

Tackling Food Waste in a Small Rural Community



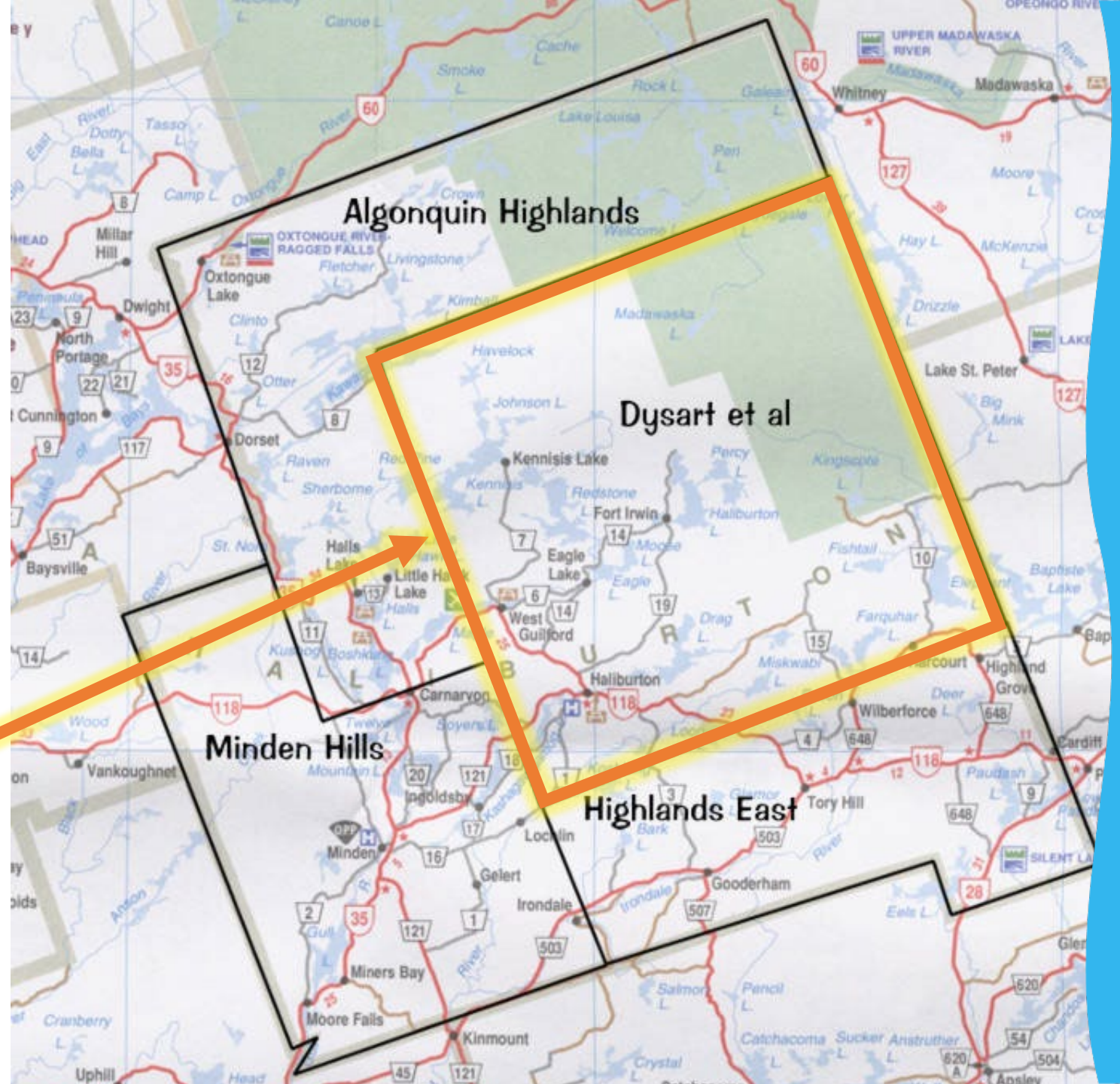
Municipality of
Dysart et al



About Dysart et al

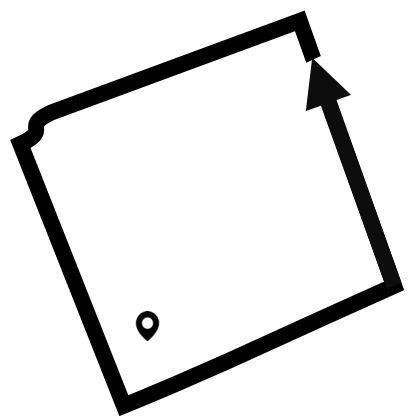
Haliburton County

also known as
Haliburton Highlands



About Dysart et al

Official Name:
The United Townships of
Dysart, Dudley, Harcourt,
Guilford, Harburn, Bruton,
Havelock, Eyre and Clyde



1,474.22 km²

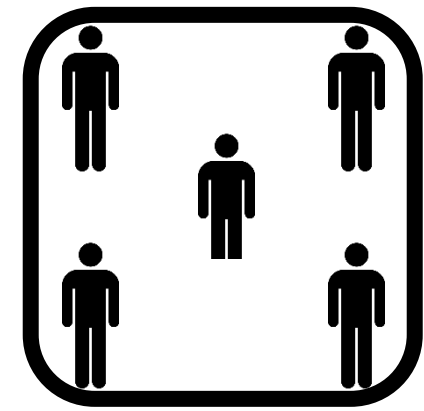
Toronto is 631.1 km²



7,298

Households
3,957 households are seasonal

Toronto has 1,253,238 private dwellings



4.9 people per km²

Toronto has 4,427.8 people per km²

Waste Management in Dysart



No curbside collection



5 Landfills/Depots

No weigh scales at any site

No electricity:

Harcourt, West Bay Landfills

No cellular reception:

