the EA.

TOR also suggests pre-EA presentation of Final Corridor Routing Analysis results - there are references in the amended TOR that indicate stakeholder engagement in Round 3 is to include the presentation of the results of a Final Corridor Routing Analysis (eg. TOR, pg 96). To some readers this could reasonably be referencing the "Final Corridor Routing Analysis" as a refinement of the "Preliminary Corridor Routing Analysis", which is the tool that considers which Alternatives to assess in the EA. To the extent that this could represent a simple iteration of the analysis to determine the routes to be considered in the EA, this seems reasonable.

Yet, other references problematically suggest different roles for what this Analysis is to the EA. where the multiple sets of "cost and constructibility (sic)" and "technical" criteria are considered relative to the EA criteria feed into the core problem at hand in the Final EA.

Overall, the "Final Corridor Routing Analysis" is an unfortunate, poorly-referenced, out-of-scope, confusing bolt-on module to this EA - Given the fact that no Alternatives were included in this EA that did not generally satisfy these ancillary criteria, it remains unclear why these criteria were further carried into the Final EA in the manner evidenced there. For example on page 53, with a stark "and", the TOR highlights the apparent 'bolt-on' role of the "final corridor routing analysis".

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[10] *MOECC. Code of Practice, S. 4.2.2, emphasis added*

To the extent that this Final Corridor Routing Analysis was intended to be a the simple, intuitive refinement of the Preliminary Corridor Analysis used to develop the alternatives to be included in the EA, it would not necessarily be a problem - as long as the refinement was limited to which corridors were to be included in the EA. Unfortunately, a significant confusion as to the role of this particular analysis with respect to its role in this EA is resoundingly evident.

And, the most significant traceability problem in this EA, is that nowhere is it explained why these three baskets of criteria are employed together after the task of selecting alternatives for the EA was completed, or how this is considered appropriate in a process intended to meet the purpose and requirements of an EA in Ontario.

> *"Then each corridor alternative was evaluated against each other to identify the preliminary proposed corridor and the corridor alternatives that will be subject to an EA **and** a final corridor routing analysis."* [11]

Underlining this critical shortcoming, the proponent states in the Final EA that the Final Corridor Routing Analysis is responsive to the approved TOR, indicating a flawed TOR, or its interpretation. We see this as highly problematic to the integrity of this process.

> *"As per the approved Amended ToR, Wataynikaneyap has completed a final corridor routing analysis for the preliminary proposed corridor, the corridor alternative around Mishkeegogamang, and the corridor alternative through Mishkeegogamang. This final corridor routing analysis was based on EA, cost and constructability and technical criteria and indicators."*[12]

Approach used in Final EA Report varies with and is more distinct than the TOR about its intention to employ multiple criteria into the actual EA - In Section 4.9, the Final Corridor Routing Analysis is included in a manner that suggests that it is somehow an integral component of evaluating the Advantages and Disadvantages, as a part of evaluating the potential environmental effects of alternatives under the EA itself:

> *"The EA planning process consists of a systematic evaluation of the potential environmental effects of alternatives, and weighting the advantages and disadvantages of alternatives. Under subsections 6(2)(d) of the Environmental Assessment Act (Government of Ontario 2003), an evaluation of the advantages and disadvantages to the environment of the undertaking and alternatives must be included in the environmental assessment. As identified in the approved Amended ToR, this EA includes an assessment of the "alternative methods" and the "do nothing" alternative, and does not include an assessment of "alternatives to" the Project. As per the approved Amended ToR, Wataynikaneyap has completed a final corridor routing analysis for the preliminary proposed corridor, the corridor alternative around Mishkeegogamang, and the corridor alternative through Mishkeegogamang. This final*

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[11] *Amended TOR, p. 53. Process for Evaluation of Corridor Options, emphasis added*

[12] *Final EA, pg 4-30, emphasis added*

corridor routing analysis was based on EA, cost and constructability and technical criteria and indicators. Section 13.0 provides the method and results of this analysis."[13]

In this tortuously ill-defined manner, patently out-of-scope criteria have managed to find their way into a very core aspect of the EA, with the demonstrable ability to overturn the the weight of the in-scope criteria used in the EA. It is of particular note that this apparent role in counter-weighting the EA criteria within a core aspect of the EA was nowhere described in the TOR.

Conclusion 1

The approach to this EA as submitted is deficient for meeting the purposes of the Act, as it fails to limit its scope to an assessment of the relative environmental impacts of the chosen Alternatives. Through the "Final Corridor Routing Analysis" this EA introduces two additional "baskets" of criteria. These additional criteria are apparently present for reasons outside that necessary for the relative assessment of how the alternatives might best provide for the protection, conservation and wise management in Ontario of the environment. Further, in the manner employed, they function to amend the findings of the EA criteria alone to another conclusion.

It is this persistent pre-occupation with the "final" selection of a route that necessarily includes the considering many other criteria which go beyond the role of EA. These considerations are not unnecessary to the project, but simply have no place in an EA. Here, they introduce confusion and distraction to the more focused subject assessment at hand, and severely limits and eclipses the summary EA conclusions expected.

It is also unfortunate that the amended TOR was not able to more clearly focus these efforts, as how these additional criteria are addressed in the approved TOR, including establishing their role and rationale relative to the EA process is not clear. What limited references are included are vague and inconsistent, and somehow peripheral to the aspects of the EA that pertain to the EA. While this should have been remedied at the TOR level, it is now a problem at the EA level, and makes the TOR as a reference highly problematic.

As the TOR (a) maintains the actual EA elements distinctly, (b) references the use of multiple criteria as both ancillary and prerequisite criteria, and only (c) peripherally introduces the inclusion of an out-of-scope Final Corridor Routing Analysis as a component of the Final EA, we highlight that the TOR is an inconsistent and partially out-of-scope referent for the Final EA. Conversely, the Final EA as submitted takes liberties with the role of the Final Corridor Routing Analysis that are not similarly detailed in the TOR, despite assurances by the proponent that they have prepared the EA in a manner consistent with the TOR. To us, this current situation is untenable, as it creates a circumstance where the TOR cannot be relied upon for the role it is normally provided for in the EA Act, without some further distinction of which parts of the TOR has meaning under the Act.

It is our understanding that an EA is intended to focus on criteria designed to understand the relative environmental impacts of the chosen Alternatives, and constrain its summary findings to that central purpose. It is our opinion that this EA as submitted contains critical deficiencies. It

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[13] *Final EA Report, p. 4-30*

(a) includes extraneous criteria that go substantially beyond and confound those necessary for the purpose of the Act; which (b) are not explicitly detailed or rationalized in the TOR as an integral element of the EA, which (c), patently confounds the clarity, traceability, logic, and overall quality of the EA at hand; and that (d) if approved, would also set a dangerous precedent that would weaken the focused role of EA in Ontario.

Recommendation 1

It is our recommendation that this Final EA as currently submitted be considered deficient in overall approach due to the substantial foundational problems of relying upon out-of-scope criteria in its summary conclusions as described above, and not be approved.

SECTION 2

2.0 Out-of-Scope criteria distracts from and negatively affects quality of EA criteria employed

The hybrid criteria and weighting scheme used to compare the alternatives in the conclusion of this EA not only contains out-of scope criteria, but also proves demonstrably distracting to the purpose of environmental assessment, where the competing criteria have weakened the design, focus, comprehensiveness, and application of the in-scope EA criteria as well.

Too many of the selected EA criteria are confounded by pervasive operational metrics that a successful EA would have already filtered the alternatives for. Environmental impacts are missed or downplayed through metrics which are assessed under a competing set of criteria, or blurred across multiple criteria. The result is a confused melting pot of concurrent discussion that all too often muddies the ability of the EA to focus on the priority of simply evaluating the alternatives for their relative environmental impacts.

Some key examples follow, including (1) access roads, (2) water crossings, (3) water power, and (4) land use interactions.

2.1 Example: Assessment of access road impacts

Weight assigned to the cost of roads, but not potential environmental impacts - For example, the length of the access roads required to build and service them is significantly different between the alternatives, representing a dramatically larger overall footprint for the preferred corridor. This is not adequately addressed in the environmental assessment portion of this EA. Instead, from the perspective of the Final Corridor Routing Analysis conclusions the lengths of the routes, and their access roads required are only explicitly a focus of the cost/ constructibility set of criteria.

> *"The total access road lengths (existing, upgraded, and new) for the Preliminary Proposed Corridor, and the corridor alternatives around and through Mishkeegogamang are 343 km (85.6 km new), 180 km (32.0 km new), and 158 km (14.9 km new) respectively. The Corridor Alternative Through Mishkeegogamang has the shortest access road requirements according to the current Project design and was assigned the criteria score of 1 because it would have the least effect on cost and constructability of the Project based on the amount of access roads required, as well as the least disturbance to traffic from construction." (Final EA, pg 3-54)*

For the purposes of this particular project and the EA at hand, it is the environmental impacts that these access roads are likely to pose merit explicit consideration, and weight. While the amount of traffic disturbance mentioned is arguably in-scope, the weight of cost and constructibility in this discussion are not. These additional costs for access roads to get to the route farther from existing roads is a separate, and compound reality atop the environmental costs of doing so. What is critical here, is that the environmental impacts are clearly weighed between the alternatives, without such distraction.

