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**Rainforest  
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Validation  
Assessment  
Report for:

Global CO2 Reduction, Inc:  
**“Northern Ontario Forestry Offset  
Pilot Project”**

In

**Kapuskasing, Ontario Canada**

Report Finalized:	June 11, 2010
Audit Dates:	8 – 10 June, 2010 26 Mar – 11 May 2010, 17 Mar – 31 Mar 2010, Jan 14 – Feb 23 2010, Nov 4 – Dec 16 2009 & August 19-20, 2009
Audit Team:	Jeremy Williams, Adam Gibbon, Jared Nunery
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Report based on :	Climate, Community and Biodiversity Standards, Second Edition, December 2008
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## 1 INTRODUCTION

The purpose of this report is to document conformance with the requirements of The Climate, Community and Biodiversity Alliance (CCBA) project design validation standards by Global CO2 Reductions Inc., who are the Project Proponents, hereafter referred to as “Company”. The report presents the findings of SmartWood auditors who have evaluated company systems and performance against the applicable standard(s). Section 2 below provides the audit conclusions and any necessary follow-up actions by the company through corrective action requests.

This evaluation follows Climate, Community and Biodiversity Project Design Standards, Second Edition, December 2008. These were not developed by Rainforest Alliance, but by the CCBA. SmartWood CCBA evaluation reports are kept confidential in the draft stage. When finalized and successfully approved, the report is posted on SmartWood’s website and that of the CCBA.

The Rainforest Alliance’s certification program, SmartWood, was founded in 1989 to certify responsible forestry practices and now focuses on providing a variety of certification and auditing services. In 2005, Rainforest Alliance extended our role as a forest assessor/auditor to standards and services that included verification of forest carbon projects. Rainforest Alliance has the following status with the listed climate related standards and systems:

- Chicago Climate Exchange - we are an *associate member* and an approved *auditor*
- Climate, Community & Biodiversity Alliance – we are a *member* and an approved *auditor*
- Plan Vivo – we are an *auditor*
- Voluntary Carbon Standard – we are an accredited *validator & auditor*
- Carbon Fix – *we are an auditor*

The CCBA Standards are primarily project design standards and demonstrated conformance to the standard in this audit related to the planning, development, and design of the project in the inception or start-up phase. Conformance related to systems, design, and proposed activities in the process of development by the project. The standards were not used to measure project implementation, thus conformance to the standard was not meant to evaluate any delivery of emissions reductions, community or biodiversity benefits, or other results hoped to be achieved through future performance of the project. The CCBA Standards were designed to be a tool to demonstrate high-quality project design that should lead to multiple-benefits in addition to carbon sequestration and emissions reductions. Use of the standards may increase confidence in forestry carbon projects.

Dispute resolution: If SmartWood clients encounter organizations or individuals having concerns or comments about Rainforest Alliance / SmartWood and our services, these parties are strongly encouraged to contact SmartWood Headquarters directly. Formal complaints or concerns should be sent in writing.

## 2 AUDIT CONCLUSIONS

### 2.1 Summary of Conformance to CCBA Standards

#### General Section

- G1. Original Conditions in the Project Area
- G2. Baseline Projections
- G3. Project Design & Goals
- G4. Management Capacity and Best Practices
- G5. Legal Status and Property Rights

#### Conformance:

- |   |                             |          |
|---|-----------------------------|----------|
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |

#### Climate Section

- CL1. Net Positive Climate Impacts
- CL2. Offsite Climate Impacts ("Leakage")
- CL3. Climate Impact Monitoring

#### Conformance:

- |   |                             |          |
|---|-----------------------------|----------|
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |

#### Community Section

- CM1. Net Positive Community Impacts
- CM2. Offsite Stakeholder Impacts
- CM3. Community Impact Monitoring

#### Conformance:

- |   |                             |          |
|---|-----------------------------|----------|
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |

#### Biodiversity Section

- B1. Net Positive Biodiversity Impacts
- B2. Offsite Biodiversity Impacts
- B3. Biodiversity Impact Monitoring

#### Conformance:

- |   |                             |          |
|---|-----------------------------|----------|
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Required |

#### Gold Level Section

- GL1. Climate Change Adaptation Benefits
- GL2. Exceptional Community Benefits
- GL3. Exceptional Biodiversity Benefits

#### Conformance:

- |                              |  |          |
|------------------------------|--|----------|
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Required |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Required |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Required |

#### CCBA Validation Level Attained:

- Approved
- Gold

- |   |  |
|---|--|
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |
| Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |

### 2.2 Auditor Recommendation

	<b>Based on Company's conformance with CCBA requirements, the auditor makes the following recommendation:</b>	
<input checked="" type="checkbox"/>	<i>Validation approved:</i> CAR(s) closed	
<input type="checkbox"/>	<i>Validation not approved:</i> Conformance with CAR(s) required	
<b>Additional comments:</b>	<p>The Project Proponent has 14 days to review the factual accuracy of this report and present written comments to Rainforest Alliance. These can be discussed as needed on a telephone conference. Rainforest Alliance will then review and amend the report as necessary.</p> <p>The final report will then be delivered to the client along with a validation agreement and statement should the project achieve validation. If the project does not achieve validation, but the</p>	

	<p>Project Proponent wishes Rainforest Alliance to review new or updated material to address the open corrective action requests, this can be arranged, under a new contract.</p> <p><b>Note that within the findings description of CAR 36/10 are four identified minor changes that shall be corrected prior to the issuance of an unqualified validation statement.</b></p>
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## 2.3 Corrective Action Requests

### 2.3.1 Corrective Action Requests (CARs)

*Note: CARs describe required actions or improvements that address COMPANY non-conformances identified during audits. CARs include defined timelines for completion. CARs issued during assessments /reassessments shall be closed prior to issuance of Validation. CARs issued during audits shall be closed within timeline or result in suspension.*

The CARs identified below were originally associated with the August 2009 version of the Project Description Document (PDD). The Project Proponent reviewed the draft verification report and based on the CARs and other comments, made a number of changes to the PDD. A November 2009 version of the PDD was reviewed by the auditor, with the changes that were made being identified under each CAR in the "Evidence to close CAR" section. March 16, 2010, the auditor reviewed a revised PDD, a revised Appendix F (plus spreadsheet version), a revised CO2Fix script, and revised succession calculations. Additionally, a final review of a further revised Appendix F, using a new modelling approach with the CBM-CFS3 model as well as supporting calculation spreadsheets and model output excel spreadsheets were reviewed during the June 8-10, 2010 review. The status of the CARs that are shown is as of June 10, 2010.

<b>CAR 01/09</b>	Requirement G1.1
Non-conformance:	The PDD does not provide specific soils and geological information for the project site.
Corrective Action Request: The Project Proponent shall provide specific soil, climate and geological information for the project area in the PDD.	
Timeline for conformance:	N/A
Evidence to close CAR:	The proponent added some text to the November 2009 version of the PDD (in section 2.1.2) that provides soils data for two well sites located in the project area. While not all of the new information provided is useful, some of it is and it is sufficient to close the CAR
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 02/09</b>	Requirement G1.2, G1.2.1, G2.3
Non-conformance:	The PDD contains minimal information on the amount of ingress of natural regrowth that has already occurred on the site. The location of trees on the site is not well described.
Corrective Action Request: The Project Proponent shall provide more explicit detail in the PDD regarding the amount of tree vegetation that was on site prior to the commencement of the project.	

<i>Please note, in the previous report CAR 02/09 had three sub sections. These have been separated into CAR 02/09, 29/09 and 30/09 for clarity</i>	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	The PDD now contains a map showing the area of ingress, but there is no explanation of why this pattern of ingress occurred.  Given that the level of ingress is so low, the auditors have decided to close this CAR and issue an observation around the lack of detail in the explanation around the current pattern of ingress. (see <b>OBS 17/09</b> )
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 03/09</b>	Requirement G1.4
Non-conformance:	The calculation of the existing carbon stock has errors.
Corrective Action Request: The Project Proponent shall re-do the calculation of the carbon on the site prior to the project and update the PDD.	
Timeline for conformance:	N/A
Evidence to close CAR:	This CAR was closed and a new <b>CAR 35/09</b> was opened that better reflected the outstanding issues.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 04/09</b>	Requirement G1.5
Non-conformance:	The PDD does not discuss age class, gender, wealth or ethnicity and does not mention whether there are nearby Aboriginal communities. The PDD does not provide a rationale for the selection of a project zone, nor does it describe how the boundaries of the project zone were chosen
Corrective Action Request: The Project Proponent shall add to the PDD documentation of additional community characteristics required by the standard, including age class, gender, wealth and ethnicity. Any Aboriginal communities that may be affected by the project should be identified.	
Timeline for conformance:	N/A
Evidence to close CAR:	The Project Proponent has added data from the 2006 census for major communities within the project impact zone. The Project Proponent has also added the Constance Lake First Nation and Moose Cree First Nation as potentially affected First Nations.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 05/09</b>	Requirement G1.7
Non-conformance:	In the PDD, the existing biodiversity of the project site is not described – the information presented appears to be a composite of regional /provincial data found on the internet plus observations made during project initiation
Corrective Action Request: The Project Proponent shall describe in the PDD the biodiversity specifically for the project zone as it was prior to the project.	
Timeline for conformance:	Prior to validation approval

Evidence to close CAR:	The sections of the PDD related to biodiversity (i.e. G1) have been re-organized and supplemented. Mention of the wetland adjacent to the project site, and some of the species observed, have been added to the February version of the PDD. Additional information related to the bald eagle has been added on page 17. There is some discussion of the species that are under threat. Invasive species were identified as a potential threat to biodiversity. In sum, the description of biodiversity on the site is acceptable and the likely main risk to biodiversity has also been identified.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 06/09</b>	Requirement G1.8.5
Non-conformance:	The importance of the project site to the community water may qualify as an HCV and should have been identified as such.
Corrective Action Request: The Project Proponent shall revise the PDD to identify the provision of the community water supply as an HCV. See also CAR <b>26/09</b> .	
Timeline for conformance:	N/A
Evidence to close CAR:	The Project Proponent has identified the community water supply as an HCV and provided a listing of best management practices that are intended to safeguard the quality of the water supply.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 07/09</b>	Requirement G3.2
Non-conformance:	The PDD has inconsistencies in terms of what species will be planted and it should be edited to ensure consistency in this important matter.
Corrective Action Request: The Project Proponent shall revise the PDD to provide a consistent description of the tree species to be planted, and the number of trees to be planted.	
Timeline for conformance:	N/A
Evidence to close CAR:	The document has been revised so that it consistently identified jack pine and willow as the species to be planted under the project (e.g. sections 2.1.1, 2.1.2).
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 08/09</b>	Requirement G3.4
Non-conformance:	The PDD suggests that the jack pine stand will break up around 75 or 80 years, while the project length is 100 years. The PDD did not discuss what happens during the period between year 75 or 80 and year 100.
Corrective Action Request: The Project Proponent shall describe the forest that will be on the project site after the jack pine breaks up until the end of the project, in 100 years time.	
Timeline for conformance:	N/A
Evidence to close CAR:	The project term has been shortened to 75 years, which is consistent with the anticipated onset of maturity of jack pine stands. The rate of growth generally declines significantly at about this time, however on suitable sites,

	the stands may persist until 100 – 120 years, if not longer. The standard is not prescriptive with respect to project length or permanence.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 09/09</b>	Requirement G3.6
Non-conformance:	The PDD does not discuss whether the project will support the retention of the HCV on the site, or whether it will create any negative impacts on the HCV. No specific measures for maintenance or enhancement were identified.
Corrective Action Request: The Project Proponent shall revise the PDD so that it is more explicit in terms of the impacts, or lack thereof, on the HCV on the project site. The PDD shall also describe any measures taken to maintain or enhance the HCV.	
Timeline for conformance:	N/A
Evidence to close CAR:	The revised PDD describes the BMPs that are followed to maintain the quality of the water supply, and asserts that BMPs will be used to prevent negative impacts on golden eagles. While the PDD does not describe the BMPs relevant to golden eagles, it does suggest that golden eagles are not likely to be found within the project area. No BMPs were specifically described that are relevant to maintaining the large, intact forest areas in the project zone, but the PDD asserts that the project will pose negligible impacts to HCVs in the area.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 10/09</b>	Requirement G3.7
Non-conformance:	The PDD does not discuss how the project benefits will be retained beyond the 100 year project time span.
Corrective Action Request: The Project Proponent shall revise the PDD to describe how the project benefits will be retained beyond the project period.	
Timeline for conformance:	N/A
Evidence to close CAR:	In section 2.3.1, the PDD describes that the forest will remain on site after the project has finished, and that continued benefits will be generated from the forest. See findings related to <b>CAR 8/09</b> .
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 11/09</b>	Requirement G3.11
Non-conformance:	The PDD does not address the adequacy of the flow of funds for project implementation in any detail and is very light in terms of financial description.
Corrective Action Request: The Project Proponent shall provide additional financial information in the PDD, such as the anticipated carbon revenues, and should evaluate whether the funding arrangements are sufficient to cover all of the planned project activities over the lifespan of the proposed project.	
Timeline for conformance:	N/A
Evidence to close CAR:	PDD describes the costs and revenues associated with the project on page 35. The revenue from expected sales now matches the expected credits calculated (although please see CAR 17/09 regarding the calculation of credits).

	The Proponents explained to auditors that while the Ontario project, on its own and as a pilot, may not be self-sustaining through the sale of its carbon credits generated, the plan is for Global CO2 Reductions portfolio of projects to be managed centrally and that the funding for ongoing operations would come from the pooled portfolio source. This approach was confirmed in writing from Global CO2 Reductions to Rainforest Alliance.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 12/09</b>	Requirement : CL1.1
Non-conformance:	The project site is not, in the opinion of the auditor, well-suited for jack pine. It is better suited for poplar or spruce (either black or white). There is risk that the plantation will do poorly if it is fully replanted to jack pine.
Corrective Action Request: The Project Proponent shall assess the suitability of the project site for jack pine and make any appropriate modifications to species selection.	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	<p>Please see <b>CAR 34/09</b> for a discussion of the evidence of the use of forestry expertise in the project design.</p> <p>It is acknowledged by the auditors that changing the species selection at this stage of the project does not seem to be an option for the Project Proponents. In addition, it is acknowledged that the CCB have no requirements that the optimum species is planted. However, the fundamental concern is that there is a lack of defence as to the conservativeness of the growth estimates based on the site conditions and species selected.</p> <p>The major concern is that the PDD classes the sites as, 'site class 2' whilst providing no definition of the site class or how the project area meets it. In addition, the CO2Fix scripts add 10% to the growth for site class 2, again without any justification in the PDD. The PDD has thus failed to demonstrate that given the site conditions and uncertainty, they have selected a conservative growth estimate.</p> <p>To aid clarity, this CAR has been closed and the issue regarding the conservativeness of the growth model selected is handled under <b>CAR 17/09</b>.</p>
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 13/09</b>	Requirement G4.5
Non-conformance:	The PDD does not provide or reference a list of relevant laws or legislation covering worker's rights in Canada and Ontario.
Corrective Action Request: The Project Proponent shall revise the PDD to include the required list of relevant legislation.	
Timeline for conformance:	N/A
Evidence to close CAR:	In section 2.3.6 of the PDD, the proponent has listed and briefly described four key provincial labour laws that are relevant to the project.
<b>CAR Status:</b>	<b>Closed.</b>

Follow-up Actions (if any):	
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<b>CAR 14/09</b>	Requirement G4.7
Non-conformance:	The PDD does not provide a breakdown of the components of the funds that were agreed to be paid to Trees for Clean Air to implement the project, which makes it difficult to assess whether adequate resources have been budgeted.
Corrective Action Request: The Project Proponent shall include a general breakdown of the contract value and include operating costs, such as costs of planting stock, planting, site prep, management costs etc.	
Timeline for conformance:	N/A
Evidence to close CAR:	The revised PDD provides an assessment of the costs of activities, presumably as of November 2009, that are required to complete the full establishment of the project plantation.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 15/09</b>	Requirement G5.1
Non-conformance:	The PDD does not provide a list or reference an accessible existing list of all national and local laws and international treaties that are related to current property rights.
Corrective Action Request: The Project Proponent shall revise the PDD to include the required list of legislation and international treaties related to current property rights.	
Timeline for conformance:	N/A
Evidence to close CAR:	In section 2.4 of the PDD, the proponent has listed and briefly described four key provincial property-related laws that are relevant to the project.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 16/09</b>	Requirement G5.3
Non-conformance:	The PDD does not contain an assertion that there will be no negative impacts on offsite stakeholders.
Corrective Action Request: The Project Proponent shall provide a rationale for the assertion that neighbouring properties will not be impacted by the project.	
Timeline for conformance:	N/A
Evidence to close CAR:	In section 2.4, the revised PDD asserts that the project will not negatively impact people or their activities in the project zone, and in fact it will provide some positive benefits.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 17/09</b>	Requirement CL1.1, CL1.4
Non-conformance:	The auditor found errors in the calculation of “with project” benefits. These have the impact of overstating the estimated project benefits. As stated in G2.3, the “without project” estimates of carbon stock changes did not account for some level of natural ingress.
Corrective Action Request: The Project Proponent shall re-calculate the net change in carbon stocks due to the project, by re-calculating the amount of carbon sequestered through the project and subtracting from this amount the	

re-calculated “without project” carbon stock changes. The impact of CO <sub>2</sub> emissions from site preparation shall also be considered, if significant.	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	<p>CFS has revised the methodology used to calculate carbon stock changes in both baseline and project activities. As a result, the calculation of net carbon stock changes has also been revised. The revised PDD and supporting documents employ the CBM-CFS3 model to simulate carbon stock change over the 75 year project lifetime.</p> <p>Model outputs are translated to per hectare values for three identified soil strata. Specified growth rates for each soil strata are used to conservatively estimate poor growth of jack pine on project area soils.</p> <p>Baseline carbon stock, estimated from assumed re-growth of the project area through old-field successional processes, is subtracted from project carbon stocks to calculate net carbon stock changes as tCO<sub>2</sub>e·ha<sup>-1</sup> values. Net carbon stock change values are then multiplied by stratum area. Individual total stratum carbon stocks are then summed at each time step to calculate total net project area carbon stock change at each time step. Time steps are then summed to calculate total net carbon stock change for the project lifetime, estimated to be 12,016 tCO<sub>2</sub>e.</p> <p>CO<sub>2</sub> emissions related to site preparation activities are calculated in Table 10 of the PDD. These emissions are then subtracted from the net carbon stock changes in the conclusions section of CL.1 on p.58 of the PDD, along with the 5% buffer discount, to calculate the number of carbon credits available for sale (11,414 tCO<sub>2</sub>e).</p> <p>The revised methodology used to calculate carbon stock changes due to the project activities are now in conformance with the standard requirements. The net carbon stock changes are now correctly calculated by subtracting the baseline (“without project” carbon stocks) subtracted from the project carbon stocks. Additionally the impacts of CO<sub>2</sub> emissions from site preparation are included in the estimated number of carbon credits available for sale.</p> <p>.</p>
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 18/09</b>	Requirement CL1.2
Non-conformance:	The PDD asserts that the net changes in methane and N <sub>2</sub> O are below the 5% threshold, however no rationale is provided for this assertion.
Corrective Action Request: The Project Proponent shall provide some rationale for the assertion that impacts of changes in the emissions of methane and N <sub>2</sub> O are <i>de minimus</i> in the proposed project.	
Timeline for conformance:	N/A
Evidence to close CAR:	In section 3.1 of the revised PDD, the project developer has indicated that the project does not include activities that typically result in the release of methane or N <sub>2</sub> O emissions.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 19/09</b>	Requirement CL1.3
Non-conformance:	The site has been ploughed to prepare it for planting, and the impacts of this activity do not seem to have been considered in the calculation of net project impacts. Justification of significance or non-significance was not provided.
Corrective Action Request: The Project Proponent shall revise the PDD and the calculation of net benefits from the project to include emissions resulting from site preparation, if significant.	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	Table 4 shows a calculation of the project emissions due to the combustion of fossil fuel and the quantity of CO2 emitted per unit of fuel consumed has been revised using the correct emissions factor from the U.S. EPA.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 20/09</b>	Requirement CL1.5
Non-conformance:	The PDD made no mention of mechanisms to prevent double counting and did not mention double-counting
Corrective Action Request: The PDD shall be revised to describe how double-counting of GHG emissions reductions or removals will be avoided.	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	Section CL1 of the February 2010 PDD contains a revised and enhanced discussion of the means by which double counting of the carbon benefits from the project is to be avoided. The application of this monitoring will need to be evidenced at future verifications, and if the area does come under a cap and trade system in the near future, evidence of how the voluntary emissions were not double counted would need to be shown to the verifiers. The proponent is listed as an account holder on the market registry website ( <a href="http://www.markitenvironmental.com/registryview.php?p=1&amp;pg=acc&amp;sort=1">http://www.markitenvironmental.com/registryview.php?p=1&amp;pg=acc&amp;sort=1</a> ). At verification it will need to be demonstrated that this system was used correctly for the project.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 21/09</b>	Requirement CL2.1
Non-conformance:	The Project Proponent did not seem to be clear about the definition of leakage in the relevant parts of the PDD.
Corrective Action Request: The Project Proponent shall review the definition of leakage and ensure that the PDD reflects appropriate application of the definition.	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	Section CL2 of the February 2010 PDD contains a satisfactory assessment of leakage. All potential leakage types are assessed and strong arguments made for there being no potential leakage.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 22/09</b>	Requirement CM1.1
Non-conformance:	The proponent shall identify whether there are any Aboriginal communities within the project zone that might be affected by the project, and specifically discuss any projects impacts on any such communities.