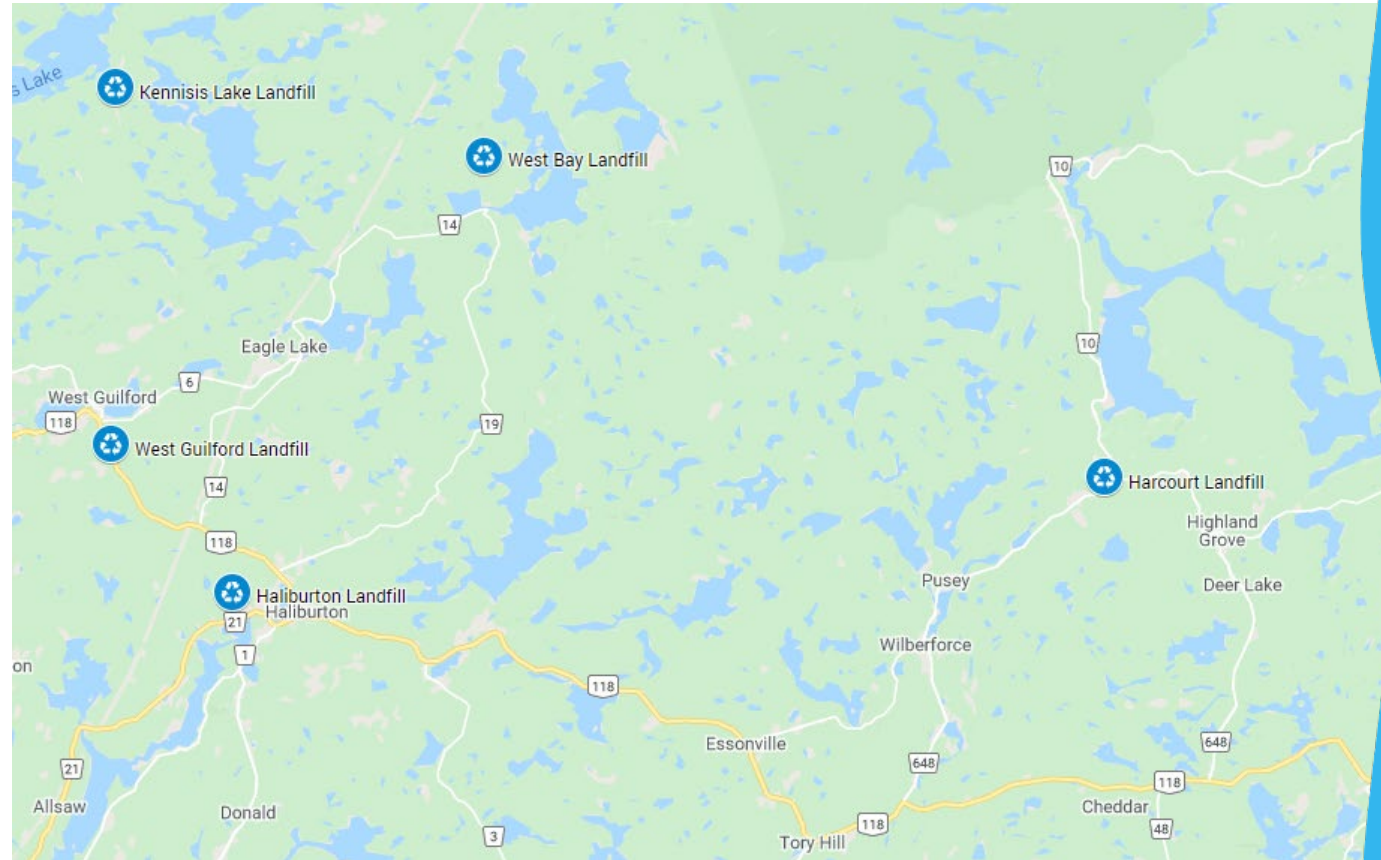
West Bay Landfill

Completely transferring garbage:

Haliburton, Kennisis Lake,
