Virtual

Date: Monday, April 3rd, 2023

Time: 9:00- 12:00 Pacific

DRAFT Notes

Revelstoke Complex and Central Selkirks

Caribou Technical Working Group
Members and invitees

Genevieve Lachance (moderator)	Christine Friedrichsmeier (notes)	**Guests:** Mateen Hessami Carlie Quinn Kathi Zimmerman	**Guests:** Rob Serrouya	
Richard Martin	Deb MacKillop	Hunter Lampreau	Cory Legebokow	Jenn Meilleur
Rieva McCuaig	Robin Steenweg	Robyn Laubman	Brent Davidson	Colin Bergeron
Aaron Reid	Aubrey Cartier	Leo DeGroot - retired	Marc Steynen	Leah Phillips
Ceryne Staples	Miles Howard	Rhiannon Kirton	Cailyn Glasser	Nikki Heim
Corey Bird	Allison Pagett	Darcy Peel	Brent Davidson	
Tina Donald	Chris Joseph	Dave Nordquist	Steve Murphy	
Caroline Feischl	John Krebs	Bevan Ernst	Jean Polfus	

The purpose of this meeting – carbon, updates and next steps.

1	9:00	Welcome – **Genevieve**
2	9:10	Update from First Nations sub-committee • Corey - Splatsin, Mateen, Steve Murphy had meeting with Simpcw • Mateen – connecting in April for a caribou summit for Indigenous communities/organisations – 2 day event; agreed with messaging with Parks; • ACTION: Mateen to connect with Brent re: cap on elders/community members for the visit?
3	9:30	Translocation of Columbia South and update on capture, External Communication process- **Aaron/Jenn Meilleur/Genevieve** • Aaron talked about the translocation – went really well, but stressful • Columbia South cow translocated – healthy, big, but thin & old; she was the first caribou captured; she's hanging out with the other caribou. Don't know how old she is until Aaron

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can examine tooth photos
- 100% of cows of Central Selkirks – 9
- Mortality on female calf during the second set of captures. Sedated in field, regurgitated in helicopter & no swallow reflex – choked (CPR administered by vet) – no more sedation on calves (but more stressful for calves, muscle damage); also, changed to only one animal per helicopter trip, so it changed the whole capture & ferry plan – tricky, but Bighorn heli did it
- Bull calf wanted but couldn't get him to come out of the trees
- 9 cows and 5 calves to capture – don't have the population to pick and choose
- Don't want to leave any calves in the field without their mother
- Sedation was working sometimes and not others – wore off fast
- Lots of challenges, but changed methods to avoid further issues
- All captured animals have bounced back from their capture and are feeding, urine is clear
- 14 total, including Columbia South; 4 calves
- Minimum known alive is 25 – bulls left behind
- Right on the line of being viable, as long as you don't lose any more adults
- Rhiannon asked if the pen was in the historical calving area- the information she has from Scott McNay (biologist up North) is important for the caribou, is it in the right place?
    - Aaron: the landscape in the South is totally different from the landscape up North. In the South Calving is @ 6000ft, fences aren't tall enough to handle 4 m of snow (caribou can jump) – and can't put them higher because the trees are shorter, sledding materials in with unstable slopes – so pen is not in calving site, but IS the best location. Scott McNay doesn't know the regional issues.
    - Effectiveness review, challenges, viability – everything we need to think about re: pens – we always need to be considering how effective it is; have a procedure
        - Scott noted he didn't consider Klinse-Za has a success story until year 9 after implementation.
        - ACTION: Send material relating to the pen to Rhiannon. Lots of considerations were taken into account with the location of the pen.
- What happened to the dead calf's body?
    - Did a necropsy (to ensure it wasn't drug-related) – it was compression; can be mitigated, but only takes 30 s, when the cow shifts when the helicopter changes direction
    - Can find people who can capture or keep under sedation – hard to find both. Also need people who can lift a cow over their heads. Requires certain personnel qualifications. Will be able to mitigate this issue next time
    - Normally would try to return the body to the natural environment, but the drugs could affect carrion-animals. Brought to landfill, did not consider ceremonial request
    - Can say a prayer for the dead calf when they head to Nakusp on Thursday for the event: https://www.syilx.org/events/honouring-styilc%CC%93a%CA%94-ceremony/
    - "Hosted near Nakusp Hot Springs. Meet at Selkirk Inn at 10:30 am to depart to location." - on poster – open to anybody
    - Dixon is the contact
    - Chris Joseph- Ktunaxa is planning doing their own ceremony
    - Kara Whitehead <mailto:mwhiteheadkarak@gmail.com> - Kara is the lead on the Shepherd Program
- External messaging- Genevieve explained the process starting from the decision at the end of the last meeting that the message would be co-developed between all parties and that Hunter would be the lead.
    - Center for Dialogue helped to draft messages to support Indigenous Nations
    - Message 1 for Parks leadership
    - Message 2 for external distribution