Corrective Action Request: The Project Proponent shall identify in the PDD whether there are any Aboriginal communities within the project zone that might be affected by the project, and specifically discuss any project impacts on any such communities.	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	The proponent has identified two First Nations that might be impacted by the project and the PDD states that there were no representatives of either First Nation at the public meetings and no concerns have been raised. The proponent concluded that there will be no project impacts on either community.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 23/09</b>	Requirement CM1.2
Non-conformance:	The PDD does not identify the Groundwater Wellhead Protection Area (GWPA) as an HCV and so does not demonstrate that this potential HCV will not be negatively affected by the project.
Corrective Action Request: The Project Proponent shall demonstrate in the PDD that the Groundwater Wellhead Protection Area will not be negatively affected by the project.	
Timeline for conformance:	N/A
Evidence to close CAR:	In section 2.1.2, the Project Proponent identified that the project is expected to provide positive benefits to the GWPA, and that it is unlikely to create negative effects in the short term. See also the discussion regarding CAR's 6/09 and 9/09.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 24/09</b>	Requirement CM2.1
Non-conformance:	The PDD asserts that no negative offsite stakeholder impacts are expected but no evidence or substantiation is provided.
Corrective Action Request: The Project Proponent shall justify that there will not be any negative off-site stakeholder impacts from the project.	
Timeline for conformance:	N/A
Evidence to close CAR:	In section 2.4, the PDD contains a discussion of potential negative effects of the project on stakeholders, and provides a rationale for why there should not be any negative off-site impacts.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 25/09</b>	Requirement CM3.1
Non-conformance:	The PDD does not identify the GWPA as an HCV and so does not include an initial plan describing how the effectiveness of measures used to maintain or enhance High Conservation Values on the project site will be enhanced.
Corrective Action Request: The Project Proponent shall revise the PDD to include an initial plan for assessing the effectiveness of measures used to maintain or enhance High Conservation Values related to community well-being (G1.8.4-6) present in the project zone.	
Timeline for conformance:	N/A

Evidence to close CAR:	In section 2.1.2, the proponent has assessed the conformance of the project to BMP's for maintaining the GWPA, and provided a rationale as to why the project will not negatively impact the GWPA.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 26/09</b>	Requirement B1.1, B2.3 and B3.1
Non-conformance:	The PDD proposes using songbird species and abundance as a measure of increased biodiversity resulting from the project. The justification for use of this method is not provided in the PDD.
<p>Corrective Action Request: The Project Proponent shall explain why songbirds were selected as an indicator of biodiversity.</p> <p><i>Due to a change in the Project Proponents choice of biodiversity indicator this CAR was revised in the 31ST March report to:</i></p> <p>The Project Proponent shall fully explain and justify the selection of indicators for net biodiversity benefits.</p>	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	<p>The PDD now explains the historical loss of forest in the area and justifies selecting increased diversity and species numbers of forest birds as an indicator of biodiversity benefit.</p> <p>The loggerhead shrike range is now shown to not overlap with the project area..</p>
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 27/09</b>	Requirement B1.3
Non-conformance:	The PDD does not provide evidence that the populations of any invasive species will not increase.
<p>Corrective Action Request: The proponent shall revise the PDD to reflect that willow was planted on site and to describe how invasive species presence will be monitored.</p>	
Timeline for conformance:	N/A
Evidence to close CAR:	The revised PDD consistently identifies that willow is being planted on the project site. The PDD describes that disturbance to soil around the project area could increase invasive species propagation. Mitigation activities such as mechanical removal and containment of affected areas are suggested. It is also stated that monitoring of invasive species around the project area will be conducted.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 28/09</b>	Requirement B2.1
Non-conformance:	The PDD described an increase in invasive species as a potential negative biodiversity impact, but this reasoning is unclear, since no invasive species will be used in the project.
<p>Corrective Action Request: The proponent shall revise the PDD to indicate what invasive species are of principle concern, and how</p>	

the project might affect their rate of spread, what potential mitigation measures may be and how they will be monitored.	
Timeline for conformance:	N/A
Evidence to close CAR:	The PDD describes that disturbance to soil around the project area could increase invasive species propagation (pages 42-43). Mitigation activities such as mechanical removal and containment of affected areas are suggested. It is also stated that monitoring of invasive species around the project area will be conducted.. Key invasive species of interest are given in the PDD as Bull thistle, Canada thistle; Goat's beard, Leafy spurge, and St. John's wort.
<b>CAR Status:</b>	<b>Closed.</b>
Follow-up Actions (if any):	

<b>CAR 29/09</b>	Requirement G2.1
Non-conformance:	The PDD contains minimal and sporadic information on the amount of ingress of natural regrowth on site.
<p>Corrective Action Request:</p> <p>The Project Proponent shall revise the PDD to describe rates of natural ingress of trees, justified by local information and literature if available.</p> <p><i>(Note: This CAR was originally part of Car 02/09 but has been separated since it is a separate action that is independent of the action requested as CAR 02/09.)</i></p>	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	<p>The PDD now contains an explanation of a wide reaching literature review that failed to provide any information that could be used to help estimate ingress rates.</p> <p>The auditors therefore accept that no information was available.</p>
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 30/09</b>	Requirement G1.2, G1.2.1, G2.3
Non-conformance:	<p>The PDD contains minimal and sporadic information on the amount of ingress of natural regrowth on site.</p> <p>There would be some amount of natural ingress over the 100 year project period and the PDD needs to describe this, justify it, and count the associated carbon against the calculation of project benefits.</p>
<p>Corrective Action Request:</p> <p>The Project Proponent shall revise the PDD to account for the carbon that will be sequestered by natural tree ingress on the project site under the baseline scenario.</p> <p><i>(Note: This CAR was originally part of Car 02/09 but has been separated since it is a separate action that is independent of the action requested as CAR 02/09.)</i></p>	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	The proponent added some text to the November 2009 version of the PDD (in section 2.1.2) that provides an assessment of the amount of carbon presently in poplar that has naturally colonized a small part of the project area since active management of the land ceased some 20 years ago, and for the expected amount of poplar ingress throughout the period of the baseline scenario.

<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 31/09</b>	Requirement CM1.1
Non-conformance:	The proponent does not provide evidence of efforts made to meet with or converse with either of the two First Nations identified as being potentially affected by the project.
Corrective Action Request: The Project Proponent shall contact both First Nations with the intent of either meeting with them to discuss the project and examine whether they have any concerns, or obtaining a written statement that the First Nations do not have any concerns related to the project.	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	The proponent has still not provided any evidence that a direct invitation was extended to the First Nations beyond general public notices. However, as the First Nations are now more clearly located on the project maps and they are outside the project zone, this is not considered a non-conformance. CAR 31/09 has been withdrawn and <b>OBS 19/09</b> has been raised.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 32/09</b>	Requirement G1.8.2
Non-conformance:	There was a cursory discussion of the methodology used to identify HCVs, and this was not sufficient to convey an understanding of the process that was followed. As a result, it is not clear why the Gordon Cosens forest was identified as one. A concern is that given the apparent lack of a methodology, HCV's might have been missed.
Corrective Action Request: The Project Proponent shall revise the PDD to include an explanation of the process used to identify HCV's in the project area, and ensure that the methodology has been applied in such a manner as to avoid overlooking any additional HCV's that might be present.	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	The PDDs presentation of the HCV identification process is still somewhat unclear, however given the small scale of the project and lack it was decided that it was sufficient to close the CAR.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 33/09</b>	Requirement G3.5
Non-conformance:	There was a cursory discussion of risks to the project, and no indication that a systematic assessment of risks was undertaken. The verifier contends that some potentially important risks were not mentioned and may not have been assessed, and the mention of risk due to climate change is only found in the Gold section and not in the other parts of the standard that deal with risk and its mitigation. The approach described to mitigate the risks associated with climate change is not clear.
Corrective Action Request: The Project Proponent shall revise the PDD to include an explanation of the process use to identify risks to the project, the and clarify the assessment of risk due to climate change and the approach for mitigating it, and include this discussion, or at least reference it, under the main indicators related to risk.	
Timeline for conformance:	Prior to validation approval

Evidence to close CAR:	<p>From p26 onwards in the PDD a revised and expanded risk assessment is presented. The PDD explains that the assessment is based on searches of the Ontario MNR for risks related to forestry projects. Climate, pests, invasive plants, fire and wind are assessed and all ranked low risk.</p> <p>Mitigation activities or explanations of why Jack Pine is low are proposed for all risks factors except pests. It is therefore not clear how the project will mitigate the risk of pests. In a discussion with the Proponents it was explained that mitigation options for pests were considered, but within the constraints of operating in the well head area, no mitigation actions were possible. This was considered acceptable by the auditors as long as regular monitoring is conducted. See <b>OBS 20/10</b>.</p>
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 34/09</b>	Requirement G4.2
Non-conformance:	To date, there has been no evident participation of the forester mentioned in the PDD (Mr. Kevin DelGuidice) and the verifier has not seen evidence that he is actively involved in assisting the project and is truly a member of the project team.
<p>Corrective Action Request: The Project Proponent shall provide evidence that the project has actively involved local forest management expertise available to it.</p>	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	Mr, Kevin DelGuidice and Mr. Jeff Leach have both been added to the project team described in the February 2010 PDD (pages 31-32) and additional references appear in the PDD to identify their suggestions and advice to the Project Proponent.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 35/09</b>	Requirement G1.4
Non-conformance:	The presentation of the data concerning the current carbon stocks lacks transparency, a defence of the methods used, and adequate justification for the changed soil carbon value used in the analysis.
<p>Corrective Action Request: The Project Proponent shall present calculations in a transparent manor and defend the methodologies used when project specific data is not used.</p>	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	In Table 1 on page 12 the calculations of the current carbon stock have been updated. The calculations in the table are correct and the values used are referenced and conservative.
<b>CAR Status:</b>	<b>Closed</b>
Follow-up Actions (if any):	

<b>CAR 36/10</b>	Requirement: G2.3
Non-conformance:	The calculations for the estimated increase in tree biomass in the baseline scenario were changed in the new version of the PDD (in which they were mathematically correct, although not defended sufficiently). The calculation of the rate of increase in the tree carbon pool over the project lifetime is now ambiguously presented. There are now errors in the calculations and numbers are reported inconsistently in the PDD.
Corrective Action Request: The Project Proponent shall calculate the expected rate of increase in the tree carbon pool using clear, correct equations and report the values consistently.	
Timeline for conformance:	Prior to validation approval
Evidence to close CAR:	<p>In order to quantify baseline succession that would likely occur in the absence of project activities, CFS estimated successional rates, founded in empirical research on old-field successional processes. CFS assumed that following 75 years, the area would be 50% forested, following a non-linear rate of reforestation. The CBM-CFS3 model was used to simulate carbon flux associated with the successional reforestation of the project area by pioneer species – trembling aspen. Each soil stratum simulated re-growth based on assumed successional processes (termed “ingress” in the PDD) for the 75 year project lifetime. Total carbon stocks calculated from simulated re-growth in the CBN-CFS3 model were then subtracted from estimated project carbon stocks to calculate net carbon stock changes as a result of project activities.</p> <p>Baseline calculations were validated through discussions with the carbon calculation consultant on June 9<sup>th</sup>, combined with review of the carbon calculation spreadsheets (titled: Kap_AnnualCarbonStocks_audit).</p> <p>The calculation of baseline carbon stocks is clearly presented in the revised PDD submitted for review on June 7<sup>th</sup>. The project estimates natural regeneration as described above, and is founded in document forest succession processes. The revised baseline carbon stock estimates are now in conformance with the standard requirements.</p> <p>It should be noted that four minor errors was found that create confusion as to how carbon stocks were calculated. RA is requesting that evidence of the correction of these errors within the PDD and supporting documents is provided to the audit team prior to the issuance of an unqualified validation statement can be issued. Following is a list of the 4 changes necessary prior to the issuance of an unqualified validation statement (see findings in G2.3, CL1.1, and CL1.4 for more information related to these issues:</p> <ol style="list-style-type: none"> <li>1) <b>CFS shall correct both Appendix F and the PDD to correctly identify the proportion of area in each soil stratum (note that proportions of “moist” and “fresh” soils are incorrectly labelled 41.5% in the PDD and Appendix F).</b></li> <li>2) <b>CFS shall correct section 3.4.2 of Appendix F and include all missing text from the version submitted to RA for review on June 7<sup>th</sup>, 2010.</b></li> <li>3) <b>CFS Shall correctly reference Table 4 on p.47 of the PDD (the version submitted for review to RA on June 7<sup>th</sup>, 2010 incorrectly referenced Table 3 on p.47).</b></li> <li>4) <b>CFS Shall correctly reference Trembling Aspen in the Table Heading of Table 9 of Appendix F (the version submitted for review to RA on June 7<sup>th</sup>, 2010 incorrectly referenced jack pine in Table 9 of Appendix F)</b></li> </ol>
<b>CAR Status:</b>	<b>Closed</b>

Follow-up Actions (if any):	Evidence of correction of the 4 identified minor errors above, shall be presented to the audit team prior to the issuance of an unqualified validation statement.
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### 2.3.2 Observations

*Note: Observations are issued for areas that the auditor sees the potential for improvement in implementing standard requirements or in the quality system; observations may lead to direct non-conformances if not addressed.*

*In addition, observations are issued for the Gold Level Criteria, which are not mandatory for validation, but must be addressed if the Gold Level validation is sought.*

<b>OBS 01/09</b>	Requirement G3.2
The location of the willow plantings was not specifically shown in the project map in the PDD.	
Observation: The proponent should indicate on the project map the parts of the site where the willow has been planted.	
<b>OBS 02/09</b>	Requirement G3.5
The PDD provided a very cursory treatment of the risks to the project during its lifetime, and mitigation methods that are being, or could be, applied.	
Observation: The proponent should include in the PDD a more systematic description of the risks to the benefits and these risks are mitigated, if at all, by the project design. This was upgraded to CAR 33/09 during the December – February review of the November 2009 version of the PDD.	
<b>OBS 03/09</b>	Requirement G3.9
The PDD did not describe a number of the steps taken to publicize the CCBA public comment period.	
Observation: The proponent should be more explicit in the PDD in relation to the manner that the public meeting was advertised, attendance, and what comments were received and how they may have been responded to.	
<b>OBS 04/09</b>	Requirement G5.5
The PDD does not discuss any illegal activities that could affect the project's climate, community or biodiversity impacts.	
Observation: The Project Proponent should discuss in the PDD some of the potential risks and either why they are not considered an issue or how they have been mitigated.	
<b>OBS 05/09</b>	Requirement CL3.1
The PDD contains a rudimentary monitoring plan but it does not mention that the site will be assessed for survival in years 2 and 5, and in fact the project manager lives very close to the sites and inspects it informally on a frequent basis.	
Observation: The proponent should include more information about monitoring in the PDD.	

<b>OBS 06/09</b>	Requirement G3.2, Requirement CM3.1.
<p>The PDD does not provide a clear indication of how “Local socio-economic statistics and trends” will be assessed and how these are relevant to the assessment of the project impacts.</p> <p>While the full details of the community impacts monitoring plan can be provided in the detailed monitoring description, the wording in the PDD is confusing about what variables will be tracked and how they relate to the determination of project benefits. The project also does not describe how many jobs of what types will be created, or for how long they will last.</p>	
<p>Observation:</p> <p>The Proponent should provide more details about how community benefit variables will be used to assess the success of the project.</p>	
<b>OBS 07/09</b>	Requirement GL1.1
<p>The PDD does not provide a source and a climate modelling basis for the high /low expected changes to summer temperature, and there is no mention of other impacts on climate (e.g. rainfall) or impacts on temperature for the rest of the year.</p>	
<p>Observation:</p> <p>The proponent should provide information about the source and climate modelling basis for the high /low expected changes to summer temperature, and discuss other impacts on climate (e.g. rainfall) or impacts on temperature for the rest of the year and clearly link these to potential changes in the local land-use scenario.</p>	
<b>OBS 08/09</b>	Requirement GL1.2
<p>The PDD does not discuss the risk to the project’s benefits as a result of climate change.</p>	
<p>Observation:</p> <p>The PDD should discuss the risk to the project’s benefits as a result of climate change.</p>	
<b>OBS 09/09</b>	Requirement GL1.3
<p>The PDD does not speak to changes that climate may have or may have already had on local communities and biodiversity in the project zone and surrounding areas.</p>	
<p>Observation:</p> <p>The proponent should provide information about the changes that climate may have or may have already had on local communities and biodiversity in the project zone and surrounding areas</p>	
<b>OBS 10/09</b>	Requirement GL1.4
<p>The PDD does not address how the project will assist communities in adapting to climate change and /or its impacts</p>	
<p>Observation:</p> <p>The PDD should discuss how the project will assist communities in adapting to climate change and /or its impacts.</p>	
<b>OBS 11/09</b>	Requirement GL2.1
<p>The PDD claims that there will be exceptional community benefits from the project, including increased local capacity targeted at local unemployed, and the provision of learning opportunities. It is the understanding of the auditor that no local residents, except for the project manager, actually planted trees on the project site. The PDD does not describe in what manner local capacity will be enhanced. There is no documentation that at least 50% of the population in the area is below the national poverty line.</p>	
<p>Observation:</p> <p>The PDD should document that at least 50% of the population in the area is below the national poverty line, describe how local capacity will be enhanced, and describe how the outcome matched the plan and account for any variances.</p>	

<b>OBS 12/09</b>	Requirement GL2.2
The PDD states that the employment benefits will be targeted at the local unemployed but there is no indication of how this will be done and the auditor understands that it was not the case.	
Observation: The PDD should discuss how employment benefits will be targeted at the local unemployed, and describe how the outcome matched the plan and account for any variances.	
<b>OBS 13/09</b>	Requirement GL2.3
The PDD does not describe barriers to prevent benefits going to poorer households and therefore no discussion of how any barriers would be overcome.	
Observation: The proponent should describe barriers to prevent benefits going to poorer households and how any barriers would be overcome.	
<b>OBS 14/09</b>	Requirement GL2.4
The PDD does not mention any measures to identify poor or vulnerable households.	
Observation: The PDD should discuss project measures to identify poor or vulnerable households.	
<b>OBS 15/09</b>	Requirement GL2.5
The PDD does not discuss what will be monitored, why, by whom, how often etc.	
Observation: The PDD should discuss what will be monitored, why, by whom, how often etc	
<b>OBS 16/09</b>	Requirement GL3.1
The PDD does not reference the vulnerability criteria in this standard	
Observation: The PDD should assess the project against the vulnerability criteria in this standard.	
<b>OBS 17/09</b>	Requirement GL3.2
The PDD does not reference the irreplaceability criteria in this standard	
Observation: The PDD should assess the project against the irreplaceability criteria in this standard.	
<b>OBS 18/09</b>	Requirement G1.2
The PDD's description of the current pattern on ingress is weak. The area of ingress is shown but there is no explanation of why this pattern occurred.	
Observation: The PDD should provide more discussion about why one area has been subject to ingress and other areas have not.	
<b>OBS 19/09</b>	Requirement CM1.1
The PDD's description assertion that First Nations were invited to participate should be supported by evidence or, if only a general invitation to the public was extended, this should be made more clear.	

Observation:

The PDD should provide more discussion about why one area has been subject to ingress and other areas have not.

**OBS 20/10**

Requirement CM1.1

There are no mitigation actions suggested for pests, which is acceptable given the constraints of the project site, but regular monitoring could minimise any damage.

Observation:

The PDD should include the monitoring of pests as a risk mitigation activity.

## 2.4 Actions Taken by Company Prior to Report Finalization

### Audit Resulting in Audit Report Dated 10<sup>th</sup> June 2010

Following the report dated 11 May 2010, two CARs remained opened (CAR 17/09 and CAR 36/10). In response to these CARs the Project Proponent revised the carbon calculations, the PDD, and Appendix F. The revised documents were then reviewed by Jared Nunery. The following documents were submitted by the Project Proponent for review:

- June 7 Kampuskasing Submission 1.0 - Tracked Changes
- June 7 Kampuskasing Submission 1.0
- Kap\_DetailedResults
- CBM-CFS3 (academic journal article about the CBM-CFS3 model)
- Kap\_AnnualCarbonStocks\_audit
- Plonski\_Curves

### Audit Resulting in Audit Report Dated 11 May 2010

In response to the audit report dated 01 April 2010, CFS submitted a revised set of documentation. They were as follows:

- 091130 Northern Ontario PDD ver4.doc
- Appendix F - Project Carbon Stocks (ver03)
- Northern Ontario Pilot Project (ver03) [CO2Fix script]
- Succession calculations (ver02)

All other appendixes not listed above have not changed since the last set submitted.

### Audit Resulting in Audit Report Dated 31 March 2010

In response to the audit report dated 23<sup>rd</sup> February 2010, CFS submitted a revised set of documentation. They were as follows:

- 091130 Northern Ontario PDD ver3.doc<sup>1</sup>
- 2010-03-10 Calculation details for PDD - emissions and ingress.xlsx
- Appendix A - Kap Climate Norms.pdf

<sup>1</sup> Note that on the title page and in header of this PDD the version is incorrectly stated as being 'November 2009'.

- Appendix B - waypoints - rev02.pdf
- Appendix C - Project Area photos rev01.pdf
- Appendix D - Project Area Legal Description & Stakeholders.pdf
- Appendix E - Response to Public Comment.pdf
- Appendix F - Project Carbon Stocks (ver02).pdf
- CARs.doc
- CO2Fix Scenario 1 Biomass.xlsx
- Current Carbon Stocks.xls
- Northern Ontario Pilot Project (ver02).co2 (CO2FIX script)

A document called, "Validation report response - Feb 18 2010" also contained an exchange between Julie Culverhouse and Kevin DelGuidice regarding the suitability of Jack Pine for the site.

Additional information on carbon credit sales was provided via email on 26 March 2010 by Steve Clark.

Additional information was provided following an information request. The information was provided in the documents listed below:

- 2 - KAP COUNCIL BRIEF - NOV 17, 2008 (1).jpg
- 2 - KAP COUNCIL BRIEF - NOV 17, 2008.jpg
- 2010-03-29 Response to RA questions.docx
- 6 - Public presentation - Kapuskasing 2009-01-12.ppt
- ATT00009.pdf
- ATT00012.dat
- Gordon Cosens-Hearst 08-09 Version 9.pdf
- Soils email.pdf

#### Audit Resulting in Audit Report Dated 23<sup>rd</sup> February 2010

After the client received the first draft version of the report, and subsequent to two telephone conversations with Adam Gibbon (Technical Specialist, Climate Initiative) and Janice O'Brien (SmartWood Carbon Verification Task Manager), Jeremy Williams (auditor), the Project Proponent and the implementer to discuss the CARs and what was expected; the following revised documents were submitted:

- 091127 Northern Ontario PDD rev02 (November 27, 2009) and;
- Appendices.zip (December 14, 2009) which contained the following appendices as separate files:
  - Appendix A – Kap Climate Norms.pdf
  - Appendix B – waypoints – rev02.pdf
  - Appendix C – Project Area photos rev01.pdf
  - Appendix D – Project Area Legal Description & Stakeholders.pdf
  - Appendix E – Response to Public Comment.pdf
  - Appendix F – project carbon stocks.pdf

These documents were provided to the auditor for review of open CARs for conformance.

## **3 AUDIT PROCESS**

### **3.1 Audit Overview**

*Note: The table below provides an overview of the audit scope. See standard checklist appendix for specific details on auditor qualifications, staff interviewed, and audit findings per facility audited.*

<b>Location/Facility</b>	<b>Date(s)</b>	<b>Length of Audit</b>	<b>Auditor(s)</b>
<p>Kapuskasing – Project site, all blocks of the project site were visible from the locations travelled by the assessor, Blocks C, G, H, I, J were all walked and viewed in detail.</p> <p>The assessor and the on-site project manager drove along Highway 17 and down a number of side roads to examine rates of ingress on old field sites.</p> <p>The Kapuskasing water treatment facility was visited so that the assessor to speak with the manager of that facility about project impacts.</p>	Aug 19 - 20	Approx 11 hours on site and meeting with the project manager	Jeremy Williams
<p>Toronto – The auditor participated in a conference call with the PD and Smartwood staff to review the CARs issued in response to the August version of the PDD. The PD revised the PDD, and submitted it plus related Appendices to Smartwood and the auditor reviewed the revisions and examined the extent to which the CARs were addressed.</p>	Nov 4 – Dec 16, 2009	Approximately 12 hrs was spent participating in conference calls, preparing minutes, reviewing the revised PDD and revising the verification report.	Jeremy Williams
<p>Toronto – The proponent revised the PDD in an effort to address the CAR's identified in the first round of review, and the auditor assessed the revisions against the standard and added his assessment of the updated status of the CARs that had been identified in the first review.</p>	Dec 9 – 16	1.25 days	Jeremy Williams
<p>Toronto – After an internal Smartwood review by Adam Gibbon, there were some additional revisions and additions required to the verification report, that were undertaken after discussion between Adam and Jeremy</p>	Jan 12 – Feb 1, 2010	1.7 days	Jeremy Williams
Desk based review of revised materials	March 2010	5 days	Jeremy Williams / Adam Gibbon
Desk based review of revised materials	April 2010	2 days	Adam Gibbon / Jeff Hayward
Desk based review of revised materials	June 2010	3 days	Jared Nunery

### **3.2 Description of Audit Process**

#### Audit Resulting in Audit Report Dated 10 June 2010

In response to the two remaining corrective action requests that were open in the audit report dated 11 May 2010 the Project Proponent submitted revised documentation on 7 June 2010. A review of this documentation was conducted via a desk audit. The report was reviewed by a Senior Internal Reviewer. Jared Nunery held a call with Colin Mahony on 9 June 2010 to discuss the carbon calculations.

