

DATE: 03 June, 2016

TO: Darrell Ouimet  
Environmental Approvals  
Manitoba Sustainable Development  
160-123 Main Street, Winnipeg

FROM: Muntaseer Ibn Azkar  
Climate Change & Air Quality  
Manitoba Sustainable Development  
160-123 Main Street, Winnipeg

**SUBJECT: MB Floodway and East Side Road Authority – All Season Road from  
Berens River to Poplar River First Nation (File: 5747.00)**

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Air Quality Section has reviewed the above proposal and provides the following comments:

- The proposal is not expected to have a significant impact on air quality provided that the cited measures regarding potential dust and particulate emissions during construction works are implemented.
- Air Quality Section suggests that the EA Clause regarding noise nuisance be included.

**DATE:** June 1, 2016

**TO:** Darrell Ouimet  
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Environmental Approvals Branch  
Sustainable Development  
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**FROM:** Alison Haugh  
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**SUBJECT: EIS Review and comments East Side Road - ASR for Berens R. to Poplar R.  
File: 5747.00**

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Lands Branch (Traditional Area Planning Section) has reviewed the subject proposal and submits the following comments:

The passage found in Section 1.2 on page 4 of the *Environmental Impact Statement* project summary document (posted April 26, 2016) is inaccurate where reads: “*The Project is not located within any....protected areas*”.

The proponent is advised that the proposed all-season road alignment crosses into the *Protected Area* zone described in the Poplar River First Nation *Asatiwisiipe Aki Management Plan*, and designated in the *Asatiwisiipe Aki Traditional Use Planning Area Regulation* (Manitoba Regulation 77/2011) under *The East Side Traditional Lands Planning and Special Protected Areas Act* (the “East Side Act”).

Mining (including quarrying) is prohibited in the *Protected Area* zone under MR 77/2011. This prohibition does not preclude development of an all-season road (i.e. the construction and maintenance of an ASR would not fit within this restriction as it relates to activities associated with a class of industry); however, exceptions to the prohibition on mining in MR 77/2011 exist to reflect the direction in the *Asatiwisiipe Aki Management Plan*, which direction is to be taken into account when making decisions about allocation /disposition of lands and resources. The *Asatiwisiipe Aki Management Plan* states that a “Proposed All Season Road [is] to be established within the [All Season Road] Access Corridor Area” (page 42); and s. 13(1) of the East Side Act provides that “When a management plan is in effect, any decision under an enactment respecting the allocation, disposition or use of Crown land and Crown resources in the planning area, and any development in the planning area, must take the plan into account.”

Accommodating the subject proposal will therefore require amendments to both the *Asatiwisiipe Aki Management Plan*, and MR 77/2011 as provided for in the East Side Act.

Lands Branch is informed that the proposed road alignment is supported in principle by Poplar River First Nation, and that the Poplar River First Nation will submit to the Minister of Sustainable Development (responsible for administration of the East Side Act) a proposal to amend the *Asatiwisipe Aki Management Plan* in support of the proposed road alignment. The amendment process under the Act involves a 90 day public consultation period prior to when any order is given to approve a proposed change, and a change to the zoning in the *Management Plan* will require a new Director of Surveys Plan, and an amendment to MR 77/2011 to reference the new survey plan.

The plan amendment and regulation amendment proposal will be posted to the East Side Planning Registry (public registry) available online at:

[http://www.gov.mb.ca/conservation/lands\\_branch/public\\_registry.html](http://www.gov.mb.ca/conservation/lands_branch/public_registry.html)

The proponent is on the Lands Branch distribution list for traditional area planning proposals and will be notified of the proposed amendment, and invited to comment, through email and lettermail.



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cc. Lori Stevenson, Director of Lands  
Jenny Harms, Protected Areas Specialist

## Eastern Region Comments

(Including Regional Wildlife Comments)

ESRA Environment Impact Assessment

Project 4

Proposed All-Season Road Linking Berens River to Poplar River First Nation

Draft as of June 30, 2016

### **PREAMBLE**

We recognize and support the need for the Project. The socio-economic benefits of all-season road (ASR) access to remote communities are immense; however; any new ASR will be associated with environmental costs which may include direct, indirect and/or cumulative effects on wildlife populations. Our responsibility is to review and comment on the overall EIA as it relates to wildlife considerations, potential effects and mitigation. The majority of our comments (General Comments) are intended to address general topics. Each of these general topics includes recommendations for consideration in the current and/or future Project processes. Another section (Detailed Comments) provides comments on a section-by-section basis.

### **GENERAL COMMENTS**

#### **A) THE PROCESS**

The overall process is summarized in a flow chart entitled ***Steps to Select, Design and Construct an All-Season Road (p 4.2)***. The flow chart indicates that ESRA's planning involves extensive community input for all phases of the Project, including: a) identification of possible road corridors, b) identification of possible road alignments within the corridor, c) selection of final road alignment, d) detailed design, and, f) construction. The chart does not, however, indicate any opportunities for Sustainable Development (SD) input on two key early phases of the process (identifying possible road alignments and identifying the final alignment) where comments/advice on wildlife implications would have been most valuable. As section 4.4.2 states, ESRA did provide updates on P4 to SD wildlife staff (via regional IRMT presentations, and annual presentations on wildlife monitoring activities), but these updates were presented as information on decisions made/results obtained/next steps, rather than as input-seeking sessions where SD comments were recorded, responded to and accommodated. Consequently, many of our comments in the following sections originate from a lack of opportunity to provide "wildlife" input early in the process, when alignments were being determined.

### General Recommendation(s)

- that the process for future all-season road proposals, with the exception of the roads identified in the East Side Lake Winnipeg Large Area Transportation Network Study (ESLWLATNS), include an opportunity for formal SD input/review, beginning at Phase 1: **identification of possible road corridors** stage.
- recognizing that Phase 1 for the ESLWLATN has already been completed, that opportunities for formal SD input/review be provided at the earliest Phase possible for all remaining road Projects in the ESLWLATN.
- that, for future sessions where ESRA provides updates and information to the regional IRMT, ESRA prepare a summary of the topics covered, including any comments, concerns, suggestions or requests made by the IRMT, as well as, ESRA's response to the IRMT input. And that, the summaries be formalized as meeting minutes once the content has been reviewed and finalized to the mutual satisfaction of both parties.

### **B) PROJECT AREA(s)**

The Local Assessment Area (LAA) for P4 is described in the document as to “to generally extend 5 km on either side of the centerline of the proposed ASR to include the expected area within which measurable potential Project effects on most VCs may occur (e.g. wildlife)”.