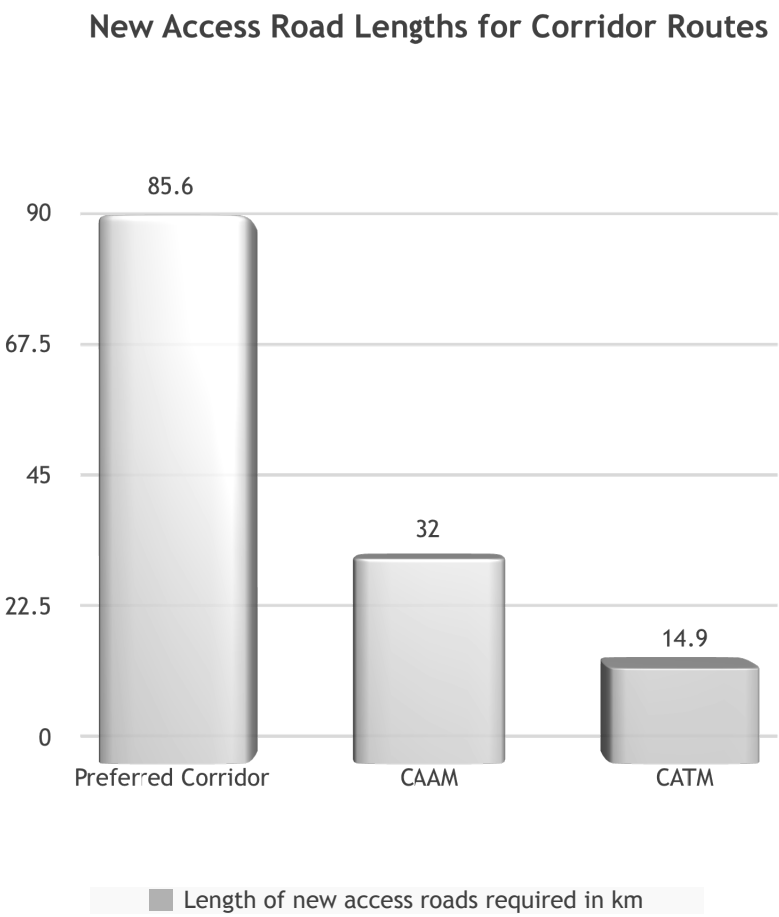

Figure 4: Length of new access roads required (km).

Differential scoring unreasonable - in the Final Corridor Routing Analysis as designed and scored, it is not clear why the Corridor Alternative around Mishkeegogamang (CAAM) is assigned the same 0 score that the Preferred Corridor did, when its length of access roads is 163km less than the Preferred Corridor, and only 20km more than the Corridor Alternative through Miskeegogamang (CATM) that received the full score of 1. Examples such as these cause the reader to not only question the weighting scheme as designed, but also as reasonably applied. Rationale behind such aspects of the weighting scheme used are not adequately provided.

Ill-conceived assessment criteria - The rationale for both "route length" and "access roads" criteria under the "cost and constructability (sic)" set of criteria, states that they would have a *"potential effect on cost and constructability (sic) of the project, as well as land disturbance due to land clearing."*[14]

These are both clear examples of where the EA as designed and employed confounds the purpose of the EA to compare the environmental impacts between alternatives, as (a) the

[14] *Final EA, Table 13.1-4, emphasis added*

second, environmental impact, idea of these repeated statement is clearly subservient to the first idea of cost, and yet (b) they are co-mingled and confused, and (c) there are no clear mirror assessments that can be traced in the EA criteria for the land-clearing footprint associated with each of the route footprint and access road footprint for each of the alternatives being considered. The closest analogue is some unspecified contributions to impacts on either or both of upland or riparian ecosystems. But the relative contributions of each project footprint (ROW, access roads, etc…) of each Alternative, and for each of these ecosystem criteria, are not traceable through this EA. This is a notable gap given that the proponent acknowledges these primary vectors of project impact:

"Predicted loss to upland ecosystems is primarily associated with the corridor ROW and new permanent access roads creating a more fragmented distribution of uplands."[15]

Were the EA to focus on in-scope criteria, these predictable and important relative impacts of a forest-clearing project like the proposal would likely be more obtainable to a reader looking for a detailed assessment of these subject corridor alternatives. See also our comments on greenhouse gas and climate change assessment pertaining to land clearing associated with access roads.

2.2 Example: Water crossings

Lack of assessment traceability between alternatives - The number of water-crossings required by each alternative are a clear surrogate for potential environmental impact. The number and nature of crossings that are likely for each alternative constitute important information to comparing likely relative impacts. While the discussion of potential surface water impacts and mitigation measures was reasonably detailed, it was not clear from the Final EA document how the relative impacts of the alternatives being assessed were finally evaluated.

Lack of rationale in weighting criteria design - Through the "cost and constructability (sic)" set of criteria used, it is made clear that the number of 'large' and 'very large' crossings is important because of the cost of more expensive structures. This is marked with a full 2 scoring points assigned to each of these categories - a apparent redundancy that is not clearly rationalized in the context of relative importance of all criteria used. This is a problem in an EA, as effectively minimizing riparian disturbance using a preventative strategy likely entails avoiding the aggregate number of crossings, including the more numerous smaller crossings. This may well involve considering fewer overall crossings that might include larger ones instead. The approach used apparently places more emphasis on cost, and effectively limits such options.

Further, trying to compare these criteria to the discussion is challenged by the manner in which this EA compartmentalizes these aspects: the number and type of crossings are identified in Table 5.1-5, but unfortunately the categories of crossings do not specifically identify which crossings are considered 'large' and 'very large'.

What is very evident however, is the dramatic difference in the overall number of water crossings predicted for the preferred corridor, particularly those that are associated with road access. Twice as many road based water crossings are identified for this option in this table. This should be a clear finding with appropriate discussion of the potential risks and pressures that this might present relative to other Alternatives.

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[15] *Final EA, pg 13-10*

Lack of specificity in environmental criteria design - By contrast, we find it unreasonable that, within the set of environmental criteria, the number of water crossings is not made explicit. In the text of the discussion, these crossings are clearly a significant source of potential environmental impacts. Testimony to this is the primary mitigation measure offered by the proponent for avoiding the impacts of water crossings: *"minimizing the number of waterbody crossings required, to the extent possible, by appropriate alignment of the preferred corridor ROW and access roads."*[16] Yet this measure is not awarded any weight in the Final Corridor Routing Assessment scheme.

Unreasonably broad surrogate assessment employed - Assessment of surface water impacts was undertaken to evaluate the project footprint for each Alternative as a percentage of the catchments impacted to selected Assessment Points in the affected watersheds. While this is one useful metric, it is a very crude surrogate for the long list of potential impacts included in the discussion. Determining the riparian area of all crossings to a minimum impact depth would arguably capture better the likely risk interface of most project impacts better, for example. In any case, we would expect to see a broader spectrum of assessments to better relatively evaluate the various potential impacts of the alternative corridors.

2.3 Example: Water-power within 30km

Inclusion of potential up-sides without consideration of potential down-sides - In the weighting scheme used in this EA, this "technical criteria" (see Table 13.1-4) provides weight to speculative economic opportunities, without addressing potential environmental impacts. In a more greenhouse gas constrained world, for example, any flooding or impoundment can have dramatic carbon and methane profiles that must be considered, as well as mercury methylation. It has been argued that this traditionally "green" energy source is not as desirable as it once was for these reasons. Ironically, the potential induced environmental effects of the line as a catalyst for such induced development, as well as their cumulative effects, would be in-scope to assess, while this high-level economic 'gravy' factor is out-of-scope under this cover.

Unfortunate relative weighting of speculative vs likely impacts - Additionally, it is inappropriate to include such speculative criteria when it has the effect of providing counter-weight to known environmental impacts, using the scheme presented in the Final EA. For example, this speculative criteria is assigned the same score as the entire category of upland ecosystem impacts, and provided the opportunity to counter-act it through the mechanism of the Final Corridor Routing Analysis scheme employed in this EA.

2.4 Example: Land-use weighting

Inclusion of multiple criteria for similar ideas - Another example of the problematic weighting system employed is the inclusion of 3 separate land-use criteria: Crown Land, First Nation Reserve, and Private Land. They are each given a separate 2 point weighting for essentially the same stated criteria. All three land use designations bring "complexity" that might present potential challenges and delays. All three corridors considered will necessarily dominantly cross Crown land - that all three corridor alternatives score the same points for the Crown land criteria hardly needed to be assessed. Including this criteria seems redundant and inefficient to begin with. But what is also odd about the weighting is that all 3 corridors were assigned the same 2

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[16] *Final EA Report, p. 5-62*

points for this criteria, while the alternatives that impacted the other two land uses had points removed.

What is also important is that, if a corridor is not crossing a first nation reserve or private land then it is crossing Crown land. In this sense, and also that the preferred corridor crosses more Crown land than the other due to its longer line length, and introduces a much larger footprint due to its dramatically longer access roads. Together, these factors cast doubt that the crown complexity of the preferred option will be as straight forward as the two alternatives.

That the other two land use criteria will be as significant in “complexity” weight - to the tune of 2 points per item also seems questionable.

By arraying the weighting in this manner it seems like a strange double-counting and a heavy scoring weight - particularly given the speculative nature of the criteria (relative to experience in hard costs of water crossings for example). The point is that this triad of land use criteria, blurred across a fourth shared criteria: “relative cost” (see below) seems inordinately inefficient and overweighted to the criteria. It suggests criteria design more responsive to a desired outcome, than to assessment.

Overlap weighting to an unspecified degree with another criteria - The EA notes a splitting weighting emphasis between the additional criteria of Relative Cost and each of the three land use criteria. This is a further source of opacity in this assessment, suggesting the likely potential for double-counting further out-of-scope criteria, and lending additional counter-weight against the in-scope criteria of the EA. This is not unique, as a double-counting of Relative Cost is also acknowledged in several other criteria in this basket, with no further explanation or breakdown of this split traceable, other than the scoring weights assigned.

