

Municipality of Red Lake Review of Waste and Recycling Management

Final Report & Results



Agenda

1. Safety Moment
2. Project Overview
3. Information Review
4. Engagement Results
5. Inventory of Services
6. How Red Lake Compares
7. Improvements
8. Cost Efficiencies
9. Long-term waste strategy

Safety Moment

Working outside in winter

Waste Management Review

Project Overview

Project Background



Red Lake currently spends an average of \$1.1 million annually on waste management services (41% on hauling, tipping, and staffing recycling depot). With revenues, the program has a net cost of \$746,000.

- Waste is collected curbside by Chukuni Sanitation and transported to Ear Falls
- Waste is also dropped off at the WTS, compacted by Red Lake, and transported by Red Lake to Ear Falls
- Recycling is collected curbside by Chukuni Sanitation and dropped at the WTS; where it is compacted and transported to Emterra in Winnipeg
- Recycling is also accepted dropped off at the WTS
- Low-leachate material is buried on-site

Project Purpose

To assist Red Lake in identifying, evaluating, and reviewing current waste management services with the goal of identifying opportunities for efficiencies and improvements and to develop a long-term waste management strategy.

The project consisted of:

- Information reviews
- Site visit/informal interviews
- Public engagement/feedback
- Compiling and benchmarking services
- Identifying opportunities for efficiencies and improvements
- Identifying options for a long-term strategy



Information Review

- Financial records
- ECA A600903 and Amendment
- Waste Management System Certificate of Approval 2986-5VEHQZ
- Red Lake By-Law No. 87-2016 (Contract with Chukuni Sanitation)
- Township of Ear Falls By-Law No. 2342-21
- Emterra Price List for co-mingled recycling
- Municipal hauling records for waste and recycling (2017-2021)
- Municipal rebate records
- Completed Engagement Surveys
- Personal Communications with Emterra, GFL, Cascades, and Eco-Depot Waste Diversion



Waste Management Review

Public Engagement Results

Public Engagement Results: Waste

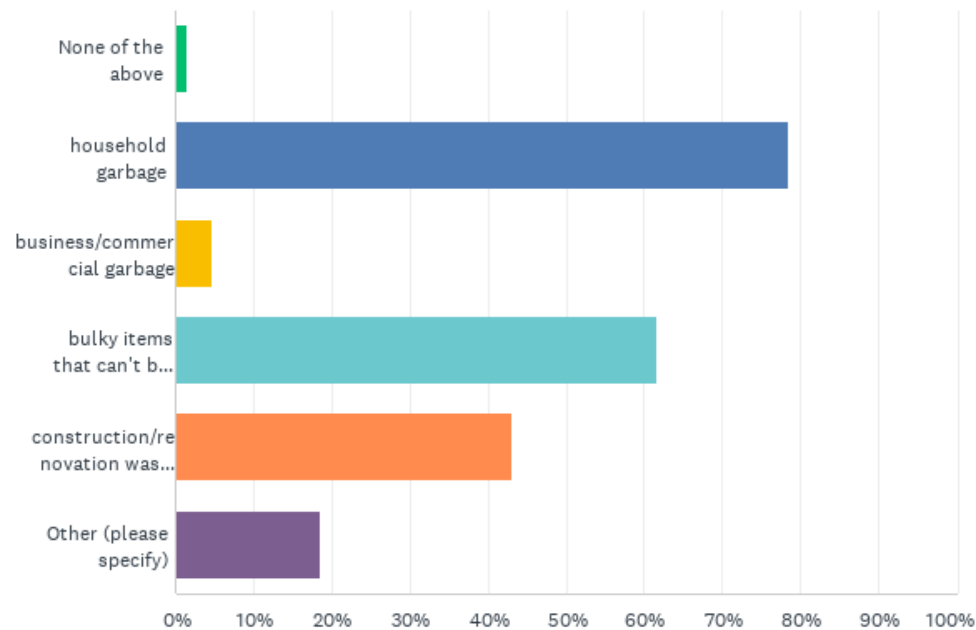
A public engagement survey was developed and posted online from December 22, 2021- January 5, 2022. The survey was advertised on Red Lake's website and social media pages. A total of 67 people responded to the survey (1.6%)

