CANADIAN PARKS AND WILDERNESS SOCIETY
YUKON CHAPTER

November 1, 2021

To: Dawson Region Planning Commission

Re: Draft Dawson Region Plan engagement submission

Dear Commission Members,

The Yukon Chapter of the Canadian Parks and Wilderness Society (CPAWS Yukon) advocates for the territory's most valuable and priceless resource: our abundant wilderness. Our mission is to conserve the land, water and wildlife of the Yukon for current and future generations. As an environmental organization, we carry a responsibility to ground our actions within a commitment to reconciliation, and we recognize that the lands and waters we advocate for are also the Traditional Territories of Yukon First Nations, the Inuvialuit, and transboundary First Nations in British Columbia, the Northwest Territories, and Alaska.

As this plan is grounded within the Tr'ondëk Hwëch'in Final Agreement, we believe that the most crucial task of the Commission is to develop a plan that honours the agreement's vision of sustainable development:

> *Beneficial socio-economic change that does not undermine the ecological and social systems upon which communities and societies are dependent.*

We are pleased that the Dawson Region Draft Plan states that it is guided by the principle of sustainable development, and this was reinforced by the Commission and supporting team throughout the engagement period. As the Commission listens to and grapples with incorporating diverse voices and perspectives to develop the recommended plan, a commitment to this principle is a fitting guiding star.

While we think the draft plan is a good start towards securing a healthy future for the Dawson Region, we also see parts that must be changed for the plan to align with sustainable development. This document focuses on our recommendations to strengthen the plan but we have also tried to note the plan's current strengths.

We would like to commend the Commission and supporting team for hosting a meaningful engagement period on the draft plan. Thank you for the numerous opportunities to participate. We wish the Commission members well as they develop the recommended plan and we look forward to reviewing it.

We have divided our recommendations into three sections: (1) major recommendations, (2) recommendations specific to each Land Management Unit, and (3) other comments on the plan.

Major Recommendations

1. Ground the plan in sustainable development, not 'balance'.

Throughout the plan, there are numerous references to "balancing" economic interests with ecological, cultural and social values. However, this framing of balance is not consistent with the definition of sustainable development in the Tr'ondëk Hwëch'in Final Agreement. Adhering to it will not ensure the continued viability of the region's living species, and the social systems and cultural connections that rely on them.

While it is important that the planning process deeply consider and support economic values and development, adhering to the principle of sustainable development sets a high bar: economic development must not undermine ecological, social, and cultural values. Speaking of balance, while in practice prioritizing economic development above ecological and cultural values, risks setting a course that causes the permanent decline of the region's land, water, wildlife and the practices that rely on them, as has unfortunately happened in numerous other jurisdictions.

We suggest removing references to 'balance' in the plan, and instead ensuring the plan reflects sustainable development or, if that is not the case, being clear where economic development has been prioritized at the risk of undermining ecological and social systems. Ideally, the policies and cumulative effects framework that guide activities in the working landscape would be backed by science and traditional knowledge that demonstrates we do not risk undermining ecological values that underpin the region's social and cultural systems. Where the impacts of development are not predictable or unknown, the plan should take a cautious approach to ensure we do not push the ecosystems beyond tipping points. If the draft plan includes types and levels of development that do risk undermining these values, this decision and risk should be clearly stated.

2. Provide enduring protections for the Fortymile caribou herd by protecting the entirety of the herd's core range in the Yukon.

The Commission has identified the importance of the Fortymile caribou herd and its habitat, but the specifics of the draft plan do not yet square with this ambition. CPAWS Yukon urges the Commission to take a decisive step towards securing the herd's core range in the Yukon and designate it as an SMA 1.

The Fortymile caribou herd has been recovering for close to 50 years, after bottoming out around 5,000 animals in the 1970s. Still, there hasn't been a corresponding increase in the

herd's range. Some biologists suspect that the herd is surpassing the carrying capacity of the range it inhabits. Essentially, there aren't enough grasses, sedges and lichens in the herd's current range to sustain eighty thousand caribou. This leaves the herd at risk of another decline.

Caribou are a sensitive species, and across Canada, working landscapes don't work well for caribou - industrial development has been linked time and again with behavioural changes and caribou declines. It's been repeatedly shown that caribou avoid disturbed areas, often with an avoidance zone of 1 to 5 kilometres.[1] Research shows that in areas where linear disturbance exceeded 0.8km/km2, caribou numbers decreased by 90%.[2]

It is vital to maintain the integrity of the Fortymile caribou herd's existing range in the Yukon and ensure it can expand into its historic range. This goal is embedded within the *2020 Fortymile Caribou Herd Harvest Management Plan*.

Fortymile caribou depend on alpine areas in the summer, especially ridgelines, for their migratory corridors. The draft plan acknowledges that summer ranges and migratory pathways "are considered essential to the persistence of the FMCH in the territory." Mining and road developments could lessen the amount of habitat available to the herd by displacing caribou from areas near development, and by cutting off migratory pathways caribou use to reach other habitats.

Even with the best planning, these impacts are nearly impossible to manage. A recent example of these impacts can be seen at the Agnico Eagle mine in Nunavut, where the Kivalliq Wildlife Board noted that "community members noticed that there were changes not only in the migration route of caribou, but the volume of the migration in certain areas."[3] This community feedback contradicts a study presented by the owners of the mine, and the Government of Nunavut and the Kivalliq Wildlife Board are currently reviewing what they describe as flaws in the mine's study.

Developments that prevent caribou from accessing food sources could further limit the carrying capacity of the landscape, creating a downward pressure on the herd's population. There's even the risk that such industrial developments could contribute to the herd spending less time in the Yukon, which could permanently restrict the ability of Tr'ondëk Hwëch'in citizens to harvest the herd.

History gives us some inclination of what the future might hold should the herd undergo another decline. Fortymile caribou ranged through much of the western and central Yukon in the early 1900s but the herd's range contracted into Alaska during the population crashes of the mid-

[1] Jackie N. Weir et al. (2007). Effects of Mine Development on Woodland Caribou Rangifer tarandus Distribution. Wildlife Biology, 13(1), 66–74.

[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), 531-537.

