

March 12th, 2011

Mr. Kris Fredrickson
Senior Program Officer, Prairie Region
Canadian Environmental Assessment Agency (CEAA)
101-167 Lombard Ave
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Mr. Fredrickson:

RE: East Side Road Authority (ESRA) GHG Assessment – Report from Dillon Consulting

INTRODUCTION

The following provides comments for a November 2010 *PR 304 to Berens River All-Season Road Environmental Impact Assessment - Greenhouse Gas Emissions Assessment DRAFT Report* (ESRA/Dillon GHG Report) prepared by Dillon Consulting Ltd. for the East Side Road Authority with respect to this project.

The overall tenor and intent of the report seems to be the minimization of greenhouse gas (GHG) estimates. Important factors are deemed to be "beyond the scope of the study" and are therefore excluded. The result is a deficient GHG assessment. Little or no context with regard to Manitoba government climate change and green house gas policies or regulatory framework is provided.

The GHG Report was produced pursuant Manitoba Environment Act License #2929 issued to the Manitoba Floodway and East Side Road Authority. In particular clause 18 requires the Licensee to:
...provide a detailed calculation of greenhouse gas emission of the Development in relation to the existing baseline conditions within three months of the date of this licence.
Manitoba Conservation sent the report back due to deficiencies. Any updated GHGs report, if one has been provided, is not public at this time.

GHG GUIDELINES & STANDARDS

The ESRA/Dillon report purports to rely on the Canadian Environment Assessment Agency document (CEAA), *Incorporating Climate Change Considerations Environmental Assessments: General Guidance for Practitioners*.¹ The CEAA guidance document outlines a five step process and on page one of the ESRA / Dillon GHG Report refers to this five step process as such:

"1. Preliminary Scoping for GHG Considerations. This preliminary scoping assesses whether there are likely GHG considerations associated with the project.

¹ CEAA GHG Guidelines (2003), p. 8

http://www.ceaa.gc.ca/A41F45C5-1A79-44FA-9091-D251EEE18322/Incorporating_Climate_Change_Considerations_in_Environmental_Assessment.pdf

2. Identify GHG Considerations. This process considers the potential GHG emissions profile of the project in comparison to the industry profile.
3. Assess GHG Considerations. The process determines the direct and indirect GHG emissions of the project, the impacts on carbon sinks, and comparison with industry, provincial / territorial and national inventories.
4. GHG Management Plans. Development of a GHG management plans to mitigate and / or offset emissions if the project results in medium or high emissions. jurisdictional considerations and project specifics
5. Monitoring, follow-up and adaptive Management. This process monitors and verifies the GHG emissions forecast and determines the effectiveness of the GHG abatement jurisdictional considerations and project specifics."²

Yet despite citing the CEEA procedural steps ESRA / Dillon completely ignore steps 4 and 5, stating steps 4 & 5 are not necessary because this project is an "adaptation response to climate change". The ESRA / Dillon GHG Report's consideration of the impacts of indirect effects, such as changes in traffic habits, changes in the development patterns of the affected communities, and the impacts on carbon sinks (these issues will be discussed more below) is also inadequate. More serious is the claim that this ESRA project is an 'adaptation response to climate change.' CEEA should immediately request verification of this claim. We are not aware of anything in the public domain with respect to the public policy or regulatory framework in Manitoba, or the licence issued by Manitoba that verifies this claim. If this is so then the ESRA/Dillon report is significantly more deficient, as there are also standards and methods to quantify and qualify a project in relation to climate change adaptation.

Despite citing the CEEA GHG Guidelines for Practitioners, it is not apparent that any standard or methodology for GHG accounting was used in developing the ESRA GHG Report. GHG estimates can be significantly altered depending on the guidelines and underlying assumptions used. The government of Manitoba is a founding member of the Western Climate Initiative (WCI), and its Climate Registry. Extensive work has been done to assist all parties (governments and emitters) in calculation of greenhouse gas emissions, especially in relation to baseline conditions. It is not evident that Dillon Consulting is accredited for GHG assessments, and it is not evident that they relied on "industry, provincial / territorial and national inventories" as per step 3 of the CEEA GHG Guidelines. Nor is there any reference to WCI or Climate Registry guidance in the ESRA/Dillon report..