Approximately half (48%) of participants indicated that they do not regularly use the curbside waste collection service, largely for reasons of convenience

- Not feasible for shift workers
- Too many issues with the contractor restrictions
- Forgetting or not wanting the hassle of bag tags
- Cheaper/easier to take waste to the WTS
- Birds and animal scavengers

Public Engagement Results: Waste

Q9 If you drop off materials at the Municipal Transfer Station, what types of materials do you drop off? (check all that apply)

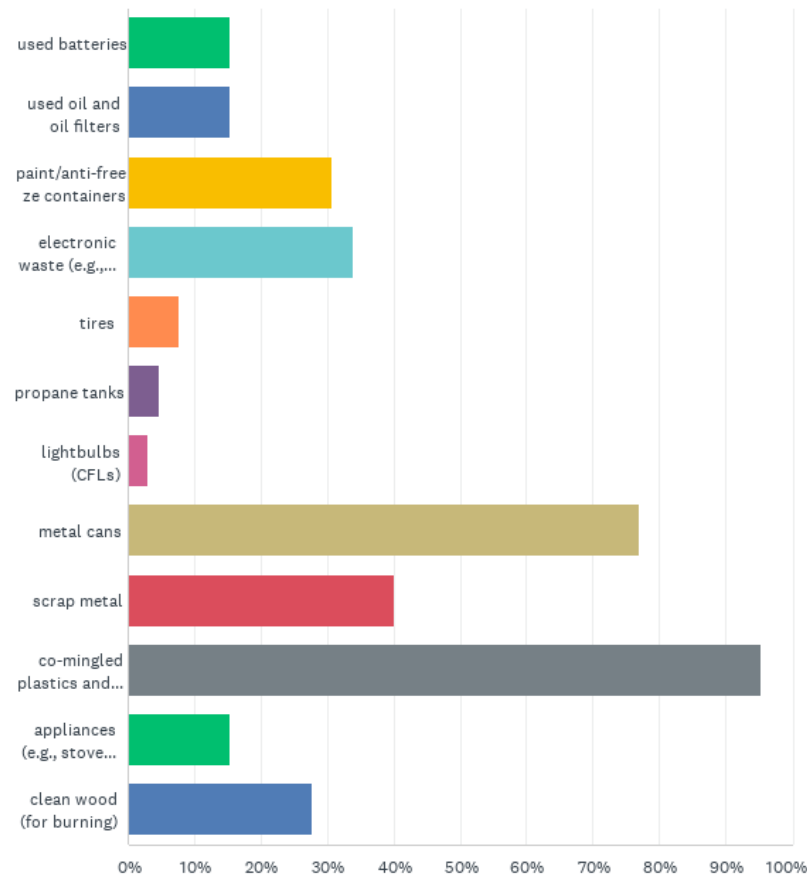


Public Engagement Results: Recycling

- 100% of participants indicated that they participate in recycling
- 69% of participants indicated that they regularly use the recycling collection service. For those that do not regularly use it, reasons indicated were:
 - Forgetting about collection day
 - Simpler and easier to go to the WTS
 - Too many bears/birds
 - Collection is not frequent enough
 - No bins at apartment buildings
- 65% indicated they drop off recyclables at the WTS including co-mingled (78%), scrap metal (37%) and e-waste (35%)

Public Engagement Results: Recycling

Q6 If you recycle, what types of materials do you typically recycle? (check all that apply)



Other Public Engagement Results

58% of participants indicated that they do not participate in backyard composting citing reasons such as:

- Concerns with attracting animals
- Not enough space/room
- Not enough information/knowledge
- Unappealing/too much work

Other feedback included:

- Re-opening the used items area
- Recycling more items (e.g. glass)
- Recycling collection to occur more frequently
- Reducing bag tag costs, or rolling costs into taxes
- Municipal composting program

Waste Management Review

Inventory of Services and Benchmarking

Inventory of Services

Services for collection, storage, transportation, and disposal of waste and recyclable materials were identified.