[3] https://www.cbc.ca/news/canada/north/agnico-eagle-caribou-migration-meliadine-mine-nunavut-1.5933750

century. For close to a decade in the late 1970s and early 1980s, the herd did not inhabit the Yukon at all.[4] It's only been relatively recently in the herd's recovery that it began to occupy its core Yukon range on a more regular basis. Fortymile caribou appear to inhabit the Yukon more widely when their population is higher, and are more restricted to Alaska when their population is lower.

There are many factors that influence the population trajectories of the herd, like harvest levels, predation, and food availability. The amount of intact habitat in the Yukon is only one part of the equation, but it is the area that land use planning is most relevant to. For these reasons, and explained in further detail in our comments on the relevant land management units (LMUs), we recommend:

1. Maintaining existing protections for the Matson Uplands as an SMA I.
2. Upgrading the northwestern piece of LMU 17: Sixtymile that falls within the herd's core range to an SMA 1.
3. Upgrading LMU 23: Fortymile Caribou Corridor from an ISA I/II to an SMA I.
4. Ensuring that disturbance thresholds within the herd's winter habitats stay within levels caribou can tolerate.

We appreciate that the plan has provided management tools (e..g such as those listed on page 173), but these tools are more appropriate for less critical areas of the herd's range, such as its winter habitat. The staggering decline of caribou herds across Canada suggests that such tools are not working. As one research study bleakly stated, "What we do know is that after 30 years of caribou management involving industry guidelines, best practices, and various restrictions on activities, Alberta's woodland caribou are now closer to extirpation than they ever have been"[5].

3. Remove Special Management Area 2 as a designation option.

The majority of protection identified in the draft plan is through the Special Management Area 2 (SMA 2) designation. While CPAWS Yukon understands that the intent of this new designation is to ensure the long-term health of these lands without putting a "bulls-eye" on them, this designation will not be sufficient to address the issue that it is trying to solve.

The SMA 2 designation should be removed as a land designation, and SMA 2s upgraded to SMA 1s. This would provide lasting protection for conservation areas and ensure there is a framework in place for Tr'ondëk Hwëch'in to co-manage their traditional lands.

[4] McDonald, J., & Cooley, D. (2010). The Historical Annual Range Use Patterns of the Fortymile Caribou Herd in Yukon. Yukon, Department of Environment, Fish and Wildlife Branch.

[5] Page 1610 in Schneider, R. R., Hauer, G., Adamowicz, W. L., & S. Boutin. (2010). Triage for conserving populations of threatened species: The case of woodland caribou in Alberta. Biological Conservation, 143(7), 1603-1611.

Management plans provide tools to foster long term conservation and respond to changing conditions, like climate change. They are also critical for establishing shared decision making between Tr'ondëk Hwëch'in and the Yukon government. This is something that has been identified as a key priority by Tr'ondëk Hwëch'in throughout the land use planning process. In their December 2020 submission to the Land Use Planning Commission, Tr'ondëk Hwëch'in stated this priority directly when they wrote, "protected and conserved areas on non-Settlement Land in TH Traditional Territory must provide for collaborative management between Yukon Government and TH". The SMA 2 designation would directly contradict this goal, greatly limiting the ability of Tr'ondëk Hwëch'in to have a role in determining the future of their traditional lands.

Because SMA 2s would not receive legal protection or management plans, most of the proposed management directions associated with them are unlikely to occur because there will be no government body legally responsible for implementation of the management direction.

For example, we are uncertain if a mechanism exists, outside of a management plan, to control conflict between aerial flights and tourism pursuits by "setting limits to the number of allowable landings in specific areas during peak visitation times" as suggested in the Policy Recommendation on pg. 66. And while it will be possible for the Parties to "explore issues and interests related to tourism when considering opportunities for TH to retain co-management responsibilities in LMU #4" (pg. 66), there will be no management framework to act on the findings of this exploration and manage tourism activities.

Various federal and territorial protected area designations are available as tools to ensure protected areas are managed appropriately and in alignment with the management directions of the Dawson Region plan. We appreciate that Indigenous Protected and Conserved Areas (IPCAs) have been identified as a designation option for LMU 4 but, as we explain below, thus far in Canada they require pairing with a legal designation to provide full protection.

In the past several decades, there has been strong movement towards comanagement of protected areas in Canada. IPCA's are an example of this model, and are meant to ensure that "Indigenous leadership is a *defining attribute* in the decisions and actions that protect and conserve an area"[6]. In their 2018 report, entitled "We Rise Together", the Indigenous Circle of Experts explained that IPCA's are defined by the fact that they ensure that indigenous laws, governance and knowledge systems are central to planning and decision making. They state that "culture and language are the heart and soul of an IPCA".

Because IPCA's are not defined under Canada's laws, an IPCA designation is twinned with a territorial or federal legal designation. There are currently no IPCA's in the Yukon, but Thaidene Nëné in the Northwest Territories, as an amalgamation of three separate areas, provides three examples of potential models to look towards. It includes:

1. A Territorial Protected Area, protected through the Protected Areas Act,
2. A National Park Reserve that is protected through the Canada National Parks Act, and

[6] https://www.canada.ca/en/environment-climate-change/services/nature-legacy/indigenous-leadership-funding.html

3. Additional land has been identified as a proposed Conservation Area, which would be designated under the NWT Wildlife Act.[7]

In the Yukon, there are many legal designations that would achieve similar goals to those used by the Government of NWT for Thaidene Nëné, but because a formal legal designation is required, it still cannot be achieved through an SMA 2.

In 2021 the Government of Canada announced over $166 million to support Indigenous governments in their work to establish IPCA's. An additional $173 million was earmarked to fund Indigenous land guardians programs, which allow First Nations like Tr'ondëk Hwëch'in to train and hire citizens to monitor the land and waters in protected areas for decades to come. As SMA 2s do not meet the criteria of a formal protected area, Tr'ondëk Hwëch'in may not be eligible to apply this funding for work in these areas.

Because SMA 2s are not legally protected, they are also ineligible for funding through the 2021 federal budget that has made $2.3 billion available over five years to achieve Canada's 25 by 25 protected area target.

