



Comments and Recommendations from Wildlife Conservation Society Canada (WCS Canada) regarding the Recommended Plan for the Dawson Planning Region

December 8th, 2022

Comments submitted electronically to 3Pikas @jacob@3pikas.com

Dear Government of Yukon and Tr'ondëk Hwëch'in Government,

Thank you for the opportunity to submit our comments and recommendations regarding the Recommended Plan for the Dawson Planning Region. We appreciate the opportunity to take part in this public review of the document.

We submit these remarks in our capacity as conservation scientists on behalf of Wildlife Conservation Society Canada. WCS Canada (www.wcscanada.org) is a national non-government organization with a mission to save wildlife and wild places in Canada through science, conservation action, and by inspiring people to value nature. WCS scientists lead research and policy development in northern boreal and Arctic regions. Our expertise is in land use planning, impact assessment, and conservation and ecosystem science research focused on intact forests and aquatic ecosystems in northern Canada. We are affiliated with global WCS programs in more than 60 countries in the world, and are active at the science-policy interface in Canada and internationally. More specifically, we are conservation biologists with many years of experience in strategic land use planning and in cumulative effects research in western Canada.

We thank the Commission, and the planning staff, for the collective hard work in developing this Recommended Plan. Many of the issues and topics are highly contentious, with clashes of values and cultures. We understand that the resulting Recommended Plan is unlikely to satisfy all interests, and that our set of interests is one of many.

Our comments are in two sections: Overall Assessment, and Detailed Comments. The former covers the most important themes and topics we want to raise regarding the Plan as a whole. The second lays out observations and comments following the page and paragraph structure of the Recommended Plan. There is obviously some overlap, with the Detailed Comments often providing more extensive discussion.

OVERALL ASSESSMENT

Our overall assessment is that the Recommended Plan for the Dawson Region is a much stronger plan than the Draft Plan in terms of its support for conservation values and for the protection of water, wildlife and land. There have been several changes that warrant support, including legally designating all Special Management Areas (SMAs) for protection; recognizing the United Nations Declaration of Indigenous Peoples (UNDRIP); recognizing the importance of climate change in the region; nominating Wetlands of Special Importance for protection, and; removing the different threshold levels in the Fortymile caribou corridor based on elevation. These changes are definitely a step in the right direction, but based on our expertise, we still assess that several parts of the planning region and associated issues remain

concerning and leave too much of a questionable future. In particular, there are three modifications that we recommend the parties to consider:

1. Remove all existing mineral tenures from Special Management Areas (SMAs) to allow for true protection as per the International Union for Conservation of Nature's (IUCN's) recommendation of protecting 30% by 2030 to slow down the crises of biodiversity loss and buffer the effects of climate change.
2. Clearly link thresholds of human footprint to the published scientific literature and bring in aquatic ecosystems, using water quality as an indicator of salmon habitat quality, as part of the cumulative effects framework for Integrated Stewardship Areas.
3. Include a clearly laid out Implementation Strategy that can be readily implemented by the Parties.

Our overall assessment is organized in three themes: Protected Areas, Stewardship outside Protected Areas, and Implementation.

PROTECTED AREAS

Protected Areas are the most influential tool society can employ in confronting the biodiversity crisis, because they can conserve self-sustaining populations of most species when they cover appropriate ecological scales and when they represent the diversity of ecosystems and species in a region. Protected Areas are also a very valuable and necessary tool in confronting the climate crisis. This is because they store vast amounts of carbon that continually needs to be removed from the atmosphere, and, when appropriately situated, they provide means for species to adapt by shifting their distributions. Our thoughts focus on three issues: what proportion of the region would be protected? Are protected areas well located to provide comprehensive conservation? Is the proposed protection really going to work as protection?

Proportion: Proposed (34.1%) and already existing (Tombstone Territorial Park - 5.3%) Protected Areas (Special Management Areas (SMAs) in the Plan) cover a total of 39.4% of the region. This is well in line with the Canadian national goal of protecting at least 30% of terrestrial and freshwater ecosystems by 2030, and is a significant gain compared to the current level of regional protection at 5.3%. So, the Recommended Plan is a positive step forward for conservation (but see "Likelihood of protection working", below).

However, the Tr'ondëk Hwëch'in (TH) government has recommended that 60% of the region be in SMAs, to provide sufficient likelihood that the key ecosystem services that the First Nation relies on economically and culturally will continue to be available. The difference between 39.4% and 60% is large (i.e. 20.6%), and difficult to reconcile. In the absence of actual increases in the SMA quantum in the Plan, any reconciliation will depend on the ability of the Plan to conserve the vulnerable values and ecosystem services on at least 20% of the region outside SMAs (i.e. in Integrated Stewardship Areas (ISAs) where some levels of industrial development are permitted), and allow TH to have an equal voice alongside Yukon Government in implementing the plan and in the management of public resources in ISAs. Principal among those values are caribou populations, salmon habitat, and other harvesting opportunities. We comment on this under "Stewardship outside Protected Areas" below.

Locations of Protected Areas: In many respects the proposed SMAs are well located. Those in LMUs 1 Tthetäwndëk (Tatonduk) and 4 Tsey Dëk (Fifteenmile) are contiguous, forming a large enough block to comprehensively cover many ecosystem processes (e.g., fire regimes, watershed integrity). They also link other protected areas in Yukon (i.e. Tombstone Territorial Park, and SMAs in the upper Ogilvie drainage) to the Yukon-Charley Rivers National Preserve in Alaska. They also encompass significant portions of the known distributions of plants and invertebrates that are endemic to the Yukon-Alaska region (because of Beringian origins) and many of which are rare. These proposed protected areas would also take in two Key Biodiversity Areas (Chandindu River, and Fifteenmile River)¹ identified for the conservation of some of these rare species. Protection for LMU 10 (Tintina Trench) is well positioned to secure Indigenous harvesting, and protection for LMU 20 Łuk Tthe K'ät (Scottie Creek Wetlands) is well suited for conservation of important wetland values. Protection for LMU 16 Wëdzey Nähuzhi (Matson Uplands), largely with caribou conservation in mind, is a step forward, but is very small in relation to the needs of the target Fortymile caribou herd. Consequently, conservation of this herd will depend on extensive ISAs (see our comments under “Stewardship outside Protected Areas” below).

The Recommended Plan misses an opportunity to significantly improve representation of the Klondike Plateau ecoregion which is currently not represented in Yukon's protected areas. In fact, the Plan does not directly address ecological representation at all. The Plan's proposed SMAs fall mainly in North Ogilvie Mountains, Mackenzie Mountains, and McQuesten Highlands ecoregions. The first two of these are already well represented in existing protected areas (Tombstone in this region and others in Peel and North Yukon regions); representation for the McQuesten Highlands is a step forward. The proposed SMAs for Matson Uplands Wëdzey Nähuzhi (LMU 16) and Scottie Creek Wetlands Łuk Tthe K'ät (LMU 20) are in the Klondike Plateau ecoregion. These will provide the first representation for this unrepresented ecoregion, which is a step forward. However, they are small, and cover only about 5% of the Klondike Plateau ecoregion, in contrast to an optimum target of 30% (given that globally ratified targets for protection call for a fairly equitable spread of the total 30% across the diversity of ecoregions). This ecoregion only overlaps other planning regions to a small extent, so the Dawson Plan is the only significant opportunity for protection of this ecoregion.

There is an opportunity to improve protection in the Klondike Plateau ecoregion, because the Recommended Plan proposes Wetland of Special Importance (WSI) status for the Ladue River drainage (a portion of LMU 19 Tädzan Dëk – White River). This proposal is not well enough described in the Recommended Plan, and needs to explicitly lay out the entire Ladue River *watershed* (in Canada) as deserving this status. **We recommend that the Ladue River watershed be identified as an SMA, to truly conserve what is the only remaining, largely undeveloped, headwater river ecosystem in the Klondike Plateau.**

Likelihood of the proposed protection actually working: It is necessary to ask whether or not the SMA status in the Recommended Plan will actually provide protection because the Plan proposes to allow development of existing industrial tenures, including mineral claims, within most of the SMAs, totalling 27.8% of the region. Only 11.6% will effectively disallow mineral tenures outright, but new forestry and agricultural tenures will still be allowed in LMU 10 (Table 1).

¹ See map of Canadian Key Biodiversity Areas at: <https://kbacanada.org/explore/map-viewer/>

Table 1. Percentage of Planning Region in each of the LMUs by different classes of SMA designation.