West Guilford Landfills

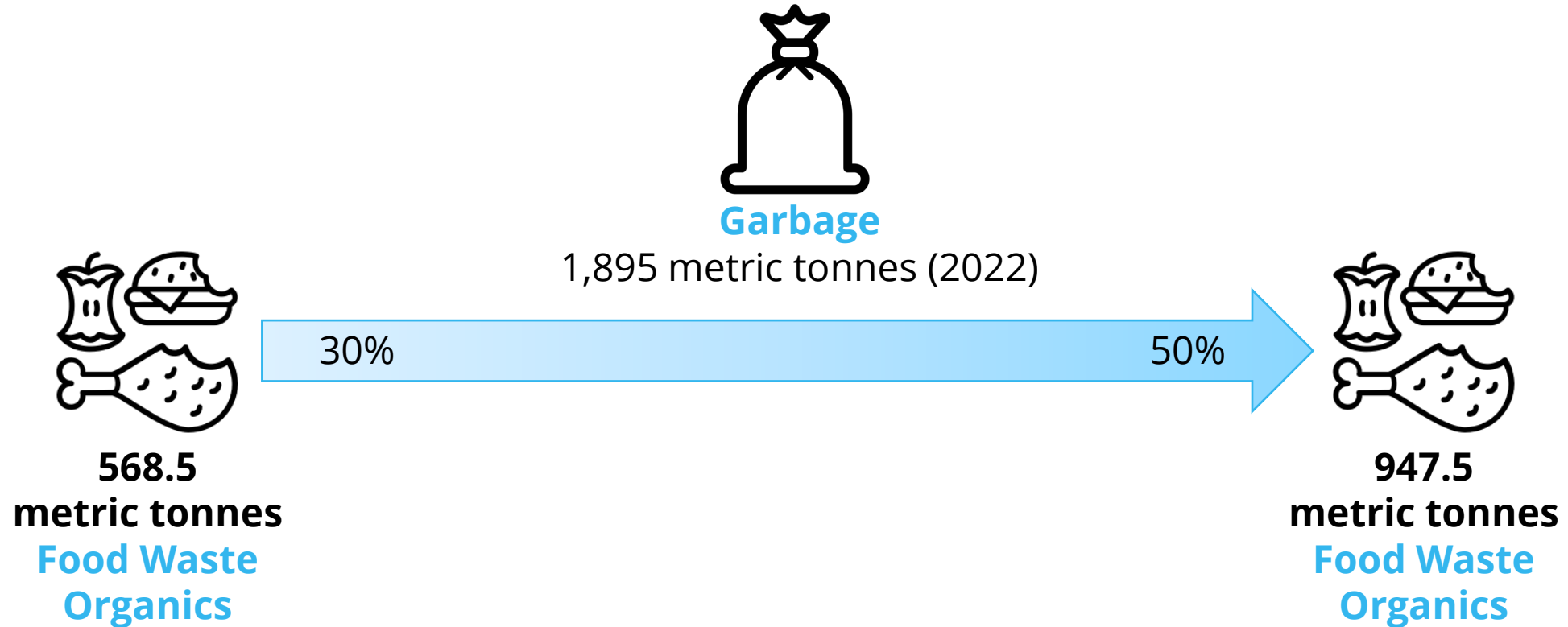
Landfilling garbage on site:

