

**Philpott, Holly**

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**From:** Moores, Shelley  
**Sent:** Friday, April 28, 2017 1:42 PM  
**To:** McCarthy, Sara  
**Cc:** Pisapio, John; Adams, Blair  
**Subject:** Boreal recovery plan

Hi Sara and Bob,

I was speaking to Blair earlier this week and given your shared knowledge, experience, the need for some fresh eyes on this document, and the pressure to get this done we thought it might be a good time to bring you both in on tidying up the Boreal Caribou Recovery plan and getting it to a point we can share it with our recovery team..... I know that you both will likely need to chat with me further on the document and what needs to be done. I think you both can tidy it up and update the information and add the habitat piece so we can move it along... when you get the critical habitat protection piece I will provide you with some examples on how we did that for other species. The goals and objectives are very rough and have been provided by the recovery team in a workshop from 2011 I have been trying to put them in some order that made sense for ages. Shelley Garland has some experience with this and may be able to help you frame them in a much more consist and get better linkages between the Actions and Objectives... This whole section will need re-working after the recovery team meets and gets this document but that doesn't mean we shouldn't give them something cleaner than what was drafted back in 2011... The implementation table will come from the revised actions and objectives. We still have a few gaps to fill in the completed actions table. Sara you have seen this document and provided some great input. John you have also had an opportunity to review it. This is the same document we have been trying to update since 2015.

Getting this document completed and ready for the team is really important right now given the press release by CPAWS.

You both working on this will also give me some time to prepare what needs to be ready for the reconvening of the recovery team. We still have a few membership issues to work out and I need to get some new appointment letters drawn-up.

The link below has the draft document, Isabelle's most recent science update and her habitat analysis document. Getting the shapefiles for mapping might be tricky but we will figure it out.

<M:\CRBK\Wildlife\Shared\Share\ESB\Boreal Caribou Recovery Plan>

*Shelley Moores*, M.Sc., B.Sc (Hons)  
Senior Manager  
Fisheries and Land Resources

Phone 709 637 2018  
117 Riverside Drive  
Box 2007  
Corner Brook, NL  
A2H 7S1

**Philpott, Holly**

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**From:** Schmelzer, Isabelle  
**Sent:** Monday, February 12, 2018 11:25 AM  
**To:** Barney, Wayne  
**Cc:** Moores, Shelley  
**Subject:** 2009 RT mintues regarding MMC caribou relocation  
**Attachments:** LWCRT 2009 Minutes (Sept 2009)\_condense\_ammended.doc

**Philpott, Holly**

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**From:** Oke, Bryan  
**Sent:** Monday, February 12, 2018 1:33 PM  
**To:** Moores, Shelley  
**Subject:** FW: Caribou in Labrador  
**Attachments:** APPENDIX III PAN.doc; D19\_D19A Pan.pdf

Hi Shelly,

In follow up to last week's meeting I have spoken with Craig and he provide the attached documentation. After reading this piece it appears quite specific in relation to the different management units. Not quite sure if this was the level of detail you were looking for? I was thinking more in line with the interaction with the forest management planning process. What's your thoughts?

Bryan

**From:** Coady, Craig G.  
**Sent:** Monday, February 12, 2018 12:14 PM  
**To:** Oke, Bryan <bryanoke@gov.nl.ca>; Wight, Corey <coreywight@gov.nl.ca>  
**Cc:** Carroll, Colin <ColinCarroll@gov.nl.ca>  
**Subject:** RE: Caribou in Labrador

Bryan,

Was just chatting to Corey. As you know, our D19 plan is co-written and the district is co-managed with the Innu Nation. I've attached some descriptions of the Protected Area Network (both the landscape level (19A,B & C)) as well as the further refined PAN for 19A that we've developed. These core reserves and linkages were established to protect the ecological and cultural character of the district which includes a heavy emphasis on caribou. Specifically, the Red Wine Caribou Core reserve is derived from the collar data supplied by WD.

Where any potential conflicts have been identified (specific blocks within District 19A, 22, 20/21), harvesting/road building restrictions (May –Sept) are in place.

Over 60% of D19A has been set aside within the Total Protected Area Network.

If you need anything else just let me know.

**Craig Coady, RPF**  
 District Ecosystem Manager  
 Forest Service of Newfoundland and Labrador

Department of Fisheries and Land Resources  
 P.O. Box 429  
 North West River, NL Canada AOP 1C0  
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 c 709.899.2377  
 f 709.497.8482



Environmental Management System registered to ISO 14001:2004.

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**From:** Oke, Bryan  
**Sent:** Thursday, February 08, 2018 10:37 AM  
**To:** Coady, Craig G.  
**Cc:** Carroll, Colin  
**Subject:** Caribou in Labrador

Hi Craig,

I just had a meeting with the Shelly Moores regarding the conservation of boreal caribou in Labrador. The primary focus was an agreement regarding habitat conservation and they wanted some language around forest planning process and protected areas. Wondering if we could have a quick chat to outline your current process, any concerns you may have and hopefully put together a paragraph or two. I am around all day so if you get a chance could you give me a call please. Thanks 637-2296

Bryan

**Philpott, Holly**

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**From:** Schmelzer, Isabelle  
**Sent:** Thursday, February 8, 2018 12:37 PM  
**To:** Moores, Shelley  
**Cc:** Luther, Glenn; Adams, Blair  
**Subject:** Critical habitat Boreal Caribou Labrador  
**Attachments:** Boreal Caribou Core Area Executive Summary \_Schmelzer.docx

Hi Shelley,

I've pulled together a summary of the Primary Core area definitions for Boreal caribou in Labrador from the larger critical habitat report I wrote last year. It should help with planning/interpretation of these mapped areas. Let me know if you have questions/if I can help further.

Blair I've copied you as this type of approach may work for NF caribou, too, and get around the problem of ARGOs data for the N Pen and GPS everywhere else.

Isabelle

**Philpott, Holly**

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**From:** Moores, Shelley  
**Sent:** Monday, February 5, 2018 4:07 PM  
**To:** Adams, Blair  
**Subject:** DM call boreal note.  
**Attachments:** DOC 2018 FPT Provincial Briefing Note ~ Biodiversity Parks and Protected Areas Feb 9, 2018 Boreal Caribou Update and Next Steps.DOCX; 7 EN Shared Note on Boreal Caribou.docx

This is a long one I'd like you to have a look and provide feed back, I suspect the DM will have questions and you know her better. I've attached the shared note.... I will work flow this to Paula to send to Steve as soon as I hear from...

Philpott, Holly

**From:** Moores, Shelley  
**Sent:** Monday, February 12, 2018 9:52 AM  
**To:** Schmelzer, Isabelle; Adams, Blair  
**Subject:** RE: Labrador Caribou story

Section 40(1)

Good Morning Isabelle,

Section 40(1)

I think this is going to require some broader discussion for several reasons including some of the concerns you have raised below.

When Blair is in perhaps the three of us can sit down and discuss this further. Thanks for sending Dr. Gunns article I will have a read of it now.

Shelley

**From:** Schmelzer, Isabelle  
**Sent:** Monday, February 12, 2018 9:32 AM  
**To:** Adams, Blair <BlairAdams@gov.nl.ca>; Moores, Shelley <shelleymoore@gov.nl.ca>  
**Subject:** Labrador Caribou story

I was just made aware of the following story on CBD news: <http://www.cbc.ca/news/canada/newfoundland-labrador/labrador-caribou-collapse-1.4528328>

It lets Tony Chubbs claim, without any contradiction from the department or more importantly, any evidence, that 300 caribou starved to death on George’s Island as part of a misguided approach to caribou recovery in Labrador. It also claims that ‘no scientific work’ has been conducted since 2011.

Section 40(1)

As someone who has conducted scientific work on those populations for 20 years, led surveys, identified critical habitat, discovered the critical decline in RWM caribou, monitored survival and recruitment, evaluated the effect of climate change on population dynamics, and has made all of this material available in reports (few of which were released by government), this is tough to read.

This work rivals and betters most of that done in other jurisdictions even with much smaller staff and resources, and is something to be proud of, not to be in contempt of. It has been developed with and presented to multi-cultural teams, other departments, and was even included as a keynote address at the latest North American Caribou workshop an event that was attended by over 300 biologists, aboriginal people and scientists.

Section 40(1)

Rationale for the decision not to list migratory caribou can be provided without undermining the work done by professional staff on behalf of the department.

As for those caribou on George’s Island? Not ONE emaciated caribou was ever found—but there was at least one wolf on that Island (and several documented kills) and numerous folks in Cartwright saw caribou swim back to shore. In fact.

Dr. Gunn cautioned Mr. Chubbs back in 2003 for his (premature) interpretation of what may happen in George's Island at ta caribou workshop <http://septentrio.uit.no/index.php/rangifer/article/view/361> ...

I apologize for the straightforward nature of this mail but it pertains directly to me and the work I've done.

Isabelle



**Philpott, Holly**

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**From:** McCarthy, Sara  
**Sent:** Thursday, February 1, 2018 2:35 PM  
**To:** Moores, Shelley  
**Subject:** Core Areas/Critical Habitat

Hi Shelley

Isabelle did a big analysis of calving and wintering critical habitat for the boreal caribou subpopulations in Labrador. I can find those kernels. H

owever, more recently, she did an analysis of how to identify Core Areas, which she proposed to be overall critical habitat, which involved a combination of those kernels. These shapefiles I cannot find. I've searched my emails and the server and our local server here with no luck. I'm sorry!

**Sara McCarthy**

Ecosystem Management Ecologist  
Wildlife Divison  
Fisheries and Land Resources  
P.O. Box 3014 stn "B", 15 Cherrywood Drive  
Happy Valley – Goose Bay, NL A0P 1E0  
(709) 896 – 7932

**Philpott, Holly**

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**From:** Moores, Shelley  
**Sent:** Wednesday, January 31, 2018 3:04 PM  
**To:** Warren, Paula E  
**Subject:** RE: Contents.docx  
**Attachments:** BN - Information Note - Conservation Agreement for Boreal Caribou.doc; Briefing Note - Information Note - CPAWS\_ECCC litigationfinal.doc; Briefing Note - Information Note - SARA Report on Progress of Boreal Caribou Recovery Strategy .DOC; Briefing Note - Letter to Innu of Quebec - November 14.doc; Letter regarding Creation of Tripartite Caribou Panel.pdf; Response Minister Steve Crocker to Innu Nation Chiefs Innu Federal Provincial Table for the Atik - Caribou July 16 2017.PDF; LETTRESIGNÉEMIN216947ChefPiétachonetChefscoignatairespdf.pdf; 9622174 2017-05-31 LT McKenna Blanchette Crocker cf Caribous\_EN.DOC

Supplementary caribou information has for the most part been trimmed now and has official numbers I believe these are the versions that were included in the binder. I think this covers the info you didn't have in the binder prior to our briefing. Sorry this slipped off my radar if these aren't the exact versions that were in her binders they are very close.

**From:** Moores, Shelley  
**Sent:** Tuesday, January 30, 2018 5:03 PM  
**To:** Warren, Paula E <PaulaEWarren@gov.nl.ca>  
**Subject:** Contents.docx

Last toc I had

**Philpott, Holly**

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**From:** Moores, Shelley  
**Sent:** Thursday, December 7, 2017 11:06 AM  
**To:** Pisapio, John; McCarthy, Sara; Adams, Blair  
**Cc:** Garland, Shelley  
**Subject:** BOREAL CARIBOU protection summary  
**Attachments:** Draft summaries of NL protection of boreal caribou individuals and CH.docx

Kate forwarded this Tuesday for our information and comments if we have any. This is for Boreal might provide some idea of what they will be looking at for GRC.

*Shelley Moores*

Senior Manager  
 Fisheries and Land Resources  
 Phone: 709 637 2018

**From:** Campbell, Kate (EC) [mailto:kate.campbell@canada.ca]  
**Sent:** Tuesday, December 5, 2017 3:55 PM  
**To:** Moores, Shelley <shelleymoores@gov.nl.ca>  
**Cc:** MacDonald2, Paul (EC) <paul.macdonald2@canada.ca>  
**Subject:** RE: Consultations

Thanks Shelley!

Here are the summaries I put together of NL laws which provide protection for boreal caribou individuals and critical habitat (each done separately). This or something like this will likely get inserted into a national summary of protection assessments. We are still waiting for comments from HQ but thought I would send it along in case you would like to look it over or add any comments at this point.

All the best,  
 Kate

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**From:** Moores, Shelley [mailto:shelleymoores@gov.nl.ca]  
**Sent:** December 5, 2017 2:02 PM  
**To:** MacDonald2, Paul (EC)  
**Cc:** Campbell, Kate (EC)  
**Subject:** Consultations

Hi Paul and Kate,

I just wanted to let you know we are still working on getting approvals to start consultations... nothing approved yet for this week.

Shelley

*Shelley Moores*, M.Sc., B.Sc (Hons)  
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**Philpott, Holly**

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**From:** Campbell, Kate (EC) <kate.campbell@canada.ca>  
**Sent:** Thursday, November 16, 2017 2:21 PM  
**To:** Morison, Steve (EC); OConnor, Katheryne (EC)  
**Cc:** Moores, Shelley; Mawhinney, Kim (EC); Boyne, Andrew (EC); MacDonald2, Paul (EC)  
**Subject:** For NCR review: NL boreal caribou CHPA  
**Attachments:** CHPA-NFL-NL-BorealCaribou-DRAFT\_16Nov2017.docx

**Importance:** High

Hi Steve and Katheryne,

We have our boreal caribou Critical Habitat Protection Assessment (CHPA) ready for NCR review attached. If there is anyone else internally that should also review it please feel free to forward it. It has already been reviewed by the province. Please let us know any comments you have by December or as soon as possible so there is time for us to address them. Thank you!