Distraction from EA aspects - Additionally (and in keeping with the emergent pattern) this out-of-scope focus distracts from a more appropriate discussion in an EA of the actual environmental impacts that might be exclusive to these land-use impacts, such as what the effects of displaced forestry might contribute for example, or other comparable social or economic disruption for the other designations.

Conclusion 2

In addition to (and particularly in combination with) relying on the two extra sets of out-of-scope criteria, this Final EA does not provide the reader with confidence that the potential environmental impacts of the alternatives being assessed in this EA have been accorded the focused attention that the EA process requires. Instead, the process suggests a design to generate a desired outcome, more than providing a thoughtful assessment of the relative environmental impacts of the alternatives at hand.

Instead, as demonstrated in the above examples, poor and unclear criteria choices, and an ill-focused process have led to substantial deficiencies in the integrity of the EA criteria and conclusions as submitted. In our opinion, this deficient overall treatment of assessment criteria and the overall relative evaluation of the chosen alternatives also include deficiencies in their traceability and logic which also extends to the rationale of their relative weighting, and are also notably affected by the relationship of these criteria to the out-of-scope criteria employed - all contrary to the purpose of the Act, and the expectations provided in policy.

Recommendation 2

It is our recommendation that the EA criteria and relative comparison of alternatives to the criteria included in the Final EA as submitted be considered deficient and not be approved by the Minister.

SECTION 3

3.0 - Boreal Caribou

The case for recovering boreal caribou has only strengthened and the urgency for positive action heightened since our report in 2013

Almost five years ago, we published a report titled *Crossing Caribou Country: A special report assessing the impacts of new transmission line routes on threatened caribou in NW Ontario.* Given the best information available at the time, we conducted our assessment and found that of six proposed transmission routes to supply energy from Ignace/Dryden to Pickle Lake, only one would pose the least risk to boreal caribou. This is the option beginning in Ignace and treading along the same corridor as Highway 599, an existing permanent road. We offered eight conclusions. One of the main ones was:

> *If a transmission line must be built, avoiding further fragmentation of intact habitat should be the priority. The option beginning in Ignace and treading along the same corridor as Highway 599 (and excluding the Osnaburgh bypass) would not generate any additional human caused disturbance footprint in the Brightsand Range and only negligibly in the Far North and Churchill Ranges. This option should be prioritized for consideration by Ontario.*[17]

In the intervening years, information and knowledge regarding the state of boreal caribou populations in Ontario have improved considerably. Back then, we had disturbance data from the federal government and Wildlands League own assessment of disturbance using provincial data. We had no information on population condition and the MNR's own assessment on disturbance was not yet published. Today we have MNR disturbance data for these ranges covering 2011-2015 and, importantly, population condition data has been made publicly available. Most recent information, however, is from 2011-2012.

As part of responsible environmental decision-making with respect to threatened species boreal caribou, we support the requirement that the proponent must begin its assessment with best available information on range condition. Range condition "refers to the likelihood that a range is able to support a self-sustaining caribou population."[18] It is informed by four lines of evidence relating to population state (size and trend) and habitat state (disturbance, amount and arrangement of habitat).[19] Population trend specifically,

> *is an indicator of self-sustainability and current science indicates that the trend is reflective of the state of the habitat within a range (i.e., amount of cumulative*

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17 *Wildlands League 2013. Crossing Caribou Country*

18 *MNRF, Ontario Range Policy, p. 2*

19 *ibid, p. 8*

disturbance, and habitat amount and arrangement). ***It is the population trend that ultimately influences the classification of range condition****"*[20]

Our 2013 report examined the state of the ranges and we expect all proponents to examine and report on range condition as well. Range condition is required by the province through its Range Management Policy, General Habitat Description for the Forest-dwelling Woodland Caribou (*Rangifer tarandus caribou*) and is consistent with federal guidance from the 2012 Recovery Strategy for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal Population, in Canada. And it was part of the instructions MNRF provided for Watay power in its letter to Mr. Eade on April 14, 2016. Range Condition is the first indicator of Caribou Habitat and was the first of 13 criteria provided by the MNRF on boreal caribou. Also included were Cumulative Disturbance at the Range Level (Indicator #2) and Alignment with Existing or Proposed Disturbance (Indicator #3) and so on.

MNRF was clear in its letter, "[w]here alternative methods affect different caribou ranges, the range condition will be used as a criterion in the comparative assessment of those methods."[21]

Not only did this not occur but it appears the proponent rejected it by saying it was "not directly linked to the proposed approach."[22] We saw that the proponent did describe range condition under its narrative in the Final EA, but when it came to criteria scoring, range condition was noticeably absent (see Table 13.1-8).

This rejection is just one example of how the approach to caribou in the Final EA is flawed and is one of several deficiencies. It has severe repercussions for the entire environmental assessment as it misleads the reader into thinking the proponent can focus on pieces of habitat without considering the whole, or the condition of ranges. It also means from a big picture perspective the proponent's scoring skirted the question of range condition and avoided the thorny question of how current range condition would inform the relative tolerance of the range to alteration and how it would inform the discussion of the risk of the proposed undertaking to caribou and its habitat.[23]

Watay's rejection of a range condition criterion is inconsistent with provincial guidance, federal guidance and published scientific literature.

As we also discuss later in the submission, the proponent's approach is to break the habitat into pieces and then measure how the undertaking affected those pieces <u>while not accounting for range condition</u>. It also fails to properly assess and account for landscape disturbance in its scoring. This is inconsistent with best available science and the province's approach which is predicated on recovering caribou where land use decisions are to be based on, [t]he status of the range condition, the application of the General Habitat Description and activity details

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[20] *ibid, p. 4, emphasis added*

[21] *April 14, 2016 letter from MNRF to Mr. Eade, p. 9*

[22] *Allan Eade Memo to Gillianne Marshall of MNRF dated July 7, 2016, p. 3*

[23] *April 14, 2016 letter from MNRF. p. 11*

associated with a proposal."[24] Moreover, the federal critical habitat framework for boreal caribou was deliberately designed as a rejection of traditional reductionist approaches to habitat achieve species' recovery.[25]

3.1 Range Condition in Three Boreal Caribou Ranges Intersected by the Preliminary Proposed Corridor and Corridor Alternatives

Up to three boreal caribou ranges are intersected by the proposed corridor routes: Churchill, Brightsand and Kinloch. Kinloch is one of seven new far north ranges. Ontario delineated ranges in the far north and published them in 2014. We see this as a positive move because now the effects of proposed developments can be properly assessed at a scale meaningful to caribou and won't be masked by one very, very large far north range.

Churchill Range

Below we describe disturbance trend in the Churchill Range. The Preferred Preliminary Corridor would introduce a new major permanent corridor to this range. The two corridor alternatives also intersect this range.

The disturbance data show high level of disturbance in the range (44.1%) and an increasing disturbance trend. Anthropogenic disturbance increased in the Churchill range by 100,238 ha from 2011-2015. The Churchill Range's disturbance level has increased beyond the 35% management threshold or 65% undisturbed. That level of disturbance in turn has a 60% probability of a caribou population being self-sustaining.[26]

The population trend data is declining as shown the Integrated Range Assessment for the Churchill Range. This range has poor calf recruitment and historical observations suggest the range recession has occurred or may be occurring in the southern portion of the range. MNRF states there are other long term indicators that range recession has occurred in this range and some areas of the range are no longer occupied by caribou.[27]

The evidence accumulated since our 2013 special report is compelling. We now know the range is facing a situation that is direr than in 2013. This range is not self-sustaining and the trends are not good.

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[24] *MNRF 2014, p. 9*

[25] *personal comm. Dr. Justina Ray 2017. Dr. Justina Ray served as a member of the science advisory group on two critical habitat reports by Environment Canada: Scientific Review for the Identification of Critical Habitat for Woodland Caribou (Rangifer tarandus caribou), Boreal population in Canada in 2008 and the update, published in 2011.*

[26] *Environment Canada 2012. Federal Recovery Strategy for Boreal Caribou*

[27] *MNRF 2014. Integrated Range Assessment for the Churchill Range, p. ix, 19, 65*

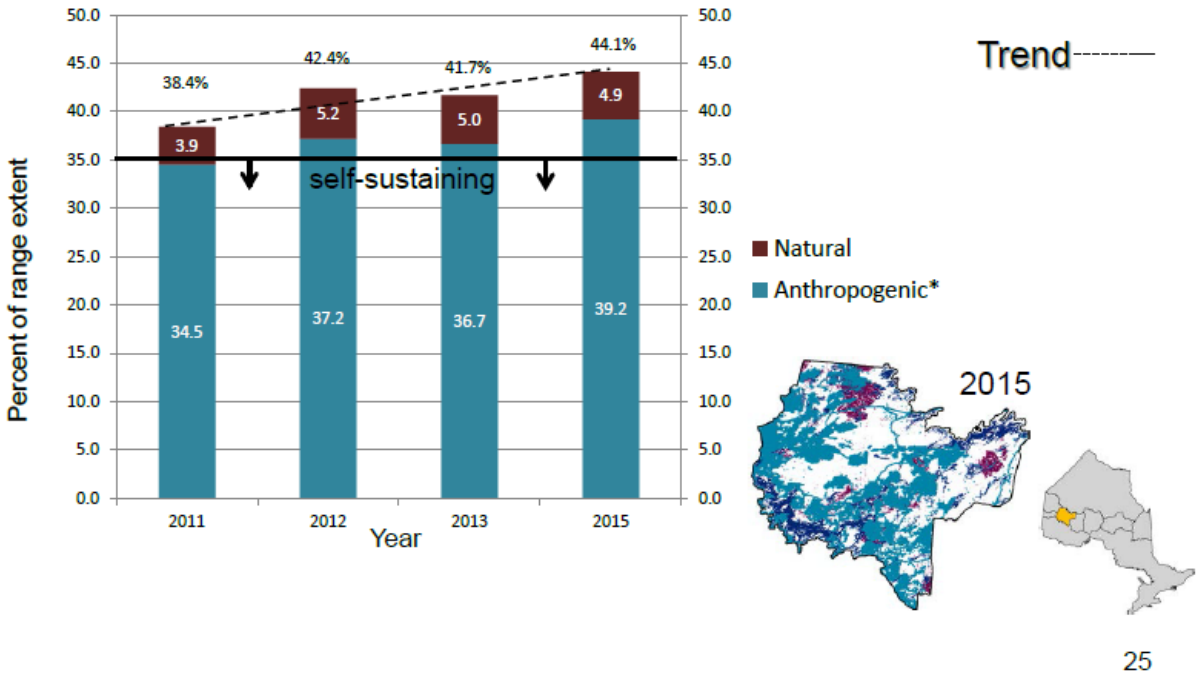

Figure 1. Disturbance trend in the Churchill Range from 2011-2015.[28]