Also Manitoba entered into an arrangement with the Canadian Standards Association (CSA) with respect to certain greenhouse gas reporting standards. There is no reference in the ESRA/ Dillon report to this CSA partnership. The ESRA is a government of Manitoba agency, subject to public policy and regulatory requirements from our government. The east side road network project is a public work funded and undertaken by the Manitoba government. On this basis alone this report and any future reporting from the ESRA regarding climate change should clearly state the methodology and standards regarding greenhouse gases and baseline conditions with respect to carbon used.

The World Resources Institute and World Business Council on Sustainable Development in collaboration with numerous multi-stakeholder partners published the *GHG Protocol for Project Accounting* (WRI Project Protocol) in 2005. The WRI Project Protocol

² ESRA / Dillon GHG Report (2010), p. 1

...presents requirements for quantifying and reporting GHG reductions and provides guidance and principles for meeting those requirements.³

...intended to guide project developers sequentially through the requirements for GHG project accounting, monitoring, and reporting.⁴

In addition, the International Standards Organization (ISO) released the three part GHG accounting and verification standards known as ISO 14064. A 2006 March-April edition of the ISO Management Systems Newsletter explains:

ISO's goal in developing the standards is to provide a set of unambiguous and verifiable requirements or specifications to support organizations and proponents of GHG emission reduction projects.⁵

ISO 14064 Part 1 details principles and requirements for designing, developing, managing and reporting organizational or company level GHG inventories, and is consistent with the WRI GHG Protocol. ISO 14064 Part 2 focuses on GHG projects or project-based activities specifically designed to reduce GHG emission or increase GHG removals. ISO 14064 Part 3 details principles and requirements for verifying GHG inventories and validating or verifying GHG projects.

The Canadian Standards Association (CSA), in collaboration with Department of Standards Malaysia (DSM), was integral in developing ISO 14064. Presently the CSA offers a variety of courses on ISO 14064 training. The CSA has also been instrumental in creation of the Canadian Climate GHG Registry⁶ and it also provides training for individuals and organizations on how to create an emissions report for the Climate Registry.

Clearly ESRA should have directed its consultants, based on a clear scope of work to: both fulfil the licence under the Environment Act, and fulfil Manitoba policy and regulatory obligations regarding GHG emissions. There are also clear options in terms of standards and methodologies which ESRA should have directed its consultants to apply to the report contents, and future reporting re GHGs. If such a scope of work was put in place by ESRA it should be part of the filings by the proponent.

Throughout these comments we refer to CEEA GHG Guideline, the WRI Project Protocol standards, ISO 14064, and the Climate Registry where appropriate.

To assess the ESRA GHG Report, transparency about which standards, if any, were relied upon and the author(s) familiarity or certification with the standards used, is required. Without this information it is virtually impossible to know if the ESRA/ Dillon GHG Report provides any credible information.

³ WRI Project Protocol (2005), p. 5 http://www.ghgprotocol.org/files/ghgp/ghg_project_protocol.pdf

⁴ *Ibid*, p. 26

⁵ March-April 2006, ISO Management Systems Newsletter
www.iso.org/ims

⁶ CSA GHG Registry
<http://www.ghgregistries.ca/>

Given the CEAA review and comprehensive study underway it is obvious the proponent needed to make sure their staff and consultants responsible for fulfilling the Manitoba Environment Act project licence regarding GHGs should have made sure CEAA and other standards were recognized, in order to be fulfilled.

It appears that none of these steps were taken, and that the ESRA may not recognize that the licence for this public works project must be fulfilled.

AUDITOR GENERAL'S REPORT ON MANITOBA CLIMATE CHANGE

In the spring of 2008 the Manitoba Government introduced the *Climate Change and Emissions Reduction Act*. In fall 2010 Manitoba's Auditor General performed a review of Manitoba's management of Climate Change and provided recommendations for improvement. Included in the fourteen recommendation were:

10. We recommend that the Department of Conservation work with climate change partner departments to ensure all greenhouse gas reduction estimates are based on sound data and reviewed for consistency with National Inventory accounting standards and practices.

...

