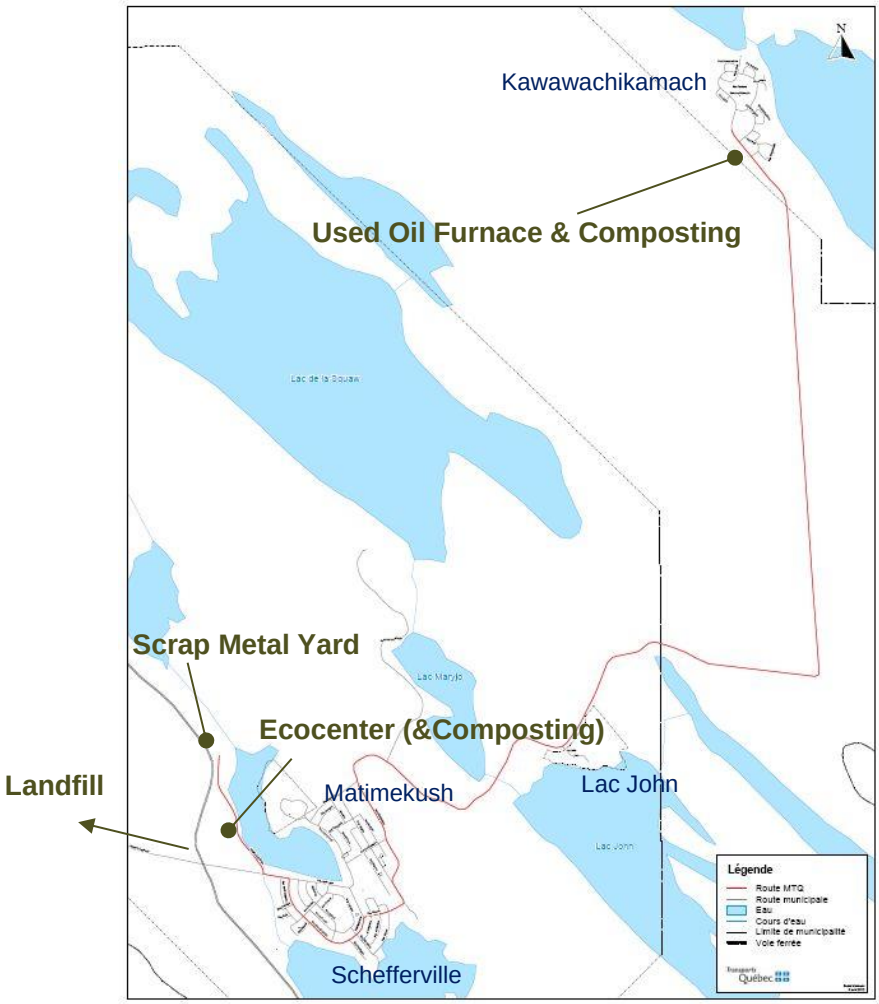
Residual Wastes: Report on the Situation in the Kawawachikamach/Matimekush-Lac-John/Schefferville Region

3 June 2021



1. Matimekush-Lac John/Kawawachikamach/Schefferville Region

Access
By air from Montréal, Québec City, Sept-Îles and Kuujjuaq
By train from Sept-Îles to Schefferville
Gravel road from Schefferville to Kawawachikamach
Remoteness Index: 0.690, 1 being the maximum value of remoteness (*Statistics Canada, 2020*)

Population

Kawawachikamach:	931
Matimekush-Lac-John:	810
Schefferville:	290
Growth rate:	High (high birth rates)

Languages

Kawawachikamach:	Naskapi, English as a second language
Matimekush-Lac-John:	Innu, French as a second language
Schefferville:	French

2. Current Regional Waste Management Structure and Infrastructure

Pursuant to an agreement between the communities, the operation and management of the regional waste infrastructure are delegated to the Town of Schefferville (the "ToS"). The Intercommunity Committee on Residual Waste Management, comprising representatives of the Naskapi Nation of Kawawachikamach (the "NNK"), Nation Innu Matimekush-Lac-John (the "NIMLJ") and the ToS, oversees the activities.

For its part, garbage collection is undertaken separately. Each community owns its garbage trucks.

The regional residual waste infrastructure currently comprises a landfill (*lieu d'enfouissement en milieu nordique*, LEMN), where open-air burning is carried out, an ecocenter, a scrap metal yard and two composting stations. A used oil furnace was also installed in Kawawachikamach last year.

Infrastructure	Establishment	Total Capacity	Additional Information
LEMN	2019	Expected operating life of 20 years	Former site established in 1996 and closed in 2019
Ecocenter Tricomm	2017	Construction, renovation, demolition and household hazardous wastes, tires, drums	
Scrap Metal Yard		5,000 tonnes	No remaining capacity: 15 heavy-duty ELV, 100 light-duty ELV and 2,500 tonnes of metal
Composting	2018	18,200 kg/year (X 2 composters)	Collection yet to be launched
Used Oil Furnace	2020		

ELV: end-of-life vehicles

3. Improvement of the waste management system

The NNK, the NIMLJ and the ToS adopted in 2012 a plan to implement the residual waste management plan of the MRC de Caniapiscau for the Kawawachikamach, Matimekush-Lac John and Schefferville Region (*Plan de mise en oeuvre du plan de gestion de la MRC de Caniapiscau pour le secteur de Kawawachikamach, Schefferville et Matimekush – Lac John*). Significant efforts were required to improve the efficiency of residual waste management and to ensure compliance with legislation and regulations pertaining to residual waste management.