Disturbance is increasing in the Churchill Range and has already exceeded the management threshold. Churchill has a declining population trend and evidence suggests range recession has already occurred.

The proponent acknowledges the range is not self-sustaining.[29] Yet, the proponent has not provided a rationale to explain why this non self-sustaining range should absorb more permanent alteration of its habitat thereby preventing this range from moving toward achieving self-sustaining status.

There is evidence to suggest that the proponent is deliberate in its approach and is willing to trade off increased risk to declining caribou ranges in order to avoid First Nation reserves and private land (these are criteria in the “cost and constructability (sic)” criteria that the proponent used to advance a poorer environmentally performing preferred corridor alternative). Moreover, there is some evidence to suggest the proponent does not see itself as contributing to actions

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[28] *Source: data from Science and Information- Package Caribou (version 2016) found in Elkie P., K. Green, G. Racey, M. Gluck, J. Elliott, G. Hooper, R. Kushneriuk and R. Rempel, 2014. Science and Information in support of Policies that address the Conservation of Woodland Caribou in Ontario: Occupancy, Habitat and Disturbance Models, Estimates of Natural Variation and Range Level Summaries. Electronic Document. Version 2016. Ontario Ministry of Natural Resources, Forests Branch.*

[29] *Final EA Report, p 6-325*

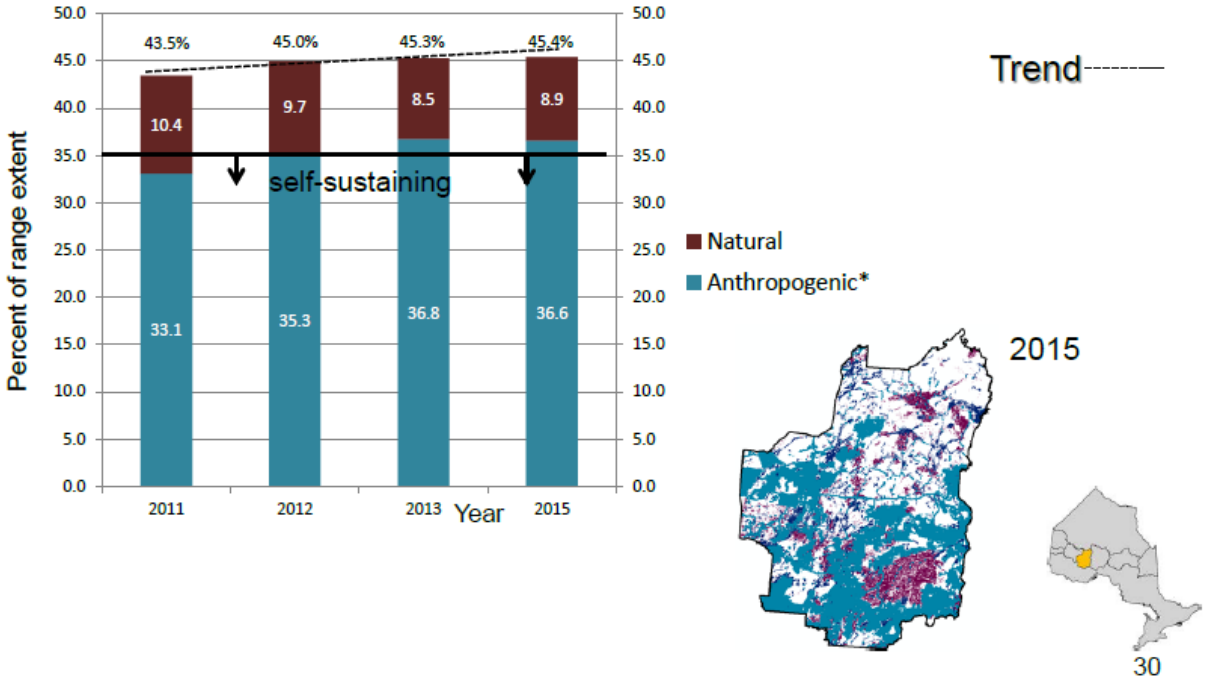
that move these ranges toward achieving self-sustaining status in the future. It states that the state of caribou ranges will be poor in the future regardless of the corridor.[30]

Good environmental planning and consideration of the range condition means Churchill cannot tolerate further permanent alteration to habitat especially at the landscape scale and with this type of undertaking, a new major north south linear corridor.

Brightsand Range

Disturbance in the Brightsand Range is shown below. The Preliminary Proposed Corridor does not intersect this range. The two corridor alternatives both intersect the Brightsand Range.

The disturbance data show high level of disturbance in the range (45.4%) and an increasing disturbance trend. Anthropogenic disturbance increased in the Brightsand range by 76,957 ha from 2011-2015. The Brightsand Range's disturbance level has increased beyond the 35% management threshold or 65% undisturbed that in turn has a 60% probability of a caribou population being self-sustaining.[31]



[30] *ibid, Appendix 14.0A*

[31] *from the 2012 Federal Recovery Strategy for Boreal Caribou*

Figure 2: Disturbance Trend in the Brightsand Range 2011-2015.[32]

The population trend data is declining as shown the Integrated Range Assessment for the Brightsand Range. This range has poor calf recruitment, low adult female survival and long term trends suggest range recession has occurred in the southern portion of the range. MNRF states there are other long term indicators that range recession has occurred in this range.[33]

This range is also not self-sustaining and we now know is facing a more urgent high risk situation than in 2013.

Disturbance is increasing in the Brightsand Range. It has already exceeded the management threshold. Brightsand has a declining population trend and evidence suggests range recession has already occurred.

Good environmental planning and consideration of the range condition means Brightsand cannot tolerate further permanent alterations to habitat at the landscape scale.

Kinloch Range

The latest disturbance data from 2015 on the Kinloch Range shows it is 19% disturbed. All three corridor routes intercept this range. Because the far north ranges were delineated in 2013, we don't have many years of data for disturbance for this range. It has not exceeded the management threshold for disturbance. Adult female survival estimates were at or above the national average. The population trend is declining for this range with low calf recruitment. MNRF notes that additional effort from collared caribou will be needed to refine their estimate of population trend.[34]

Kinloch has a declining population trend and 19% disturbance. Its range condition is uncertain.

While it does have disturbance below the management threshold, caution must be exercised when determining the relative tolerance of the range to alteration because of the declining population trend. There is an added caution because not all anthropogenic disturbances are addressed by the disturbance analysis. Other factors may be contributing to functional habitat loss such as sensory disturbance.[35]

Another factor to consider is that caribou habitat appears to mature slower as latitude rises. MNRF states, "[i]n northern parts of the Churchill range it appears it takes +50 years for caribou

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[32] *Source: data from Science and Information- Package Caribou (version 2016) found in Elkie P., K. Green, G. Racey, M. Gluck, J. Elliott, G. Hooper, R. Kushneriuk and R. Rempel, 2014. Science and Information in support of Policies that address the Conservation of Woodland Caribou in Ontario: Occupancy, Habitat and Disturbance Models, Estimates of Natural Variation and Range Level Summaries. Electronic Document. Version 2016. Ontario Ministry of Natural Resources, Forests Branch.*

[33] *MNRF 2014. Integrated Range Assessment for the Brightsand Range. p xi, 66, 68*

[34] *MNRF 2014, p. 99, 110*

[35] *ibid, p. 42, 100*

to frequent previously disturbed areas."[36] This would have implications for Kinloch too as it is directly north of Churchill. Because MNRF assumes caribou refuge and winter habitat becomes suitable at 40 years of age, in northern latitudes such as northern part of Churchill and Kinloch, this may not be the case.

Caution must be exercised because these ranges all have declining population trends and two have very high disturbance (see Table 1 below). MNRF has stopped monitoring caribou so we don't know if the population trends of these ranges have deteriorated further since the aerial surveys of 2011/2012. We do know disturbance has increased since 2011 for two of three ranges described. This provides important context for the discussion in the coming sections. It also means, as a first principle of good environmental planning, the proponent should do everything they can to prevent or avoid adverse environmental effects in caribou ranges already facing perilous situations.

Table 1: Summary of Range Condition for Three Boreal Caribou Ranges.