LMUs (Numbers & names)	SMA's with Full protection from mining	SMA's with Existing Mineral Tenures Allowed	Thresholds of Human Footprint fall within what ISA Class?
5. Tombstone Park	5.3*		n/a
1. Tthetäwndëk, Tatonduk		20.0	1
4. Tsey Dëk, Fifteenmile		6.9	1
10. Upper Klondike	4.5**		2
16. Wëdzey Nähuzhi, Matson Uplands	1.8		n/a
20. Łuk Tthe K'ät, Scottie Creek Wetlands		0.9	2
TOTALS	11.6	27.8	
GRAND TOTALS	39.4 (34.1 without Tombstone)		

* Existing protected area in which development of historical mineral claims has been rejected by YG in recent years

** No mineral tenures, but agriculture and timber harvest may be allowed

Only already existing mineral tenures, and no new ones, will be considered in these SMA's. But, even so, the mere presence of active mineral extraction may mean that these are not recognized internationally as true protected areas, and therefore would not contribute to Canada's goal of 30% by 2030. Also the active mineral extraction would most likely be based on new road development, which leaves the questions of public access, ancillary access, and decommissioning to future processes.

The cumulative levels of human footprint to be allowed in these SMA's must fall within limits for ISA classes 1 or 2 (the most restrictive two classes) (Table 1). So, if any mineral exploration and extraction on the existing tenures is to be allowed, restriction of footprint within limits set by these classes will be precautionary. However, only class 1 has strong chance of sustaining caribou (see "Stewardship Outside Protected Areas" below). And, within a very large LMU such as Tthetäwndëk Tatonduk, intense localized development could still be accommodated within LMU-wide measures of footprint based on % surface area and km/km² density. Because of the risk of intense localized development forcing caribou and other sensitive species from parts of the SMA's, **we recommend that the Plan removes all existing mineral tenures from Special Management Areas (SMA's).**

STEWARDSHIP OUTSIDE PROTECTED AREAS

Outside SMA's, the region is divided into LMU 3 Chu Kon Dëk (Yukon River corridor) for future sub-regional planning, and many LMUs classed as Integrated Stewardship Areas (ISAs). **We strongly support sub-regional planning for LMU 2. We also think that the Stewart and White River valleys deserve their own corridor status, with discrete LMUs, given their prominence as travel routes for humans and salmon, plus their relatively high ecological productivity and ecosystem diversity.**

Integrated Stewardship Areas (outside SMAs) cover 57.5% of the Plan region. The success of this Plan, for sustainability of ecological and cultural resources, will therefore depend a lot on how ISAs are stewarded. The main tools for stewardship are: thresholds for cumulative effects (CE) indicators; spatial buffers and timing windows on key habitats, sites and species occurrences; the management of ground access routes with respect to routing, public use and decommissioning; and General Management Direction more broadly.

Cumulative Effects Indicators and Limits (Thresholds): The Cumulative Effects (CE) framework lays out a complex array of four classes of ISA, and three levels of footprint intensity (Precautionary, Cautionary, and Critical) for two indicators (% surface disturbance, and linear feature density (km/km²)). However, of various ecological values of interest to citizens in the region and beyond, only caribou is addressed using cumulative effects assessment, with limits on human footprint being put forward for the two indicators.

This planning process has decided not to include in the CE approach values associated with water and therefore salmon habitat. This is a huge disappointment and leaves a lot of concern for ongoing high risk of impacts from placer mining on water quality. The *implication* (though not explicitly stated) is that the existing Fish Habitat Management System (FHMS) put in place to deal with placer mining will be sufficient to deal with salmon issues for the near future; the Plan suggests that further research and monitoring will come up with better solutions. The FHMS includes water quality objectives and a monitoring regime with lots of data. Why haven't those been built into a CE indicator and thresholds approach for streams with potential salmon habitat? In our own analysis of the FHMS's publicly available data on water quality in the Goldfields region of this Plan (presented to the Commission in our initial comments on the draft plan), we found that surface disturbance needs to stay at a 0% threshold to maintain 'high' salmon habitat sensitivity as per the Department of Fisheries and Oceans Canada (DFO) water quality objectives; 11.3% threshold for 'moderate' salmon habitat sensitivity, and; 63.7% for 'moderate to low' salmon habitat sensitivity. We also found that a road density threshold of 0.0 km/km² was needed to maintain water quality within limits of 'high' and 'moderate-high' salmon habitat sensitivity as derived by DFO and 0.84 km/km² for 'moderate – low' salmon habitat sensitivity (our report can be provided upon request). **One can build on this analysis to adapt to other areas within the Dawson region and we recommend that a scientific enquiry and working group do so.**

The Plan tries to deal with wetlands and with salmon through General Management Direction, such as no development in bogs or marshes (which is good), and a 50% development cap on fens (which is unlikely to be effective).

Here we reproduce Table 3-2 from the Recommended Plan, for comparison to scientifically assessed limits on development, in our assessment of whether the CE approach is likely to work for terrestrial values. This Table provides the Plan's quantified thresholds, or limits, to two indicators of human footprint.

Designation	Management Intent	Precautionary		Cautionary		Critical	
		Surface (%)	Linear (km/km ²)	Surface (%)	Linear (km/km ²)	Surface (%)	Linear (km/km ²)
ISA 1	Lowest development	0.0625	0.0625	0.1875	0.1875	0.25	0.25
ISA 2	Low development	0.25	0.125	0.75	0.375	1.0	0.5

ISA 3	Moderate development	0.5	0.25	1.5	0.75	2.0	1.0
ISA 4	Highest development	1.0	0.5	3.0	1.5	4.0	2.0

The main questions are whether or not the quantified limits are supported by science, and which of them will be of any use for sensitive terrestrial wildlife species (especially caribou) for which they are designed. The published literature says the following:

- Caribou – barrenground²: negative impacts on population size when footprint above 0.8 km/ km².
- Caribou – barrenground³: declining cow and calf numbers when footprint above 0.3 km / km².
- Caribou – mountain⁴: reduction in calving rates by 20% when footprint above 0.12 km / km².
- Moose – Nova Scotia⁵: population declines when footprint above 0.6 km/km².
- Grizzly Bear – British Columbia⁶: habitat avoidance, higher mortality and lower reproduction when footprint of motorized access roads exceeds 0.6 km / km².

Comparing these published limits to the “critical” values in the right-hand column of the Table indicates that only ISAs 1 and 2 have strong likelihood of sustaining caribou and grizzly bear populations. A precautionary approach (one of the principles for this Plan) would be to apply ISA 1 status to all LMUs deemed critical for caribou conservation. **Accordingly, we recommend that LMU 21 Wëdzey Tay (Fortymile Caribou Corridor) and LMU 14 Tay Dëkdhät (Top of the World) be reclassified as ISA 1.**

We return now to the gap identified earlier between the proposed proportion of protection in the Plan (39.4%) and that proposed by the Tr’ondëk Hwëch’in (60%), a gap of at least 20% of the region. Can ISAs conserve the core ecological values (caribou, salmon, wetlands, moose) that the Plan identifies, over at least 20% of the region. The answer is probably no for salmon and wetlands, because these values are not addressed in the CE approach, and because much of the likely development activity in ISAs (i.e. placer mining) will be targeting valley-bottoms, streams and associated wetland habitats. Wetland buffering of 20 m (proposed in the Recommended Plan) ignores the precautionary principle and will be less than is required to remove large risk of sediment inflow overland based on published science (see Detailed Comments below). The proposed attempt at true protection of some wetlands (Scottie Creek, Ladue, Flat Creek), by way of the Wetlands of Special Importance (WSI) designation, could be very valuable. However, one of these (Scottie Creek) falls within an SMA where existing mineral tenures would be allowed to proceed. The same would appear to be true for the Ladue River which is in LMU 19 Tădzan Dëk (ISA 1), but the text does not specify, nor does it suggest geographical boundaries for this WSI. Those boundaries should be the entire watershed. Overall, there are few constraints on impacts of the placer

² Vistnes, I., Nellemann, C., Jordhøy, P. and Strand, O., 2001. Wild reindeer: impacts of progressive infrastructure development on distribution and range use. *Polar Biology*, 24(7), pp.531-537.

³ Nellemann, C., and R. D. Cameron. 1998. Cumulative impacts of an evolving oil-field complex on the distribution of calving caribou. *Canadian Journal of Zoology* 76:1425–1430.

⁴ COSEWIC. 2014. COSEWIC assessment and status report on the Caribou Rangifer tarandus, Northern Mountain population, Central Mountain population and Southern Mountain population in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxii + 113 pp. (Species at Risk Public Registry)

⁵ Beazley, K.F., Snaith, T.V., Mackinnon, F. and David, C., 2004. Road density and the potential impact on wildlife species such as American moose in mainland Nova Scotia. *Proceedings of the Nova Scotian Institute of Science*.

⁶ Proctor, M.F., McLellan, B.N., Stenhouse, G.B., Mowat, G., Lamb, C.T. and Boyce, M.S., 2020. Effects of roads and motorized human access on grizzly bear populations in British Columbia and Alberta, Canada. *Ursus*, 2019(30e2), pp.16-39.

mining on water quality and wetland integrity, and very few riparian/wetland systems will remain intact outside of SMAs.

