

EA File: EA1314-01

September 8<sup>th</sup>, 2015

To: All parties and the developer

**Re: EA1314-01 – Inclusion of document describing updated environmental variables related to the Jay project and the Bathurst herd to the public record**

The Independent Environmental Monitoring Agency (IEMA) has requested that information describing updated environmental variables related to the Jay project at the Bathurst caribou herd be placed onto the Jay Project record. In the attached email correspondence, IEMA has described why it believes the information should be placed on the record, how it is relevant to the environmental assessment and the Review Board's decision, and why it was submitted late.

If any parties have concerns about the inclusion of this evidence please submit them in writing to the Review Board. The explanation should clearly state why the party objects, whether it disagrees with IEMA's assertion that the information is relevant to the environmental assessment and the Review Board's decision, and why it believes it is irrelevant. The Review Board must receive the response in writing by noon on September 11<sup>th</sup>, 2015.

The Review Board contact for the Jay Project is:

Chuck Hubert  
Senior EA Officer  
Mackenzie Valley Review Board  
Tel (867) 766-7052  
Fax: (867) 766-7074  
Email: [chubert@reviewboard.ca](mailto:chubert@reviewboard.ca)

*Attached:*

*Email correspondence with IEMA RE: updated environmental variables related to the Jay project and the Bathurst herd*

## Sachi De Souza

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**From:** Sachi De Souza  
**Sent:** September-02-15 1:52 PM  
**To:** ross@ucalgary.ca  
**Cc:** Chuck Hubert; Mark Cliffe-Phillips  
**Subject:** RE: Request to Submit New Evidence - Jay Project  
**Attachments:** FW: Request to Submit New Evidence - Jay Project - Part two Fwd: FW: summer trends Bathurst.docx; Summer env trends Bathurst range to 2014.docx; BAH climate 1979-2014.xlsx; Request\_for\_Ruling\_form.pdf

Hi Bill,

Thank you for the additional information for the Jay EA. Before we can continue on with the process for a late submission we would like IEMA to address the questions below. These questions follow from what is required for a Request for Ruling (see the attached document). We appreciate this is not a Request for Ruling; however, the information needs are similar.

1. Why would IEMA like this information on the record? *You have already addressed this question below.*
2. Are there additional references or supporting documentation for this proposed evidence?
3. What is the relevance for the EA and the Board's decision? It is important the Board understand the relevance of the potential new evidence.
4. Why was the information was submitted late?

Please let us know if you have any questions.

Thank you,

Sachi

Sachi De Souza  
Environmental Assessment Officer  
Mackenzie Valley Environmental Impact Review Board  
Box 938, 5102-50<sup>th</sup> Ave, Yellowknife, NT X1A 2N7  
(Direct) 867-766-7054  
(Fax) 867-766-7074  
[www.reviewboard.ca](http://www.reviewboard.ca)



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**From:** Chuck Hubert  
**Sent:** September 2, 2015 12:13 PM  
**To:** Sachi De Souza  
**Subject:** FW: Request to Submit New Evidence - Jay Project

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**From:** Bill Ross [<mailto:ross@ucalgary.ca>]  
**Sent:** August 30, 2015 7:47 PM  
**To:** Chuck Hubert  
**Cc:** Kevin O'Reilly; Kim Poole  
**Subject:** Request to Submit New Evidence - Jay Project

Chuck:

In accordance with the notice of proceeding regarding the submission of new evidence, The Independent Environmental Monitoring Agency requests permission to add the Updated environmental variables related to Jay and the Bathurst herd. The Agency believes this is important for the Board to understand.

