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CANADIAN PARKS AND WILDERNESS SOCIETY  
YUKON CHAPTER

# ERODING THE YUKON'S WILD CHARACTER

RESOURCE ROADS AND MAKING BETTER DECISIONS





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## EXECUTIVE SUMMARY

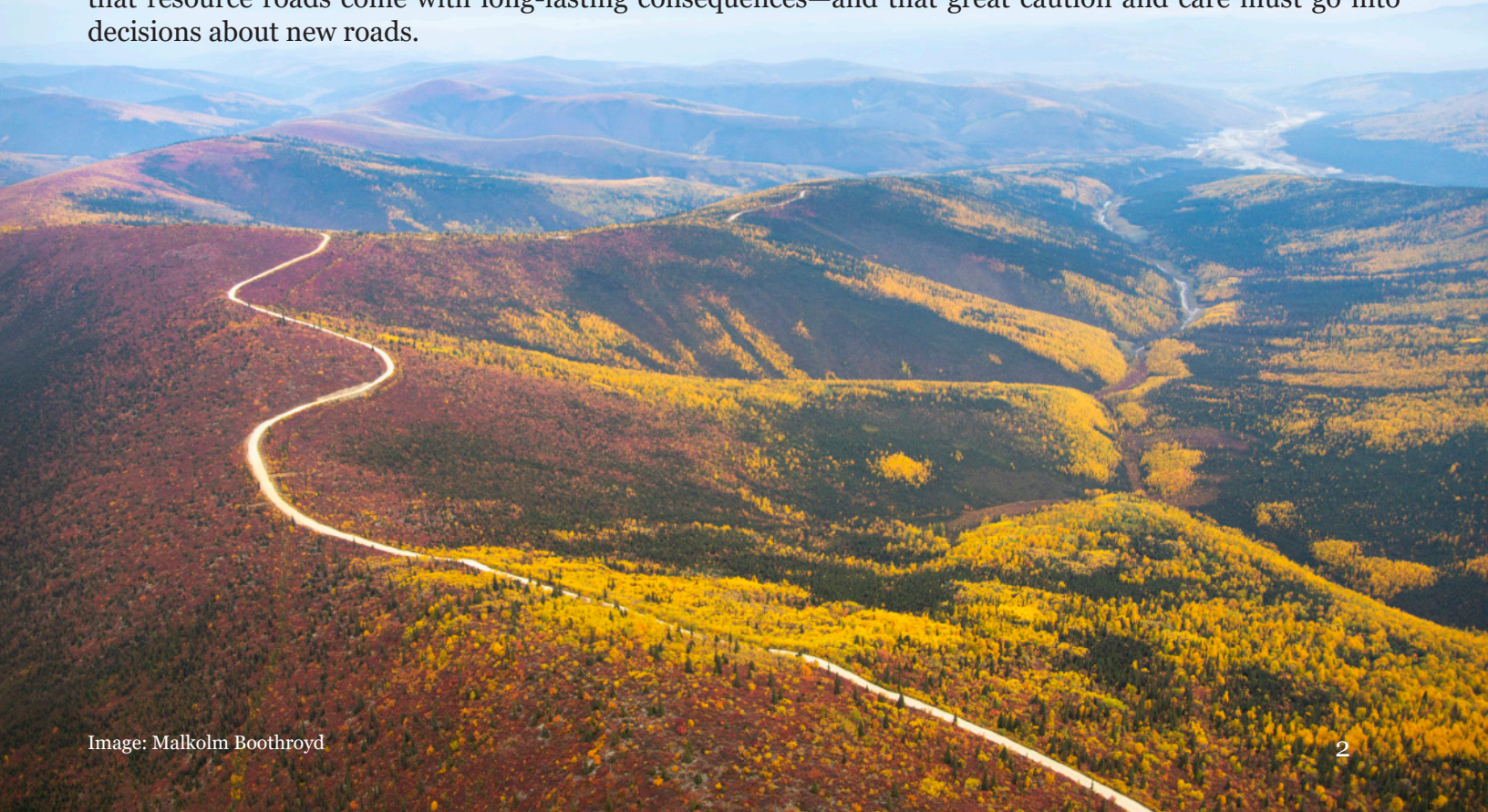
People have complicated feelings about roads. On one hand, roads help Yukoners explore forests, lakes, rivers and mountains. On the other, we value the remoteness of places far removed from the rumble of engines. Lucky travellers might glimpse a lynx slipping across a highway, but we also see the carcasses of porcupines and songbirds along the shoulder. Roads bring many services to human societies, but are also a driving factor behind the biodiversity crisis. Roads have been called a “sleeping giant”<sup>1</sup> in the understanding of humankind’s impact on the planet.

The Yukon is fortunate to still have a wealth of roadless areas—where wolves and grizzly bears can still roam freely. These are lands engraved by creeks and caribou trails, not exploration roads and seismic lines. Large, intact landscapes are essential for sustaining healthy wildlife populations, and strengthening the resilience of ecosystems in the face of the climate emergency.