Best wishes,  
Kate

**Kate Campbell, PhD**

Conservation Biologist, Canadian Wildlife Service  
Environment and Climate Change Canada / Government of Canada  
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**Philpott, Holly**

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**From:** Campbell, Kate (EC) <kate.campbell@canada.ca>  
**Sent:** Wednesday, November 15, 2017 2:42 PM  
**To:** Moores, Shelley  
**Subject:** CHPA revised - in tracked changes  
**Attachments:** CHPA-NFL-NL-BorealCaribou-DRAFT\_15Nov2017\_Revised.docx

Hi Shelley,

I finished revising the CHPA. Here it is attached in tracked changes. I am still waiting on a photo from Isabelle, coming shortly. I made substantial changes to the executive summary adding in context and clarifications. Hopefully this is much better and clearer now. For reading it over, I recommend changing the mode to 'final' so it is easier to read through. I will clean it up and send it to HQ tomorrow for them to review. Let me know if you have anything else to add at this point.

Thanks so much for all your insights and assistance with this!

All the best,

Kate

**Kate Campbell, PhD**

Conservation Biologist, Canadian Wildlife Service  
Environment and Climate Change Canada / Government of Canada  
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Courriel: [kate.campbell@canada.ca](mailto:kate.campbell@canada.ca) / Tel: 709 772 3739

**Philpott, Holly**

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**From:** McCarthy, Sara  
**Sent:** Wednesday, August 16, 2017 4:04 PM  
**To:** Moores, Shelley; Pisapio, John; Adams, Blair  
**Subject:** Draft Boreal Caribou RP  
**Attachments:** Boreal\_RP\_DRAFT\_16Aug2017CLEAN.docx; Boreal\_RP\_DRAFT\_16Aug17.docx

Hello All,

I just feel the need to let you all know that progress since our meeting about a month ago has been very slim on my end. With the number of smaller requests coming in every day, setting aside solid time periods to work on the BCRP draft has been difficult.

That being said, I did get a chance to have a conversation with Isabelle about the anthropogenic footprint. She indicated that Jana had already started to assemble these files at the beginning of 2017. I'm looking forward to chatting with Jana about this when she gets back from Germany, in about two weeks.

Has there been any progress on getting the complete disturbance dataset and shapefiles from Nalcor?

Attached are my most recent versions- one clean and one showing my changes.

**Sara McCarthy**

Ecosystem Management Ecologist  
Wildlife Division  
Environment and Climate Change  
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Happy Valley – Goose Bay, NL A0P 1E0  
(709) 896 – 7932

**Philpott, Holly**

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**From:** Moores, Shelley  
**Sent:** Wednesday, August 30, 2017 3:27 PM  
**To:** Balsom, Stephen  
**Subject:** Due to ECCC-CWS tomorrow-L Boreal Caribou Recovery Summary  
**Attachments:** NL Boreal Caribou Recovery Summary.docx

Steve,

Attached is the Boreal caribou Summary for CWS. It ended up being more than I expected. I worked quite a bit with Sara (Goose Bay office) on this. She has been updating our provincial recovery plan for boreal and also authored a monitoring plan back in 2015 that I don't believe was ever approved. This may not fit in exactly with what the feds have requested... I noticed other Jurisdictions did not keep to the page limit or outline. I have added the guidance document they sent us. This summary will go in their 2012 Recovery Strategy implementation report. It is DUE TOMORROW. And as Sue stated in her letter to you there are no extensions.

I believe Blair must be off the grid.... As he should be... so he hasn't reviewed. I don't think there is anything in here that hasn't been stated elsewhere except for what I placed in the concluding paragraph about re-evaluating all recovery programs for caribou in Labrador given the impending GRC/Torngat listing.

Now we just have to determine who is submitting this... You to Sue since she wrote that letter to you last week (if so I can draft you a letter) or me to one of Blair/my CWS counterparts- I can go regional director or one of the directors in Ottawa.

Please let me know if this is good to go or you would like edits...

Shelley



**Philpott, Holly**

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**From:** Moores, Shelley  
**Sent:** Thursday, August 31, 2017 2:37 PM  
**To:** 'Mawhinney, Kim (EC)'  
**Cc:** Boyne, Andrew (EC); MacDonald2, Paul (EC); Campbell, Kate (EC)  
**Subject:** RE: Meeting with caribou recovery team members in September  
**Attachments:** RE: 5-year report on implementation of the recovery strategy for boreal caribou

Hi Kim,

Blair and I did discuss and we are both generally supportive of the meeting. It might be worth putting it off until later in the fall as we are likely to be wrapped up in September in some other issues in Labrador and that will give us more time for planning. We also would like to have a general discussion with our ADM about the team and a meeting. Its been tough to sit everyone down since we met in July, there has been someone on vacation every week since then. We are all back next week. So give us a few days.

Also our ADM forwarded our summary on recovery activities yesterday afternoon, I have attached the message above. I would have liked more time to work on this summary. Although it was only supposed to be 3 pages it was difficult to keep it to that length. There was some additional info we did not included in the summary for length.

We'll be in touch with respect to a team meeting in the fall.

Shelley  
*Shelley Moores*  
Senior Manager  
Fisheries and Land Resources  
Phone: 709 637 2018

**From:** Mawhinney, Kim (EC) [mailto:kim.mawhinney@canada.ca]  
**Sent:** Thursday, August 31, 2017 11:05 AM  
**To:** Moores, Shelley <shelleymoore@gov.nl.ca>  
**Cc:** Boyne, Andrew (EC) <andrew.boyne@canada.ca>; Mawhinney, Kim (EC) <kim.mawhinney@canada.ca>; MacDonald2, Paul (EC) <paul.macdonald2@canada.ca>; Campbell, Kate (EC) <kate.campbell@canada.ca>  
**Subject:** Meeting with caribou recovery team members in September

Hi Shelley,

I am just following up with you on our discussions from July. Have you had a chance to follow up with Blair to see if we could get some endorsement on bringing together member of the Recovery team in September to host an information session to update them on current issues and anticipated plans, in additional to other updates associated with caribou in Labrador? This is not to be a formal recovery team meeting and as discussed, we, CWS would be happy to co-chair and/or work with you to put together meeting logistics, agenda, etc.

Regards,

Kim

**Kim Mawhinney, PhD**

*Manager, Conservation Planning and Stewardship*

*Atlantic Region*

*Environment Canada, Government of Canada*

*[kim.mawhinney@canada.ca](mailto:kim.mawhinney@canada.ca) / Tel: 709-772-7456*

*Gestionnaire, Planification de la Conservation et Intendance*

*Région de l'atlantique*

*Environnement Canada, Gouvernement du Canada*

*[kim.mawhinney@canada.ca](mailto:kim.mawhinney@canada.ca) / Tél: 709-772-7456*

**Philpott, Holly**

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**From:** Balsom, Stephen  
**Sent:** Wednesday, August 30, 2017 3:44 PM  
**To:** 'Milburn-Hopwood, Sue (EC)'  
**Cc:** Moores, Shelley  
**Subject:** RE: 5-year report on implementation of the recovery strategy for boreal caribou  
**Attachments:** NL Boreal Caribou Recovery Summary.docx

Sue,

Please find attached a summary of efforts to date regarding caribou recovery. If you have any questions please let me know.

Steve

**Stephen Balsom, RPF**

Assistant Deputy Minister  
Department of Fisheries and Land Resources  
Forestry and Wildlife Branch  
P.O. Box 2006, Fortis Building  
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**From:** Scullion3, Melissa (EC) [mailto:melissa.scullion3@canada.ca] **On Behalf Of** Milburn-Hopwood, Sue (EC)  
**Sent:** Friday, August 25, 2017 3:40 PM  
**To:** Milburn-Hopwood, Sue (EC)  
**Subject:** 5-year report on implementation of the recovery strategy for boreal caribou

Good afternoon,

I am writing to you today regarding the 5-year report on implementation of the recovery strategy for boreal caribou.

As you are likely aware, Environment and Climate Change is currently working to finalize the report. As we indicated in March 2017, this report is due on October 5, 2017 as per the *Species at Risk Act*, five years from the date of the publication of the recovery strategy.

First, I want to thank you and your officials for providing ECCC with the completed detailed tables outlining the recovery activities and measures implemented in the last five years for all ranges in your jurisdiction. This information has been essential to ECCC in preparing a draft of the report. In addition to these detailed submissions, we more recently asked all jurisdictions for a 2-3 page overview summary of provincial/territorial efforts to be included directly in the report itself, unedited.

While several jurisdictions have taken the opportunity to complete and submit this written summary of jurisdictional efforts, we have still not received a submission from your jurisdiction.

This is just a reminder to kindly provide your final submission, according to format that ECCC provided, no later than August 31, 2017. This will ensure that the efforts of your jurisdiction are appropriately reflected in the report. It goes without saying that it is in the mutual interest of your government and the Government of Canada that your jurisdiction is reflected in the report that will be released nationally. Given our internal demands, we cannot commit to include your narrative should we not receive it on or before August 31.

Please be assured that we plan to share an embargoed version of the report with provinces and territories in advance of the October 2017 publication by the federal government.

In addition, we are planning to brief provincial and territorial officials on the report release at the upcoming face-to-face Federal-Provincial/Territorial Coordinating Committee on Caribou meeting planned for Toronto on September 19, 2017. I encourage your jurisdiction to send representation to this meeting to facilitate interjurisdictional discussion prior to posting and discuss other important issues related to managing the caribou file, including federal plans for conducting socio-economic analysis, key elements for section 11 conservation agreements, provincial and territorial views on the recently released federal Action Plan and provincial/territorial views on the establishment of a new National Caribou Knowledge Consortium.

I intend to participate in this meeting in Toronto and would welcome your participation.

Please accept my best wishes.

Sincerely,

Sue Milburn-Hopwood

Assistant Deputy Minister, Canadian Wildlife Service  
Environment and Climate Change Canada / Government of Canada  
[Sue.Milburn-Hopwood@canada.ca](mailto:Sue.Milburn-Hopwood@canada.ca) / Tel: 819-938-3908

Sous-ministre adjointe, Service canadien de la faune  
Environnement et Changement climatique Canada / Gouvernement du Canada  
[Sue.Milburn-Hopwood@canada.ca](mailto:Sue.Milburn-Hopwood@canada.ca) / Tél: 819-938-3908

**Philpott, Holly**

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**From:** McCarthy, Sara  
**Sent:** Thursday, July 6, 2017 12:59 PM  
**To:** Moores, Shelley; Pisapio, John  
**Cc:** Adams, Blair  
**Subject:** RE: RE: Boreal Caribou Recovery Plan  
**Attachments:** Boreal\_RP\_DRAFT\_6July2017CLEAN.DOCX; Habitat\_Section\_DRAFT\_6July2017.docx; Revised\_RS\_CH\_OutlineOct252016.docx; Boreal\_RP\_DRAFT\_6July2017.docx

Attached are four word files associated with recent revisions to the Labrador Boreal Caribou Recovery Plan:

1. The original draft RP that I started working on- with track changes for all the edits I've made thus far-  
**Boreal\_RP\_DRAFT\_6July2017**
2. A copy of that same RP, with all of my track changes accepted, so that the document is easier to read if you don't want to see all that red edit text - **Boreal\_RP\_DRAFT\_6July2017CLEAN**
3. The original 61 page document prepared by Isabelle on how she went about identifying the critical and recovery habitat and the results-  
**Revised\_RS\_CH\_OutlineOct252016**
4. The 6 page summary of Isabelle's document that I've been working on to insert into the Habitat portion of the Recovery Plan-  
**Habitat\_Section\_DRAFT\_6July2017**

My goal in revision has been to include any new information available, make the document shorter, more concise, and to try to simplify how it reads by reducing the amount of data presented and methodologies explained and increase information on how it applies to recovery planning. Neither the draft RP or the Habitat Summary that I've attached have been completely cleaned-up yet, but the Habitat piece is getting close!

**Sara McCarthy**

Ecosystem Management Ecologist  
Wildlife Division  
Environment and Climate Change  
P.O. Box 3014 stn "B", 15 Cherrywood Drive  
Happy Valley – Goose Bay, NL A0P 1E0  
(709) 896 – 7932

**Sara McCarthy**

Ecosystem Management Ecologist  
Wildlife Division  
Environment and Climate Change  
P.O. Box 3014 stn "B", 15 Cherrywood Drive  
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(709) 896 – 7932

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**From:** Moores, Shelley  
**Sent:** Thursday, July 06, 2017 11:33 AM  
**To:** McCarthy, Sara; Pisapio, John  
**Cc:** Adams, Blair  
**Subject:** RE: RE: Boreal Caribou Recovery Plan

Hi Sara,

I think it would be good to forward what you have done so far to the entire group before heading off on your trip, or just post it on the shared drive in the folder where you found the draft. By the sounds of it you have made significant progress in cleaning it up. It would be good for us all to have a chance to give it the once over recognizing there still is quite a bit more to do with the CH piece. Before passing it on to you folks it was quite apparent it was written by committee with no one person able to dedicate significant time. The focus you have given the document has been great! We should probably have a broader discussion around the goals and objectives... I struggled with what the recovery team proposed and how to frame them. I know Emily did as well.

Thanks so much,  
Shelley  
*Shelley Moores*  
Senior Manager  
Fisheries and Land Resources  
Phone: 709 637 2018

**From:** McCarthy, Sara  
**Sent:** Thursday, July 6, 2017 9:49 AM  
**To:** Pisapio, John <[JohnPisapio@gov.nl.ca](mailto:JohnPisapio@gov.nl.ca)>  
**Cc:** Moores, Shelley <[shelleymoore@gov.nl.ca](mailto:shelleymoore@gov.nl.ca)>; Adams, Blair <[BlairAdams@gov.nl.ca](mailto:BlairAdams@gov.nl.ca)>  
**Subject:** RE: Boreal Caribou Recovery Plan

John,

As per my direction from Shelley, and supported by Blair, and copied to you, I have been working on revising the text of the recovery plan. I have been addressing missing references, removing unnecessary information, summarizing methodologies, updating graphs, tables, and maps, highlighting missing information, and most recently, preparing a critical habitat piece.