We believe that measurable effects on wide ranging and vulnerable species such as moose and woodland caribou can be expected within a minimum of 10 km on either side of the ASR, particularly as the ASR will traverse/bisect key habitat areas for these species, and because the positioning of the ASR may potentially act to fragment core caribou use areas that extend to the west across the road to the vicinity of the Lake Winnipeg shoreline. Several elements of ESRA's wildlife monitoring plan are already occurring in a manner that should allow for detection of measurable effects on these species within 10 km of the ASR centerline, and we support continuation of these activities.

### General Recommendation(s):

- that the LAA for future road Projects in the ESLWLATN incorporate, at minimum, all areas within a 10 km distance from the centerline of all alternative routes considered during Phase 2: **Identify possible Road Alignments**.
- that, for the purpose of future effects monitoring, the LAA for P4 be modified to include all areas within a 10 km distance of the centerline of the final selected route.
- that ESRA continue conducting those monitoring activities conducive to the analysis/detection of measurable effects within 10 km of the centerline of the ASR alignment.

### **C) THE FINAL SELECTED ROAD ALIGNMENT**

The first step in minimizing environmental costs is to select an appropriate route. Section 2.2.2 states that “Road route selection criteria included consideration of technical aspects, natural environment, social/cultural environment, and capital and maintenance costs”. We acknowledge that P4 presented routing challenges related to the natural environment criterion, given the natural distribution of 2 key wildlife VCs; i.e. moose and caribou. We recognize that, in many areas, routing to avoid known “caribou” areas meant traversing known “moose” areas (and vice versa); also; that in the southern 1/3 of the route there appeared to be no possible route that could avoid bisecting known caribou core summer areas. However, we believe that potential effects on moose could have been mitigated better, without negative effects to caribou, if the northern 1/3 of the route was altered by moving it a minimum of 5 km from the Poplar River.

At this point in time the selected final alignment is unlikely to change, as exploratory clearing along much of the centerline has already occurred. We are of the understanding that the exploratory clearing was done to conduct geotechnical testing of the alignment’s capability to support a road. This, we have been advised, is a requirement/need of the CEAA (federal) environment assessment process. We believe this process to be counter-intuitive to a appropriate review of alternative route options - it means that the centre line of ESRA’s all-weather road Projects will be cleared in the absence of any independent technical/scientific review, prior to submitting an Environment Assessment, and potentially, in advance of collecting baseline information. We acknowledge that ESRA met regularly with the regional IRMT to present updates on routing; however; any concerns expressed at these meetings were countered by explanations that deviations from the proposed route were not possible due to ground conditions and related engineering constraints. We note, though, that alternative routing options were developed as planning progressed, in accordance with comments/concerns received from the First Nation communities. We concur with most of these revisions, particularly those that moved the route a greater distance from the Poplar River.

#### **General Recommendation(s):**

- that ESRA provide more detailed information on why the final route cannot be moved at least 5 km from the margins of the Poplar River;
- that SD be contacted for formal input /discussion during Phase 2: ***Identify possible Road Alignments***, of future LWELATN road Projects; that ESRA document SD comments, concerns and suggestions provided at these sessions, and that SD input and comments be considered and responded to by ESRA prior to the initiation of exploratory clearing.

## **D) BASELINE STUDIES, WILDLIFE MONITORING AND DATA ANALYSIS**

ESRA has conducted a number of baseline wildlife studies for P4. These studies will provide a baseline for assessing changes/impacts resulting from the P4 construction and operational phases. The methods used to collect, analyze and assess baseline information are of interest to SD insofar as SD will be making ongoing management decisions for ungulates and other wildlife species in this area. Accordingly, it will be important to know which data is available to each agency, as well as, the collection and treatment methods employed.

ESRA's baseline studies were conducted in accordance with the monitoring objectives/methods outlined in their 2013 Wildlife Monitoring Plan, which was developed for the PR 304 to Berens River ASR Project (P1). This monitoring plan will need to be updated to reflect expectations for construction and post-construction monitoring for both projects (P1 and P4).

FISHERIES: Similar to steps being taken to address wildlife concerns by undertaking baseline studies prior to road development, ESRA should undertake similar baseline studies of the fisheries resources in the area. The development of road networks near major lakes and rivers will increase the amount of pressure on fish stocks. Given the reliance of these fish stocks as a source of food to the communities around Berens River and Poplar River, we recommend that a baseline survey of the current fish communities be undertaken concurrent to development of P4 and prior to any exploratory work for the P4 project.

As the exploratory work of the P4 project begins, other water bodies should also be considered for fisheries survey.

### General Recommendation(s):

- that ESRA and their consultants continue to meet with SD to provide additional information on the methods and analyses used to collect baseline data in the LAA, and the results arising from these analyses, including mapping of results to provide spatial context; and; that these sessions provide an opportunity for SD to provide advice and input to ESRA on the information presented;
- that ESRA and their consultants work collaboratively with SD on updating and adjusting their 2013 wildlife monitoring plan ;
- that the wildlife monitoring plan be submitted for review and approval by EAB prior to the commencement of construction activities;

## **E) QUARRIES and AGGREGATE REMOVAL**

A number of potential quarry sites have been identified in the EIA. We understand that quarries are required for the project; however; it should also be recognized that quarry operations will be associated with environmental costs. Adverse effects on wildlife are to be expected and in many cases can be mitigated by minimizing the number of quarry operations, by avoiding sensitive wildlife areas, by restricting operations during critical

periods, by preferentially developing quarries immediately adjacent to the ROW, and by timely decommissioning of access roads and rehabilitation of pits.

We note, however, that a number of quarry sites have been identified within documented summer and/or winter core use areas for woodland caribou (primarily in the southern 2/3 of the route), while other quarries have been identified within important moose areas in the northern 1/3 of the route. The quarries within documented caribou use areas are of particular concern, given that woodland caribou are a threatened species, and that Manitoba's Endangered Species Act states that:

- *No person shall kill, injure, possess, disturb or interfere with a member of a threatened species, destroy, disturb or interfere with the habitat of an endangered species, a threatened species or damage, destroy, obstruct or remove a natural resource on which a threatened species depends for its life and propagation.*

This provision does not apply to a person who acts under the authority of a licence issued under *The Environment Act*, if the minister is satisfied that:

- protection and preservation of the species and its habitat is assured; or
- appropriate measures are established, or will be established, to reduce to a minimum the impact of the development upon the species and its habitat.

