

The Backhaul Project
Summary Report for the Removal of Stewardship and Non-Stewardship
Material from Northern Manitoba Remote First Nation Communities

August 2022



2022 Mixed Load Backhaul Truck

Producer Responsibility Organization (PRO) Group:

- Canadian Battery Association
- Call2Recycle
- Electronic Products Recycling Association
- Heating Refrigeration and Air Conditioning Institute of Canada
- Health Products Stewardship Association
- Manitoba Association for Resource Recovery Corp.
- Multi-Material Stewardship Manitoba Inc.
- Product Care Association of Canada
- Recycle My Cell
- Tire Stewardship Manitoba

Acknowledgements

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The author would also like to acknowledge key assistance provided by staff at Indigenous Services Canada for important feedback throughout the project.

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Disclaimer

This Report is intended to provide a summary of the Backhaul Project work completed between May 2021 and April 2022 by the PRO's. No part of this Report may be reproduced, in any form or in any means without written permission of the PRO's. The PRO's accept no liability, or responsibility, for any damages incurred by any third party as a result of use of, or any decision made based on, this Report.

Executive Summary

From May 2021 to April 2022 Producer Responsibility Organizations (PRO's) operating in Manitoba continued to sponsor the Backhaul Project aimed at removing stewardship material from participating remote First Nation Communities. The communities involved in the 2021/22 project included: Barren Lands First Nation, Bunibonibee Cree Nation, Nation, Northlands Denesuline First Nation, Sayisi Dene First Nation, St. Theresa Point First Nation, and Wasagamack First Nation. God's Lake First Nation and Garden Hill First Nation did not participate in the 2021/22 backhaul. Contact was established with Manto Sipi Cree Nation and Pauingassi First Nation as these communities are in the process of upgrading waste management/diversion infrastructure.

PRO's included: Canadian Battery Association, Call2Recycle, Electronic Products Recycling Association, Heating Refrigeration and Air Conditioning Institute of Canada, Health Products Stewardship Association, Manitoba Association for Resource Recovery Corp., Multi-Material Stewardship Manitoba Inc., Product Care Association of Canada, Recycle My Cell and Tire Stewardship Manitoba.

Staff in the communities worked to collect, sort, pack, and stage for transport stewardship material. In addition, some non-stewardship materials (non-ODS/GHG containing scrap appliances, tire rims and non-stewardship cardboard) were also collected, sorted, packed, and staged.

In total, 14 semi-trailer loads of material were removed from 4 communities comprising approximately 92,350 kg of non-stewardship and stewardship material representing material from 6 of the 10 PRO groups. Staged material in 2 community's was not removed due to COVID, weather or lack of appropriate backhaul trucks to transport the material.

Supplies to enhance material packing and storage capabilities were delivered to the six communities. Through 2021/22 three additional used oil burning units were installed (Wasagamack is fully certified with Bunibonibee and Garden Hill having units installed but not certified). Work continued to have burning units installed in 3 communities (Barren Lands, Northlands and Sayisi). COVID travel bans and locating certified installers and electricians proved to be a considerable challenge.

Cold weather and heavy snow accumulation hampered access to staged materials for removal. In several cases material was not accessible due to it being buried in snow reducing the amount of material to load on the truck. Cold weather created challenges with operating equipment. Lack of equipment (e.g., lights to safely load at night or access to loading equipment) hampered loading and reduced the amount of material that could be loaded on some trucks.

COVID continued to present challenges at every step of the backhaul process. Every community experienced one or more lock down and/or had travel restrictions. Many

community contacts or family members had COVID limiting ability to work at key times.

Important lessons learned by all stakeholders will help enhance material diversion and removal efforts in the future.

Key Outcomes

- A program delivery model that considers the full cycle of new products being procured and transported into communities, backhaul of diverted material out of communities on the same trucks and receiving and processing the material in Winnipeg has been defined.
- The detailed costs for the delivery model have been identified and areas for efficiencies continue to be refined.
- The need to support community waste diversion worker's, including training, proper equipment to safely do their jobs, and supplies to safely pack the material has been reinforced. Ideally this would involve periodic community visits to advise and train workers as well as provision of proper equipment and supplies.
- The need for communities to have adequate budgets to support worker wages, training, consumable supplies and costs for transport and handling of non-stewardship material has been reinforced.
- The cost/benefit of including all diverted material including stewardship and non-stewardship in backhaul transport trucks has been defined.
- There is a need for infrastructure and equipment to store diverted material and safely load it onto backhaul trucks including weather protected areas for material storage, loading equipment, for example, loaders with forks, skid steer with forks, pallet jacks, lights for loading at night.
- Collaboration among all stakeholders is essential.