At our Goose Bay team meeting, you were in fact very clear that you would like us to provide a joint review to Shelley from our office, rather than me send my comments and revisions directly to her. This is why I have not sent any of my revisions to Shelley yet. As you directed.

I do not remember you asking me to specifically work only on the critical habitat section during that meeting. Updating the demographics, maps, population trends, etc. sections are something that I have been responsible for in other documents, and it is confusing that you don't want me to do that in this case.

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I will send you my work to date at the end of the day today, as I am leaving town for the wilderness this afternoon until next Friday. I will not have completed the critical habitat section or my "clean-up" work yet though. When I return I will be happy to continue making progress on this document in collaboration with you and Bob.

**Sara McCarthy**  
Ecosystem Management Ecologist  
Wildlife Division  
Environment and Climate Change  
P.O. Box 3014 stn "B", 15 Cherrywood Drive  
Happy Valley – Goose Bay, NL A0P 1E0  
(709) 896 – 7932

---

**From:** Pisapio, John  
**Sent:** Wednesday, July 05, 2017 7:25 PM  
**To:** McCarthy, Sara  
**Subject:** RE: Issue analysis on Mealy Mountains Caribou

Sara,

My direction to you and Bob at our last team meeting before I left for vacation was for the two of you to continue to work on finalizing the critical habitat piece....and to hold off on other revisions pending my review and revision of the main text of the draft. I explained specifically that I would address the requirement for revising the context of the proposed management / recovery actions, clarify the status of the RT and the RP (as recommendations to government), update the threats section, and incorporate the concept of future recovery thresholds ostensibly in support of possible (future) sustainable aboriginal hunting (*for the consideration of the RT*). These are fundamental deficiencies with the current draft that need to be addressed first, before any finalizing of the text. This is not simply a "clean up" situation.

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Please forward to me the revisions you have prepared to date and I will review these along with the draft sent by Shelly. I'm sure your consolidations will be good, but will need to place within broader context of clarified document purpose and workability of proposed recovery actions. Once I've completed my revisions, I will then provide to you for additional review before we send the draft along to Shelly. Given that you are away next week, it would be appreciated if you could have your revisions submitted to me by Friday of this week...or by Sunday. We have until the end of July to complete our review and send to Shelly.

John

---

**From:** McCarthy, Sara  
**Sent:** Wednesday, July 05, 2017 10:04 AM  
**To:** Pisapio, John  
**Subject:** RE: Issue analysis on Mealy Mountains Caribou

I am working on all the portions of the RP- details in attached email, as discussed in the previous emails from Shelley to myself and you and Bob.

**Sara McCarthy**  
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OK...no rush on the LJ results...just wanted to know.

So you are still working on the critical habitat portions of the RP? This issue is now being pursued in several different streams ( MM NP, ECC working group, CWS, WD / RP (Draft)...and eventually also the RT)....and this is not an ideal situation. Please plan to discuss with me the focus of the revision / updates you are working on. Seeing you are away next week, and that we have a deadline of the end of July to have the GB office comments / revisions sent to Shelly, .....lets have this discussion before the end of this week.

John

---

**From:** McCarthy, Sara  
**Sent:** Wednesday, July 05, 2017 8:14 AM  
**To:** Pisapio, John  
**Subject:** RE: Issue analysis on Mealy Mountains Caribou

I have not been able to do the survey estimate yet. Spending any available time on the Boreal Recovery Plan. LJ Survey is next on the list

**Sara McCarthy**  
Ecosystem Management Ecologist  
Wildlife Divison  
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(709) 896 – 7932

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**From:** Pisapio, John  
**Sent:** Tuesday, July 04, 2017 5:58 PM  
**To:** McCarthy, Sara  
**Subject:** FW: Issue analysis on Mealy Mountains Caribou

Sara,

In preparation for upcoming discussions with Parks Can, I may request input from you on MM monitoring; past and future study design.

Please note that this is a Parks Can document and that Shelly , Blair and I will be discussing a wide range of issues with PC...and we may have some concerns with some issues and interpretations that will need to be addressed (with regard to caribou and other species). Please feel free to discuss with me any issues, concerns or incongruities that you may have / see with the document. Reconciling existing provincial harvest prohibitions against (interpretation of) harvesting rights in the Park is going to be a challenge.

BTW...have you completed the LJ survey / estimate?



John

**From:** [darroch.whitaker@pc.gc.ca](mailto:darroch.whitaker@pc.gc.ca) [<mailto:darroch.whitaker@pc.gc.ca>]  
**Sent:** Thursday, June 29, 2017 7:59 AM  
**To:** Moores, Shelley; Pisapio, John  
**Cc:** Boyne, Andrew (EC)  
**Subject:** Issue analysis on Mealy Mountains Caribou

Hi John and Shelley - attached is an issue analysis I prepared in consultation with other knowledgeable folks at Parks Canada and externally, and which Andrew Boyne suggested that I share with you. John, as you know you and I have discussed this issue on a number of occasions and I may have already shared this with you, but sending it again now in case I hadn't. Happy to discuss - as you'll see this draft is from January and this is a constantly evolving topic so the picture will change as we move forward with park establishment and begin discussions with the Cooperative Management Board etc.. Certainly we'll be working closely with the province on the monitoring and management of this caribou herd so I expect we'll be talking about it for many years yet.

Regards,  
Darroch

---

**Darroch Whitaker**

Ecosystem Scientist | Scientifique des écosystèmes  
Western Newfoundland & Labrador Field Unit | L'unité de gestion de l'Ouest de Terre-Neuve et du Labrador  
Parks Canada | Parcs Canada  
Government of Canada | Gouvernement du Canada  
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[darroch.whitaker@pc.gc.ca](mailto:darroch.whitaker@pc.gc.ca) / Tel: 709-458-3464 / Fax: 709-458-2059  
[www.parkscanada.gc.ca](http://www.parkscanada.gc.ca) | [www.parcscanada.gc.ca](http://www.parcscanada.gc.ca)

Adjunct Professor, Environmental Science, Grenfell Campus - Memorial University of Newfoundland

***2017 - Your Free Pass to Discovery | 2017 - Votre entrée libre vers la découverte***

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**Philpott, Holly**

---

**From:** McCarthy, Sara  
**Sent:** Thursday, July 6, 2017 9:49 AM  
**To:** Pisapio, John  
**Cc:** Moores, Shelley; Adams, Blair  
**Subject:** RE: Boreal Caribou Recovery Plan  
**Attachments:** FW: Boreal recovery plan; RE: Boreal Caribou recovery plan ; Re: Boreal Recovery Document; RE: Boreal recovery plan

John,  
 As per my direction from Shelley, and supported by Blair, and copied to you, I have been working on revising the text of the recovery plan. I have been addressing missing references, removing unnecessary information, summarizing methodologies, updating graphs, tables, and maps, highlighting missing information, and most recently, preparing a critical habitat piece.

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**Darroch Whitaker**

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Parks Canada | Parcs Canada  
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[darroch.whitaker@pc.gc.ca](mailto:darroch.whitaker@pc.gc.ca) / Tel: 709-458-3464 / Fax: 709-458-2059  
[www.parkscanada.gc.ca](http://www.parkscanada.gc.ca) | [www.parcscanada.gc.ca](http://www.parcscanada.gc.ca)

Adjunct Professor, Environmental Science, Grenfell Campus - Memorial University of Newfoundland

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---

**Philpott, Holly**

**From:** McCarthy, Sara  
**Sent:** Tuesday, July 25, 2017 1:36 PM  
**To:** Moores, Shelley  
**Subject:** RE: ? I need to get this done ASAP

Its in my draft habitat piece

Table 2: Total disturbance from fire and anthropogenic sources for 5 Boreal caribou subpopulation ranges in Labrador. Data is current to January 1, 2013.

Sub-Pop	Best Fit MCP (km <sup>2</sup> )	Fire (km <sup>2</sup> )	Anthropogenic (km <sup>2</sup> )	Disturbed (%)
LJ	60468	4146	993	8.5
DL	10367	513	9	5.0
RW	20275	1287	555	9.1
JR	14892	458	196	4.4
MM	44120	831	1245	4.7

Table 3: A summary of caribou core areas for 5 Boreal caribou subpopulations in Labrador relative to range size. Note that limited overlap occurs for some Secondary Core areas as a function of overlapping population ranges.

Sub-Pop	Best Fit MCP (km <sup>2</sup> )	Proportion PCA (%)	Proportion SCA (%)
LJ	60468	15	14 <sub>1</sub>
DL	10367	26	18
RW	20275	40	35
JR	14892	26	24
MM	44120	34	32

1. Region excludes areas within the Quebec portion of the range

**Sara McCarthy**  
 Ecosystem Management Ecologist  
 Wildlife Division  
 Environment and Climate Change  
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 Happy Valley – Goose Bay, NL A0P 1E0  
 (709) 896 – 7932

**From:** Moores, Shelley  
**Sent:** Tuesday, July 25, 2017 12:10 PM  
**To:** McCarthy, Sara  
**Subject:** RE: ? I need to get this done ASAP

I hate to pester but I can't find that table is it finalized?

*Shelley Moores*

Senior Manager  
Fisheries and Land Resources  
Phone: 709 637 2018

**From:** McCarthy, Sara  
**Sent:** Tuesday, July 25, 2017 12:21 PM  
**To:** Moores, Shelley <[shelleymoore@gov.nl.ca](mailto:shelleymoore@gov.nl.ca)>  
**Subject:** RE: ? I need to get this done ASAP

Hmm. I guess that is not really clear. What I mean is that there was a table made that says that LJ's range is X km<sup>2</sup> large, and that X% of it was identified as CH and X% of it was identified as RH

**Sara McCarthy**  
Ecosystem Management Ecologist  
Wildlife Division  
Environment and Climate Change  
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---

**From:** Moores, Shelley  
**Sent:** Tuesday, July 25, 2017 11:49 AM  
**To:** McCarthy, Sara  
**Subject:** RE: ? I need to get this done ASAP

In case we are asked what is meant by the one highlighted in green?

*Shelley Moores*

Senior Manager  
Fisheries and Land Resources  
Phone: 709 637 2018

**From:** McCarthy, Sara  
**Sent:** Tuesday, July 25, 2017 10:21 AM  
**To:** Moores, Shelley <[shelleymoore@gov.nl.ca](mailto:shelleymoore@gov.nl.ca)>  
**Subject:** RE: ? I need to get this done ASAP

Hope this helps-

**Summary of Completed Actions in the Identification, Assessment and Protection of Critical/Recovery Habitat**

- A standardized approach for the delineation of critical and recovery habitat was established and executed. This approach related collared caribou location data to measured landscape features, including fires and anthropogenic disturbances. It accounted for the findings of seasonal habitat preference analyses, by insuring preferred habitats were included within critical habitat delineation for the sensitive winter and calving seasons.
- The proportion of each herd's range that was considered disturbed by fire or anthropogenic sources was established.

The proportion of each herd's range that was identified as critical or recovery habitat was established.

- The province supported the establishment of the Mealy Mountains National Park

- The recovery team has identified areas in the RWM and LJ ranges that would support caribou recovery if protected

#### Summary of Actions not yet completed

- Delineation of critical and recovery habitat will require annual updates to incorporate new caribou location data and changes in landscape composition and configuration.
- A caribou specific ELC has not yet been created for the Mealy Mountain region, which would allow the evaluation of seasonal habitat preferences. Therefore, delineation of critical and recovery habitat for this herd is not as robust as for other herds.
- Identification of gaps in protected areas and development of priority areas based on risk level
- Support the creation of the Provincial Waterway Park at Eagle River, the Lac Joseph-Atikonak Lake Provincial Ecological Reserve and protected areas within the RWM caribou range.
- Development of guidelines and recommendations for mitigation of resource-based activities in Boreal Caribou ranges.
- Identification of movement corridors between subpopulations

#### Sara McCarthy

Ecosystem Management Ecologist  
Wildlife Division  
Environment and Climate Change  
P.O. Box 3014 stn "B", 15 Cherrywood Drive  
Happy Valley - Goose Bay, NL A0P 1E0  
(709) 896 - 7932

---

**From:** Moores, Shelley  
**Sent:** Monday, July 24, 2017 3:10 PM  
**To:** McCarthy, Sara  
**Subject:** ? I need to get this done ASAP

Sara,

I have to summarize completed recovery actions for the federal strategy... this is in the provincial plan as completed actions... I don't like them... what do you think.... How would you rework this... I know your busy but I am thinking about shorter... to the point. Blair committed me to doing this before I go on holidays... hence... I am sticking around for another day.... No big deal. But I gotta have this done before end of day tomorrow.



<p><b>Critical Habitat Identification, Assessment &amp; Protection</b></p>	<p>Refine critical and recovery habitat.</p> <ul style="list-style-type: none"> <li>• Compile available environmental and land use information at landscape scale</li> <li>• Review available information and assess suitability for caribou habitat assessments, highlight information gaps, and develop strategy to assemble necessary baseline information</li> <li>• Delineate ecological communities relevant to caribou and map these throughout caribou ranges</li> <li>• Map natural (fire) and anthropogenic disturbance throughout caribou ranges</li> <li>• Combine environmental and land use information with caribou location data to determine habitat selection at several spatial scales</li> <li>• Determine seasonal habitat preferences</li> <li>• Determine lichen biomass of winter ranges and compare these to caribou requirements</li> <li>• Determine abundance and location of preferred habitats and recommend areas for consideration as critical habitat.</li> </ul>	<p>Completed 2008/09</p> <p>Completed 2008/09</p> <p>Completed for RWM and LJ 2011</p> <p>Completed 2011Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>
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*Shelley Moore*, M.Sc., B.Sc (Hons)  
 Senior Manager  
 Fisheries and Land Resources

Phone 709 637 2018  
 117 Riverside Drive  
 Box 2007  
 Corner Brook, NL  
 A2H 7S1

**Philpott, Holly**

**From:** Moores, Shelley  
**Sent:** Thursday, June 1, 2017 2:25 PM  
**To:** McCarthy, Sara  
**Subject:** FW: Report from June 2011 Woodland Caribou Recovery Team Meeting.  
**Attachments:** Woodland Caribou Recovery Team Meeting June 2011\_DRAFT Minutes1.doc; Group Questions compilation.doc

This is what I got from Isabelle on the last recovery team meeting. Not sure if anything here will help you.