4. Ensure the Cumulative Effects Framework will Work to Sustain Ecological and Cultural Values

Thresholds are not backed by evidence and are too high

CPAWS Yukon understands that the cumulative effects framework for the Dawson Region draft plan has not been fully built out, and we thank the Commission for hosting a workshop to begin addressing this. Our general concern with the current framework is that the levels the cumulative disturbance thresholds are set at are not backed by science or traditional knowledge, and do not link directly to the values they are meant to protect. This is in contrast to the North Yukon and Peel Watershed plans, where thresholds were based on modelling that was designed to understand what levels of disturbance could occur, without undue impact on valued regional components like the Porcupine caribou herd.

We are also concerned that the disturbance thresholds in the draft plan are too high. 5% disturbance levels in ISA IVs, and 2.5% disturbance thresholds in ISA IIIs would allow for a tremendous amount of development. For comparison, the most development allowed within high-development IMAs in the Peel Watershed is 1%. The development thresholds in the draft plan for the Dawson Region do not appear grounded in ecological values. While the Dawson Region is a different environment than the Peel Watershed, we are doubtful there is a characteristic unique to the Dawson Region that allows ecosystems and wildlife to tolerate development levels 5 times higher than what is acceptable within the Peel Watershed.

Rather, the disturbance thresholds seem to be set at a level that allows for a generous amount of new disturbance to take place. Areas with the most development pressures, like the Indian

[7] https://www.enr.gov.nt.ca/en/services/conservation-network-planning/thaidene-nene

River and Coffee Creek areas, have some of the highest development thresholds. Setting cumulative effects thresholds to accommodate development pressures is akin to determining speed limits based on how fast cars can go.

Recommendation: Choose thresholds designed to sustain ecological and cultural values

The Dawson Land Use Plan should take a different approach to setting cumulative effects thresholds. These limits should be based on environmental indicators that correspond with the key ecological and cultural values in the Dawson Region. One such indicator could be the level of landscape disturbance at which caribou begin to be displaced from an environment, another could be based on water quality levels that support spawning salmon and other fish, and so on.

As cited earlier, research shows that in areas where linear disturbance exceeded 0.8km/km2, caribou numbers decreased by 90%.[8] The thresholds currently included within the draft plan are unlikely to sustain caribou populations in the working landscape over the long term, given that even the thresholds in ISA IIs (1.0%) exceed this amount of disturbance.

There may be limited information to support such decisions at this time. However, uncertainties over where critical thresholds lie is reason for a more precautionary approach. Development thresholds could always be revisited in the future if it becomes clear that the region's ecosystems can tolerate higher levels of development. It is much harder to heal landscapes that have experienced heavy disturbances, and may be impossible to repair ecosystems that have lost critical species or functions.

The framework does not account for the uneven distribution of values (e.g. habitat) and disturbance

The Dawson Region draft plan, as other plans before it, calculates cumulative effects thresholds by averaging out disturbances across each landscape management unit. This approach may be suitable in some instances, where disturbances tend to fall evenly across a landscape. CPAWS Yukon explored the implications of this approach in the Dawson Region and determined it is not suited to managing values and development that are unevenly distributed, including placer mining disturbance of wetland ecosystems.[9]

Placer mining is very specific to valley bottom and streamside environments. As an example, valley bottom habitats make up only 25% of LMU 12, but contain over 75% of the disturbances within the landscape management unit[10]. A threshold accounting system that averages disturbances across an entire landscape management unit could allow a tremendous amount of

[8] 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.

[9] Our methods and calculations are detailed at https://cpawsyukon.org/calculating-the-future-of-the-indian-river/

[10] For the purposes of our analysis, we defined a "valley bottom" as an area below 700 metres elevation, and within 500 metres of a river or 250 metres of a creek.

development to be packed within valley bottoms, while staying within the overall disturbance limit.

We calculated the existing distribution of developments within LMU 12. We then projected how much development could occur within valley bottoms under a 5% disturbance threshold, based on the existing ratio of developments that fall within valleys. We found that disturbance levels within valley bottoms in LMU 12 could reach nearly 15%.

Disturbances would not be distributed evenly throughout valley bottoms either. The bulk of placer operations are concentrated in the Indian River watershed, and it is likely that future developments would occur within this corridor too. We used a combination of existing disturbance and placer mining claims to project where future developments could occur. Under this scenario, disturbance levels could reach 26% within the Indian River valley, while still staying below the 5% disturbance threshold across LMU 12.

Recommendation: Manage cumulative effects by setting meaningful boundaries

A better approach would be to calculate disturbance thresholds within smaller zones within each LMU. In LMU 12 for example, the Indian River corridor could be one zone, the tributaries of the Klondike River could be another, and upland areas could be a zone. The plan could then prescribe that development levels within each zone stay within a set threshold. For wildlife populations, a similar approach would involve overlaying the disturbance thresholds overtop wildlife habitat and ranges.This would make for a better-scaled approach, so that development levels within smaller areas remained aligned with the land use plan's vision for the entire LMU.

Grizzly bears should be added as a key value to the current framework

Grizzly bears are a Species of Concern and sensitive to motorized linear access. Motorized access has been found to affect grizzly bears through a number of parameters including habitat use, home range selection, reproduction rate and survival[11]. Road density is an important metric to consider in the conservation and management of grizzly bears. In British Columbia, road densities greater than 0.6 km/km^2 are associated with decreased grizzly bear densities[12]. Road densities above 0.6 km/km^2 may become a population sink for grizzly bears, particularly due to decreased female survival rates or habitat avoidance by females[13]. It is important to note, however, that there is no universal human access threshold that can be relied on to predict

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

[12] Lamb, C.t., Mowat, G., Reid, A., Smit, L., Proctor, M., McLellan, B.N., Nielsen, S.E., Boutin, S. (2017). Effects of habitat quality and access management on the density of a recovering grizzly bear population. *Journal of Applied Ecology*. 2018(55), 1406-1417.