Tote Bags with Loose Packed Aluminum and Plastic Beverage Containers

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OVERVIEW

From May 2021 to April 2022 the Backhaul Project (the project) worked with six Northern Manitoba Remote First Nation Communities (communities) for the Removal of Stewardship and Non-Stewardship Material (material). The material had been diverted from landfill disposal or collected during community clean-up projects including projects to address accumulations of derelict vehicles or scrap appliances.

The communities that participated in the Project in 2021/22 are: Barren Lands First Nation, Bunibonibee Cree Nation, Northlands Denesuline First Nation, Sayisi Dene First Nation, St. Theresa Point First Nation, and Wasagamack First Nation. Several communities including Manto Sipi Cree Nation, God's Lake First Nation, Garden Hill First Nation, and Paungassi First Nation were in contact with the project coordinator but did not participate in the backhaul this year.

In Manitoba, Producer Responsibility Organizations (PRO's) have been established to operate programs that manage designated material that is diverted from landfill disposal. Ten PRO's took part in the project: Canadian Battery Association, Call2Recycle, Electronic Products Recycling Association, Health Products Stewardship Association, Heating Refrigeration and Air Conditioning Institute of Canada, Manitoba Association for Resource Recovery Corp., Multi-Materials Stewardship Manitoba Inc., Recycle My Cell, Product Care Recycling and Tire Stewardship Manitoba.

The 2021/22 project represents the 3rd full year of backhauling material from remote communities. The project continues to be learning process for all stakeholders. Key to any success is a collaborative approach to safely collect, package, store, stage and remove material from the communities and transport it to processing facilities in Winnipeg.

The overarching goal of the project is to develop a model to efficiently remove stewardship and non-stewardship material from remote communities during the winter road season. To accomplish the goal, the project coordinator worked with communities deemed most ready due to local efforts to divert recyclable material from landfill disposal or work on reducing End of Life Vehicle (ELV) stockpiles.

Material Removal

Material was removed from 4 communities in 2022 – Bunibonibee Cree Nation, Wasagamack First Nation, St. Theresa Point First Nation, and Barren Lands First Nation. Challenges in finding proper backhaul trucks prevented staged material

from being removed from Sayisi Dene First Nation and Northlands Denesuline First Nation.

With expansion of Backhaul to the three new north-west communities (North Lands, Barrenlands, and Sayisi) a new transporter was engaged in 2022, Dubra Transport. Direction North continued to support backhaul and serviced the north-east communities (Bunibonibee, St. Theresa Point and Wasagamack). Key to engaging Dubra facilitating approval for a Hazardous Waste Transporter License and ensuring communicating the load plans. A third transporter, G&C Payne, was hired to remove the commercial cardboard from Bunibonibee.

The project entered a more formal arrangement with Secure to act as the receiving facility for all mixed loads. One load of 100% tires and one load of 100% commercial cardboard were sent directly to processors but all other loads were mixed and were unloaded at the Secure facility where material was sorted and either transported to processors or collected by processors.

Significant data on handling costs and logistics was compiled by Secure. These data will help the project identify future efficiencies and handling procedures.

Fourteen semi-trailer loads of material totaling approximately 92,350 kilograms were removed during the 2022 winter road season. Stewardship materials included scrap tires, electronics, waste paint, residential cardboard, aluminum and plastic beverage containers, lead acid batteries, fluorescent lights, used oil, used oil filters, empty oil containers, and aerosol containers. Non-stewardship material included commercial cardboard, steel tire rims, scrap appliances (stoves, driers, washers, hot water tanks), and aluminum. Details of the material and contents of each load are illustrated in Table 1.



Waste Latex Paint Pallet



Electronics Pallet



Pallets of Lead Acid Batteries and Used Oil Drums (Photo Eric Laviolette)



Baled Household Cardboard, Aluminum and Plastic Beverage Containers (Photo Eric Laviolette)



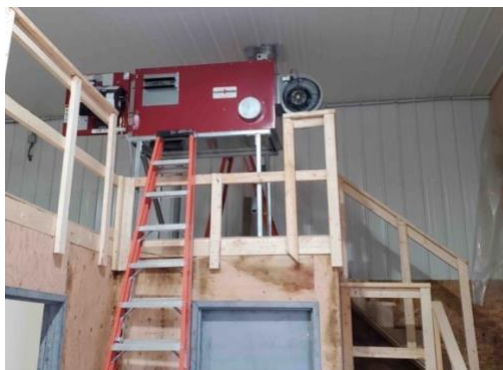
Fluorescent Light Boxes (Photo Eric Laviolette)