*Shelley Moores*

Senior Manager  
 Fisheries and Land Resources  
 Phone: 709 637 2018

Section 40(1)

**From:** Schmelzer, Isabelle  
**Sent:** Thursday, September 8, 2011 11:49 AM  
**To:** Schmelzer, Isabelle <isabelleschmelzer@gov.nl.ca>; 'Otto, Robert D.' <rotto@swgc.mun.ca>; 'Peter.Deering@pc.gc.ca' <Peter.Deering@pc.gc.ca>; O'Brien, Gary <garyobrien@gov.nl.ca>; 'Jim Goudie' <jim\_goudie@nunatsiavut.com>; 'Wayne A. Russell' <wrussell@labradormetis.ca>; Graham, Jeri <jerigraham@gov.nl.ca>; Sharpe, Jonathan <jonathansharpe@gov.nl.ca>; 'Hearn, Brian' <BHearn@NRCan.gc.ca>; Barney, Wayne <waynebarney@gov.nl.ca>; [REDACTED]@gmail.com>; 'Tony Chubbs' <techubbs@cablelab.net>; Crowley, Shannon <ShannonCrowley@gov.nl.ca>; Adams, Blair <BlairAdams@gov.nl.ca>; 'nuna, richard' <rjnuna@innu.ca>; [REDACTED]@nf.sympatico.ca' [REDACTED]@nf.sympatico.ca>  
**Cc:** [REDACTED]@nl.rogers.com [REDACTED]@nl.rogers.com>; [REDACTED]@nlh.nl.ca' [REDACTED]@nlh.nl.ca>; 'Paul.H.MacDonald@ec.gc.ca' <Paul.H.MacDonald@ec.gc.ca>; [REDACTED]@iemr.org>; Pardy, Shelley <shelleypardy@gov.nl.ca>; 'Guy Playfair' <guyplayfair@innu.ca>; Herdman, Emily <EmilyHerdman@gov.nl.ca>; 'Jennifer Mitchell' <jennifer.mitchell@torngatsecretariat.ca>; 'Lindsay Notzl' <Lindsay.Notzl@natureconservancy.ca>; McCarthy, Sara <SaraMcCarthy@gov.nl.ca> Section 40(1)  
**Subject:** Report from June 2011 Woodland Caribou Recovery Team Meeting.

Good Day,

Please find attached a summary of our last meeting. Note that while they may be considered meeting minutes, they include details in a report format to ensure the breadth of the information discussed and presented is captured, as these materials will be incorporated into the revised recovery strategy. For those who did not attend, our meeting was structured as a workshop with the goal of gaining an understanding of what the future landscape for caribou in Labrador might look like, and to undertake discussions regarding threat assessments and landscape-level planning for caribou and their habitat. The second document is an appendix which compiles group discussion on each of three main resource sectors. Our next task is to work with Emily to help her integrate these materials (and others you feel may have been missed or need to be elaborated on) into the revised recovery strategy.

Regards,

Isabelle

Isabelle Schmelzer PhD  
 Senior Biologist - Terrestrial Ecologist  
 Research Section / Wildlife Division  
 Department of Environment and Conservation

Corner Brook, Newfoundland

CIMFP Exhibit P-01768

Page 35

709-637-2051 telephone  
709-637-2036 fax

**Philpott, Holly**

---

**From:** Moores, Shelley  
**Sent:** Friday, June 16, 2017 4:06 PM  
**To:** McCarthy, Sara; Pisapio, John  
**Cc:** Rogers, Bob  
**Subject:** Re: Boreal Recovery Document

Thanks So much Sara! Have a good weekend!

Sent from my BlackBerry 10 smartphone on the Bell network.

---

**From:** McCarthy, Sara  
**Sent:** Friday, June 16, 2017 4:02 PM  
**To:** Moores, Shelley; Pisapio, John  
**Cc:** Rogers, Bob  
**Subject:** Boreal Recovery Document

TGIF!

I have spent the past two days working on the recovery document. As Shelley suggested in the original email, there is some cleaning up to do. So far I've gotten through the first 14 pages, and have reduced it to 8 pages of concise text, and added all the missing references. I will continue this as my main priority, including the CH piece, and will update you on my progress as I go along.

I'm maintaining two copies of the document

1. The original with track changes and my comments as I go
2. A clean version of what I am proposing as the revised draft

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---

**From:** Pisapio, John  
**Sent:** Thursday, May 11, 2017 3:17 PM  
**To:** McCarthy, Sara; Rogers, Bob  
**Subject:** FW: Boreal recovery plan

I have a number of comments and concerns on the draft RP, including technical , regulatory operationalization (i.e. workability) and procedural (in relation to the reconvening of the Recovery Team and goals and objectives). We can discuss in further detail next week. Once each of us have read the documents we will sit down and discuss our respective review contributions. I am tentatively going to schedule this discussion for next Thursday, May 18, 1 pm.

John

---

**From:** Moores, Shelley  
**Sent:** Friday, April 28, 2017 1:19 PM  
**To:** McCarthy, Sara; 'bob.rodgers@gov.nl.ca'  
**Cc:** Pisapio, John; Adams, Blair  
**Subject:** RE: Boreal recovery plan

I meant to add... Sara please pass this along but Sara being on the ball just sent me his email. Hi Bob welcome aboard. Please keep an updated version of your work in the folder so others can update.... I will spend a bit of time going through it again this weekend and getting the inside covers and depts. Updated trying to clean up a few old comments and edits....

Talk to you all soon I'm sure!

Shelley

*Shelley Moores*  
Senior Manager  
Fisheries and Land Resources  
Phone: 709 637 2018

**From:** Moores, Shelley  
**Sent:** Friday, April 28, 2017 1:42 PM  
**To:** McCarthy, Sara <SaraMcCarthy@gov.nl.ca>  
**Cc:** Pisapio, John <JohnPisapio@gov.nl.ca>; Adams, Blair <BlairAdams@gov.nl.ca>  
**Subject:** Boreal recovery plan

Hi Sara and Bob,

I was speaking to Blair earlier this week and given your shared knowledge, experience, the need for some fresh eyes on this document, and the pressure to get this done we thought it might be a good time to bring you both in on tidying up the Boreal Caribou Recovery plan and getting it to a point we can share it with our recovery team..... I know that you both will likely need to chat with me further on the document and what needs to be done. I think you both can tidy it up and update the information and add the habitat piece so we can move it along... when you get the critical habitat

protection piece I will provide you with some examples on how we did that for other species. The goals and objectives are very rough and have been provided by the recovery team in a workshop from 2011 I have been trying to put them in some order that made sense for ages. Shelley Garland has some experience with this and may be able to help you frame them in a much more consist and get better linkages between the Actions and Objectives... This whole section will need re-working after the recovery team meets and gets this document but that doesn't mean we shouldn't give them something cleaner than what was drafted back in 2011... The implementation table will come from the revised actions and objectives. We still have a few gaps to fill in the completed actions table. Sara you have seen this document and provided some great input. John you have also had an opportunity to review it. This is the same document we have been trying to update since 2015.

Getting this document completed and ready for the team is really important right now given the press release by CPAWS.

You both working on this will also give me some time to prepare what needs to be ready for the reconvening of the recovery team. We still have a few membership issues to work out and I need to get some new appointment letters drawn-up.

The link below has the draft document, Isabelle's most recent science update and her habitat analysis document. Getting the shapefiles for mapping might be tricky but we will figure it out.

<M:\CRBK\Wildlife\Shared\Share\ESB\Boreal Caribou Recovery Plan>

*Shelley Moore*, M.Sc., B.Sc (Hons)  
Senior Manager  
Fisheries and Land Resources

Phone 709 637 2018  
117 Riverside Drive  
Box 2007  
Corner Brook, NL  
A2H 7S1

**Philpott, Holly**

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**From:** Pisapio, John  
**Sent:** Thursday, May 11, 2017 6:52 PM  
**To:** McCarthy, Sara  
**Subject:** RE: Boreal recovery plan

Yes...I read this. And I too have spoken to Blair about you and Bob assisting on this...which I encouraged, but we shall proceed as per my direction....meeting next week, and then provide comments afterwards to Shelly. There are some significant weaknesses and omissions with the draft that we will discuss next week, and work towards addressing.

John

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**From:** McCarthy, Sara  
**Sent:** Thursday, May 11, 2017 12:00 PM  
**To:** Pisapio, John  
**Subject:** FW: Boreal recovery plan

**Sara McCarthy**  
Ecosystem Management Ecologist  
Wildlife Division  
Environment and Climate Change  
P.O. Box 3014 stn "B", 15 Cherrywood Drive  
Happy Valley – Goose Bay, NL A0P 1E0  
(709) 896 – 7932

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**From:** Moores, Shelley  
**Sent:** Friday, April 28, 2017 1:12 PM  
**To:** McCarthy, Sara  
**Cc:** Pisapio, John; Adams, Blair  
**Subject:** Boreal recovery plan

Hi Sara and Bob,

I was speaking to Blair earlier this week and given your shared knowledge, experience, the need for some fresh eyes on this document, and the pressure to get this done we thought it might be a good time to bring you both in on tiding up the Boreal Caribou Recovery plan and getting it to a point we can share it with our recovery team..... I know that you both will likely need to chat with me further on the document and what needs to be done. I think you both can tidy it up and update the information and add the habitat piece so we can move it along... when you get the critical habitat protection piece I will provide you with some examples on how we did that for other species. The goals and objectives are very rough and have been provided by the recovery team in a workshop from 2011 I have been trying to put them in some order that made sense for ages. Shelley Garland has some experience with this and may be able to help you frame them in a much more consist and get better linkages between the Actions and Objectives... This whole section will need re-working after the recovery team meets and gets this document but that doesn't mean we shouldn't give them something cleaner than what was drafted back in 2011... The implementation table will come from the revised actions and objectives. We still have a few gaps to fill in the completed actions table. Sara you have seen this document and provided some great input. John you have also had an opportunity to review it. This is the same document we have been trying to update since 2015.

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You both working on this will also give me some time to prepare what needs to be ready for the reconvening of the recovery team. We still have a few membership issues to work out and I need to get some new appointment letters drawn-up.

The link below has the draft document, Isabelle's most recent science update and her habitat analysis document. Getting the shapefiles for mapping might be tricky but we will figure it out.

<M:\CRBK\Wildlife\Shared\Share\ESB\Boreal Caribou Recovery Plan>

*Shelley Moores*, M.Sc., B.Sc (Hons)  
Senior Manager  
Fisheries and Land Resources

Phone 709 637 2018  
117 Riverside Drive  
Box 2007  
Corner Brook, NL  
A2H 7S1



**Philpott, Holly**

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**From:** Pisapio, John  
**Sent:** Wednesday, April 19, 2017 1:32 PM  
**To:** Moores, Shelley  
**Cc:** McCarthy, Sara  
**Subject:** RE: Boreal Caribou recovery plan

OK...we can wait until the CH section has been added, but GB office will still require a substantive review / comment opportunity on the current DRAFT prior to the reconvening of the Recovery Team. The Recovery Team will then also require an opportunity for input before the plan is finalized / revised.

John

---

**From:** Moores, Shelley  
**Sent:** Monday, April 17, 2017 6:32 PM  
**To:** Pisapio, John  
**Cc:** McCarthy, Sara  
**Subject:** Re: Boreal Caribou recovery plan

It's not completely revised since you last had opportunity to review and provide comments. The CH section still has to be added when I get capacity to get it done. We have been trying to get the polar bear draft done and limestone barrens ecosystem plan done as well. Caribou is next after those two are done. When the additions are made it will be forwarded.

Sent from my BlackBerry 10 smartphone on the Bell network.

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**From:** Pisapio, John  
**Sent:** Monday, April 17, 2017 6:28 PM  
**To:** Moores, Shelley  
**Cc:** McCarthy, Sara  
**Subject:** RE: Boreal Caribou recovery plan

Hi Shelly,

Just a reminder, we are still waiting to receive and r

he RP.

John

---

**From:** Pisapio, John  
**Sent:** Thursday, April 06, 2017 1:23 PM  
**To:** Moores, Shelley  
**Cc:** McCarthy, Sara  
**Subject:** RE: Boreal Caribou recovery plan

Understood and agreed...required direction on budgets and departmental priorities in the coming weeks.....but I would still like the GB office to receive the most current draft now so we can be up to speed on technical matters once we're in a position to move forward with reconvening the RT.

John

*April  
2017*

**From:** Moores, Shelley  
**Sent:** Thursday, April 06, 2017 1:06 PM  
**To:** Pisapio, John  
**Cc:** McCarthy, Sara  
**Subject:** RE: Boreal Caribou recovery plan

Hi John,

Thanks for reaching out... the update to the plan has been ongoing for 2 years and continues to be delayed due to a lack of capacity. I think given all the changes over the last few weeks it is a bit premature to plan anything until we know priorities, reporting lines and budgets... Isabelle completed a very comprehensive and detailed habitat analysis last summer. She did an amazing job. It was a fabulous piece of work and we need to incorporate it into the plan. Up until now there has been no capacity to do it. Once we receive direction on priorities and budgets we can chat further.

