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Transportation Infrastructure Program Feasibility Study, Phase I Cree Land Use Study - Wemindji **Technical Report**



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CREE LAND USE STUDY - WEMINDJI TECHNICAL REPORT

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Table of **Contents**

1. Introdi	uction1
	Grande Alliance
	cio-environmental Feasibility Study
	ee land Use Study2
	odology4
	udy Area4
	ta Acquisition and Processing4
	2.1 Literature review
	2.2 Land user interviews
	nunity Profile8
	ues and Vision
4. Result	s9
	ee Land Use9
	1.1 Trapline VC119
	1.2 Trapline VC12
	1.3 Trapline VC13
	mments, Concerns and Recommendations10
5. Refere	ences
List C	of.
Table	es
Table 1	Traplines in Wemindji Potentially Touched by LGA Phase 1 Infrastructures4
Table 2	Comments, Concerns and Recommendations – Upgrade and Paving of Wemindji Access Road11



List of Maps

IMAD I - CIEE LAND USE SIDOV AIEA III VVEITIII OII	Map 1	Cree Land Use Stud	v Area in Wemindii
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1. INTRODUCTION

1.1 LA GRANDE ALLIANCE

La Grande Alliance (LGA) program is a plan to protect, connect and develop the Eeyou-Istchee Baie-James territory. It includes a study of a transport development that encompasses a renewal of existing Cree Community roads, the implementation of a north-south link Matagami to the James-Bay area and finally, a deep-sea port. It materialized in 2018 when the Grand Council of the Cree (GCC) and the Governement du Québec (GQ) signed a memorandum of understanding for the study. The study has involved the Cree First Nations communities from the beginning of the initiative to ensure community engagement, and respect for the traditional way of life and values. The study is overseen by the Cree Development Corporation (CDC) on behalf of the Cree Nation Government (CNG).

The CDC, on behalf of the GCC/CNG and the GQ, has been mandated to oversee the study. In turn, they have assigned Vision Eeyou Istchee (VEI), a consortium formed by STANTEC, DESFOR and SYSTRA, to carry out a Feasibility Study on the technical, socio-environmental and economic components in Phase I of the LGA infrastructure program, covering years 1-5 from the beginning of construction. The CDC appointed WSP to perform a pre-feasibility study of Phases II-III of the program (covering years 6-15 and subsequently years 16-30).

Phase I of LGA includes:

- Upgrades to the access roads between the Billy-Diamond Highway (BDH) and the Cree communities of Waskaganish, Eastmain and Wemindji.
- Upgrade to the access road between the Route du Nord (RDN) and the Cree community of Nemaska.
- Construction of a new secondary access road to Mistissini via the RDN.
- A railway line following, as much as possible, the Billy-Diamond Highway between the town of Matagami and KM257 (Rupert River bridge) of the Highway.
- A return to service for the railway line between Grevet (Lebel-sur-Quévillon) and Chapais (approximate distance of 225 km).
- Trans-shipment areas along the Billy-Diamond Highway and the Grevet-Chapais railway corridors, specifically one located at KM257.

Among the tasks to achieve the stated objectives of the Feasibility Study for Phase I — Infrastructure, a socio-environmental feasibility study was conducted. This study included a Cree Land Use Study among the communities potentially impacted by the proposed infrastructures, including Wemindji.

1.2 SOCIO-ENVIRONMENTAL FEASIBILITY STUDY

Development projects cannot be carried out without bringing changes in the environment and to the social environment. The James Bay and Northern Québec Agreement (JBNQA) was established in 1975 to ensure, among other things, that development in the Cree territory is carried out taking into account the protection of the environment and the maintenance of land use by Cree communities for the practice of their traditional activities. The JBNQA also provides a pathway for Cree in the decision-making as part of the environmental assessment process under Chapter 22 of the Agreement.

This Environmental and Social Feasibility Study is an important tool to guide future developers wishing to carry out the Phase 1 of LGA. It is an innovative approach that plans to document, upstream of design by future proponents,





the expectations and concerns of affected Cree communities, identify key potential land use conflicts and propose solutions (avoid, mitigate, offset), anticipate key potential impacts and recommend mitigation measures.