		• Then edited by Mark, Hunter, Cailyn • Then to BC – and Mateen, etc. • BC can't release it to media, but to stakeholders and partners (like Parks). Finalized on Friday by Jenn Meilleur; waiting on approval by Jen Psyllakis. Colin noted that Parks' message will be shorter (cut from the final version) and released today • How does everyone feel about this process for other messaging in the future? • How does Hunter feel? Thinks it's good that the messaging will be released by all parties on the same day. Hunter liked the way this was done. Building it together, looking forward and in a positive manner was an excellent first go. Lines up well with new draft TOR as well.
4	9:45	TOR/Process update- **Hunter Lampreau/Jenn Meilleur** • First meeting about TOR with reps from all the Nations as a sub-group • Process was agreed-upon in the group • Next meeting on Wednesday • Members will pick out what they like from other TORs and decide upon • When drafted and polished, it will be presented to the larger group • Can have more or different members of this group within the TOR group, just let Genevieve know • Hunter re-drafted the TOR – can look at it on Weds afternoon
5	10:00	Facilitator- **Genevieve** • First list of potential facilitators has been drafted • Can have sub-group of FN reps work on it? Or a different/smaller group? • Decision: it is ok to have the smaller sub-group work on hiring facilitator. • An outside facilitator – no conflicts of interest • Marc opined that he wanted a *known* person with no conflict of interest, not an outside/unknown person • Rhiannon noted that last time group agreed not to have anyone from the communities involved, and no prior connections so as to be completely neutral, preferably FN. Marc agreed. • Will talk about it on Weds
6	10:15	Potential workshop led by Center for Dialogue- **Lindsay and Robert** • Was not discussed- Robert and Lindsay not present
7	10:30	Update on carbon **- Deb Mackillop** • Looking at what's missing • Will talk about AAC, carbon benefit, socio-ec considerations (if available) • Presented Carbon in Caribou Habitat and Old Growth – see Deb's presentation • Finally, not just caribou vs timber, environment vs jobs • Realization of climate change and conservation as an opportunity – think of what we could do with $100M from a rich philanthropic company • Have to show that the money is needed • Forestry Revenue Sharing for Nations (8% +/-) - cash for logging • Atmospheric Benefit Sharing (80%) - cash for carbon • 2 different markets – compliance and voluntary. Has always been voluntary but moving towards compliance • BC Forest Carbon Offset Protocol 2.0 being released shortly • Avoided harvest – get paid for keeping carbon in the existing trees (conservation) • Based on 25 years – that's harvestable, must be >60 year old trees (using THLB) • Huge reduction in area of harvestable THLB. We've already logged over 50% of what is harvestable (so, not available for the 25 year window) • Will need to harvest all left old growth/caribou habitat in the next 20 years, before the AAC hits the "fall down" (already 10 years into it)

- Therefore we NEED to consider the carbon offsets to save caribou habitat
- $1.4M/year (tier 3), $3.2M/y (tier 1) – over 25 years @ tier 1, it's worth $810M (with increasing carbon offset value at $15/tonne to 2030)
- Kamloops TSA tier 1, 2 has biggest impact; Revelstoke for tier 3
- Revelstoke has highest impact overall
- Matrix old growth (OG): TAP deferral polygons
- Value for tier 1 over 25y is $1.6B (social cost of carbon)
- OG has bigger impact in tier 1
- BC govt is primary purchaser, and not living up to prospects
- Still have to SELL the credits to see the money
- See the numerous links in Deb's presentation