Shelley  
*Shelley Moores*  
Senior Manager  
Fisheries and Land Resources  
Phone: 709 637 2018

**From:** Pisapio, John  
**Sent:** Thursday, April 6, 2017 12:56 PM  
**To:** Moores, Shelley <[shelleymoores@gov.nl.ca](mailto:shelleymoores@gov.nl.ca)>  
**Cc:** McCarthy, Sara <[SaraMcCarthy@gov.nl.ca](mailto:SaraMcCarthy@gov.nl.ca)>  
**Subject:** Boreal Caribou recovery plan

Hi Shelly,

As we briefly discussed last week, to my knowledge Goose Bay office has not yet had any opportunity to provide input to the (currently being revised) Boreal Caribou Recovery Plan. I was not aware that the plan was being (recently) updated in advance of the reconvening of the recovery team, of which I am the chair. It would be appreciated if you could please forward the current draft to Sara and I so we can review and provide input. Once we've had the opportunity to do so, I'll be touch with you regarding planning for RT reconvening meeting.

Thanks.

John

**Philpott, Holly**

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**From:** Schmelzer, Isabelle  
**Sent:** Tuesday, January 17, 2017 2:00 PM  
**To:** Moores, Shelley  
**Subject:** FW: Lac Joseph Caribou Survey

They're gonna help out!

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**From:** Sandra.Heppell@mffp.gouv.qc.ca [mailto:Sandra.Heppell@mffp.gouv.qc.ca]  
**Sent:** Tuesday, January 17, 2017 1:13 PM  
**To:** Schmelzer, Isabelle  
**Cc:** Antoine.St-Louis@mffp.gouv.qc.ca  
**Subject:** RE: Lac Joseph Caribou Survey

Dear Isabelle,

Sorry for the delay to answer you.

Your work on caribou is interesting, in particular your way to establish the core areas. Of course, i'm interested to work with you and consider these areas in my analyses to ensure it remains safe for caribou. If you have any shape files of these core areas, can you share it with us ? It will be more easy for us to integrate this information in our analyses.

I'm also happy to learn that you schedule a survey this winter for lac Joseph herd. Of course, it makes sense that you cover all the population range including what is on the Quebec side.

For your fuel caches, it could be possible for you to use the cache fuel of Hydro-Québec at Poste Montagnais (see picture below), it is a supply place where you can find fuel, food and lodging. It's inside your survey area. My opinion is that is your better choice on the Quebec side. But we have to check before with Hydro-Quebec if they agree you use their fuel. Otherwise, there is also a landing strip and a railway, so it could be possible for you to bring easily some fuel drums at this place by twin otter or by train from Sept-Îles (the company FBO sell Jet A1 at Sept-Iles <http://avjet.ca/en/affiliated-fbos-and-service-stations/> and can deliver to Poste Montagnais. Some helicopters company have already some caches in the woods also). Finally, maybe there is also some possibility at Camp Mista near Romaine river but it's more far away from your survey area. It could be possible to bring you some fuel drums at this place if decided to use this place and HQ don't want to sell his fuel.

Here is the contact person to check for the use of fuel or lodging with Hydro-Québec installation. I already let a vocal message at mister Alain Turcotte to get some basic information but he didn't return my message at this time. I'll keep you inform.

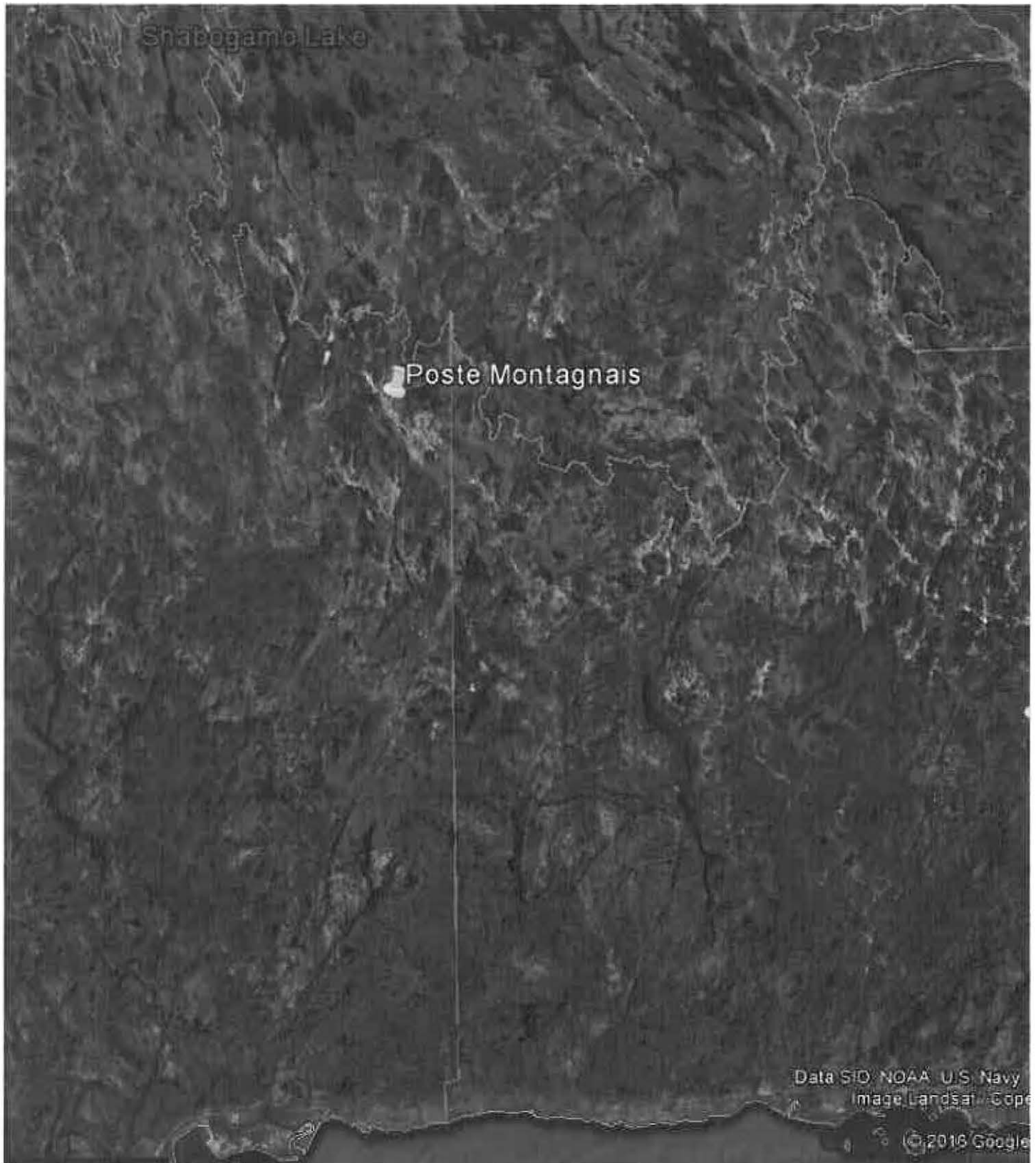
- Poste Montagnais : Alain Turcotte (418) 964-3605 # 5363
- Camp Mista : Lyne Boudreault (418) 538-7720 # 5400

Can you tell me your preference between Mista or Poste Montagnais or both ? The quantity of fuel you need on the Quebec side ? The dates of your survey and do you need lodging ?

If you need any other information or help, don't hesitate. If needed, we are also interested in any kind of participation in the survey.

Ariane is actually in maternity leave. So Antoine St-Louis is now in charge of the woodland caribou at the provincial level. Is in cc of this message. He'll be interested to have news form you to.

I wish you health and success for 2017.



Sandra Heppell

**Biologiste**  
**Direction de la gestion de la faune de la Côte-Nord**  
**Ministère des Forêts, de la Faune et des Parcs**  
625, boul. Laflèche, R.C. 702  
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[sandra.heppell@mffp.gouv.qc.ca](mailto:sandra.heppell@mffp.gouv.qc.ca)  
[mffp.gouv.qc.ca](http://mffp.gouv.qc.ca)

**De :** Schmelzer, Isabelle [<mailto:isabelleschmelzer@gov.nl.ca>]  
**Envoyé :** 10 janvier 2017 08:38  
**À :** Heppell, Sandra (09-DGFa) <[Sandra.Heppell@mffp.gouv.qc.ca](mailto:Sandra.Heppell@mffp.gouv.qc.ca)>  
**Cc :** Massé, Ariane (DEFTHA) <[Ariane.Masse@mffp.gouv.qc.ca](mailto:Ariane.Masse@mffp.gouv.qc.ca)>  
**Objet :** Lac Joseph Caribou Survey

Dear Sandra and Arianne,

Over the past few months I have been working on identifying core areas for all the Boreal caribou populations in Labrador. I wanted to stay away from exclusive use of kernels so instead mapped all annual ranges for individual caribou and performed a spatial analysis which counted overlapping ranges. Areas which were used more often over time and by different animals are considered to be of higher value to caribou (there's little description pasted at the end of this mail). As you know the Lac Joseph population extends into Quebec and this analysis identifies some vital areas in Quebec adjacent to Labrador. I bring these to your attention so that we can work together to ensure they remain vital for caribou and you can consider them in your planning.

The second reason I am writing to you today is that we have scheduled a survey for the LJ population this coming March. I've attached an image which shows the preliminary areas we would like to run transects. I've overlain locations of groups observed in past surveys and classifications, and the kernels depicting late winter use in the range based on collared animals. Since this population extends into Quebec, it makes sense to survey over the border to generate a complete population estimate. In particular, we'll need to survey the part of QC that juts up into Labrador, in a high density area. WE would like to add a second area, in the far SW, in which we know winter use occurs (currently no transect lines drawn there). For us, placement of remote fuel caches into this region is a big issue and expense, as we can only fly 5 drums at a time, and it needs to come out of Goose Bay. These caches would need to be placed very near the QC border, and in some cases even in QC, ideally. I suspect that there are roads associated with the La Romaine project and perhaps others in QC that approach the Labrador border—I'm wondering if it would be possible to get some assistance with caching fuel in that region, perhaps by truck? Again I'm not sure if this is possible..but it would be of great assistance, and of course you'd be able to have access to our survey results and sightings of caribou in the area.

I hope you are well, and I wish you both all the best in the New Year.

Isabelle

**Description:**

***Identification of Core Areas***

*The next two phases outlined in the CH Identification framework include establishing criteria for attributes that constitute critical habitat, and applying these to the available information. In Labrador, since ranges are still largely intact, the emphasis was on identifying areas with a high probability of occupancy and demonstrated repeated use over time, termed 'core' areas. Describing space use within a population range based on the number of repeatedly visited areas or those of common use among individuals and over time can be a useful way to determine intensively used regions within the population range (Kie et al 2010). Caribou are particularly suited to such an analysis because they are*

*not territorial and because they show fidelity to their annual ranges over time (Rasuilis et al 2011). Identifying core areas within population ranges may be particularly relevant as population ranges extend over vast areas (140 000 km<sup>2</sup>) and caribou activity is not uniform throughout them.*

*Areas that are included more often in the ranges of different caribou over time overlap more frequently and are therefore more intensively used. Core areas were defined on the basis of two different use intensities: Primary and Secondary. Primary Core areas (PC) have a high likelihood of occupancy based on use by multiple individuals, and/or on multiple occasions over time, and are critical to the long-term viability of Boreal caribou in a given population range. Secondary Core (SC) areas are used less intensively than PC areas, but they still have a higher probability of occupancy than other portions of the range. Secondary Core areas are often adjacent to PC areas, and provide connectivity between PC areas within ranges, and also connectivity between adjacent local populations. While Secondary Core areas have a lower probability of occupancy than Primary Core areas, they remain priorities areas for management within caribou ranges. Primary and Secondary Core areas may be considered analogous to the NL ESA definitions corresponding to 'Critical' and 'Recovery' habitat, respectively. However, given their utility as a tool for planning and management, their application will extend beyond simple identification under federal and Provincial Endangered Species legislation. Jointly-used areas were identified by conducting a spatial analysis of annual home ranges which overlapped or occurred within 1 km of each other. Annual home ranges, defined as the 95% probability contour (a commonly recognized definition of an animal's home range) were estimated for each individual telemetered female caribou in all 5 Boreal caribou populations. Direct counts of the number of overlapping animal-year ranges was completed for each population range. The threshold for Primary Core habitat was set at the value corresponding to the 10th percentile of overlapping annual range for each population. A second step assessed whether calving areas were represented within the mapped Primary Core areas; if less than 65% of the calving/post-calving locations occurred inside the PC area, the critical threshold defining the number of required overlapping ranges was relaxed until calving areas were represented within the Primary Core.*

Isabelle Schmelzer PhD  
Senior Biologist - Terrestrial Ecologist  
Research Section / Wildlife Division  
Department of Environment and Climate Change  
Corner Brook, Newfoundland

709-637-2051 telephone

709-637-2036 fax

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**Philpott, Holly**

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**From:** Schmelzer, Isabelle  
**Sent:** Tuesday, November 15, 2016 4:38 PM  
**To:** McCarthy, Sara; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard; Saunders, Paul; Barney, Wayne  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan  
**Attachments:** Boreal Caribou Monitoring2016IScomments.docx

Please find attached my response to John's questions. Since some of the questions actually included several aspects, I broke these up in my response.

IS

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**From:** McCarthy, Sara  
**Sent:** Tuesday, November 08, 2016 3:33 PM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard; Saunders, Paul; Barney, Wayne  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Hi Everyone,

Attached is an updated version of the BCMP. Agreeing on and implementing the schedule/goals of these field based activities well in advance will be vital to cost reduction and staff efficiency over the upcoming years, while maximizing the information we can gather on these caribou.

John B had asked that everyone review the document and answer the questions below by October 7<sup>th</sup>. I have received answers from Wayne (many of his comments included in the updated draft).

Please spend some time thinking about these questions and get back to me as soon as possible.

**Sara McCarthy**

Ecosystem Management Ecologist  
 Wildlife Divison  
 Environment and Climate Change  
 P.O. Box 3014 stn "C", 15 Cherrywood Drive  
 Happy Valley – Goose Bay, NL A0P 1C0  
 (709) 896 – 7932

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**From:** McCarthy, Sara  
**Sent:** Tuesday, October 04, 2016 3:02 PM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard; Saunders, Paul  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Reminder of the below email. Please send responses to discussion points and draft by the end of the week.  
 Thanks!