The CDC made it clear from the beginning of the LGA process that they wanted local community involvement, and environmental and social criteria evaluated at the same level as technical and financial criteria in the infrastructure design and planning. To meet these principles, VEI did the following:

- Organised internal bi-weekly meetings and direct exchanges between colleagues to share relevant land use and environmental information with the other study teams as it was collected;
- Used an online database (interactive ArcGIS map) to make land use, environmental and technical data accessible to targeted team members:
- Organized a workshop, bringing together tallymen and engineers, to review the potential Billy-Diamond Highway railway alignment, and identify main issues;
- Accommodated the tallymen's recommendations as much as possible.
- Encouraged team members to communicate with the Cree Liaison Officers (CIOs) and have ad-hoc discussions with them.
- Prioritised Cree workers and companies in the organization of field campaigns.
- Invited tallymen and land users to meet the field crews and to participate in fieldwork.
- Reviewed and included information shared by the following organizations:
 - Cree Nation Government (Land Use Planning Commission, including the Protected Areas Working Group and Environment Department);
 - Aanischaaukamikw Cree Cultural Institute;
 - Cree Outfitting and Tourism Association;
 - Cree companies, Cree communities, and the CIOs.

1.3 CREE LAND USE STUDY

As part of the socio-environmental study, the mandate included a Cree land use study which covered each proposed infrastructure's study area. The Cree land use study's main goal is to document the land and resources use in the study area, so as to better identify and understand potential risks, conflicts and opportunities related to the transportation infrastructures under study. More specific objectives of this research include:

- Collect traditional knowledge regarding the area to inform and improve the design of the potential infrastructures.
- Identify valued sites and sensitive areas to be protected from potential development.
- Gather concerns and recommendations in relation to the proposed infrastructure, as well as concerning the LGA process in general.
- Assess preliminary potential impacts from the construction and operation of the infrastructures.





- Identify any potential cumulative effects from previous project impacts as well as in light of the potential infrastructures.
- Propose solutions to potential conflicts and alternate options.

It is important to keep in mind the following limitations regarding this component of the study:

- Novelty of the Grande Alliance study and approach for land users for whom this consists of the first contact regarding the infrastructure components under study;
- Relatively short time allotted to conduct the interviews and the study;
- Difficulty to obtain data from past studies or projects (e.g. sites of special interest to the Cree identified during forestry management exercise, as per the Paix des Braves);
- Difficulty to reach and meet all the potentially affected land users;
- Reluctance from certain land users to participate in the study because they do not want their participation to be interpreted as consent to the proposed infrastructure or to LGA;
- Reluctance from certain land users to share specific information about their activities;
- "Consultation fatigue" of certain land users who have shared their knowledge repeatedly;
- Potential loss of precision due to translation (Cree-English/English-Cree).

Is should be seen as a first general picture of the land and resources use in the study areas, to be completed in future stages of the process, rather than a complete list of land use features and recommendations. Indeed, it should be noted that the approach adopted by the LGA team is very innovative in engaging land users and community members from the start of the planning process, before the final infrastructure design. If some of the proposed infrastructure works go ahead, engagement with community members will continue and data will be refined.

The present report presents the results of the Cree Land Use Study conducted in the community of Wemindji.





2. METHODOLOGY

The approach and methodology adopted for the Cree land use study, as well as the consent forms and interview grid were reviewed by and discussed with the CIOs.

2.1 STUDY AREA

The study area defined for the Wemindji access road consist of a 1 km buffer zone on either side of each road's centerline and they extend from the start of the road to its connection with the BDH (see Map 1). However, during the interviews with tallymen and land users, if land use activities or features were reported outside the study area, they were noted as well.

The table below indicates the traplines in Wemindji potentially touched by the upgrade of the access road.

Table 1 Traplines in Wemindji Potentially Touched by LGA Phase 1 Infrastructures

Infrastructure	Number of traplines	Trapline Intersected
	3	VC11
Wemindji Access Road		VC12
		VC13

2.2 DATA ACQUISITION AND PROCESSING

2.2.1 Literature review

At the beginning of the study, a review of existing information was conducted. General search by key words was carried out as well as search in specific databases, including:

- Hydro-Québec projects that were subject to an environmental impact assessment (Cherloc);
- Projects evaluated by the COMEX;
- Québec environmental assessment registries (MELCCFP and Bureau des audiences publiques sur l'environnement);
- Canadian impact assessment registry (Government of Canada).

