FOODCYCLE SCIENCE

FOODCYCLER™

MUNICIPAL FOOD WASTE DIVERSION PILOT PROGRAM

MACKENZIE
BRITISH COLUMBIA

District of Mackenzie
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250-997-3221

Tuesday, May 23, 2023

The FoodCycler™ Food Waste Diversion Municipal Pilot Program

Dear District of Mackenzie Staff and Council,

Thank you for your interest in food waste diversion in your community. Food Cycle Science (FCS) is a social purpose organization born from the alarming fact that 63% of food waste is avoidable and responsible for about 10% of the world's greenhouse gas emissions. FCS has developed an innovative solution that reduces food waste in landfills, takes more trucks off the road, reduces infrastructure and collection costs, and contributes to a 95% reduction in CO2E compared to sending food to landfills. We deploy our patented technology to households around the world, helping them take ownership of their food waste and environmental impact.

In partnering with municipalities, we are committed to creating accessible food waste solutions for all people and changing the way the world thinks about food waste. The purpose of the FoodCycler™ Pilot Program is to measure the viability of on-site food waste processing technology as a method of waste diversion. By reducing food waste at home, you can support your environmental goals, reduce residential waste, reduce your community's carbon footprint, and extend the life of your community's landfill(s).

Based on several factors, we believe the District of Mackenzie would be a great fit for the benefits of this program, and we are proposing a study involving 100 households in the District of Mackenzie.

The **FoodCycler FC-30** and **Eco 5** devices can process 2.5 L and 5 L (respectively) of food waste per cycle and converts it into a nutrient-rich by-product that can be used to enrich your soil. Power consumption per cycle is ~0.8 kWh (FC-30) / ~1.3 kWh (Eco 5) and takes less than 8 hours to complete (overnight).

Every FoodCycler deployed is estimated to divert at least 2 tonnes of food over its expected lifetime. Based on market rates of $100 per tonne of waste (fully burdened), 100 households participating would divert 200 tonnes of food waste and save the municipality an estimated $20,000.00 in costs. Please note that this analysis is based on market rates and depending on remaining landfill lifespan and closure costs, local rates for waste disposal may vary.

Every tonne of food waste diverted from landfill is estimated to reduce greenhouse gas emissions by 1.3 tonnes of CO2e before transportation emissions. Based on this, 100 households could divert approximately 260 tonnes of greenhouse gas emissions.

Food Cycle Science is excited to have you on board for this exciting and revolutionary program. The FoodCycler™ Municipal Solutions Team is always available to answer any questions you might have.

Warm regards,

The FoodCycler™ Municipal Team

Impact Canada/AAFC Food Waste Reduction Challenge

Food Cycle Science is a finalist of Impact Canada's Food Waste Reduction Challenge, which is a three-stage initiative from the Government of Canada through Agriculture and Agri-Food Canada to support business model solutions that prevent or divert food waste at any point from farm to plate. FoodCycler has been chosen as a finalist for our project titled: “Residential On-Site Food Waste Diversion for Northern, Rural, and Remote Communities”.

The challenge objectives and assessment criteria are for solutions that:

1. **Can measurably reduce food waste** – in dollars and metric tonnes;
2. **Are innovative and disruptive to the status quo** – the old way of doing business is out;
3. **Are ready to scale up** – it is time to deploy high-impact and wide-reaching solutions across the Canadian food supply chain;
4. **Have a strong business case** – there is a demand for your solution;
5. **Make a difference to our communities** – creating jobs and increasing access to safe, nutritious, and high-quality food is a priority; and,
6. **Improve our environment** – reducing food waste means shrinking our GHG footprint and conserving natural resources.

As a finalist, Food Cycle Science is the recipient of a $400,000 grant that is being 100% redistributed to our Canadian municipal partners in support of their FoodCycler initiatives and pilot programs. Based on several factors, FoodCycler believes the District of Mackenzie would be an ideal *“Implementation Partner”* for this stage of the challenge and we are proposing a study involving 100 households in the District of Mackenzie, wherein Food Cycle Science will contribute a portion of this grant money towards offsetting the costs of your program.