A new push for road development is happening in the Yukon. These roads wouldn’t connect communities or people. Instead they would serve the needs of resource extraction companies. Resource roads would open the territory’s wild spaces to cascades of new development.

We have the right tools to make thoughtful decisions about resource road developments. The problem is that the tools are being used out of order. Land use planning is designed to lay out a broad vision for the land, and can settle the big questions around roads and other developments. However, in most of the Yukon, planning isn’t finished yet—or hasn’t even begun. Without guidance from land use plans, the territory’s environmental review process can’t adequately address the far-reaching implications of resource roads. Road after road could be approved, with little consideration for cumulative impacts. Spiderwebs of roads could slowly erode the Yukon’s wild character.

Some Yukoners might have a vision for a territory with a much more expansive road network, while others would rather see the Yukon stay wild. Wherever people stand, everybody should be able to agree that resource roads come with long-lasting consequences—and that great caution and care must go into decisions about new roads.





## KEY RECOMMENDATIONS

- Roads that would make the 'first cut' into roadless areas should be treated cautiously, especially roads proposed in areas of high ecological and cultural significance.
- Decisions about where roads are and aren't acceptable should be made through land use planning, and in conjunction with Yukon First Nations.
- Land use plans should set thresholds on disturbances caused by roads and other linear features. There should be interim thresholds on linear disturbances in areas where land use plans are not complete.
- In lieu of land use plans, YESAB and the Government of Yukon should respect the land and resource plans created by First Nations. This is particularly important when considering road developments in the territories of Nations who have not signed Final Agreements.
- Major resource road proposals that fall in areas without land use plans should trigger a sub-regional land use planning process. Sub-regional land use planning should address whether resource roads and consequential developments are in the broader interests of the area.
- The scope of YESAB reviews should be expanded to better address cumulative impacts and induced developments associated with resource roads.
- YESAB should take great care when evaluating roads in areas without completed land use plans. Such projects should be analyzed by YESAB Executive Committees, which conduct more rigorous reviews than YESAB Designated Offices.
- Road proponents should fund independent baseline data collection, so that YESAB can have solid information on ecological and cultural values as it reviews road proposals.
- The Yukon government should require companies to post sufficient financial security to cover the costs of resource road reclamation. Reclamation outcomes should be time-bound, and well-defined in advance of road construction.

The Peel Watershed Land Use Plan recognized the importance of roadless ecosystems, and restricted road construction in 83% of the watershed. Image: Peter Mather



## INTRODUCTION

Roads are among the most stark symbols of humankind's impact on the planet. In the lower 48 states of the U.S., the total length of roads is one million kilometres greater than the distance covered by streams and rivers.<sup>2</sup> Over 36 million kilometres of roads extend across the globe.<sup>3</sup> This is likely an underestimate, given the proliferation of resource roads. Around 750,000 kilometres of resource roads exist in British Columbia alone.<sup>4</sup>

Roads bring many benefits to human societies, but they have serious ecological consequences too. Roads fragment habitats, disrupt water flows, help invasive species spread and open up landscapes and ecosystems to increased human developments.<sup>1</sup> Numerous wildlife species respond by changing their behaviours, movements and migrations, or avoiding habitats near roads.<sup>5, 1, 6, 7</sup>

Once a road makes the 'first cut' into a remote area, a rush of development is often inevitable.<sup>8</sup> A new push for **resource roads** threatens the Yukon's wildest spaces and iconic wildlife. These projects would substantially increase industrial access to wild places. Roads could carve through intact **ecosystems**, dissect wildlife habitat, and reduce landscape **connectivity**. Resource roads and **linear disturbances** could reshape large swaths of the Yukon forever.

Unfortunately, the Yukon's decision-making processes are not well prepared to address far-reaching impacts these roads would bring. Land use planning is the best way to address big picture questions, like where roads are acceptable, or where should stay roadless. However, land use plans have not been completed yet in most of the Yukon. That means that decisions about road developments are being made through low-level assessments by the Yukon Environmental and Socio-economic Assessment Board (YESAB). Without direction from land use plans, some of the most important implications of road developments will be overlooked.

YESAB reviews are poorly equipped to evaluate big-picture consequences of road developments, such as **cumulative impacts** and **induced**

**development**. New roads would usher in a rush of industrial development that could reshape whole landscapes—before land use planning can happen. *This is not a criticism of YESAB or its employees. Without guidance from a land use plan, YESAB is poorly equipped to assess transformational projects such as roads. Similar issues are common to environmental review processes across many jurisdictions.*

Roadless areas are becoming rare in today's age. The Yukon is fortunate to still have wild spaces that haven't been transformed by roads. Roadless areas strengthen habitat connectivity across landscapes and support species such as wolves, caribou and grizzly bears.<sup>9</sup> The Yukon needs to make thoughtful decisions about the future of resource roads, to ensure that roads and industrial development do not erode the territory's wild character, health and integrity.