#### Audit Resulting in Audit Report Dated 11 May 2010

In response to the corrective action requests that were open in the audit report dated 01 April 2010 the Project Proponent submitted revised documentation on 26 April 2010. A review of this documentation was conducted via a desk audit. The report was reviewed by a Senior Internal Reviewer. Adam Gibbon held a call with Steve Clarke on 28 April 2010 to discuss primarily the carbon calculations.

#### Audit Resulting in Audit Report Dated 01 April 2010

In response to the corrective action requests that were open in the audit report dated 23<sup>rd</sup> February 2010 the Project Proponent submitted revised documentation on 17 March 2010. A review of this documentation was conducted via a desk audit. A number of requests for additional information were made to the auditors by the Project Proponent. The report was reviewed by a Senior Internal Reviewer.

#### Audit Resulting in Audit Report Dated 23<sup>rd</sup> February 2010

The auditor reviewed the PDD (revised version dated July 2009, which included track changes of revisions), the summary of responses by the Company to the pre-validation review, public comments. The auditor carried out field validation, and interviewed at length the Kapuskasing project manager. The auditor also had a short phone conversation with one of the principles of Global CO2 Reductions Inc on the afternoon of August 19, part way through the site visit.

The site visit took place August 19 – 20. The auditor flew to Timmins and drove to Kapuskasing, arriving shortly after noon. The auditor met with the project manager, Ms. Julie Culverhouse, at 12:30 and discussed the project in general terms, then visited the project site from approximately 2:00 – 4:30 p.m., and then viewed other fields that have been idle for as long as 40 years to examine the extent of encroachment by natural ingress. The auditor had dinner with Ms. Culverhouse and discussed the project further, until approx 9:30 p.m. The auditor and Ms. Culverhouse met again for 2 hours on the morning of August 20 before the auditor departed for home.

During the visit to the project site, the auditor and project manager went to the nearby water treatment facility to interview the manager regarding the project and the potential impacts of the project on the depth and quality of the aquifer that provides water to Kapuskasing. The project manager also spoke with a relative regarding the length of time that some parcels of field owned by family members have been unused for hay production or as pasture.

On August 24, the auditor and Rainforest Alliance staff had a 45-minute phone conversation about some of the main issues that arose during the validation audit. The auditor prepared a draft report and submitted it to SmartWood on August 26, 2009. The report was given a preliminary review and returned to the auditor for clarifications Sept 2, 2009. A revised version was received and submitted for re-review Sept 20, 2009. The final draft was prepared for client review on Sept 29, 2009.

The draft report was provided to the client on November 3, 2009. Following the client review of the report, the auditor and Smartwood Task Manager (Janice O'Brien) Adam Gibbon (Technical Specialist, Climate Initiative) and the auditor (Jeremy Williams) had two conference calls (November 9, 2009 and November 12, 2009) with the Project Proponent and the implementer to discuss the CARs and what was expected. The Project Proponent submitted a revised report (November 27, 2009) and appendices to address the CARs.

The revised report was then reviewed again by the auditor, the status of the CARs updated as per the auditor's assessment of the extent that the CARs were satisfied.

### **3.3 Documents reviewed**

#### Review Resulting in Audit Report Dated 10 June 2010

The auditor reviewed a revised PDD, a revised Appendix F, CBM-CFS3 model outputs, carbon calculation spreadsheets; academic publications on the CBM-CFS3 model as well as technical information about the CBM-CFS3 model from the Canadian Carbon Accounting Team (see [http://carbon.cfs.nrcan.gc.ca/CBM-CFS3\\_e.html](http://carbon.cfs.nrcan.gc.ca/CBM-CFS3_e.html)). Additional information and explanation was obtained by the audit team through direct communications with the consultant responsible for the revised carbon calculations.

#### Review Resulting in Audit Report Dated 11 May 2010

The auditor reviewed a revised PDD, a revised Appendix F (plus spreadsheet version), a revised CO2Fix script, and revised succession calculations. Extra information about the Junior Rangers was also provided. Confidential finance letter not included in report.

#### Review Resulting in Audit Report Dated 01 April 2010

The auditor reviewed a revised PDD (dated November 2009 on cover), including associated appendices A – F (local climate norms, waypoints, project area photos, legal description of the project area, carbon stocks and the summary of responses by the Company to the pre-verification assessment, public comments). The auditor also reviewed spreadsheets provided by the proponent showing carbon stocks, biomass, and CO2Fix calculation details. Finally, the proponent provided an overview of the responses made to the Corrective Action Requests that remained open in a version of the PDD dated November 27, 2009

A number of other documents were seen after a request for additional information. These are listed in section 2.4 above.

#### Review Resulting in Audit Report Dated 23<sup>rd</sup> February 2010

The auditor reviewed the PDD (revised version dated July 2009 on cover, which included track changes of revisions), the summary of responses by the Company to the pre-verification assessment, public comments, viewed the project in the field, and interviewed at length the Kapuskasing project manager. The auditor also made use of IPCC Good Practice Guidance for LULUCF, especially chapters 3.2 (Forests) and 3.4 (Grasslands).

In preparation of this second draft, the auditor reviewed an updated version of the PDD dated November 27, 2009, as well as a table that the Project Proponent prepared showing the changes that had been made to address the CARs. The appendices were also reviewed.

### **3.4 Stakeholder consultation process (if applicable)**

The CCBA requirements for stakeholder consultation are that the project design document(s) describing how the project meets CCB criteria must be posted on the CCBA website 30 days prior to the on-site field visit. The proponents prepared a project design

document, which was submitted to the CCBA on June 25, 2009 and was posted by the CCBA for public comment between June 30, 2009 and July 29, 2009. The CCBA invited comment on the PDD through emails sent to the Climate Change Info Mailing List.

In the stakeholder comment period, there was only one public comment received. The comments indicated issues primarily with two of the stated objectives of the project: Firstly that the carbon projections were likely to be greatly overestimated due to unrealistic baseline assumptions; secondly, that reforestation efforts as stated would have no effect and/or a negative effect on local biodiversity. The Rainforest Alliance provided the client with the public comments in order that they could be addressed during the onsite audit. The Rainforest Alliance auditor evaluated the issues raised with the client at the time of the onsite audit, reported on findings throughout the report as required, and raised CARs where required. Please see Appendix C below for full details.

During the validation process, the auditor held unstructured interviews with a small number of local people.

## Appendix A: COMPANY DETAILS

### 1 CONTACTS

#### 1.1 Primary Contact for Coordination with SmartWood

Primary Contact, Position:	Steve Clark
Address:	2320-555 West Hastings Street, Vancouver BC
Tel/Fax/Email:	604-676-9792 ext 232/sclark@carbonfriendly.com

#### 1.2 Billing Contact

Contact, Position:	Steve Clark
Address:	2320-555 West Hastings Street, Vancouver BC
Tel/Fax/Email:	604-676-9792 ext 232/sclark@carbonfriendly.com

### 2 SmartWood Website Customer Fact Sheet

*Note: upon Validation, the SmartWood website posts and maintains Customer Fact Sheets for companies with the information in the table below at <http://www.ra-smartwood.org/>*

Field	Text for Customer Fact Sheet	Has this Info Changed?
Contact, Title: (Sales & Marketing)	Steve Clark	Yes <input type="checkbox"/> No <input type="checkbox"/>
Address:	2320-555 West Hastings Street, Vancouver BC	Yes <input type="checkbox"/> No <input type="checkbox"/>
Tel/Fax/Email/Website:	604-676-9792 ext 232/sclark@carbonfriendly.com	Yes <input type="checkbox"/> No <input type="checkbox"/>
Products/Descriptions:		Yes <input type="checkbox"/> No <input type="checkbox"/>

### 3 Validation Scope

#### 3.1 Scope Definition:

The scope of the validation audit is to assess the conformance of Carbon Friendly Solution's afforestation project in northern Ontario against the Climate, Community and Biodiversity Alliance Standard (2<sup>nd</sup> edition). The project covers an area of 45 hectares divided into eleven sites that are adjacent to one another. The land on which the project is sited is owned by the town of Kapuskasing. The audit assesses the project with respect to the baseline scenarios presented in the project design document. The audit assesses all material GHG sources, sinks and reservoirs required by the CCBA. The project has a lifetime of 75 years.

**3.2 Type of Legal Entity:** Corporation

**3.3 Jurisdiction:** Canada

## Appendix B: STANDARD CHECKLIST CCBA STANDARDS

### 1 Evaluation of Project

Project Name:	Clear Lake Road, Kapuskasing
Contact for Validation:	Ms. Julie Culverhouse,
Address:	12 Wolfe Street, Kapuskasing, ON P5N 2J2
Tel/Fax/Email:	(705) 337-4236 sales@treesforcleanair.com

### 2 Evaluation Details

Auditor(s), Qualifications:	Jeremy Williams
Sites Visited:	Blocks A – G of the project
People Interviewed, Titles:	Ms. Julie Culverhouse, Owner, Trees for Clean Air Steve Clark, Vice President–Operations, Carbon Friendly™ Solutions, Inc. Mr. Ted Czuba, Kapuskasing Water Treatment Supervisor (Operator in Charge) Ms Culverhouse’s Grandmother, Ms. Jeanette Filion Ms. Culverhouse’s father, Mr. Gaetan Filion

### 3 Standard Checklist

Climate, Community and Biodiversity Project Design Standards  
Second Edition, December 2008

## GENERAL SECTION

### G1. Original Conditions at Project Site - Required

#### Concept

The original conditions at the project area<sup>2</sup> and the surrounding project zone<sup>3</sup> before the project commences must be described. This description, along with baseline projections (G2), will help to determine the likely impacts of the project.

#### Indicators

The Project Proponents must provide a description of the project zone, containing all the following information:

#### General Information

- 1) The location of the project and basic physical parameters (e.g. soil, geology, climate).

Findings from 20 <sup>th</sup> August Report	The PDD describes the regional soils and geology but does not provide specific information for the project site. The PDD also provides some regional climate information as well as local temperature records for Kapuskasing. The PDD notes that
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<sup>2</sup> The ‘project area’ is defined as the land within the carbon project boundary and under the control of the Project Proponent.

<sup>3</sup> The ‘project zone’ is defined as the project area and the land within the boundaries of the adjacent communities potentially affected by the project.

	the project site is located within a groundwater wellhead protection area, but does not elaborate that this is the aquifer that provides Kapuskasing's drinking water – well heads #1 and #2 are located within the project site.		
Findings from 27 <sup>th</sup> Nov Report	The proponent added some text to the November 2009 version of the PDD (in section 2.1.2) that provides soil data for two well sites located in the project area. While not all of the new information provided is useful, some of it is and it is sufficient to close the CAR.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

2) The types and condition of vegetation within the project area.

Findings from 20 <sup>th</sup> August Report	Section 2.1.2 describes the vegetation on the site, and lists a variety of species that were identified on site, although the main grass species are not listed. Section 2.1.3 observes that natural succession tends to be very slow and sporadic on sites such as the project site, while section 2.2 (Baseline) does not mention natural ingress or the existence of any trees on the project site. In section 2.3.1, PDD indicates that the area has less than 10% tree cover. This latter statement was judged to be accurate, based on the observations of the auditor, however there were individual encroaching poplar scattered along some of the edges of the site. Almost all of the trees were less than 2 m in height, with the majority being less than 1 m. The trees only exhibited a modest rate of annual growth.		
Findings from 27 <sup>th</sup> Nov Report	The proponent added some text to the November 2009 version of the PDD (in section 2.1.2) that describes the area of current poplar ingress and provides an assessment of the amount of carbon presently in poplar that has naturally colonized a small part of the project area since active management of the land ceased some 20 years ago. The PDD should provide a more detailed description of the ingress, such as a map of its location(s), the size of the trees, the species, and other specifications. The PDD also requires a justification of the rate of ingress selected for the baseline, based on available scientific literature.		
Findings from 1st April Report	<p>On Page 7 of the PDD, there is a title, "Climate Information", with a sub-heading of "Current carbon stocks within the project area". This section discusses both the current carbon stocks and the estimated amount of ingress expected in the baseline scenario, it does not contain climate information; therefore the heading appears to be a typo.</p> <p>A map has now been provided on page 9 to show the area where ingress has occurred. On page 7 it is stated that, "Current observations of tree ingress in the project area are estimated at 8.59 tonnes", no units were given but it is assumed this means tonnes of C. This amount was found to be negligible. The auditors agree that the current amount of tree biomass on site is negligible.</p> <p>There still remains no attempt to justify low ingress rates using literature and there is no discussion of why the pattern of ingress that occurred has done so.</p> <p>The projection of ingress in the baseline scenario is discussed in section G2.1 below.</p>		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 18/09</b>		

3) The boundaries of the project area and the project zone.

Findings from 20 <sup>th</sup> August Report	The project boundaries, including compartment boundaries, are well delineated, generally by either natural features (wetlands, blocks of tree cover) or by roads, and the map in the PDD is accurate.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

### Climate Information

- 4) Current carbon stocks within the project area(s), using stratification by land-use or vegetation type and methods of carbon calculation (such as biomass plots, formulae, default values) from the Intergovernmental Panel on Climate Change's 2006 Guidelines for National GHG Inventories for Agriculture, Forestry and Other Land Use<sup>4</sup> (IPCC 2006 GL for AFOLU) or a more robust and detailed methodology.<sup>5</sup>

Findings from 20 <sup>th</sup> August Report	The existing carbon stock is calculated as being 1,071 t/ha, as presented in section 2.1.3 of the PDD. The detailed calculation is in Appendix B of the PDD. These figures include the soil, estimated as being 765 t C/ha. This figure is excessive – Table 3.4.4 in the IPCC Grasslands chapter suggests that carbon in spodic soils under native vegetation is 117 tC/ha. This figure is referenced in Appendix B, but there is no justification for it – there is no discussion of substantiate the contention that the soil is spodic and the native vegetation has been cleared and replaced with grassland /hayfield. It is agreed that the carbon stocks in the natural trees on site is negligible.
Findings from 27 <sup>th</sup> Nov Report	In Table 2, the revised PDD contains the calculation of existing carbon stock undertaken by the auditor as a check on the proponent's original calculation, and contains an estimate of the amount of ingress from poplar regeneration. The PDD states that the IPCC suggest, " <i>it is good practice to use a "Tier 1" estimation method if the current carbon stocks in the project area are not significantly contributing to carbon removals, based on the following principles</i> ". This is not correct. The source of this information appears to be the IPCC GPG LULUCF (2003) Chapter 3.4, section 3.4.1.1.1 (page 3) <sup>6</sup> . The guidance given here on tier of data reporting refers to country level reporting, not projects. For a project, Tier 3 data would normally be expected. The PDD shows a calculation performed as a check by the auditor, which has then been copied into the report. There is no defence of why tier 3 data was not sought and no spreadsheets were presented to allow checks of the data. In addition, it is noted that CAR 02/09 may lead to a change in the level of carbon contained within the ingress forecast in the baseline.  Finally, it is also noted that in their references given for the data used to calculate the current project site carbon amounts, (Table 2), footnote 1 references table 3.4.3, it should be 3.4.2.
Findings from 1st April Report	Table 1 in the February 2010 PDD contains the calculation of existing carbon stock. This is supported by a spreadsheet titled, "Current Carbon Stocks". The PDD states that the IPCC suggests, " <i>it is good practice to use a "Tier 1" estimation method if the current carbon stocks in the project area are not significantly contributing to carbon removals, based on the following principles</i> ". This is not correct. The source of this information appears to be the IPCC GPG LULUCF (2003) Chapter 3.4, section 3.4.1.1.1 (page 3) <sup>7</sup> . The guidance given here on tier of data reporting refers to country level reporting, not projects. For a project, Tier 3 data would normally be expected. However, given the low biomass of the grass, and no anticipated changes in soil carbon, it was considered acceptable to use IPCC default data. However, where

<sup>4</sup> Volume 4 Agriculture, Forestry and Other Land Use <http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.html>

<sup>5</sup> In cases where a published methodology is used, the full reference must be given and any variations from the published methodology must be explained.

<sup>6</sup> [http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf\\_files/Chp3/Chp3\\_4\\_Grassland.pdf](http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf_files/Chp3/Chp3_4_Grassland.pdf)

<sup>7</sup> [http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf\\_files/Chp3/Chp3\\_4\\_Grassland.pdf](http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf_files/Chp3/Chp3_4_Grassland.pdf)

	<p>non-project area specific data are used, it is necessary to be conservative in the treatment of uncertainty. In this case there has been no discussion of the treatment of uncertainty with respect to the errors provided in the IPCC default tables. A common theme throughout the versions of this PDD has been the lack of evidence provided to justify the assumptions made and values chosen. This comment applies to all areas of the methodology.</p> <p>The calculations presented are correct. However, there are some issues with the units presented. For example, in Table 1, the units of the root to shoot ration are “4.0 tonnes DM ha<sup>-1</sup>” yet they should be unitless as stated correctly below the table. This is a common theme in the methodology and spreadsheets. In this case (Table 1) it does not lead to any material error, but in other circumstances it does.</p> <p>A further sample of data references were checked in this audit and another potential issue was discovered. On page 9 of the PDD the wood density of aspen is said to be 689 kg/m<sup>3</sup>. The reference was given as <a href="http://www.borealforest.org/nwwood.htm#populus">www.borealforest.org/nwwood.htm#populus</a>. This reference provides a number of values, but it is not clear why the proponents selected “weight” in “kg/m<sup>3</sup>” to use for their calculations. Weight is not measured in units of kg/m<sup>3</sup>, so it is unclear what this data means. Usually ratio of oven dry mass to fresh volume is used. In this case the lack of defence of a value that is suspiciously high is conservative as it overestimates the baseline carbon stocks. As a comparison the auditors checked the wood density of North American Salicaceae according to Global Wood Density Database (<a href="http://datadryad.org/repo/handle/10255/dryad.235">http://datadryad.org/repo/handle/10255/dryad.235</a>), and found the mean value here to be 0.34 g cm<sup>-3</sup> (oven dry mass to fresh volume).</p> <p>The PDD’s selection of a soil carbon value is supported by an email from silvicultural specialist Jeff Leach.</p> <p>Finally, as noted previously, the reference given for the data used to calculate the current project site carbon amounts (Table 1), footnote 1 references table 3.4.3, it should be 3.4.2. This has not been changed, and is therefore still incorrect. To emphasise again – all references must be clear and correct throughout the methodology.</p>			
Findings from 11th May Report	<p>In Table 1 on page 12 the calculations of the current carbon stock have been updated. The calculations in the table are correct and the values used are referenced and conservative.</p> <p>It was noted that the use of the 90<sup>th</sup> percentile in this cases results in very conservative grass biomass values (because the bigger the number, the more conservative it is). However the approach of using 90<sup>th</sup> percentile for maximum biomass values used later in the PDD is not conservative (because the bigger the number, the less conservative it is).</p>			
Conformance	<table border="1" style="width: 100%;"> <tr> <td style="width: 33%;">Yes <input checked="" type="checkbox"/></td> <td style="width: 33%;">No <input type="checkbox"/></td> <td style="width: 33%;">N/A <input type="checkbox"/></td> </tr> </table>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
CAR/OBS				

### Community Information

- 5) A description of communities<sup>8</sup> located in the project zone, including basic socio-economic and cultural information that describes the social, economic and cultural diversity within communities (wealth,

<sup>8</sup> ‘Communities’ are defined as all groups of people—including Indigenous Peoples, mobile peoples and other local communities—who live within or adjacent to the project area as well as any groups that regularly visit the area and derive income, livelihood or cultural values from the area. (See Appendix B: Glossary for more information.)

gender, age, ethnicity etc.), identifies specific groups such as Indigenous Peoples<sup>9</sup> and describes any community characteristics.<sup>10</sup>

Findings from 20 <sup>th</sup> August Report	Community population statistics are described in the PDD for communities located within the project zone. The auditor observed that the 2006 census data are available for all communities listed as being in the project zone, and the PDD should provide these. The PDD does not discuss age class, gender, wealth or ethnicity and does not mention whether there are nearby Aboriginal communities. The PDD does not provide a rationale for the selection of a project zone, nor does it describe how the boundaries of the project zone were chosen.		
Findings from 27 <sup>th</sup> Nov Report	The Project Proponent has added data from the 2006 census for major communities within the project impact zone. The Project Proponent has also added the Constance Lake First Nation and Moose Cree First Nation as potentially affected First Nations. While the rationale for this choice is unclear, the follow-up monitoring of potential impacts should provide the necessary clarity.		
Findings from 1st April Report	The Project Proponent has revised the information presented on First Nations and identified that the Constance Lake First Nation and Moose Cree First Nation are located outside the project boundary.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

6) A description of current land use and customary and legal property rights including community property<sup>11</sup> in the project zone, identifying any ongoing or unresolved conflicts or disputes and identifying and describing any disputes over land tenure that were resolved during the last ten years (see also G5).

Findings from 20 <sup>th</sup> August Report	This is well described in section 2.2 of the revised PDD.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

### Biodiversity Information

7) A description of current biodiversity within the project zone (diversity of species and ecosystems<sup>12</sup>) and threats to that biodiversity, using appropriate methodologies, substantiated where possible with appropriate reference material.

Findings from 20 <sup>th</sup> August Report	The PDD describes the species richness of the general boreal forest, species at risk in Ontario, and provides a list of flora and fauna encountered on the site during planting. In general, the existing biodiversity of the project site is not described – the information presented appears to be a composite of regional /provincial data found on the internet plus observations made during project initiation. The PDD should note that the site is adjacent to a small wetland and there is a creek running through the site. The PDD does not specifically mention threats to the existing biodiversity; these are negligible since there is a very high level of protection on the site due to it being within Kapuskasing's groundwater wellhead protection zone.		
Findings from 27 <sup>th</sup>	The Project Proponent has added a listing of most common grasses found on the site;		

<sup>9</sup> 'Indigenous Peoples' are defined as distinct, vulnerable, social and cultural groups whose members identify themselves as belonging to an indigenous cultural group. (See Appendix B: Glossary for more information.)

<sup>10</sup> Community characteristics may include shared history, culture, and livelihood systems, relationships with one or more natural resources, or the customary institutions and rules governing the use of resources.

<sup>11</sup> Including lands that communities have traditionally owned, occupied or otherwise used or acquired.

<sup>12</sup> Equates to habitat types, biotic communities, ecoregions, etc.

Nov Report	however the indicator is for the project zone. For example, there is no mention of the wetland beside the project area or the biodiversity within it. The indicator also requires a systematic discussion of threats to biodiversity substantiated with appropriate reference material where possible, and there is no evidence that this was done.		
Findings from 1st April Report	The sections of the PDD related to biodiversity (i.e. G1) have been re-organized and supplemented. Mention of the wetland adjacent to the project site, and some of the species observed, have been added to the February version of the PDD. Additional information related to the bald eagle has been added on page 17. While there is no evidence that a systematic assessment of risks to biodiversity has been undertaken, there is some discussion of the species that are under threat. Invasive species were identified as a potential threat to biodiversity. In sum, the description of biodiversity on the site is acceptable and the likely main risk to biodiversity has also been identified.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

8) An evaluation of whether the project zone includes any of the following High Conservation Values (HCVs) and a description of the qualifying attributes:<sup>13</sup>

8.1. Globally, regionally or nationally significant concentrations of biodiversity values;

- a. protected areas<sup>14</sup>
- b. threatened species<sup>15</sup>
- c. endemic species<sup>16</sup>
- d. areas that support significant concentrations of a species during any time in their lifecycle (e.g. migrations, feeding grounds, breeding areas).