**Sara McCarthy**

Ecosystem Management Ecologist

Wildlife Divison  
 Environment and Climate Change  
 P.O. Box 3014 stn "C", 15 Cherrywood Drive  
 Happy Valley – Goose Bay, NL A0P 1C0  
 (709) 896 – 7932

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**From:** McCarthy, Sara  
**Sent:** Wednesday, September 21, 2016 12:09 PM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard; Saunders, Paul  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Hello All,

The revised draft of the Labrador Caribou Monitoring Plan is ready for further discussion. Please review the attached draft, with particular attention paid to Section 5: the field monitoring plan and implementation schedule. On John Blake's behalf, I'm asking you respond to the following discussion points by October 7<sup>th</sup>. A meeting will be coordinated to follow shortly after that. Thank you.

1. Will we keep 10 collars minimum alive on each of the 3 herds in order to calculate an average survival rate over 3 year periods? This would involve collaring only females, deploying 15-20 collars annually, and would serve to combine recruitment data with survival estimates to model the population size between census years. To back it up a little, how do we determine the minimum sample size for each population in the first place, and should it be based on 3 populations or 5? **OR** Do we want to collar less animals (including males and females), and conduct population survey estimates more often?
2. Are we logistically capable of meeting our objective decided from question 1 (helicopter time and personnel)?
3. Is there a role for fecal pellet collection in the LBCMP? What is it and does it add to or replace other proposed monitoring efforts?
4. Collar deployment scheduling – compare the power, logistics, and cost of two options presented for Table 6.
5. Schedule for classifications/population estimates. Does everyone agree with a three year rotation for each of the 3 herds and a population survey every second classification? What about the proposed implementation plan? (Table 7)

**Sara McCarthy**  
 Ecosystem Management Ecologist  
 Wildlife Divison  
 Environment and Climate Change  
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 Happy Valley – Goose Bay, NL A0P 1C0  
 (709) 896 – 7932

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**From:** McCarthy, Sara  
**Sent:** Friday, February 26, 2016 2:24 PM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Just a heads up for everyone- I received the 20 Lotek Collars for the Boreal Caribou. I'm currently programming them to record a location every 7 hours, with a VHF that turns on with the local sunrise/sundown times. This will allow for a four year deployment period. If anyone has any concerns with this schedule please let me know asap.

Sara



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**From:** McCarthy, Sara  
**Sent:** Friday, February 12, 2016 3:23 PM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

TGIF!

I've drafted a second go at the Labrador Boreal Caribou Monitoring Plan. Thank you very much to Isabelle and to Paul for their constructive comments on the first round. The draft has been greatly improved, but still needs input from everyone, as this is a group exercise and will benefit from all your expertise and reflection. Not to mention, the outlined work would need to be funded and completed by our three sections. I've highlighted a few questions of particular concern. Looking forward to your feedback, and hopefully agreeing on an action plan for the next few years (especially for this winter!).

Note\*\*\* Please keep in mind that this document is not meant to cover all research or analyses conducted by the Wildlife Division in relation to Boreal caribou in Labrador. It is rather, a document to set the stage of the current scenario we are dealing with, and create a plan for implementing and coordinating the field based and expense related activities. The data and samples collected from this plan will provide the information needed to work towards our research questions and goals (which are outlined in the Recovery Document). It is also not meant to summarize historical data (which is summarized in a separate Science Update Document).

Thanks again to you all and have a great weekend,  
Sara

---

**From:** McCarthy, Sara  
**Sent:** Wednesday, February 03, 2016 10:31 AM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Oh thank you Isabelle! I must have deleted it accidentally in my mad rush to get through my emails. Thank you for the feedback and I'll incorporate your comments ASAP  
Sara

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**From:** Schmelzer, Isabelle  
**Sent:** Wednesday, February 03, 2016 10:11 AM  
**To:** McCarthy, Sara; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Hi Sara, welcome back—I sent detailed comments to you and the rest of the group on Jan 20. I've reattached and pasted the original mail below.

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I'd like to start by passing on kudos to Sara for putting this together so quickly—it'll be useful document to guide our field activities over the next few years.

I've added a few comments, updated information and moved around some of the content for better 'flow'. Also, to keep the focus on the monitoring plan itself, I think it best to refer to companion documents that describe things like surveys, classifications etc (they're all in the science update for example) with the exception of a brief overview. I'll use this comment as an impetus to update that document, and combine it with the summary of all the demographic info we

compiled for the COSEWIC review so that this document can be a companion doc for the RP and this monitoring plan (and prevent the need to reiterate this info in other places, where it tends to swamp other information).

My main comment pertains to the purpose of the document—I believe it needs to be made much more clear. As is, it's written as a 'what do we do now that we don't have the IEMR' focus rather than a plan which clearly describes our monitoring commitments as a result of a number of obligations to legislation, and mitigation and our management. My suggestion is to revamp the 'Purpose' section to reflect our obligations under the latter 3 headings. The IEMR info can be pooled with monitoring commitments from other mitigation programs. The info on population abundance, recruitment survival and population trend were collected/ are being collected to fill our commitments under our own ESA and for SARA and wildlife management commitments. I think that once the stage has been set this way, so to speak, there can be some background info on ongoing or current mitigation, IEMR/DND as one section, NALCOR as another, and WD oversight data analysis, mapping and compilation. This can be followed by the section on the background info for Labrador caribou, and then the monitoring plan for the coming years.

I've attached a BN about the IEMR closure if it helps with that part of the description. I've also filled in information on survival and recruitment for the past 5 year interval.

I've also attached the MP with my comments/revisions.

Hope this helps,

IS

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**From:** McCarthy, Sara  
**Sent:** Wednesday, February 03, 2016 10:05 AM  
**To:** Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Schmelzer, Isabelle; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Hello again!

Unfortunately I have not received any replies on the below email/draft. Has the conversation continued while I was away?

Sara

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**From:** McCarthy, Sara  
**Sent:** Wednesday, December 23, 2015 3:36 PM  
**To:** Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Schmelzer, Isabelle; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** Action Item: Boreal Caribou Monitoring Plan

Merry Christmas Everyone!

You may remember that an action item at the end of our Labrador Boreal Caribou Meeting in November was that I was to draft a monitoring plan. Now that we no longer have the financial, administrative, and field crew help from IEMR, it is necessary that we outline our monitoring objectives and work together to keep this piece of work flowing.

Using the Recovery team's draft recovery document, I've prepared a draft monitoring plan that is built to meet the requirements of the recovery document, while balancing the need for data with cost savings.

It's important to remember the scope of the document while reviewing it. It is not meant to be a comprehensive document in terms of all the background, historical data, or future activities related to boreal caribou in Labrador. It is simply a document that outlines what minimum level of monitoring we want to maintain, why, how, and when. There

are no doubt many other activities that will be carried out in relation to Boreal Caribou (ex/ habitat delineations, stewardship initiatives, gene flow studies, etc.).

Some of my comments, questions, and concerns are raised in the document. Any text in red is something I need help with or expect someone to have more information to provide. Please give this a thorough review, and provide your input in track changes/comments.

I will be away Jan 11<sup>th</sup>-29<sup>th</sup>. If I receive all your comments before the 7<sup>th</sup> I will do my best to have a final version ready before I leave. Otherwise I'll get to it in February.

Thanks in advance for your help and hope you all have a wonderful holiday,  
Sara

**Philpott, Holly**

---

**From:** Schmelzer, Isabelle  
**Sent:** Thursday, October 13, 2016 3:14 PM  
**To:** Pardy, Shelley  
**Subject:** RE: Boreal Caribou Critical Habitat--Labrador

Thanks Shelley. I'd suggest reading the Intro and Part 5 for the best approach to CH. The other sections essentially address the 'biophysical habitat component descriptions' that we need to include but are more peripheral to the final maps.

---

**From:** Pardy, Shelley  
**Sent:** Thursday, October 13, 2016 3:11 PM  
**To:** Schmelzer, Isabelle; Doucet, Christine; McCarthy, Sara; Pisapio, John; Miller, Kirsten  
**Cc:** Blake, John; Malone, Rita C.  
**Subject:** RE: Boreal Caribou Critical Habitat--Labrador

Thank you Isabelle,

I had a quick look and it is very obvious you put a considerable amount of time into this and we will have to work very hard to ensure this is reflected in the update to the recovery plan.

I will spend some time this weekend reading this and then thinking about how to incorporate or (highlight is probably more appropriate) this work into the recovery plan. I think we will need to talk about this further.

Great work!!!!...

Shelley

*Shelley Pardy Moores*

Senior Manager-Endangered Species and Biodiversity  
 Wildlife Division

Ph: 709 637 2018

Fax: 709 637 2080

---

**From:** Schmelzer, Isabelle  
**Sent:** Thursday, October 13, 2016 2:30 PM  
**To:** Pardy, Shelley; Doucet, Christine; McCarthy, Sara; Pisapio, John; Miller, Kirsten  
**Cc:** Blake, John; Malone, Rita C.  
**Subject:** Boreal Caribou Critical Habitat--Labrador

Hi all,

Most of you are aware that I was asked to develop and implement an approach to the identification of critical habitat for Boreal caribou over the past few months. To do so, I reviewed the requirements as specified under Federal and Provincial legislation, and gave considerable thought to the type of information/product which could best serve internal needs for EA review and landscape-level planning at the same time.

My intent was to produce a **stand-alone** document that would integrate the 'best available knowledge' on caribou occurrence, landscape composition and habitat selection for Boreal caribou in Labrador and use it to make evidence-based recommendations on core areas within each population range that are essential for viability and conservation of our 5 herds. We have acquired a lot of information, and I have conducted many statistical and spatial analyses, so this document also serves as a science update on the current state of knowledge. It can be used as a companion document to the Recovery Strategy, or as a planning tool/science update that contains information needed for management and of

interest to a much wider audience than for the Recovery Strategy (e.g. to companies conducting EAs, to other management agencies, many of which have released similar documents, to universities etc). The fact that it doesn't have to be explicitly tied to a Recovery Strategy, which often becomes mired in political process, means the information will be more readily available as a planning tool. While I have included more detail than perhaps some of you would like, I am keenly aware that many of these approaches will be peer-reviewed by other experts with NGOs/aboriginal groups/companies etc. and the work needs to be fully transparent.

To address the question of critical habitat identification, I've outlined how the document and associated outputs meet the Federal and Provincial definitions of 'critical' habitat in the 'Introduction and Framework' section. Given that our Provincial definition splits the 'critical' and 'recovery' portions of habitat while the Federal government pools them, I've been clear that the 'Primary Core' areas identified in the report are equivalent to the former while the combination of 'Primary and Secondary Core' areas meets the definition of latter. To be honest, since relatively small (~20%) of each range receives the most intensive use (See Part 5), it's good to have the flexibility afforded under our Provincial legislation to protect these areas more stringently, and to distinguish them from less intensively used areas. Please note Appendix D contains the maps (which I recommend be restricted to internal use for now—A more general version is included in Part 5).

I've pasted the link to the report below. I've left the TOC and Exec Summary as these are likely to be refined as the document is revised.

If you can't access the report on the shared drive (Sara?) shoot me a mail and I'll send it to you.

**M:\CRBK\Wildlife\Shared\Share\Research\ISABELLE\Critical Habitat Working Docs**

Chris, Shelley—thanks for not pestering me for this after Sept 390 came and went...

Isabelle

Isabelle Schmelzer PhD  
Senior Biologist - Terrestrial Ecologist  
Research Section / Wildlife Division  
Department of Environment and Climate Change  
Corner Brook, Newfoundland

709-637-2051 telephone  
709-637-2036 fax

**Philpott, Holly**

---

**From:** McCarthy, Sara  
**Sent:** Wednesday, September 21, 2016 12:39 PM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard; Saunders, Paul  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan  
**Attachments:** Boreal Caribou Monitoring-DRAFT-September2016.docx

Hello All,

The revised draft of the Labrador Caribou Monitoring Plan is ready for further discussion. Please review the attached draft, with particular attention paid to Section 5: the field monitoring plan and implementation schedule. On John Blake's behalf, I'm asking you respond to the following discussion points by October 7<sup>th</sup>. A meeting will be coordinated to follow shortly after that. Thank you.

1. Will we keep 10 collars minimum alive on each of the 3 herds in order to calculate an average survival rate over 3 year periods? This would involve collaring only females, deploying 15-20 collars annually, and would serve to combine the recruitment data with survival estimates to model the population size between census years. **OR** Do we want to collar less animals (including males and females), and conduct population survey estimates more often?
2. Are we logistically capable of meeting our objective decided from question 1 (helicopter time and personnel)?
3. Is there a role for fecal pellet collection in the LBCMP? What is it and does it add to or replace other proposed monitoring efforts?
4. Collar deployment scheduling -- compare the power, logistics, and cost of two options presented for Table 6.
5. Schedule for classifications/population estimates. Does everyone agree with a three year rotation for each of the 3 herds and a population survey every second classification? What about the proposed implementation plan? (Table 7)

**Sara McCarthy**

Ecosystem Management Ecologist  
 Wildlife Division  
 Environment and Climate Change  
 P.O. Box 3014 stn "C", 15 Cherrywood Drive  
 Happy Valley – Goose Bay, NL A0P 1C0  
 (709) 896 – 7932

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**From:** McCarthy, Sara  
**Sent:** Friday, February 26, 2016 2:24 PM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Just a heads up for everyone- I received the 20 Lotek Collars for the Boreal Caribou. I'm currently programming them to record a location every 7 hours, with a VHF that turns on with the local sunrise/sundown times. This will allow for a four year deployment period. If anyone has any concerns with this schedule please let me know asap.

Sara

**From:** McCarthy, Sara  
**Sent:** Friday, February 12, 2016 3:23 PM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

TGIF!