In response to DAR-MVEIRB-9 from 19 January 2015, DDEC summarized in its Assessment Report Adequacy Review trends in environmental variables

([http://www.reviewboard.ca/upload/project\\_document/EA1314-01\\_Adequacy\\_Review\\_Responses\\_Vol\\_1.PDF](http://www.reviewboard.ca/upload/project_document/EA1314-01_Adequacy_Review_Responses_Vol_1.PDF) ; section 2, pg 12). DDEC used a retrospective set of environmental variables derived from the MERRA data supplied by CircumArctic Rangifer Monitoring and Assessment Network (CARMA) via Don Russell. This data set included the years 1979 to 2009. More recent data were not included in the assessment because at that time the MERRA data “had not been acquired from NASA (Russell 2014, pers. comm)”. Based on the data used, DDEC concluded “No broad-scale increasing or decreasing trends were evident for any of the climate variables from three different data sources within the Bathurst post-calving to autumn range.” (pg 15).

In discussion with Don Russell of CARMA the Agency learned that the MERRA data up to 2014 had been obtained, and consequently we asked him to summarize some key environmentally-derived variables up to 2014. These are included as graphs in the attached Word document. In summary, after 2009 there appears to be some important trends:

1. Increasing Growing Degree Days (= longer growing season, but also possible trophic mis-match on plant growth and cow/calf needs);
2. Increasing Oestrid Index (= much higher rates of insect harassment = less time feeding and more energy used);
3. Declining mushroom index (mushrooms appear to be an important source of fall nutrition);
4. Increasing Drying Index (= lower vegetation quality);
5. Lower Snow Depth (= generally easier foraging, but possibly lower safety from wolves).

DDEC used the environmental trend data to conclude “There are no expected changes to the residual impact classification and determination of significance provided in the DAR for cumulative effects to caribou.” These recent data raise questions as to this conclusion, and also speak to the anticipated reduction in Bathurst caribou numbers from the June 2015 survey. The Agency would like to provide these figures to the Public Registry, so that DDEC and the other organizations will have these data available to them for the hearing.

Please contact us if you have any questions.

Sincerely,

Bill Ross  
Chairperson, Independent Environmental Monitoring Agency

PS: To ensure we are not relying solely on hearsay evidence from Don Russel, I will send immediately an email (forwarded to me from Kim Poole) received from Don Russell.

## Sachi De Souza

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**From:** Bill Ross <ross@ucalgary.ca>  
**Sent:** September-02-15 8:19 PM  
**To:** Sachi De Souza  
**Cc:** Chuck Hubert; Mark Cliffe-Phillips; Kim Poole; Kevin O'Reilly; 'Tee Lim'  
**Subject:** Re: Request to Submit New Evidence - Jay Project

Sachi:

Thanks for this. The responses to your magic questions are below, after the questions. I trust this is sufficient. Should you need anything further, please do not hesitate to ask. I apologise for you having to put up with me, rather than the more skilled (with Review Board requirements) Executive Director. As you may well know, Kevin is on holiday, returning this weekend. Again thanks.

Bill Ross

On 2015-09-02 13:52, Sachi De Souza wrote:

Hi Bill,

Thank you for the additional information for the Jay EA. Before we can continue on with the process for a late submission we would like IEMA to address the questions below. These questions follow from what is required for a Request for Ruling (see the attached document). We appreciate this is not a Request for Ruling; however, the information needs are similar.

1. Why would IEMA like this information on the record? *You have already addressed this question below.*
2. Are there additional references or supporting documentation for this proposed evidence?

**No. All information is contained in our submission, including the personal communication email from Don Russell.**

3. What is the relevance for the EA and the Board's decision? It is important the Board understand the relevance of the potential new evidence.

**It relates to the determination of significance of effects on the Bathurst herd. It also suggests that the review of environmental trends carried out in the DAR may have been somewhat dated and not have considered more recent trends over the past 5 years, thereby leading to an incomplete understanding of environmental stresses on the herd.**

4. Why was the information was submitted late?

**The information was only recently available from CARMA (CARMA could only download and calculate these parameters up to 2014 in late spring-early summer 2015). We have attempted to share this information with the Review Board as soon as it was available.**

Please let us know if you have any questions.