In view of these provisions, SD believes that a more cautious approach to quarry development is warranted in the P4 area. We anticipate that we will be working closely with ESRA as appropriate Environmental Protection Procedures are developed for quarry operations, including spatial and temporal restrictions that may be needed in or near sensitive wildlife areas/habitats;

General Recommendation(s):

- that ESRA engage in discussions with SD with respect to determining specific sensitive areas where restrictions may apply as to: a) the placement of quarries, including set-back distances; and/or; b) the timing of pit development and operations, including blasting restrictions;
- that a *Blasting in Quarries* Procedure be added to the Environmental Protection Plan; and that the *Blasting in Quarries* Procedure identify spatial and temporal restrictions that will apply in sensitive wildlife areas, including but not limited to the habitats of Species At Risk.

**F) ENVIRONMENTAL IMPACT ASSESSMENT SCOPE AND APPROACH;  
and EFFECTS ASSESSMENTS FOR WILDLIFE SPECIES**

We have a number of comments and questions respecting how the effects assessments were conducted for P4. Our understanding is that the Canadian Environmental Assessment Agency (CEAA) process was followed, as P4 is subject to federal review.

We understand from the EIA that:

- the CEAA effects assessment process involves several steps for each valued component (VC); e.g, moose, woodland caribou, etc.:



- a) identification of potential effects;
- b) Initial screening of potential effects, where the level of each potential effect is evaluated prior to applying any mitigation;
- c) mitigation ( i.e. *apply technically and economically feasible mitigation measures* ) ;
- d) determining significance of residual effects (i.e. effects remaining after mitigation)

and that:

- an adverse residual effect is defined as “Significant” only if it meets both of the following criteria:
  - a level 3 rating for ecological context; and;
  - a level 2 or 3 rating for each of: duration, magnitude, extent and frequency;

and that:

- a) if a residual adverse effect on any VC is ranked as “Significant”, this might possibly trigger a CEAA requirement for a more extensive review;

Comments:

We have concerns with this process for several reasons:

- a) It appears as though the proponent is determining the ranking descriptions. We assume this to be the case, as the ranking descriptions are different for P4 than for those used for P7A; e.g.:

ECOLOGICAL CONTEXT	P7A	P4
Rank 1	No discernible or meaningful effects; effects within the range of natural variation and limited to project assessment area	Minimal disruption of ecological functions and relationships in the area;
Rank 2	Effects outside the range of natural variation but only involving locally common species or affecting resources of limited ecological importance	Some disruption of non-critical ecological functions and relationships in the area
Rank 3	Effects involve locally, regionally or nationally important species	Disruption of critical ecological functions and relationships in the area

- b) All the inputs and the final outcomes are determined by the proponent. It is noteworthy that for P4 the ecological context for every terrestrial VC in the EIA was ranked level 1 by the proponent during the “screening” step, effectively reducing all potential effects to non-significant. For example, in the case of moose, the potential impacts from increased hunting were assessed as a rank 1, with a low probability of occurring, prior to any mitigation being taken. Based on our experience in Manitoba, and discussions with our counterparts in other jurisdictions, we know this to be incorrect. We can expect (with a high degree of certainty), that a new ASR will lead to increased hunting access, increased

moose harvests, and the eventual disappearance of moose in the vicinity of the new access route.

- c) A significant residual effect may possibly trigger a more extensive review; accordingly; proponents will be motivated to conduct assessments with non-significant outcomes.

We disagree with many of the assessment outcomes presented in the EIA, including most of the “residual effects” evaluations for moose and woodland caribou . The example of “effects on moose due to increased hunting” was only used to demonstrate one obvious case of mis-ranking.

General Recommendation(s):

- that ESRA provide information on the origin of the methods and criteria used for the effects assessments; i.e. which elements arise from published federal or provincial “standards”, were any of these “standards” adapted for the P4 Project, and which elements were developed by ESRA?
- that ESRA consider the comments in our response to the P4 EIA when developing effects assessment for future road projects.

**G) ENVIRONMENTAL EFFECTS AND ASSESSMENT - MOOSE**

We have concerns about the manner in which effects on moose are assessed and mitigation is presented. Our comments specifically address statements in the EIA related to *Operations and Maintenance Effects and Mitigation*. We have summarized some of the EIA statements into the following table for clarity of reference:

Potential Effect	Level of Adverse Effect Assigned	Mitigation and/or Comments Expressed in the EIA
Increased mortality due to vehicle collisions	LOW No increased risk in mortality is expected due to collisions	<ul style="list-style-type: none"> <li>• Infrastructure maintenance will occur in fall/winter to the extent feasible ;</li> <li>• Road will be designed to optimize line of sight;</li> <li>• Moose crossing or speed reduction signs will be installed;</li> <li>• Research and monitoring to continue to identify where adaptive management is required;</li> </ul>
Increased mortality or changes in distribution due to changes in hunting access	LOW No increased risk in mortality or distribution is expected due to increased hunting access	<ul style="list-style-type: none"> <li>• Temporary access trails and winter road will be decommissioned;</li> <li>• Road access control will be developed during construction and continued through O &amp; M phase;</li> <li>• <b><i>The application of existing provincial moose population management actions (e.g. hunting seasons, bag limits and vehicle use regulations) and cooperative efforts with local communities and regional moose management committees will be undertaken;</i></b></li> <li>• <b><i>Access management, road refuge (e.g. the establishment of a Wildlife Refuge along the ASR) , and provincial harvest management strategies that regulate hunting will play an important role in monitoring changes in moose population numbers and status;</i></b></li> </ul>
Increased mortality or changes in distribution due	LOW No increased risk in mortality or distribution is	<ul style="list-style-type: none"> <li>• ESRA studies indicate wolves are using anthropogenic features far less than they are using natural linear features;</li> <li>• To date, wolf kill sites are not correlated with anthropogenic linear features;</li> </ul>

to changes in predation	expected due to increased predation	<ul style="list-style-type: none"> <li>• ESRA monitoring activities have not yet identified a significant change in wolf predation on moose;</li> <li>• ESRA will continue research and monitoring during construction ...to identify where adaptive management is required;</li> </ul>
Introduction of disease/ parasites from white-tailed deer	LOW No increased risk in mortality is expected due to disease /parasites	<ul style="list-style-type: none"> <li>• The brainworm /liver fluke host, the white-tailed deer, is not expected to persist at densities capable of transmitting the parasite in the P4 area;</li> <li>• <b><i>As required SD will apply existing provincial deer population management actions;</i></b></li> </ul>