I've drafted a second go at the Labrador Boreal Caribou Monitoring Plan. Thank you very much to Isabelle and to Paul for their constructive comments on the first round. The draft has been greatly improved, but still needs input from everyone, as this is a group exercise and will benefit from all your expertise and reflection. Not to mention, the outlined work would need to be funded and completed by our three sections. I've highlighted a few questions of particular concern. Looking forward to your feedback, and hopefully agreeing on an action plan for the next few years (especially for this winter!).

Note\*\*\* Please keep in mind that this document is not meant to cover all research or analyses conducted by the Wildlife Division in relation to Boreal caribou in Labrador. It is rather, a document to set the stage of the current scenario we are dealing with, and create a plan for implementing and coordinating the field based and expense related activities. The data and samples collected from this plan will provide the information needed to work towards our research questions and goals (which are outlined in the Recovery Document). It is also not meant to summarize historical data (which is summarized in a separate Science Update Document).

Thanks again to you all and have a great weekend,  
Sara

---

**From:** McCarthy, Sara  
**Sent:** Wednesday, February 03, 2016 10:31 AM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Oh thank you Isabelle! I must have deleted it accidentally in my mad rush to get through my emails. Thank you for the feedback and I'll incorporate your comments ASAP  
Sara

---

**From:** Schmelzer, Isabelle  
**Sent:** Wednesday, February 03, 2016 10:11 AM  
**To:** McCarthy, Sara; Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Hi Sara, welcome back—I sent detailed comments to you and the rest of the group on Jan 20. I've reattached and pasted the original mail below.

---

I'd like to start by passing on kudos to Sara for putting this together so quickly—it'll be useful document to guide our field activities over the next few years.

I've added a few comments, updated information and moved around some of the content for better 'flow'. Also, to keep the focus on the monitoring plan itself, I think it best to refer to companion documents that describe things like surveys, classifications etc (they're all in the science update for example) with the exception of a brief overview. I'll use this comment as an impetus to update that document, and combine it with the summary of all the demographic info we

compiled for the COSEWIC review so that this document can be a companion doc for the RP and this monitoring plan (and prevent the need to reiterate this info in other places, where it tends to swamp other information).

My main comment pertains to the purpose of the document—I believe it needs to be made much more clear. As is, it's written as a 'what do we do now that we don't have the IEMR' focus rather than a plan which clearly describes our monitoring commitments as a result of a number of obligations to legislation, and mitigation and our management. My suggestion is to revamp the 'Purpose' section to reflect our obligations under the latter 3 headings. The IEMR info can be pooled with monitoring commitments from other mitigation programs. The info on population abundance, recruitment survival and population trend were collected/ are being collected to fill our commitments under our own ESA and for SARA and wildlife management commitments. I think that once the stage has been set this way, so to speak, there can be some background info on ongoing or current mitigation, IEMR/DND as one section, NALCOR as another, and WD oversight data analysis, mapping and compilation. This can be followed by the section on the background info for Labrador caribou, and then the monitoring plan for the coming years.

I've attached a BN about the IEMR closure if it helps with that part of the description. I've also filled in information on survival and recruitment for the past 5 year interval.

I've also attached the MP with my comments/revisions.

Hope this helps,

IS

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**From:** McCarthy, Sara  
**Sent:** Wednesday, February 03, 2016 10:05 AM  
**To:** Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Schmelzer, Isabelle; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** RE: Action Item: Boreal Caribou Monitoring Plan

Hello again!

Unfortunately I have not received any replies on the below email/draft. Has the conversation continued while I was away?

Sara

---

**From:** McCarthy, Sara  
**Sent:** Wednesday, December 23, 2015 3:36 PM  
**To:** Pardy, Shelley; Miller, Kirsten; Doucet, Christine; Schmelzer, Isabelle; Pisapio, John; Neville, Richard  
**Cc:** Blake, John  
**Subject:** Action Item: Boreal Caribou Monitoring Plan

Merry Christmas Everyone!

You may remember that an action item at the end of our Labrador Boreal Caribou Meeting in November was that I was to draft a monitoring plan. Now that we no longer have the financial, administrative, and field crew help from IEMR, it is necessary that we outline our monitoring objectives and work together to keep this piece of work flowing.

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are no doubt many other activities that will be carried out in relation to Boreal Caribou (ex/ habitat delineations, stewardship initiatives, gene flow studies, etc.).

Some of my comments, questions, and concerns are raised in the document. Any text in red is something I need help with or expect someone to have more information to provide. Please give this a thorough review, and provide your input in track changes/comments.

I will be away Jan 11<sup>th</sup>-29<sup>th</sup>. If I receive all your comments before the 7<sup>th</sup> I will do my best to have a final version ready before I leave. Otherwise I'll get to it in February.

Thanks in advance for your help and hope you all have a wonderful holiday,  
Sara

**Philpott, Holly**

---

**From:** Schmelzer, Isabelle  
**Sent:** Wednesday, August 10, 2016 4:01 PM  
**To:** Pisapio, John  
**Cc:** McCarthy, Sara; Pardy, Shelley  
**Subject:** Some potential slides for EC  
**Attachments:** EC\_request.pptx

Hi folks,

I've put together a few slides that contain the information requested by EC. In some cases I've included redundant information as they may have a preferred approach—this gives them a little flexibility.

Isabelle

**Philpott, Holly**

---

**From:** Brettney Pilgrim <brettneylp@mun.ca>  
**Sent:** Wednesday, June 1, 2016 2:48 PM  
**To:** Schmelzer, Isabelle  
**Subject:** RE: Caribou microsatellite report

Haha..sounds like a plan, talk to you then!

---

**From:** Schmelzer, Isabelle [mailto:isabelleschmelzer@gov.nl.ca]  
**Sent:** June-01-16 1:42 PM  
**To:** 'Brettney Pilgrim'  
**Subject:** RE: Caribou microsatellite report

Perfect—thanks for doing that. Tomorrow morning work for you? My singing voice is better in the am...9:30?

---

**From:** Brettney Pilgrim [mailto:brettneylp@mun.ca]  
**Sent:** Wednesday, June 01, 2016 11:54 AM  
**To:** Schmelzer, Isabelle  
**Subject:** RE: Caribou microsatellite report

Hey Isabelle,

I've had a read over the three papers so whenever you have a chance, give me a shout and we can have a chat (or chant ☺...) about your questions.

Brettney

---

**From:** Schmelzer, Isabelle [mailto:isabelleschmelzer@gov.nl.ca]  
**Sent:** May-30-16 10:04 AM  
**To:** 'Brettney Pilgrim'  
**Subject:** RE: Caribou microsatellite report

Great—I appreciate it. And I meant chat not chant haha

---

**From:** Brettney Pilgrim [mailto:brettneylp@mun.ca]  
**Sent:** Monday, May 30, 2016 9:11 AM  
**To:** Schmelzer, Isabelle  
**Subject:** RE: Caribou microsatellite report

Sure. I will sit down to read the three papers you sent either today or tomorrow so I have a better idea of what's been reported already!

Brettney

---

**From:** Schmelzer, Isabelle [mailto:isabelleschmelzer@gov.nl.ca]  
**Sent:** May-27-16 1:51 PM  
**To:** 'Brettney Pilgrim'  
**Subject:** RE: Caribou microsatellite report

Ahh good point. I guess I was just hoping to put the results into context relative to what's been reported in the studies I mentioned. Perhaps we could chat next week?

---

**From:** Brettney Pilgrim [mailto:brettneylp@mun.ca]  
**Sent:** Friday, May 27, 2016 11:37 AM  
**To:** Schmelzer, Isabelle  
**Subject:** RE: Caribou microsatellite report

Good morning Isabelle,

I can get this information together for you for sure. In order to calculate isolation by distance, I need some information from you, ie. a matrix with the distance between the herds in kilometres. Like I mentioned in the report, with so few individuals, I'm not sure if we'll get any level of statistical significance, or can draw any strong conclusions from this information, but I can definitely take a look for you!

Brettney

---

**From:** Schmelzer, Isabelle [mailto:isabelleschmelzer@gov.nl.ca]  
**Sent:** May-26-16 3:44 PM  
**To:** 'Brettney Pilgrim'  
**Subject:** RE: Caribou microsatellite report

Many thanks for this Brettney. I've read it over and have embedded a few quick comments in the document, mostly for my own clarification.

I wonder if you would be able to clarify the statement 'genetically homogenous' for me a little—could you elaborate a little on how these results ( $F_{ST}$ ) compare to Courtois et al, Boulet et al and the and the Yannic studies which have also assessed Boreal caribou genetic diversity in Labrador? What were the mean number of alleles? (just asking because a table in Serge Couturiers thesis, on which the Boulet et al is based, reports on this—I've pasted a screenshot below). What immigration rates would be required to sustain the level of gene flow observed? Were different allelic frequencies observed at different loci in any of the populations? Is there any evidence of isolation by distance?

Forgive me if you've answered these questions, or if they are too rudimentary—as I said this is new to me, and the only way I can interpret the results is by comparing it to how it's reported in other papers.

Many thanks for your help!

Isabelle

Table 2.2. Number of alleles observed at each locus (A), allelic richness standardized for the smallest sample size with complete scoring ( $n = 11$ ,  $AR_{11}$ ), observed heterozygosity ( $H_o$ ), expected heterozygosity ( $H_e$ ), and mean number of alleles / loci ( $A_{mean}$ ) found in the caribou herds of northern Québec and Labrador (LACJ = Lac Joseph, MEAL = Mealy Mountains, REDW = Red Wine Mountains, JAME = Jamésie, TORN = Torngat, LEAF = Rivière-aux-Feuilles, and GEOR = Rivière-George).  $N$  refers to sample sizes

	LACJ ( $n = 36$ )	MEAL ( $n = 12$ )	REDW ( $n = 20$ )	JAME ( $n = 27$ )	TORN ( $n = 24$ )	LEAF ( $n = 114$ )	GEOR ( $n = 98$ )
<b>RT1</b>							
A	10	7	6	9	9	10	12
$AR_{11}$	7.153	6.826	5.266	7.069	6.821	7.344	7.701
$H_o$	0.861	0.667	0.650	0.852	0.833	0.798	0.724
$H_e$	0.821	0.804	0.731	0.839	0.778	0.833	0.816
<b>RT5</b>							
A	8	6	7	8	10	13	11
$AR_{11}$	5.652	5.826	6.062	7.197	7.479	7.782	6.927
$H_o$	0.806	0.667	0.850	0.885	0.833	0.814	0.732
$H_e$	0.784	0.732	0.749	0.864	0.795	0.834	0.828
<b>RT6</b>							
A	6	4	4	5	9	11	11
$AR_{11}$	4.606	3.917	3.737	4.553	7.298	5.818	5.155

From: [REDACTED]@mun.ca]

Sent: Tuesday, May 17, 2016 3:21 PM

To: Schmelzer, Isabelle

Subject: Caribou microsatellite report

Section 40(1)

Hey Isabelle,

I've finished up your report on the caribou blood samples and it's attached. You can find all of the tables in the excel file. If there is anything I missed, or any other information you'd like to get out of these specific samples, please let me know. As I mention a few times in the report, the main point was to get the lab protocols developed and in place, all the other results are preliminary and we can't draw any strong conclusions due to small sample size, but it's always interesting to take a look-see anyway. Let me know if you have any questions at all!

Brettney

Brettney Pilgrim, M.Sc.  
Research Laboratory Coordinator I | CREAT | Genomics

Room ER3002 | Alexander Murray Building  
Memorial University of Newfoundland | St. John's, NL | A1B 3X5  
(709) 864-3278 | [brettneylp@mun.ca](mailto:brettneylp@mun.ca)

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**Philpott, Holly**

**From:** McCarthy, Sara  
**Sent:** Tuesday, May 31, 2016 3:35 PM  
**To:** Schmelzer, Isabelle  
**Subject:** RE: Defining Core Areas

Thanks, I really appreciate you keeping me in the loop. I'm so out of the loop it's not even funny. Really helps to know what others are doing.  
 If you saw any presentations/posters about adaptive management of caribou herds in terms of hunting quotas/allocation and protected areas at the recent conference please point me in that direction too!