Thank you,

Sachi

Sachi De Souza  
Environmental Assessment Officer  
Mackenzie Valley Environmental Impact Review Board  
Box 938, 5102-50<sup>th</sup> Ave, Yellowknife, NT X1A 2N7  
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**Sent:** September 2, 2015 12:13 PM  
**To:** Sachi De Souza  
**Subject:** FW: Request to Submit New Evidence - Jay Project

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**Sent:** August 30, 2015 7:47 PM  
**To:** Chuck Hubert  
**Cc:** Kevin O'Reilly; Kim Poole  
**Subject:** Request to Submit New Evidence - Jay Project

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Bill Ross

Chairperson, Independent Environmental Monitoring Agency

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## Sachi De Souza

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**From:** Chuck Hubert  
**Sent:** September-02-15 12:13 PM  
**To:** Sachi De Souza  
**Subject:** FW: Request to Submit New Evidence - Jay Project - Part two Fwd: FW: summer trends Bathurst.docx  
**Attachments:** BAH climate 1979-2014.xlsx

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**From:** Bill Ross [<mailto:ross@ucalgary.ca>]  
**Sent:** August 30, 2015 7:48 PM  
**To:** Chuck Hubert  
**Cc:** Kevin O'Reilly; Kim Poole  
**Subject:** Request to Submit New Evidence - Jay Project - Part two Fwd: FW: summer trends Bathurst.docx

Chuck:  
As promised.

Bill Ross

----- Forwarded Message -----

**Subject:**FW: summer trends Bathurst.docx  
**Date:**Wed, 26 Aug 2015 18:25:54 -0600  
**From:**Kim Poole <[kpoole@aurorawildlife.com](mailto:kpoole@aurorawildlife.com)>  
**To:**Bill Ross <[ross@ucalgary.ca](mailto:ross@ucalgary.ca)>

Bill: I called Don about the data earlier this summer. Here is his delivery email, with the spreadsheet attached, which I made into a Word doc for ease.

Kim

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**From:** Don Russell [<mailto:drussell@yukoncollege.yk.ca>]  
**Sent:** August 22, 2015 12:17 AM  
**To:** Kim Poole <[kpoole@aurorawildlife.com](mailto:kpoole@aurorawildlife.com)>  
**Subject:** Re: summer trends Bathurst.docx

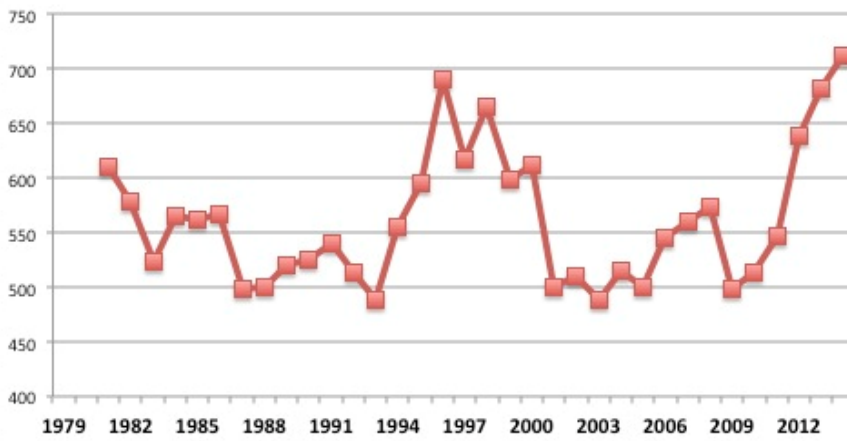
I have attached the climate spreadsheet which should answer your questions Kim - this is based on the updated climate (through to 2014) while I sent Golder the 1979-2009 version, i.e. missing the last 4 years. Yes the 2014 value is the average of 2012,13,14..

Hope this helps.