Findings from 20 <sup>th</sup> August Report	PDD identifies that golden eagles are the only potential threatened species that might fly over the site. The auditor considers that there is a very low likelihood of one flying over the project area, let alone using it.; there are unlikely to be other threatened species on the project site.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

8.2. Globally, regionally or nationally significant large landscape-level areas where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance;

Findings from 20 <sup>th</sup> August Report	PDD identifies that the project area lies within (or adjacent to) a regionally significant forest (Gorden Cosens) which has been identified as an HCV.		
Findings from 27 <sup>th</sup> Nov Report	There was a cursory discussion of the methodology used to identify HCVs, and this was not sufficient to convey an understanding of the process that was followed. The		

<sup>13</sup> These high conservation value criteria are based on those defined by the High Conservation Value (HCV) Resource Network <http://hcvnetwork.org/>. Practical help is available for using HCVs in each region, including generic guidance documents (Toolkits) and Country Pages.

<sup>14</sup> Legally protected areas equivalent to IUCN Protected Area Management Categories I-VI (see [http://www.iucn.org/about/union/commissions/wcpa/wcpa\\_work/wcpa\\_strategic/wcpa\\_science/wcpa\\_categories/index.cfm](http://www.iucn.org/about/union/commissions/wcpa/wcpa_work/wcpa_strategic/wcpa_science/wcpa_categories/index.cfm) for definitions) as well as areas that have been proposed for protected area status by the relevant statutory body but have not yet been officially declared, and including areas protected under international conventions (e.g., Ramsar sites, World Heritage Sites, UNESCO Man-and-Biosphere Reserves, etc.).

<sup>15</sup> Species that qualify for the IUCN Red List threat categories of Critically Endangered (CR), Endangered (EN) and Vulnerable (VU). (See [www.iucnredlist.org](http://www.iucnredlist.org) and Appendix B: Glossary for more information.) Additional national or regional listings should also be used where these may differ from the IUCN Red List.

<sup>16</sup> Species for which the entire global range is restricted to the site, the region or the country (the level of endemicity must be defined).

	PDD states that the proponent referred to “HCV reports submitted by Tembec for the Gordon Cosens Forest in Kapuskasing”, but it not clear how these were used nor whether they were a factor in the identification of HCV’s for this project. As a result, it is not clear why the Gordon Cosens forest was identified as an HCV. A concern is that given the apparent lack of a structured approach to HCV assessment, HCV’s might have been missed.		
Findings from 1st April Report	The revised PDD contains a revised description of HCVs however the description of the methodology used to identify HCVs still does present the reader with a transparent picture of the process that was undertaken. The PDD states that the proponent referred to HCV reports submitted by Tembec for the Gordon Cosens Forest in Kapuskasing and Smooth Rock Falls Forest, but it not clear how these were used nor whether they were a factor in the identification of HCV’s for this project. As a result, it is not clear why the Gordon Cosens forest was identified as an HCV. However, given the small scale of the project it was decided that what was presented, although unclear was sufficient.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

8.3. Threatened or rare ecosystems;

Findings from 20 <sup>th</sup> August Report	PDD does not identify any HCV’s of this type, which the auditor feels is appropriate within the immediate project location.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

8.4. Areas that provide critical ecosystem services (e.g., hydrological services, erosion control, fire control);

Findings from 20 <sup>th</sup> August Report	PDD does not identify any HCV’s of this type.		
Findings from 27 <sup>th</sup> Nov Report	As identified below, the revised PDD identifies the community water supply as an HCV.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

8.5. Areas that are fundamental for meeting the basic needs of local communities (e.g., for essential food, fuel, fodder, medicines or building materials without readily available alternatives);

Findings from 20 <sup>th</sup> August Report	PDD identified that the project lies within a groundwater wellhead protection zone, which is the zone that overlies the aquifer that provides all of Kapuskasing’s drinking water. This was not identified as a HCV.		
Findings from 27 <sup>th</sup> Nov Report	The Project Proponent has identified the community water supply as an HCV and provided a list of best management practices that are intended to safeguard the quality of the water supply. However, there is not a clear documented process of how this HCV was identified, reducing confidence in the auditor that all potential sites have been identified.		
Findings from 1st April Report	The section of the PDD on HCVs has been re-organized and supplemented. The PDD asserts that the tools on the HCV Network site were used. The report does not provide a description of the exact process used or specific tools. The revised PDD also lists a number of types of information that were to be reviewed (e.g. use of non-timber forest products) but evidence is lacking in the report that all of these factors were considered.		

	However, it is acknowledged by the auditors that the project is small scale and low risk, therefore the level of documentation was sufficient.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

8.6. Areas that are critical for the traditional cultural identity of communities (e.g., areas of cultural, ecological, economic or religious significance identified in collaboration with the communities).

Findings from 20 <sup>th</sup> August Report	PDD does not identify any HCV's of this type, which the auditor agrees with, in the immediate area of the project.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

## G2. Baseline Projections- Required

### Concept

A baseline projection is a description of expected conditions in the project zone in the absence of project activities. The project impacts will be measured against this 'without-project' reference scenario.

### Indicators

The Project Proponents must develop a defensible and well-documented "without-project" reference scenario that must:

- 1) Describe the most likely land-use scenario in the absence of the project following IPCC 2006 GL for AFOLU or a more robust and detailed methodology,<sup>17</sup> describing the range of potential land-use scenarios and the associated drivers of GHG emissions and justifying why the land-use scenario selected is most likely.

Findings from 20 <sup>th</sup> August Report	PDD identifies that the project site would continue to remain as grassland in the absence of the project and proposes that the baseline is "no change in carbon stocks". The PDD justified this by referencing a forester who is described as the pilot project advisor. Due to the public comment received that suggested that there would be natural ingress of trees on the project site, the auditor viewed a number of sites within the project zone that had not been hayed or grazed for 30 – 40 years (Ms. Culverhouse had personal knowledge of this) and there were occasional small trees growing on these sites. The auditor did not observe any grassland sites that had a high stocking of encroaching tree cover. However, there would be some amount of natural ingress over the 100 year project period and the PDD needs to describe this, justify it, and count the associated carbon against the calculation of project benefits.
Findings from 27 <sup>th</sup> Nov Report	The PDD states that the status of the land as an area protecting the town's water supply and the lack of alternative suitable uses, as well as examples of land lying fallow for up to 40 years, is a sufficient basis to conclude that the most likely scenario is that the land would continue to remain as grassland. The auditor agrees that this is a reasonable conclusion for the area, given its characteristics. However, there would be some natural ingress and this must be conservatively accounted for.

<sup>17</sup> In cases where a published methodology is used, the full reference must be given and any variations from the published methodology must be explained.

	<p>An estimate of continued poplar ingress has been added to the baseline scenario, based on an extrapolation of the ingress that had occurred on the project site. This is a very low rate of ingress compared to what would be expected on many sites, and there is no other evidence provided in the PDD to support the assertion. There is no evidence that there had been a search of relevant, local literature, for example.</p>
Findings from 1st April Report	<p>An estimate of continued poplar ingress has been added to the baseline scenario on page 8 of the PDD. This based on an extrapolation of the ingress that had occurred on the project site since its abandonment. This is a very low rate of ingress compared to what would be expected on many sites however it was supported by visual evidence obtained by the auditor during the inspection of the project site and surrounding lands.</p> <p>It is stated on page 7 that the seed bank in the soil is depleted due to a long history of agricultural use, however, the only objective evidence provided is a personal communication from Kevin DelGuidice. This personal communication was a conversation held between Mr DelGuidice and Julie Culverhouse. The date of the conversation is not known and there are no written records of it.</p> <p>There still remains no attempt to justify low ingress rates using literature and there is no discussion of why the pattern of ingress that occurred has done so.</p> <p>There is no evidence that there has been a search of the literature or potential information sources. If there has been a search of literature and other potential information sources (experts, local/regional technical forestry organisations etc) and nothing was found, the places searched and search criteria must be stated to demonstrate this.</p> <p>See also section G1.4 for a description of a potential issue with the wood density used in the ingress calculations.</p>
Findings from 11th May Report	<p>The PDD now contains an explanation of a wide reaching literature review that failed to provide any information that could be used to help estimate ingress rates.</p> <p>The auditors therefore accept that no information was available.</p> <p>In the absence of any literature data the site based approach is accepted as being appropriate. However, please see section G2.3 below for issues with the calculations performed.</p>
Conformance	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p>
CAR/OBS	

- 2) Document that project benefits would not have occurred in the absence of the project, explaining how existing laws or regulations would likely affect land use and justifying that the benefits being claimed by the project are truly 'additional' and would be unlikely to occur without the project.<sup>18</sup>

Findings from 20 <sup>th</sup> August Report	<p>The presence of the GWPA means that activity is heavily restricted on the site and therefore the project area is unlikely to have provided project benefits that are additional to those provided as a result of the project. Community water quality benefits are assumed to be unaffected by the project and would continue, with or without the project.</p>
Findings from 27 <sup>th</sup>	<p>No change to the assessment.</p>

<sup>18</sup> Project proponents must demonstrate that project activities would not have been implemented under business as usual due to significant financial, technological, institutional or capacity barriers. Actions implemented by the project must not be required by law, or Project Proponents must demonstrate that the pertinent laws are not being enforced. Project proponents must provide credible and well-documented analyses (e.g., poverty assessments, farming knowledge assessments, or remote sensing analysis) to demonstrate that the 'without project' reference scenario reflects land-use practices that are likely to continue or that otherwise differ from the land-use practices expected as a result of project activities.

Nov Report			
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

3) Calculate the estimated carbon stock changes associated with the ‘without project’ reference scenario described above. This requires estimation of carbon stocks for each of the land-use classes of concern and a definition of the carbon pools included, among the classes defined in the IPCC 2006 GL for AFOLU.<sup>19</sup> The timeframe for this analysis can be either the project lifetime (see **G3**) or the project GHG accounting period, whichever is more appropriate.<sup>20</sup> Estimate the net change in the emissions of non-CO<sub>2</sub> GHG emissions such as CH<sub>4</sub> and N<sub>2</sub>O in the ‘without project’ scenario. Non-CO<sub>2</sub> gases must be included if they are likely to account for more than 5% (in terms of CO<sub>2</sub>-equivalent) of the project’s overall GHG impact over each monitoring period.<sup>21</sup>

Projects whose activities are designed to avoid GHG emissions (such as those reducing emissions from deforestation and forest degradation (REDD), avoiding conversion of non-forest land, or certain improved forest management projects) must include an analysis of the relevant drivers and rates of deforestation and/or degradation and a description and justification of the approaches, assumptions and data used to perform this analysis.<sup>22</sup> Regional-level estimates can be used at the project’s planning stage as long as there is a commitment to evaluate locally-specific carbon stocks and to develop a project-specific spatial analysis of deforestation and/or degradation using an appropriately robust and detailed carbon accounting methodology before the start of the project.<sup>23</sup>

Findings from 20 <sup>th</sup> August Report	The PDD asserts that there would be no change in the carbon stocks on the project site over the 100 year project timeframe in the absence of the project. As described above, some amount of natural ingress would be expected and the carbon associated with this ingress should be quantified and considered to be an increase in carbon stocks over the next 100 year period (see CAR 07/09).
Findings from 27 <sup>th</sup> Nov Report	The revised PDD contains an estimate of the amount of carbon that would be sequestered by the ingress over time, in the absence of the project. <b>CAR 29/09</b> requests that the proponent provide additional justification for the rate of ingress – however the methodology used for the calculation (on page 7 of the revised PDD) is acceptable and should be re-calculated once the ingress rate has been confirmed.
Findings from 1st April Report	No change to the assessment.
Findings from 11th May Report	<p>The calculations for the estimated increase in tree biomass in the baseline scenario were changed in the new version of the PDD (in which they were mathematically correct, although not defended sufficiently). The calculation of the rate of increase in the tree carbon pool over the project lifetime is now ambiguously presented. There are now errors in the calculations and numbers are reported inconsistently in the PDD.</p> <p>The unnumbered tables at the bottom of page 10 and the top of page 11 which are in the mislabelled section called “Climate Information” have been revised from the last version.</p> <p>The wood density of Aspen is said to be “400kg/m<sup>3</sup>”. It is not clear what the weight represents, dry biomass, wet biomass, carbon? The volume is said to be “wood”. The equation presented soon after, “Current kg of Carbon = 6.8 m<sup>3</sup> * 50% moisture * 400 kg/m<sup>3</sup>” does not help in interpreting the data. It was confirmed via a telephone conversation that the wood density was in units of dry matter per m<sup>3</sup> of wood. This</p>

<sup>19</sup> Above-ground biomass, below-ground biomass, deadwood, litter, soils.

<sup>20</sup> In some cases, the project lifetime and the project GHG accounting period may be different.

<sup>21</sup> The following CDM Executive Board tool can be used to test the significance of emissions sources:

[http://cdm.unfccc.int/EB/031/eb31\\_repan16.pdf](http://cdm.unfccc.int/EB/031/eb31_repan16.pdf).

<sup>22</sup> The analysis may use a model that is based on historical rates and patterns of deforestation and degradation or predict the expected increases or decreases in deforestation and degradation.

<sup>23</sup> The ‘start of the project’ is defined as the start of implementation of activities that will directly cause the project’s expected GHG emissions reductions or removals.

	<p>means the equation is incorrect in having a correction for moisture and not having a conversion from dry matter to carbon.</p> <p>The lack of clear referencing of units caused errors in the last version of the PDD and has not been fully addressed (For another example, see page 7, “Current observations of tree succession in the project area are estimated at 8.59 tonnes”. There is no clear indication of what there were 8.59 tonnes of, although it could be implied from the second part of the sentence that it is ‘C’.)</p> <p>In the box the PDD states that “1,360 kg of C” is equal to “0.0004 tonnes C · ha<sup>-1</sup> · year<sup>-1</sup>”. The calculations were checked in the spreadsheet, “Succession calculations (ver02)”. The assumptions behind this are not clear. The value 1360 was divided by 1000 (to convert from kg to t), which is reasonable, then divided by 45 (to make it per ha for the project area), which is reasonable but then divided by 75 (presumably related to the 75 year lifespan of the project, which is not understood by the auditors. The biomass in the project site at present accumulated over 30 years, or possible 10 years of tree growth after 20 years establishment, so the reasoning behind the decision to divide by 75 is not clear.</p> <p>In the spreadsheet, “Succession calculations (ver02)” there is a section called, “Difference between current and predicted carbon stock calculations”. The use of inaccurate headings makes this section difficult to understand. The values are not carbon stocks, but rates of carbon stock increases (one of which seems to be calculated incorrectly). These inaccurate headings are also used in the PDD and can cause confusion. This calculation does not appear to be used in the PDD, so it is not clear what it is for.</p> <p>The header of this table repeats across the split page which causes confusion because underneath a heading of “Current carbon stock from natural succession” future projections are reported.</p> <p>Under the heading, “Future predicted carbon stock calculation for 75 years” The presentation of the equations again are erroneous due to the wood density unit not being clear. However, the auditors were able to work out how the final conversion was done in this case (1 t = 1000kg, area = 45 ha, t = 75 years).</p> <p>The numbers calculated in the table do not appear to support the assertion made on page 7,</p> <p><i>“Current observations of tree succession in the project area are estimated at 8.59 tonnes; therefore, the Proponent estimates the annual natural succession of trees in the project area to be 0.015 tonnes C · ha<sup>-1</sup> · year. Details of the calculations are below.”</i></p> <p>The equations used to calculate these numbers are not provided and it is not clear what these numbers represent or why they are presented (they do not appear to be used elsewhere).</p>
Findings from 10 <sup>th</sup> June Report	<p>In order to quantify baseline succession that would likely occur in the absence of project activities, CFS estimated successional rates, founded in empirical research on old-field successional processes. Section 3.1.1 of Appendix F includes a literature review of the extant body of literature on old-field successional dynamics. Successional theory was used to develop assumptions of predicted natural reforestation of the project area.</p> <p>CFS assumed that following 75 years, the area would be 50% forested, following a non-linear rate of reforestation. A non-linear model was developed based on an assumed doubling of reforested area every 10 years. Figure 4 of Appendix F visually depicts the assumed reforestation over the 75 year period. The CBM-CFS3 model was</p>

	<p>used to simulate carbon flux associated with the successional reforestation of the project area by pioneer species – trembling aspen. Each soil stratum simulated re-growth based on assumed successional processes (termed “ingress” in the PDD) for the 75 year project lifetime. Individual cohort growth (based on assumed area regeneration) was simulated and carbon stocks associated with cohort growth were summed to estimate total carbon stock change over the 75 year project lifetime in the baseline scenario.</p> <p>Baseline calculations were validated through discussions with the carbon calculation consultant on June 9<sup>th</sup>, combined with review of the carbon calculation spreadsheets (titled: Kap_AnnualCarbonStocks_audit).</p> <p>It should be noted that one minor error was found that created confusion as to how baseline carbon stocks were calculated. RA is requesting that evidence of the correction of this error within the PDD and supporting documents is provided to the audit team prior to the issuance of an unqualified validation statement can be issued. This error was found in Table 9 of Appendix F. In the heading for Table 9, it is stated that the forecasted carbon stocks are based on Plonski Site Class 2 for Jack Pine. However, section 3.3.3 of Appendix F states that the most likely species to natural regenerate in this area are trembling aspen and balsam poplar. During a telephone interview with the carbon calculation consultant on June 9<sup>th</sup>, it was determined that this is an typo within Appendix F, and the table header for Table 9 should be corrected to state that Plonski Site Class tables for trembling aspen were used.</p>		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

4) Describe how the ‘without project’ reference scenario would affect communities in the project zone, including the impact of likely changes in water, soil and other locally important ecosystem services.

Findings from 20 <sup>th</sup> August Report	There are no likely changes in the water, soil or other locally important ecosystem services that would have occurred without the project. There are no other economic benefits that the project site would generate in the “without project” scenario.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

5) Describe how the ‘without project’ reference scenario would affect biodiversity in the project zone (e.g., habitat availability, landscape connectivity and threatened species).

Findings from 20 <sup>th</sup> August Report	There are no likely, significant changes in the biodiversity that would have occurred without the project, notwithstanding the probable ingress of scattered trees due to natural renewal over the 100 year period.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

### G3. Project Design & Goals - Required

## Concept

The project must be described in sufficient detail so that a third-party can adequately evaluate it.

Projects must be designed to minimize risks to the expected climate, community and biodiversity benefits and to maintain those benefits beyond the life of the project. Effective local participation in project design and implementation is key to optimizing multiple benefits, equitably and sustainably. Projects that operate in a transparent manner build confidence with stakeholders and outside parties and enable them to contribute more effectively to the project.

## Indicators

The Project proponents must:

- 1) Provide a summary of the project's major climate, community and biodiversity objectives.

Findings from 20 <sup>th</sup> August Report	The project's major climate, community and biodiversity objectives are provided in section 2.3.5 of the PDD. The goals are appropriate for the project.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 2) Describe each project activity with expected climate, community and biodiversity impacts and its relevance to achieving the project's objectives.

Findings from 20 <sup>th</sup> August Report	The PDD outlines the activities anticipated under the project and has identified how they cumulatively contribute to the project objectives. The PDD has some inconsistencies regarding which species are to be planted. In section 2.1.2, the PDD states that the project will plant jack pine and black spruce, whereas the remainder of the document refers only to jack pine. The PDD references once that willow will be planted in one location (the map in Figure 1). In fact, the majority of the trees planted were jack pine however willow cuttings were planted Aug 17 – 19 in some of the wetter areas of the project site.		
Findings from 27 <sup>th</sup> Nov Report	The document has been revised so that it consistently identified jack pine and willow as the species to be planted under the project (e.g. sections 2.1.1, 2.1.2).		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 01/09, OBS 06/09</b>		

- 3) Provide a map identifying the project location and boundaries of the project area(s), where the project activities will occur, of the project zone and of additional surrounding locations that are predicted to be impacted by project activities (e.g. through leakage).

Findings from 20 <sup>th</sup> August Report	A map of the project area and the project zone are provided in the PDD. They are of appropriate quality and level of detail, although the location of the willow plantings was not specifically shown.		
Findings from 27 <sup>th</sup> Nov Report	The map was updated to show the number of willow sticks planted in each block.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 4) Define the project lifetime and GHG accounting period and explain and justify any differences between them. Define an implementation schedule, indicating key dates and milestones in the project's development.

Findings from 20 <sup>th</sup> August Report	The project period has been identified as being 100 years and the land has been leased from the town for that period of time. The PDD suggests that the jack pine stand will break up around 75 or 80 years, and did not discuss the gap between the two periods.		
Findings from 27 <sup>th</sup> Nov Report	The project term has been shortened to 75 years, which is consistent with the anticipated onset of maturity of jack pine stands. The rate of growth generally declines significantly at about this time, however on suitable sites; the stands may persist until 100 – 120 years, if not longer. The standard is not prescriptive with respect to project length or permanence.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 5) Identify likely natural and human-induced risks to the expected climate, community and biodiversity benefits during the project lifetime and outline measures adopted to mitigate these risks.

Findings from 20 <sup>th</sup> August Report	The PDD provided a very cursory treatment of the risks to the project during its lifetime, and mitigation methods that are being, or could be, applied. For example, the site is well protected against fire and is close to Kapuskasing and to the water treatment centre, so that there are regularly people nearby who could detect and report a fire at an early stage. Fire suppression equipment is located close by. However, the south boundary of the site is a wetland, there is a creek running through the property, and the site is bordered by poplar stands. All of these tend to make good firebreaks. Jack pine budworm may cause some defoliation and possibly dieback but it rarely causes mortality. The PDD observed that encroachment of invasive plants was seen as a risk to the project.
Findings from 27 <sup>th</sup> Nov Report	The November 27 PDD contains revisions to the discussion of risk but there is still no evidence that a systematic assessment of risk has been undertaken. The revised PDD contained additional discussion of what measures would be taken to monitor and control invasive exotic species, of which six species of primary concern were identified. In the view of the auditor, the main risks are jack pine budworm and fire, not invasive species. In section 6.1, the PDD also discusses risks to the project due to changing climate, and proposes using fast-growing jack pine. It is not clear whether the PDD is indicating that jack pine generally grow fast, or whether seed from faster growing varieties of jack pine has been used. A CAR has been issued as a result of these findings.
Findings from 1st April Report	The February 2010 PDD contains revisions to the discussion of risk including additional data regarding the incidence of fire. Exotic species introduction continues to be viewed by the proponent as the major source of risk. The PDD discusses the measures that will be taken to monitor and control invasive exotic species, of which five species of primary concern are identified. In section G3, the PDD also evaluates risks to the project due to changing climate. In the view of the auditor, an important risk to the project is jack pine budworm which was not discussed in the PDD. This is not mentioned in the PDD, nor are any risks related to pests. Furthermore, after the initial planting high mortality was experienced, that the proponents attribute to extreme weather. There is no mention of extreme weather events (except wind and blow down), or establishment risks (frost, drought etc). It may be that no replanting is planned, however a consideration of these risks, in case any replanting of trees is necessary would provide the auditors confidence that events from the past have been acknowledged and all reasonable steps to mitigate them will be taken in the future.  It is unclear what the table at the bottom of page 24 has to do with risks. The table lists two sources of project activity emissions, which should be discussed elsewhere.