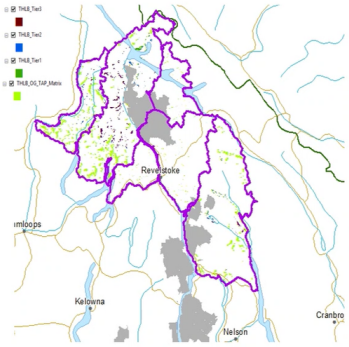
Take home messages #1

Tier 1 has the best chance for self-sufficient caribou populations
- Highest area for protection
- Most restrictive matrix management

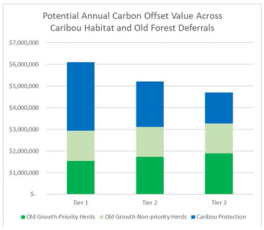
- highest impact on timber
  - Close to double the area impacted compared to Tier 3
- most potential for carbon and conservation funding

Tier 3 has opposite pros/cons
- Lowest protection for caribou
- Highest risk to caribou
- Lowest, but still substantial, impacts on available timber for harvest
- Lowest carbon offset sales potential

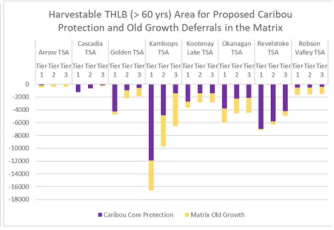
Including **old forest protection** within the matrix with caribou core habitat protection adds considerable carbon and caribou conservation value
- Old growth deferral areas could contribute significantly to carbon offset potential
  - They have more carbon offset potential value than protection scenarios in Tier 2 and Tier 3
- Could also consider other values like watersheds, salmon streams, or other species of concern for carbon offsetting (not included here)



Carbon $



THLB Area



MacKillop, Deb J FOREX

Take home messages #2

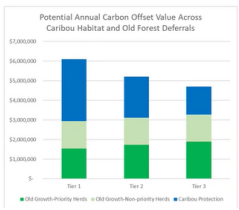
- The **Conservation Economy** has substantial impacts on timber supply.
  - Based on Timber Supply Analysis assumptions, the majority of remaining old and mature forest within the THLB in caribou herd boundaries is planned for harvest within the next 20-30 years.
- **Carbon has potential to provide considerable revenue**, but pricing is uncertain
  - Future cost of carbon is unknown
  - At low pricing, the opportunity looks to be between a minimum of:
    - ~ $4.7 mil/yr (Tier 3 + OG) to $6.1 mil/yr (Tier 1 +OG)
  - At Carbon Tax pricing (social cost of carbon), value increases from
    - Between $1 billion and $1.5 billion over 25 years
      - (increasing value from $65 → $170/t from now to 2030)
  - **Assuming there is a market for this much carbon**
- **Forest Revenue Sharing** is variable
  - Depends on fluctuating stumpage rates and harvest levels
  - Results in losses to caribou habitat and old forests
- Atmospheric (carbon) benefit sharing and Forestry revenue sharing *could* provide **similar economic value to Indigenous Nations**
  - 80% of carbon value can be sold by Indigenous Nations
  - 8-10% of stumpage value is shared with Indigenous Nations
- Full economic cost/benefit has not been done

Comparing Annual Atmospheric Benefit and Forestry Revenue Sharing across Price Gradients

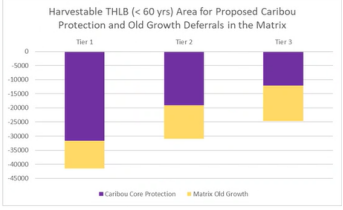
Carbon Offset Pricing	Atmospheric Benefit (Carbon) Sharing (80%) (millions)	Stumpage Rates	Forest Revenue Sharing (10%) (millions)
Carbon Value $15/t	$ 4.9	Stumpage $90/m3	$ 4.9
Carbon Value $12/t	$ 3.9	Stumpage $72/m3	$ 3.9
Carbon Value $25/t	$ 8.1	Stumpage $150/m3	$ 8.1
Carbon Value --> $170/t	$ 49.8	Stumpage $920/m3	$ 49.9

- Stumpage rates are the average stumpage value that results in similar revenue sharing as could be obtained from carbon offset sales at set pricing.
- Values ($) are based on carbon (tCO2e) and volume (m3) for caribou (Tier 1) and old growth deferrals, combined.