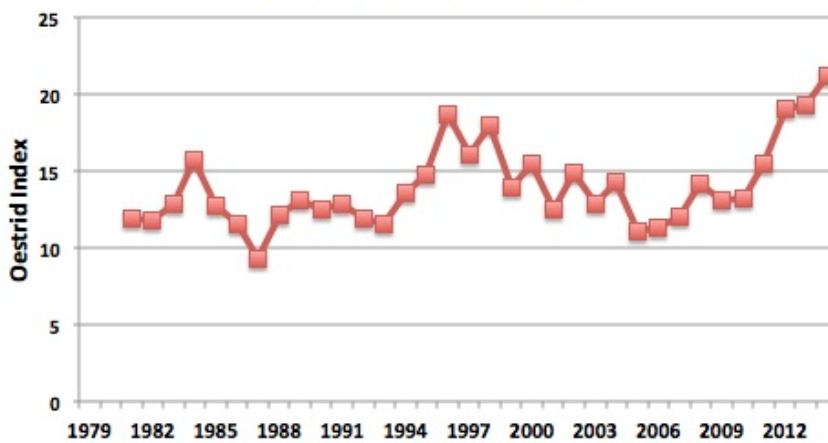
Don



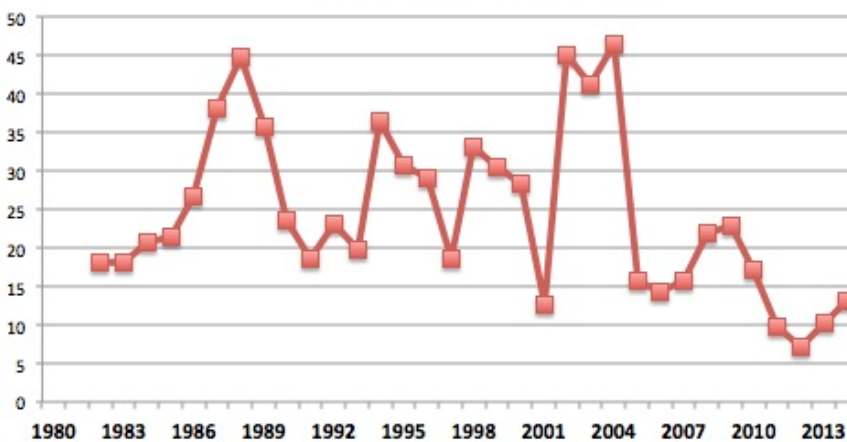
**Cumulative Growing Degree days July 15**  
(3 year running average)



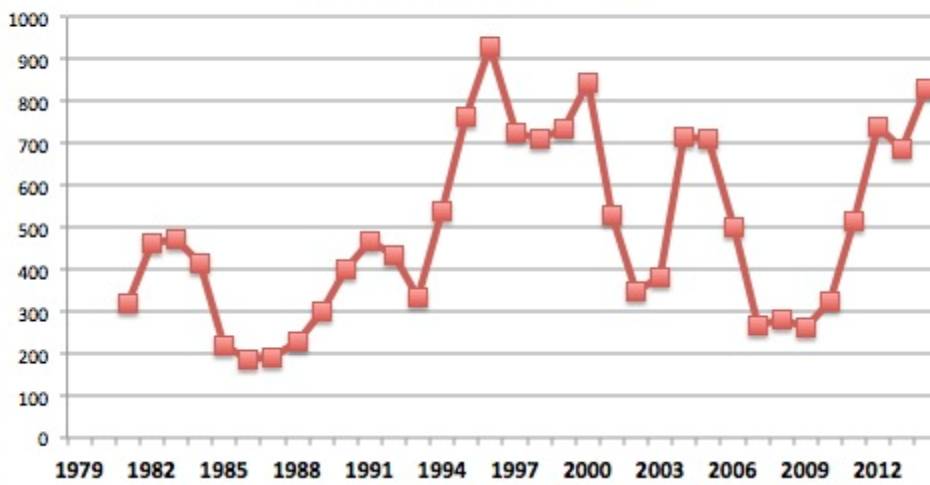
**Cumulative Oestrid index July 31**  
(3 year running average)



**Mushroom Index**  
(3 year running average)



**Summer Drying Index, July  
(3 year running average)**



**Snow depth winter range March 31  
(3 year running average)**