Specific comments on the text in the third column are provided in the following paragraphs:

- ***The application of existing provincial moose population management actions (e.g. hunting seasons, bag limits and vehicle use regulations) and cooperative efforts with local communities and regional moose management committees will be undertaken; and;***
- ***As required ,SD will apply existing provincial deer population management actions;***

These statements appear to be indicating that the risk is low because another agency (Sustainable development) will be taking action to mitigate. It is not appropriate for a proponent to be identifying tasks for other agencies as part of the proponent's mitigation strategy;

- ***Access management, road refuge (e.g. the establishment of a Wildlife Refuge along the ASR) , and provincial harvest management strategies that regulate hunting will play an important role in monitoring changes in moose population numbers and status;***

Two of the assumed mitigative measures (establishment of a Wildlife Refuge and provincial harvest management strategies) are not within ESRA's area of authority, As with the previous examples, It is not appropriate for a proponent to be identifying tasks for other agencies as part of the proponent's mitigation strategy;

This statement also is confusing as it appears to indicate that these measures will be important for monitoring changes.

- ESRA studies indicate wolves are using anthropogenic features far less than they are using natural linear features;

Previous presentations on ESRA's results re: wolf use of anthropogenic and natural features have not clarified whether the proportion of each feature was taken into account for the analysis;

- To date, wolf kill sites are not correlated with anthropogenic linear features;

It would be premature to make statements about correlation without examining sampling effort, accounting for sampling units and pack territories, and incorporating post-construction data;

- ESRA monitoring activities have not yet identified a significant change in wolf predation on moose;

It would be premature to make conclusions about changes in wolf predation without before and after datasets;

## DETAILED COMMENTS ON SECTIONS

### Chapter 2: Project Justification and Alternatives Considered

- Section 2.2.2.1 – Road Route Alignment – Background
  - There is a reference to a caribou HSI model. Which model is being referenced? There is no further mention of the HSI model throughout the remaining EIS.
  - Table 2.2 – from this table, it appears that environmental and/or wildlife concerns played a minor role in route alignment adjustments.

### Chapter 3: Project Description

- Section 3.2.5 – Decommissioning
  - We recommend a licence condition requiring IRMT approval for ESRA's proposed methods for decommissioning of the winter road.
- Section 3.3.6 – Quarries and Borrow Areas
  - The distance of quarry and borrow areas from centerline stated in this section contradicts section 2.2.4.1 (Quarry and Borrow Areas).
    - 2.2.4.1 – located within 100m of the proposed ROW (where possible)
    - 3.3.6 – borrow areas within 500m of centerline; quarries up to 1km from road alignment
  - Would like clarity as to which are the correct distances being considered.

### Chapter 5: Environmental Protection and Sustainable Development

- See our previous comments on developing a *Blasting in Quarries* Procedure; It is important to outline the specific mitigation that would minimize/prevent/protect the habitat and habitat loss for species at risk. At minimum, Blasting should occur outside most sensitive breeding /brooding period of May 1 to July 31.
- Wildlife EPP – “No blasting shall be permitted within close proximity to sensitive wildlife habitat during critical life cycle periods.”
  - “Close proximity” should be defined by a distance measurement.
  - Preference for borrow operations that were off the right of way to be ceased between May 1 and July 1.

- Provides for less disturbance for females moving to potential calving sites – the average birth period is between May 15<sup>th</sup> and May 20<sup>th</sup>. However some are earlier.

## **Chapter 9: Terrestrial Environment**

- Section 9.2.5.1 – Moose
  - The re-vegetation of the winter road will not provide a quantity of quality habitat that would be detectable for moose.
- Section 9.2.5.1.1 – Construction Effects and Mitigation – Increased mortality or changes in distribution due to changes in predation
  - Wolf use of human linear features – the conclusion of wolves using anthropogenic linear features less than natural linear features may not be correct. It does not appear that the relative proportion of each type of feature human linear features has been properly accounted for in this analysis. The difference may merely be an artifact given that natural features on the landscape is in higher proportion than compared to human linear features.
- Section 9.2.5.1.2 – Operation and Maintenance Effects and Mitigation
  - Increased mortality of changes in distribution due to increased hunting access
    - Even if SD’s community consultation processes eventually lead to support for a legislated road refuge, risks would not be completely mitigated, as cooperation is influenced by factors which are not readily managed;
  - Changes due to Predation
    - Natural linear features are in higher proportion on the landscape compared to human linear features – accounting for proportions, the conclusion reached in this section may not be appropriate.
  - Temporary Sensory Disturbance
    - Calling the decommissioning of the winter road a habitat gain is misleading. Any gains would not be measurable in the short-term. Any gains would be measured in the long term once the structure on the feature is similar to the surrounding matrix.
- Section 9.2.5.1.3 – Summary of Residual Effects
  - The importance of mortality and change in distribution during operations has been understated.
  - The presence of the ASR will likely have a lasting impact on moose abundance within the LAA. It is generally accepted that new access results in local area reductions in abundance.
- Section 9.2.5.2 – Boreal Woodland Caribou
  - 9.2.5.2.2 – Operations and Maintenance Effects and Mitigation – Increased mortality due to vehicle collisions
    - While currently vehicle collisions are not a considered a threat to boreal caribou within the Atikaki-Berens Management Unit, with the construction of a new all season road through core areas, there is a potential for collisions to emerge as a new threat.

- Increased mortality due to predation
      - Natural linear features are in higher proportion on the landscape compared to human linear features – accounting for proportions, the conclusion reached in this section may not be appropriate.
      - Although surrounding habitat may be unchanged, road travel by wolves may still facilitate movement into previously inaccessible areas because wolves would have previously likely had a difficult time moving into these areas due to the nature of the terrain (bog, fen, etc.)
- Section 9.2.5.2.3 – Summary of Project Residual Effects and Conclusions
  - While up to now there has not been any documented predation on boreal caribou from collared wolves, we generally know that it does occur. How
  - The lack of mortality due to vehicle collision within the regional assessment area is likely a function of the fact that current operational parts of P1 do not traverse caribou areas;
  - While residual effects may not necessarily be significant at a population level, even after mitigation measures are implemented, there will likely be lasting effects in how caribou move in this area.
  - While each potential effect, that has been outlined, on their own may not result in a significant impact, cumulatively, these effects have the potential to impact caribou at the population level given their life history characteristics.