	There is still no explanation of the process undertaken to identify risks.		
Findings from 11th May Report	<p>From p26 onwards in the PDD a revised and expanded risk assessment is presented. The PDD explains that the assessment is based on searches of the Montario MNR for risks related to forestry projects. Climate, pests, invasive plants, fire and wind are assessed and all ranked low risk.</p> <p>Mitigation activities or explanations of why Jack Pine is low are proposed for all risks factors except pests. It is therefore not clear how the project will mitigate the risk of pests. In a discussion with the Proponents it was explained that mitigation options for pests were considered, but within the constraints of operating in the well head area, no mitigation actions were possible. This was considered acceptable by the auditors as long as regular monitoring is conducted (<b>OBS 20/10</b>).</p>		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 02/09, OBS 20/10</b>		

- 6) Demonstrate that the project design includes specific measures to ensure the maintenance or enhancement of the high conservation value attributes identified in **G1** consistent with the precautionary principle.<sup>24</sup>

Findings from 20 <sup>th</sup> August Report	The PDD does not discuss whether the project will support the retention of the HCV on the site, or whether it will create any negative impacts on the HCV. No specific measures for maintenance or enhancement were identified.		
Findings from 27 <sup>th</sup> Nov Report	The revised PDD describes the best management practices (BMPs) that are followed to maintain the quality of the water supply, and asserts that BMPs will be used to prevent negative impacts on golden eagles. While the PDD does not describe the BMPs relevant to golden eagles, it does suggest that golden eagles are not likely to be found within the project area. No BMPs were specifically described that are relevant to maintaining the large, intact forest areas in the project zone, but the PDD asserts that the project will pose negligible impacts to HCVs in the area.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 7) Describe the measures that will be taken to maintain and enhance the climate, community and biodiversity benefits beyond the project lifetime.

Findings from 20 <sup>th</sup> August Report	The PDD does not discuss how the project benefits will be retained beyond the 100 year project time span.		
Findings from 27 <sup>th</sup> Nov Report	In section 2.3.1, the PDD describes that the forest will remain on site after the project has finished, and that continued benefits will be generated from the forest. See comments related to CAR 08/09.		
Findings from 1st April Report	In section G3, the PDD describes that the forest will remain on site after the project has finished, and that continued benefits will be generated from the forest. No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

<sup>24</sup> The 'precautionary principle' is defined in the Preamble to the *Convention on Biological Diversity* (1992): '[W]here there is a threat of **significant reduction** or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat.'

- 8) Document and defend how communities and other stakeholders<sup>25</sup> potentially affected by the project activities have been identified and have been involved in project design through effective consultation,<sup>26</sup> particularly with a view to optimizing community and stakeholder benefits, respecting local customs and values and maintaining high conservation values. Project developers must document stakeholder dialogues and indicate if and how the project proposal was revised based on such input.<sup>27</sup> A plan must be developed to continue communication and consultation between project managers and all community groups about the project and its impacts to facilitate adaptive management throughout the life of the project.

Findings from 20 <sup>th</sup> August Report	Section 2.3.3 of the PDD summarizes the landowner and stakeholder consultation that occurred during project concept development. Consultation included discussions with and presentations to the Kapuskasing town council, one presentation to the Moonbeam local council, and a public meeting that was advertised in advance in the local newspaper and on the Kapuskasing town web site. One written public comment that was received was critical of the project's additionality and socio-economic benefits, however the auditor has investigated these and concluded that the objections are not as serious as the comment suggested (although there are CARs identified that the PDD should address the natural ingress question and revise the baseline accordingly).		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 9) Describe what specific steps have been taken, and communications methods used, to publicize the CCBA public comment period<sup>28</sup> to communities and other stakeholders and to facilitate their submission of comments to CCBA. Project proponents must play an active role in distributing key project documents to affected communities and stakeholders and hold widely publicized information meetings in relevant local or regional languages.

Findings from 20 <sup>th</sup> August Report	The PDD did not describe a number of the steps taken to publicize the CCBA public comment period. The project manager stated that there have been articles in the local and regional newspapers & a public presentation of the project in Kapuskasing, with approx 13 public & two media and four official municipal government attendees. There were also numerous town council meetings and a presentation in Moonbeam. The public meeting was advertised in the local newspaper. Town council meeting minutes mentioned the upcoming public meeting and minutes are posted on town web site.		
Findings from 27 <sup>th</sup>	No change to the assessment.		

<sup>25</sup> 'Other stakeholders' are defined as the main groups potentially affected by the project activities that are not living on or adjacent to the project site.

<sup>26</sup> Effective consultation requires Project Proponents to inform and engage broadly with all community groups and other stakeholders using socially and culturally appropriate methods. Consultations must be gender and inter-generationally inclusive and must be conducted at mutually agreed locations and through representatives who are designated by the communities themselves in accordance with their own procedures. Stakeholders affected by the project must have an opportunity to evaluate impacts and raise concerns about potential negative impacts, express desired outcomes and provide input on the project design, both before the project design is finalized and during implementation.

<sup>27</sup> In cases where it is unclear whether a project will be implemented or not, it is acceptable to start with a preliminary community consultation, provided there are plans for appropriate full engagement before the start of the project. Where conformance with the Standards is being applied to a project already under implementation, Project Proponents must either provide documentation of appropriate consultation during the project design phase or demonstrate how more recent consultations have been effective in evaluating community benefits and adapting project design and implementation to optimize community and stakeholder benefits and respect local customs.

<sup>28</sup> The CCBA public comment period' is the process whereby CCBA posts project documents that are under evaluation by an auditor for conformance with the Standards on [www.climate-standards.org](http://www.climate-standards.org) for at least 30 days with an invitation and link for public comments to which the auditor must respond in the audit report.

Nov Report			
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 03/09</b>		

10) Formalize a clear process for handling unresolved conflicts and grievances that arise during project planning and implementation. The project design must include a process for hearing, responding to and resolving community and other stakeholder grievances within a reasonable time period. This grievance process must be publicized to communities and other stakeholders and must be managed by a third party or mediator to prevent any conflict of interest. Project management must attempt to resolve all reasonable grievances raised, and provide a written response to grievances within 30 days. Grievances and project responses must be documented.

Findings from 20 <sup>th</sup> August Report	The PDD discusses in some detail how conflicts will be resolved, providing two generic options. Because it is difficult to identify the nature of any conflict that might emerge (and the likelihood of a conflict emerging appears to be minor), and because the town council is supportive of the project and the project manager is a resident in town, the conflict resolution processes identified in the PDD are sufficient. The project manager and Global CO2 Reductions have a contractual agreement and it is assumed that the legal remedies available in the case of conflict will be suitable should conflicts emerge between these two agents.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

11) Demonstrate that financial mechanisms adopted, including projected revenues from emissions reductions and other sources, are likely to provide an adequate flow of funds for project implementation and to achieve the anticipated climate, community and biodiversity benefits.

Findings from 20 <sup>th</sup> August Report	The PDD does not address this issue in any detail and is very light in terms of financial details. The value of the contract between the project manager and Global CO2 Reductions is provided; this contract is to cover plantation establishment, competition control and monitoring for the first five years of the project. Beyond that, it is not clear if the offset credits have been sold – no price has been provided and there is no benefit-cost analysis in the PDD.		
Findings from 27 <sup>th</sup> Nov Report	The PDD describes how remaining funds for project establishment are to be spent, and indicates the anticipated revenues from carbon offset generation. The PDD contends that the remaining project establishment budget is sufficient funds to support the project for its initial five years, however given that there was a large re-planting effort required. This was not mentioned in the discussion of the budget. As a result, it is not clear how the budget remains viable for the first five years of the project. Section 2.3.6 of the PDD states that total of \$58,334 of revenue is expected for forestry offsets in 75 years or alternately, a total of \$ 33,743 would be received for forestry offsets in 50 years at an estimated price of \$6 each. However since it is not clear how the amount of offsets is to be calculated, the values are not well-substantiated. The PDD does not state whether the funding will be used in part to monitor and verify the amount of offsets as the project continues, which creates a source of uncertainty related to the proponent's ability to carry out the project after year 5, especially since the PDD does not indicate when the funding would be received.		
Findings from 1st April Report	The February 2010 PDD provides increased detail and discussion regarding the project finances, including both revenues and expenditures (pages 27-8 of the PDD). The analysis and discussion provide sufficient cost detail, and explains that any re-planting costs are covered in the agreement with Trees for Clean Air. However, there is a		



## G4. Management Capacity and Best Practices - Required

### Concept

The success of a project depends upon the competence of the implementing management team. Projects that include a significant capacity-building (training, skill building, etc.) component are more likely to sustain the positive outcomes generated by the project and have them replicated elsewhere.

Best practices for project management include: local stakeholder employment, worker rights, worker safety and a clear process for handling grievances.

### Indicators

The Project Proponents must:

- 1) Identify a single Project Proponent which is responsible for the project's design and implementation. If multiple organizations or individuals are involved in the project's development and implementation the governance structure, roles and responsibilities of each of the organizations or individuals involved must also be described.

Findings from 20 <sup>th</sup> August Report	Global CO2 Reduction Inc is clearly identified as the Project Proponent. The roles of Global CO2 Reductions, Trees for Clean Air are described in section 2.3.6 of the PDD.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 2) Document key technical skills that will be required to implement the project successfully, including community engagement, biodiversity assessment and carbon measurement and monitoring skills. Document the management team's expertise and prior experience implementing land management projects at the scale of this project. If relevant experience is lacking, the proponents must either demonstrate how other organizations will be partnered with to support the project or have a recruitment strategy to fill the gaps.

Findings from 20 <sup>th</sup> August Report	Section 2.3.6.1 of the PDD identifies the project management staff and their skills and qualifications, and section 2.3.6.2 identifies Trees for Clean Air as the project implementer and documents the skills and expertise of that Company's staff. However, the project site is not, in the opinion of the auditor, well-suited for jack pine. The project site is better suited for poplar or spruce (either black or white) – this was apparently noted by a forester who provided advice to the project but the decision was made to plant jack pine due to its apparently higher yields. The auditor is concerned that the site may not yield the anticipated amount of biomass and it is possible that the high mortality experienced after the initial planting may be due in part to the inappropriate site (the majority of the mortality was attributed to three days of sub-zero weather immediately after planting. The auditor suggests that locally knowledgeable forest silviculture expertise is lacking and this CAR recommends that this shortcoming be addressed.
Findings from 27 <sup>th</sup> Nov Report	The Project Proponent contends that the site is suited to jack pine, and stands by the initial assessment that was made of the site. The revised PDD also references jack pine plantations near Moonbeam, which is approximately 10 – 15 km from the project site. The auditor is not satisfied with this response. That there are jack pine plantations in Moonbeam is not really relevant; there is no jack pine growing in the vicinity of the project site. In addition, the auditor and project manager spent at least one hour driving within the project zone to look at ingress on abandoned hayfields and pastures and the auditor noted only one occurrence of jack pine (planted beside a house) during the entire tour of the area. Moreover, the soils data provided in response to CAR 09/01 supports the auditors contention that the site is poorly suited to jack pine, since the

	<p>soils data show that there is from 2.5 – 3.5 m of clay soil on site.</p> <p>The initial planting of jack pine experienced very high mortality, ranging from over 80% on some blocks to virtually 100% on others, based on a rough estimate of the auditor after spending time on several of the project area blocks searching for planted trees. This scale of plantation failure is rarely encountered in northern Ontario any more and is strongly suggestive that the auditor's contention is correct that the site is not suited for jack pine. It is noted that the project manager attributed the mortality to three days of very cold weather immediately following planting – and as a result, the project manager felt it was appropriate to re-plant jack pine on the site. The cold weather probably contributed to the mortality, in the view of the auditor, but at the same time, it is probably not an unusual occurrence during planting season and this level of mortality is very uncommon in N. Ontario.</p> <p>Moreover, the indicator requires that the technical skills of the project team be documented, and this is covered in section 2.3.6 of the PDD. A Mr. Kevin DelGuidice has been identified as providing forestry advice, but this individual has not been part of the validation and there is no documentation to indicate he provided a professional opinion related to the suitability of jack pine for the site. As such, the verifier is concerned that there is a lack of local forest management experience in the project team, pending further evidence being provided. CAR 34/09 has been issued in this respect.</p>		
Findings from 1st April Report	<p>The PDD is now clearer in explaining the role of forestry experts in the project. Mr, Kevin DelGuidice and Mr. Jeff Leach have both been added to the project team described in the February 2010 PDD (pages 31-32) and additional references appear in the PDD to identify their suggestions and advice to the Project Proponent.</p> <p>It is acknowledged by the auditors that changing the species selection at this stage of the project does not seem to be an option for the Project Proponents. In addition, it is acknowledged that the CCB have no requirements that the optimum species is planted. The auditors still have concerns over the conservativeness of the growth model selected given the site conditions. These are discussed in section CL1.1 below and <b>CAR 17/09</b>.</p>		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 3) Include a plan to provide orientation and training for the project's employees and relevant people from the communities with an objective of building locally useful skills and knowledge to increase local participation in project implementation. These capacity building efforts should target a wide range of people in the communities, including minority and underrepresented groups. Identify how training will be passed on to new workers when there is staff turnover, so that local capacity will not be lost.

Findings from 20 <sup>th</sup> August Report	<p>This activity has largely been implemented by Trees for Clean Air – the company owner is well known in the community and has been raising local awareness and knowledge. There is reported to be considerable interest from local farmers in having portions of their land planted but restrictions on the length of lease have prevented any such projects from being implemented. Outland Reforestation, which did some of the tree planting, works for local forest companies and in 2009, they weren't planting as many trees as they had expected and so TFCA was able to take advantage of their being in town and hired them for two days to assist with planting. This arrangement was helpful for both Outland and TFCA. Local people have opportunities to plant with Outland but few choose to participate.</p>
Findings from 27 <sup>th</sup> Nov Report	<p>No change to the assessment. The revised PDD includes a brief description of the orientation and training provided by the project – pre-season training by Outland Reforestation is mentioned. The PDD states that Outland provided on-site orientation, health and safety training, and risk identification and avoidance.</p>
Findings from 1st April Report	<p>No change to the assessment.</p>

Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 4) Show that people from the communities will be given an equal opportunity to fill all employment positions (including management) if the job requirements are met. Project proponents must explain how employees will be selected for positions and where relevant, must indicate how local community members, including women and other potentially underrepresented groups, will be given a fair chance to fill positions for which they can be trained.

Findings from 20 <sup>th</sup> August Report	Approximately 60% of the employment time on the project, excluding the time devoted by staff of TFCA, has been with local individuals. Local people have opportunities to plant with Outland Reforestation (who undertook the other 40% of work) but few choose to participate. If the time of the TFCA staff person is included, it is likely that approximately 90% of the employment time was for local people.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 5) Submit a list of all relevant laws and regulations covering worker's rights in the host country. Describe how the project will inform workers about their rights. Provide assurance that the project meets or exceeds all applicable laws and/or regulations covering worker rights<sup>29</sup> and, where relevant, demonstrate how compliance is achieved.

Findings from 20 <sup>th</sup> August Report	The PDD does not provide or reference a list of relevant laws or legislation. The project manager did state that Outland is a certified tree planter, which would provide some assurance of legal compliance and adequate health and safety measures.		
Findings from 27 <sup>th</sup> Nov Report	In section 2.3.6 of the PDD, the proponent has listed and briefly described four key provincial labour laws that are relevant to the project. The PDD simply states that the project complies with all relevant laws but does not demonstrate how compliance is to be achieved.		
Findings from 1st April Report	The February 2010 PDD (section G4) includes enhanced discussion of relevant provincial labour laws. No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 6) Comprehensively assess situations and occupations that pose a substantial risk to worker safety. A plan must be in place to inform workers of risks and to explain how to minimize such risks. Where worker safety cannot be guaranteed, Project Proponents must show how the risks will be minimized using best work practices.

Findings from 20 <sup>th</sup> August Report	The PDD discusses this in section 2.3.6.2. All tree planters used were trained and experienced - Outland had two planting supervisors (one full time and one part time) and TFCA had three supervisors on site (2 full time & 1 part time). Ms. Culverhouse explained that considerable time was spent prior to the project identifying safety resources and potential hazards, and this was verified once the tree planters reached the site. The auditor notes that the work site actually has very few hazards /risks – e.g. no standing trees.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		

<sup>29</sup> 'Workers' are defined as people directly working on project activities in return for compensation (financial or otherwise), including employees, contracted workers, sub-contracted workers and community members that are paid to carry out project-related work.

April Report			
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

7) Document the financial health of the implementing organization(s) to demonstrate that financial resources budgeted will be adequate to implement the project.

Findings from 20 <sup>th</sup> August Report	It was asserted that the funding provided to TFCA by GCO2R was sufficient to cover the initial planting but no breakout of the components of the sum value was provided to be verified. TFCA indicated that it will probably not be sufficient to cover the additional expenditures needed for replanting. TFCA indicated that it intends to honour its contracts and the nursery owner is a family relation who may provide favourable terms for additional trees.		
Findings from 27 <sup>th</sup> Nov Report	See response to CAR 11/09 – the revised PDD provides an assessment of the costs of activities, presumably as of November 2009, that are required to complete the full establishment of the project plantation.		
Findings from 1st April Report	The February 2010 PDD provides increased detail and discussion regarding the project finances, including both revenues and expenditures (pages 27-8 of the PDD). The analysis and discussion provide sufficient cost detail, and explains that any re-planting costs are covered in the agreement with Trees for Clean Air. No change to the assessment.  However please note that there are discrepancies in the financial information presented and the estimate of net GHG benefits that could impact the projects finances significantly. See <b>CAR 11/09</b> and <b>CAR 17/09</b> .		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

## G5. Legal Status and Property Rights - Required

### Concept

The project must be based on a solid legal framework (e.g., appropriate contracts are in place) and the project must satisfy applicable planning and regulatory requirements.

During the project design phase, the Project Proponents should communicate early on with relevant local, regional and national authorities in order to allow adequate time to earn necessary approvals. The project design should be sufficiently flexible to accommodate potential modifications that may arise as a result of this process.

In the event of unresolved disputes over tenure or use rights to land or resources in the project zone, the project should demonstrate how it will help to bring them to resolution so that there are no unresolved disputes by the start of the project.

### Indicators

Based on information about current property rights provided in **G1**, the Project Proponents must:

- 1) Submit a list of all relevant national and local laws<sup>30</sup> and regulations in the host country and all applicable international treaties and agreements. Provide assurance that the project will comply with these and, where relevant, demonstrate how compliance is achieved.

Findings from 20 <sup>th</sup> August Report	The PDD does not provide such a list or reference an accessible existing list.
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<sup>30</sup> Local laws include all legal norms given by organisms of government whose jurisdiction is less than the national level, such as departmental, municipal and customary norms.

Findings from 27 <sup>th</sup> Nov Report	In section 2.4 of the PDD, the proponent has listed and briefly described four key provincial property-related laws that are relevant to the project. The PDD includes a statement saying all laws will be followed.		
Findings from 1st April Report	The February 2010 PDD (section G4) includes enhanced discussion of relevant provincial labour laws. No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 2) Document that the project has approval from the appropriate authorities, including the established formal and/or traditional authorities customarily required by the communities.

Findings from 20 <sup>th</sup> August Report	A lease and carbon finance agreement between the Corporation of the Town of Kapuskasing, TFCA, and Global CO2 Reductions Inc was signed March 23, 2009 and this signifies approval of the town for the project. There are also town council meeting minutes that demonstrate municipal approval.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 3) Demonstrate with documented consultations and agreements that the project will not encroach uninvited on private property, community property,<sup>31</sup> or government property and has obtained the free, prior, and informed consent of those whose rights will be affected by the project.<sup>32</sup>

Findings from 20 <sup>th</sup> August Report	Section 4.2 of the PDD asserts that there will be no negative impacts on offsite stakeholders and indicates that mitigation will occur if such impacts are identified. While the auditor concurs that the project should not encroach on other properties or have impacts on other properties, the PDD does not contain a rationalization in order to be consistent with the standard.		
Findings from 27 <sup>th</sup> Nov Report	In section 2.4, the revised PDD asserts that the project will not negatively impact people or their activities in the project zone, and in fact it will provide some positive benefits. The project is being undertaken on private land.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 4) Demonstrate that the project does not require the involuntary relocation of people or of the activities important for the livelihoods and culture of the communities.<sup>33</sup> If any relocation of habitation or activities is undertaken within the terms of an agreement, the Project Proponents must demonstrate that the agreement was made with the free, prior, and informed consent of those concerned and includes provisions for just and fair compensation.<sup>34</sup>

Findings from 20 <sup>th</sup> August Report	The PDD indicates that no relocation of inhabitants will result from the project.		
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<sup>31</sup> Including lands that communities have traditionally owned, occupied or otherwise used or acquired.

<sup>32</sup> In conformance with the United Nations Declaration on the Rights of Indigenous Peoples.

<sup>33</sup> Restricting the evaluation to activities that comply with statutory laws or conform to customary rights. 'Customary rights' to lands and resources refers to patterns of long-standing community land and resource usage in accordance with Indigenous Peoples' and local communities' customary laws, values, customs, and traditions, including seasonal or cyclical use, rather than formal legal title to land and resources issued by the State.

<sup>34</sup> In conformance with the United Nations Declaration on the Rights of Indigenous Peoples.

Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

5) Identify any illegal activities that could affect the project's climate, community or biodiversity impacts (e.g., logging) taking place in the project zone and describe how the project will help to reduce these activities so that project benefits are not derived from illegal activities.

Findings from 20 <sup>th</sup> August Report	The PDD does not discuss this but the Project Proponent in an interview with the auditor said that the risk assessment that had been done suggested a very low probability of a reversal greater than 5% of project benefits – this is consistent with the implicit assumption that there are no potential illegal activities that could take place on the project site which would affect the project's benefits. The auditor generally concurs, noting that snowmobiling, ATV use, and the illegal use of fire are potential hazards.		
Findings from 27 <sup>th</sup> Nov Report	No change in assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 04/09</b>		

6) Demonstrate that the Project Proponents have clear, uncontested title to the carbon rights, or provide legal documentation demonstrating that the project is undertaken on behalf of the carbon owners with their full consent. Where local or national conditions preclude clear title to the carbon rights at the time of validation against the Standards, the Project Proponents must provide evidence that their ownership of carbon rights is likely to be established before they enter into any transactions concerning the project's carbon assets.

Findings from 20 <sup>th</sup> August Report	This is part of the agreement between the Town of Kapuskasing, Trees for Clean Air and Global CO2 Reduction and it is also part of separate contract between Trees for Clean Air and Global CO2 Reduction. The PDD states that Global CO2 Reduction has the rights to all of the offsets produced under this project, which is sufficient, in the opinion of the auditor, to give the proponent clear and uncontested rights to the carbon.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

# CLIMATE SECTION

## CL1. Net Positive Climate Impacts - Required

### Concept

*The project must generate net positive impacts on atmospheric concentrations of greenhouse gases (GHGs) over the project lifetime from land use changes within the project boundaries.*

### Indicators

The Project Proponents must:

- 1) Estimate the net change in carbon stocks due to the project activities using the methods of calculation, formulae and default values of the IPCC 2006 GL for AFOLU or using a more robust and detailed methodology.<sup>35</sup> The net change is equal to carbon stock changes *with* the project minus carbon stock changes *without* the project (the latter having been estimated in **G2**). This estimate must be based on clearly defined and defensible assumptions about how project activities will alter GHG emissions or carbon stocks over the duration of the project or the project GHG accounting period.