The answer is a conditional yes for caribou and moose because ISA 1 comprises 15.7% of the region, and ISA 2 comprises 13.1% of the region. The Porcupine and Hart River caribou herds are most secure. The Clear Creek caribou herd remains insecure with this Plan because much of its range is in ISA 4 (LMU 9). The Fortymile caribou herd lies somewhere in between because a substantial proportion of its range lies in ISA 2 and ISA 3. So, we repeat **our recommendation (from above) that LMU 21 Wëdzey Tày (Fortymile Caribou Corridor) and LMU 14 Tày Dëkdhāt (Top of the World) be reclassified as ISA 1.**

Spatial Buffers and Timing Windows: Spatial buffers, and especially timing windows, are mentioned in the Plan (mostly in General Management Direction) for specific resource values: sheep, raptors, and migratory birds. We agree that this approach is valuable to conserving key habitats, species occurrences, and sites. We detail our concerns later in this document. Overall, the Plan does not specify what those timing windows or spatial buffers should be, so lacks the detail to be implementable. **We recommend that the Plan include specific details on timing windows and spatial buffers so that users of the Plan can readily implement it.**

Access Management: The Recommended Plan includes a number of positive decisions (e.g., Dempster Highway corridor; access management planning in certain LMUs) and useful direction in General Management Direction. It misses two opportunities to make steps forward for conservation. The first is that it does not prescribe any Off-Road Vehicle Management Areas; it only recommends that the Parties and associated agencies consider options. This is disappointing considering the prominent effect of motorized vehicles in remote areas inducing caribou to avoid tracks and trails, thereby reducing the amount of available habitat and forcing extra movements. It is unlikely that the mapping of linear features required for applying the CE thresholds in ISAs will be detailed enough to include all ORV trails. **We recommend that the ISAs critical for caribou conservation be classified as ORVMAs in the Plan, with ORVs restricted to using a mapped set of trails that provide general access to some areas but leave large areas undisturbed.**

The second is that the Plan defers decision-making about public access along new roads to future discussions between the Parties, and future access management planning. New resource access roads should not be publicly accessible because of the added game harvest and habitat alienation that will result. **We recommend that the Plan includes prohibition on public use of new resource access roads, a component of the Resource Road regulation (under the Territorial Lands (Yukon) Act) previously drafted by Yukon government.**

IMPLEMENTATION

Implementation is a much bigger concern for the Dawson Regional Plan than for the North Yukon and Peel Plans because *the effectiveness of the Dawson Plan relies much more on future activities* that include monitoring of indicators for cumulative effects assessments, implementation of sub-regional planning, periodic reporting on implementation, developing proposals and advocating for further decision making regarding such processes as Wetlands of Special Importance and access management plans (that are necessary topics laid out in the Plan).

The Implementation chapter certainly attempts to cover the wide variety of issues involved. However, this Recommended Plan could be criticized because it leaves so many vital decisions to be made by future processes, often without clarity as to which agency (the “Parties”, the Implementation Committee, YLUPC?) is responsible and to what technical standards. We provide many examples of this problem in the Detailed Comments section. Principally, **we recommend that implementation be the responsibility of an Implementation Committee (with priority membership of Commission members) supported by a Secretariat that provides the technical, logistic, administrative, and communications support.**

Regarding the need for clarity in responsibilities, **we recommend that the Plan forcefully assert a process and set of institutions/agencies that will deal with plan conformity.** The most straightforward ways to do this are to (a) be very clear as to what of the discussed bodies does what, and (b) provide a summary of what implementation will include. Regarding (a), the Plan currently does not clearly tell the reader the assumed functions of the ongoing Commission, the Implementation Committee, and a Secretariat. Implementation requires two bodies – one that provides conceptual and socio-political direction, one that does the technical and communications work to achieve the implementation targets. The Plan needs clear direction on these two sets of functions, and a graphical representation of how these bodies will interact, with each other and with the Parties, other agencies (notably YESAB), and with the public as implementation proceeds. Regarding (b), the Plan needs a table or matrix (of activities by agencies) in which each of the key implementation activities (e.g., sub-regional planning; access mgmt. planning; CE indicator monitoring and conformity checking; annual reporting, etc.) is listed on one side, and all the potential agencies is listed on the other, and text in cells indicates what, if anything, each agency will do to achieve the implementation activity.

The Plan identifies the need for an Implementation Strategy but defers any decisions on this to the Implementation Committee. Implementation is a crucial part of making this Plan work, and the Commission with its planners should provide this Strategy document. **We recommend that the Plan include an Implementation Strategy for the Implementation Committee that the Parties, and all related agencies can refer to and follow.** The Plan does not need to provide the details or a set of personal work plans for implementation activities, but it does need to give more specific and concise direction than it presently does. The meat of an Implementation Strategy is the table or matrix explained under point (b) in the previous paragraph: what is the complete set of implementation activities envisaged by this Plan and who will accomplish them with what timelines? A matrix can cover off many paragraphs of text and provide clear direction.

DETAILED COMMENTS

Our comments are organized under the numbered sections of the Recommended Plan (bold type), and then by page and paragraph.

How to use this Plan

6/- From this page until page 159 the header includes the words “Landscape Management Units”, which is an inappropriate phrase for these sections. This is probably a simple mistake, but should be deleted.

1.7.2. Other Final Agreement Chapters

19/1 the Plan states that it links to other FNFA directives or topics, including: *“Have water that is on or flowing through or adjacent to Tr’ondëk Hwëch’in Settlement Land remain substantially unaltered as to quantity, quality, and rate of flow, including seasonal rate of flow (Chapter 14).”* Given the prominence of the placer industry in the region, and the lack of any monitoring of water quality, wetlands, and salmon habitat in the Cumulative Effects or other sections of the Plan, it seems unlikely that this goal/objective has been maintained or achieved. How does the Plan reconcile the FNFA and the level of attention that the Plan provides on this topic?

1.9.1 Sustainable Development

23/3 Sustainable economic activities

- It would be useful if examples of the various categories of economic activity were presented (e.g., Class 1 – subsistence harvest of big game and berries; Class 2 – sustainable timber harvesting; Class 3 – mining where the affected land cannot be restored to original conditions (e.g., certain wetlands))
- The second type referred to – activities that deplete resources from which the land can recover – needs a reference to time scale

23/4 This paragraph, dealing with unsustainable economic activities, seems logically inconsistent. It states that economic activities that permanently degrade the land are not sustainable, but that they can become sustainable through mitigations and cumulative effects measures. However, the fact is that, in cases of permanent degradation (say 7 generations or more), neither mitigations nor cumulative effects measures can reverse the permanence of the degradation; the development is either sustainable or unsustainable, based mainly on whether or not “it undermines the ecological and social systems upon which communities and societies are dependent” as per the definition. An example would help.

However, the Plan should be more honest. It is actually proposing that certain forms of unsustainable development can continue (counter to the basic principle of Chapter 11), but that some measures will be put in place to replace some of the values that are lost with other related values (i.e. partial offsetting). Cumulative effects measures, by contrast, are mainly designed to deal with the kind of economic activity referred to in the previous section – “resources are depleted but the land can recover”. Cumulative effects measures are attempts to control the amount of depletion so that the land (or water) does still have the ability to recover within a reasonable length of time to allow continued benefit to the dependent community. Cumulative effects measures cannot reverse an unsustainable pathway, which is one that leads to permanent degradation or loss of certain ecological functions and services.

1.9.2 Stewardship

23 This section starts with an insert from the Guide to Heritage Stewardship. The result is that the whole concept of stewardship is then assumed to be embedded in Indigenous approaches and world-views. Then the subsequent distinction between Ancestral and Community Stewardship becomes confusing because the latter does not seem rooted in Indigenous approaches (judging by wording). So, we recommend moving the inserted quote from the Guide to Heritage Stewardship into the Ancestral Stewardship section.

24/1 The Plan lays out two stewardship approaches, but the reason for doing so is unclear. One can infer that the reason is that stewardship can be embedded in different cultural traditions, and this would be worth stating. Also, the text could be more explicit that the Plan supports either approach.

1.9.3 Precautionary Principle

27/1 The first sentence more specifically relates to the impact assessment process rather than the planning process: how does the Plan provide direction to the impact assessment process (i.e. YESAB and other Boards) on how to apply the precautionary principle? Also, this section is not as clear in telling the reader how this Principle (in contrast to the other Principles) is used in the body of the Plan. It provides one example (Yukon River sub-regional planning), but how else is it revealed in the Plan?