#### **Appendix 9-1 – Wildlife Technical Report**

- Section 5 – Species Presence in Study Area
  - Regional wildlife staff would like to obtain the occupation/distribution data from the camera study (locations of cameras and locations of observed species), as it will be useful for action planning;
- Section 6 – Baseline Habitat Evaluation and Analysis
  - The general assumption that the existing winter road will regenerate may be misleading.
    - There is evidence from Alberta that suggests that especially in treed bog/fen areas, there is minimal regeneration and features can remain on the landscape for long periods of time.
    - Although the authors do discuss some aspects of regeneration with respect to the winter road, they do not discuss treed bog/fen areas and the challenges to regeneration.
- Section 7 – Boreal Woodland Caribou
  - 7.2 Group Counts
    - The age and sex information collected during these surveys was not reported. We would like this information, as well as, the location data, as it will be useful for action planning;
    - This type of data constitutes a winter recruitment survey.
  - 7.3 Population Trend

- The method and timing used to assess caribou recruitment does not conform to the standard approach used in many jurisdictions. The context of recruitment that is generally defined/and used is the young of the year surviving to 1 year of age to become a member of the adult population. The generally accepted standard assessment of recruitment is to conduct surveys in winter, January – March. “Recruitment Surveys” in summer (July – September) provides data on survival during summer months and is not a true recruitment assessment.
    - The lambda rates reported are likely biased low as a result of the data used.
    - The comparisons of these rates to other reported rates is likely not appropriate. The methods used are different. Most other reported rates incorporate winter recruitment.
    - SD Wildlife Staff have previously expressed concerns with the methodology that has been used. Wildlife Staff would like to further discuss an acceptable/appropriate methodology.
  - 7.4 Caribou Distribution
    - 7.4.2 Results
      - Pg 23 – last sentence – should begin with the words “Collared caribou winter...”. This would provide the understanding that not all caribou are likely found within these kernel areas.
      - Annual kernels were not presented. These would be useful.
      - It is important to remember that the core areas, especially summer, are only for collared caribou.
      - A better description of the calving habitat modeling approach is needed to improve understanding for the methodology used. We would appreciate the opportunity to hear the model presented by the consultant who developed it;
  - 7.6 Range Fragmentation
    - An analysis of caribou movement patterns as it related to existing linear features (winter road, transmission line) on the landscape was conducted to provide insight into potential effects of the new ASR (point density analysis and path trajectory analysis). A winter/summer comparison was presented with the path trajectory analysis, however a similar comparison was not presented for the point density analysis as it related to the transmission line as a linear feature. Results of this analysis would have been useful in considering potential changes to caribou movement patterns as it relates to linear features. It is recommended that future analysis take this into consideration.
- Section 11.0 – Multi-Species Survey
  - Eastern Region Wildlife would like to obtain this data (including the location data) – it will be useful for action planning

- The actual methodologies of these surveys were not described in the document. This information would be useful in better understanding the survey results.
- Why were there not multi-species surveys conducted across multiple years? This would have provided a more robust dataset to base the conclusions on.

### **Chapter 13: Cumulative Effects**

- Section 13.3.3 – Boreal Woodland Caribou
  - It is not necessarily appropriate to remove the winter road from the P1 area as of 2015 and replace it with the all season road. The winter road does not instantly disappear from the landscape. The feature itself will persist on the landscape for an extended period of time. This item fits in with the larger debate of when is a linear feature no longer a linear feature?
    - Additionally, the removal of the winter road in 2020 in the P4 area is also not necessarily appropriate.
  - Caribou have not “co-existed”, they have adapted to the existence of the winter road.

### **Chapter 14: Monitoring and Follow-Up**

- This may be the first new ASR in Manitoba that traverses and/or bisects large portions of documented woodland caribou summer and winter core use areas. While some impact outcomes are not certain it is reasonably certain that current habitat use in the project area will become fragmented and likely alter seasonal movement patterns through time.
- There is a unique opportunity with P4 to monitor potential changes in movement pattern in a summer and winter core use area given the new ASR will cross through an existing core use area for both seasons. It will be important to identify these areas and develop a specific methodology to monitor these areas over multiple years post construction.





**Infrastructure and Transportation**

Highway Planning and Design Branch  
Environmental Services Section  
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May 12, 2016

Tracey Braun, M. Sc.  
Director, Environmental Approvals Branch  
Manitoba Conservation and Water Stewardship  
123 Main St., Suite 160  
Winnipeg, MB R3C 1A5

RE: E.Side Road – All Season Road from Berens R. to Poplar R.  
Client File No 5747.00

Dear Ms. Braun:

MIT has reviewed proposal noted above and we do not have concerns with the development as proposed.

Thank you very much for providing us the opportunity to review the proposal.

Sincerely,

Ryan Coulter, M. Sc., P. Eng.  
Manager of Environmental Services

## Ouimet, Darrell (SD)

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**From:** Stibbard, James (CWS)  
**Sent:** May-16-16 3:38 PM  
**To:** Ouimet, Darrell (CWS)  
**Subject:** RE: 5747.00 Berens River to Poplar River ASR, EAP Review

Mr. Ouimet,

The Berens River MANA North and South Communities draw raw water for their potable water systems from the Berens River. As such, Office of Drinking Water recommends that contact information for these communities be included in the emergency procedures manual for the project with instructions, that, in the event of a spill of fuel or any other deleterious products into the Berens River during construction, the Berens River North and south MANA communities be contacted immediately.

Apart from this, Office of Drinking Water has no other concerns with this EAP or the proposed project respecting drinking water quality or safety.

If you have any questions, please call.

Regards,

**James Stibbard P. Eng.**

Approvals Engineer

Office of Drinking Water

1007 Century Street

Winnipeg MB R3H 0W4

phone: (204) 945-5949

fax: (204) 945-1365

email: [James.Stibbard@gov.mb.ca](mailto:James.Stibbard@gov.mb.ca)

website: [www.manitoba.ca/drinkingwater](http://www.manitoba.ca/drinkingwater)

## Ouimet, Darrell (SD)

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**From:** Matthews, Rob (CWS)  
**Sent:** April-27-16 3:07 PM  
**To:** Ouimet, Darrell (CWS)  
**Subject:** RE: EIS Review and comments E.Side Road - ASR for Berens R. to Poplar R. - File: 5747.00

No concerns.