*This report focuses on proactive steps to ensure roads don't transform the Yukon's intact and ecologically important landscapes in the first place. Mitigation measures and reclamation efforts are important too, but we only touch on these aspects briefly.*

## Important definitions

*Ecosystems* are the networks of interactions between living organisms and their physical environment.

*Connectivity* is the ability of species and ecological processes to flow unimpeded across landscapes.

*Resource roads* are roads built by oil and mining companies to access lands and resources.

*Linear disturbances* are roads, seismic lines, pipelines and other disturbances that fragment landscapes.

*Induced developments* are industrial activities that become feasible with new infrastructure construction.

*Cumulative effects* are the combined impacts from multiple environmental stressors. For example, the effects of a road may interact with impacts from pollution, climate change, fires and historical disturbances, heightening the consequences for wildlife, communities and people.



## ECOLOGICAL IMPACTS OF ROADS

The planet is in a biodiversity crisis. Species are vanishing 100-1000 times faster than the natural rate of extinction.<sup>10</sup> Roads and other developments are driving deforestation and habitat fragmentation around the world.<sup>11</sup> Roads pave the way for industries to encroach into wild spaces—exposing ecosystems to new waves of exploitation.<sup>12</sup>

The ecological impacts of roads extend well beyond the physical land that they occupy. Consequences such as roadkill are easy to see, but most of the impacts of roads are less obvious. Road networks can severely alter landscapes, disturb natural water flows, and carve ecosystems into isolated fragments.<sup>1, 13</sup> Resource roads and highways can be barriers to animal movements, especially among wide-ranging species like caribou, grizzly bears and wolverines.<sup>14,7, 15,16</sup> Species that depend on large, interconnected habitats are especially susceptible to habitat fragmentation.<sup>4,17</sup> Roads and other forms of development can fragment wildlife populations and limit gene flow, which increases the risk of populations going extinct.<sup>17,18</sup>

In other cases, roads can attract animals. Road salts and vehicle fluids like antifreeze can lure Dall sheep, mountain goats and other wildlife.<sup>19</sup> Roadside attractants increase the likelihood of animal-vehicle collisions, endangering the safety of people and wildlife.

Many species avoid habitats near roads—for reasons such as pollution levels, high human access, and the increased risk of encountering predators.<sup>1</sup> The presence of roads can diminish the amount of available habitat for species that are wary of roads. Some birds avoid nesting near roads, and nest densities can be noticeably lower as far as 2.8 kilometres from heavily used roads.<sup>20</sup>

Roads provide easy access, which in turn can lead to increased levels of hunting and poaching and the depletion of wildlife populations.<sup>21,26</sup> For example, hunting access provided by the construction of the Campbell Highway was blamed for the extirpation of a stone sheep herd in the Selwyn Mountains. Environmental Dynamics Incorporated (EDI) studied the relationship between roads and hunting in the White Gold area, south of Dawson City.

Human-caused grizzly bear mortalities are most likely to occur near roads. Image: Malkolm Boothroyd



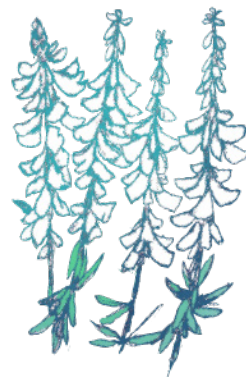


EDI determined game zones with higher road and trail densities had higher moose harvest rates. Environment Yukon raised similar concerns in the Mayo Region. In its comments on the ATAC road, the department warned that “harvest of moose in this area is currently at or above sustainable harvest levels, and the proportion of bulls is particularly low in the Keno area because of ready access provided by mining roads.”<sup>22</sup>

As the frequency of roads increases, impacts on wildlife tend to increase too.<sup>23</sup> However, even single roads can have serious consequences for wildlife. The road to the Red Dog Mine in northern Alaska interrupts the migration of barren-ground caribou, and has resulted in some individuals stalling their migration for over one month before crossing.<sup>24</sup> Roads and other oil and gas infrastructure in parts of the Alaska North Slope are predicted to result in a 30% reduction in the availability of prime caribou calving habitat.<sup>25</sup> Over time, the

incremental expansion of roads and other industrial developments can fragment populations and dramatically reduce habitat availability for species.<sup>26</sup>

Places with high human populations are not the only areas that are scarred by roads—the north is impacted too. The proliferation of roads and other linear disturbances are associated with resource developments, such as oil and gas extraction in northern Alberta, logging in British Columbia, and placer and quartz mining in the Yukon.