28/2 In LMU 21 Wëdzey Tày, the precautionary principle is supposed to be applied for the Fortymile Caribou Herd, which is contradictive to its designation as a ISA 2. We reiterate our above recommendation in response to this and recommend that LMU 21 Wëdzey Tày (Fortymile Caribou Corridor) be reclassified as ISA 1.

2.1 Setting

30/2 There is a literal contradiction between this sentence (exclusion of land from the Planning Region) and the second sentence under Land Status (2.2) (inclusion of the same areas). This needs to be edited. It seems that these lands “are within the Region, but are not addressed by the Plan”.

2.3 Environment

33/1 The term “bisected by” should refer to the feature or process that makes the division into two parts, whereas, in this sentence, what is described are the two sections resulting from the bisection. The planning region is bisected into two distinct ecozones, rather than by them.

2.6 TH Holistic View

39/1 The first sentence in this section - “The Tr'ondëk Hwëch'in traditional view of the land is much different than as described above in this section” – is confusing. Is this an error? A literal reading states that the TH traditional view is much different than the TH traditional view as described earlier (in some undefined section). Yet the sections above (those in part 2) frequently refer to the TH view of the world.

2.7 Climate Change

39/- This is an important and useful section. Right now it focusses on trends. This leaves out two key points:

- Increases in precipitation do not necessarily lead to better growing conditions for plants because increases in temperature can offset the precipitation through higher evapotranspiration.
- Trends indicate real changes, but are statistical summaries of inter-annual or inter-seasonal variability. The climate projections suggest increasing variability, with more extremes in temperatures and precipitation events. These are more often the events or features of change that have most impact, for example through flooding and heightened fire risk.

3.2.3 Sub-Regional Planning Areas

43/1 A sub-regional planning process is recommended for LMU3: Chu Kon Dëk. This is excellent. However, we can find no place in the plan that tells how this corridor is defined spatially. Is it a fixed

width corridor with reference to the mid-line of the water? Is it a space defined by lateral distance from the high water mark on the river's banks? The Plan needs to state this, ideally in the description of the LMU itself. Without it, the proposal to withdraw options for new land tenures on an interim basis, and the actual actions of a sub-regional Planning Commission, are at risk and compromised.

3.2.4 Overlay Areas

3.2.4.1 Caribou Stewardship Area

44/- Two LMUs are listed as having particularly high caribou values, but are not SMAs: LMU 7: Wehtr'e (Antimony) and LMU 21: Wëdzey Tay (Fortymile Caribou Corridor). Existing mineral and other tenures (and there are substantial numbers) in these LMUs are open for development, but the Plan recommends withdrawing these LMUs from new mineral staking on an interim basis. Conditions for removing the interim withdrawal include development of an Access Management Plan or re-assessment at a 10-year Plan review. These are good initiatives.

3.6 Cumulative Effects Management

3.6.3.1 Recommended Plan Indicators

53/1 The Indicators are limited to two terrestrial ones, both related to ecological values. The lack of aquatic indicators, and socioeconomic indicators, is a weakness given the pervasive impacts of placer mining, and the impacts of mining and tourism on permanent residents of the Region.

3.6.3.1.1 Surface Disturbance

53/2 First bullet indicates that reclaimed or recovered areas are not included in surface disturbance. What agency and process is considered the authority to define an area as reclaimed or recovered? This needs to be specified in the Plan, otherwise it is not implementable.

The fourth bullet states that surface disturbance within the 600 m road corridors will not be considered. This means that there is then no incentive to reclaim or restore such disturbances, unless under some other legislation and regulation. Is that a fact, or does this mean something different?

3.6.3.1.2 Linear Feature Density

55/3 The first bullet over-states the relative impact of roads, to some extent, by emphasizing intensity of use as the dominant effect of linear features. Yes, ungulate avoidance and mortality from roadkill and hunting may increase with intensity of human use of a corridor. However, the process whereby linear features impact ungulates, by increasing predation pressure, is more likely to be inversely related to intensity of use by people: wolves are more likely to use linear features that are not often used by people. So, the most prominent reason for not considering different classes of linear feature separately is that the different processes whereby the linear features affect ungulates act differently with respect to feature type and intensity of use by people. The metric of km/km² is a good umbrella metric to cover all processes.

The second bullet needs rewording. Its current wording literally means that the linear feature can be up to 2 km long to have an effect. It should talk about an up to two-km wide *zone of influence* on each side of the linear feature.

3.6.3.2 Applying Thresholds

56/Table 3-2 The document provides no reference as to how the quantitative measures were reached and decided; what science or knowledge is behind these thresholds?

57/Table 3-3 This Table explains three tiers of thresholds. It seems that three tiers may be unnecessary. Why can't two levels be enough? – a level that sends a note of caution, and a level that should not be exceeded. As written, the Precautionary Level is in place to “improve information collection and understanding of cumulative effects in an area”. If the means of measuring the indicator (i.e. collecting the information) is not already as good as it can be then the whole exercise is questionable: in other words, this step should be unnecessary. As written, the Critical Level “represents the point at which the indicators have reached acceptable levels”. This should read “unacceptable levels”; indicators increase through various stages of acceptability to reach a threshold above which things are unacceptable.

4 Cumulative Effects Framework

There is a lot of repetition between this section and section 3.6 (Cumulative Effects Management). If Cumulative Effects deserve a whole detailed chapter in this Plan (i.e. this section 4), then we suggest that section 3.6 be reduced in length, so that it gets similar attention/length in section 3 as do the other Concepts. Much of the material in section 3.6 is well laid out, and could replace or amplify parts of section 4 (some of which is not as well presented, and is repetitive).

59/Fig 4-1 This Figure is incomprehensible as presented. Based on the words and arrows in the top line, there is a flow from left to right, and that seems to hold (and make sense) for the top row of boxes. And perhaps the adaptive mgmt. arrows on the bottom can realistically be viewed as relating to the top row of boxes through a process of iterative decision making. However, the Thresholds box sits in limbo with no clear relationship (it logically should sit in a flow between indicator monitoring then circling back to Assessment). The second row of boxes is not readily relatable to other parts of the figure: Is this another left to right flow? What is the difference between Indicator and Effectiveness Monitoring (both need indicators)? How do Future Scenarios play into an adaptive mgmt. approach? The figure could use some work to make it more understandable.

Figures 3-1, 4-1 and 4-3 all seem to be putting across much of the same information (all are built around values, indicators, and monitoring with adaptive responses). Having so many figures, often using the same terms, muddies the water. There is one process (right now well illustrated in Fig 3-1), and one figure should suffice, particularly if thresholds and actions/responses are added to it.

4.2.1 Values

60/Fig 4-2 Salmon is listed as a value here but then is lost from the further discussion. Why is it dropped?

61/4 The Plan states: “The following is a sampling of potential indicators that are being considered...” Why does the Plan talk about work that is still to be done? The Plan should be putting forward decisions – which indicators have been chosen and why? If ‘work on indicators is ongoing’, what is the process and timeline for making decisions and getting the work completed?

Socio-economic indicators: Human population is missing. It is crucial to understanding many of the others. As human population increases, ability to meet subsistence harvest needs will decline, and harvest effort will increase.

4.2.3 Thresholds

63/3 The text lists a number of factors that were used to set quantitative levels for thresholds. Most of these are subjective, or economically driven for establishing an ecological threshold. An ecological threshold is affected by ecological relationships; economic and social factors should not be considered in the establishment of such thresholds. Those factors may be relevant when it comes to assessing management actions when the ecological limits (cautionary, precautionary, etc.) are reached. As established and explained here, one can have very limited confidence that the ecological thresholds actually relate to the persistence and sustainability of the value in question.

Also, there is no explanation for how the various factors were combined in some multifactorial approach to threshold setting. For example, how would growth scenarios about gold production impact an ecological threshold? Were the ecological thresholds relaxed because future placer gold production has to be accommodated?

4.3.1 Current Conditions & 4.3.2 Future Scenarios

The titles and content of these sections overlap and are not consistent. Current conditions are defined as including past and foreseeable conditions, so why is the title restricted to current? But then the text says that current conditions do not include foreseeable disturbance. Then the section on Future Conditions deals with foreseeable conditions, in a modelling sense. This needs some clarity as to what is being talked about.

The Recommendation for further modelling seems misplaced; there are no empirical data from this region on relationship of footprint and surface disturbance with the values in question (moose and caribou behaviours or population persistence). So, it seems that gathering empirical data is much more important than hypothetical modelling.

4.4.1 Informing Decisions

64/- This may be the most important section of the whole Plan: will any of the thresholds put forward in the Plan ever have any meaningful effect on what people do on the land? Rather than listing examples in Fig 4-4, the plan should diagrammatically depict the scenarios/processes so there is clarity in how this plan and thresholds should be implemented.