	Population Trend	Disturbance	Range Condition	Range Recession Occurred Already in Range?	Tolerance of Range to Alteration	Risk this type of undertaking could pose for caribou*
Churchill	Declining	44.1% and increasing trend	not self sustaining	yes	Very low	Very high
Brightsand	Declining	45.4% and increasing trend	not self sustaining	yes	Very low	Very high
Kinloch	Declining	19% (trend not available yet)	uncertain	no	Uncertain	High

** a major, 300km transmission corridor (permanent linear disturbance) without taking into account where within the range the corridor would cross and/or any alignment with existing disturbed areas.*

Table 1 shows that the risk a large transmission corridor would pose to caribou would be very high in both the Churchill and Brightsand Ranges. The reason is scientists warn that linear disturbances are the most 'significant contributor to landscape change' and resultant caribou response.

In our special report from 2013, we discussed the significant risk linear disturbances pose for caribou. It bears repeating here:

[36] *ibid, p. 30*

While total disturbance (combined fire and anthropogenic disturbance) is the best predictor of the relationship between calf recruitment and range condition, the Scientific Update conducted by Environment Canada in 2011 noted that,

> *among the major categories of anthropogenic disturbance considered, linear disturbances were the **most significant contributor** to landscape change…and resultant caribou response* [37]

The scientists add, "the ubiquitous, negative influence of linear disturbances on caribou, relative to the more variable response of other disturbance types" may be explained by four factors: the permanency of the linear disturbances; uniformity relative to polygonal shaped disturbances; the "profound and disproportionate influence on landscape configuration and habitat fragmentation for sensitive species, relative to the area directly disturbed"; and that the facilitation of increased predator movements and opening up new areas for ungulates while making habitat conditions less suitable for caribou.[38]

We have a very good example of the ubiquitous and negative influence in the region. Highway 599, built in the 50s and 60s, runs north through the Brightsand and Churchill ranges. What we know from caribou collaring data and winter distribution data is that caribou are avoiding up to 15km on either side of this highway. Utmost caution is required when planning major new linear disturbances in caribou country.

In the next sections, we discuss several of the impacts that the Preliminary Proposed Corridor, Corridor Alternative Through Mishkeegogamang (CATM) and Corridor Alternative Around Mishkeegogamang (CAAM) could have on the respective caribou ranges using Watay power's data included in its Final EA Report. We have not verified the data ourselves or verified the assumptions that the proponent applied to them. We turn to permanent disturbance first.

3.2 Permanent Disturbance

Here we discuss the permanent disturbance numbers provided by Watay power for the three corridors. As mentioned above, we have not verified the data ourselves or verified the assumptions that the proponent applied in determining them.

Permanent disturbance in the range is an important criteria because scientists have found that total disturbance (anthropogenic and natural) is the best predictor describing the relationship between calf recruitment and range condition.[39] It is also important because caribou "depend directly and indirectly on the entire range as habitat"[40] to carry out their life processes. MNRF required Watay Power to report on Cumulative Disturbance at the Range Level as an indicator

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[37] *the Scientific Update conducted by Environment Canada in 2011 p. 267*

[38] *ibid, p. 268*

[39] *Environment Canada 2011*

[40] *MNRF 2014, pg 3*

for the caribou habitat criteria.[41] The proponent responded that its corresponding indicator was habitat availability. We pulled out the data here in chart form as it appears to us the proponent downplayed these findings and its importance in its scoring.

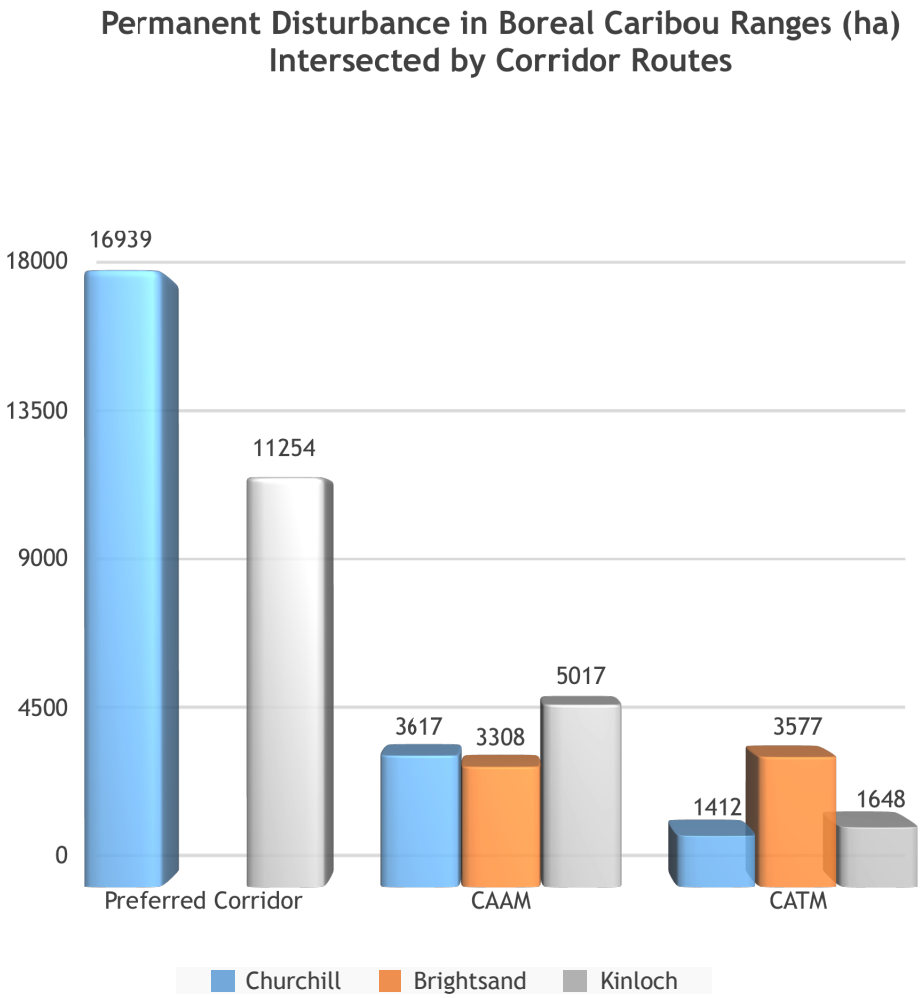

Figure 3: Permanent disturbance in boreal caribou ranges intersected by corridor routes.

The Preferred Corridor permanently disturbs the most habitat in the Churchill Range (16,939 ha). It does not intersect the Brightsand Range. It permanently disturbs 5X the amount of the first alternative (CAAM) in the Churchill Range and 12X the amount of the second alternative (CATM) in Churchill.

The Prefered Corridor also permanently disturbs 2.4X the amount of habitat than the CAAM in Kinloch and approx. 7X than the CATM in the Kinloch range.

The Corridor Alternative Around Mishkeegogamang (CAAM) would permanently disturb habitat 5017 ha in the Kinloch range. Of the three corridors, Kinloch would see the most permanent disturbance with CAAM.

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[41] *see April 14, 2016 MNRF letter to Mr. Eade*

The Corridor Alternative Through Mishkeegogamang (CATM) would permanently disturb 1,412, 3,577 and 1,648 ha in the Churchill, Brightsand and Kinloch Ranges respectively. The Brightsand Range would see the most permanent disturbance with CATM.

From a landscape disturbance perspective and relative to the alternatives, the Preferred Corridor permanently disturbs the most habitat in the Churchill and Kinloch Ranges. This is not reflected in the scoring in our view as the proponent prioritized minimizing harm to nursery areas for example, nursery areas over landscape disturbance.

Access Roads - Additionally, an important part of landscape disturbance is the creation of new access roads. The proponent covers access roads under “cost and constructability (sic)” criteria but not for its potential environmental impacts (see also Section 2 of this submission). For the purposes of environmental impacts on caribou, one can also evaluate and score the corridors based on the least km of new access road needed. Figure 4 below using data provided by the Watay power shows that the Corridor Alternative Through Mishkeegogamang would require the least km of new access roads. Given that the Churchill and Brightsand Ranges are heavily disturbed already (Figures 1 and 2), it should be required in the scoring and it should be required that new access roads be limited.

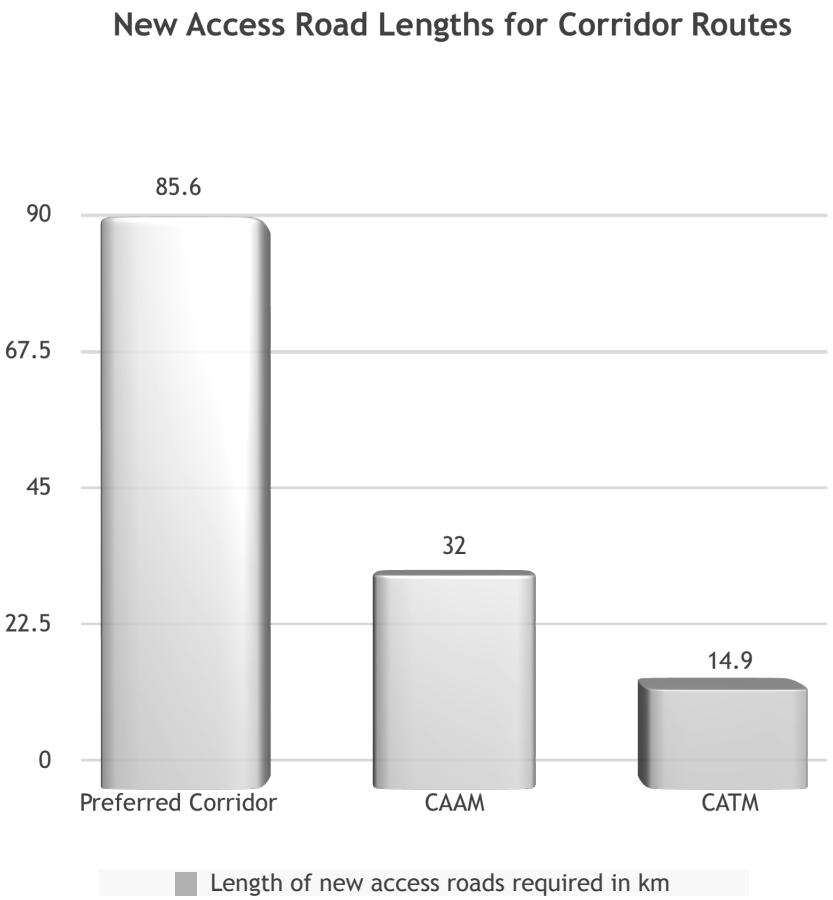

Figure 4: Length of new access roads required (km).