Key Services include:

- 19 material categories
- 12 service providers
- 12 service locations
- Frequency of services ranging from 4 days per week to once per year (or as-needed)



Waste Category					
Waste material		Service offered	Current Service Provider	Location of Service	Frequency of Service
Household Waste	Co-mingled recyclables	Collection	Chukuni Sanitation	Curbside	bi-weekly
		Storage	Red Lake	WTS	ongoing
		Transportation	Red Lake	WTS to Winnipeg	1-2 loads per week
		Disposal	Emterra	Winnipeg	1-2 loads per week
	Regular garbage	Collection	Chukuni Sanitation	Curbside	weekly
		Storage	Red Lake	WTS	ongoing
		Transportation	Red Lake	WTS to Ear Falls	1-2 loads/week
		Disposal	Ear Falls	Ear Falls WDS	1-2 load/week plus curbside collection
	Low-leachate material	Collection	Not provided	Not provided	n/a
		Storage	Red Lake	Balmertown WDS expansion	ongoing
		Disposal	Red Lake	Balmertown WDS expansion	ongoing
	Fridges/appliances	Collection	Not provided	Not provided	n/a
		Storage	Red Lake	WTS	ongoing
		Transportation and Disposal	PGE	off-site	as needed
	Scrap metal	Collection	Not provided	Not provided	as needed
		Storage	Red Lake	WTS	ongoing
		Transportation	Red Lake	WTS to Winnipeg	1-2 loads/month
		Disposal	General Scrap	Winnipeg	As needed
	Tires	Collection	Not provided	Not provided	n/a
		Storage	Red Lake	WTS	ongoing
		Transportation and Disposal	E-Tracks	off-site	as needed
Household Hazardous Waste	E-waste	Collection	Not provided	Not provided	n/a
		Storage	Red Lake	WTS	ongoing
		Transportation and Disposal	EPRA	Winnipeg	as needed/on call (22-24 pallets)
	Batteries-large	Collection	Not provided	Not provided	n/a
		Storage	Red Lake	WTS	Saturdays (10-4)
		Transportation and Disposal	PGE	off-site	as needed
	Batteries-household	Collection	Not provided	Not provided	as needed
		Storage	Red Lake	Scale-house/municipal office	ongoing
		Transportation	CanadaPost paid by Call2Recycle	Red Lake	as needed
	Miscellaneous liquid household hazardous waste	Disposal	Call2Recycle	Winnipeg	as needed
		Collection	Not provided	Not provided	n/a
		Storage	Red Lake	WTS	Saturdays (10-4)
	Used oil	Transportation and Disposal	Tervita/GFL	Red Lake to Winnipeg	as needed
		Collection	Not provided	Not provided	n/a
		Storage	Red Lake	WTS	Saturdays (10-4)
	Propane tanks	Transportation and Disposal	Tervita/GFL	Red Lake to Winnipeg	as needed/when in town
		Collection	Not provided	Not provided	n/a
		Storage	Red Lake	WTS	Saturdays (10-4)
	Aerosol cans	Transportation and Disposal	PGE	Red Lake to off-site	as needed
		Collection	Not provided	Not provided	n/a
		Storage	Red Lake	WTS	Saturdays (10-4)
	Contaminated Material	Transportation and Disposal	Tervita/GFL	Red lake to Winnipeg	as needed
		Collection	Not provided	Not provided	n/a
		Storage	Not provided	Not provided	n/a
	Pesticide containers	Disposal	Red Lake	Balmertown WDS expansion	as needed
		Collection	Not provided	Not provided	Saturdays
		Storage	Red Lake	WTS	Saturdays (10-4)
	CFL Lightbulbs	Transportation and Disposal	Tervita/GFL	Red Lake to Winnipeg	as needed
		Collection	Not provided	Not provided	n/a
		Storage	Red Lake	WTS	Saturdays (10-4)
	Biomedical Waste	Transportation and Disposal	PGE	Red lake to off-site	as needed
		Collection	Not provided	Not provided	n/a
		Storage	Red Lake Pharmacy	516 Highway 105	ongoing
Organic Waste	Branches/clean wood/yard waste	Transportation and Disposal	HPSA	Woodbridge, Ontario	as needed
		Collection	Not provided	Not provided	n/a
		Storage	Red Lake	WTS	ongoing
	Christmas Trees	Disposal	Red Lake	Balmertown WDS expansion	weekly (Thursday)
		Collection	Chukuni Sanitation	Curbside	once per year
		Storage	Red Lake	WTS	once per year
		Disposal	Red Lake	Balmertown WDS expansion	weekly (Thursday)