[13] Proctor. M.F., McLellan, B.N., Stenhouse, G.B., Mowat, G., Lamb, C.T., Boyce, M.S. (2018). Resource roads and grizzly bears in British Columbia and Alberta, Canada. Canadian Grizzly Bear Management Series, Resource Road Management. Trans-border Grizzly Bear Project, Kaslo, British Columbia, Canada. http://transbordergrizzlybearproject.ca/research/publications.html

negative outcomes for grizzly bears due to changes in habitat quality and the behavior of people across regions[7]. These factors must be considered for the conservation of grizzly bears. Where motorized access is an issue for grizzly bear populations, targeted access management in areas of high-quality habitat has been a successful mitigation strategy[6].

The Dawson Land Use Plan must consider the sensitivities of grizzly bears to motorized linear access. The cumulative effects framework currently doesn't consider grizzly bears, which is an oversight. The linear density thresholds currently proposed for SMA II's following zone II thresholds (1.0 km/km^2), ISA IIs (1.0 km/km^2), ISA III's (2.5 km/km^2), and ISA IV's (5.0 km/km^2) all exceed the 0.6 km/km^2 road density threshold supported by many studies[5,6,7]. At a minimum, linear density thresholds should be broken down further to ensure road densities remain below 0.6 km/km.

It is critical to consider areas of high-quality grizzly bear habitat, current population levels, and the distribution of roads across the landscape when assessing linear access[6,7]. To ensure sustainable grizzly bear populations, road density thresholds should be below 0.6 km/km^2, keeping in mind this threshold comes from recovering grizzly bear populations in medium quality habitat[6]. Areas of high-quality habitat should be kept road-free, and grizzly bear range connectivity should be maintained[6].

The 2020 Dawson Resource Assessment Report shows the highest grizzly bear densities in the McQuesten Highlands ecoregion (14.6/1000 km^2) and Mackenzie Mountains ecoregion (13.8/1000 km^2), with lower densities (11.0/1000 km^2) in the Klondike Plateau and North Ogilvie Mountains ecoregion. It will be important to investigate the question of whether lower grizzly bear densities in some parts of the Dawson region are due to lower quality habitat, or due to existing road densities and level of motorized access.

Finally, CPAWS Yukon would like to note that when large-ranging, sensitive species such as grizzly bears are planned for, a suite of other access-sensitive species will be conserved along with them. Interestingly, on page 81 of the draft plan, the Commission recommends the planning parties consider a road density threshold of 0.6 km/km^2 based on moose habitat.

Water quality / salmon should be added as a key value to the current framework

Salmon are the foundation for some of the region's most important ecological and cultural systems, which is why we propose adding water quality / salmon as an indicator. This indicator received broad support at the cumulative effects workshop in September 2021. We recommend incorporating the work the Wildlife Conservation Society presented at the workshop, which linked increasing densities of unpaved roads to increased suspended solids in streams, reducing their suitability for salmon. This indicator is particularly important as a way for the plan to respond to climate change; this research found that increased precipitation as a result of climate change will lead to more run-off, and is likely to amplify the relationship between road density and suspended solids in streams.

5. Establish meaningful protection for wetlands

CPAWS Yukon appreciates the Commission's open admission that it is at a "crossroads when it comes to the difficult decision of disturbance or activity in the Region" (pg. 92). These tradeoffs are drawn into particular focus in the Indian River valley, where the Yukon's most productive placer mining district overlaps with an ecologically and culturally important wetland complex. This conflict has been amplified by Yukon's free entry system of mining, which has permitted many wetlands in this drainage to be disturbed or staked, well ahead of land use planning.

CPAWS Yukon is encouraged that the Commission has made development of bogs and marshes, rare wetlands in the region, off-limits throughout the region. We understand that the Commission is seeking input on the percentage of fens that should be off-limits to development, with a listed range of 25% to 75%. We feel that at least 75%, and ideally 100%, of fen ecosystems should be spared from development. Fens store carbon and, once disturbed, their layers of ancient peat cannot be restored. Retaining these wetlands aligns with the Yukon's climate commitment and the plan's own aspirations to mitigate the effects of climate change. In addition, these ecosystems, often patterned with sedges or tamarack, sustain diverse plant species, prevent flooding, store water that's a haven in dry periods, and are culturally important harvesting areas. Given the sensitivity of fens to disturbance, high levels of protection align with the precautionary principle embedded in the draft Dawson Plan.

However, in making this recommendation we recognize wetland protection is complicated by several factors. First, boundaries between wetlands are often ill-defined and it can be difficult or impossible to meaningfully distinguish where one wetland begins and the other ends. Second, upstream disturbance can indirectly impact downstream wetlands through the disruption of groundwater connections. Even disturbance outside of wetlands can impact their function and values. This makes it imperative to protect entire wetland ecosystems. In light of these factors, we recommend the following to protect the critical ecological and cultural values wetlands hold in the region:

1. Upgrade protections for LMUs 19 and 22, the Upper Indian River Wetlands and Scottie Creek Core, from SMA 2s to SMA 1s. Without stronger protections, development on existing tenure could impact a host of values, including water quality, biodiversity, cultural connection, and harvesting.
2. Designate the Ladue and White River wetlands in LMU 21 as SMA 1s or nominate these ecosystems as Wetlands of Special Importance.
3. Upgrade LMU 11, which includes the Flat Creek Wetlands, to an SMA 1 and redraw the LMU's boundaries to fully protect wetlands from upstream effects.
4. Include appropriate buffers around wetland ecosystems in the plan, to ensure permitted development does not sever critical hydrological connections and disturb other wetland functions.

These recommendations are further detailed in our LMU-specific comments.

6. Better protect the Klondike Plateau ecoregion

The planning area overlaps five distinct ecoregions: the Klondike Plateau, McQuesten Highlands, Mackenzie Mountains, North Ogilvie Mountains, and a small corner of the Yukon Plateau-Central ecoregion. These areas are nature's neighbourhoods - each has a distinct ecological character, and is home to different communities of plants and animals. Protecting a significant portion of each ecoregion in the Yukon will ensure future generations of people and wild creatures can experience the same types of wild places that exist today. The Klondike Plateau, which blankets the southern and central parts of the region, currently has no protection in the Yukon, although it would receive modest protection through the Matson Uplands SMA 1 and the Scottie Creek Core SMA 2.