13. We recommend that the Minister of Conservation determine the method that will be used to calculate greenhouse gas emissions for reporting purposes under The Climate Change and Emissions Reductions Act.⁷

As the Manitoba Auditor General notes:

The Act states that “the Minister may determine the method of calculating emissions and emission offsets for the purpose of quantifying Manitoba’s emissions in any given year”. **In practice, a method is required for measurement to take place** (emphasis added). The Act further states “the Minister shall have regard for relevant methodologies and principles that are used in other jurisdictions, including those that participate with Manitoba in regional or international climate change partnerships, and must consult with experts considered knowledgeable about standards for calculating emissions and offsets”. **This ensures the method determined by the Minister will be widely viewed as credible** (emphasis added).

Clearly defining the method(s) used to calculate GHG emissions, ensuring that the estimates are based on sound data, and the method(s) and related data is publicly accessible is fundamental to the successful management of GHG emissions, because without methodology, transparency of methods and data, the GHG numbers are not considered credible.

The responsibility lies with the Department who carries both climate change and licensing responsibilities. Public works should not go forward in Manitoba, including should not be licensed

⁷ Manitoba Auditor General, Performance Reviews (2010), p. 47-48
http://www.oag.mb.ca/reports/rtl_performance_audits_2010.pdf

in Manitoba, without carbon inventory and GHG measurement methods in place. The Auditor General only had estimates and projections to work with but was still able to determine that Manitoba will not meet its regulatory objectives for GHG reductions. This project and all other Manitoba public works should provide clear information about how it will avoid increase in emissions, while avoiding further delay in our province reaching its mandated GHG reductions target.

SCOPE OF THE PROJECT – Project Boundaries

Manitoba Wildlands submitted a letter to the Canadian Environmental Assessment Agency (CEAA) July 7th, 2010 "Public Consultation - Comprehensive Study Scoping Document, Lake Winnipeg East Side Road CEAR Reference Number 09-03-52056," in which we provided comments on the Scoping document, suggesting:

... the scope for this project be considered to be as broad as possible, in order to apply the precautionary principle regarding possibly adverse environmental effects of this project. Making sure the project has a broad and inclusive scope will decrease the risks of significant adverse environmental impacts and effects.⁸

The Project study area according to the Dillon GHG Report:

...is along the eastern shoreline of Lake Winnipeg and extends from the southern limit of Hollow Water traditional lands north to Poplar River and east to Pauingassi and Little Grand Rapids First Nation on to the Ontario border. The study area encompasses all First Nations traditional lands.⁹

There is no stated justification for the chosen geographic scope of the project. And different reports for this project appear to be using different project areas/scopes. One has to wonder why the geographic area extends so far East of the proposed All-Season Road (ASR) to the Ontario border, while on the Western side of the ASR the geographic Scope only extends the few kilometres to the Lake's edge. It appears the geographic scope was selected on the basis of convenience using the provincial border and the edge of the lake as boundaries. What was the rationale for this choice?

ESRA/ Dillon also appear not to have read CEAA guidance with respect to project areas that border on large bodies of water. This is reference to Lake Winnipeg.

Additionally the scope of a project is delineated by more than geographic boundaries, as the effects, particularly the secondary effects, of a GHG project are not always constrained by geography.

We note that there is a lack of data and baseline information regarding the carbon in place before the project commences. This was required by the Manitoba licence. In particular we would suggest that

⁸ July 7th, 2010 Manitoba Wildlands correspondence to CEAA
<http://manitobawildlands.org/pdfs/CEAA-ScopingDocReviewJuly2010.pdf>

⁹ Dillon Consulting (2010). GHG Report, p. 2

any estimate of carbon before the project needs to show clearly its data sources, and could be mapped. Public sources for carbon in our forest regions are available for most of Canada now.

The WRI Project Protocol lays out a five step process for determining a GHG Assessment Boundary¹⁰:

- 1) Identify each project activity associated with the GHG project.
- 2) Identify all primary effects related to each project activity.
- 3) Consider all secondary effects related to each project activity.
- 4) Estimate the relative magnitude of all secondary effects.
- 5) Assess the significance of all secondary effects.