Carbon $



THLB Area



MacKillop, Deb J FOREX

- Question: do you have a correction factor for reconciliation values? i.e., the cost of infringement due to not protecting ecosystems, old growth and caribou habitat is X amount. The blueberry decision was hundreds of $ millions, making the case for tier 1 should include highest impact on timber supply, but least likelihood to land the province in litigation due to infringement.
  - This depends on socio-ec factors and assessment; Deb did not do this. Fisher

		habitat socio-ec analysis (available) would be similar. • Worth more money to conserve tier 1 over tier 3 • Current forestry benefit model isn't having a positive benefit to FN communities • BC is comfortable compensating licensees for reductions, but they should be compensating Nations as well – otherwise, it's inequitable. Licensees have "made their money" • Not just FN communities, but all communities – loggers can find work in restoration economy too • Nations who want to have logging businesses – need to see how they can fit in • Continuing carbon dynamics research in old growth (current models (Canada for above/below ground carbon) do NOT work well in old growth forests. This research is specifically to get better data for these models) – Colin noted a 40% error • $100K contract – but can only sample 40 sites with that – need to be judicious with selection for ancient, old, mature and potentially harvested sites • Lots of opportunity for field work – Deb doesn't have a job description yet, but will circulate when she has it • Colin: calculation based on National Canadian Budget Model? No, based on VRI biomass values (only above ground, not soil or other carbon pools). This work was just for ballparking feasibility. Then you can spent the $100K to get the analysis to be able to sell it. Would be a several year process. • Colin: retention harvesting – caribou will still use partial cut/retention cut areas, so how can we attain both goals • Deb has research on this too, to do estimates to combine harvest with carbon • Potential issues with moose (re: caribou & wolves) – need to assess how prioritize timber over all other values
	11:00	Break
8	11:15	Tiers update – what information do we have, what is missing, and process forward - **All** Roundtable – working on comms package for leadership; updates • Aubrey – comms pkg - not comfortable yet, but can get there • Brent – comms pkg - needs to be more succinct but otherwise good • Caroline – funding for program confirmed; F2F in May; comms pkg – add stuff on carbon, will need some help, can present in May • Chris – reviewing TOR, carbon credits, Pacific Woodtech building relationships; working on translocation; Lindsay Kara stewardship program; comms pkg – still need to get it to leadership, want to present carbon credit too. • Corey – no updates, ok to meet F2F in May, comms pkg – need more time with it to be able to relay the info to leadership in a short amount of time - & not coming to them with an ask (which they prefer for communications with leadership, carbon offsets info is key • Marc - comms pkg – in favour of highest protection, the carbon work is helpful – need to get licensees/BCTS/MoF to the table to discuss. Need to make it much more digestible to present to leadership. Socio-ec, recreation needs to be considered. Summit happening week before F2F meeting – will be an issue for many in this group. Heartened by the Great Bear Rainforest work with carbon • Columbia Mountain Institute workshop https://cmiae.org/event/responsible-recreation-pathways-practices-and-possibilities/ • Deb – would be helpful to have $ revenue info to develop info to share with leadership. What other types of info do FN need? • Money – recreation, carbon • Need to know what the alternatives to forestry are • But will lose 40% of AAC coming – can't put it off and deal with it then. Economics people can help with this info • Would be great to have this information feed into the 3 scenarios. Also will depend on the herd – recreation in Frisby-Boulder • Need to know forestry, recreation, carbon, restoration $ for each area/scenario