CPAWS Yukon encourages the Commission to expand protections in the Klondike Plateau ecoregion. Upgrading the Scottie Creek Core SMA 2 to an SMA 1 would ensure lasting protections for the lower elevations of this ecoregion, as the Matson Uplands represents mostly upland habitat. As described earlier, CPAWS Yukon recommends protection for the White River and Ladue wetland complexes; doing so would also better protect the Klondike Plateau ecoregion.

There are many reasons to ensure ecoregions have sufficient protection. For one, it creates a conservation network that is biodiverse and ecologically representative. Ecosystems rich in biodiversity are resilient and better able to adjust to future disturbances like fire or climate change.

Adequate protection of ecoregions will also be helpful for measuring the future success of the cumulative effects framework. Large, ecologically healthy conservation areas are 'ecological benchmarks,' which can be used as undisturbed points of reference to evaluate how well regulations and management actions are working in similar landscapes that host development or resource extraction.[14] Ecological benchmarks make it easier to determine if changes on the land are human-caused or due to natural ecological fluctuations.

For example, if biodiversity is declining in a developed landscape and similar changes are occurring in a comparable conservation area, then development is not likely behind the decline. But if biodiversity is declining in a developed landscape and not in a comparable conservation area, then the cause is likely development. This type of information could be used to adjust policies and disturbance threshold levels in the Dawson Region.

Better protecting the Klondike Plateau ecoregion aligns with a key goal of Yukon's *Parks and Land Certainty Act*, to represent all ecoregions in the network of Yukon's protected areas. The Dawson Region plan provides an opportunity to work towards this commitment.

CPAWs Yukon is pleased to see that the Upper Klondike SMA 1 (LMU 10) will provide ecosystem representation for the McQuesten Highlands ecoregion, an area that currently lacks

[14] Schmiegelow, F. (2007). On benchmarking natural systems. *Canadian Silviculture, 5*(1), 3-7.

sufficient representative protection in the Yukon. It is worth noting the Mackenzie Mountains and North Ogilvie Mountains ecoregions already have some protection afforded to them through Tombstone Territorial Park, the Peel Regional Land Use Plan, and Ni'iinlii Njiik Territorial Park.

Comments on Specific Land Management Units

LMU 1: North - Tthetàwndëk

This area includes many ecologically important values, including wetlands, Dall sheep habitat, and endemic plants. We commend the Commission for recommending its designation as a conservation area, although we recommend that the SMA 2 designation is upgraded to an SMA 1 designation.

LMU 3: Yukon River - Chu kon dëk

CPAWS Yukon supports more detailed planning for the Yukon River - Chu kon dëk corridor as this area hosts a large variety of uses and values. Given the importance of planning for stewarding these values, we strongly support the management direction of putting an interim withdrawal in place until subregional planning is complete.

We also recommend that the Parties prioritize the Research Recommendation on pg. 62, to "design and conduct a study into the ecological and social impacts of barging on the Yukon River." This will be important information for developing the subregional plan and should be available during the planning process.

It is our understanding that the Yukon River Corridor extends 1 km on either side of the river from the high water mark. CPAWS Yukon would like to see an ecologically meaningful definition of the corridor's boundaries. We suggest that the corridor should run 1 km from either side of the high water mark, or from the river to the crest of the river valley, whichever is greater. This approach would encompass important conservation priorities that are often located on slopes, such as raptor nests and endemic plant species. This corridor could be defined through the use of a 'viewscape model' using LiDAR data.

LMU 4: Fifteen/Chandindu - Tsey dëk/Tthen dëk

The Dawson Region plan holds great promise in terms of reconciliation and integrating Indigenous perspectives, values and governance into management of SMA's across the region. Designation of this LMU as an IPCA aligns with that promise. Currently the Commission has only proposed LMU 4 as an IPCA but CPAWS Yukon recommends that all areas designated for protection should be seen through the lens of being an opportunity for reconciliation.

As explained earlier in our submission, we recommend this LMU is designated as an SMA 1. Leaving the area as an SMA 2 will make it difficult or even impossible to realize the comanagement potential of the IPCA designation.

LMU 7: Upper Brewery/Hamilton

CPAWS Yukon supports the designation of this area for conservation but we feel it should be upgraded to an SMA 1. Without an SMA 1 designation, we are concerned that the intent to protect wildlife habitat and the area's scenic beauty will be difficult to achieve, given that the SMA 2 designation permits development on existing tenure and a large portion of the LMU is blanketed by existing mineral claims.

This LMU contains calving, summer, and rut habitat for the Hart River caribou herd, seasonal life stages where caribou are very sensitive to direct and indirect disturbance. While we are pleased that the cumulative effects thresholds in this area match that of an ISA 1, the logical conclusion of exploration is mine development. Given that mine development would exceed the disturbance thresholds in this area and would not be permitted (unless only a small portion falls within the LMU), we feel there is little reason to potentially undermine the health of the Hart River herd by permitting exploration disturbance in this LMU.

LMU 8: Lower Brewery/Hamilton

We understand that management in this LMU is challenging, given the high ecological and cultural values, and the potential for mining activity to re-start. Given these competing values, we are pleased to see the thoughtful Special Management Directions in the draft plan, particularly the direction to consider access from the Dempster Highway only through plan amendment.

At the same time, we feel it is a stretch to say that "A zone 3 designation will allow for continued mineral exploration and development and forestry to occur without undermining the ecological and cultural value of the surrounding area" (pg. 130). This area includes critical calving, post-calving, summer, and rutting habitat for the Clear Creek caribou herd and development will both directly and indirectly decrease this habitat and the herd's health. The population status of this herd is unknown, and it could well be declining, given the past and current development pressures throughout its range. We feel strongly that the herd's remaining habitat should be protected.

For the above reasons, **we strongly recommend that the eastern third of this LMU - the section that overlaps with the range of the Clear Creek caribou herd - be added to LMU 7: Upper Brewery Creek** (an SMA 2 that we are recommending for SMA 1 designation).