More information can be found here: https://impact.canada.ca/en/challenges/food-waste-reduction-challenge

As of the date of this proposal, there are a total of 8383 Canadian municipalities who have signed on to participate in a FoodCycler program. Through this partnership, the District of Mackenzie can achieve immediate and impactful benefits, acquire valuable insight about food waste diversion in your region, and showcase itself as an environmental leader and innovator in Canada.

Food Cycle Science is looking to achieve the following through this proposed partnership:

- Receive high-quality data from pilot program participants regarding food waste diversion
- Receive high-quality feedback from residents, staff, and council regarding the feasibility of a FoodCycler food waste diversion program for the District of Mackenzie and similar communities
- Demonstrate the viability of our technology and solutions in a municipal setting so the model can be re-deployed in other similar communities in Canada
- Demonstration of a program regarding food waste diversion in small/rural Canada to support Phase 3 of Impact Canada's Food Waste Reduction Challenge

The District of Mackenzie would receive several benefits through this partnership:

- Opportunity to trial a food waste diversion solution at a cost well below market prices utilizing federal funding intended for food waste reduction in our country
- Reduced residential waste generation thus increasing diversion rates
- Reduced costs associated with waste management (collection, transfer, disposal, and landfill operations)
- The reduction of greenhouse gas (GHG) emissions from transportation and decomposition of food waste in landfills
- Extend the life of your landfill(s)
- Opportunity to support Canadian innovation and clean tech
- Opportunity to provide residents with an innovative solution that reduces waste and fights climate change, at an affordable price
- Obtaining data that could be used to develop a future organic waste diversion program

Residents of the District of Mackenzie would receive several benefits through this partnership:

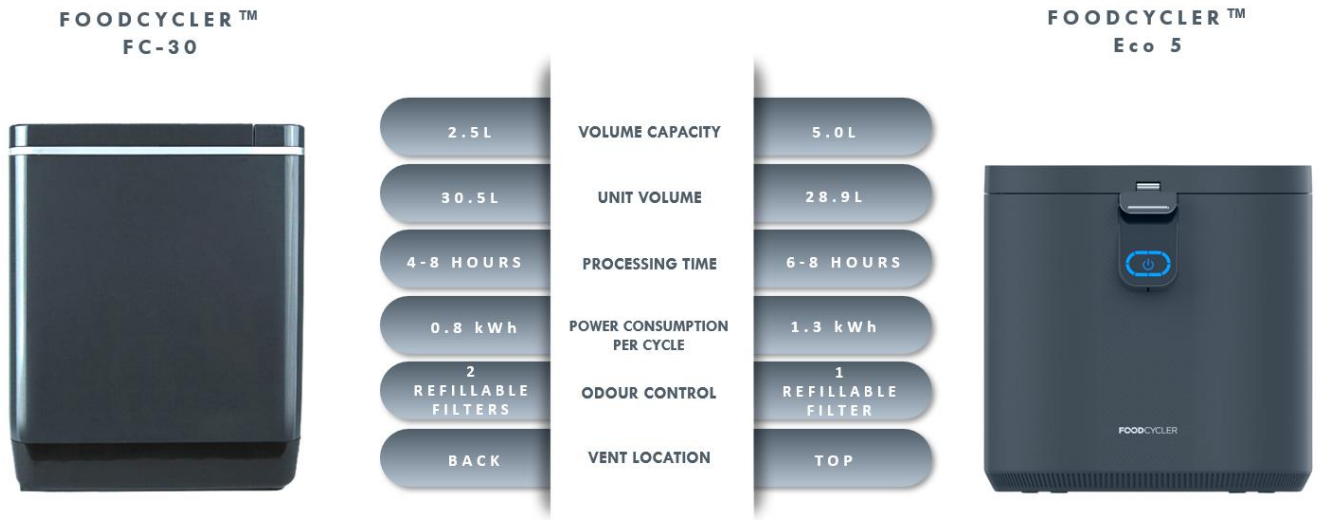
- Opportunity to own an at-home food waste diversion solution at a cost well below market prices
- Support climate change goals by reducing waste going to landfill
- Ability to fertilize their garden soil by generating a nutrient-rich soil amendment
- Reduce the "ick factor" of garbage to keep animals and vermin away
- Reduce trips to the waste site and save on excess waste fees where applicable

In the pages that follow, we will offer a pilot program recommendation for consideration.