		• Need to base it on current data, if FN on this call are willing to provide their economic data. ACTION: Genevieve to coordinate • Mateen - comms pkg – presentations are helpful, need a lot more work done to get to a habitat protection scenario that everyone agrees on; • ACTION: Mateen/ Genevieve to work with Deb to get carbon info to put into the package. • Rhiannon – working with Steve and Caroline. April will be bad for a F2F meeting, May would be better. comms pkg – Marc and Corey covered it. Can't make a decision when it's vague. Need to have concrete options, with timelines (Deb – can't get that; will need the direction to do that work! Asking for direction, and will need to be at the G2G level). What are we asking? Tier level? For each herd? May need to break options out for each herd using Bevan's tool. • Kathi – want to get to a place where we can co-develop management strategies. Want to protect as much habitat as we can, but it's not always feasible. Absolute certainty isn't possible, but need to build these scenarios together, and understand what's important. • Steve – all been said • Cailyn – N/A, will email her thoughts • Colin – Kootenay Connect meeting – building a web app to help stakeholders to understand wildlife connectivity. Asked Parks, BC re: info of caribou to contribute – would like to discuss this at the next meeting. Similar to Bevan's work, some synergy to be gained. • Also, Parks wants a short debrief on translocation decision-making process – what went well, how we can approach this better. • ACTION: Colin to send Genevieve an email with an outline of what he needs for Parks' requested debrief on translocation decision-making process.
9	11:55	Other updates and next steps: Timeline/process**, Genevieve/All** • Next meeting will be virtual • ACTION - ALL: what would help you to take this package to your respective leadership? What info would they like to make a decision? What concerns do Nations have? Email Genevieve to compile, so Deb can get what's needed for you to present the info.
10	12:00	**Adjourn**

ACTIONS/DECISION SUMMARY

New items

- ACTION: Mateen to connect with Brent regarding: a cap on elders/community members for the visit.
- ACTION: Aaron/Genevieve are to Send material relating to the pen to Rhiannon. Lots of considerations were considered with the location of the pen.
- Decision: it is ok to have the smaller sub-group work on selecting a facilitator.
- ACTION: Mateen/ Genevieve to work with Deb to get carbon info into the package.
- ACTION: Colin is to send Genevieve an email with an outline of what he needs for Parks' requested debrief on the translocation decision-making process.
- ACTION - ALL: what would help you to take this package to your respective leadership? What info would they like to make a decision? What concerns do Nations have? Email Genevieve to compile, so Deb can get what's needed for you to present the info.

older items- not completed

- **Mateen** will get back to the group on percentage of UD is on top of current protections. We have the data, will create a slide
- **Deb and Genevieve** to bring this question (Can we work with Meike to push a pilot case through right now to test it to advance compensation under the 2 funds mentioned?) to the economists- Mieke has left
- **Mateen** will look at suggestions to explore making Core and Matrix slides, clearer, the current state, and Pros/cons for caribou for each option. Risks/costs for each option. federal process/threshold. Cumulative

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Effects - More to come in Jan mtg

- **Genevieve** seeking Policy/Legislation people to come to speak to this at a next meeting
- Robyn L.: Hwy 23 - concerns for caribou - to discuss later meeting?
- **Hunter** to write a paragraph on vision towards decision making? for Genevieve to include in the summary doc. Not completed

older items- completed

- **Genevieve** to work with **Aaron and Colin** to provide a background summary of the translocation information and put it out to those Nations (only?) who may have a recommendation for Aaron. Need answer within 2 weeks. Could be a vote.
- **Deb** to set up a presentation from GBR on carbon off-setting
- **Aaron** to update the options paper and distribute
- **Genevieve** to follow with anti-racism with a contract to support the engagement process
- **Genevieve** is still waiting on some Contribution agreement to offer funding in support of collaboration with TWG
- **Jean Polfus** suggested that Mateen creates a table to clarify the options, management, and implications to caribou- Completed by Genevieve-
- **Rob, Kathi, Leo, Aaron, and Bevan** to work on the rationales of the different scenarios proposed. Why is 95% better than 75% or why is protecting High and Moderate better than just the Low option, etc? Will be completed by the next meeting in January
- **Genevieve** - ensure we are stating clear objectives at the start of the document- Mateen completed
- **Genevieve/Bevan** to create a map to add a layer for cat skiing, heli-ski tenures, and snowmobile closures to the scenario - will be added to the presentation
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