Rob Matthews, Manager, WULS, CWS

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**From:** Steele, Tania (CWS)  
**Sent:** April-27-16 2:00 PM  
**To:** Wilson, Brian (MAFRD); +WPG1212 - Conservation\_Circulars (CWS); Labossiere, Don (CWS); Molod, Rommel (CWS); +WPG1212 - Parks Circulars (CWS); Keenan, Phil (CWS); Missyabit, Ron (CWS); Page, Elaine (CWS); Phipps, Graham (CWS); Kiss, Brian (CWS); Stibbard, James (CWS); Matthews, Rob (CWS); Reimer, Geoff P (CWS); +WPG574 - HRB (TCHSCP); Cunningham, Neil (CWS); Roberecki, Susan (HHLS); Roberts, Tracy (HHLS); +WPG969 - MIT Environmental Services Section (MIT); Beaumont-Smith, Chris (MMR); 'Sigurdson,Shauna [CEAA]'; Smiley, Donna (CWS); Prawdzik, Tim (CWS); Prosser, Cheryl (CWS); Shabaga, Greg (CWS); Lowdon, Keith (MMR); Crone, Jim (MMG); Meuckon, Cameron (CWS)  
**Cc:** Ouimet, Darrell (CWS)  
**Subject:** EIS Review and comments E.Side Road - ASR for Berens R. to Poplar R. - File: 5747.00

Your review and comments would be appreciated for the attached Proposal submitted pursuant to *The Environment Act*:

<http://www.gov.mb.ca/conservation/eal/registries/5747berenspoplarroad/index.html>

The contact person assigned to co-ordinate review and assessment of the Proposal is:

**Darrell Ouimet @ 204-803-1389.** Email replies are programmed to automatically deliver to [darrell.ouimet@gov.mb.ca](mailto:darrell.ouimet@gov.mb.ca)

Please indicate to the contact person if you are unable to review the proposal. A non-reply will be considered as indicating your department has reviewed the proposal and has no concerns.

Any comments you have on the Proposal should be emailed by **June 3, 2016.**

**\*\*No hard copies will be provided\*\***

Thank you.

*Sent on behalf of:*

**Darrell Ouimet**  
Environment Officer  
Environmental Approvals Branch  
Manitoba Conservation and Water Stewardship  
Tel. 204-803-1389  
Fax. 204-945-5229

## Ouimet, Darrell (SD)

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**From:** Roberts, Dan (CWS)  
**Sent:** May-02-16 1:38 PM  
**To:** Ouimet, Darrell (CWS)  
**Subject:** EIS Review and comments E.Side Road - ASR for Berens R. to Poplar R. - File: 5747.00

On behalf of the *Water Control Works and Drainage Licensing Section*, there are no concerns.

## Dan Roberts

Water Resource Officer  
Water Control Works and Drainage Licensing Section  
Conservation and Water Stewardship  
Box 6000, Building #1180, 75 - 7th Avenue,  
Gimli, MB R0C 1B0  
Cell: (204) 641-1331

# **East Side Road Authority – Project 4 – Berens River to Poplar River All-Season Road - Environmental Impact Statement**

## **Wildlife Related Comments from the Wildlife and Fisheries Branch**

### **Overall Comments and Concerns:**

Wildlife and Fisheries Branch has concerns that the route alignment process outlined in Chapter 2 does not specifically identify where wildlife related technical advice was sought from Manitoba Sustainable Development (formally referred to as MCWS). Rather, **Table 2.2 “Chronology of Alignment Revisions...”** identifies only comments provided by the community and engineering constraints. The Wildlife and Fisheries Branch acknowledges that routing options and alignment revisions were presented to staff from both the Branch and the Eastern Region at various points during the process; however this section does not document if, when, and how wildlife information provided by the department was sought after and applied during the routing process. Given that the Natural Environment (effects on species at risk, environmentally sensitive areas, etc.) is stated as part of the evaluation criteria, the Wildlife and Fisheries Branch and Regional Wildlife Staff should have been awarded the same degree of consultation as local communities during the route planning phase.

### **Recommended Licence Conditions:**

- 1) Based on the data presented, this project will result in direct and functional habitat loss for *Threatened boreal woodland caribou*. *The Endangered Species and Ecosystems Act* states that:

#### **Prohibition**

10(1) No person shall

(a) kill, injure, possess, disturb or interfere with a member of an endangered species, a threatened species, or an extirpated species that has been reintroduced;

(b) destroy, disturb or interfere with the habitat of an endangered species, a threatened species or an extirpated species that has been reintroduced; or

(c) damage, destroy, obstruct or remove a natural resource on which an endangered species, a threatened species or an extirpated species that has been reintroduced depends for its life and propagation.

#### **Exception**

10(2) Subsection (1) does not apply to a person

(a) who acts under the authority of a permit issued by the minister under section 11;

(b) who is exempted from the application of this Act under section 12; or

(c) who acts under the authority of a licence issued under *The Environment Act*, if the minister is satisfied with respect to the matters described in clauses 12(1)(a) and (b).

#### **Exemption of developments**

12(1) The minister may exempt an existing or proposed development from the application of this Act if the minister is satisfied that

(a) protection and preservation of the species and its habitat is assured; or

(b) appropriate measures are established, or will be established, to reduce to a minimum the impact of the development upon the species and its habitat.

Thus, a specific condition should be added to ensure that actions are taken to “reduce to a minimum the impact of the development” (i.e. habitat loss restricted to the road allowance, with no additional loss attributed to quarries, access trails, etc. within sensitive habitat areas). We recommend that this condition resemble the following:

- A specific plan is developed that identifies how the Project’s impact on boreal woodland caribou habitat will be kept to a minimum during the construction and operation phases, in accordance with *The Endangered Species and Ecosystems Act*. This plan will first be approved by the Director of Environmental Approvals, the Director of the Wildlife and Fisheries Branch, and the Director of the Eastern Region, and then approved by the Minister prior to construction being permitted.
- 2) The Branch is unable to review the project’s Wildlife Monitoring Plan prior to a licence being issued. Therefore since the Branch must review and approve this plan prior to road construction, the following licence clause is recommended:
- A Wildlife Monitoring Plan must be submitted to the Director of Environmental Approvals by the date of ###. This plan must be reviewed and approved by the Director of Environmental Approvals, the Director of the Wildlife and Fisheries Branch, and the Director of the Eastern Region prior to construction activities commencing.
- 3) Beaver dams cannot be removed without a Beaver Dam Removal Authorization from a Conservation Officer, in addition to following guidelines from DFO. While a general wildlife management operational procedure is being developed as a separate document from the EIS (and will not be part of the Environmental Licence), this authorization and standard conditions needs to be identified in the Licence. Such authorization will recognize that dam removal and pond draw-down requires beaver removal during only certain times of the year (e.g. cannot be during nursing periods of young).
- 4) Impacts on black bears should recognize that a wide variety of attractants, not just food/garbage, can result in human/black bear conflicts. Designated disposal areas are required for a wide variety of facilities. Note that some disposal methods, e.g. incineration, will attract bears. These considerations should be considered in the Licence, not just the separate EPP.