Nursery Areas

In this section we present nursery area numbers (direct removal and indirect alteration) provided by Watay power for the three corridors. As mentioned earlier, we have not verified the data ourselves or verified the assumptions the proponent relies upon in determining them.

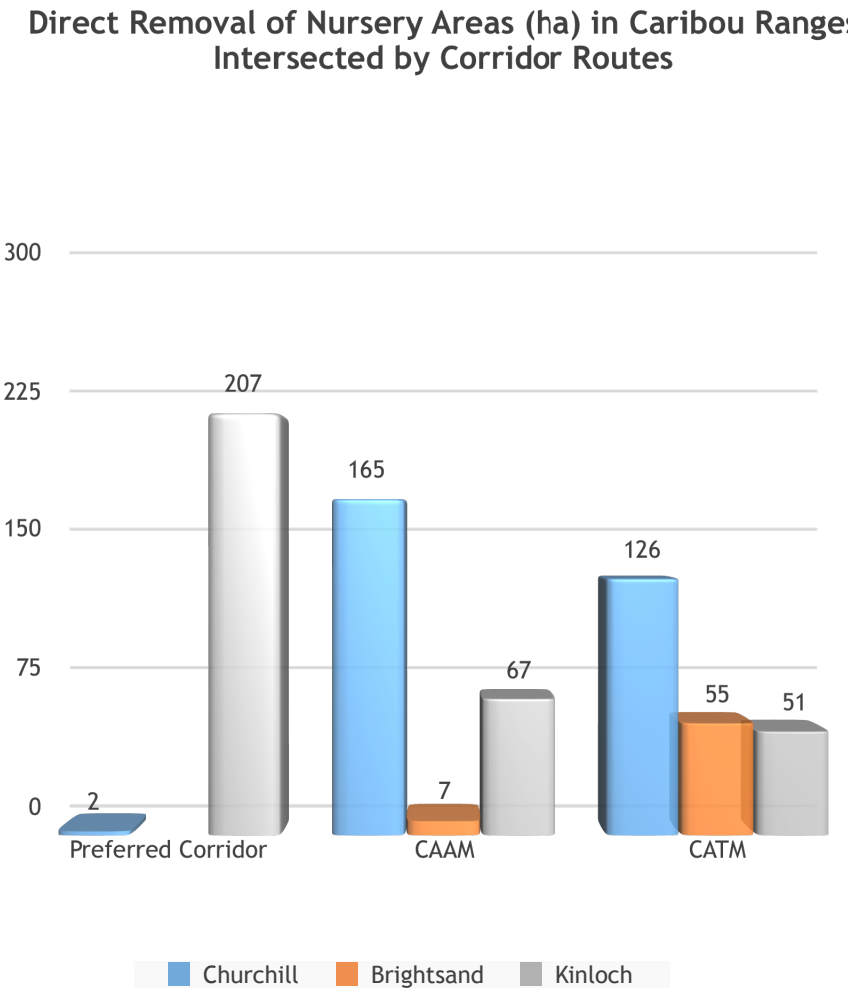

Figure 5: Direct removal of nursery areas in boreal caribou ranges intersected by corridor routes.

Relative to both alternatives, the Preferred Corridor directly removes the most nursery area in the Kinloch range. The CAAM removes the most for Churchill and the CATM removes the most for Brightsand. The Preferred Corridor would remove the least nursery area in the Churchill Range.

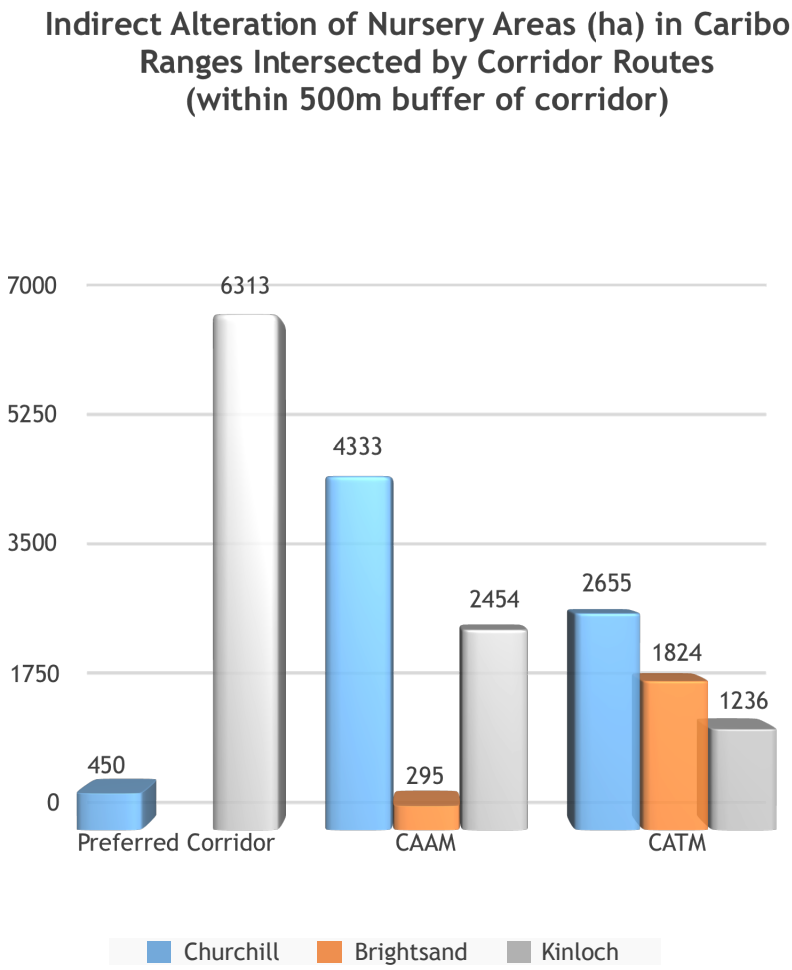

Figure 6: Indirect alteration of nursery areas in caribou ranges intersected by corridor routes.

Relative to the alternatives, the Preferred Corridor indirectly alters the most nursery area in the Kinloch range. The CAAM indirectly alters the most for Churchill and the CATM alters the most for Brightsand. The Preferred Corridor would indirectly alter the least nursery area in the Churchill Range.

The metrics of direct removal and indirect alteration of nursery appears to be one of two main metrics the proponent relies upon to justify building a line through the Churchill Range. These data when taken out of context of the range, when given more weighting than landscape disturbance and when not explicitly tied to range condition, is misleading. Ontario cannot meet its Caribou Conservation Goal or its Range Management Policy, by continuing to allow ranges to be eroded. Proponents should not be allowed to pursue options that continue to hollow out declining ranges by minimize impacts to nursery areas. It's a scale mismatch and fails to meet the needs of caribou.

This approach also raises a perplexing problem regarding trade-offs with Kinloch. Not only would Kinloch lose nursery areas (both direct and indirect) but it loses the most of all options.

And a final note on nursery areas. The province has a long history in resource development of focusing on avoiding or minimizing impacts to calving lakes while allowing cumulative disturbance to increase in ranges. Caribou have continued to decline. It is not appropriate for this approach to be repeated here. Also the province has also not comprehensively surveyed ranges to properly map these areas so caution is required when describing and scoring them. We do not know where they all are. Absence in the maps does not correlate to absence on the ground for example. The opposite is also true; presence on a map does not necessarily mean sites are being used. As MNRF noted in its General Habitat Description, “evidence of specific calving site locations may not be known for all Nursery Areas”.[42]

Winter use areas

In this section we present winter use area numbers (direct removal and indirect alteration) provided by Watay power for the three corridors. As mentioned above, we have not verified the data ourselves or verified the assumptions that the proponent applied in determining them.