The text mentions YESAA, a development assessment process, and “other decision-makers”. What are all of these decision bodies (where are they housed within Governments or regulatory bodies)? How will they be informed of the Plan’s direction? How do they interact with each other, and which one(s) is the ultimate decision-maker for each or all of them?

The text states that “The expectations are set out in Section 4.5 – Cumulative Effects Framework: Monitoring (page 67) for the appropriate mitigations at the precautionary, cautionary, and critical threshold levels.” This does not seem to be the case, in that the three levels are not mentioned in Section 4.5 (they were presented in section 3.6 – so this is another example of where the detail in 3.6 was unnecessary and would better be in Section 4).

4.5 CUMULATIVE EFFECTS FRAMEWORK: MONITORING

67/1 This may be the second most important part of the Plan. How will useful data regarding the thresholds be gathered and made available to the regulatory and decision bodies? As its written there is no mention of which agencies will be responsible for gathering the required data to track indicators, doing the analysis, and then making the information available to the regulatory bodies. There is text recommending certain general actions, but no explicit responsibility is given.

There is a list of three elements to the monitoring regime, but these are not clearly distinct and lack detail.

- “Ongoing tracking and mapping”: What standards should be applied by the agency doing the mapping? Are these the current Yukon Environment standards referred to in Section 4.3.1, and if so, which agency updates and follows these Standards? How will the digitally updated mapping be made available to the public and agencies (the Geomatics website?)? What does “ongoing” mean; what time frame for actual digital updates?
- “Annual Regional planning commission report”. What is this? Is this an expected annual report just about monitoring indicators, or is this a more comprehensive report from the Commission that will be written each year? What indicators are expected to be in the Report? Why a Planning Commission report when Planning Commissions normally disband after the Plan is ratified by the Parties?
- “Year status report”. How does this differ from an Annual Planning Commission report? They would seem to be the same thing. This would report on the status of what? What agency would produce this Report?

4.5.1 Cumulative Effects Framework: Recommendations

68/Policy Recommendation 3. Having made fairly detailed recommendations regarding the need for indicators for socio-cultural and socio-economic values, this recommendation then lumps all other values in a relatively cursory single sentence. Those other values include extremely important values associated with water, wetlands, and salmon. From an ecological point of view, this is a big gap. Some wetland types are among the least common ecosystems in the region, and also the most threatened by mining. Salmon are highly valued subsistence foods, and are directly threatened by mineral exploration and extraction, plus climate change.

This approach also ignores the existence of a placer management regime that includes a water quality monitoring process and sampling. In other words, data are available, and could be related to the sustainability of the resource (water quality, salmon). Why is this overlooked?

68/Policy Recommendation 4. This states that “The Parties must define what is meant by reclamation and restoration and how these concepts relate to the Dawson Regional Plan’s cumulative effects framework”. This is misleading because the next paragraph provides a fairly detailed definition of restoration. The document uses two terms – reclamation and restoration – repeatedly, yet does not formally provide definitions (in the glossary), so the plan provides no direction to the implementation process (are these different processes, or two words for the same process?). This Plan should do the hard work of providing definitions, and of telling the plan implementation process what agency and process would be deemed sufficient to judge satisfactory accomplishment of reclamation and restoration.

69/12. Recommended Action It is not clear that the topics/scope of the medium and long term steps for providing cumulative effects indicators to the public are really different. The medium term goal of “an

indicator tracking system to be publicly accessible” and the long term goal of “an online platform that would allow proponents to have information” do not appear to be different. A publicly accessible indicator tracking system would have to be an online platform, and in both cases the information to be communicated is the indicator measures by LMU.

5 GENERAL MANAGEMENT DIRECTIONS

5.1.1 How to Read this Section

71/Table 5-1 This Table brings in the word “Strategies” without having used it earlier in this section, and without having defined it. Consequently, the wording in the Table is somewhat confusing. What is a Strategy? Plan Objectives logically relate to Outcomes, apparently by way of Practices (though this is not explicitly described). The Table has a box dealing with Practices, but then seems to describe Practices as strategies, approaches, and actions. Is strategy just another word for practice, as apparently are actions and approaches? Perhaps by using less conceptual nouns and keeping the language consistent this will be less confusing.

5.2.1.1 Caribou

76/Recommended Management Practices Many of these Practices are logically incomplete or lack sensitivity to the biology of caribou.

a. The phrase “a safe operating distance from caribou” does not depict reality. Caribou *are not static* (i.e. fixed in space) on the landscape; if the habitat has some general suitability for them, they could well pass through and use it. However, most mineral exploration and especially extraction activities *are largely static*. Consequently, where caribou occupy a landscape with mineral activity in it, then it is the caribou that judge what is a safe operating distance, and they abandon habitat that is not safe. The question is how much habitat can they afford to abandon before they suffer demographically. That issue requires application of the cumulative effects guidelines regarding surface disturbance and especially linear feature density. So the recommended Practice should be rigorous application of the cumulative effects guidelines within the precautionary levels.

For mineral exploration activities that are not static (e.g., staking and reconnaissance), the phrase is also problematic in that both the caribou and the human activity are in motion, and the caribou are more likely to respond first. Yukon Environment has some existing best practices (e.g., “Flying in Caribou Country”) for a part of this problem. Can these be specified here?

b. The recommendation here is for “avoidance” of high levels of activity” within high quality caribou habitat”. However, no reference is given for where the high quality habitat is, so it is not possible to apply this Plan directly. Also, the recommendation is to “avoid” but within the cumulative effects threshold. The word “avoid” in English means outright prohibition, but cumulative effects guidelines do not deal with “prohibition” unless the limits are to be exceeded. Therefore, the text is not clear.

c. Once again the recommendation is for “avoidance” of high levels of activity” but within migratory routes. However, no reference is given for where the migratory routes are, so it is not possible to apply this Plan directly. Also, the recommendation is to “avoid” but within the cumulative effects threshold. The word “avoid” in English means outright prohibition, but cumulative effects guidelines do not deal with “prohibition” unless the limits are to be exceeded. Therefore, the text is not clear.

d. Map 5 is referred to as the source of information as to where to apply this practice. However, Map 5 does not provide sufficient information on seasonal ranges, or on migratory routes of the herds, so the practice cannot be applied within the wording of this Plan. Also, this practice depends on “timing windows”, but no timing windows are given in this section, so it cannot be applied. On page 239, the plan says that timing windows that reduce industrial impacts to moose and caribou should be applied as guided by regional biologists or as determined by the parties. We suggest moving this text to this section and explicitly state who has authority for these.

77/13. Research recommendations

The third bullet is too difficult to understand: “mitigations” regarding what? “efficacy” of what? The fourth bullet is largely completed already. The existing lichen mapping should be enough for this Plan to include specific recommendations regarding forest fire suppression in specific land cover types (i.e. habitats with high lichen availability) by LMU. The science already exists, and this Plan should directly apply that science. Pushing this whole issue into the future is putting these caribou herds at higher risk, because, once winter range has burned (with loss of lichen), recovery takes a minimum of about four decades.

Timing windows: The notion of timing windows within which activities on the land would be stopped to avoid disturbance to local caribou is mentioned in at least one LMU (21. Wëdzey Tay Forty-mile caribou corridor). However, no specific windows are provided, and the general direction is for this to be set up “by the Parties”. This is weak because there is risk that it will be overlooked (it is not explicitly part of Plan implementation if it falls to the Parties), and there is nothing for assessment agencies to work with in the short term (e.g., YESAB in its setting of conditions on recommendations regarding development; government agencies producing public notices regarding landscape-specific trail closures).

5.2.1.2 Moose

It is not clear that the Objective (A resilient and growing moose population sufficient to support herd health, as well as current and future harvest levels) is realistic. To a large extent, a growing moose population will result in a declining caribou population, because good moose habitat is often poor caribou habitat, and because more moose will support more wolves that will also prey on caribou. Assuming ongoing harvest levels, achieving growth in the moose population is most likely to depend on increasing the extent and quality of habitat, which may well compromise caribou habitat. So, the Objective probably should be toned down to reflect need for ongoing harvests and maintenance of populations *in conjunction with* the ongoing maintenance of caribou populations.

79/Recommended Management Practices These Practices do not provide enough information for this Plan to be applied. No reference is provided for where key calving areas, post-rut aggregations, movement corridors are located, or where that information could be acquired. Consequently, these practices are not detailed enough to be useful.

5.2.1.3 Salmon

82/ Box regarding FHMS Why is this Box presented? Does this Plan consider the Fish Habitat Management System (FHMS) sufficient to sustain salmon populations in the future? If so, the Plan needs to state as much, when presenting this information. Also, if the Plan thinks the FHMS is sufficient, then why isn't the

Water Quality Monitoring protocol explicitly built into this Plan within the cumulative effects monitoring (section 4)?