Harcourt, West Bay Landfills



Food Waste

What's in the garbage?



Food Waste Diversion Programs





Culprit in series of vehicle break-ins in Haliburton is a bear: OPP



A bear damaged a number of unlocked vehicles in Haliburton. (Handout)

SHARE: [Tweet](#) [Reddit](#)

TEXT: [+](#) [-](#)

Bryann Aguilar, CP24.com
Published Wednesday, June 24, 2020 8:49PM EDT

A bear is believed to be responsible for several vehicle break-ins in Haliburton, Ontario Provincial Police say.

Haliburton Highlands OPP were called to Kennaway Road and Dudley Road just before 10 p.m. on Tuesday.

Following an investigation, the OPP said they found a bear "with an interesting talent of opening unlocked car doors."

The bear opened more than 10 vehicles over the previous nights, the OPP said, adding that many of the vehicles were significantly damaged.

"Police are requesting residents keep car doors locked and make certain there is nothing inside their vehicles that could be food for a hungry bear," the OPP said in a news release.

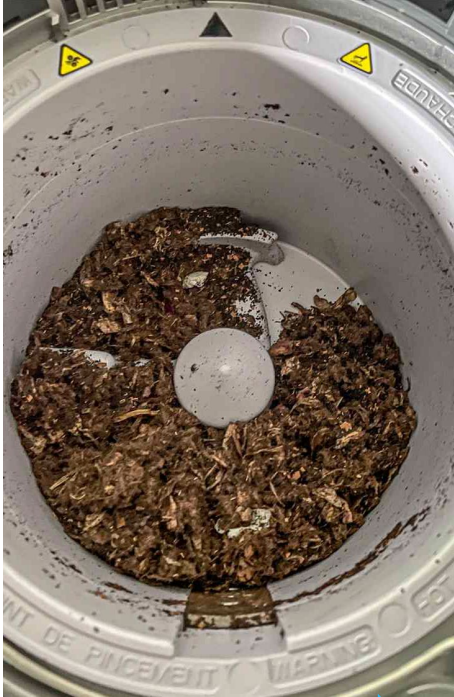
FoodCycler Pilot Project

Delegation to Dysart Council

October 26, 2021



About the FoodCycler



Cycle time of 4 to 8 hours

Staff Report

November 9, 2021



Municipality of Dysart et al
Committee of the Whole
STAFF REPORT

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705-457-1740
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To: Members of the Committee of the Whole
From: John Watson, Environmental Manager
Date: 09 Nov 2021
Re: FoodCycler Pilot Project

Recommendation:

Be it resolved that Committee of the Whole recommends that Council:

OPTION 1: allocate and approve \$10,000 net to the 2022 Environmental Management operating budget for a FoodCycler pilot project to take place in spring 2022, subject to funding from Impact Canada

or

OPTION 2: participate in a FoodCycler pilot project to take place in spring 2022 with no subsidy from the Municipality.