The FoodCycler Product Family

The FoodCycler product family offers closed-loop solutions to food waste, with zero emissions or odours. This sustainable process reduces your organic waste to a tenth of its original volume. Small and compact, FoodCycler products can fit anywhere. They operate quietly and efficiently, using little energy.



Recycle Your Food Waste in 3 Easy Steps

Step 1:

Place your food waste into the FoodCycler™ bucket. The FoodCycler™ can take almost any type of food waste, including fruit and vegetable scraps, meat, fish, dairy, bones, shells, pits, coffee grinds and filters, and even paper towels.

Step 2:

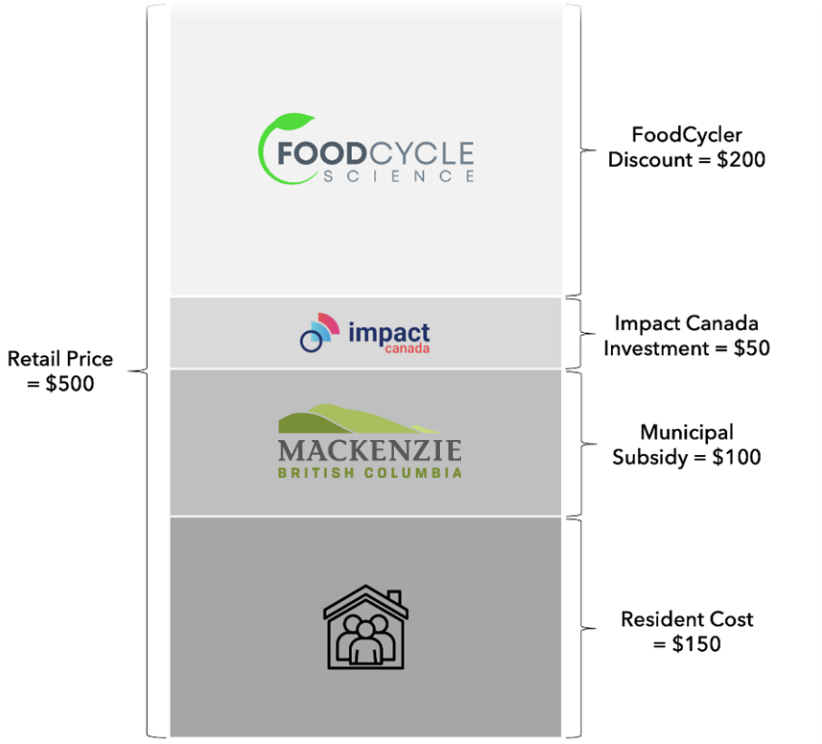
Place the FoodCycler™ bucket into your FoodCycler™ machine. The FoodCycler™ machine can be used anywhere with a plug such as a kitchen countertop, basement, laundry room, heated garage, etc.

Step 3:

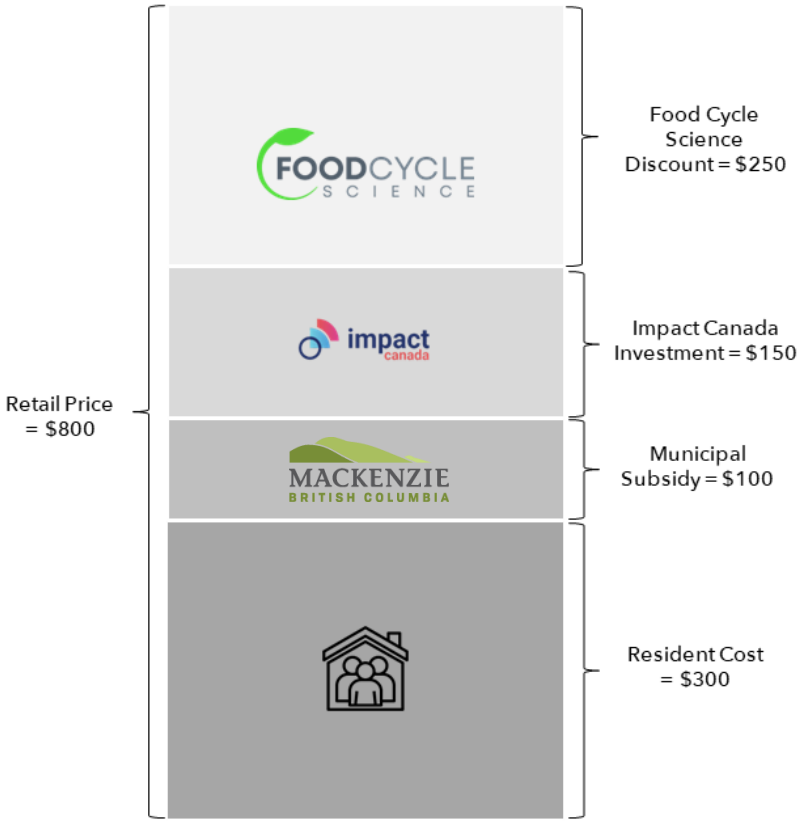
Press Start. In 8 hours or less, your food waste will be transformed into a nutrient rich soil amendment that can integrated back into your soil. The cycle runs quietly and with no odours or GHG emissions.