## Roads and invasive species

Roads are a driving force behind the spread of invasive species.<sup>27</sup> Vehicles can transport seeds across long distances<sup>28</sup> and exotic species can take hold in niches created by habitat disturbances next to roads.<sup>29, 30</sup>

## Cumulative threats and Boreal caribou

The plight of Boreal caribou shows how the cumulative effects of industrial development can drive wildlife populations toward extinction. Boreal caribou habitat, especially in northern Alberta and northeastern British Columbia is fractured by roads, trails, pipelines, seismic lines and transmission lines. Some herds experience human disturbances that encompass over 70% of their ranges—and up to 95% in the extreme.<sup>31</sup>

All of Alberta’s twelve Boreal caribou herds are declining, and if current trends continue all but three herds are projected to fall below ten animals in the next two decades.<sup>32</sup> Wolf predation is the direct cause of caribou decline, but human activities have created the conditions for the crisis to unfold.<sup>33</sup> For example, linear corridors help wolves move through forests more efficiently and access Boreal caribou habitat with greater ease.<sup>33,34</sup> Caribou experience a higher risk of predation when near linear features and tend to avoid these areas, further shrinking available habitat.<sup>34</sup>





## Ecosystems and the climate emergency

In 2019 the Vuntut Gwitchin First Nation, the Government of Yukon and the City of Whitehorse all declared states of climate emergency. The climate crisis makes it even more critical to protect large, intact and connected wild spaces. As ecosystems change, species may need to shift their ranges to find suitable climates—like moving northward or to higher elevations.<sup>35</sup> Protecting large, interconnected ecosystems can give animals and plants a better chance of withstanding the climate crisis.

The importance of tackling the climate crisis makes it even more important to approach new resource roads with caution. Roads and developments fracture ecosystems, and can make it more difficult for species to move.<sup>17, 16</sup> Keeping ecosystems intact is also vital for protecting boreal carbon sinks: forests and peatlands that capture and store harmful greenhouse gases.<sup>36</sup>

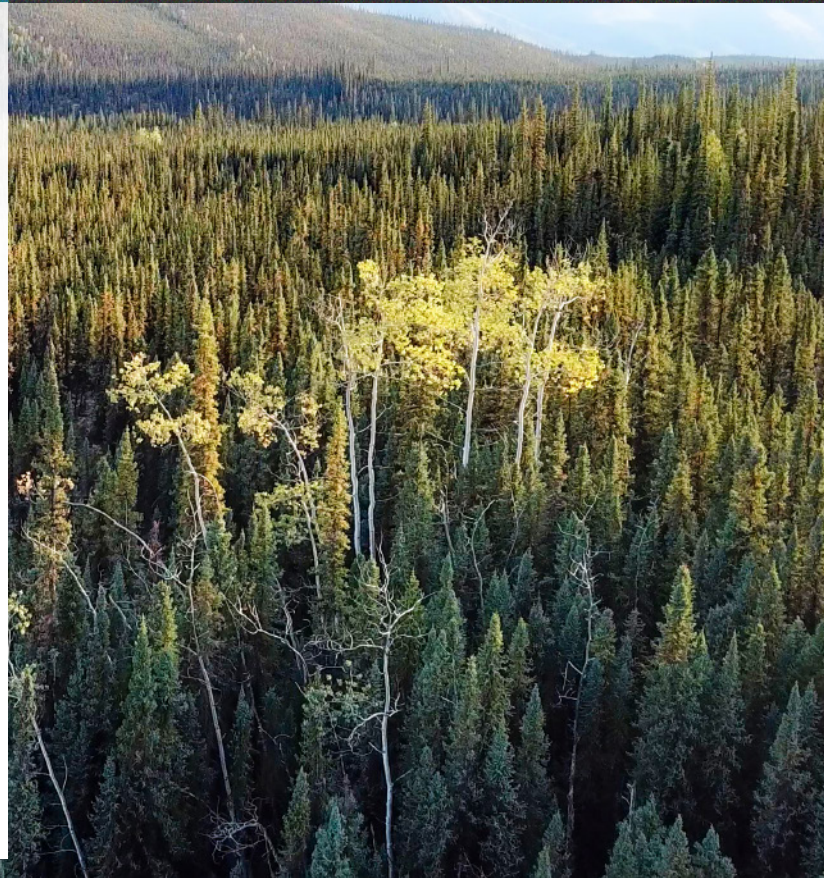


Image: Malkolm Boothroyd

## ROADS IN THE YUKON

Roads have reshaped the Yukon in a relatively short period. Roads are a recent phenomenon in the history of the territory. Up until the 1940s, automobiles were almost unheard of in the Yukon. Railways, boats, dog teams and foot travel dominated transportation in the early 20<sup>th</sup> century.<sup>37</sup>

The completion of the Alaska Highway in 1942 brought immense changes to the territory. Construction of the highway was the Yukon's second stampede.<sup>40</sup> Like the Klondike Gold Rush, the highway was immensely disruptive—especially to First Nations.<sup>40</sup> New development along the highway drew many people away from hunting and trapping, and into the wage economy.<sup>40</sup> Meanwhile, roadside hunting by highway workers and soldiers decimated many wildlife populations in the southern Yukon.<sup>40</sup>