Background Information:

At the October 26, 2021 meeting of Dysart Council, representatives from FoodCycle Science presented a delegation regarding their FoodCycler composting device and a potential pilot project.

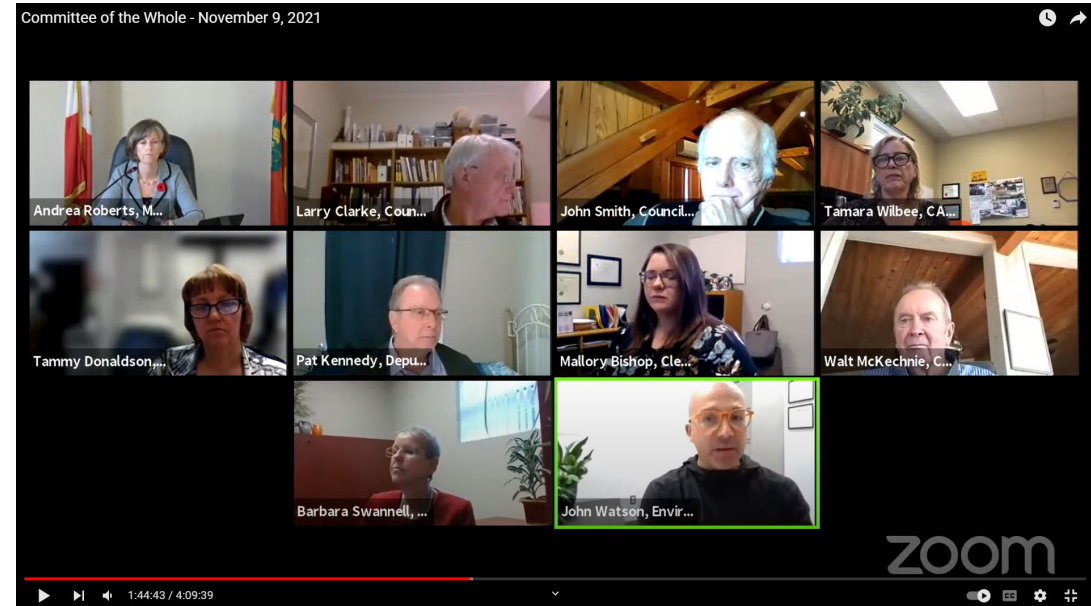
Council directed staff to return to the November 9, 2021 Committee of the Whole with a report on the cost and resources to participate in this initiative.

About FoodCycle Science and FoodCycler

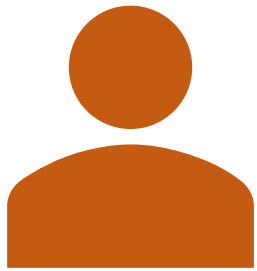
Founded in 2011, FoodCycle Science is a Canadian company that produces residential and commercial devices that use electricity to quickly compost food waste into a finished compost product.

FoodCycle Science's residential device is called FoodCycler. It is approximately 32 cm x 27.94 cm x 36.07 cm (approximately the size of a breadmaking machine). It can hold up to 1 kg (2.5 litres) of food waste. Using electricity, the device dries and grinds food waste into a dry, odourless, nutrient-dense by-product that is significantly reduced in weight and volume from its unprocessed state. The end product is free from bacteria, and weed seeds and food-borne pathogens are eliminated in the process. Each "cycle" of composting takes approximately four to eight hours. The FoodCycler uses 0.8 kWh of electricity (approximately 10 cents per composting cycle).