The two stated objectives of the FHMS are actually incompatible. Placer mining directly destroys and compromises the quality of fish habitat. To sustain an ongoing placer industry with no time horizon will result in ongoing loss of fish, notably salmon, habitat, and **long-term** loss of carrying capacity for a number of fish species.

82/Objectives They are statements of apparent fact and do not put forward projections of improved future condition (which is what most other Objectives in this document do).

82/Planning issues There are a number of key planning issues that involve the placer mining industry. However, this Plan does not address these pressing issues beyond reference to the FHMS. Once again, why is the Plan silent on water quality guidelines in the cumulative effects section?

5.2.1.4 Sheep

85/- The introductory paragraph does not adequately include reference to lower elevation sheep populations in the south of the planning region.

Recommended Management Practices

85/Box The intent and general advice of Special Management Direction is good, but as written here, and in the Direction for each LMU, the Direction is unworkable because of internal inconsistencies and lack of detail. LMUs 1, 4 and 7 have high sheep values and two are also proposed SMAs. The direction for “Avoidance of industrial activities within sensitive sheep habitats and key areas, with emphasis on winter range avoidance (Map 5 – Ungulates)” is inconsistent in that industrial activities on already established tenures will be allowed in these LMUs and these tenures overlap sensitive sheep habitat by default given the level of detail in Map 5. Therefore, “avoidance” is an impossibility. The only ways for this Direction of “avoidance” to be logically consistent is to extinguish mineral tenures within the large swaths of these LMUs that are “sheep habitat” in Map 5, or to provide reference to better mapping that specifically shows “sensitive habitats” and “key areas” and also extinguishes mineral tenures in those sensitive habitats and key areas. Where adequate mapping of sensitive habitats and key areas is lacking, then the Plan should indicate whose responsibility it is to produce such mapping (i.e. the proponent of the development activity) and which agency should validate the quality of the mapping.

The direction for “Implementation of timing windows for land use activities and aerial access restrictions during lambing periods in areas of known key sheep habitat” cannot be implemented with the information in this Plan. First, the SMD text within each LMU description only refers generally to “timing windows”, as does this section. So, timing windows are not prescribed (i.e. specific dates of the year) in this Plan, and therefore cannot be implemented. This applies for any sensitive season, and the text is not clear as to what seasons require prohibitions on access during “timing windows”; winter and lambing seasons are both talked about, but without clarity in this SMD section.

5.2.1.5 Grizzly and Black Bears

86/4 Key Planning Issues: The second bullet regarding linear feature density is valuable, but could be improved by: (i) providing a reference for the quoted cumulative effect threshold (i.e. Lamb et al. 2018

Journal Applied Ecology); (ii) directing the reader to a more appropriate section of the Cumulative Effects chapter, which is the Table now in section 3.6 on p. 56, rather than the beginning of section 4. From that Table, one can then infer that the Plan is only recommending the conditions (critical thresholds) for ongoing persistence of grizzly bears in SMAs plus in ISAs 1 & 2, but not in ISAs 3 and 4. In other words, the first Objective for Grizzly Bears in this Plan does not apply to about 30% of the planning region (ISAs 3 & 4 plus Community Area). To be honest, the Plan should state this.

5.2.2 Other Fish and Wildlife Habitat

5.2.2.1 Resident Fish Species

88/Key planning issues: The full title of this section refers to the wrong species and needs to be changed.

5.2.2.2 Migratory Birds and Raptors

88/2 This introductory section fails to acknowledge the relatively high value and strong nest-site fidelity by raptors for some portions of river corridors (e.g., Peregrine Falcons) and by other raptors for specific nest sites in forested areas (e.g., Northern Goshawk, Great-horned Owls). Areas above 1,000 m are not the only areas of high value; the whole planning region needs to be considered.

89/Key planning issues: The full title of this section refers to the wrong species and needs to be changed. The first bullet refers only to migration as key periods, but nesting is a more sensitive time period because nests are fixed in space and time (migratory birds have some flexibility in flight paths). Seasonal timing windows, and spatial buffers around nests, need to be employed by people in all activities on the land, so as to avoid conflicts.

The high value of some sections of river corridors for raptor nesting adds support for sub-regional planning in the Yukon River Corridor at least, and this deserves mention.

89/Recommended Management Practices. The need to employ spatial buffers and timing windows should be listed under Recommended Management Practices. Many raptors use nest sites, or nesting areas of limited spatial extent, repeatedly across years. There is solid science to support explicit spatial buffers and timing windows for the limitation of human disturbances to those sites during nesting. The Plan should specify that assessment agencies require proponents to employ these practices.

5.2.2.3 Species at Risk and Rare Endemic Species

90/Objectives It is valuable that the Plan is addressing rare and endemic species. However, the wording is somewhat confusing.

Objective 1. uses the word “resilience”, which means the ability to recover to original condition following a disturbance. It is not clear that “resilience” is appropriate. What is the disturbance or set of disturbances in question? What can a Plan such as this do to enhance resilience? Resilience rests on the life history traits of the organism, and it is unlikely that this Plan would be pursuing modifications to life histories. It seems that “persistence of viable populations” of the species in question would be a more appropriate objective.

Objective 2. addresses ecosystems, which are not the subjects of this section (it deals with species). If “critical, rare or unique ecosystems” have been identified in the planning region (e.g., the rarity of lakes, and certain wetland types), then this objective can have value, but the title of the section would have to be expanded. As it stands, this section only mentions ecosystems in one objective, and no-where else, so the objective is effectively orphaned.

90/Recommended Management Practices

Practice “a” is unnecessarily restricted to Canadian Wildlife Service and Government of Yukon, when the broad scientific literature, including practices in other jurisdictions, plus non-governmental scientific organizations, can provide suitable practices.

5.2.5 Wetlands

98/Wetland Thresholds Thresholds of allowable disturbance are to be “measured at the scale of a permit area or claim block”, and specifically for fens as 50% of the area. Why are there two potential denominators to this metric? And what are definitions for these (e.g., in the glossary)?

The existence of a thresholds approach to wetlands needs to be explicitly acknowledged in the Cumulative Effects section of this Plan (section 4). At present, that section gives the impression that this resource value is not directly addressed.

99/Climate Change and Wetlands The text suggests that climate change emergency is seriously considered in this Plan. We respectfully disagree. The continued allowance of disturbance to carbon-rich bogs and marshes where they overlap existing mineral tenures, the continued destruction of up to 50% of fens in many LMUs, the ability to destroy swamps with no limits, and the lack of any calculation and monitoring of the loss of sequestered carbon to result from all these surface disturbances combine to mean that ongoing destruction of wetlands will continue to be a substantial but unmeasured contribution to greenhouse gas emissions.

100/47. Policy Recommendation This could be a particularly important and useful recommendation, but some clarity is required. First, three disjunct areas are proposed as Wetlands of Special Importance. However, there is no detail provided as to the spatial extent and exact locations (mapped) of these WSI. Does Scottie Creek refer to the full LMU 20? What are the spatial extents of Ladue River and Flat Creek? Without this information, the direction for a WSI proposal is vague.

Second, what agency should have the responsibility of preparing the WSI proposals? Responsibility needs to be designated in a Plan such as this.

Third, this Plan needs to be clearer about the fate of existing mineral (notably placer) tenures in these areas. Elsewhere (45. Policy Recommendation) the Plan states that the prohibition on development in undisturbed fens in LMU 19 Tădzan Dëk (which encompasses Ladue River) “does not apply to existing permits”. Would that rule also apply to Ladue River within a WSI proposal, or does this Plan advocate extinguishment of existing placer tenures in the Ladue River if it is to become a WSI? How about mineral tenures within the other two suggested WSI? These issues need to be explicitly laid out.

100/50. & 51. Policy recommendation – Buffers A buffer of 20 m is proposed around wetlands other than swamps, and is put forward as a management approach until further research can provide more information. This may be a useful recommendation, but it could also be a case where the precautionary principle, espoused earlier, is ignored. The Plan advocates for reviewing the literature to improve the recommendation: why doesn't this Plan do that work and provide an approach based on solid evidence. First, why are swamps not included? Second, why 20 m; what science was used to reach this figure? For example, a scientific review paper on the subject (Castelle, A. et al. 1994. Wetland and stream buffer size requirement: a review. *Journal of Environmental Quality* 23:878-882) indicates that buffer widths would vary depending on what disturbance to the wetland is being buffered. That review suggests that moderation of impacts on water temperatures can occur with buffers of 30 m width, and that up to 60 m are required for removing risk of sediment flow from disturbed areas into the wetlands. Those are two of the principal direct effects of placer operations on wetlands. Buffers to conserve habitat quality for vertebrates would need to be much wider (see also: Kihlsinger, Rebecca L.; McElfish, James M. Jr.; and Nichols, Sandra S., "Planner's guide to wetland buffers for local governments" (2008). KIP Data Sets and Technical Reports. 106. https://digitalcommons.usf.edu/kip_data/106). All of this suggests that a 20 m buffer may be inadequate. If the Plan were to seriously employ the precautionary principle, then it would start with a relatively wide buffer and implement research to determine whether reduced buffers would be problematic. This Plan appears to be taking the risky approach of avoiding precaution and relying on future research to fill the knowledge gap; by which time the damage is done and the notion of a buffer is relatively meaningless.