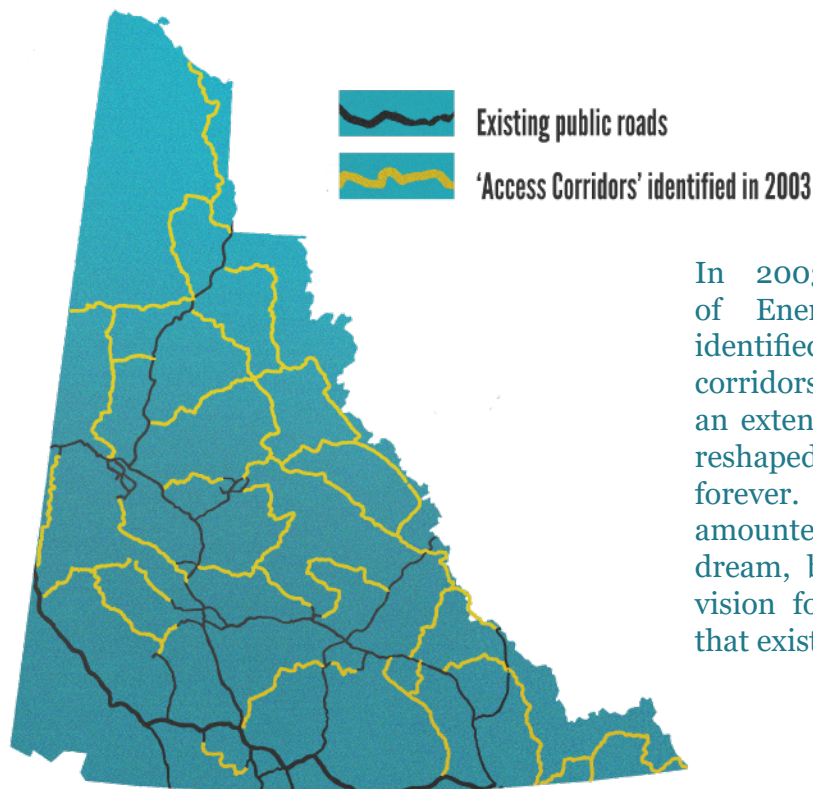
In the late 1950s, the government of Prime Minister John Diefenbaker established the Roads to Resources Program. Under this program, the federal government pledged \$200 million for road projects in the Yukon and Northwest Territories — all aimed at accessing oil, minerals and other commodities.<sup>38</sup>

Canada's Minister of Northern Affairs and Natural Resources at the time summed up the government's vision of the north as "a new world to conquer... a great vault, holding in its recesses treasures to maintain and increase the material living standards which our countries take for granted."<sup>39</sup>

The Yukon's highway system dramatically expanded throughout the 1950s and 1960s, with the construction of the North and South Klondike, Top of the World and Robert Campbell highways, the Silver Trail and the Nahanni Range Road. Construction of the Dempster Highway began under the Roads to Resources Program, and the road's completion in 1979 marked the last major addition to the Yukon's highway network.

The roads to resources vision of Prime Minister Diefenbaker continues to this day. Many Yukon government reports over the decades have envisioned expansive transportation corridors to stimulate mining development and link the Yukon to markets across the world. Meanwhile, the mining industry continually calls for more infrastructure dollars to help open new areas to development.





In 2003 the Yukon's Department of Energy, Mines and Resources identified 32 potential resource access corridors throughout the Yukon. Such an extensive road network would have reshaped the Yukon and its wild spaces forever. In the end, these corridors amounted to little more than a pipe dream, but they illustrate a dramatic vision for resource road development that exists in the Yukon.

Major resource road developments are in the works for the Yukon. New resource roads could usher in waves of new industrial developments, and reshape large parts of the Yukon. There are critical shortcomings in the Yukon's decision-making processes around roads. Land use plans are not in place in much of the territory, and the Yukon's environmental review process is not designed to address some of the most serious impacts that roads bring.

## YESAB AND ENVIRONMENTAL REVIEWS OF ROADS

Environmental reviews of roads concentrate on site-specific impacts and mitigation measures. Unfortunately, the impacts of roads extend far beyond the physical land that they occupy. YESAB, (the Yukon Environmental and Socio-economic Assessment Board) is best equipped to address the localized impacts of roads. Like many environmental review processes, YESAB was not designed to address big-picture questions, such as how roads accelerate resource extraction and transform landscapes, or how cumulative impacts affect ecosystems and communities.

YESAB is not mandated to consider values-based questions either, such as whether more roads and developments are in communities' interests or not. The board acknowledges, "a YESAB assessment does not and cannot address the matter of whether a project proposes an appropriate use of land."<sup>40</sup> That means that in areas without completed land use plans, there is no process for addressing the far-reaching implications of road developments.

YESAB is the right tool for addressing technical concerns around roads, but the wrong tool for evaluating the broader ecological and social implications of road developments. Road projects are typically assessed by Designated Offices—the lowest level of review by YESAB. Designated Offices take an average of 82 business days to review projects,<sup>41</sup> while the impacts brought on by road developments would last for generations.

There are two major road projects currently on the table in the territory: the Yukon Resource Gateway Project and the ATAC road. Both exemplify different shortcomings in the Yukon's process for evaluating the impacts of roads.