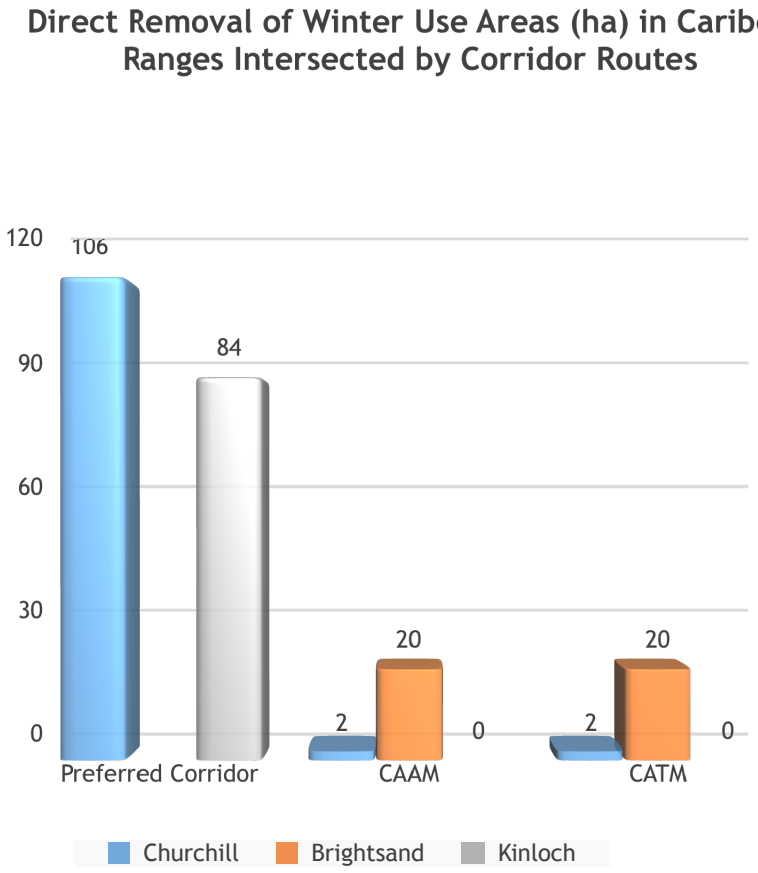

Figure 7: Direct removal of winter use areas in caribou ranges intersected by corridor routes.

[42] *MNRF (2013). General Habitat Description. p.4*

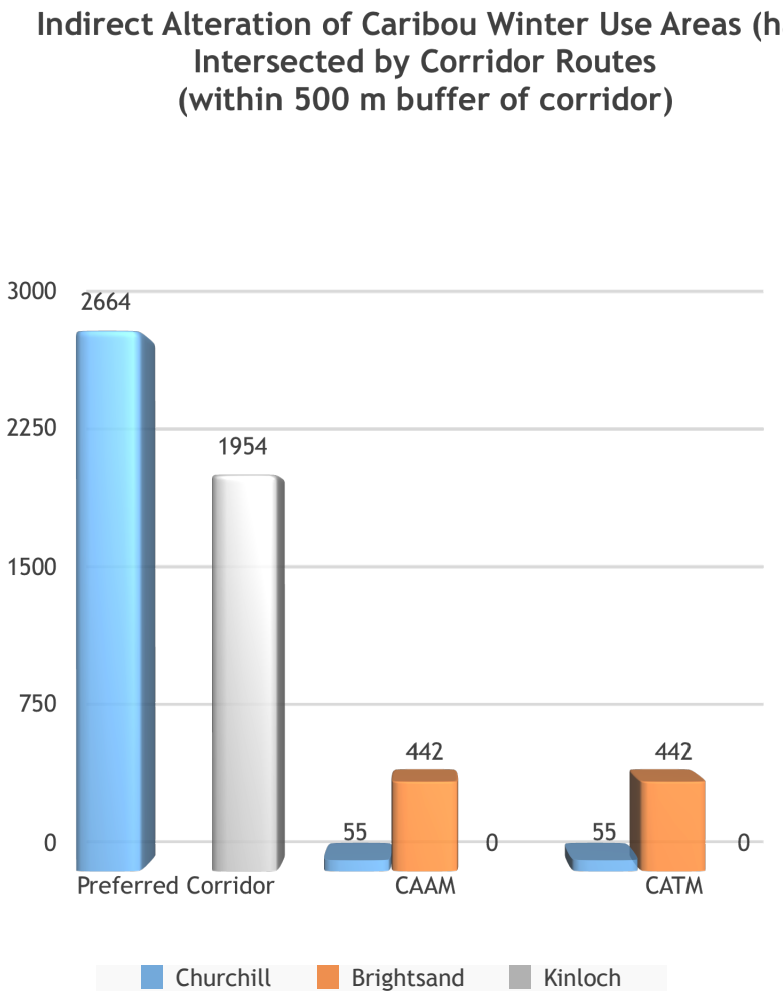

Figure 8: Indirect alteration of caribou winter use areas in caribou ranges intersected by corridor routes.

From both Figures 6 and 7, it is evident that **the Preferred Corridor directly removes or indirectly alters the <u>most</u> winter use area in both of the Churchill and Kinloch Ranges.**

3.3 Scoring System for Caribou is Flawed

Churchill Range

We've identified at least three flaws in the scoring system for caribou to this point (see Table 13.1-8 in the Final EA). It omits range condition, has a scale mismatch between the type of information and the needs of caribou and fails to adequately account for inter-range effects. And an overall criticism is that the proponent employs a reductionist approach to habitat that misleads the reader.

Using the Churchill Range as an example, in terms of the habitat availability indicator, the proponent indicates that the preferred corridor is the Preferred Corridor for direct and indirect nursery areas and winter use areas. Setting aside range condition and permanent disturbance, the proponent's math doesn't add up as the only metric where Preferred Corridor scores higher is on nursery areas. It does not score higher on winter use areas (on both measures direct or indirect). As we show in Figures 7 and 8, the Preferred Corridor directly removes and indirectly removes more winter use habitat in the Churchill Range than both alternative corridors.

The Preferred Corridor thus fails on winter areas and then when you add in permanent disturbance, it fails on that too. The scores for the corridor alternatives are equal on winter use areas but where they differ is on permanent disturbance**. The CATM has lower permanent disturbance in the Churchill and therefore, should score highest for Churchill for the habitat availability indicator.**

Similar concerns arise when one examines habitat distribution indicator for Churchill in Table 13.1-8. The proponent concludes that the Preferred Corridor would be better for connectivity beyond the range and the alternatives better for connectivity within the range.

It is not reasonable to conclude that creating a major new north-south linear disturbance in currently occupied habitat in Churchill that obviously extends into Kinloch would not impact connectivity beyond the Churchill range. We know that the Preferred Corridor will negatively impact the Kinloch Range and sever a regionally significant calving lake, Lake St. Joseph, from important areas further north[43] in addition to bisecting Churchill and severing it from the western part of the range. MNRF states that the "northern waterbodies particularly within the Cat River lake chain and Lake St. Joseph are likely to be important to the caribou in the Kinloch Range as they are to caribou in the Churchill Range."[44]

The Preferred Corridor would further compromise the ability of the Churchill Range to be restored 65%; would reduce connectivity within the range and reduce connectivity for this region of Ontario. **The Corridor Alternative Through Mishkeegogamang should be the preferred corridor for Churchill for the habitat distribution indicator.**

More concerns arise when one considers the survival and reproduction indicator for Churchill. The proponent states that the Preferred Corridor performs best for "incremental change in predation risk".[45]

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[43] *MNRF, 2014, p. ix,*

[44] *ibid, p. 2*

[45] *See Table 13.1-8 in the Final EA.*

This is where Range Condition should have been explicitly examined and accounted for in our view. We recommend recalling the information we presented in Table 1. A precautionary approach - this is based on achieving the Caribou Conservation Goal and the objective of the Range policy which is, “To maintain or move towards a sufficient range condition in all caribou ranges in Ontario”.[46]

Overall, disturbance is increasing in the Churchill Range and has already exceeded the management threshold. Churchill has a declining population trend and evidence suggests range recession has already occurred.

The responsible course of action is to avoid building a transmission line in this range in the first place. Therefore the highest score for this indicator should have been the Corridor Alternative Through Mishkeegogamang (CATM), because the CAAM permanently disturbs more habitat in Churchill and directly removes more winter use area and indirectly alters more winter use area than CATM.

The scoring for the Preferred Corridor in the Churchill Range is not defensible. The Corridor Alternative Through Mishkeegogamang should have received 3 points using this scheme.

Brightsand Range

Watay power assigned the Preferred Corridor 3 points with respect to the Brightsand Range - even though the corridor does not intersect this range. In our view, this is in effect padding the score for the Preferred Corridor. What the proponent should have done instead is indicate n/a or not applicable similar to what they did in Table 13.1-3. That would mean the remaining two alternatives would be assessed for this indicator.

An important note on the Brightsand Range. We know Highway 599 in this range has influenced the connectivity between Churchill and Brightsand through both habitat fragmentation and sensory and physical disturbance.[47] Fryxell (2013) noted that extensive radio-telemetry data indicate that caribou rarely use the area within 15km of the highway.[48] Also Frxyell noted that it was likely that treading the transmission line along highway 599 was less likely to have deleterious impact on the Kinloch range than increasing disturbance north of Lake St. Joseph. Winter distribution data provided by MNRF to us in 2013 also seems to show caribou avoiding Highway 599 by up to 15 km.

Given the new information and knowledge we have regarding caribou and the heightened urgency around recovering caribou, it is our view that avoiding further fragmentation should be the clear priority. In this respect, our recommendation from 2013 has stood the test of time well:

> *If a transmission line must be built, avoiding further fragmentation of intact habitat should be the priority. The option beginning in Ignace and treading along the same corridor as Highway 599 (and excluding the Osnaburgh bypass) would not generate any additional*

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[46] *MNRF, 2014. Range Policy. p. 4*

[47] *MNRF, 2014, p. 14*

[48] *Fryxell, J. (2013). Assessment of Potential Environmental Impacts of the Proposed Sagatay Transmission Corridor to Pickle Lake with respect to Woodland Caribou. unpublished report.*

human caused disturbance footprint in the Brightsand Range and only negligibly in the Far North and Churchill Ranges. This option should be prioritized for consideration by Ontario.