FoodCycler Funded Pilot Program – Subsidy Model

FoodCycler FC-30



FoodCycler Eco 5



FoodCycler Funded Pilot Program

Recommendation and Details

Based on the demographics and current waste management system in place at the District of Mackenzie, Food Cycle Science is recommending a pilot program involving 100 households.

The funded pilot program is based on a cost subsidy model where Food Cycle Science provides an initial discount, we contribute an investment from AAFC/Impact Canada, the District of Mackenzie provides a subsidy, and the resident provides the remaining contribution. The purpose of this model is to make this technology accessible to more Canadians at an affordable price.

The total investment from Impact Canada for a 100 household pilot would amount to **$10,000.00**[1]. The funding period for Impact Canada ends in May 2023 or until all funding has been fully allocated, whichever comes sooner.

Through this partnership-based program, the **municipal investment for District of Mackenzie is $100.00 per household**, regardless of which device is selected. Residents will then have the option to choose the FoodCycler™ model that best suits their household and budget.

Each FoodCycler™ is estimated to divert at least 2 tonnes of food over its expected lifetime. Based on average market rates of $100 per tonne of waste (fully burdened), 100 households participating would divert 200 tonnes of food waste and save the municipality an estimated **$20,000.00** in costs.

Total Invoiced Amount

	Price	Quantity	Total
FoodCycler FC-30 Municipal Rate	$250	50	$12,500
FoodCycler Eco 5 Municipal Rate	$400	50	$20,000
Shipping Estimate			$1,500
Total Invoice Amount			**$34,000**

Plus applicable taxes.

Net Municipal Cost:

	Price	Quantity	Total
Total Invoice Amount			$34,000
Less Resident Resale: FC-30	$150	50	$-7,500
Less Resident Resale: Eco 5	$300	50	$-15,000
Net Municipal Cost			**$11,500**

Plus applicable taxes.

Volume Discount: Orders of 500 units or more will be eligible to receive an additional $50.00 per unit discount on the FoodCycler Eco 5. The Municipality shall maintain a minimum of $100.00 per household subsidy, thus passing on these savings directly to residents, reducing the resident contribution on the Eco 5 to $250.00.

[1] Based on an estimated 50/50 split between FC-30 and Eco 5s. Will vary depending on the quantity of FoodCyclers purchased and the model ultimately selected by residents.

Purchase and Program Terms

Confirmation Deadline: Confirmation of order (Council resolution and/or signed partnership agreement) to be received no later than June 30, 2023.

Price Guarantee: Food Cycle Science will honour these rates on subsequent orders of 100 units or more, placed between June 1, 2023 and June 1, 2024.

Shipping: Shipping estimates to your location may range from $1,100.00 – $1,900.00 and the $1,500.00 quoted is an estimated average based on today's shipping rates. The Municipality may choose the shipping option that best suits their budget and needs. The higher cost shipping options will generally provide superior shipping accuracy.

FoodCycler Model Selection: During a registration period, residents will be given the option to indicate their preferred FoodCycler model. The total allotment of each FoodCycler model can be either predetermined or determined by resident selection.

Payment Terms: Payment is 100% due upon receipt of goods.

Accessories: Additional filters and other accessories may be purchased from FoodCycler at wholesale rates for resale to residents under the pilot program with no additional freight cost provided they are included in the initial order.