More than 200 documents, concerning at least 40 projects achieved between 1977 and 2021, were consulted. This literature review allowed to collect information about known valued sites and sensitive elements, mainly along the Rupert River on Waskaganish and Nemaska territories. Some information regarding Cree land use near the communities of Waswanipi and Nemaska was also available. However, the literature review also revealed that little information is available for several sectors under study, including:

- Around the community of Wemindji and along the access road;
- Along the Billy Diamond Highway between Matagami and Waskaganish;
- Along the Grevet-Chapais roadbed, except for Lake Opawica area;
- Along the Eastmain access road.





2.2.2 Land user interviews

At the beginning of the study, traplines that could potentially be touched by the proposed works and infrastructures were identified. The VEI teamthen asked each CIO to validate the identity of each trapline's tallyman and to identify other land users or knowledge holders who should be invited to participate in the Cree land use study. In collaboration with the CIOs, VEI organized information sessions for tallymen and land users in each community potentially affected by LGA Phase 1 infrastructures (eight communities). Tallymen were invited to bring their family members and land users with them. General information on LGA as well as more specific information about Phase 1 studies and the infrastructures that could potentially go through the local traplines were presented and discussed with the attendees.

Sometime after the information session, the tallymen were invited to an individual land use interview in which their family members and land users were also welcomed to participate. The interviews were semi-structured, with openended questions, and were conducted mostly in Cree by one of VEI's Cree Liaison Officers and VEI's anthropologist. Large paper maps were used to locate land use features and information shared by the participants. Prior to starting the interview, the participants were asked if they had questions about LGA, and information about LGA and specific infrastructures was presented to those who had not assisted to the information session. The interview questions touched upon the following themes:

- Description of land use activities and features
 - Harvesting activities (hunting, fishing, trapping, and berries, plants and wood gathering);
 - Habitations sites (camp, cabin, seasonal campsite, tent frame, camping area, house, store, old trading post, old campsite and other building);
 - Trails and travelways (ATV/snowmobile trails, forestry roads, path, boat landing and portages);
 - Social and cultural sites (community, gathering, knowledge transfer, historical, archeological, ceremonial, burial or sacred site, picnic area, landmark).
- Environmental information concerning the study area (traditional ecological knowledge)
 - Wildlife:
 - Species present in the study area, quantity, quality, and potential issues.
 - Trails and migration routes, with special attention to roads and alignments crossings.
 - Calving/kidding aresa.
 - Other areas used by moose or caribou.
 - Beaver lodges/ponds.
 - Goose hunting ponds.
 - Fish:
 - Species present in the study area, quantity, quality, and potential issues.
 - Presence of fish, and species, in each watercourse along the alignments.
 - Spawning and rearing areas.
 - Water Resources