How Red Lake Compares: Waste and Recycling

Waste Material	Sioux Lookout	Dryden	Greenstone	Average Service Level	Red Lake Service
Co-mingled recycling	Bi-weekly curbside collection only; no drop-off	Bi-weekly curbside collection; free drop-off; commercial drop-off \$100/tonne	No curbside service, no co-mingled recycling program	Free curbside collection	Above Average
Regular (non-divertible) waste	Accepted at WDS for tipping (50 kg min) fee; \$157.66/tonne); accepted curbside \$2.60 /tag	Accepted at WDS for tipping fee (\$110/tonne); accepted curbside and drop-off \$2.50 /tag	Weekly curbside collection (no bag tags), drop-off at WDS (free to \$807.83)	Curbside collection with bag tags or drop-off for a tipping fee	Average
Low-Leachate material	Accepted at WDS (\$157.66/tonne)	Accepted at WDS (\$110/tonne)	Accepted free at WDS (<1/2 ton); 1x/year bulky item pickup (excl. demo)	Accepted at WDS for a tipping fee	Average
Freon appliances	Accepted at WDS for \$103.01/tonne and freon must be removed	Not accepted	Accepted at WDS for \$50 (tagged and freon removed); ,1x/year bulky item pickup	Accepted with freon removed and for a fee	Above Average
Scrap Metal	Accepted at WDS for tipping fee \$103.01/tonne	Accepted free at WDS	Accepted free at WDS; 1x/year bulky item pickup	Accepted free at WDS	Average
Tires	Accepted free at WDS; maximum of 10 per day/person	Accepted at WDS (free) up to 4 per day and \$4 per additional	Accepted at WDS for \$5-\$340; 1x/ year bulky item pickup	Accepted free at WDS (up to a maximum)	Average

How Red Lake Compares: Household Hazardous Waste

Waste Material	Sioux Lookout	Dryden	Greenstone	Average Service Level	Red Lake Service
Batteries-large	Not accepted	Accepted at public works yard for free on an annual collection day; residential volume only	Not accepted	Not accepted	Above Average
Batteries-household	Accepted free at municipal sites	Accepted free at municipal sites	Accepted seasonally at WDS; no charge	Accepted (free) at municipal sites, year-round	Average
Household hazardous waste	Not accepted	Accepted at public works yard for free on an annual collection day; residential volume only	Accepted free at WDS, seasonally	Accepted (free) at certain times of the year	Above Average
Used oil/filters	Accepted free at WDS	Accepted at public works yard for free on an annual collection day; residential volume only	Accepted free at WDS, seasonally	Accepted (free) at certain times of the year	Above Average
Propane tanks	Not accepted	Not accepted; can be returned to a local dealer	Accepted free at WDS, seasonally	Not accepted	Above Average
Aerosol cans	Not accepted	Accepted at public works yard for free on an annual collection day; residential volume only	Accepted free at WDS, seasonally	Accepted (free) at certain times of the year	Above Average
Contaminated Material	Accepted at WDS if tested and approved	Not accepted	Accepted for a fee at WDS if tested and approved	Accepted at WDS if tested and approved	Average
Pesticide containers	Not accepted	Accepted at public works yard for free on an annual collection day; residential volume only	Accepted free at WDS, seasonally	Accepted (free) at certain times of the year	Above Average
CFL Lightbulbs	Not accepted	Accepted at public works yard for free on an annual collection day; residential volume only	Accepted free at WDS, seasonally	Accepted (free) at certain times of the year	Above Average
Biomedical Waste	Accepted free at local pharmacies, year-round	Accepted free on an annual collection day; or drop off at local pharmacy year-round	Accepted free at local pharmacies, year-round	Accepted (free) at local pharmacies, year-round	Average
E-waste	Accepted free at WDS	Accepted at another local vendor	Accepted free at WDS or through bulky item pickup (1x/year)	Accepted (free) at WDS	Average