The FoodCycler is available for online purchase from Vitamix at a cost of \$500.00 plus applicable taxes.



Council Approval



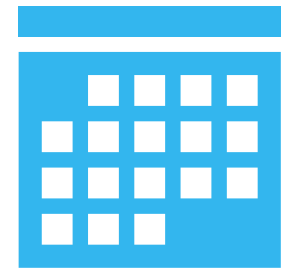
100
participants



FoodCycler retail cost	\$500
Impact Canada subsidy	- \$250
Dysart et al subsidy	- \$100

**Cost to Dysart
participant**

**\$150.00
plus HST**



12
week pilot

April 10 to
July 2, 2022

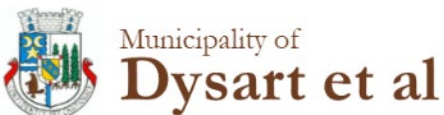
Pilot Project Initial Promotion

Website
dysartetal.ca/foodcycler

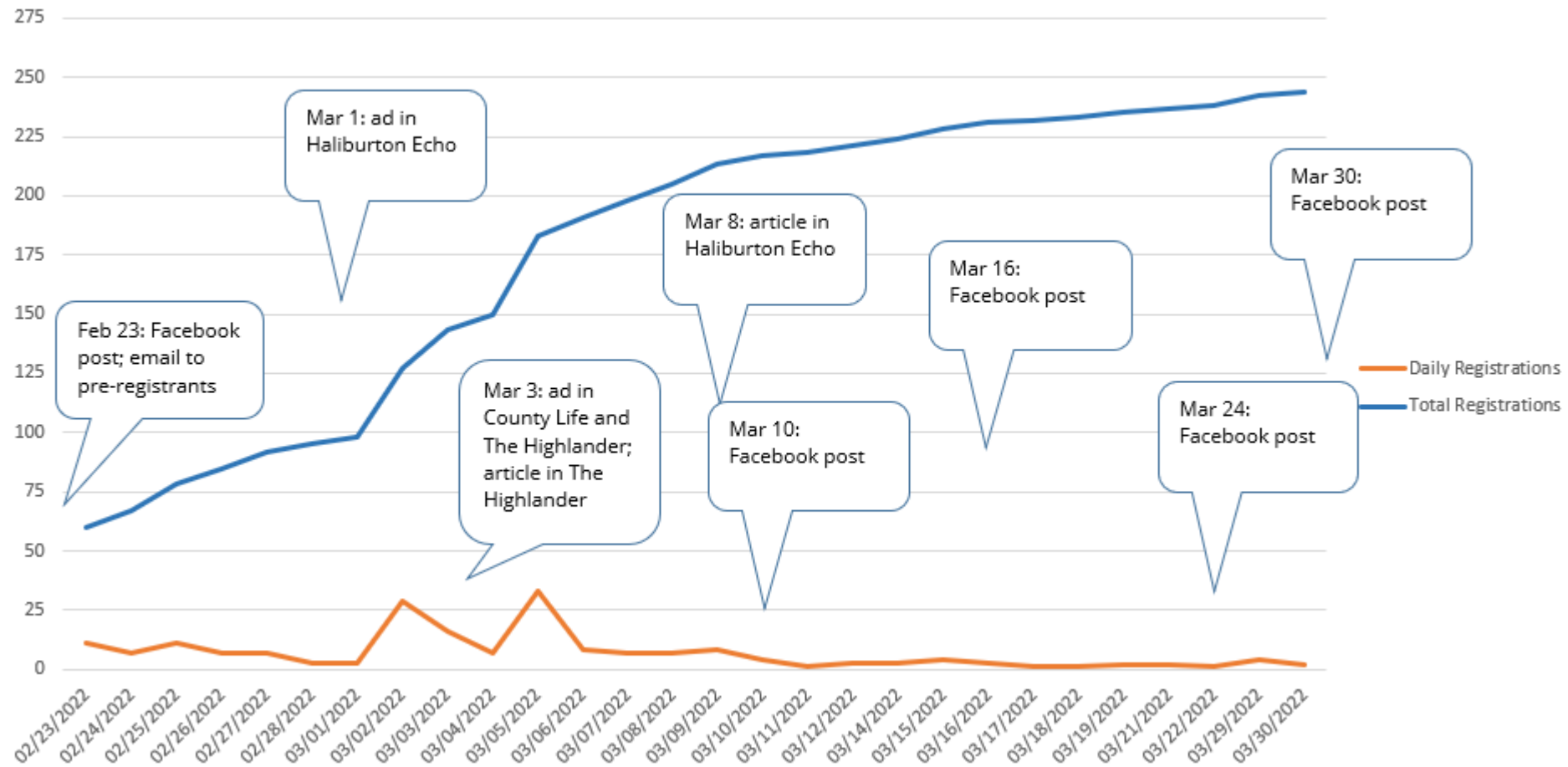
Media
Release

Newspaper
Advertisement

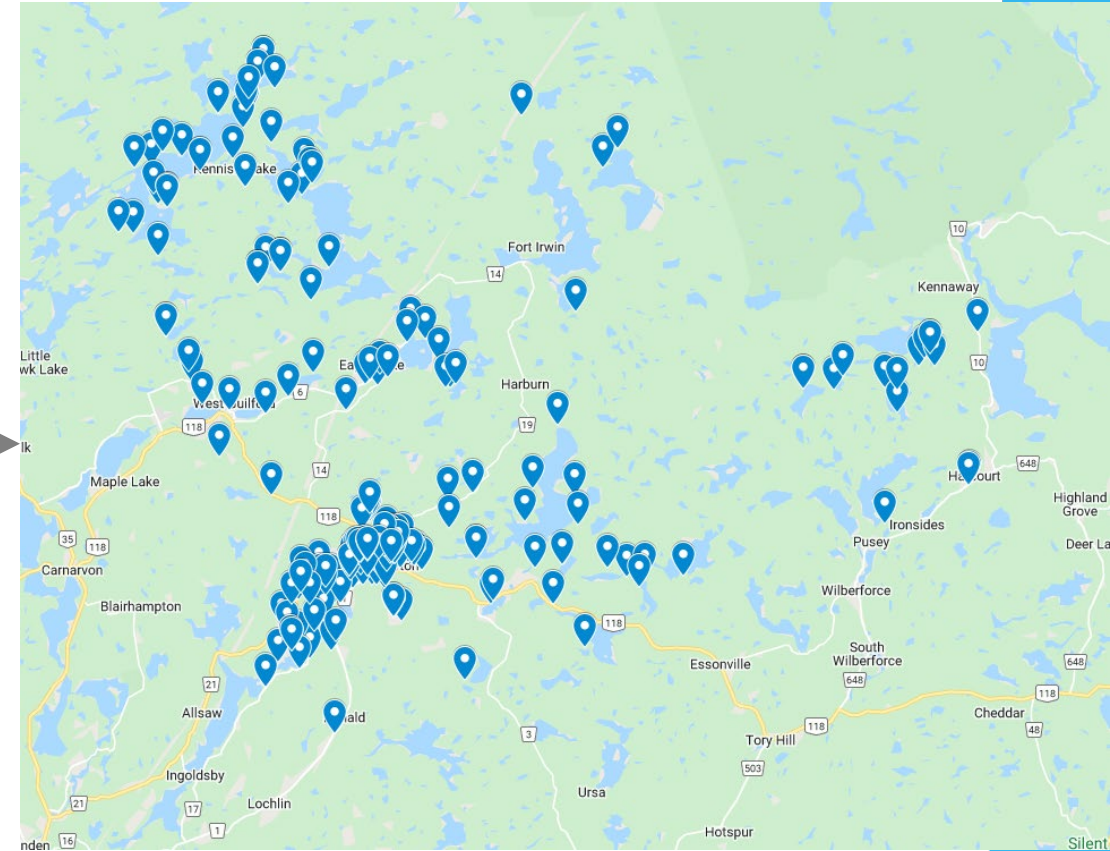
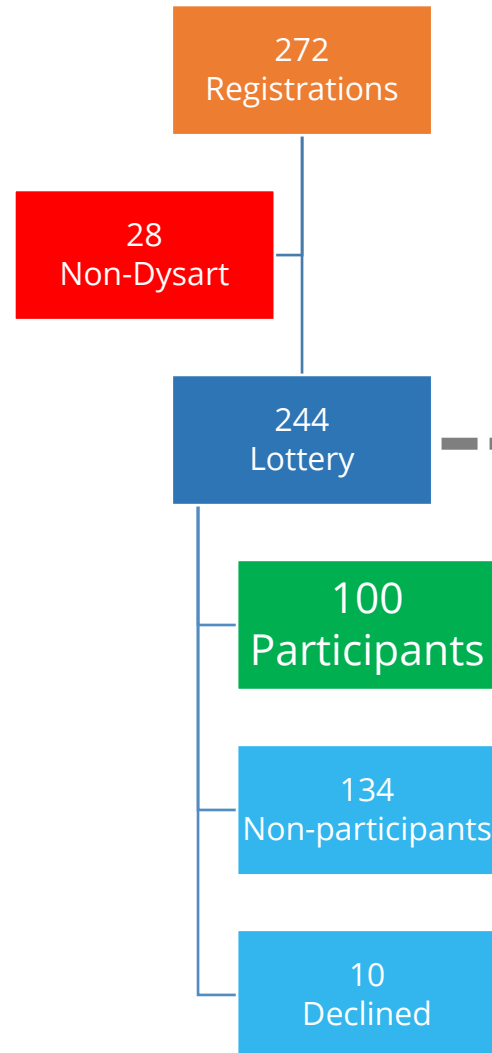
Social Media