LMU 9: Clear Creek

CPAWS Yukon is very concerned that this area is designated as an ISA IV, with the northern half of the LMU overlapping with the Clear Creek caribou herd's range. The population status of

this herd is unknown, and disturbance to the herd's habitat may already be above what the herd can tolerate in the long term. As cited earlier in our submission, caribou are at major risk of deline when linear developments exceed 0.8 km/km2. This LMU would allow up to 5km/km2. Ideally, the northern half of this LMU would be added to LMU 7, along with the eastern portion of LMU 8, to protect the Clear Creek herd's range that falls within the planning region. However, we realize this is unlikely, given the density of existing tenures in the area.

Therefore, we suggest the Commission recommend that Yukon Government and First Nations with overlapping traditional territory initiate a cumulative effects study of the herd's entire range. This information could feed into the plan amendment process, and into the future Northern Tutchone Regional Plan. We also recommend that, under the Special Management Directions, new access through the herd's rut habitat should not be permitted, versus simply "discouraged".

LMU 10: Upper Klondike

This part of the Dawson Region obviously holds immense ecological and cultural importance, and we generally support the LMUs designation as an SMA 1. However, we note that section 10.3.5 of the Umbrella Final Agreement states that, "A Special Management Area may not include Settlement Land without the consent of the affected Yukon First Nation". As this LMU is primarily settlement land, the suitability of an SMA 1 designation is contingent on the consent of Tr'ondëk Hwëch'in.

LMU 11: Flat Creek Wetlands

CPAWS Yukon recommends that this area be upgraded to an SMA 1. This LMU falls within the Tintina Trench Flyway, a major migration corridor of continental significance, and it includes marsh wetlands which are extremely rare in the Dawson Region. At the very least, these wetlands should be nominated as Wetlands of Special Importance. We also recommend extending the southwestern edge of this LMU to LMU 19 to better align with regional topography and ensure protection of wetland hydrological connectivity.

LMU 12: East - Nächo dëk

CPAWS Yukon understands that this area is highly prospective for minerals, hosts high levels of historic and current activity, and has been prioritized for development. We do not disagree that this area is highly important for economic development. However, we are concerned that the cumulative disturbance thresholds in this LMU are too high to sustain ecological and cultural values in the long term, and that they are calculated in a way that permits high concentrations of development, well above the overall 5% threshold. We hope some of these issues could be resolved through our earlier recommendations on the cumulative effects framework.

We also recommend that the protection of ridge top migration routes for caribou be added to the Special Management Directions. The Commission could also consider introducing Major River Corridors as an overlay designation, to ensure that the high ecological and cultural values of river ecosystems, such as the Stewart River, receive adequate protection. This would permit the

Commission to include special management directions for these areas, as found in the Peel Region Plan, such as “Avoid large-scale industrial and/or infrastructure projects within Major River Corridors.” This designation would also be suitable for other rivers in the region, such as the White River and the Ladue River.

LMU 13: Klondike Valley

CPAWS Yukon supports more detailed planning for the Klondike Valley, given the high concentration and variety of uses and values in this area.

LMU 17: Sixtymile - Khel dëk

Key summer habitat for the Fortymile caribou herd falls within this LMU, which allows up to 2.5% disturbance as an ISA III. This is a high level of development: for comparison the highest level of development permitted anywhere within the Peel Watershed is 1%. The northwestern section of this LMU should be designated as an SMA 1.

The part of LMU 17 that overlaps with the core summer range of the FMCH is heavily staked for quartz mining, showing high development pressures for this area. The existing disturbance thresholds could allow for a tremendous amount of development within this area. The best way to protect key migration corridors for the Fortymile caribou herd is to designate its entire core range as an SMA 1, instead of risking that this vital route will be eroded through disturbance.

LMU 18: Matson Uplands

CPAWS Yukon supports the SMA I designation for the Matson Uplands.

The draft land use plan makes a good start towards securing the Yukon range of the Fortymile caribou herd. The Matson Uplands is the very core of the herds Yukon range, and CPAWS Yukon commends the Commission for affording these lands a strong conservation designation. As outlined elsewhere in these comments, SMA Is are the high standard that all conservation areas within the Dawson Region should receive.

While protecting the Matson Uplands is a positive step, the Dawson Region Plan needs to go further in protecting critical Fortymile caribou habitat. It is worth noting, that while strong conservation for the Matson Uplands is a good thing, this is not the part of the herd’s summer range that is at most risk. Just 0.04% of the Matson Uplands are staked for mining. An area of such little mineral interest probably wouldn’t have had development in it even if it were an ISA.

Other parts of the herd’s core summer range have much greater levels of mineral interests. There is a wide belt of quartz mining claims which begin immediately north of the Matson Uplands and extend through the Sixtymile LMU and into the Fortymile Caribou Corridor LMU. Advanced exploration or mine development among this belt of claims could diminish the connectivity of the FMCH Yukon range, and impede the movement of caribou through its critical summer habitat.

LMU 19: Upper Indian River Wetlands

CPAWS Yukon appreciated the intention behind the Upper Indian River Wetland SMA, but unfortunately the specific policy directions for this LMU don't match the vision. This is because the draft plan allows for development within existing mining claims, and LMU 19 is heavily staked.

While all other SMA 2s in the plan allow for ISA I level of disturbance, the draft plan allows for ISA II level disturbances within mining claims in this LMU. Since 125 square kilometres (26%) of this LMU falls within a quartz or placer claim, it means that 1.25 square kilometers of disturbance could occur within LMU 19. That's more development than would be allowed if all of LMU 19 were made into an ISA I. The land use plan does prevent development within undisturbed wetlands, though these protections are no different than if LMU were an ISA, (except when related to fens).

What's more, the existing mining claims in LMU 19 are contiguous, and overlap with the Goldfields road network. Other SMA IIs allow disturbance on claims, but these claims tend to be isolated, meaning that building all season road access to these claims would generally not be possible. This limitation does not exist in LMU 19, and the draft policy directions would leave the door open for networks of roads and developments to expand into LMU 19. The amount of development and road building that could happen within LMU 19 leads us to conclude that for most purposes, LMU 19 would act as an ISA, not an SMA.

The draft land use plan's vision for the Upper Indian River Wetlands is to protect the function of the "wetland complex as fully as possible to respect cultural and ecological values". Again, the LMU 19's policy directions are at odds with this vision. Exactly 50% of wetlands[15] within LMU 19 fall within mining claims, meaning that the only protection afforded to these areas is the policy direction not to develop "undisturbed" wetlands.