Step 1 involves identifying the various activities of the project and determining the positive or negative GHG impacts. Examples in the current context include, but are not limited to activities such as the construction of a road, clearance of land, use of construction equipment, the movement of vehicles to the project area the quarrying of aggregate, the travel of vehicles on the road once constructed, etc.

Step 2 involves assessing the primary effects of each of these activities, or in other words what the primary effects in terms of GHG emissions will be.

Steps 3 -5 require estimating secondary or indirect effects. The ESRA/ Dillon GHG Report and analysis on secondary effects is particularly problematic. (We review some of these deficiencies below.) Then when all effects have been identified the boundary for the assessment would be set. That clearly was not followed in this report.

We recommend a thorough review of the CEAA Guidelines, WRI standards, and advice. ESRA needs to decide which methodology and standards it will use on this and future road network projects. Then ESRA needs to provide that information to the regulatory agencies for this and future projects. We note that there is to date no such methodology or standard in place for the Winnipeg Floodway Authority's projects and operations.

GHG reporting during construction and for a five year period afterwards should be filed in a public manner.

SECONDARY EFFECT: POPULATION GROWTH

The ESRA/Dillon GHG report assumes no population growth in the communities of Berens River, Bloodvein First Nations or the communities along the route between Winnipeg and Berens River.¹¹

A Manitoba government commissioned report, also prepared by Dillon Consulting Ltd. in August of 2000, entitled *East Side of Lake Winnipeg All Weather Road Justification and Scoping Study* (Dillon

¹⁰ WRI Project Protocol (2005), p. 30

¹¹ Dillon Consulting (2010). GHG Report, p. 22

Scoping Study)¹², projected community population increases ranging from 2.5% to 4.8% in *annual* population growth.

A commissioned review of this study by Paskanake Project Management (PPM) showed that these annual population numbers were high, 2.5% per annum being a more correct rate of population growth, this overestimation led to "...an approximate \$7.63 million overstatement in transportation net benefits."¹³

Even at 2.5% population growth we would have a 28% population growth in the decade since the earlier Dillon Consulting Ltd report regarding an east side road network.

The same consulting firm, who over estimated population growth 10 years ago, is now claiming that that there will be/ was no population growth. This is simply an untenable assumption. A variety of public sources exist that document population growth patterns in Aboriginal communities, and population growth for communities in Manitoba has also been documented and projected. It appears as though we have opportunistic bases for the calculations in this current report.

SECONDARY EFFECT: CHANGES IN TRAVEL PATTERNS

The same 2000 Dillon scoping study from ten years ago determined that a North- South road on the East Side of Lake Winnipeg was likely to result in a 60% reduction in air travel. The PPM review questioned that number as high. Yet the 2010 Dillon GHG Report for ESRA assumes an 80% decline in air travel.¹⁴

We cannot see any basis for many of the assumptions in the current GHG report by Dillon Consulting Ltd. The Paskanake Project Management review of the Dillon 2000 feasibility report indicated that standard methods in the industry assumes as much as a 25% variance in such combined statistical and economic assumptions. We are not able to find any statement as to variances assumed in the ESRA/Dillon GHG report. Perhaps there is also a 25% variance in their GHG assumptions.

Likewise the ESRA/Dillon GHG Report assumes traffic levels will not change and that ratio of cars and light trucks to heavy trucks on this road will stay consistent at a 93% to 7%.¹⁵ Once again, on what basis are these assumptions made? Increased access to roads is likely to lead to increased trip volumes; and once the all-season road is built it is also likely that the number of semi-trailers hauling goods is also likely to increase. Once freight does not need to be flown in there may be many

¹² Dillon Consulting (2000). Scoping Study, p. 8

<http://www.gov.mb.ca/mit/tspd/completed#east>

¹³ PPM (2001). *Review and Analysis: East Side of Lake Winnipeg Road Justification and Scoping Study*, p. 10

http://manitobawildlands.org/pdfs/BHart_AWR_Review2001.pdf

¹⁴ Dillon Consulting (2010). GHG Report, p. 28

¹⁵ *Ibid*, p. 29

changes in trip volumes, and kinds of vehicles. Has Dillon ignored these possibilities in order to validate assumptions about low GHGs? These traffic level assumptions are quite different than those in the 2000 Dillon report.