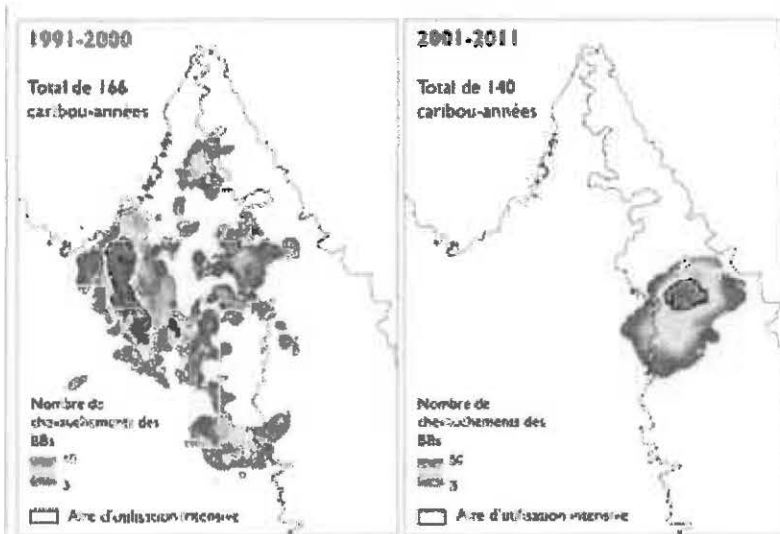
**From:** Schmelzer, Isabelle  
**Sent:** Tuesday, May 31, 2016 3:00 PM  
**To:** McCarthy, Sara  
**Subject:** FW: Defining Core Areas

FYI

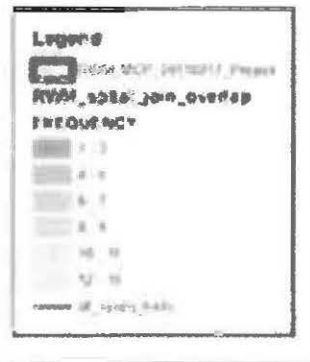
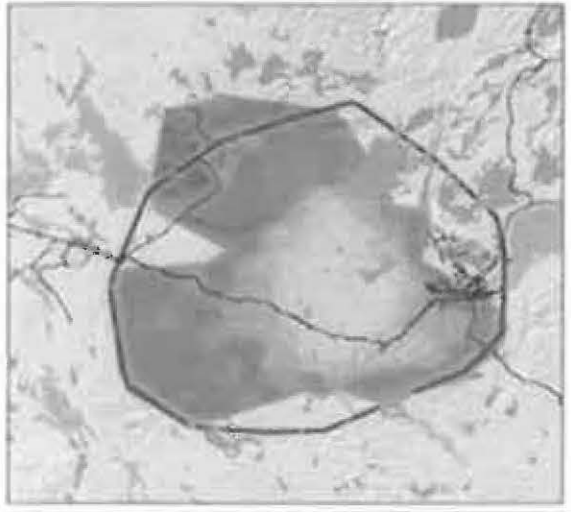
**From:** Schmelzer, Isabelle  
**Sent:** Tuesday, May 31, 2016 3:01 PM  
**To:** 'allen.campeau.1@ulaval.ca'  
**Subject:** Defining Core Areas

Dear Brett,

I really enjoyed the presentation you gave at the Ungava colloquium a few weeks ago. Interesting project and very nicely laid out. I've contacted you regarding one of the methods you used to define core areas (Aire de l'utilisation intensive) in your presentation. As I understand it, you constructed 95% Brownian Bridge use distribution for each animal for the period June to September—have I got that right? Or did you use one BB per animal/seasons combination for each year of monitoring?  
 Secondly, how did you define the region enclosed within the hard black boundary as the 'core' area? The number of overlapping ranges is different in the pre 2000 range as for the post 2001 range, so I'm assuming it wasn't the number of overlapping ranges that was used as a threshold in this case.



The reason I am curious is that I too have been thinking about different ways to define core areas, but for Boreal caribou. I'm not a big fan of just using the 50% kernel as has been frequently used elsewhere. I've also counted overlapping ranges as a way to define them (below), though in this case it's a 'lifetime range' (pooled all locations all years) for caribou monitored for a minimum of 4 consecutive years in a row (the minimum monitoring period required in our case to capture 80% of areas used in a lifetime) to create a 'heatmap' for RWM caribou range (below).



I'd like to be able to define it with a 'hard' boundary, as you have—that's why I'm curious. I'm thinking about overlapping the 98% MCP of individual caribou ranges (pooling seasons) but am uncertain whether I should collapse all years or use each monitoring year as a replicate. I'm also not sure how to demarcate a boundary as you've done above. I'll likely repeat the analysis for calving and wintering areas. I'll be comparing the results to 'typical' use distributions created using telemetry data for each season.

Thank you in advance for any insights you can provide!

Regards,

Isabelle

Isabelle Schmelzer PhD  
Senior Biologist - Terrestrial Ecologist  
Research Section / Wildlife Division  
Department of Environment and Conservation  
Corner Brook, Newfoundland

709-637-2051 telephone  
709-637-2036 fax



**Philpott, Holly**

---

**From:** Blake, John  
**Sent:** Thursday, February 4, 2016 8:59 AM  
**To:** Schmelzer, Isabelle  
**Cc:** Pardy, Shelley  
**Subject:** RE: Boreal/Woodland Caribou Range Planning Jurisdictional Summary

We're not developing range plans for the federal government. We are, or should be, working to complete our provincial recovery plan – an exercise that has been publicly committed to since 2010. If, in doing so, we comply with federal guidelines, fine. From my perspective, we should work as hard to comply with the federal recovery strategy as the federal government has in helping us protect boreal populations from the real threat.

---

**From:** Schmelzer, Isabelle  
**Sent:** Thursday, February 04, 2016 8:55 AM  
**To:** Blake, John  
**Subject:** RE: Boreal/Woodland Caribou Range Planning Jurisdictional Summary

Thanks I just saw that—I must say I don't agree with what's written—we've undertaken several steps similar to what other jurisdictions are doing.

---

**From:** Blake, John  
**Sent:** Thursday, February 04, 2016 8:54 AM  
**To:** Schmelzer, Isabelle  
**Subject:** RE: Boreal/Woodland Caribou Range Planning Jurisdictional Summary

NL is included in the table

---

**From:** Schmelzer, Isabelle  
**Sent:** Thursday, February 04, 2016 8:53 AM  
**To:** Blake, John  
**Subject:** RE: Boreal/Woodland Caribou Range Planning Jurisdictional Summary

Did we provide an update?

---

**From:** Blake, John  
**Sent:** Thursday, February 04, 2016 8:36 AM  
**To:** Schmelzer, Isabelle; Pardy, Shelley; Pisapio, John; Miller, Kirsten  
**Subject:** FW: Boreal/Woodland Caribou Range Planning Jurisdictional Summary

fyi

[Section 40\(1\)](#)

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**From:** [REDACTED]@sasktel.net]  
**Sent:** Wednesday, February 03, 2016 5:44 PM  
**To:** Adrienne Sinclair; Alec Dale; Antoine St-Louis; Barry Smith; Basile van Havre; Beverly LeDrew; Bob McLean; Bob Petrie; Brad Potter; Caitlin Murphy; Carole Lemay; Caroline Ladanowski; Chloe Stuart; Dan Peterson; David Ingstrup; Dean Smith; Drikus Gissing; Francis Bouchard; Grant Hogg; Janis Leblanc; Jim Duncan (james. [duncan@gov.mb.ca](mailto:duncan@gov.mb.ca)); Blake, John; Josee Lanctot; Julie Stewart; Karen Clyde; Kate MacQuarrie; Kent Prior; Kristian Moore; Lyle Saigeon; Lynda Yonge; Marie-Josée Couture; Melissa Joyal; Nadine Crookes; Pierre Berube; Roger Roberge; Sarah Wren; Secretariat; Sue Milburn-Hopwood; Travis Ripley

**Cc:** 'Stephen Virc'; 'Dave Hervieux'

**Subject:** Boreal/Woodland Caribou Range Planning Jurisdictional Summary

CWDC:

You will recall that one of the Action Items that flowed from the National Boreal Caribou Technical Committee report at the Winnipeg CWDC meeting in October was the following:

*NBCTC*

- o *Prepare, in collaboration with the NBCTC co-chairs, a provincial-territorial summary of the current status of range planning activity, and share with CWDC*

Chloe Stuart of ON took the lead in compiling the jurisdictional comments, and sought input from the NBCTC Co-Chairs (Virc and Hervieux). The attached document, current as of the end of 2015, includes the jurisdictional comments for your reading pleasure.

Have a good one.

 Section 40(1)

# Anthropogenic footprint within Boreal caribou ranges, Labrador



# Federal Criteria for Disturbance Management

- 60% probability of stable or increasing growth associated with 35% disturbance threshold

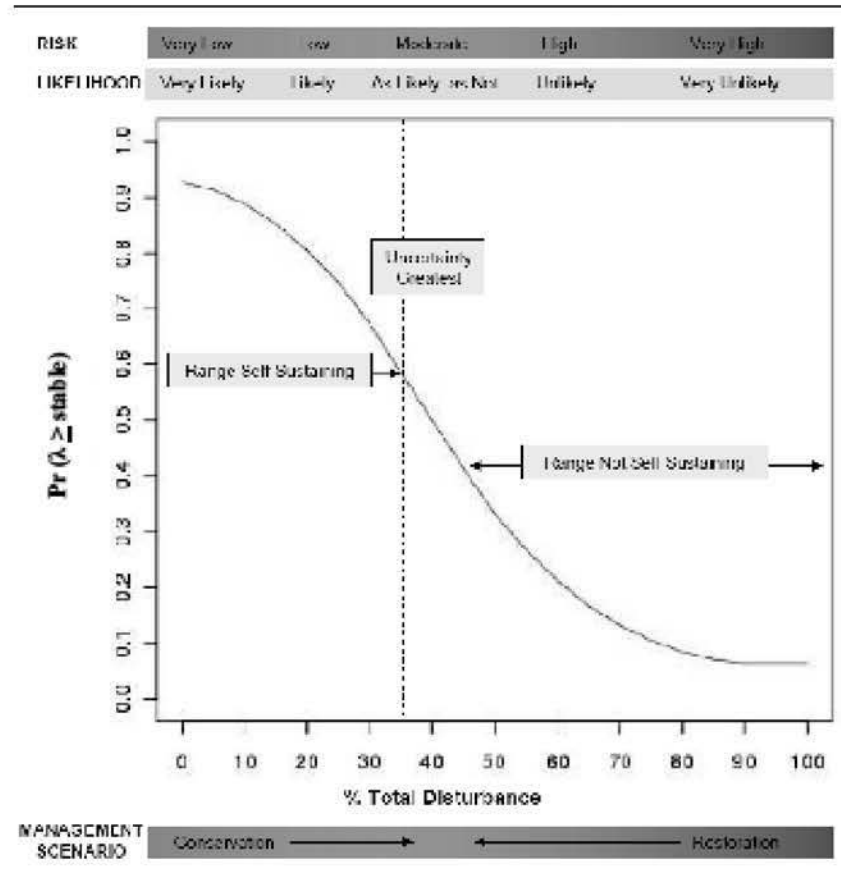
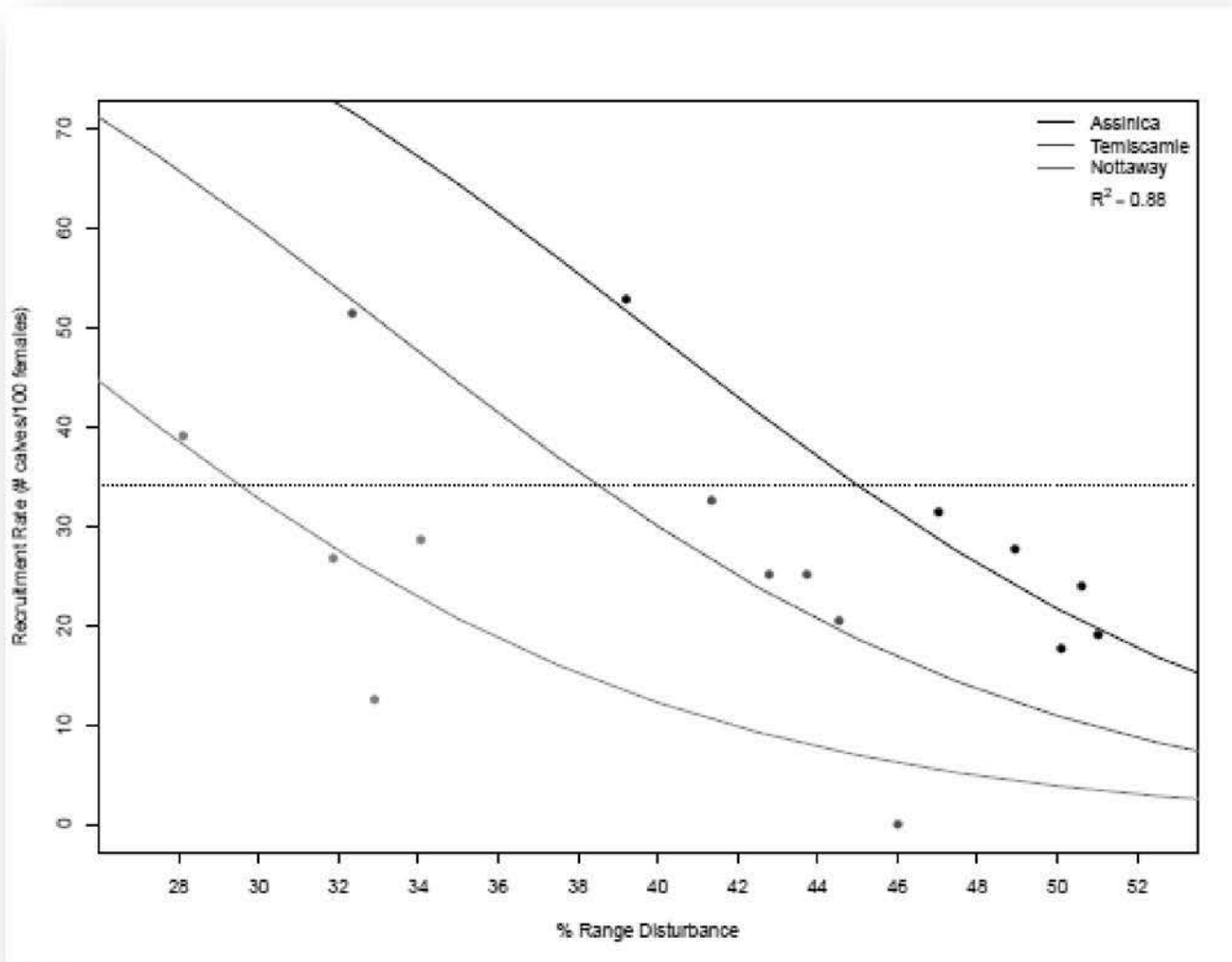


Figure E-1. Disturbance management thresholds: The probability of observing stable or positive growth ( $\lambda \geq \text{stable}$ ) of boreal caribou local populations over a 20-year period at varying levels of total range disturbance (fires  $\leq$  40 years + anthropogenic disturbances buffered by 500 m). Certainty of outcome, ecological risk, and management scenarios are illustrated along a continuum of conditions.

# A word of caution



# Components of the Anthropogenic Footprint

## Fire

- Burns 40 y or less
- Burns 50 or less
- Burns 60 yrs or less

No buffer



Add 500 m →

## Human-modified

- Linear
  - All roads
  - Transmission lines
  - Railroads
  - Maintained trails
- Polygonal
  - Cutovers
- Point
  - All cabins
  - Quarries
  - dams