Findings from 20 <sup>th</sup> August Report	<p>The Project Proponent used the CO2Fix Model to estimate the carbon benefits from the project, subtracting their estimate of “without project” changes in carbon from the “with project amount”. CARs issued in this report require that the proponent re-calculate the “without project” estimates of carbon stock changes to account for some level of natural ingress. The auditor also found a number of errors in the calculation of “with project” benefits. These have the impact of overstating the project benefits by a substantial amount.</p> <p>The auditor notes that the pre-validation report recommendation: “The Project Proponent should clearly document all calculation steps (and provide spreadsheets), use the correct units, reference clearly all values used and defend all assumptions and data selections.” does not appear to have been sufficiently acted on in the revised PDD.</p>
Findings from 27 <sup>th</sup> Nov Report	<p>The Project Proponent reported that the responses to CAR 02/09 and 03/09 were applied to the with-project carbon benefits calculation. These CARs required the proponent to account for ingress and use a revised figure for the baseline. There is no evidence that the results from CAR 19/09 were applied, and in any case the calculated emissions are too low (see CAR 19/09, which remains open). More significantly, it is noted that the CO2FIX input data still show that the wood density was set at 1.0, which is too high and has the effect of over-estimating carbon benefits from the project. There is also no apparent separate identification and calculation of the carbon to be sequestered by the willow.</p> <p>Fundamentally, there is a lack of transparency regarding the with-project GHG benefit calculations, which makes the GHG benefit assertions difficult to assess. The proponent provided the input data in a difficult to interpret format. There is no description of how the model was used to calculate the with-project benefits, what key assumptions are, and other information that would enable a reader to understand how the calculation was undertaken. It is not clear how the graphs of carbon accumulation in Appendix F were used to get the numbers given in the PDD.</p>
Findings from 1st April Report	<p>Section CL1 (pages 35-7) of the February 2010 PDD contains a revised and enhanced discussion of the carbon benefits anticipated from the project. In addition, Rainforest Alliance has now been supplied with spreadsheets that show the output of the CO2FIX model, and the calculations of GHG benefits (“CO2Fix Scenario 1 Biomass”). The PDD now also contains some justification for the modelling values used and assumptions made (page 37). The CO2Fix script has been updated and is called, “Northern Ontario Pilot Project (ver02)”.</p>

<sup>35</sup> In cases where a published methodology is used, the full reference must be given and any variations from the published methodology must be explained.

The presentation of net GHG removals data in Table 3 (page 36) was found to lack clarity and be erroneous. Therefore the numbers provided by his table and used elsewhere in the methodology are incorrect.

In the third column data on the, "Estimation of baseline ingress of woody vegetation" is provided and the units are said to be, "t CO<sub>2e</sub>" [sic]. The value for biomass reported in this column is 2.47, which is calculated by: "0.015 tonnes C· ha<sup>-1</sup> [sic] x 45 ha x 3.66 CO<sub>2e</sub> conversion factor" (table footnote 1, page 36). The value reported is correct, however, this value should be a per year value, and therefore the units should be 't CO<sub>2e</sub> year<sup>-1</sup>'. Please see page 9, where the correct units are shown for the 0.015 value, although note that again there is a typo here (the '-1' is missing at the end of the last line after the word year). The consequence of this error is that in the 8<sup>th</sup> column of table 3 the value of carbon sequestration due to ingress in the baseline scenario is only subtracted once, despite the fact that the row covers a five year period. The outcome is that the GHG benefits of the project are overestimated.

The heading for the third column in table 3, "Estimation of baseline GHG removals" was found to be confusing, since the data in the column was actually the baseline carbon stock, which is unchanging, and hence not 'removing' (net) GHGs from the atmosphere in any 5 year period.

The numbers provided in the 4th column of table 3 appear consistent with the calculations elsewhere (although issues exist in these calculations, see below). However, in cell G4 of "Current Carbon stocks" a value of 699.98 is used, whilst in the table it is reported as 699.75. Estimations of sequestration of GHGs from modelling need not be reported with decimal places since they are only estimates, however, because they have been, and the decimals are different, it has the potential to cause confusion for the reader.

The value of 3.45, in the 5<sup>th</sup> column in table 3 is correctly brought across and clearly referenced to table 4.

The values for "Estimation of actual net GHG removals by sinks" in the 6<sup>th</sup> column of table 3 are correctly taken from the other tabs in the spreadsheet, "CO2Fix Scenario 1 Biomass". However, in the "CO2 Fix Summary" tab of the aforementioned spreadsheet the units used in the table are incorrect. They are said to be per ha, values, when in fact they are per project area. There is no impact of this as it is only a mis-labelling, but it has the potential to cause confusion.

The final calculation performed in the column, "Estimation of net anthropogenic GHG removals" is not explained anywhere in the PDD. The calculation was found to be erroneous (see finding above related to subtraction of ingress biomass). It is not understood why the current carbon stock in the soil is subtracted from the biomass gained in the project scenario. The PDD supplies no explanation as to why the soil is anticipated to lose all its carbon stock to a depth of 30 cm. This is a conservative assumption, but any assumption should be justified. Any changes in soil carbon stock anticipated (including no changes losses from the existing stock) need to be scientifically justified with references to literature.

From page 36 onwards, the PDD now provides some justification for the assumptions made and values selected for the CO2Fix model. This is an improvement on previous versions of the PDD which made no attempt to explain or defence the model, and allows now for an assessment of the arguments. On page 36, the carbon stocks are said to be "conservatively" calculated. The following pages do not explain how conservative selections of data and assumptions were made when uncertainty was

faced. In the absence of such explanations (which are required) the auditors provide an assessment of the conservativeness below.

On pages 36/37 it is said that, "The project area is characterized by biogeoclimatic conditions that represent an intermediate site series between 1 and 2; predicted growth rates based on site series 2 yield curves may underestimate actual yields in the project area.] Refer to summary table below." It is not clear, but it appears there may be a missing table, as no such table is found below. Therefore it has not been demonstrated that the selection of data from 'site class 2' is conservative given the project site conditions and considering the clay soil conditions.

In order to get data for the annual increment of willow, aspen has been used as a surrogate. There is no explanation provided as to why this is a conservative surrogate. It is stated in the CO2Fix script that "the willow tree supplier suggested we use Aspen as a surrogate" however no evidence has been provided for this, and no supporting literature is presented.

The data was for CAI of Jack pine has been correctly taken from the data tables referenced.

On page 37 the selection of the wood density for Jack Pine is said to be 0.808 tonnes dry matter  $m^{-3}$ . The reference provided for this is a document called, "*Gordon Cosens-Hearst 08-09 Version 9*". It is not clear how this document was used to gather information on wood density. There is a column called, "Mass Vol. Ratio Vol. Table", and it would appear that the value 808 has been taken from lines corresponding with species, "03-Pj", which presumably is the code for jack pine. However, on the second page of the PDF the value in the, "Mass Vol. Ratio Vol. Table" column is 3503. The PDD does not explain how this table was used, how the data was gathered or what the units are. The auditors still think that this value of wood density seems very high for Jack pine and that the reference used to support the assertion is not transparent / ambiguous. The wood density of the main tree species planted directly impacts the estimated GHG benefits of the project, and as such must be thoroughly defended with reference to multiple sources of literature data. In the face of uncertainty the data value selected must be shown to be conservative.

As a comparison the auditors checked the wood density of Pinus Banksiana according to Global Wood Density Database (<http://datadryad.org/repo/handle/10255/dryad.235>), and found the value here to be 0.4  $g\ cm^{-3}$  (oven dry mass to fresh volume). The reference provided for this is Alden, H. 1997. Softwoods of North America. United States Department of Agriculture, Forest Service, Forest Products Laboratory. Gen. Tech. Report FPL-GTR-102. 151 pp. <http://www2.fpl.fs.fed.us/TechSheets/softwood.html>. Furthermore, the mean value of wood density from the pine species in the IPCC (2003) data table, 3A.1.9-1 is 0.39  $M_o/V_{wet}$ . It would therefore appear that there has been a significant over-estimation of the wood density.

The wood density for willow has been correctly taken from the IPCC default reference table (salix).

The PDD is not clear in explaining how Appendix A is related to the soil module. In general there is very little information about the soil calculations. No literature is referenced to support the gains forecast.

It is accepted that non-CO<sub>2</sub> emissions are likely to be negligible.

There are also a number of assumptions and data values used in the CO2Fix script that are still not explained in the PDD.

At start of the CO2FIX file it states, "Maximum biomass in stand based on Plonkski's gross volume and total production (336 m<sup>3</sup>/ha)". Further down it states, "336 # max\_biomass in the stand [Mg/ha]". The relationship between these numbers is not clear but the units are different. The PDD should explain what these numbers mean and confirm that there has not been a mix up in the units when data was put into the model.

In the script it is stated, "non-stem growth correction factor (10%) based on fast-growing jack pine species and silviculture to optimize growth (factor not applied to willow). Estimates of turnover rates and relative growth of non-stem components are primarily based on professional judgement, fast-growing tree species, and silviculture best management practices." The PDD provides no justification for why this is necessary or why it is considered conservative. To do this it would need to be shown, why the species of Jack Pine used is 'faster' growing than those used for the creation of the CAI data, and how the management techniques are different from those assumed in the model and original data. In addition, some justification is required to explain why these differences combine to conservatively result in a 10% increase in growth.

In the script there is the following line, "2188.1 # annual mean temperature". It is unclear what this means, and it is not explained in the PDD.

To conclude, the presentation of quantitative data in the PDD, although improved is below that which is required. This is because, there are values presented with incorrect units, values calculated incorrectly, and a persistent lack of reference to literature to support assumptions made. There is very little explanation and transparency related to the equations used, this has resulted in what appear to be errors. In addition, whilst the PDD states that the calculations made are conservative, there is no explanation of where conservative choices were made in the face of uncertain data.

#### Extra Analysis on the Conservativeness of the Growth Assumptions

The PDD contends that the site is suited to jack pine, and stands by the initial assessment that was made of the site. On pages 21-2 of the February 2010 PDD, the proponent expands the justification of the use of jack pine on the project area, referring to some examples of jack pine stands in the project zone. An e-mail from Mr. DelGuidice, a forester who has been advising the project team, dated Feb 12 2009, states that provided the competition is controlled, jack pine will grow on the site however because of the soil and site conditions (not being sandy, which jack pine prefers), a site class 2 curve was used rather than a site class 1 yield curve to estimate volumes. The proponent has provided no evidence that the project site conforms to site class 2 criteria.

The PDD provides information about the presence of jack pine plantations in the project region, but does not compare the site conditions in these places, or give any information about their growth rates / biomass. The revised PDD references jack pine plantations near Moonbeam, which is approximately 10 – 15 km from the project site. The auditor is not satisfied with this response. That there are jack pine plantations in Moonbeam is not really relevant; there is no jack pine growing in the vicinity of the project site, and there was very little jack pine present in the larger surrounding area that we travelled through as we examined other grassy sites known to have been unmanaged for an extended period of time (this was to examine rates of ingress on similar sites in the project zone). Moreover, there are several esker complexes in the area of the Gordon Cosens forest that contain sandy to gravelly material that would be

	<p>conducive to the growth of jack pine. The Gordon Cosens 2005 FMP also indicates that there is very little jack pine in the forest and where present, it is found on sandy sites. Section 2.3.2.2.1 of the revised 2005 Gordon Cosens Forest Forest Management Plan (sourced from: <a href="https://ozone.scholarsportal.info/bitstream/1873/11844/489/Revised%202005%20fmp%20text%20jan%202005.doc">https://ozone.scholarsportal.info/bitstream/1873/11844/489/Revised%202005%20fmp%20text%20jan%202005.doc</a>) states that the jack pine stands “which are dominated by jack pine, are found on upland sites that are characterized by deep, dry to fresh, sandy soils with generally less than 20 cm of organic material over the mineral soil.” The FMP also describes that jack pine occurs on less than 2% of the Gordon Cosens Forest. This evidence strongly suggests that jack pine is not an appropriate species for the project site. Moreover, the soils data provided in response to CAR 09/01 supports the auditors contention that the site is poorly suited to jack pine, since the soils data show that there is from 2.5 – 3.5 m of clay soil on site.</p>
<p>Findings from 11th May Report</p>	<p>In the updated PDD, the section on the net change in carbon stocks has been updated (p42 onwards). A fuller explanation of the CO2Fix model is now presented; this includes screenshots and referencing of literature values used. The CO2Fix script was checked and found to match with the description of the PDD, with the exception of the ambiguity surrounding the maximum stand biomass value described below.</p> <p>The following two findings from the last report were not addressed:</p> <p>“The heading for the third column in table 3, “Estimation of baseline GHG removals” was found to be confusing, since the data in the column was actually the baseline carbon stock, which is unchanging, and hence not ‘removing’ (net) GHGs from the atmosphere in any 5 year period.”</p> <p>“In order to get data for the annual increment of willow, aspen has been used as a surrogate. There is no explanation provided as to why this is a conservative surrogate. It is stated in the CO2Fix script that “the willow tree supplier suggested we use Aspen as a surrogate” however no evidence has been provided for this, and no supporting literature is presented.”</p> <p>On p40 it is explained that in order to get data for the ‘maximum biomass in the stand’, mean annual increment (MAI) data and a growing length of 75 years was used. A range of MAI values were found in a literature reference (<a href="http://ginkgo.cisti.nrc.ca/RPAS/rpv?hm=Hlnit&amp;journal=cjss&amp;volume=78&amp;afpf=S97-041.pdf">http://ginkgo.cisti.nrc.ca/RPAS/rpv?hm=Hlnit&amp;journal=cjss&amp;volume=78&amp;afpf=S97-041.pdf</a>). It appears that the data was taken from Table 1 of the reference. Of the 17 forest stands analysed by the paper, two had jack pine percentages less than 60% (10% and 56%), with black spruce making up the majority of the reaming portion. The list of data was not filter for its representativeness to the site in any way. The use of data points with a stand composition so different from the projects was not found to be suitable.</p> <p>From this range the 90<sup>th</sup> percentile value was taken. This is not a conservative way to select this value from the range. The 90<sup>th</sup> percentile represents the data point which is greater than 90% of the other values. As shown in the table on p43 it is significantly higher than the average. There is a note on p43 which says that the parameter ‘maximum biomass in the stand’ is not necessary if growth is modelled as a function of age, and in the script the value is set to 232 Mg ha<sup>-1</sup>. If the parameter is not used then it is not clear why a statistically erroneous derivation of a conservative value for it is presented in the PDD (and mentioned in the introduction to the script, see below). If it is used, then the value selected from the range does not appear to be conservative. It is not clear why an extrapolation of MAI’s was used to generate maximum biomass instead of using actual biomass or volume data from mature stands. The process of extrapolation can introduce errors such as the assumption of linear growth for 75 years. The text in this section is somewhat ambiguous, so it may actually be that the data was</p>

also presented for maximum biomass.

It is not clear how the paragraph below found in the introduction to the script links to the text in the PDD which describes the parameter selection of maximum biomass.

*“Maximum biomass in stand: Canada subalpine coniferous forest, range 117 to 313. Chose 313 Mg/ha for maximum biomass in the stand based on a forest age of 70-78 years reported in "Root biomass allocation in the world's upland forests" by M. Cairns, S. Brown, E. Helmer, G. Baumgardner, July 1996, US Environmental Protection Agency, Department of Forest Science, Anteon Corporation, 11p.*

The PDD shows site classes from the surrounding Gordon Cosens Forest and derives an average site class of site 2. However, the ‘species composition’ codes show that no jack pine stands were included in the analysis. The majority of the analysis was conducted on stands that were mainly Poplar (code = PO). The reference provided in footnote 58 of the PDD (p44) states, “*Site class is a group of species-specific site indices*”, and therefore it is inappropriate to draw conclusions about the site class for one species from the site class for another species. The presence of clay soils is mentioned in the PDD (see quote below), however the auditors are not satisfied that enough investigation into the impact of sub-optimal soils on Jack Pine growth has been done to justify the selection of site class 2. No examples of jack Pine growth in conditions similar to the project site have been presented.

*“The area where jack pine was planted was successfully used as agriculture land for many years, suggesting that the project area is well drained and thus suited for jack pine. The land contains clayey soils typical of the Clay Belt, which are acceptable for jack pine growth. Optimal soil conditions for jack pine would likely include sandier soils; therefore, the Proponent used Plonski’s growth data for site class 2 as conservative estimates in the calculation of carbon removals under the with-project scenario (refer to the **Climate Section – CL1 Net Positive Climate Impacts**). Plonski’s data for site class 1 indicates greater jack pine growth in sandy soils.”*

The same current annual increment data is presented for Jack Pine and Aspen. It was noted that in the CO2Fix script the data is now input in 10 year intervals as opposed to the to the 5 yearly intervals used in the previous version.

The wood density value presented for Jack Pine has been changed to 0.464. A reference was provided in the footnotes. The value was checked (found on page 19 of the PDD) and found to be correct.

On p45 and p46 the footnote references appear to be incorrectly labelled.

### **Table 3**

Table 3 on page 47 calculates the net carbon benefit of the project. All data values were traced back to their sources and calculations checked. Below are the discrepancies that were found.

The fourth column in table 3 is called, “Estimation of baseline GHG removals by sinks”, however this does not appear to be what this column contains. The column, in the first row, labelled ‘biomass’ contains Biomass AND soil carbon stock data, that is projected not to change under the baseline scenario. The second row, labelled ‘soil’ contains value for the current carbon stock of the soil only (in the project scenario this is projected to rise).

	<p>In the 6th column under the heading 'Estimation of GHG removals by sinks' the value 240.67 t C ha<sup>-1</sup> is taken from Appendix F. This can be traced to cell AJ82 in the spreadsheet, 'CO2FIX output (ver03)'. This implies that after 75 years a carbon stock of 240.67 t C ha<sup>-1</sup> is projected to be present in the biomass of the forest. No comparisons are provided between the model output and the expected volumes/biomass of the stands with respect to literature values. Without this check it is not possible for auditors to be confident that realistic values are coming out of the model.</p> <p>Further investigation of this number found that it was comprised of 148 t C ha<sup>-1</sup> of willow biomass and 92.59 t C ha<sup>-1</sup> of Jack Pine (cell X81+ cell L81). It is not clear why willow, which has such a low planting density could produce this much biomass. No equations or explanations of how numbers were taken from Appendix F and put into table 3 are provided. In the previous version of calculations, steps were taken to account for the fact that per ha, only a small percentage was willow, in this version this step seems to have been removed, and could be one source of error.</p> <p>In the final column the calculation formed was found to use incorrect values and hence not match the numbers in the rest of the table <math>(=(39,638.35+558)-(3.45+7699.75+6752.7+33.75) \# "0.00")</math>. The equation on reference 6 was not correct because it subtracts carbon stocks which the project expects to remain (soil carbon). This is a result of the inaccurately labelled headings and the confusion between stocks and changes in stocks.</p> <p>Generally the presentation of values in the PDD is not well structured and the methods use to calculate the carbon benefits of the project are not acceptable. Quality control checks do not appear to be in place as evidenced by the large volume of errors. The lack of flow between the calculations (separate spreadsheets, some additions done in Word tables, some manually) is another source of error. The biomass or volume data for the stands is not presented in the PDD for each year (or at least some intervals) of the project. As such verification would be difficult, as the rather confusing appendix F would need to be used.</p> <p>It is still suspected that the calculations significantly overestimate the carbon benefits of the project.</p>
<p>Findings from 10<sup>th</sup> June Report</p>	<p>The revised version of the PDD and specifically Appendix F, employ the CBM-CFS3 model to predict carbon stock changes in both the project and baseline scenarios. The assumptions associated with model inputs are explained in Appendix F. The CBM-CFS3 incorporates yield inputs from the Plonski's Normal Tables, assumptions associated with the use of these tables are explained in section 3.3.1 of Appendix F. Plonski's growth and yield tables used for model inputs were submitted by the consultant hired to conduct GHG calculations.</p> <p>In model simulations, site class was used as a mechanism for adjusting for poor growth of jack pine on unfavourable soil conditions for this species. The justification for the use of jack pine on the lacustrine clay soils of the project area is given in sections 3.2.5 through 3.2.7 of Appendix F. Project foresters collected 3 auger cores from the project site to supplement 2 surface soil samples. Mottling was noted in two of the three soil samples, indicating periods of saturation creating anoxic conditions. It should be noted that the soil sample size was limited, and this was noted in section 3.2.4 of Appendix F, and the corresponding text on p. 12 of the PDD. Soils were recognized in the PDD as not being optimal for the growth of jack pine, the dominant species planted in project activities.</p>

Regional forestry experts were consulted as part of the justification for the conservative estimation of jack pine growth on the project soils. In order to account for potentially retarded growth of jack pine on project soils, site class growth and yield tables, as noted above, were used to estimate decreased growth relative to jack pine growth on well drained soils. As a result of limited soil sampling, model simulations used estimations of soil type distribution based on observed area topography. All areas identified for planting willow species were assumed to be classified as “wet” soils, representing 7% of the project area. These areas were simulated as trembling aspen growth on site class 3 soils (see Table 8 of Appendix F). The remaining areas were assumed to be divided equally between “moist” and “fresh” soils. Review of the spreadsheets used to calculate net carbon stock change as a result of project activities, showed that this was calculated correctly (see cells K3 and L3 of the “Project” worksheet in the Kap\_AnuualCarbonSocks\_audit spreadsheet submitted by the consultant hired to conduct carbon calculations. However, section 3.2.7 on p 11 of Appendix F, and also p.17 of the PDD state that this proportion is only 41.5 %. This is not consistent with the evidence obtained by the audit team during the June 8-10 review of the revised project documents, as noted above.

**5) CFS shall correct both Appendix F and the PDD to correctly identify the proportion of area in each soil stratum.**

In Appendix F, section 3.4.2 it appears that text has been removed from the document submitted for review. Email correspondence with the Project Proponent on June 6<sup>th</sup> revealed that this was an artefact of the document conversion from MS Word to pdf file format.

**6) CFS shall correct section 3.4.2 of Appendix F and include all missing text from the version submitted to RA for review on June 7<sup>th</sup>, 2010.**

In order to explain net climate benefits associated with project activities within the PDD, large sections of text from Appendix F are directly repeated within the PDD. It appears that on p.47 of the PDD, the reference to Table 3 regarding CBM-CFS3 model inputs is an artefact from the transfer from Appendix F to the PDD. It is not clear if this is meant to refer to Table 4 on p.51 of the PDD that lists model inputs.