## YUKON RESOURCE GATEWAY PROJECT

In 2017, the federal and territorial government announced \$470 million in funding for the Yukon Resource Gateway Project. The project aims to “maximize future [mining] development”<sup>42</sup> with new resource road infrastructure. The project would construct and upgrade 650 kilometres of mining roads in the mineral-heavy Dawson and Nahanni ranges. The proposed cost-sharing agreement would see the Yukon government provide \$112 million, the federal government contribute \$247 million and the mining industry add \$108 million. Public funds would cover all costs of open-access roads, and 30 percent of costs for industry-exclusive roads.<sup>45</sup>

The Yukon Resource Gateway Project would service mining proposals such as Newmont Goldcorp’s Coffee Mine and Western Copper and Gold’s Casino Mine. Beyond servicing these megaprojects, roads in remote areas like the Dawson Range would stimulate the development of smaller projects that would not have been feasible without public infrastructure dollars. In a letter of support, the Yukon Chamber of Mines wrote that the Yukon Resource Gateway Project would “lead to a significant increase in activity in this highly prospective district.”<sup>43</sup>

The Yukon Resource Gateway Project poses challenges to the integrity of the Yukon’s environmental review process. The Yukon government is a funder of the project, and in many cases is the project proponent.<sup>†</sup> The Yukon also has the final authority to approve or reject road developments following recommendations from YESAB—making it difficult to maintain the impartiality of environmental reviews. Meanwhile, the Casino and Coffee mines are still under review by YESAB. The Yukon government will make the final decisions following YESAB’s recommendations, and these decisions are complicated by the fact that the Yukon has pledged tens of millions of dollars for the construction of roads to these mines.

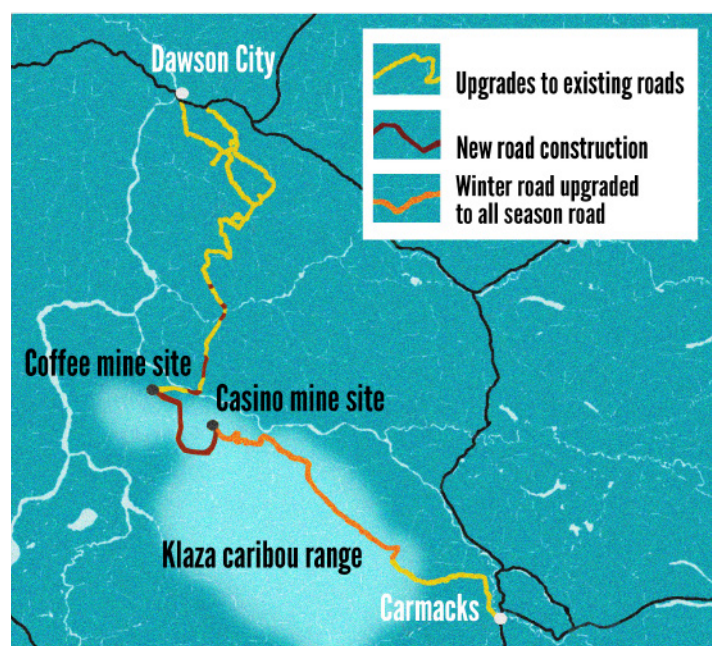
<sup>†</sup> “Road construction on both the Indian River/Coffee and the Casino Road components of the project will be assessed as part of the assessment of the [Newmont Goldcorp] and Casino Mining Corporation proposals for their respective mine developments. The Government of Yukon will coordinate the assessments for the remaining portions of the YRGP.” See: Government of Yukon (2016). *Yukon Resource Gateway Project Summary. Application for National Infrastructure Component Funding. Addendum*. Page 10.

## Roads and the Klaza caribou herd

Road construction and a corresponding spike in mining activity in the Dawson Range would have serious consequences for the Klaza caribou herd: a type of Northern mountain caribou, listed as “special concern” under Canada’s *Species at Risk Act*.<sup>44</sup> According to Environment Yukon, the Klaza caribou herd faces “some of the most significant conservation concerns among all Northern Mountain caribou herds in Yukon,” owing in large part to roads and mining activity.<sup>45</sup>

Klaza caribou favour alpine habitats in the summer and lichen-rich valleys in the winter. The Yukon Resource Gateway Project and associated mining development would substantially increase the human footprint in the Klaza herd’s range. Roads would bisect the valley-bottom habitats caribou depend on during winters, and significantly increase year-round human activity in the herd’s range.<sup>46</sup> Further road construction and development of Casino and other mines could force caribou out from high value winter habitats in the northern part of their range.<sup>50</sup> Increased mining and road construction in the Dawson Range may also hinder the Fortymile caribou herd from reestablishing its historical summer range in the region.<sup>47</sup>

### Yukon Resource Gateway Project Dawson Range Components





## THE ATAC ROAD

The Beaver River Watershed northeast of Mayo is home to moose, grizzly bears, wolves and spawning salmon. The area is largely roadless, but Vancouver-based ATAC Resources Ltd. intends to cut a 65-kilometre resource road through the heart of the watershed.<sup>48</sup> The road would connect to a series of gold and copper claims held by ATAC. Road access would cut the company's exploration costs and make the development of a potential mine more economical.