The community of Oxford House (Bunibonibee Cree Nation) began accepting commercial cardboard from the local Northern Store in 2021. This material was collected and loosely stored in large tote bags prior to being baled in the community's new recycling building. Working in cooperation the project, BCN operators and Northern Store arranged to have 29 bales of cardboard removed to a processing facility in Winnipeg. In addition, BCN operators working in collaboration with Thompson Recycling Centre, removed a quantity of loose packed totes of cardboard to Thompson. This collaboration marks an important milestone and could lead to future collaboration with Northern Store's across all northern communities.



Baled Cardboard and Plastic in Bunibonibee (Photo Tommy Weenusk)

Work continued to have burning units installed in 3 communities (Barren Lands, Northlands and Sayisi). COVID travel bans and locating certified installers and electricians proved to be a considerable challenge. Units in Bunibonibee, Garden Hill and Wasagamack are now installed but only Wasagamack has been fully certified. Operator training is also required in these communities.

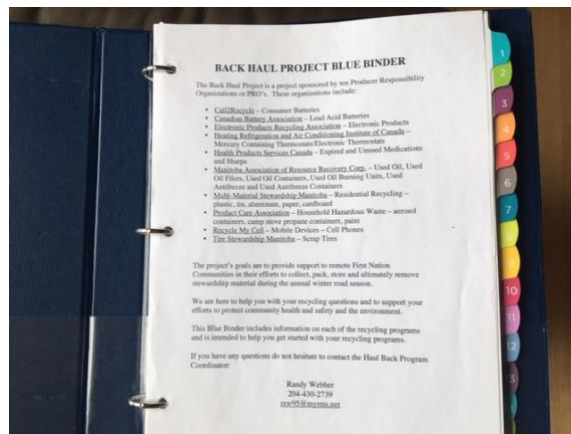


Oil Burning Unit Installation in Bunibonibee (Photo Tommy Weenusk)

The project was unable to accommodate removal of material from all PRO programs for several reasons:

- For Health Products, there is a separate system in place to manage material designated under this program. Specific information on Health Products was provided to aid in the proper management of this material in the communities.
- For Call2Recycle and Recycle My Cell, the intent was to set up collection in schools and band offices. This was not possible due to COVID where schools and band offices were closed through much of 2021/22.
- For the thermostat collection program and non-stewardship HHW, Indigenous Services Canada has now included specific language in construction, renovation, and demolition contracts to place onus on contractors to manage this material generated in all Manitoba First Nation communities.

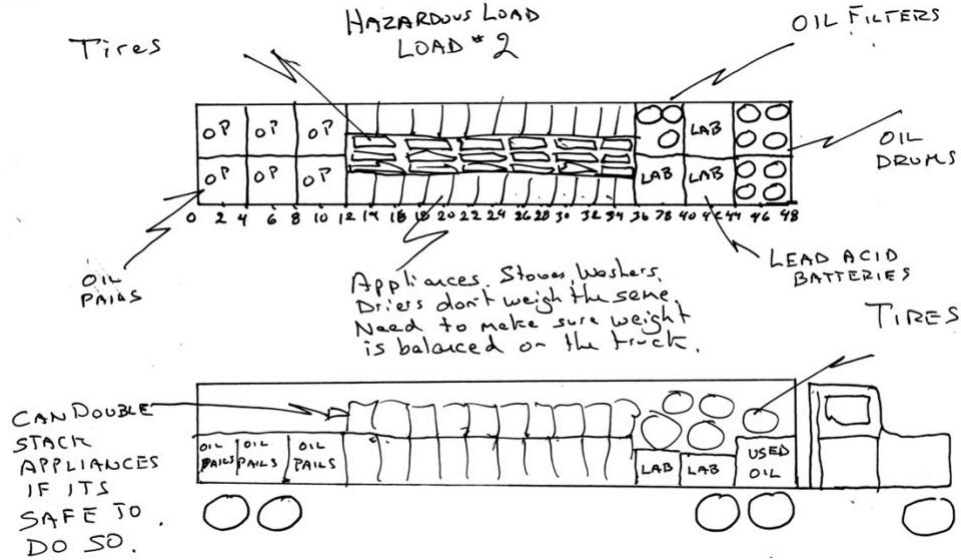
Information on all programs was made available to community contacts through the “Blue Binder”. Specific requests to the Coordinator regarding various recycling/waste diversion issues were fielded throughout the year. Efforts to build on project successes will increase the capacity for communities to include all programs in the future.