And, now that the Far North ranges have been delineated, we can clarify that the Corridor Alternative Through Mishkeegogamang would have the least harmful impact on caribou in the Brightsand, Churchill and Kinloch Ranges. As we noted in 2013, there would be some impacts to caribou and probably at multiple scales.

Another flaw in the scoring system and other concerns

It is also important to note that the scoring system also does not take into account whether the undertaking would impede the ability of the Churchill and Brightsand Ranges to recover to self-sustaining status and what the implications of this would be on other users of the forest and Ontario.

While we disagree with the proponent that there would be "incremental" or "minor" changes from the Preferred Corridor, we do agree that the changes would impede the ability of the Churchill range to recover. And it seems this concern was not lost on the forest industry that attended the open houses either. We read concerns from an SFL holder about re-opening access roads for Watay power and how this would impact their ability to achieve forest management objectives. We also read concerns that the transmission line "could reduce habitat availability and contribute to disturbance to an area, thereby making the case for forest harvesting more difficult since less forest harvesting would be allowed before thresholds of disturbances are reached/ exceeded."[49]

This raises a very important point about equity, and in particular sharing the goal and work equitably toward recovering caribou in Ontario. If the current project is approved with its current preferred route, it would mean that the task of recovering caribou would fall to other users of the forest, Ontario and the public to make up the difference. Could they? How much more difficult would it be to restore Churchill with a new major linear disturbance running north south in it? Is this an appropriate trade off to increasing electrical supply in Pickle when a less harmful alternative is available?

We think it will be very difficult to restore this range if Watay power is granted approval to build this line. Not only should the forestry industry be concerned but so should the public. Finally our comments are not intended to be seen as somehow letting the forestry industry off the hook. Forestry has contributed extensively to the legacy of the southern caribou ranges and it too must be prepared to do its part. We expect it to do its part now and in the future when the exemption for forestry under the *Endangered Species Act* is expected to expire (in 2 years).

The overall situation is exacerbated by the fact that Ontario so far has failed to implement range planning as required by the Federal Recovery Strategy. In the absence of range plans, the risk is a *free for all*, or *first come first serve approach*, where as long as proponents receive approvals, disturbances in the ranges would continue to increase. It matters critically in ranges like Churchill and Brightsand where despite the new *Endangered Species Act, 2007*, caribou

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[49] *Appendix 2.4A, p. 231*

habitat has so far received no legal protection and no habitat has been been set aside under the Act.

This demonstrably flawed scoring system also doesn't take into account the full costs of the project (including who is going to bear the cost of restoring the Churchill and Kinloch if a poorly routed line is built), and which elevates metrics that allow ranges to continue to be eroded with increasing disturbance and for populations to decline.

We are nervous so far, and not convinced on the evidence that Watay is committed to good environmental planning when it comes to caribou. This comes from our observations that there seems to be several at least 4, sometimes competing, narratives employed by Watay Power regarding caribou and the project:

1. There is the narrative that the Preferred Corridor would have the least predicted or potential negative effects on caribou;

2. Then there is the view that the Net adverse environmental effects of the Project have been predicted to be negligible or not significant for all criteria <u>except</u> woodland caribou and bats, both species <u>not currently considered to be self-sustaining at baseline</u>. Project contribution to effects to these species are predicted to be minor;[50]

3. Then we have seen, language around potential future effects (also from Appendix 14.0A) implying a fatalistic attitude to caribou: "Potential future effects, regardless of corridor: Direct loss of nursery habitat; Loss of winter use areas; Constrained movement between the Churchill and Brightsand Ranges; and Considerable habitat conversion linked to increased predation pressure. Interaction with climate change could also facilitate white-tailed deer range expansion;"[51]

   We cannot help but to conclude from this that the proponent is making an argument here that caribou are in bad shape and don't appear to recovering anytime soon, 'so let us build a transmission line through the Churchill and Kinloch ranges anyway'? In our opinion these perspectives are counter to the purpose of the *Environmental Assessment Act, the Endangered Species Act,* and contrary to good environmental planning principles; and finally,

4. There is this particularly perplexing and unsupported statement in the conclusion: "**there were advantages for the Preliminary Proposed Corridor for some SAR species including woodland caribou Churchill and Brightsand range.**"[52] The proponent has provided no evidence to suggest that caribou will be better off if the Preliminary Proposed Corridor is built for woodland caribou in the Churchill and Brightsand Ranges. In fact they acknowledge that the two ranges are not self-sustaining now - and won't be

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[50] *see Final EA, Appendix 14.0A*

[51] *ibid*

[52] *Final EA. p. 13-64*

in the foreseeable future. They add the ecological effectiveness will continue to be compromised by their proposed project for these two ranges but won't be lost.[53]

This conclusion flows from its table of comparison of advantages and disadvantages (Table 13.2-1). The significant flaws that we pointed out to their approach and to the scoring system would also apply to this table as similar points are made except in this table it blends in "cost and constructability (sic)" criteria and "technical" criteria which are outside the scope of environmental assessment.

The dire situation of caribou in the Brightsand and Churchill Ranges and the nature of the undertaking means we are dealing with a situation of increased risk to caribou. The least harmful corridor in our view, relative to the two others, is the route that treads along Highway 599 through Mishkeegogamang - the CATM. From an environmental assessment perspective based on environmental criteria consistent with the purpose of the *Environmental Assessment Act*, the responsible recommendation between these alternatives is for the EA to recommend avoiding further fragmenting the ranges at a landscape scale and to route the line along Highway 599 through Mishkeegogamang. This has not occurred.

Conclusion 3

The case for recovering boreal caribou has strengthened and urgency heightened since our special report in 2013. Disturbance is increasing in both the Churchill and Brightsand Ranges. Both have already exceeded the management threshold. Both have a declining population trend and evidence suggests range recession has already occurred in the ranges. Good environmental planning and consideration of the range condition means these ranges cannot tolerate further permanent alterations to habitat at the landscape scale. The proponent has not provided a rationale to explain why Churchill, a non self-sustaining range, should absorb more permanent alteration of its habitat thereby preventing this range from moving toward achieving self-sustaining status. The proposed project along the proponent's preferred route would pose very high risk to caribou in the Churchill Range and high risk to caribou in the Kinloch Range thereby. We have identified significant flaws in the scoring system for caribou including it omits range condition; has a scale mismatch between the type of information and the needs of caribou; and employs a reductionist approach to habitat among other flaws. This resulted in the environmental score of the Preferred Corridor being artificially elevated while several of the scores for the alternatives depressed. For all these reasons we find the Final EA with respect to the handling of the assessment of caribou between EA alternatives deficient as submitted.

Recommendation 3

We recommend, on the basis of this key environmental criteria, which is also one of the most consequential in comparing alternatives, that the Final EA as submitted be considered deficient for its assessment of the risks to caribou from these alternatives, and not approved.

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[53] *ibid. p. ES-23*

SECTION 4

4.0 Greenhouse gas and carbon impacts

Land clearing impacts, including sequestration opportunity costs are largely missed - This section does not sufficiently detail longer-lasting land-clearing and ongoing land-use carbon impacts. Instead it focuses on equipment emissions and standing timber at time of clearing only. Temporally, it focuses on the construction phase, essentially ignoring the ongoing loss of active carbon sequestration that the differences in area of displaced forest that the various activities would produce. The metric of ongoing access roads needed will play an important role in how many kilometres of access roads remain un-vegetated over time between the alternatives being assessed.

For example, other than some limited discussion of construction impacts to standing timber, a more detailed route and access road footprint characterization of the alternatives, that includes ongoing carbon footprint impacts over time, is unfortunately not apparent. Each alternative, save the no-project option, would predictably result in a degree of deforestation, which bring a well-known range of fragmentation, edge creation, and climate change impacts to bear on this boreal ecosystem. Each unit of productive forest lost to infrastructure represents lost CO2 sequestration, on an annual basis, over the long term. The conversion of boreal forest to a vegetation-managed transmission right-of-way is a specific subset example of this, along with forest conversion to both temporary and permanent access roads or staging areas, or the re-opening of a decommissioned road, or a delayed decommissioning of an access road.

Unreasonable characterization of project greenhouse gas impacts - Instead, the EA characterizes these impacts at an unreasonable level of sensitivity: relative to the entire province, and country, instead of against the null-project or the other Alternatives being considered:

> *"The Project is predicted to have a negligible net effect on emission levels of CO_2, N_2O and CH_4 based on the comparison between the estimated annual emissions from the Project to both the federal and provincial GHG emissions."* [54]

As all of these other options would demonstrably contribute lower land clearing impacts from shorter line lengths and access roads, this characterization is favourable to the preferred option, as the proponent has equally scored all three corridor alternatives. This is likely based on this unreasonable baseline, which distracts from a more robust impact assessment of the relative long-term impacts between the corridor alternatives.

Conclusion 4

In this Environmental Assessment, we expected (a) a far more focused and comprehensive assessment of predictable environmental effects associated with land use and ongoing forest conversion, and (b) an appropriate sensitivity of such assessment, able to effectively compare the relative impacts of the alternatives being assessed, for such a key aspect of environmental impact for such a project along a highly topical and relevant theme. For these reasons, we find

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[54] *Final EA Report, p. 5-192*

the Final EA with respect to its handling of the assessment of relative greenhouse gas and climate change impacts between the EA alternatives deficient as submitted.

Recommendation 4

On this basis, we recommend that the Minister not approve the Final EA as submitted, or in the alternative, to not consider it until such time as this key assessment gap for this predictable environmental impact has been effectively remedied.

We recommend, on the basis of this key environmental criteria, that the Final EA as submitted be considered deficient for its assessment of the relative impacts to greenhouse gas cycling between these alternatives, and not approved.