**7) CFS Shall correctly reference Table 4 on p.47 of the PDD (incorrectly referenced to Table 3 on p.47 in the version of the PDD submitted to RA on June 7<sup>th</sup>, 2010).**

The net carbon reductions and removals associated with project activities, are calculated in the “project” worksheet of Kap\_AnnualCarbonStocks\_audit excel spreadsheet, submitted to RA on June 9<sup>th</sup> by the consultants hired by CFS to complete the GHG calculations. This spreadsheet inputs model outputs, and calculates per hectare carbon stock changes over the 75 year project lifetime for both baseline and project scenarios. Columns H through J calculate the net carbon stock change per project soil stratum, by subtracting baseline carbon stocks per hectare from project carbon stocks per hectare, to obtain the net carbon stock change per hectare for each stratum. These values are then multiplied by the strata size to calculate carbon stock changes at each time step, over the 75 year project lifetime. Finally, all strata are summed at each time step, and the cumulative sum of all time steps is calculated to obtain the project lifetime net carbon stock change. This is calculated to be 12,016 tCO<sub>2</sub>e. Section 4.2 of Appendix F, compares the carbon sequestration rates within the different pools measured to assess the project estimates against known literature values, and found that in those pools identified in section 4.2 of Appendix F, the calculated values were below literature values, and hence conservative. These comparisons did not include a total carbon stock comparison, however as noted above,

	comparison of carbon sequestration rates proved to be conservative..		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 2) Estimate the net change in the emissions of non-CO<sub>2</sub> GHG emissions such as CH<sub>4</sub> and N<sub>2</sub>O in the *with* and *without* project scenarios if those gases are likely to account for more than a 5% increase or decrease (in terms of CO<sub>2</sub>-equivalent) of the project's overall GHG emissions reductions or removals over each monitoring period.

Findings from 20 <sup>th</sup> August Report	The PDD asserts that the net changes in methane and N <sub>2</sub> O are below the 5% threshold, however no rationale is provided for this assertion. While the auditor agrees that the impacts of any changes in these GHGs due to the project will be <i>de minimus</i> , the PDD needs to support the assumption.		
Findings from 27 <sup>th</sup> Nov Report	In section 3.1 of the revised PDD, the project developer has indicated that the project does not include activities that typically result in the release of methane or N <sub>2</sub> O emissions.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 3) Estimate any other GHG emissions resulting from project activities. Emissions sources include, but are not limited to, emissions from biomass burning during site preparation, emissions from fossil fuel combustion,<sup>36</sup> direct emissions from the use of synthetic fertilizers,<sup>37</sup> and emissions from the decomposition of N-fixing species.

Findings from 20 <sup>th</sup> August Report	The site has been plowed to prepare it for planting, and this activity leads to CO <sub>2</sub> emissions from the soil for a few years into the project. These impacts do not seem to have been considered in the calculation of net project impacts.		
Findings from 27 <sup>th</sup> Nov Report	The revised PDD contains an analysis of the CO <sub>2</sub> emissions from the fuel consumed during site preparation and other related project activities. The factor used to calculate the amount of CO <sub>2</sub> emitted from a gallon of gasoline is too low by a factor of 3, (source US EPA website: <a href="http://www.epa.gov/oms/climate/420f05001.htm">http://www.epa.gov/oms/climate/420f05001.htm</a> ), and so understates the true level of emissions.		
Findings from 1st April Report	Table 4 shows a calculation of the project emissions due to the combustion of fossil fuel and the quantity of CO <sub>2</sub> emitted per unit of fuel consumed has been revised using the correct emissions factor from the U.S. EPA.  Due to the fact that ploughing was done in strips 6 feet apart, the auditors are satisfied that the emissions associated with this will not be material		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 4) Demonstrate that the net climate impact of the project is positive. The net climate impact of the project is the net change in carbon stocks plus net change in non-CO<sub>2</sub> GHGs where appropriate minus any other GHG emissions resulting from project activities minus any likely project-related unmitigated negative offsite climate impacts (see CL2.3).

Findings from 20 <sup>th</sup> August Report	The PDD demonstrates a net positive impact on climate, and despite the calculation errors, the auditor believes that the net benefit remains intact, although it will be smaller.		
Findings from 27 <sup>th</sup>	No change to the assessment. The overstatement of the carbon benefits is so large		

<sup>36</sup> The following CDM Executive Board tool can be used to quantify these emissions:  
[http://cdm.unfccc.int/EB/033/eb33\\_repan14.pdf](http://cdm.unfccc.int/EB/033/eb33_repan14.pdf)

<sup>37</sup> The following CDM Executive Board tool can be used to quantify these emissions:  
[http://cdm.unfccc.int/EB/033/eb33\\_repan16.pdf](http://cdm.unfccc.int/EB/033/eb33_repan16.pdf)

Nov Report	(due to the incorrect wood density being used) and the method has so little transparency that the final answer cannot be assessed properly. For example, it is not clear where the baseline carbon stocks are subtracted from the project scenario stocks.		
Findings from 1st April Report	Improvements have been made with the provision of spreadsheets and a better explanation of the CO2Fix model and. However, the PDD still lacks adequate, referenced defences of the assumptions made in the model; the spreadsheets were found to contain errors in units and calculations. The wood density value that has been selected for jack pine has not been transparently referenced and appears to be significantly too high when compared with reliable sources.		
Findings from 11th May Report	There are still numerous errors in the carbon calculations. They are poorly presented and not transparent. The calculations significantly over-estimate the benefits of the project.  The wood density for Jack Pine has been revised to a value supported by a literature reference.		
Findings from 10 <sup>th</sup> June Report	The revised carbon calculation methodology included several minor errors (see findings from the 10th of June Review in CL1.1 above). No major errors in the revised calculations were identified in the revised carbon calculations. The revised calculations employ the CBM-CFS3 model to simulate forest growth based on known growth and yield tables. Retarded growth on poor soils is accounted for by adjusting growth and yield tables (dividing by 2) for jack pine, as described in section 3.3.1.  Carbon values are based on merchantable volumes input into the CBM-CFS3 model. The model then converts merchantable volume to carbon based on a Tier 3 approach of the IPCC Good Practice Guidance for reporting carbon stocks and carbon stock changes resulting from LULUCF. The model uses widely accepted BEF and allometric equations from the region.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

5) Specify how double counting of GHG emissions reductions or removals will be avoided, particularly for offsets sold on the voluntary market and generated in a country with an emissions cap.

Findings from 20 <sup>th</sup> August Report	The PDD made no mention of mechanisms to prevent double counting and did not mention double-counting.
Findings from 27 <sup>th</sup> Nov Report	In section 3, the Proponent asserts that the intention is to sell the credits into the voluntary market and there will be no double-counting because neither the province nor Canada have cap-and-trade or other carbon account systems in place that will lead to double-counting. However, there is no evidence provided that the proponent will monitor the policy situation in Canada or that if one emerges, that they will take steps to prevent double counting.
Findings from 1st April Report	Section CL1 of the February 2010 PDD contains a revised and enhanced discussion of the means by which double counting of the carbon benefits from the project is to be avoided. The PDD states that double counting will be avoided and policy monitoring will be undertaken, but does not specify how. The application of this monitoring will need to be evidenced at future verifications, and if the area does come under a cap and trade system in the near future, evidence of how the voluntary emissions were not double counted would need to be shown to the verifiers. The proponent is listed as an account holder on the 'markit' registry website ( <a href="http://www.markitenvironmental.com/registryview.php?p=1&amp;pg=acc&amp;sort=1">http://www.markitenvironmental.com/registryview.php?p=1&amp;pg=acc&amp;sort=1</a> ). At verifications it will need to be demonstrated that this system was used correctly for the project.  In an email communication from Steve Clark (26 March) it was explained that up to that date only 15 credits had been sold. Email evidence was provided that Carbon Friendly solutions are registered with the Markit Registry. The project is not listed yet, but this is because only projects with validated PDDs are listed.

Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

## CL2. Offsite Climate Impacts (“Leakage”) - Required

### Concept

The Project Proponents must quantify and mitigate increased GHG emissions that occur beyond the project area and are caused by project activities (commonly referred to as ‘leakage’).

### Indicators

The Project Proponents must:

- 1) Determine the types of leakage<sup>38</sup> that are expected and estimate potential offsite increases in GHGs (increases in emissions or decreases in sequestration) due to project activities. Where relevant, define and justify where leakage is most likely to take place.

Findings from 20 <sup>th</sup> August Report	The discussion on leakage in the PDD referenced some unexpected sources of leakage and drew the conclusion that there will be no leakage from the project. The auditor agrees with the conclusion, if not the process of arriving at it, since the land currently does not produce any goods and therefore there is no production to be shifted to other locations.		
Findings from 27 <sup>th</sup> Nov Report	Section CL2 requires the Project Proponent to “quantify and mitigate increased GHG emissions that occur beyond the project area and are caused by project activities (commonly referred to as ‘leakage’).” The first step in the process is to “Determine the types of leakage that are expected and estimate potential offsite increases in GHGs (increases in emissions or decreases in sequestration) due to project activities. Where relevant, define and justify where leakage is most likely to take place.”  The current version of the PDD does not mention leakage and does not provide any evidence that the proponent has undertaken the analysis required by the standard.		
Findings from 1st April Report	Section CL2 of the February 2010 PDD contains a satisfactory assessment of leakage. All potential leakage types are assessed and strong arguments made for there being no potential leakage.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 2) Document how any leakage will be mitigated and estimate the extent to which such impacts will be reduced by these mitigation activities.

Findings from 20 <sup>th</sup> August Report	Since there will be no leakage on account of the project, this indicator is not applicable to this project.		
Findings from 27 <sup>th</sup> Nov Report	Whilst there is no change to this assessment, CAR 21/09 remains open as the PDD does not demonstrate an understanding of the leakage concept and conduct an analysis of the potential for leakage.		
Findings from 1st April Report	Section CL2 of the February 2010 PDD contains a satisfactory assessment of leakage, and the finding is that leakage will be negligible. The assessor agrees with this finding.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS			

<sup>38</sup> Offsite changes in GHG emissions can result from a variety of causes including:

- activity shifting or displacement;
- market effects (particularly when timber harvest volumes are reduced by the project);
- increased investment in the project zone;
- decreased investment in the project zone; and
- alternative livelihood programs or other leakage prevention activities.

- 3) Subtract any likely project-related unmitigated negative offsite climate impacts from the climate benefits being claimed by the project and demonstrate that this has been included in the evaluation of net climate impact of the project (as calculated in **CL1.4**).

Findings from 20 <sup>th</sup> August Report	Since there will be no leakage on account of the project, this indicator is not applicable to this project.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	Section CL2 of the February 2010 PDD contains a satisfactory assessment of leakage, and the finding is that leakage will be negligible. The assessor agrees with this finding.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS			

- 4) Non-CO<sub>2</sub> gases must be included if they are likely to account for more than a 5% increase or decrease (in terms of CO<sub>2</sub>-equivalent) of the net change calculations (above) of the project's overall off-site GHG emissions reductions or removals over each monitoring period.

Findings from 20 <sup>th</sup> August Report	Since there will be no leakage on account of the project, this indicator is not applicable to this project.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS			

### CL3. Climate Impact Monitoring - Required

#### Concept

Before a project begins, the Project Proponents must have an initial monitoring plan in place to quantify and document changes (within and outside the project boundaries) in project-related carbon pools, project emissions, and non-CO<sub>2</sub> GHG emissions if appropriate. The monitoring plan must identify the types of measurements, the sampling method, and the frequency of measurement.

Since developing a full monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being validated against the Standards. This is acceptable as long as there is an explicit commitment to develop and implement a monitoring plan.

#### Indicators

The Project Proponents must:

- 1) Develop an initial plan for selecting carbon pools and non-CO<sub>2</sub> GHGs to be monitored, and determine the frequency of monitoring. Potential pools include aboveground biomass, litter, dead wood, belowground biomass, wood products, soil carbon and peat. Pools to monitor must include any pools expected to decrease as a result of project activities, including those in the region outside the project boundaries resulting from all types of leakage identified in CL2. A plan must be in place to continue leakage monitoring for at least five years after all activity displacement or other leakage causing activity has taken place. Individual GHG sources may be considered 'insignificant' and do not have to be accounted for if *together* such omitted decreases in carbon pools and increases in GHG emissions amount to less than 5% of the total CO<sub>2</sub>-equivalent benefits generated by the project.<sup>39</sup> Non-CO<sub>2</sub> gases

<sup>39</sup> The following CDM Executive Board tool can be used to test the significance of emissions sources: [http://cdm.unfccc.int/EB/031/eb31\\_repan16.pdf](http://cdm.unfccc.int/EB/031/eb31_repan16.pdf)

must be included if they are likely to account for more than 5% (in terms of CO<sub>2</sub>-equivalent) of the project's overall GHG impact over each monitoring period. Direct field measurements using scientifically robust sampling must be used to measure more significant elements of the project's carbon stocks. Other data must be suitable to the project site and specific forest type.

Findings from 20 <sup>th</sup> August Report	The PDD contains a rudimentary monitoring plan, which is focused on monitoring the above ground biomass. There is no mention of sampling methodology in the PDD but this may be included in the detailed sampling plan that is not yet due. The PDD does not mention that the site will be assessed for survival in years 2 and 5, and in fact the project manager lives very close to the sites and inspects it informally on a frequent basis.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 05/09</b>		

- 2) Commit to developing a full monitoring plan within six months of the project start date or within twelve months of validation against the Standards and to disseminate this plan and the results of monitoring, ensuring that they are made publicly available on the internet and are communicated to the communities and other stakeholders.

Findings from 20 <sup>th</sup> August Report	The PDD contains the required commitment.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

# COMMUNITY SECTION

## CM1. Net Positive Community Impacts - Required

### Concept

The project must generate net positive impacts on the social and economic well-being of communities and ensure that costs and benefits are equitably shared among community members and constituent groups during the project lifetime.

Projects must maintain or enhance the High Conservation Values (identified in G1) in the project zone that are of particular importance to the communities' well-being.

### Indicators

The Project Proponents must:

- 1) Use appropriate methodologies<sup>40</sup> to estimate the impacts on communities, including all constituent socio-economic or cultural groups such as indigenous peoples (defined in G1), resulting from planned project activities. A credible estimate of impacts must include changes in community well-being due to project activities and an evaluation of the impacts by the affected groups. This estimate must be based on clearly defined and defensible assumptions about how project activities will alter social and economic well-being<sup>41</sup>, including potential impacts of changes in natural resources and ecosystem services identified as important by the communities (including water and soil resources), over the duration of the project. The 'with project' scenario must then be compared with the 'without project' scenario of social and economic well-being in the absence of the project (completed in G2). The difference (i.e., the community benefit) must be positive for all community groups.

Findings from 20 <sup>th</sup> August Report	<p>The current project is expected to yield employment benefits to the local communities and to assist with awareness raising and education with respect to climate change and offsetting. The project manager has meticulously documented employment during project initiation, with the exception of her time. The "with project" scenario provides incremental employment and yields positive benefits for affected groups. The scale of employment benefit is relatively small compared to the size of the community and the scope of the economic ills currently affecting the region.</p> <p>While this is not to denigrate the benefits, in the context of this particular project, the auditor does not see value in having the proponent track community well-being or separating the benefits by impacted groups. However, the proponent should identify whether there are any Aboriginal communities within the project zone that might be affected by the project, and specifically discuss any project impacts on any such communities.</p>
Findings from 27 <sup>th</sup> Nov Report	<p>The proponent has identified two First Nations that might be impacted by the project and the PDD states that there were no representatives of either First Nation at the public meetings and no concerns have been raised. The proponent concluded that there will be no project impacts on either community.</p> <p>The PDD provides no evidence that either First Nation has ever been contacted by the proponent, and the proponent had not identified the two First Nations at the time of the site visit by the auditor. The auditor feels that insufficient efforts have been made to contact the First Nations and discuss whether they have any concerns.</p> <p><b>CAR 22/09</b> is closed but <b>CAR 31/09</b> has been issued.</p>
Findings from 1st April Report	<p>The PDD has been revised to indicate that the Moose Cree and Constance Lake First Nations are located outside of the project zone.</p> <p>The PDD states on page 11 of the PDD that First Nations members were invited to</p>

<sup>40</sup> See Appendix A of CCB Standard "Potential Tools and Strategies".

<sup>41</sup> Restricting the evaluation to well-being based on activities that comply with statutory laws or conform to customary rights.

	project information sessions. The PDD provides no evidence that either First Nation has ever been contacted by the proponent, and the proponent had not identified any First Nations as having been contacted at the time of the site visit by the auditor. The Proponent was asked to provide evidence of the invitations extended to First Nations. The response included general notifications about the project and a town hall meeting on the subject, but not any specific invitations. The auditors concern is that the PDD may slightly exaggerate the effort made to contact First Nations, since 'inviting' someone to something implies some direct action was taken. Since the projects scale and impact is small and the First Nations are outside the project zone, this is not considered a non-conformity but has been raised as a new observation.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 19/09</b>		

2) Demonstrate that no High Conservation Values identified in **G1.8.4-6**<sup>42</sup> will be negatively affected by the project.

Findings from 20 <sup>th</sup> August Report	The PDD does not identify the GWPA as an HCV, and therefore this indicator is not met for the most significant HCV on the project site. The auditor concurs with the statements provided in interviews with project staff that the project will not negatively affect the groundwater aquifer, and may instead have some positive influence on water flows and retention. (See also G1 8.5)		
Findings from 27 <sup>th</sup> Nov Report	In section 2.1.2, the Project Proponent identified that the project is expected to provide positive benefits to the GWPA, and that it is unlikely to create negative effects in the short term. See also the discussion regarding CAR's 06/09 and 09/09.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

## CM2. Offsite Community Impacts - Required

### Concept

The Project Proponents must evaluate and mitigate any possible social and economic impacts that could result in the decreased social and economic well-being of the main stakeholders living outside the project zone resulting from project activities. Project activities should at least 'do no harm' to the well-being of offsite stakeholders<sup>43</sup>.

### Indicators

The Project Proponents must:

- 1) Identify any potential negative offsite stakeholder impacts that the project activities are likely to cause.

Findings from 20 <sup>th</sup> August Report	The PDD asserts that no negative offset stakeholder impacts are expected, and the auditor agrees with this assertion. No evidence or substantiation is provided.		
Findings from 27 <sup>th</sup> Nov Report	In section 2.4, the PDD contains a discussion of potential negative effects of the project on stakeholders, and provides a rationale for why there should not be any negative off-		

<sup>42</sup> **G1.8.4** Areas that provide critical ecosystem services (e.g., hydrological services, erosion control, fire control);  
**G1.8.5** Areas that are fundamental for the livelihoods of local communities (e.g., for essential food, fuel, fodder, medicines, or building materials without readily available alternatives); and,  
**G1.8.6** Areas that are critical for the traditional cultural identity of communities (e.g., areas of cultural, ecological, economic or religious significance identified in collaboration with the communities).

Note that High Conservation Values G1.8.1-3 that are more related to biodiversity conservation are covered in B1.

<sup>43</sup> Restricting the evaluation to well-being based on activities that comply with statutory or conform to customary rights.

	site impacts. Note that the proponent has not provided evidence of adequate efforts to consult with Constance lake or Moose Cree First Nations, which are both reported to be in the project zone, and so <b>CAR 31/09</b> has been raised.		
Findings from 1st April Report	The PDD has been revised to indicate that the Moose Cree and Constance Lake First Nations are located outside of the project zone.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

2) Describe how the project plans to mitigate these negative offsite social and economic impacts.

Findings from 20 <sup>th</sup> August Report	No negative offset stakeholder impacts are expected.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS			

3) Demonstrate that the project is not likely to result in net negative impacts on the well-being of other stakeholder groups.

Findings from 20 <sup>th</sup> August Report	No negative offset stakeholder impacts are expected, however the PDD does not provide a strong rationale for this position. The auditor concurs with the conclusion here.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

### CM3. Community Impact Monitoring - Required

#### Concept

The Project Proponents must have an initial monitoring plan to quantify and document changes in social and economic well-being resulting from the project activities (for communities and other stakeholders). The monitoring plan must indicate which communities and other stakeholders will be monitored, and identify the types of measurements, the sampling method, and the frequency of measurement.

Since developing a full community monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being validated against the Standards. This is acceptable as long as there is an explicit commitment to develop and implement a monitoring plan.

#### Indicators

The Project Proponents must:

- 1) Develop an initial plan for selecting community variables to be monitored and the frequency of monitoring and reporting to ensure that monitoring variables are directly linked to the project's community development objectives and to anticipated impacts (positive and negative).<sup>44</sup>

<sup>44</sup> Potential variables may include but are not limited to: income, employment generation, health, market access, schools, food security and education.

Findings from 20 <sup>th</sup> August Report	The PDD indicates that the monitoring of community impacts will be focused on employment. This has in fact been done to an impressive level of detail by the project manager as the project has been implemented. However, the PDD does not provide a clear indication of how “Local socio-economic statistics and trends” will be assessed and how these are relevant to the assessment of the project impacts.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment. The PDD also does not provide an indication of the type of jobs to be provided, the number of jobs and length of employment, and other salient factors.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 06/09</b>		

- 2) Develop an initial plan for how they will assess the effectiveness of measures used to maintain or enhance High Conservation Values related to community well-being (G1.8.4-6) present in the project zone.

Findings from 20 <sup>th</sup> August Report	Since the key HCV on the project area was not identified in the PDD ( <b>CAR 06/09</b> ), this part of the standard was not addressed in the PDD.		
Findings from 27 <sup>th</sup> Nov Report	In section 2.1.2, the proponent has assessed the conformance of the project to BMP's for maintaining the GWPA, and provided a rationale as to why the project will not negatively impact the GWPA.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 3) Commit to developing a full monitoring plan within six months of the project start date or within twelve months of validation against the Standards and to disseminate this plan and the results of monitoring, ensuring that they are made publicly available on the internet and are communicated to the communities and other stakeholders.

Findings from 20 <sup>th</sup> August Report	The PDD contains the required commitment.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

## BIODIVERSITY SECTION

### B1. Net Positive Biodiversity Impacts - Required

#### Concept

The project must generate net positive impacts on biodiversity within the project zone and within the project lifetime, measured against the baseline conditions.

The project should maintain or enhance any High Conservation Values (identified in G1) present in the project zone that are of importance in conserving globally, regionally or nationally significant biodiversity.

**Invasive species populations<sup>45</sup> must not increase as a result of the project, either through direct use or indirectly as a result of project activities.**

**Projects may not use genetically modified organisms (GMOs)<sup>46</sup> to generate GHG emissions reductions or removals. GMOs raise unresolved ethical, scientific and socio-economic issues. For example, some GMO attributes may result in invasive genes or species.**

**Indicators**

The Project Proponents must:

- 1) Use appropriate methodologies<sup>47</sup> to estimate changes in biodiversity as a result of the project in the project zone and in the project lifetime. This estimate must be based on clearly defined and defensible assumptions. The 'with project' scenario should then be compared with the baseline 'without project' biodiversity scenario completed in **G2**. The difference (i.e., the net biodiversity benefit) must be positive.

Findings from 20 <sup>th</sup> August Report	The PDD proposes using songbird species and abundance as a measure of increased biodiversity resulting from the project. There is no rationalization of the choice of this metric provided in the PDD.		
Findings from 27 <sup>th</sup> Nov Report	Section 5.1 of the revised PDD describes why songbirds were chosen as an indicator of biodiversity. The explanation is not convincing because the underlying assumption that replacing grassland birds with forest birds is a biodiversity benefit is not explained.		
Findings from 1st April Report	<p>On page 41 of the February PDD it is stated that the project scenario (jack pine monoculture) will support more species than the grassland baseline scenario. No evidence is provided to support this assertion.</p> <p>Pages 15-17 of the February 2010 PDD describe the biodiversity of the project area and list a number of species that were identified on the project site during operations. The last paragraph of section G2 (on page 21) explains that a benefit of the project is the increased diversity of forest bird species at the expense of grassland bird species. The role of birds as an indicator of biodiversity has been expanded from the consideration of songbirds to the consideration of a wider range of bird species. The underlying assumption that replacing grassland birds with forest birds is a biodiversity benefit has not explained and is therefore not convincing.</p> <p>On page 17, the status of the golden eagle and bald eagle are described but the PDD does not draw any conclusions regarding the role of these species in the overall biodiversity of the project area. The list of Species at Risk in Ontario identifies 28 species and populations of flora and fauna that range from Species of Concern to Endangered in the Ontario boreal forest. The golden eagle is not on this list. There is one grassland bird, for example, that is endangered (loggerhead shrike) and the PDD does not provide any evidence that the proponent has assessed the potential for the listed species to be present in the project area nor the project to affect them.</p>		
Findings from 11th May Report	<p>The PDD now explains the historical loss of forest in the area and justifies selecting increased diversity and species numbers of forest birds as an indicator of biodiversity benefit.</p> <p>The loggerhead shrike range is now shown to not overlap with the project area.</p>		
Conformance	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>

<sup>45</sup> 'Invasive species' are defined as non-native species that threaten ecosystems, habitats or species in the project zone as identified in the Global Invasive Species Database: <http://www.issg.org/database>, from scientific literature, and from local knowledge.