Red Lake services were deemed to be above average given that the WTS is open year-round and accepts a variety of hazardous wastes; however, other municipalities offer services largely free of charge

How Red Lake Compares: Organic Waste

Waste Material	Sioux Lookout	Dryden	Greenstone	Average Service Level	Red Lake Service
Branches/clean wood/yard waste	Accepted free at WDS	Free seasonal curbside collection; accepted free at WDS	Accepted free at WDS; accepted curbside 1x/year (bulky item pickup)	Accepted free at WDS	Average
Christmas Trees	Free drop-off at WDS	Free drop-off at WDS	Free drop-off at WDS	Free drop-off at WDS	Above Average
Compost	Not accepted at WDS or curbside	Not accepted at WDS or curbside	Not accepted at WDS or curbside	Not accepted at WDS or curbside	Average

Waste Management Review

Service Improvements and Efficiencies

Improving Curbside Collection

- Approx \$31,000 spent (2021) hauling waste (482 tonnes) from the WTS to Ear Falls
- Only 54% of participants indicated they regularly use curbside collection

Possible service improvements include:

- Increasing the minimum tipping charge
- Phasing out the acceptance of bagged waste at the WTS
- Working with Chukini to improve services
- Discontinuing bag tags and rolling fees into municipal taxes
- Switching service providers (GFL >\$600k)
- Taking over curbside collection (>20k)



Improving Recycling and Re-Use



Many comments on re-open the re-usable items room

- Many operational issues including safety, loitering, conflicts
- Alternative to increase promotion of other initiatives (i.e., free weekends)

Increasing divertible items:

- Limited markets for plastics
- Cardboard accepted by Cascades for a rebate
- Mattresses accepted by Mother Earth Recycling
- Glass accepted (co-mingled) by GFL at their facility in Winnipeg

Increasing Diverted Materials



Cardboard

- Accepted by Cascades in Winnipeg (\$70/tonne rebate); however, needs to be segregated and clean
- Approximately \$5,000+ in cost savings/rebates annually (7% of recycling stream)
- Likely not economical given the effort and costs to segregate, bale, and haul to Winnipeg

Mattresses

- Accepted at Mother Earth in Winnipeg (social enterprise) for \$15 charge/unit
- Clean and dry (would need shipping container)
- Likely would need to charge a substantial fee to residents to offset costs (>\$70/unit)

Increasing Diverted Materials (Glass)



Desire to recycle glass, based on community engagement feedback

- Currently not accepted as it is likely crushed in compaction and Emterra does not have the equipment/facilities to segregate it
- Glass is crushed and used in road/utility fill
- Can be accepted by GFL through two options:
 - Separate 40-yard enclosed roll-off bin (charged \$800/month rental) and picked up/replaced by contractor (\$400,000)
 - Increased effort and cost to segregate materials and pay for separate hauling fees
 - Accepted co-mingled and compacted at their facility in Winnipeg (\$150/tonne); use automated tech to segregate material

Increasing Composting

Composting presents a large opportunity to reduce waste (approximately 30%) resulting in up to \$39,200 annually in cost savings in tipping and hauling



Backyard Composting

- Providing information (workshops, newsletters) to encourage backyard composting; working with local NGOs
- Accepting compost at the community garden
- Promoting/incentivizing the purchase of composter units

Municipal Composting

- Eco-Depot Waste Diversion in Thunder Bay (opening in 2024)
- BRRMF in Winnipeg (pilot underway)
- Not currently economical to haul compost or set up a municipal facility

Cost Efficiencies/Revenues

PRO Benefits:

- ProductCare depot for hazardous waste (paints, solvents, fertilizers, pressurized tanks)
 - \$800+/year cost savings in hazardous material transport
- \$197,200 estimated to be saved in tipping and hauling fees through transition of blue box recycling to Circular Economy Act

Promoting backyard composting:

- Up to \$39,200 in cost savings (assuming 30% of currently dropped off waste is compostable; 20% increase leads to \$10,000 in savings annually)

Increasing use of curbside collection:

- Discouraging the practice of dropping of materials that could be transported through curbside collection (estimated \$8,000+ in savings; 25% increase)