Ideally, this LMU would be afforded full protection through an SMA 1 designation. This area is highly culturally important to Tr'ondëk Hwëch'in, who pushed for years for the Yukon Water Board to hold a public hearing on placer mining in wetlands, which was initiated because of pressures in the Indian River Watershed. According to YESAB Evaluation Report 2020-0017:

> *"… the Indian River valley wetlands are of high ecological and socio-cultural importance, vulnerable to change, and cannot be effectively replaced given the complexity of restoring wetlands.*
>
> *…*
>
> *It is likely that mining in the Indian River wetland complex has already surpassed the threshold of social acceptability … The ecological value of wetlands is also unlikely to be effectively restored to its original function once disturbed…*

[15] We used the "Wetlands_50k" layer available from GeoYukon.

> *Changes to the ecosystem are not well understood and have not yet been effectively monitored.*
>
> *…*
>
> *Placer mining within these areas will result in the irreversible loss of the intact wetland habitat, and there is robust evidence to suggest that unmined wetlands have ecological, social, cultural, and intrinsic value. In the face of accelerating development and landscape level change any remaining wetland habitat is considered exceptionally vulnerable to disturbance and compels the need for robust protection."*

Protecting the upstream portion of this watershed also affords some protection to downstream wetlands that fall within LMU 12.

We note that the draft plan defines "undisturbed wetlands" as those "where natural functions of a wetland have not been significantly or directly altered by human activities either permanently or temporarily." CPAWS Yukon supports the Commission in defining "disturbances" based on the function of a wetland, rather than something more cosmetic, as this will help preserve wetland ecosystems as they presently function. However, we recommend the plan go into greater detail on what is meant by an undisturbed wetland, as ambiguity in this definition could lead to future decisions that diverge from the Commission's intentions. For example, indicators could be included within this definition, and the distribution of disturbed and undisturbed wetlands could be mapped.

LMU 21: White - Tädzan dëk

This LMU contains important wetland complexes along the Upper Ladue River and the White River. We recommend the Commission protect these areas through an SMA 1 designation or nominate them as Wetlands of Special Importance. We are pleased that this area has a low development threshold through an ISA I designation, although the entire LMU makes a good candidate for an SMA 1. As noted in our comments for LMU 12, the Commission could consider including a Major River Corridor overlay designation in the plan, which would enable appropriate stewardship of sensitive river ecosystems like the White River and Ladue River.

LMU 22: Scottie Creek Core

CPAWS Yukon supports the designation of this LMU as a conservation area given its ecological value and cultural importance to White River First Nation. However, we recommend it is upgraded to an SMA 1 to better align with the plan's intent to protect it as a Habitat Protection Area.

LMU 23: Fortymile Caribou Corridor

We recommend this area is upgraded to an SMA 1, to provide enduring and certain protections for the Fortymile caribou herd.

The draft plan's vision and objectives for the Fortymile Caribou Corridor speak to the need to preserve the herd's migratory pathways and guarantee the right for people to subsist on the herd. In CPAWS Yukon's view, the LMU's designation as an ISA I/II would make it difficult to achieve these management visions for the area.

The ISA I disturbance threshold is relatively low, but it's calculated by averaging disturbances across the 800 square kilometres of alpine within LMU 23. High amounts of disturbance could still occur within small areas. Any mining development within ridgetop habitats could interrupt caribou migration corridors, or displace them from key summer habitats.

It's unclear to CPAWS Yukon whether or not advanced exploration work or an operating hard rock mine could occur within alpine areas of LMU 23, and remain within the ISA I disturbance threshold. It's possible that a mining company could be creative: such as having part of the mine's footprint not count towards the ISA I threshold by placing some infrastructure in lower elevations.

An ISA I disturbance threshold would also allow for a substantial amount of new road developments within the alpine areas of LMU 23. Roads, like caribou, seek the path of least resistance through a landscape, which in LMU 23 are ridgetop corridors. Road developments have been shown to impact caribou in a variety of adverse ways, such as by delaying and deflecting migrating caribou, displacing caribou from roadside habitats, and by making it easier for predators to access caribou habitat.

A threshold-based approach to preserving caribou habitat has other weaknesses too. Leaving LMU 23 as an ISA I/II would set a broad direction for the area, but would ultimately pass decision making responsibilities on. Future industrial developments within LMU 23 would be analyzed by YESAB, with a recommendation passed on to the Yukon government for a final decision. Making LMU 23 as an ISA I/II would give discretion over developments within key FMCH habitat to future Yukon governments, which may not share the commission's desire to see strong protections for the FMCH.

In contrast, designating LMU 23—or at the very least, high elevations within LMU 23—as a SMA I would guarantee lasting protection for the FMCH's summer range in the Yukon. SMA I designation would also leave the door open to co-management over these lands between Yukon government and Tr'ondëk Hwëch'in.

Other Comments on the Plan

Rephrase the heading "How to Use this Plan" (pg. 10) and build out the description.

In this section, the plan design is described as a way to provide certainty and clarity for people in the environmental assessment field and project proponents. This misses the broad range of people, organizations and governments that will use this plan, and a more appropriate heading might be something like "How to Use this Plan for Project Planning and Assessment". We also feel this description misses an opportunity to speak to the message we've heard throughout this process, that the plan is intended to promote stewardship for all users of the land.

Rephrase a draft Ecological Goal on pg. 21.

CPAWS Yukon supports reclamation as a stewardship tool. However, we must also ensure that cumulative disturbances do not push ecological and cultural systems beyond tipping points they can recover from, and recognize that restoration or reclamation is often not ecologically achievable. This is why we recommend changing the draft ecological goal from:

"Support the natural integrity of the planning region be ensuring cumulative disturbances from human activities on the landscape are reclaimed or restored"

to

" Support the natural integrity of the planning region by ensuring cumulative disturbances do not undermine ecological values, and by reclaiming or restoring ecological values disturbed by human activities."