<sup>46</sup> 'Genetically modified organisms' are defined as any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology and which is capable of transferring or replicating genetic material.

<sup>47</sup> See Appendix A of CCB Standard "Potential Tools and Strategies" for further guidance.

CAR/OBS	
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- 2) Demonstrate that no High Conservation Values identified in **G1.8.1-3**<sup>48</sup> will be negatively affected by the project.

Findings from 20 <sup>th</sup> August Report	No High Conservation Values were identified in <b>G1.8.1-3</b> .		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS			

- 3) Identify all species to be used by the project and show that no known invasive species will be introduced into any area affected by the project and that the population of any invasive species will not increase as a result of the project.

Findings from 20 <sup>th</sup> August Report	Species used by the project were identified (but turned out to be modified – no poplar were planted, as had been mentioned in the first version of the PDD that was reviewed by the verifier, but willow was planted in its stead). There is a discussion about the off-site presence of invasive species but it does not provide evidence that the population of any invasive species will not increase.		
Findings from 27 <sup>th</sup> Nov Report	The revised PDD consistently identifies that willow is being planted on the project site, and describes in more detail the strategy that will be followed to monitor and control undesirable invasive plant species.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 4) Describe possible adverse effects of non-native species used by the project on the region's environment, including impacts on native species and disease introduction or facilitation. Project proponents must justify any use of non-native species over native species.

Findings from 20 <sup>th</sup> August Report	No non-native species will be used in the project.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS			

- 5) Guarantee that no GMOs will be used to generate GHG emissions reductions or removals.

<sup>48</sup>

**G1.8.1** Globally, regionally or nationally significant concentrations of biodiversity values, including protected areas, threatened species, endemic species and areas that support significant concentrations of a species during any time in their lifecycle (e.g., migrations, feeding grounds, breeding areas);

**G1.8.2** Globally, regionally or nationally significant large landscape-level areas where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance;

**G1.8.3** Threatened or rare ecosystems.

Note that High Conservation Values G1.8.4-6 that are more related to community well-being are covered in CM1.

Findings from 20 <sup>th</sup> August Report	The PDD does not describe the use of any GMOs nor were any GMOs viewed on site. The improved willow that is being planted is not considered to be a GMO.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

## B2. Offsite Biodiversity Impacts - Required

### Concept

The Project Proponents must evaluate and mitigate likely negative impacts on biodiversity outside the project zone resulting from project activities.

### Indicators

The Project Proponents must:

- 1) Identify potential negative offsite biodiversity impacts that the project is likely to cause.

Findings from 20 <sup>th</sup> August Report	The PDD describes an increase in invasive species as a potential negative biodiversity impact, but this reasoning is unclear, since no invasive species will be used in the project.		
Findings from 27 <sup>th</sup> Nov Report	The PDD describes that disturbance to soil around the project area could increase invasive species propagation (pages 42-43). Mitigation activities such as mechanical removal and containment of affected areas are suggested. It is also stated that monitoring of invasive species around the project area will be conducted.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 2) Describe how the project plans to mitigate these negative offsite biodiversity impacts.

Findings from 20 <sup>th</sup> August Report	No negative offsite biodiversity impacts are expected, according to the PDD, and the auditor concurs with this position.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS			

- 3) Evaluate likely unmitigated negative offsite biodiversity impacts against the biodiversity benefits of the project within the project boundaries. Justify and demonstrate that the net effect of the project on biodiversity is positive.

Findings from 20 <sup>th</sup> August Report	Not applicable since no negative off-site biodiversity impacts are anticipated.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment. As was noted in the findings for section B1.1, there is not a full justification of how replacing grassland with Jack Pine and Willow and will result in a net biodiversity benefit		
Findings from 1st April Report	No change to the assessment. As was noted in the findings for section B1.1, there is not a full justification of how replacing grassland with Jack Pine and Willow and will		

	result in a net biodiversity benefit. Without a full description of the onsite net biodiversity benefits, it is difficult to assess the offsite ones.		
Findings from 11 <sup>th</sup> May Report	See section B1.1. The only offsite negative biodiversity impact expected is invasive species spreading to areas of disturbance associated with planting, but this will be mitigated via mechanical removal and monitoring.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

### B3. Biodiversity Impact Monitoring - Required

#### Concept

The Project Proponents must have an initial monitoring plan to quantify and document the changes in biodiversity resulting from the project activities (within and outside the project boundaries). The monitoring plan must identify the types of measurements, the sampling method, and the frequency of measurement.

Since developing a full biodiversity-monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being validated against the Standards. This is acceptable as long as there is an explicit commitment to develop and implement a monitoring plan.

#### Indicators

The Project Proponents must:

- 1) Develop an initial plan for selecting biodiversity variables to be monitored and the frequency of monitoring and reporting to ensure that monitoring variables are directly linked to the project's biodiversity objectives and to anticipated impacts (positive and negative).<sup>49</sup>

Findings from 20 <sup>th</sup> August Report	The PDD indicates that songbirds will be monitored every five years. No rationale is provided for the selection of this value.		
Findings from 27 <sup>th</sup> Nov Report	Section 5.1 of the revised PDD describes why songbirds were chosen as an indicator of biodiversity. The explanation is not convincing because the underlying assumption that replacing grassland birds with forest birds is a biodiversity benefit is not explained.		
Findings from 1st April Report	Section B1 and B3 of the February PDD describe that bird species numbers and bird species richness will be monitored as indicators of biodiversity benefits. <b>CAR 26/09</b> was raised because there was inadequate explanation surrounding the assumption that an increase in forest bird species number/richness is considered a net biodiversity benefit, when it will come at the expense of grassland species.  It is not clear in section B3 how the measurements will be used. To give an example, if 3 grassland bird species were lost and 2 forest species were gained, would this be considered positive or negative for biodiversity?		
Findings from 11th May Report	Due to the lack of forest area (due to historical deforestation), the presence of forest birds will be used as an indicator of biodiversity benefits.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

<sup>49</sup> Potential variables may include but are not limited to: species abundance; population size, range, trends and diversity; habitat area, quality and diversity; landscape connectivity; and forest fragmentation.

- 2) Develop an initial plan for assessing the effectiveness of measures used to maintain or enhance High Conservation Values related to globally, regionally or nationally significant biodiversity (**G1.8.1-3**) present in the project zone.

Findings from 20 <sup>th</sup> August Report	No High Conservation Values were identified in <b>G1.8.1-3</b> .		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS			

- 3) Commit to developing a full monitoring plan within six months of the project start date or within twelve months of validation against the Standards and to disseminate this plan and the results of monitoring, ensuring that they are made publicly available on the internet and are communicated to the communities and other stakeholders.

Findings from 20 <sup>th</sup> August Report	The PDD contains the required commitment.		
Findings from 27 <sup>th</sup> Nov Report	No change to the assessment.		
Findings from 1st April Report	No change to the assessment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

## GOLD LEVEL SECTION

### GL1. Climate Change Adaptation Benefits - Optional

#### Concept

This Gold Level Climate Change Adaptation Benefits criterion identifies projects that will provide significant support to assist communities and/or biodiversity in adapting to the impacts of climate change. Anticipated local climate change and climate variability within the project zone could potentially affect communities and biodiversity during the life of the project and beyond. Communities and biodiversity in some areas of the world will be more vulnerable to the negative impacts of these changes due to: vulnerability of key crops or production systems to climatic changes; lack of diversity of livelihood resources and inadequate resources, institutions and capacity to develop new livelihood strategies; and high levels of threat to species survival from habitat fragmentation. Land-based carbon projects have the potential to help local communities and biodiversity adapt to climate change by: diversifying revenues and livelihood strategies; maintaining valuable ecosystem services such as hydrological regulation, pollination, pest control and soil fertility; and increasing habitat connectivity across a range of habitat and climate types.

Please note: Since Gold Level criteria are optional no CARs are issued in this section. Non conformities are issued as observations, since they are optional for achieving validation.

#### Indicators

The Project Proponents must:

- 1) Identify likely regional climate change and climate variability scenarios and impacts, using available studies, and identify potential changes in the local land-use scenario due to these climate change scenarios in the absence of the project.

Findings from 20 <sup>th</sup> August Report	This was not done in the PDD.		
Findings from 27 <sup>th</sup> Nov Report	The Gold section of the PDD identifies some ranges in expected average summer temperature increase from 2011 – 2040 under high and low GHG scenarios. The basis for these scenarios was not identified and there is no information given on temperature change in other parts of the year, or on an annual basis, or on hydrological cycles, fire and pest regimes, etc which would impact the viability of the project under these various climate change scenarios.  The PDD describes potential loss of access to arable land, which is not clear and was not mentioned previously in the document. It is not clear how this potential issue is expected to manifest itself. The PDD appears to be arguing that the use of fast growing species will mitigate risks from climate change, apparently on the basis that the trees will reach maturity before climate change impacts become really significant. The logic is not evident.		
Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 07/09</b>		

- 2) Identify any risks to the project's climate, community and biodiversity benefits resulting from likely climate change and climate variability impacts and explain how these risks will be mitigated.<sup>50</sup>

Findings from 20 <sup>th</sup> August Report	This was not done in the PDD.		
Findings from 27 <sup>th</sup> Nov Report	The PDD does not discuss the risk to the project's benefits as a result of climate change.		
Findings from 1st April Report	The February 2010 PDD describes the risks to the project benefits from climate change and concludes that they are negligible (page 24).		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 07/09</b>		

- 3) Demonstrate that current or anticipated climate changes are having or are likely to have an impact on the well-being of communities<sup>51</sup> and/or the conservation status of biodiversity<sup>52</sup> in the project zone and surrounding regions.

Findings from 20 <sup>th</sup> August Report	This was not done in the PDD.		
Findings from 27 <sup>th</sup> Nov Report	The PDD does not speak to changes that climate may have or may have already had on local communities and biodiversity in the project zone and surrounding areas.		
Findings from 1st April Report	The PDD does not speak to changes that climate may have or may have already had on local communities and biodiversity in the project zone and surrounding areas.		
Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>

<sup>50</sup> Examples of how risks from climate change can be mitigated include the choice of species (adapted to various temperatures, precipitation, seasonality, salinity of water table, diseases/pests, etc.), the methods used to implement GHG emissions reduction activities, certainty of water sources critical for project success and location of activities in relation to anticipated land cover changes (e.g. flooding) expected as a result of climate change.

<sup>51</sup> Project proponents can demonstrate, for example, evidence of decreased access to natural resources of importance for communities' livelihoods and overall well-being. Climate change models that detail the predicted effects on these natural resources, such as freshwater and participatory evaluations can be used to demonstrate anticipated impacts on communities.

<sup>52</sup> Project proponents can demonstrate evidence of a change in actual range, phenology or behavior of a species found within the project zone. For a range change, the Project Proponents should demonstrate that the change affects the entire range of the species and not just a subset of the range (which might be part of natural variation and offset by gains in other parts of the species range). Alternatively, the Project Proponents can demonstrate anticipated negative changes in the range of one or more species found in the project area using modeling techniques. The recommended modeling tool is Maxent because of its ease of implementation and performance (<http://www.cs.princeton.edu/~schapire/maxent/>). Recommended climatologies are IPCC4 A1 or A2 scenarios, Hadley or Japan high resolution GCM, downscaled to 1km (also available on the internet at <http://www.worldclim.org>). Best practice is to have this analysis conducted by a researcher who has published on climate and species distribution modeling using Maxent in the peer-review literature.

CAR/OBS	<b>OBS 09/09</b>
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- 4) Demonstrate that the project activities will assist communities<sup>53</sup> and/or biodiversity<sup>54</sup> to adapt to the probable impacts of climate change.

Findings from 20 <sup>th</sup> August Report	This was not done in the PDD.		
Findings from 27 <sup>th</sup> Nov Report	The PDD does not address how the project will assist communities in adapting to climate change and /or its impacts.		
Findings from 1st April Report	The PDD does not address how the project will assist communities in adapting to climate change and /or its impacts.		
Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 10/09</b>		

## GL2. Exceptional Community Benefits – OPTIONAL

### Concept

This Gold Level Exceptional Community Benefits criterion recognizes project approaches that are explicitly pro-poor in terms of targeting benefits to globally poorer communities and the poorer, more vulnerable households and individuals within them. In so doing, land-based carbon projects can make a significant contribution to reducing the poverty and enhancing the sustainable livelihoods of these groups. Given that poorer people typically have less access to land and other natural assets, this optional criterion requires innovative approaches that enable poorer households to participate effectively in land-based carbon activities. Furthermore, this criterion requires that the project will ‘do no harm’ to poorer and more vulnerable members of the communities, by establishing that no member of a poorer or more vulnerable social group will experience a net negative impact on their well-being or rights.

### Indicators

Project proponents must:

- 1) Demonstrate that the project zone is in a low human development country OR in an administrative area of a medium or high human development<sup>55</sup> country in which at least 50% of the population of that area is below the national poverty line.

Findings from 20 <sup>th</sup> August Report	These conditions are not present at the project site or environs.
Findings from 27 <sup>th</sup> Nov Report	The PDD claims that there will be exceptional community benefits from the project, including increased local capacity targeted at local unemployed, and the provision of

<sup>53</sup> Where communities are predicted to experience or are experiencing decreased access to natural resources because of climate change, Project Proponents must demonstrate that activities are likely to decrease communities’ dependence on these natural resources. For example, where freshwater access is affected by climate change, a project can improve water management for maximum efficiency or provide alternative agricultural methods or products that require less water. Project activities may also help communities adapt to new planting and harvesting schedules to ensure maximum yields. Other climate change adaptation assistance can involve helping communities prepare for ‘extreme events’ such as floods, droughts and mudslides.

<sup>54</sup> Where an actual range or phenology change in a species is identified, Project Proponents must demonstrate that the project activities will make a significant contribution to mitigating this impact of climate change. Examples include: creating suitable habitat in an area that is becoming climatically suitable for a species that is losing climatically suitable habitats in other parts of its range; and providing a native food source for a species that is suffering population declines because of timing mismatches between its food needs and food availability linked to climate change (such as spring emergence of vegetation or insects). Where a modeled range impact is demonstrated, Project Proponents should demonstrate that the project significantly contributes to improving species’ ability to occupy a new range or creates habitat in areas to which the species is migrating.

<sup>55</sup> Low, Medium, and High Human Development Countries defined in the latest UNDP Human Development Report [http://hdr.undp.org/en/media/hdr\\_20072008\\_en\\_complete.pdf](http://hdr.undp.org/en/media/hdr_20072008_en_complete.pdf)

	learning opportunities. It is the understanding of the auditor that no local residents, except for the project manager, actually planted trees on the project site. The PDD does not describe in what manner local capacity will be enhanced. There is no documentation that at least 50% of the population in the area is below the national poverty line.		
Findings from 1st April Report	The PDD claims that there will be exceptional community benefits from the project, including increased local capacity targeted at local unemployed, and the provision of learning opportunities. It is the understanding of the auditor that no local residents, except for the project manager, actually planted trees on the project site. The PDD does not describe in what manner local capacity will be enhanced. There is no documentation that at least 50% of the population in the area is below the national poverty line.		
Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS	<b>OBS 11/09</b>		

2) Demonstrate that at least 50% of households within the lowest category of well-being (e.g., poorest quartile) of the community are likely to benefit substantially from the project.

Findings from 20 <sup>th</sup> August Report	These conditions are not present at the project site or environs.		
Findings from 27 <sup>th</sup> Nov Report	The PDD states that the employment benefits will be targeted at the local unemployed but there is no indication of how this will be done and the auditor understands that it was not the case.		
Findings from 1st April Report	The PDD states that the employment benefits will be targeted at the local unemployed but there is no indication of how this will be done and the auditor understands that it was not the case.		
Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS	<b>OBS 12/09</b>		

3) Demonstrate that any barriers or risks that might prevent benefits going to poorer households have been identified and addressed in order to increase the probable flow of benefits to poorer households.

Findings from 20 <sup>th</sup> August Report	The PDD does not describe barriers to prevent benefits going to poorer households and therefore no discussion of how any barriers would be overcome.		
Findings from 27 <sup>th</sup> Nov Report	The PDD does not describe barriers to prevent benefits going to poorer households and therefore no discussion of how any barriers would be overcome.		
Findings from 1st April Report	The PDD does not describe barriers to prevent benefits going to poorer households and therefore no discussion of how any barriers would be overcome.		
Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS	<b>OBS 13/09</b>		

4) Demonstrate that measures have been taken to identify any poorer and more vulnerable households and individuals whose well-being or poverty may be negatively affected by the project, and that the project design includes measures to avoid any such impacts. Where negative impacts are unavoidable, demonstrate that they will be effectively mitigated.

Findings from 20 <sup>th</sup> August Report	The PDD does not mention any measures to identify poor or vulnerable households and so does not meet the test in this requirement.		
Findings from 27 <sup>th</sup> Nov Report	The PDD does not mention any measures to identify poor or vulnerable households and so does not meet the test in this requirement.		
Findings from 1st April Report	The PDD does not mention any measures to identify poor or vulnerable households and so does not meet the test in this requirement.		
Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS	<b>OBS 14/09</b>		

- 5) Demonstrate that community impact monitoring will be able to identify positive and negative impacts on poorer and more vulnerable groups. The social impact monitoring must take a differentiated approach that can identify positive and negative impacts on poorer households and individuals and other disadvantaged groups, including women.

Findings from 20 <sup>th</sup> August Report	This has not been done.		
Findings from 27 <sup>th</sup> Nov Report	There is a passing reference to monitoring, but no discussion of what will be monitored, why, by whom, how often etc.		
Findings from 1st April Report	There is a passing reference to monitoring, but no discussion of what will be monitored, why, by whom, how often etc.		
Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS	<b>OBS 15/09</b>		

### GL3. Exceptional Biodiversity Benefits – OPTIONAL

#### Concept

All projects conforming to the Standards must demonstrate net positive impacts on biodiversity within their project zone. This Gold Level Exceptional Biodiversity Benefits criterion identifies projects that conserve biodiversity at sites of global significance for biodiversity conservation. Sites meeting this optional criterion must be based on the Key Biodiversity Area (KBA) framework of vulnerability and irreplaceability.<sup>56</sup> These criteria are defined in terms of species and population threat levels, since these are the most clearly defined elements of biodiversity. These scientifically based criteria are drawn from existing best practices that have been used, to date, to identify important sites for biodiversity in over 173 countries.

#### Indicators

Project proponents must demonstrate that the project zone includes a site of high biodiversity conservation priority by meeting either the vulnerability *or* irreplaceability criteria defined below:

1) Vulnerability

- a. Regular occurrence of a globally threatened species (according to the IUCN Red List) at the site:
- b. Critically Endangered (CR) and Endangered (EN) species - presence of at least a single individual; or
- c. Vulnerable species (VU) - presence of at least 30 individuals or 10 pairs.

Findings from 20 <sup>th</sup> August Report	This was not done.		
Findings from 27 <sup>th</sup> Nov Report	The PDD does not reference the vulnerability criteria in this standard.		
Findings from 1st April Report	The PDD does not reference the vulnerability criteria in this standard.		
Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 16/09</b>		

Or,

2) Irreplaceability

- a. A minimum proportion of a species' global population present at the site at any stage of the species' lifecycle according to the following thresholds:<sup>57</sup>
- b. Restricted-range species - species with a global range less than 50,000 km<sup>2</sup> and 5% of global population at the site; or
- c. Species with large but clumped distributions - 5% of the global population at the site; or
- d. Globally significant congregations - 1% of the global population seasonally at the site; or
- e. Globally significant source populations - 1% of the global population at the site;

Findings from 20 <sup>th</sup> August Report	This was not done.		
Findings from 27 <sup>th</sup> Nov Report	The PDD does not reference the irreplaceability criteria in this standard.		
Findings from 1st April Report	The PDD does not reference the irreplaceability criteria in this standard.		

<sup>56</sup> See Appendix A of CCB Standard "Potential Tools and Strategies" for further guidance.

<sup>57</sup> While there is wide consensus on the need for a sub-criterion for bioregionally restricted assemblages, this sub-criterion has been excluded from the Standards until guidelines and thresholds have been agreed.

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Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	<b>OBS 17/09</b>		

- 3) Demonstrate that the project zone is in a low human development country OR in an administrative area of a medium or high human development<sup>58</sup> country in which at least 50% of the population of that area is below the national poverty line.

Findings from 20 <sup>th</sup> August Report	This was not done.		
Findings from 27 <sup>th</sup> Nov Report	See <b>OBS 11/09</b>		
Findings from 1st April Report	See <b>OBS 11/09</b>		
Conformance	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
CAR/OBS			

<sup>58</sup> Low, Medium, and High Human Development Countries defined in the latest UNDP Human Development Report [http://hdr.undp.org/en/media/hdr\\_20072008\\_en\\_complete.pdf](http://hdr.undp.org/en/media/hdr_20072008_en_complete.pdf)

## Appendix C: ASSESSMENT OF PUBLIC COMMENTS TO VALIDATION

One set of public comments was received regarding the project, containing three concerns. The proponent discussed their response to these concerns in Appendix E of the PDD.

The first of the concerns raised was related to the initial assumption by the Project Proponent that there would not be any ingress on the project site. As a result of this comment, during the site visit, the auditor paid considerable attention to ingress on the project site and on similar sites in the project zone. The auditor observed that there was some ingress of poplar in a number of places on the edges of the project site, however the amount was not great and its apparent rate of advance into the site was very slow. With the project manager, the auditor toured a number of other similar properties, including some that were known to the project manager to have been abandoned for more than 30 years, and a similarly low level and slow rate of ingress was observed.

In the current version of the PDD, the Project Proponent has estimated the area of ingress and accounted for it in the baseline (**CAR 29/09** is related to deficiencies in the substantiation of a long-term rate of ingress).

The second comment was a concern that the project would not provide an increase in biodiversity, and may lead to a reduction in biodiversity because jack pine plantations tend to have very little diversity associated with them. The Project Proponent argues that returning fallow agricultural land to native forest is beneficial from the perspective of biodiversity, but does not explain why replacing grassland birds with forest birds is a biodiversity benefit (see **CAR 26/09**).

The final concern voiced by the commenter was that the amount of employment that was attributed to the project was overstated. The commenter noted the amount of overstatement was relatively minor, but pointed out that he felt it unlikely that many employment benefits would accrue to the local communities. The Project Proponent's response was to assert that there would be local employment and that local unemployed labour was being targeted. The auditor observes that the concerns of the commenter were in fact valid as the trees were planted by contract tree planters, none of whom were local, and that the willow was planted by Junior Rangers, who are from the local area (See **OBS 12/09**).