- **RF-35 Replacement Filter Pack (Refillable)**: Includes 2 refillable filter cartridges with carbon included, good for 1 filter change. One-time purchase only to convert to the refillable system. May be purchased at a price of $22.12 + tax in increments of 18.
- **RC-35 Carbon Filter Packs**: Includes 8 carbon packets, good for 4 filter changes. Compatible only with RF-35 refillable filter system. May be purchased at a price of $50.00 + tax in increments of 9.
- **RC-104 Carbon Filter Packs**: Includes 4 carbon packets, good for 4 filter changes. Compatible only with the Eco 5 refillable filter system. May be purchased at a price of $50.00 + tax in increments of 9.
- **BK-30 Spare Buckets:** May be purchased at a price of $50.00 + tax in increments of 6.
- **BK-100 Spare Buckets for Eco 5:** May be purchased at a price of $80.00 + tax in increments of 4.
- **RF-30 Replacement Filter Pack**: Includes 2 disposable filter cartridges with carbon included, good for 1 filter change. May be purchased at a price of $22.12 + tax and must be purchased in increments of 20.

Warranty: 1-year standard manufacturer's warranty starting on date of delivery of all FoodCycler units to the District of Mackenzie. We will repair or replace any defects during that time. Extended warranties may be purchased at additional cost of $25.00 per year for up to 5 years.
Buyback Guarantee: Food Cycle Science will buy back any unsold units after a period of 1 year from the delivery date. All units must be in new and unopened condition. The municipality is responsible for return shipping to our warehouse in Ottawa, ON plus a $25.00/unit restocking fee.

Marketing and Promotion: The District of Mackenzie and Food Cycle Science mutually grant permission to use the name and/or logo or any other identifying marks for purposes of marketing, sales, case studies, public relations materials, and other communications solely to recognize the partnership between Food Cycle Science and the District of Mackenzie. The District of Mackenzie staff may be asked to provide a quote / video testimonial regarding the program.

Surveys / Tracking:

- The trial / survey period will be for 12 weeks starting on or before August 31, 2023.
- Residents will be asked to track weekly usage of the FoodCycler during each week of the trial. Tracking sheets will be provided as part of a Resident Package prepared by Food Cycle Science.
- At the end of the 12 weeks, residents must report their usage and answer a number of survey questions. Survey is to be provided by Food Cycle Science and approved by the District of Mackenzie.
- The survey is to be administered either by the District of Mackenzie or by Food Cycle Science, by request and with permission. All survey results are to be shared between the District of Mackenzie and Food Cycle Science. The District of Mackenzie shall ensure all personal information of participants is removed from any data ahead of sharing with Food Cycle Science.
- The District of Mackenzie may administer additional touchpoints with participants at their discretion.

Customer Support / Replacement Units:

- Food Cycle Science has a dedicated municipal support team that is available to assist residents directly with any troubleshooting, repairs, or replacement when required.
- Food Cycle Science may provide a small number of spare FoodCycler units with the initial order to be used for replacements if/when required. The District of Mackenzie would be tasked with assisting residents with replacements where necessary. Replacement units will be supplied at no cost to the municipality and may represent up to 2% of the total initial order. This represents our anticipated/accepted failure rates.
    - Any unused spare units remaining after the warranty period shall be donated to a local school, with priority given to schools participating in EcoSchools Canada programs.

Backyard Composting Pilot Program:

- If the Town of Deep River chooses to operate a backyard composting pilot program in addition to the FoodCycler pilot program, Food Cycle Science will offer to provide data collection support for the backyard composting program. In return, Food Cycle Science is requesting that the Town of Deep River shares the data from the backyard composting program with Food Cycle Science.

Summary and Acceptance of Terms

We respectfully ask that you confirm your participation no later than June 30, 2023 in order to respect the timeline of the Impact Canada Food Waste Reduction Challenge.

Summary of pilot program costs:

Program Recommendation	Invoice Amount	→	Net Municipal Cost
100 Households	**$34,000**	→	**$11,500**

Terms Accepted and Agreed by District of Mackenzie:

_____		_____	
Name / Title		Name / Title	
_____	_____	_____	_____
Signature	Date	Signature	Date

Food Cycle Science looks forward to working with the District of Mackenzie to reduce the amount of food waste going to landfill in a manner that is convenient and cost-effective.

Sincerely,

Jacob Hanlon
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