DISCREPANCY: GHG EMISSIONS - WETLANDS, DEFORESTATION AND REFORESTATION

In April 2007 a symposium was held in Wageningen, the Netherlands, to advance our understanding of peatland Carbon cycling through integration across disciplines and research approaches in order to develop a more synthetic picture of the present and future role of peatlands in the global Carbon cycle and their interactions with the climate system. A paper, *Peatlands and the carbon cycle-a synthesis*¹⁶ resulted. There is also ongoing research and findings with respect to peatlands (muskeg) in Canada's boreal regions from institutes and universities across Canada. The Dillon GHG report seems to dismiss current technical and research findings about carbon in the project region.

According to ESRA/Dillon estimates land clearing emissions will only create annual Carbon equivalent emissions of 1,361 tonnes during the first four years of construction (2010-13) with an additional 637 Carbon equivalent tonnes of emissions added in the first year to account for forest biomass decomposition (mainly roots). Additionally they claim annual carbon equivalent emissions sequestered will be reduced by 45 tonnes in the first four years, and 32 tonnes for the years thereafter.¹⁷ An explanation of what 'carbon equivalent emissions sequestered' means should be provided.

Other ESRA/Dillon assumptions regarding GHG emission estimates are similarly overly optimistic. Noteworthy is the assumptions that 67% of the 15,657 tonnes of cleared biomass is excluded from GHG calculations because it is assumed that 50% of cleared biomass would be converted to durable long lasting products for wood construction and 17% would be used as firewood by local communities and therefore "...this volume of biomass would have been harvested regardless of the project."¹⁸

As there is currently no operating mill, and no logging going on in the region – other than small community operations – we would recommend to the regulators that they ask ESRA to provide the data these assumptions are based on.

Do the neighbouring communities have the infrastructure, knowledge, ability and access to markets to convert the cleared wood into durable long lasting products? Are there any operations or licences in place to verify this potential activity? Is 50% even a realistic assumption? It is unclear how ESRA/Dillon determined that 50% of the biomass would be converted to durable products, *or how this would occur.*

¹⁶ J. Limpens et. Al (2008)

¹⁷ *Ibid*, Table 4.1 & 4.2 pp. 32-33

¹⁸ *Ibid*, pp. 23-24

What is the local demand for firewood in nearby communities? 2,662 tonnes of firewood is substantial. Can the communities really use this much firewood? Do they have a way to access it and move it? No supporting evidence was provided in this regard. It is also conceivable that the firewood would need to be hauled additional distances in order to be fully utilized. If this is the case the added emissions from hauling the firewood need to be included in the equation. The same applies to any biomass converted to other goods. If the proponent intends to stay with calculations that assume manufacture of goods then the emissions from the transport, manufacture, and further transport of goods would need to be reported as part of any calculations.

USING SELECTIVE DATA

It seems there is a consistent pattern on the part of ESRA/Dillon Consulting to "cherry-pick" data to produce a result desired by the proponent, rather than a factual result, based on accepted methodologies. This is further compounded by the fact that the rationale for numerous assumptions is not explicitly stated. The result here is to drastically underestimate the GHG impacts of the road both during construction, and once operational.

We are surprised at the steps and standards not accessed for this report. With respect to the boreal forest regions in Manitoba there are reliable, more recent sources that would help the proponent report the carbon inventory (pre project status) and the environmental effects of disturbance of the carbon during construction. The ability to project the resulting emissions also exists based on recent technical standards, research and academic work. Any GHGs data should, again, be based on credible, transparent standards and methods.

IMPACTS OF CLIMATE CHANGE ON PROJECT

The ESRA/Dillon GHG study does not consider the impact that climate change will have on new permanent road (i.e heaving permafrost may cause roads to heave, they assume historical average of winter road access but climate change may change this).

It is somewhat ironic that the Dillon GHG report disclaims:

...the impacts of climate change to the study *cannot be exactly predicted* and is beyond the scope of this GHG assessment. The changes in climate are expected to impact transportation patterns of the study region.¹⁹

But if this is the case one has to wonder if the proponent does not want to consider the impacts of climate change on the road project and whether the regulator has been clear enough in its requirements etc. Stating there will be climate caused changes in transportation patterns in the region may mean the proponent contradicts its own GHG report.