- 5) No clearing will occur between April 1 and August 31 without review and approval by Manitoba Sustainable Development. This may require breeding bird surveys and nest searches to be conducted prior to submitting a request to clear during this period. This condition will require that, depending on the results of the survey, that the Branch be contacted if target species are encountered and that appropriate mitigation measures be discussed and in place prior to approval being granted. Results of surveys and the outcome of mitigation measures will be provided to the Branch.

## **Subject Specific Comments:**

### **Habitat Gain**

The EIS contains an overall theme of habitat gain, as shown throughout the Project Summary, e.g. **Table 10 - “Habitat gain due to decommissioning and regeneration of vegetation of temporary access routes and winter road”**. Although the Wildlife and Fisheries Branch appreciates the decommissioning of the winter road and access trails, broad statements like this cannot be made for the reasons listed below:

- Overall:
  - This concept should be referred to a “potential habitat gain”, as this process will take time, and there is no guarantee that pre-disturbance composition and quality will be regenerated.
  - Rather than referring to the decommissioning of the winter road as a potential environmental effect, it should instead be stated as a mitigation measure to offset some of the habitat loss that will be occurring due to the new RoW.
- Decommissioning of project related access routes will not result in habitat gain as these areas are currently in a natural state, rather it will used to lessen the project effects.
- Habitat gain for certain species may be detrimental to other species, and should be disclosed in the document, e.g. gaining moose habitat will not offset the loss of caribou habitat, and may additionally be detrimental to caribou due to the possible introduction of predators and parasites as is a major concern with linear developments.
- It is not specifically identified how and to what extent the winter road and access trails will be decommissioned, e.g. all natural regeneration, plantings, mechanical decommission, etc.
- It is unclear how “Environmentally Sensitive Sites” will be gained due to the decommissioning of the winter road and temporary access routes (Project Summary, 5.2.12, Table 12)?

Furthermore, there is no indication that these statements will be verified through the monitoring process. As the project specific Monitoring Plan is developed/revised, a long-term habitat monitoring component should be incorporated.

## **Birds**

We appreciate the revised information pertaining to birds and amphibians that was presented to Branch staff post-filing of EIS, which addressed many of our concerns over the information that is presented in the document. That being said, we still have the following comments and concerns that we do not believe will be addressed in the addendum that is to be filed.

- 1) Based on the data presented, we believe that an insufficient amount of breeding bird data was collected within the study area, as point counts were collected within only two general areas, with neither being located along the proposed RoW, and a limited number of ARU's were deployed during the breeding bird period (limited in comparison to the size of the study area and various habitat types occupied by SAR).
- 2) In the absence of the data mentioned above, we appreciate seeing the habitat modeling conducted for avian species at risk. The potential for habitat offsets is encouraging, however no bird or habitat monitoring is proposed (see Project Summary, Section 6.1, where bird related monitoring is not listed). As with our comments related to habitat gain, the long-term Monitoring Plan should include monitoring for species at risk and habitat replacement in order to verify that habitat has been regained and individuals are utilizing it. If monitoring results do not support these models, then further mitigation should be required.
- 3) In regards to specific habitat requirements for the species modeled, we provide the following comments:
  - a. For eastern whip-poor-will - **“focus on coniferous open, coniferous sparse, and exposed open rock outcrops”**: We believe that open deciduous or mixedwoods would have been a better choice. Unlike common nighthawk, rock outcrops are not common nesting locations.
  - b. For eastern wood-pewee: Please verify that “dense” stands are an appropriate choice for this species.
  - c. For species that require mature forests, habitat gain should not be discussed due to the long time periods involved in reclamation and utilization.



## Hunting and Access

In regards to hunting and access, the document contains numerous statements that we disagree with and our contradictory statements below should be considered during monitoring, and future study design and EIS development:

- Prognostications related to the impact of increased access and hunting should be limited to the construction phase only. Post construction monitoring will show what the impact of the road has had over the agreed to monitoring period.
- We suspect that an increase in both resident and rights-based hunting pressure could result in lower abundances of wildlife and lower success, so the potential effect should not be limited to just temporary disturbance during construction, but also include the operation period (Project Summary, 5.2.16, Table 16).
- We do not anticipate an increase in non-resident moose hunting pressure, as non-resident allocations are managed on a GHA basis by the Branch rather than being an open access licence (Project Summary, 5.2.16, Table 16).
- Decommissioning of access roads, blocking access, and encouraging re-growth is useful for deterring all hunters from using the road as an access point, not just non-local hunters (Project Summary, 5.2.16, Table 16) and illegal hunting activities (Chapter 9, 9.2.3).
- The expressions “**commercial hunting opportunities**” and “**commercial wolf hunting**” are misleading, and should simply be stated as “outfitting opportunities” and “non-resident hunting” (Chapter 9, 9.1.3.1).
- We have concerns about the “**Use of signage (e.g., moose awareness signs) to aid in the reduction of animal and vehicle collisions.**” (Chapter 9, 9.2.3). If preconstruction studies anticipate low traffic volumes (Chapter 13, 13.3.2) and the collision risk will therefore be minimal, then is it wise to advertise where relatively high moose densities are near the RoW, which could result in localized hunting pressure at these sites? The Branch would like to further discuss this topic with the proponent going forward.
- It is unclear what the statement “**As required, MCWS will apply existing provincial deer population management actions**” means and how it is relevant to this assessment. Furthermore we disagree with the conclusion that “**The brainworm/liver fluke host, the white-tailed deer is not anticipated to persist at densities capable of transmitting this parasite**”. White-tailed deer expansion as a result of the new RoW may happen gradually over time, and this conclusion cannot be made pre-construction (Chapter 9, 9.2.5.1.2).

We appreciate the inclusion of “**ungulate wetland feeding areas**” under Environmentally Sensitive Sites, and the concern that will be given to their location near the RoW and the potential effect that this may

have on the species. That being said, going forward with future documents it would be useful to describe what represents an “ungulate wetland feeding area”.