Blue Binder

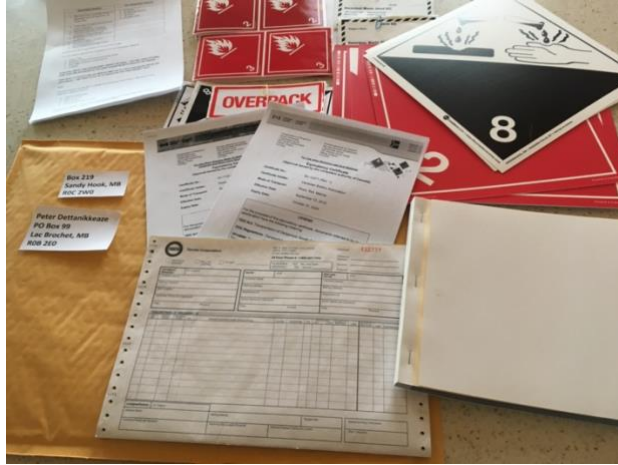
Load Plans and Shipping Documents

A key community support component is preparing load plans and assisting with documentation.



Load plans help ensure community workers pack Trucks as full as possible and are the Basis for Shipping Document Preparation. The load plans were shared with the truckers so they knew what material would be on their vehicles and were used by Secure to plan for proper staff and equipment to handle material during unloading.

Draft Shipping Documents Were Prepared in Community and Texted to the Coordinator for Review and Comment



Safety Marks and Generic Shipping Documents Were Prepared by the Coordinator and Mailed to Each Community

Regulatory Liaison

Ensuring communities and transporters are compliant with regulatory requirements for hazardous waste is ongoing. Key activities in 2022 included helping to register new communities as Hazardous Waste Generators and working with the Dubra to become fully licensed as a Hazardous Waste Transporter. Assistance was also provided to liaise with Manitoba Environment, Climate and Parks and Direction North to obtain permission to park a vehicle laden with Hazardous Waste at their compound when Secure was closed, a requirement of their transport license.

Manitoba 
Environment, Climate and Parks
Environmental Compliance & Enforcement Branch
Hazardous Waste Program
1007 Century St
Winnipeg MB R3H 0W4
T 204-945-7086 F 204-948-2338

February 07, 2022

Dear hazardous waste generator:

Re: Acknowledgement of Receipt of Hazardous Waste Generator Registration Form

This document will acknowledge receipt of the hazardous waste generator registration form submitted to Manitoba Environment, Climate and Parks by the following waste consignor (generator):

Supplies

Supplies were sent to the 6 communities on the 2022 winter road. Supplies included steel 205 litre drums for packing used oil, used oil filters, aerosol containers and camp stove propane containers, tote bags for household recycling, packing supplies for lead acid batteries and electronics and safety supplies.



Supplies – Drums for Used Oil, Oil Filters, Aerosol and Camp Stove Propane Containers and Tote Bags for Household Recycling

In-community collection, storage, staging challenges

Challenges in the collection storage and staging of material exist in every community. Issues include lack of collection equipment, lack of secure storage space and loading equipment.

Cold and snow also contributed to challenges in having material staged for the backhaul trucks. In some cases, material was buried in deep snow and inaccessible. Cold weather contributed to equipment breakdown.

COVID continued to impact the collection, storage and staging of material. Throughout this year's project, every community experienced one or more lockdown, including some that had staff who contracted the virus.



Staged Material in Barren Lands First Nation (Photo Armand Halkatt)

Key Outcomes

Beyond the actual removal of material, key outcomes include:

- A program delivery model that considers the transportation cycle of products being procured and transported into the communities, backhaul of diverted material out of the communities on these trucks and receiving and processing the material in Winnipeg has been defined. Coordinating trucks delivering supplies with trucks backhauling material will be increasingly important to maximize efficiencies and effectiveness of backhaul.
- The costs for the backhaul portion of the delivery model have been identified and areas for efficiencies continue to be refined.
- There is a continued need to support community waste diversion worker's, including training, proper equipment to safely do their jobs, and supplies to safely pack the material. Ideally this would involve periodic community visits to advise and train workers.
- There is a need for communities to have adequate budgets to support worker wages, training, consumable supplies and costs for transport and handling of non-stewardship material.
- The cost/benefit of including all diverted material including stewardship and non-stewardship in backhaul transport trucks can now be better defined.
- There is a need for infrastructure and equipment to store diverted material and safely load it onto backhaul trucks including weather protected areas for material storage, and loading equipment (for example, loaders with forks, skid steer with forks, pallet jacks, lights for loading at night).