¹⁹ *Ibid*, pp. 5-6

Clearly, at minimum the study needs to consider the impacts that changing climate will have on road operation, and maintenance etc. Heaving permafrost could cause the road to buckle, and repairs would be costly and would themselves cause GHG emissions. The region has been affected by serious weather events in the recent and distant past, has this been taken into account at all?

As noted in the CEEA GHG Guidelines:

if climate change risks extend beyond the project itself to potentially affect the public or the environment, this information must be factored into an informed decision by relevant authorities. Priority should also be given to projects that are both located in areas where there is a known sensitivity to climate change (i.e. projects located in Arctic regions or near large bodies of water), and are identified as sensitive to the effects of changing climatic parameters.²⁰

A discussion about increased costs of building and maintaining the road due to climate change is also absent from the GHG report. Overall GHG emissions are having immense impacts in this region, and other boreal regions – so it is an avoidance to say the GHG emissions from this project will have a little local impact. In fact the report should be able to *identify and project the combined GHG emissions in the region.*

CONCLUSION

In conclusion Manitoba Wildlands recommends:

1. That any firm or individual providing technical reporting, advice etc regarding green house gases and climate change for a licensing process in Manitoba be certified. Also that any methods, sources, or criteria used to assess GHG be clearly identified in all reports, work products etc.
2. That any agency or developer whose project involves crown lands and waters use accredited climate change verifiers for any reporting, EIS, or actions taken.
3. That project areas for public works be identified in order to identify possible environmental effects while avoiding being large so as to be able to claim that impacts are insignificant simply based on characteristics for size of area.
4. That the Manitoba government follow through on the recommendations of our auditor general regarding tracking and reporting carbon and emissions especially for both emitting and reductions. This involves actual emissions data rather than estimates and projections

²⁰ CEEA GHG Guidelines (2003), p. 13

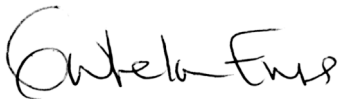
[http://www.ceaa.gc.ca/A41F45C5-1A79-44FA-9091-](http://www.ceaa.gc.ca/A41F45C5-1A79-44FA-9091-D251EEE18322/Incorporating_Climate_Change_Considerations_in_Environmental_Assessment.pdf)

[D251EEE18322/Incorporating_Climate_Change_Considerations_in_Environmental_Assessment.pdf](http://www.ceaa.gc.ca/A41F45C5-1A79-44FA-9091-D251EEE18322/Incorporating_Climate_Change_Considerations_in_Environmental_Assessment.pdf)

based on these. Clear guidelines and directives for environment licences (GHGs reporting, baseline inventories, etc), especially for public works need to be made public

5. That Manitoba Conservation specify in EIS guidelines and scoping documents what is required of any proponent regarding climate change content and reporting.
6. Sources for research, data, assumptions, and advice regarding climate change, emissions, carbon sequestration, etc be identified in any licensing filing, report, or requirement under an Environment Act licence.
7. That all reports regarding climate change, environmental management that involves climate change, carbon sequestration, monitoring, reporting etc in relation to an Environment Act licence be made public, and placed in the public registry. We would encourage proponents to also post this information publicly.
8. All public sector proponents abide by and support the public policy and regulatory framework with regards to climate change, including going beyond minimum compliance so that best outcomes are sought.
9. Each community affected by the ESRA be informed of the climate change impacts, monitoring and reporting that will be put in place regarding the ESRA.

Regards,



Gaile Whelan Enns,
Director, Manitoba Wildlands

Attachments List:

Paskanake Project Management February 2001, "Review and Analysis Eastside of Lake Winnipeg All Weather Justification and Scoping Study."

Manitoba Wildlands July 7th, 2010 letter to the Canadian Environmental Assessment Agency (CEAA) "Public Consultation - Comprehensive Study Scoping Document, Lake Winnipeg East Side Road CEAR Reference Number 09-03-52056."

Manitoba Wildlands January 15th, 2010 Letter to Braun and Blaikie "Manitoba Environment Proposal: PR 304 to Berens River All Season Road Environmental Impact Assessment - File No: 5388"