In 2017, YESAB ruled in favour of the ATAC road, but the Board's review left many questions unanswered. ATAC's belt of mineral claims extends over one hundred kilometres beyond the end of the proposed road. The company may be tempted to extend the road in the future, while other mining companies may look to build offshoot roads. In comments submitted to YESAB, Environment Yukon pointed out that "opening up a new all-season access route into the Beaver River Watershed results in a high likelihood that additional industrial development will follow."<sup>49</sup>

The avalanche of development that the ATAC road could trigger was out of the scope of the YESAB review. The Yukon government and Na-Cho Nyak Dun First Nation are working on a land use plan for the Beaver River Watershed, though the plan is going on the assumption that the road will be built.

## ROAD RECLAMATION

Without active reclamation work, the scars left behind by roads can take generations to heal. It is difficult for plant communities to regenerate in the compacted soils underneath roadbeds.<sup>50</sup> Unremediated roadbeds can also disrupt water flows, worsen erosion, and increase the risk of landslides.<sup>50</sup> Remediation is critical to limiting the long-term impacts of roads. One reclamation technique is tearing up old roadbeds, in order to improve soil aeration, water infiltration and plant growth. Another is recontouring: rearranging the ground around roadbeds to return hillsides to their natural slope.<sup>50</sup>

Wetlands, muskeg, alpine habitats and lands underlain by permafrost are highly vulnerable to disturbance from roads and seismic lines.<sup>51,52</sup> These ecosystems may take decades or even centuries to recover, and reclamation could be extremely difficult.<sup>52</sup> Roads should avoid these areas at all cost.

The Yukon's current financial security requirements are not sufficient to cover reclamation costs. Financial security is capped at \$100,000, reflecting the road remediation costs of fifty years ago.<sup>53</sup> Without the guarantee of reclamation, "temporary" resource roads may become part of the Yukon's permanent road system. The Yukon government acknowledges the seriousness of these problems, and is developing new resource road regulations.<sup>53</sup>



A moose wades through a subalpine lake. The nearby creek flows into one of the 73 water bodies the ATAC road would cross. Image: Malkolm Boothroyd



Upcoming regulations will likely set remediation requirements, but it's unclear what those requirements will look like. Companies may only be held to minimum decommissioning standards. Crews would remove bridges and culverts with the intention of making roads impassible, rather than to restore the land. The roadbeds would be left as scars on the landscape, fragmenting ecosystems long after roads are officially decommissioned.

One goal of the Yukon's upcoming resource road regulations is to make it easier to close roads. Still, keeping resource roads temporary is easier said than done. For example, Company A might be approved to build a fifty-kilometre resource road, with a lifespan of ten years. Company B might request to extend the road a further fifteen kilometres for a mine with a twenty-year lifespan. Company C and D could build a series of spur roads to access other developments. Each additional user would extend the road's footprint and lifespan, and reclaiming the road could become practically impossible.

## The access conundrum

Resource roads are intended to be used for industrial purposes, not as public highways. However many resource roads are eventually integrated into the Yukon's public road system—fundamentally changing the original intent of these roads. The Yukon currently lacks legal tools to restrict public access to resource roads (except logging roads).

YESAB acknowledges “dedicated individuals will bypass access controls, and there is no real recourse against ‘unauthorized’ road users.”<sup>54</sup> The Yukon upcoming resource road regulations would attempt to address these concerns.

The ecological impacts of roads worsen with increased traffic, improved road conditions and more public access.<sup>55,56,24,4</sup> Restricting access on resource roads would lessen the ecological impacts of roads, but limiting access creates new problems. Access controls may make it logistically challenging for mining or oil companies to grant access to First Nations people with traditional harvesting rights. Exclusive access by industry could also create a perception of unfairness—given that the public bears many of the financial, environmental and social costs of roads.

## ROADS AND LAND USE PLANNING

The Umbrella Final Agreement (UFA) between First Nations, the Yukon and Canada created the Yukon's land use planning process. Land use planning is designed to make collaborative decisions about conservation and development, reduce land use conflict, and ensure development is sustainable.<sup>57</sup>

First Nations governments and the Yukon government nominates a planning commission comprised of people with deep connections to the planning region. The commission leads the



planning process, synthesizing community input and traditional and scientific knowledge. Land use plans are refined through numerous rounds of community consultations before being finalized.

Land use planning is suited to making decisions with long-term implications, such as where should be protected, where development is acceptable, and what levels of development are compatible with protecting ecosystems, subsistence and cultural values.<sup>58</sup> Unlike YESAB reviews, land use planning is well positioned to consider big picture questions around road developments. Land use plans can set thresholds or caps on linear disturbance in areas open to development, and determine which places are critical to keep roadless.