Service Provider Efficiencies

Waste

- Ear Falls is the most economical provider (\$39.95/m³) providing efficiencies with increased compaction
- Curbside collection with GFL estimated to be approximately double the current cost
- Municipal curbside collection
 - (\$250k truck +185k O and M) no cost savings

Recycling

Unlikely that materials are currently being recycled due to compaction, majority is likely landfilled

- Cascades: can accept compacted recycling at \$145/tonne (\$35/tonne in savings); however, increased restrictions (plastics #1,2,4,5- with color restrictions)
- GFL: can accept compacted recycling, including glass for \$150/MT at their Winnipeg facility that uses automated technologies to segregate compacted material
 - Savings of \$30/MT = \$10,000 annually
 - Approximately equivalent hauling costs
 - Test load can be sent with 24-hour notice



Waste Management Review

Long-term (30+ year) waste strategy

Option 1: New Site on Provincial Lands (preferred)

This option requires site acquisition under the *Public Lands Act*. MNRF is no longer issuing land use permits for waste disposal sites.

- Site would need to be purchased at market value (equivalent to 10+ years of LUP) and an easement obtained for the CAZ

Other regulatory requirements:

- ECA under the Environmental Protection Act (>40,000 m³)
 - Survey, geotechnical and hydrogeological assessments
 - Plans and specifications addressing leachate, landfill gas, and effects to soil, visuals, noise, emergency measures, operation and maintenance and closure
- Individual Environmental Assessment under the *Environmental Assessment Act* (if partnering with another community; >100,000m³ required)
 - Includes a consultation process and effects assessment (soils, water, wildlife, air, noise, socio-economic effects)
 - mitigation measures, monitoring, and alternatives

Option 2: Status Quo

Assumes Ear Falls can accept waste for the long-term (30+years)

Lifespan assessment of low-leachate expansion area:

- 2,258 m³/year of waste is hauled to Ear Falls
- Estimated that previous landfilling rate was 3,300 m³/year; therefore, the landfilling rate of the low-leachate expansion area is approximately 1,000 m³/year
- 40,000 m³ capacity built in 2017 (36,000 m³ remaining)
- 30-year lifespan achieved if (10-15% of capacity is lost to cover and best management practices are used

No additional regulatory requirements

Option 3: Expansion of the Existing Site

Same regulatory requirements as Option 1; however, efficiencies are likely in that a siting study and land acquisition would not need to be undertaken

- Environmental concerns (proximity to Balmer Creek)
- Potential regulatory concerns
- Proximity can lead to more people choosing to drop off materials

Comparison of Conceptual Costs

Service	Annual Average Expense	Item	Revenue (2017-2020 average)
Garbage collection	\$170,900	Recoveries	\$24,100
Garbage hauling/tipping	\$0.00	Tipping and Other Fees	\$150,800
Waste site operation	\$431,240	Bag Tags	\$111,300
Disposal of HHW and oil	\$7,880	Dump Tickets	\$9,200
Disposal of batteries and fridges	\$5,380	Property standards	\$10,200
Recycling depot operation	\$243,600 ¹	Commissions	-\$14,600
Total Expenses	\$859,000	Total Revenues	\$291,000
¹ Average annual operation of the recycling program excluding the charges associated with blue box materials collection, transport, and disposal			

Service	Annual Average Expense	Item	Revenue (2017-2020 average)
Garbage collection ¹	\$170,900	Recoveries	\$24,100
Garbage hauling/tipping	\$128,500 ³	Tipping and Other Fees	\$150,800
Waste site operation	\$431,240	Bag Tags	\$111,300
Disposal of HHW and oil	\$7,800	Dump Tickets	\$9,200
Disposal of batteries and fridges	\$5,380	Property standards	\$10,200
Recycling depot operation	\$243,600 ²	Commissions	-\$14,600
Total Expenses	\$987,500	Total Revenues	\$291,000
¹ Expense based on 2022-2023 rates			
² Average annual operation of the recycling program excluding the charges associated with blue box materials collection, transport, and disposal			
³ Estimated average cost of hauling and tipping waste (excludes staff effort)			



Questions and Discussion