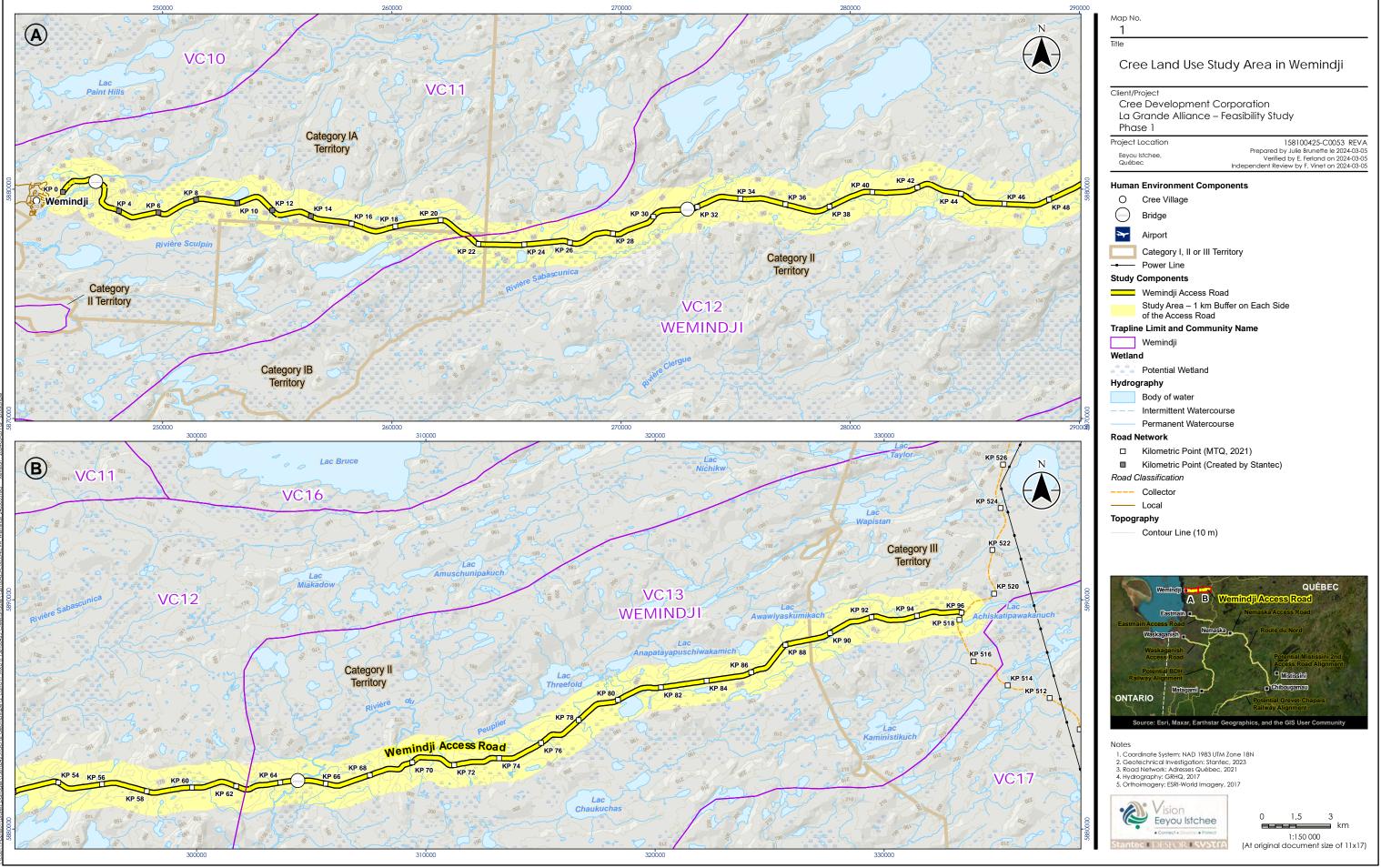


- Wetlands, bogs, swamp areas
- Invasive species and changes observed in the last 25 years.
- Condition of the existing infrastructures
- Potential effects and recommendations.

Once the interviews notes were compiled, the information collected was integrated into a GIS database specifically created for Phase 1 feasibility study, so it could be shared with the technical and the archaeological teams (note that access was limited to a small number of people).

Validation interviews were organized with the study participants, so they can review the data collected, verify its accuracy, and add precisions if required. The georeferenced database was also used during the validation process, to make sure the land use information was properly located. The interview notes were also read with the participants to validate the accuracy and clarify some information, if needed. The validation process also offered the land users an opportunity to share additional data or express additional concerns and recommendations.

It is important to note that some of the information collected is not presented in this report or is mentioned with very few details to preserve confidentiality and respect its sensitive nature. However, it will be provided to the CDC along with relevant non-disclosure agreements.







3. COMMUNITY PROFILE

Wemindji's territory is divided into 21 traplines covering 29,819 km² (CMEB, 2022). The main river which crosses the land is the Maquatua River. Moreover, the village of Wemindji is located at the mouth of this river. There are also also many large lakes such as Lake Sakami, Lake Yasinski and Lake Old Factory. The community, located approximately 95 km from the BDH, is accessible by the Wemindji Road. Wemindji is a fairly new community comprising Cree families originally living at the trading post named "Paakumshumwashtikw", known as Vieux-Comptoir or its English equivalent "Old Factory". This trading post was founded in the 17th century and was alternately under British or French control. In 1959 the community was relocated about 45 km north to its present location (where Wemindji is now). As of August 2022, the Cree First Nation of Wemindji had a total registered population of 1,658 (CIRNAC, 2022), with 1,465 members living on reserve, 141 living off reserve and 52 living on other reserves or Crown land.

The only LGA Phase 1 infrastructure located on Wemindji territory is the entire Wemindji Access Road.