## **Furbearers and Dens**

Please ensure that Beaver Dam Removal Guidelines are identified throughout the Environmental Protection Plan section. These sections should acknowledge that beaver dams cannot be removed without a Beaver Dam Removal Authorization from a Conservation Officer, in addition to following guidelines from DFO; and recognize that dam removal and pond draw-down requires beaver removal during only certain times (e.g. cannot be during nursing periods of young).

**Chapter 9, 9.2.5.3 & 9.2.5.4** – In these sections the impacts should have included added trapping pressure, although increased access is a benefit to only a few trappers; also keeping in mind the closure of the winter road will mitigate this only after several decades. Furthermore, the creation of an all-season road will likely cause an increase in species of lower density, especially raccoon, skunk, coyote; these species will not survive far from roadway but may become problematic for the communities themselves.

The document contains various statements indicating that dens will be marked as Environmentally Sensitive Sites and avoided/buffered (e.g. Project Summary, 5.2.11). Based on the data provided we do not believe that proper dens surveys have been conducted at this point, as the only furbearer den baseline data collection that has occurred are the winter multispecies aerial surveys and the ongoing trapper program (not described in EIS), both of which would not adequately identify a large proportion of furbearer dens considering timing and survey methods employed. Furthermore identifying dens several years before construction will only alleviate impacts on multi-year dens which will vary in use among species. Given the statements made throughout the EIS on the avoidance of dens, MFESRA should conduct den surveys pre-road construction to ensure that future construction activity will not impact denning furbearers.

## **Minor Edits**

We provide the following comments for consideration, given that information documented in this EIS will likely be used during the development of future project related materials and other EIS's.

- **Chapter 6, Appendix 6-1**- Mapleleaf mussel is listed as *Endangered* under MBESEA, Common snapping turtle is not listed under MBESEA.
- **Chapter 8, 8.9.3** – “Therefore, moose densities are not necessarily linked to disturbance, but more so to habitat productivity and climate.” This statement needs a citation.

- **Chapter 9, 9.1** - Should an Existing Conditions section not include a summary of conditions based on data collection as well? Most of what is presented is a literature review based in habitat conditions and common species within the region, and provides very little information at that, e.g. one sentence each is dedicated to moose, beaver, and marten which are VC's. The only results presented are from bird ARU's and point counts.
- **Chapter 9, 9.1** - **“Some of the previously logged areas are less than 40 years old... but may be preferred by species such as moose that browse on successional vegetation.”** This statement needs a citation, since this may be true for burned areas, but is this time period adequate for logged areas in the boreal forest, as well?
- **Chapter 9, 9.1.3** - Multiple sub-sections direct the reader to Section 9.1.4 for **“Additional information on VCs selected for the environmental assessment”**. There is no Section 9.1.4 in this chapter, and therefore no further description of VCs.
- **Chapter 9, 9.1.3** – This section should overtly state the biomes being discussed, rather than how plant succession works.
- **Chapter 9, 9.1.3** – Please note that the scientific name of some furbearing and small mammal species have changed. Also, least weasel, raccoon, and striped skunk are not at edge of natural range, rather they exist in low numbers; ranges for all three species go well into northern Manitoba.
- **Chapter 9, 9.1.3.3** – Olive-sided flycatcher is listed as *Threatened* under MBESEA.
- **Chapter 9, 9.2.5.1.1** – **“Within the Local Assessment Area and Regional Assessment Area there are no known publicized forestry, mining, or oil and gas activities occurring or planned in the future.”** This statement should have said “near future”, since there is high potential that the establishment of this all-season road provides a gateway for future development within the Regional Assessment Area, regardless of what is publicized or not at this time.
- **Chapter 9, Appendix 9-7** –
  - Canada warbler, Potential Occurrence in LAA of RAA: The bird related addendum should indicate that this species was detected during field surveys, and therefore its occurrence should be upgraded to “High Potential”.
  - Olive-sided flycatcher, Potential Occurrence in LAA of RAA: As presented in this document, this species was detected during field studies and Breeding Bird Surveys, therefore its occurrence should be upgraded to “High Potential”.
  - Northern myotis should have been included in this table.
- **Chapter 9, Appendix 9-8** – It is unclear why this assortment of maps was included in the assessment, as a number of the species provided do not occur anywhere near the RAA.

- **Chapter 9, 9.2.5.1.1** - We appreciate the inclusion of mineral licks as an Environmentally Sensitive Site, however in the future surveys to identify mineral licks should be conducted in spring/early-summer, rather than fall.
- **Wildlife Technical Report, 2.1.4** – The opening statement should have been expanded to describe what natural regions, biomes, or ecoregions that the LPSA is located within.
- **Wildlife Technical Report, 2.1.6** – Please note that the scientific names of some furbearing species have changed. The Furbearers subsection should include that marten and fisher consume voles as a very important component of their diets. Raccoon is also a Furbearer for this area, not a Small Mammal. What is the source of info for the Small Mammals section?
- **Wildlife Technical Report, 2.1.6** – For white-tailed deer: **“their range is generally limited to south of the Bloodvein River due to harsh winter conditions and limited food supply (MCWS 2015)”**. This citation appears incorrect given that this information is not stated within the Manitoba Hunting Guide.
- **Wildlife Technical Report, Table 1** – The green frog is ranked S1S2 by the Manitoba Conservation Data Centre, not listed under *The Endangered Species and Ecosystems Act*.
- **Wildlife Technical Report, 5.1** – The methods do not indicate when cameras were first deployed, therefore the reader is forced to go looking for this information elsewhere.
- **Wildlife Technical Report, 8.0** – For moose: **“they are highly valued for licensed hunting and rights-based subsistence hunting in GHA 17B and are an integral component of the ecosystem in their predator/prey relationship (MCWS 2015)”**. This citation appears incorrect given that this information is not stated within the Manitoba Hunting Guide.
- **Wildlife Technical Report, 12.1.1** – A citation or explanation (if internal data) for the components used should have been included (e.g. 8ha water bodies).
- **Wildlife Technical Report, 12.1.2 & 12.2.2** - All tables need to reflect a time period for when the P4 road reclamation will/will not contribute to habitat again for each species.
- **Wildlife Technical Report, 12.2.1** – Short-eared owl is not mentioned in the methods section, but is modelled.
- **Appendix 9-4** – The western population of wolverine is listed as special concern by COSEWIC, not under SARA.