To this end and since 2017, the NNK, NIMLJ and the ToS have implemented a collaborative project to improve regional residual waste management through funding received from Indigenous Service Canada, under the auspice of its First Nation Solid Waste Management Initiative. The project has the following objectives:

Objective 1: Optimize residual waste collection equipment to improve efficiency and prevent environmental hazards
Objective 2: Improve hazardous waste management to limit the risks of environmental contamination
Objective 3: Reduce adverse effects associated to open-air waste burning
Objective 4: Characterize the flow of residual wastes in the Region
Objective 5: Implement alternatives to waste burying and open air burning (increase waste diversion rate)
Objective 6: Reduce environmental liabilities
Objective 7: Close the former landfill site and plan the establishment of a new site
Objective 8: Implement and enhance the ecocenter infrastructure
Objective 9: Inform, educate and promote awareness in regard to residual waste management

The following table summarizes the actions undertaken under the project.

Objective	Phase I – 2017-18	Phase II – 2018-19	Phase III – 2019-20	Phase IV – 2020-21
1 (Waste Collection)	Purchase garbage and roll-off containers, research mechanism to keep garbage containers closed	Install a mechanism to keep bears and dogs out of garbage containers		
2 (Hazardous Wastes)	Support private and community garages in the management of used oils, reach out to the SOGHU, purchase press for oil drums	Evaluate quantities of used oils produced, communicate with SOGHU, elaborate protocol to empty and press drums, plan shipping of drums, improve operations	Purchase reservoirs to store used oils	Install a used oil furnace
3 and 5 (Open Air Burning)	Plan study on the impacts of burning (literature review, modelling of pollutants dispersion), participate in a study conducted by the CRIQ	Research into a proposed alternative (handmade incinerator), prepare technical plans	*Request certificate of authorization for the handmade incinerator – abandoned*	*Feasibility study on compacting wastes to produce bales for burying, or other alternatives to burning – postponed*
5 (Composting)		Carry out consultation on composting and the interest of population and businesses, estimate volumes, purchase and adapt 2 composters and containers, initiate pilot project	Continue development of pilot project, prepare site, carry out electrical work, purchase complementary equipment.	Carry out improvement work on composters
6 (Scrap Metal)	Carry out inventory of ELV, identify solutions and costs for recycling, install fencing and surveillance system	Tow, dismantle and transport to the scrap yard 100 ELV	Continue towing, dismantling and transporting of the ELV to the scrap yard (scrap yard at full capacity)	Prepare and ship 13 ELV and some metal located outside the yard to a recycler, install surveillance system at the yard
6 (Tires)	Carry out inventory of oversized tires, identify solutions for recycling, evaluate costs	Research possibilities for the diversion of oversized tires	Transport 100 oversized tires to the recycler site	
7 (Landfill)	Plan the closing of the old LEMN, repair fence, clean entrance	Request certificate of authorization and prepare plans and specifications for new LEMN	Prepare site for new LEMN, install fence, close old LEMN	Carry out minor improvement works, install trailer and surveillance system to control access, clean old LEMN
8 (Ecocenter)	Carry out electrification work, purchase sanitary unit, containers, worksite shelter and equipment, conclude agreements with recycling organizations, install surveillance system, launch operations	Move access road, widen bottom platform	Optimize site – install crush stone, lights and gates	Optimize access road with crush stone, install surveillance system, purchase a pick-up truck and other equipment
4 and 9 (Governance)	Characterize residual wastes generated by the residential and ICI sectors, organize information and outreach activities and campaigns	Organize information and outreach activities and campaigns	Organize information and outreach activities and campaigns	Initiate development of a Regional Waste Management Board

CRIQ: Conseil de recherche industrielle du Québec
ELV: end-of-life vehicles
ICI: institutional, commercial and industrial sector
SOGHU: Société de gestion des huiles usagées

4. Challenges

A. The harmful effects of open air burning on health, public security and the environment, and the difficulty of identifying adequate and feasible alternatives are great challenges. An air emission modelling study was conducted in 2017-2018 and several alternatives were investigated throughout the years, but no adequate or feasible alternative could be identified. The costs of alternatives have been so far unrealistic for the Region's population size.

B. The high costs to transport scrap metal to recyclers located in southern Québec and the resulting large accumulation of scrap metal are significant challenges. The scrap metal yard is currently at full capacity, and preliminary estimates evaluate the cost of disposal between $500,000 and $900,000. In the meantime, scrap metal continues to be generated and increases environmental liability on the territories of the three communities.

C. The current waste management structure between the three communities should be improved.

5. Solutions investigated

A. Identifying feasible alternatives to open-air burning that are adapted to the northern environment and the Region's population size.

B. On the short-term, an efficient recycling operation must be planned and implemented, and funding must be obtained to recycle the accumulated scrap metal. In the longer term, sound day-to-day management of scrap metal should be developed and established, which should provide, among others, for recurrent or long-term funding by creating sources of revenue.

C. The Intercommunity Committee intends to establish an intercommunity (or intermunicipal) board responsible for the management of residual wastes, which would include a board of directors comprising representatives of all three communities. Discussions are well underway and a draft agreement is currently being developed.