5.4.1 Mineral Exploration and Development

126/Recommended Mgmt Practices Section "a" should be expanded to include other currently existing best practices, so they are not overlooked: Government of Yukon 2008. Flying in caribou country. Yukon Environment, MPERG Report 2008-1. <https://yukon.ca/en/flying-caribou-country> , and Government of Yukon 2002. Flying in sheep country. Yukon Environment, MPERG Report 2002-6 <https://yukon.ca/en/flying-sheep-country> .

5.4.3 Transportation and Access

5.4.3.1 Existing Highway Access

5.4.3.1.1 Dempster Highway Corridor

132/87. Recommended Action The decision to pursue a sub-regional plan for the Dempster Highway corridor is a good one. The first bullet in this Action should have more detail in this Plan. It states that "The corridor planning area should be defined jointly by the Yukon Government, affected First Nations and the Gwich'in Tribal Council". The Dawson Plan should advocate for a specific and useful corridor width within which the stated values associated with the corridor (ranging from viewsapes, to aggregate resources, to controls on vehicular access, to key wildlife habitats) can be adequately managed. A previous statement (on p.131) points out the current width of the Dempster Highway Development Area Regulation as being 8 km on each side of the centreline. This seems to be a minimum width suitable for addressing the stated resource values.

5.4.3.1.2 & 5.4.3.1.3 Highway Corridors

132-136/- The Top-of-the World and the North Klondike Highway corridors are defined as being 600 m in width (300 m on each side). Yet, each acknowledges issues of viewscape, ORV vehicle use, access to

aggregate resources, and risk of disturbance to wildlife. It seems that such a narrow corridor is not wide enough to deal with these issues, and needs to be expanded to at least 1 km on each side.

134/90. Research Recommendation This concerns ORV use and disturbance to wildlife. But it is weak. It pushes any decision-making into the future, and so perpetuates a management problem especially with regard to disturbance to caribou (a key resource value in this Plan). It suggests that the Dawson District Renewable Resources Council (in collaboration with unknown other entities) monitor ORV use for problems and impacts, and identify areas for potential ORV Management Areas (that is total or partial exclusion zones). Given that ORV use is already an issue, the Plan could be more visionary and put in place an ORV Management Area defined as an exclusion zone apart from certain key trails.

5.4.3.2 New All-Season Surface Access and Winter Roads

136/- This section is generally strong and addresses an important aspect of the Plan. The question of how recommendations and guidance will get implemented is somewhat unclear. Often the responsibility is left to the Parties, for most aspects of both specific plan implementation (e.g., access mgmt. plan for LMU7 Wehtr'e) and ongoing reviews of specific project proposals and their access management. This is potentially weak because it leaves a void in how Parties would work together and communicate to do the work: do both Parties do the work (redundancy) or do they establish a joint working group? Who will fund these activities and associated staff within each of the Parties? It also misses the necessary role of the Implementation Committee in achieving some specific activities including: access management planning in LMU7 Wehtr'e prior to lifting of the interim withdrawal, higher level access mgmt. planning in four LMUs (p. 140, section 5.4.3.2.2), plus the development and implementation of a framework for monitoring access developments. These are specific implementation requirements originating in the Plan and not the responsibility of any other agency. They must be overseen by the Implementation Committee, and reported on to the public for compliance and oversight. It is important that this Plan articulate responsibilities and interagency processes for these various aspects of what is plan implementation, and adequately bring the Implementation Committee into the text for the various situations where it's role is essential.

5.4.3.3 Off-Road Vehicle Access

142/Recommendations to the Parties The Plan only supports the option for DRRRC to pursue new ORV Management Areas. The Plan should step forward and actively establish some new ORVMAs in areas where ORV activity is already a substantial risk and needs to be controlled. In particular, LMUs crucial for conservation of the Forty-mile caribou herd (LMU16 (Matson Uplands) & LMU21 (Wedzey Tay) could become ORVMAs with limitation of ORV use to existing trails (as does the current ORVMA for areas above 1,400 m asl).

5.4.7 Forestry

155/25. Research Recommendation This section recommends pursuit of the biomass energy industry in the region. We disagree. Burning biomass (in the Yukon's case, trees that have grown over many years) is a net contributor to Greenhouse Gas emissions on an annual basis. Although wood is a renewable resource, biomass energy is not a green or carbon-neutral source of energy. It is not entirely appropriate to pursue this objective in the context of mitigating climate change.

7 PLAN IMPLEMENTATION

7.2 PLAN IMPLEMENTATION RESPONSIBILITIES

275/139. Recommended Action “The Parties and YLUPC should continue to fund the DRPC”

&

277/140. Recommended Action “The Parties should jointly establish an Implementation Committee within one year of Plan approval.”

Both of these Recommended Actions address a crucial issue in the future value of this Plan: how will it be implemented, used, and assessed. This is a much bigger concern for the Dawson Region Plan than for the North Yukon and Peel Plans because *the effectiveness of the Dawson Plan relies much more on future activities* ranging from monitoring of indicators for cumulative effects assessments, implementation of sub-regional planning, periodic reporting on implementation, developing proposals and advocating for further decision making regarding such processes as Wetlands of Special Importance and access management plans (that are necessary topics laid out in the Plan).

The skill sets required for effective implementation are, at least: (i) knowledge of the thinking and compromises built into the Plan (i.e. continuity of knowledge); (ii) effective representation, politically, from each of the Parties and other affected First Nations; (iii) technical assessments of indicators, largely from remote sensing, for compliance monitoring; (iv) facilitation of bureaucratic proposals, processes and negotiations that the Plan depends on and sets in place (e.g., access mgmt. planning; communications with regulatory bodies such as YESAB); (v) compilation and writing of reports and assessments mandated by the Plan.

The problem with interpreting this section of the Plan is that the functions of the proposed bodies – a continuing DRPC and an Implementation Committee and potentially a Secretariat– are not explained. That is, which of the at least five functions or skill sets listed above will these bodies have responsibility for? As written, we assume that the Implementation Committee is the political and oversight body, and that a Secretariat (mentioned later in this section of the Plan) would do the technical and administrative work. If that is not the division of responsibilities envisaged by the Plan, then the actual division needs to be made clear right up front with any introduction of the bodies involved.

In that context, we think it is unnecessary to have two bodies (the DRPC and an Implementation Committee) do the political and guiding work, because of the extra costs, likely duplication of effort, likely disagreements as to actions and therefore stalling of processes, and no clear and specific gains to be achieved. We recommend just an Implementation Committee, but with priority membership of former Commission members. A continuing Commission, despite the option for continuity in Chapter 11 of the UFA, risks functioning unfairly and ineffectively because some members will have to drop out (necessitating replacement processes that are cumbersome and contentious) and because the implementation work is largely technical and not within the Commission member’s capacities. If the Commission continues on and becomes the guiding body for Plan implementation, it will probably require advice from the agencies that the Plan requires as partners in implementation – such as YESAB and Yukon Water Board. How will that be achieved? We provide some thoughts under Implementation Committee below.

The Plan needs to assert that the Parties “should establish a Secretariat to provide the technical, logistical, organizational, and communications capacities required for implementation”. The Secretariat

has to include planning staff with geomatics, facilitation, and communication skills. The Secretariat cannot reside within the bureaucracy of one or other of the Parties due to risk of bias. It could be effectively housed within the YLUPC, and the Plan needs to make this decision.

7.2.2 Implementation Committee

276/Fig 7-1 and associated text This Figure and associated text leave a lot of uncertainties and general lack of direction. First, the Figure lacks arrows so relationships are not clear. Second, the inclusion of DRPC as members of the Implementation Committee is unclear. In an earlier section, the Plan recommends that the DRPC remain active, but this has potential costs and risks (see section above). Does the Plan suggest that the only role of DRPC is as members of the Implementation Committee? If so, how many members and members appointed from which Parties? A more streamlined approach would be for the Parties to be told that they should put priority on choosing DRPC members as their representatives on the Implementation Committee. Third, a number of other Governments and agencies are listed in the text, but not shown in the Figure. How would they fit in? Given that this is a government –to-government process, should not “Other affected First Nations” get mandated membership on the Implementation Committee? The Committee would probably benefit from input from other quasi-governmental bodies (e.g., YLUPC, YESAB), but it is far from clear that they should be permanent members. So, a separate category of advisory, but non-voting, membership needs to be articulated. Fourth, who on the Implementation Committee gets to make decisions presumably by voting on key outcomes? Such power should only fall to the Parties (including other affected First Nations). Fifth, how many representatives does each of the Parties get to appoint to the Committee, so what is the maximum size of the Committee? It is the responsibility of the Commission, through this Plan, to lay out the answers to these questions, plus associated information, clearly and assertively.