The Peel Watershed Regional Land Use Plan emphasizes that “maintaining large roadless wilderness areas within the planning region will ensure that healthy wildlife and fish populations remain viable into the future.”<sup>59</sup> The Peel plan includes strong measures to limit the impacts of roads. The plan permanently prevents the road construction within Special Management Areas (55% of the watershed) and places interim restrictions on road development in wilderness areas (28% of the watershed).<sup>60</sup> The plan also sets limits on linear disturbances in areas where development is allowed. Thresholds for linear disturbance range from 0.1 km per km<sup>2</sup> in areas of low development to 1 km per km<sup>2</sup> in high development zones.<sup>60</sup>

The integrity of land use planning would be compromised if roads and other transformational

projects go ahead before plans are finished. This almost happened in 2007, when YESAB approved the Werneke winter mining road. The approximately 200-kilometre long road would have cut through the heart of the Peel Watershed en route to Cash Minerals’ uranium claims.<sup>60</sup> The Peel Watershed Land Use Plan was being drafted at the time, and the road contradicted the vision for the Peel that the plan later arrived at. The company behind the Werneke winter road went bankrupt and the road was never built, but it is easy to imagine the damage that could have happened had the road been built.

Major resource road projects like the Yukon Resource Gateway Project would amount to de-facto land use planning: irreversibly changing whole regions before land use plans can be completed. The Yukon should prioritize land use planning and support First Nations capacity to engage in the process, to ensure that decisions with far reaching consequences are made in the best possible way.

## Land use planning outside of Final Agreements

The Liard First Nation, Ross River Dena Council and White River First Nation have not signed Final Agreements—and land use planning as defined by the UFA will not happen without Final Agreements in place. Nonetheless, these Nations have undertaken land and resource plans, setting out a similar vision to what land use plans achieve. YESAB and the Yukon government should strive to conform to these plans when considering roads and other developments on these territories.



## SOLUTIONS AND RECOMMENDATIONS

### Land use planning realm

- Critical decisions about where roads are acceptable and where they are not should be made through land use planning and in conjunction with First Nations.
- Roads that would make the 'first cut' into roadless landscapes should be approached with serious caution. Companies should look to alternatives to road access.
- Land use plans should set thresholds on linear disturbance throughout planning regions.
- Land use planning should be appropriately funded, to help ensure that plans are completed in the remainder of the Yukon's land use planning regions within the near future.
- In lieu of land use plans, YESAB and the Government of Yukon should respect the land and resource plans created by First Nations. This is particularly important when considering road developments in the territories of Nations who have not signed Final Agreements.
- A sub-regional land use planning process should be triggered when a major road development is proposed for an area without a completed land use plan and where planning is not underway.
- The construction of the road should not be a starting assumption of a sub-regional land use plan. Such a plan should evaluate alternatives and determine whether road development is in the best interests of the area in question.
- Sub-regional land use planning should be conducted within the bounds of the Umbrella Final Agreement.

### YESAB realm

- Major road developments should be reviewed by a YESAB Executive Committee, providing greater scrutiny and opportunity for public involvement than a Designated Office review.

- The scope of YESAB reviews should be expanded to include reasonably foreseeable developments that road infrastructure may induce.
- YESAB should use modelling tools to better understand how a road development may influence future development patterns.
- The Yukon government should ensure that adequate baseline data and information on ecological and cultural values are available before YESAB reviews road developments.

### Legislation and policy realm

- Management and access controls must not restrict First Nations' access to their territories.
- Resource roads should be co-managed by the Government of Yukon and the First Nations whose territories roads cross. Co-management should include the power to regulate industrial usage and industrial traffic levels, road lifespan and reclamation.
- Road proponents must post sufficient financial security to cover the costs of road reclamation. Reclamation standards should go beyond road decommissioning, and outcomes should be defined in advance of road construction.
- Road proponents must submit a comprehensive plan for road closure and reclamation. Operation permits should include reclamation requirements.
- Road building materials (e.g. gravel) should be sourced responsibly and not from fragile habitats or important landforms such as eskers.
- Companies that want to build roads should fund Environment Yukon to monitor and analyze the impacts of proposed road developments.
- Criteria should be established for identifying 'major' new road proposals. For example, a road could be defined as 'major' if it is proposed for an area that is currently roadless, if the road would lead to substantial new development, the road falls in an area without a land use plan, or if the road would impact the habitat of a species at risk.



## CONCLUSIONS

The Yukon is one of the last places on earth where large swaths of the landscape remain roadless. These are the headwaters of wild rivers and unbroken mountain ranges. These are lands where generations have fished, hunted and trapped. These lands give the Yukon its identity.

The Yukon already has the tools to make thoughtful decisions about road developments. The problem is that the tools are not being used in the right order. In the absence of land use plans, big-picture questions around road developments cannot be addressed. Under the current system, new roads will keep being approved by YESAB. Labyrinths of roads may slowly erode the Yukon's wild character and ecological integrity.

That is why land use planning needs to come first. YESAB can then address project-specific impacts, and determine whether proposed roads align with the vision set out in land use plans. Roads have serious implications for the Yukon's future, and decisions must be with extreme care.

## Acknowledgements

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