3.1 ISSUES AND VISION

In 2017, the Eeyou Planning Commission undertook a consultation process with Wemindji community members. The results are presented in the "Report on Community Input on Land Use Planning Goals" (EPC, 2017) and included information on the community's values, issues and vision for the future. Some of it is summarized below:

Issues that Wemindji faces:

- Inadequate monitoring of mineral exploration activities
- Projects happening while undergoing environmental review
- Shortcomings in the consultation process about developments
- Construction contracts in category 3 lands
- Over-fishing and over-hunting
- The need to bring back the tradition of "resting" the animals so they can replenish
- Issues with non-Cree hunters and improper hunting handling of kills
- Issues concerning allocation and landscaping of housing lots

Elements of a Wemindji vision for the future:

- Closely monitored and controlled hunting and fishing
- Continuity of Cree culture and language
- Unity and collaboration across the Cree communities and with other entities
- Proactive Cree-led development
- Economic diversification

Eco-tourism to balance culture, environment and development





4. RESULTS

The interviews provided a general idea of the land use taking place along the access road and surrounding areas, rather than a complete picture. The number of land users of the studyarea, the frequency of their visits and quantity of resources harvested were not estimated since it was not in the scope of the Cree land use study carried out as part of the LGA Phase 1 Feasibility Study. It is worth noting that such an estimation exercise would be a big undertaking since various community members use the lands in proximity to their community's access road.

While being relatively recent on the territory, modern roads are widely used by the Cree population. In terms of transportation routes, they have overtaken rivers. The communities' access roads are not only important to connect with other communities and with "the south", but also to facilitate land use and harvesting activities. The fact that most land users do not live from the land anymore and occupy paid jobs partly explains the growth in importance of modern roads, as they provide faster access. Major changes in important rivers' hydrology and ice cover, following hydroelectric development in the last decades or due to climate change, also contributed to the increase in use of modern roads. Since it is now more dangerous, complicated, or sometimes impossible to navigate on some watercourses as well as to travel by snowmobile, roads offer interesting alternate options.

4.1 CREE LAND USE

The construction of the actual Wemindji access road was completed in 1996 (DMC, 2019). The road has a total length of 98 km, from the outskirts of the community to its connection with the BDH, around km 518. Starting west, the first 22.6 km, located on category I lands, are already paved. The road continues on category II lands for 67 km (km 22 to km 89), and on category III lands for the rest of its alignment (approximately 10 km). As shown on Map 1, the road crosses three traplines, namely VC11, VC12 and VC13.

The resurfacing and paving of the first 16.4 km of the access road was studied in 2017 (Stantec, 2017). The scope of that study provided preliminary information required for the assessment of the project file by the Evaluating Committee. As such, it differs form the current mandate which studied the upgrading and paving of the entire Wemindji Road, taking into account additional upgrading options.

Between June 8 and June 10, 2022, VEI conducted land use interviews with a total of 16 participants which included the tallymen, their family members and/or the land users of the three traplines intersected by the Wemindji access road. One tallyman could not be interviewed, but his brother, who is also a land user of the trapline, was interviewed. The data presented herein will need to be updated after interviewing that tallyman.

4.1.1 Trapline VC11

The section of the Wemindji access road located on trapline VC11 is completely paved. Most of the information shared by the land user during the interview was regarding the location of the camps near the actual access road. A total of seven camps were reported, among which four are used by family or friends and the other three are cultural camps. One cultural camp is located near km 6 and is used by the Cree School Board. The second and third, are respectively located near km 10 and km 20, were also built by the Cree School Board, but are less used than the first one. The tallyman still needs to complement this land use information.

4.1.2 Trapline VC12

The tallyman and his family members reported several hunting activities along the Weminjdi access road and in the surrounding area. Tallyman and land users hunt all types of animals on their trapline, but especially goose,





ptarmigan, rabbit, and grouse. Along the road, they harvest small game: beaver, rabbit, and ptarmigan. They hunt moose on the Bay. People from the community hunt ptarmigan and moose along the road/from the road. "We lost count, everybody goes there" and they are not informing the tallyman. It is dangerous for people on the trail.

Fishing activities for trout, walleye, pike, and cisco take place in the lakes on both sides of the road. The land users get to trapline VC12 by vehicle using the Wemindji access road, and they also travel in the area by snowmobile and ATV. They mentioned two trails that cross the Wemindji access road, one near km 24 and the other at km 46. However, the participants indicated that the trail at km 46 is not in use anymore. Most of the camps reported during the interviews belong to family members, friends, or others land users. Only one of the 12 camps identified is an old log cabin, not in use anymore.

In addition, participants indicated harvesting blueberries, raspberries and strawberries along the road but especially outside the study area. Jam is made with the extra fruits. Labrador tea can be found on the trapline but they do not harvest or consume it.