7.4 SUB-REGIONAL PLANS

279/Table 7-1 The scope for LMU3 Chu Kon Dëk needs to “Consider key wildlife values” as one of the bullets.

7.5 PLAN CONFORMITY AND ASSESSMENT

280/- This section correctly indicates that assessments of development projects within the direction of the Plan, plus technical analyses regarding conformity, will be onerous in the Dawson Region. However, the text mainly talks about YESAB processes, with general advice on gaining better communication and working relationships between bodies (such as YLUPC and YESAB). It seems to make the assumption that YLUPC will continue to be involved (especially in conformity evaluations). It suggests the idea of a “secretariat” in passing, without making it explicit in a Recommendation. It lacks specificity and clear direction as to institutional functions and responsibilities under the Plan’s implementation. It pushes real decision-making on these issues to a future “plan conformity evaluation process” to be started by the Implementation Committee (Recommended Action). Consequently, this section is relatively weak and subject to the future whims and political influence of the Parties.

We recommend that the Plan forcefully assert a process and set of institutions/agencies that will deal with plan conformity (the Plan should make these decision, not some future process). This includes the need for a Secretariat to support the Implementation Committee and that the Secretariat be housed in the YLUPC offices (where it can benefit from shared resources and skills required for other planning

processes) independent of each of the Parties but linked to technical staff in the bureaucracies of the Parties. A diagram would be useful.

281/146. Recommended Action The word “triage” is inappropriate. Triage means deciding which of a set of options does not get attention. With development proposals, each one needs attention with regard to plan conformity; none can be ignored. The appropriate verb is “classify”.

This list of items to consider is weak, because merely recommending “consideration” (rather than asserting necessity) likely means that some or all of them will get ignored. The Plan needs to be more assertive in its language: these things must get done for any hope of a useful implementation of this Plan.

7.6.1 Implementation Strategy

281/1 The text states: “A detailed implementation strategy should be developed...”. Postponing an implementation strategy to some future time is an abdication of responsibility by this Plan. This is not a Plan if its most influential and necessary process gets no thorough and assertive direction embedded within it. The only strong assertion in this section of the Plan is the statement in 7.2.2 that: “The Parties should jointly establish an Implementation Committee within one year of Plan approval”. After that, this document leaves all decision-making up to the Implementation Committee, with merely a set recommended actions to “consider”.

The Plan must include an implementation strategy that the Implementation Committee can follow, rather than leaving everything to do with implementation to be decided by this Committee. This Committee will be subject to the political whims of the Parties, and therefore not working at arms length from governments, and in a publicly transparent manner, as has the Commission itself, unless it includes former Commission members (see section above). Without a pre-organized implementation strategy for the Committee, there will be no implementation for a long time because of:

- Lack of direction in the Plan as to membership of the Committee (see section above)
- The excessively long timelines for implementation currently in the Plan (see section below)

The text suggests that “The strategy should be developed using public consultation and feedback on the Recommended Plan...”. This is a useful assertion. However, the Commission and its planners should be taking this input from the public and building it into an Implementation Strategy in the Final Recommended Plan; not the future Implementation Committee doing this work. This Implementation Strategy should provide direction to the Implementation Committee on all aspects of implementation including Committee membership and agency contributions, inter-agency relationships, a Secretariat, scope of activities, associated timelines, associated technical guidelines and standards. Many of these are already dealt with in this section of the Plan, so the issue is largely around making some key decisions on issues listed above.

The core of an Implementation Strategy is a table or matrix (of activities by agencies) in which each of the key *implementation activities* (e.g., sub-regional planning; access mgmt. planning; CE indicator monitoring and conformity checking; definition of timing windows; annual reporting, etc.) is listed on one side, and all the potential *agencies* is listed on the other, and text in cells indicates what, if anything, each agency will do to achieve each implementation activity and within what timeline.

7.6.3 Implementation Priorities

282/Table 7-2 & 283/Fig 7-2 The SMA Planning sections of the Table and Figure are both missing a necessary step that should have its own row or section: “SMA designation”. The Implementation Committee has to go through a process of deciding which of the legally defined land use designations each of the SMAs will be given (e.g., Habitat Protection Area under the Wildlife Act; Territorial Park under the Parks and Land Certainty Act). This step will require technical input from a Secretariat and Government bureaucrats. It has to occur before the “SMA Planning” can go ahead, because such designations are best dealt with collectively across the region (in one interactive process) and because the details of the planning processes are somewhat dictated by the legislative designations. This designation process should start within the first year of implementation and be completed by year 3. As per comment regarding page 69 (above), the timelines for implementing the short (2-year), medium (5-year), and long (10-year) term implementation steps are far too long, especially given that there is no substantive difference between the medium and long term steps (see comment re p. 69 above). These do not involve particularly elaborate technical issues, and the timeline could be shortened considerably.

Monitoring Reports: This section states that the Parties should compile Monitoring Reports that they then give to the ongoing Commission to build into an Annual Report. This is a cumbersome process, and open for major delays and communication problems. Reporting on Plan implementation (in all its aspects) should be responsibility of the Implementation Committee; once again there is no benefit to having the DRPC active to do this, and it will only lead to political and communications problems because the Implementation Committee is charged with the process. Also, the “Parties” should not be charged with doing the technical work; that means that technical staff in each are charged with doing the same work and somehow coming together to produce a consensus outcome. A much simpler solution is for technical staff in the Secretariat to the Implementation Committee to tabulate the monitoring indicators, and produce a report along with other annual reporting, and for the Implementation Committee to release the annual report to the public.

286/151. Recommended Action. The Plan states: “The DRPC, in collaboration with the Parties, will produce an annual report of Plan implementation activities and impacts. The Parties should provide updates to the Commission who will compile this information into a single report that will be available publicly.” This recommendation needs the same criticism as the Monitoring report dealt with above: it is cumbersome, and fraught with communications and likely technical issues. The DRPC itself cannot produce the Report: where are the technical staff to compile the indicators, measures, institutional updates, etc., and do the writing? Are Commission members expected to do all of this? How will agreement be reached between the technical staff of the “Parties” as to who is responsible for what portions of the reporting, and whose technical staff will be deployed to do the work (this is a large additional work load)? Why have an Implementation Committee when all this implementation is supposedly going to be the responsibility of the ongoing Commission? A much simpler solution is for technical staff in the Secretariat to the Implementation Committee to do all the technical, liaison, inter-agency, and writing work to get a report done, and for the Implementation Committee to release it publicly.

7.8.1 Plan Variance and Amendment

289/Table of Recommended Actions The information in this Table illustrates the problem that results from this Plan’s recommendation that both the DRPC and an Implementation Committee, with

involvement of the Parties, should be involved in implementation. What results is a great deal of uncertainty as to what body has the responsibility for doing the work (much of which is technical), and how the bodies will work together to get things done. For example, nowhere in this table of Recommended Actions regarding plan variances, amendments and reviews is there mention of the Implementation Committee. Surely, assessments of how well the Plan is working (the essence of any changes to it) are the purview of the Implementation Committee. Why does the Plan even assert the need for an Implementation Committee when it is not charged with producing the key information required for assessing progress and sufficiency? Next, why do certain of the steps fall to the Parties and other steps to the Commission? What is the process/body that would bring the Parties together to do any work (surely that is the Implementation Committee with its mandated representation from the Parties)? Next, how can the Commission “collaborate with the Parties” to get things done: how are the staff of the Parties supposed to fit this work into their schedules unless funded and resourced to do so? Next, how can “the Parties” collaborate to bring forward certain proposed outcomes such as “a process for assessing Plan Variances and Amendments”? Without individually-mandated work responsibility, funding and resources, staff of the Parties will not be able to take on this additional set of tasks. Overall, the Plan has to simplify its view of how agencies will implement this Plan by vesting the responsibility in an Implementation Committee (with membership of the Parties and especially of Commission members appointed by the Parties), and by establishing a separately-funded Secretariat to do the technical, organizational and communications work.

Thanks for reviewing and considering these comments.

Yours sincerely,

A handwritten signature in black ink that reads "Donald G Reid". The signature is written in a cursive style with a large, stylized 'D'.

Donald Reid, PhD

A handwritten signature in black ink that reads "CM Pringle". The signature is written in a cursive style with a large, stylized 'C' and 'M'.

Chrystal Mantyka-Pringle, PhD