Conclusion

In the 2022 backhaul a total of 14 semi-trailer loads of material were removed from 4 communities comprising approximately 92,350 kg of stewardship and non-stewardship material representing material from 6 of the 10 PRO groups. Staged material in 2 community's was not removed due to COVID, weather or lack of appropriate backhaul trucks to transport the material.

For the first time significant amounts of non-stewardship material was included in the backhaul trucks contributing to community priorities to remove this legacy material. Another first was a collaboration with Northern Store where 29 bales of commercial cardboard was removed from Bunibonibee Cree Nation and delivered to a processor in Winnipeg.

The success of the project in 2021/22 is in large part due to a continued collaborative process with the PRO's, community operators, transporters, and processors.

Table 1 Material Details

Location/Load	Date of Waste at 999 Redonda	Tires (total)	Tires (kgs)	White Goods (total)	White Goods (lbs)	E-Waste (pallets)	E-Waste (kgs)	Paint (pallets)	Paint (kgs)	Cardboard (bales)	Plastics (bales/bags)	Aluminum (bales)	Aluminum (kgs)	All Recycling (kgs)	Batteries (pallets)	Batteries (kgs)
Bunibonbee Cree Nation-Oxford House																
BCN Load #1	January 24, 2022	90	1660	34	4980	3	595									
BCN Load #2	January 28, 2022	105	1910	36	4340				2	1211						
BCN Load #3	January 31, 2022	110	2590	12	1340						7	5	3	4156		
BCN Load #4	January 31, 2022	212	3290	36	4020										2	1728
BCN Load #5	February 7, 2022	248	4813	36	3856											
BCN Load #6	March 11, 2022	91	1650	50	5920											
BCN Load #7	March 5, 2022									29				9918		
Total/Location		856	15913	204	24456	3	595	2	1211	36	5	3	0	14074	2	1728
St Theresa Point																
STP Load #1	February 4, 2022	501	12610													
STP Load #2	February 7, 2022	15	387	9	964	6	1376					4	633			
STP Load #3	February 15, 2022											1	3048		2	1949
Total/Location		516	12997	9	964	6	1376	0	0	0	0	5	3681	0	2	1949
Wakagamack																
WAS Load #1	February 23, 2022	320	5540	58	5940	2	476									
WAS Load #2	February 28, 2022	136	181	29	3160						1			67	5	5064
WAS Load #3	March 4, 2022			56	5860											
Total/Location		456	5721	143	14960	2	476	0	0	0	1	0	0	67	5	5064
Northlands-Lac Brochet																
Barren Lands-Brochet																
BLFN Load #1	April 1, 2022	108	1188	28	2940							4	1	100	2	1446
Total/Location		108	1188	28	2940	0	0	0	0	0	4	1	0	100	2	1446
Sayisi Dene-Tadoule Lake																
Project Totals		1,936.00	35,819.00	384.00	43,320.00	11.00	2,447.00	2.00	1,211.00	26.00	10.00	9.00	3,681.00	14,241.00	11.00	10,187.00

Fluorescent Tubes (box)	Fluorescent Tubes (kgs)	Used Oil (drums)	Used Oil (kgs)	Oil Filters (drums)	Oil Filters (kgs)	Empty Pails (pallets)	Empty Pails (kgs)	Oil Containers (bags)	Oil Containers (kgs)	Oil Pail Lids (bags)	Oil Pail Lids (kgs)	Aerosols (drum)	Aerosols (kgs)	Tire Rims (each)	Tire Rims (lbs)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	103														
2	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		8	1766	2	216	2	258	1	73	3	80	1	27	187	4820
0	0	8	1766	2	216	2	258	1	73	3	80	1	27	187	4820
		2	400			1	5								
0	0	2	400	0	0	1	5	0	0	0	0	0	0	0	0
2.00	103.00	10.00	2,166.00	2.00	216.00	3.00	263.00	1.00	73.00	3.00	80.00	1.00	27.00	187.00	4,820.00

Table 2
Key Metrics

Number of Trucks	14
Total Cost for 2021/22	\$114,000
Estimated KG Removed	92,350 KG
Average KG per Truck	6,596 KG
Cost per KG Removed	\$1.23 KG