4.1.3 Trapline VC13

A total of 16 camps have been identified along the road and in its surroundings. Among these, six (6) are old camps and two are projected camps.

The tallyman and his family members reported many harvesting activities along the Wemindji access road and in the surrounding area. Indeed, they use the area to go hunting, mostly goose, moose, and bear, but also other animals such as beaver and caribou. The tallyman and his family members hunt moose along the road and around the bay. They also hunt white bird along the road, and goose and ptarmigan all over their land. Fishing takes place on the lakes on both sides of the road. Species caught are mostly pike, trout, walleye, and white fish. In addition, participants indicated harvesting blueberries all along the road, and pointed out two specific locations.

The participants also mentioned three burial sites in proximity to the road. A participant wants the burial site near km 70 of the road to remain untouched. Participants explained that the presence of a curve at km 70 of the road is due to a mass grave that was discovered south of the actual road during construction. Another valued site, a birth site, is located on the north shore of the Lake Anapapatayapuschiwakamich, near km 82 of the road.

As for cultural sites, references to the Bigfoot legend were made during the interview. Large human footprints, considered to be the Bigfoot's, were reported south of the road, not too far from an area where a bad smell, "like wet dog", was mentioned.

4.2 COMMENTS, CONCERNS AND RECOMMENDATIONS

The Cree land use study participants shared a wealth of information regarding the Wemindji access road and made interesting recommendations concerning its potential upgrade and paving. Their comments, concerns and recommendations are presented in the table below:





Table 2 Comments, Concerns and Recommendations – Upgrade and Paving of Wemindji Access Road

Alignment / Conception

- The road should be enlarged. Some people go walking along the road and there is not much space between pedestrians and cars. Also, there is no place to park or where to turn around along the road.
- There is no flooding problem on the road, but in spring there is a lot of water, and it drains slowly. Perhaps the culverts are too small.
- At km 12 of Wemindji access road, the hill and the sharp curve create a dangerous area.
- Around km 20 of Wemindji access road, a collision between a truck and a SUV happened in the curve.
- The shoulders are too narrow, the road should be wider.
- At km 22 of Wemindji access road, the culvert should be risen.
- Around km 28 of Wemindji access road, in spring, there is flooding at the culvert. The culvert is not big enough.
- Big rock sticking out of the road around km 43. It should be moved, if possible. "At this time, we have been told that there is no funding."
- Section from km 26 to km 28 of Wemindji access road: the sharp curve, the slope and the winter road nearby make that area dangerous. A ramp should be installed but not too close to the road.
- The creek at km 92-93 of Wemindji access road is too deep. A bridge would be better because there is a big slope going down, and then going up.
- Culvert to be removed at the creek near km 93 of Wemindji access road.

Operation and Maintenance

- The bushes along the road are too close, it can block the view. The tallyman and land users recommend brush-cutting along the Wemindji Road all the way to the BDH. "Perhaps Eeyou lumberjack or Tawich could do the job".
- At km 42 and 46 of Wemindji access road, beaver lodges can flood the road. The flooding can contaminate the nearby watercourses.
- A trailer used for maintenance of the road should be removed as it is not used anymore.

Safety

- People hunt from the road (ptarmigan and moose) and it is dangerous for people on the trail.
- The shoulders should be enlarged. When a vehicle is parked along the road and another vehicle is coming, it is dangerous.
- The bridge at km 64 should be enlarged. People park there to go fishing, and when KEPA or CRT transport trucks pass it is dangerous.
- Bush trimming needs to be done all along the road to improve the visibility.

Valued Sites

• Old borrow pit, located some 1.8-2 km north of the road, around km 49. "We want this area to stay unaffected".





- There is a tipi or a tombstone around km 70 of Wemindji access road. Maybe it is a burial, so it should be leave untouched.
- The reason why there is a curve around km 70 of Wemindji access road is because a mass grave was discovered and circumvented during the construction of the road.
- Old camp near Lake Chaukuchas that the tallyman wants to stay untouched.

Signage

- Signage should be installed to indicate the presence of camps nearby so the drivers can slow down, or "no shooting" signage near camps.
- Moose crossing signs should be installed along the road.

Others

- The areas near km 46 and 52 of Wemindji access road have been tested for their potential to operate a borrow pit. "If they want to operate this borrow pit, it is ok, and maybe they could convert it into a goose pond".
- Near km 61, 67, 74 and 84 of Wemindji access road, there are gravel pits used for goose hunting by community members.





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