There is an important distinction between habitat restoration and reclamation following mining activity. In most cases, complete restoration of the habitat and ecosystem services and functions is impossible, especially within certain habitats such as peatland wetlands. Reclamation is the more common outcome, where some of the original values may be returned to the land, some of the original values will be lost, and sometimes different values may be added. When it comes to placer mining in wetlands, habitat restoration is not the goal of reclamation work[16]. Ultimately, reclamation leads to a permanent change in the landscape where mining has occurred.

Original values that reclamation cannot reliably restore range from carbon sequestration and permafrost preservation in peatlands, to habitat for sensitive species such as caribou, to various cultural values.

[16] Page 16, Chevreaux, A., Clarkson, R. 2015. Wetland Reclamation for Placer Mining: Recommendations and Guidelines. Klondike Placer Miners Associaiton. Available at https://www.kpma.ca/wp-content/uploads/2017/07/KPMA-Wetland_reclamation-final.pdf

Values that may be added through reclamation include increased habitat for moose and waterfowl through the creation of marshes and shallow open water wetlands and increased willow growth.

Reclamation must be approached with goals in mind, meaning the values that will be returned, lost, and added should be identified from the beginning. Reclamation is a time-consuming process that isn't fully captured by the Yukon's licensing structure, specifically for placer mining. Licenses expire before it is possible to know if reclamation has successfully met the goals identified in the beginning. In addition, certain values, such as cultural values, often aren't meaningfully incorporated into the reclamation process.

Reclamation is an important tool to be used following mining activity, but it can't be relied on to fully restore all values. The Commission must keep this distinction in mind when making land planning decisions for the Dawson region.

Ensure disturbances within Highway Corridors are meaningfully captured in the cumulative effects framework (pg. 31).

The plan defines Highway Corridors as being 1 km on both sides from the centreline of the highway, and includes the Dempster Highway, Klondike Highway, and Top of the World Highway. It's unclear why disturbances within these corridors are not included in LMU disturbance thresholds (pg. 31). These disturbances count to wildlife and other ecological values, and they need to be accounted for in the cumulative effects framework.

Rephrase the Policy Recommendation on pg. 49, which states "support implementation of the recommendations of the Yukon Mineral Development Strategy related to Strategic Priority #3 to establish effective, efficient, and transparent environmental and regulatory processes".

We do not disagree in principle with the goal to support effective, efficient, and transparent environmental and regulatory processes but recommend removing the reference to Priority #3 of the Yukon Mineral Development Strategy (YMDS). CPAWS Yukon provided comments on the YMDS in February 2021, and in our submission we note that while there are some strong recommendations under Strategic Priority 3, some of the recommendations place industry-centred concerns about regulatory speed and efficiency above other key principles of effective regulation: accountability, transparency, public involvement, and First Nations co-management and rights. For example, the *Gowlings Report and Pricewaterhouse Coopers Report* cited in this section of the YMDS were industry-driven exercises and were generally not supported by First Nations or conservation organizations in their feedback on the YMDS.

We strongly support the Recommended Action on pg. 59, for the Parties to "develop overarching access management plans for the planning region…".

The plan rightfully acknowledges the impacts that access from roads and trails can create and we are pleased to see the recommendation to develop access management plans for LMUs 12,

17, 9, and 20. We recommend that this Recommended Action is flagged as a priority action for the Parties.

We support the recommendation to implement seasonal road closures in key post-rut habitat areas for moose, from Oct. 15-31 (pg. 81). ORVMA designation could also be considered.

This recommendation is an interesting way to potentially reduce harvest pressure on moose. The success of this measure will depend on effective access controls, such as gates. The Commission could also recommend these areas be designated as Off Road Vehicle Management Areas, in order to seasonally restrict access by off road vehicles.

Remove Figure 4-1 on pg. 96.

Given that the effects of wetland disturbance have unpredictable, non-linear effects, we recommend removing the figure on pg. 96, which suggests a linear relationship.

We support the idea of a Land Stewardship Trust (pg. 106)

CPAWS Yukon supports the development of a Dawson Region Land Stewardship Trust. Funding through the Yukon Fish and Wildlife Management Trust has supported many important projects, and a Dawson trust could make a similar positive contribution to stewardship projects. This recommendation aligns well with other recommendations in the plan, such as the one on page 75, to “support the ongoing Local Resource Knowledge Project...”.

In closing

CPAWS Yukon thanks the Dawson Region Planning Commission and planning staff for the thought that has gone into the draft plan. It is clear that you are taking your role seriously and that you are working hard to ensure a positive future for the region.

When we attended the wetland workshop hosted by the Commission at the end of October, we heard that whether it’s 20 years from now or 50 years, it is only a matter of time before the gold runs out in the Dawson Region. When it does, what will the region look like for the future generations who will still call the region home?

We hope the Fortymile caribou still roam the Klondike Plateau, as they have done for millennia. We hope the salmon still spawn in the Klondike River. We hope that, even as climate change shifts the landscape, we will still have provided a place for wildlife to roam. And we hope that people are happy, healthy, and thriving.

In writing our recommendations for the Commission, we have done our best to channel the gusto and boldness of the youth who sit on the Yukon’s Youth Panel on Climate Change. In October 2021, they released a document entitled *Our Recommendations, Our Future: 27*

Programs and Policies to Embolden the Yukon's Climate Action.[17] We were fortunate to watch them present their recommendations, as they stood mere metres from territorial decision makers, demanding change that would deliver a strong future for people, land, waters, and wildlife in the Yukon. Their recommendations included a call to "prioritize and complete Land Use Planning that is centered on sustainability and ecological preservation throughout the Yukon, guided and led by Yukon First Nations." Specifically, they recommended that we should:

1. Prioritize the completion of land use planning across the territory using processes that balance Western science with traditional knowledge and prioritize environmental protection.
2. Work with and defer to the guidance of Yukon First Nations to identify areas for protection in order to foster a direct relationship to the land.

As you create your Recommended Plan, we encourage the Commission to also heed the advice of these young people. Their future is something that we cannot afford to risk, and we strongly encourage the Commission to release a Recommended Plan that will lead to a healthy, just, and equitable future for generations upon generations.

Sincerely and on behalf of the CPAWS Yukon team,

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[17] https://www.yukonyouth.com/wp-content/uploads/2021/10/YPCC-Recommendations-Condensed-Version.pdf