Pilot Project Timeline of Registrants

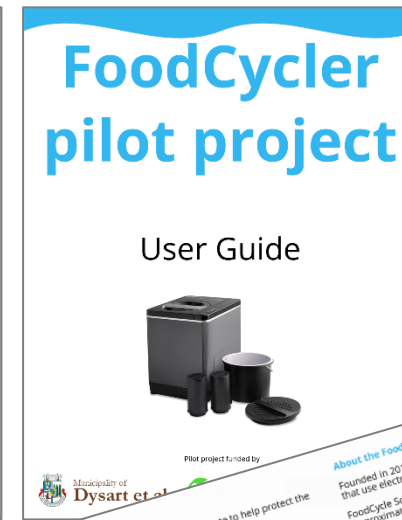
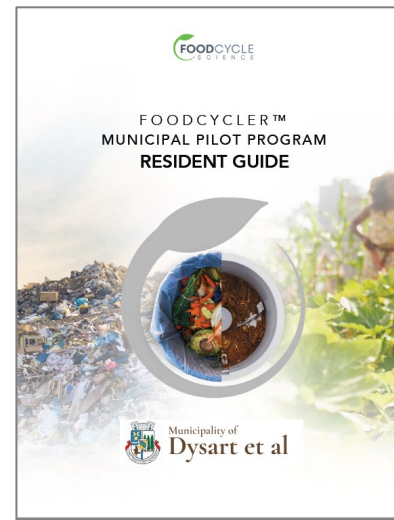


Pilot Project Registrants & Participants



Pilot Project Participant Pickup

- Pay for FoodCycler using debit card or credit card
- Fill in *Commitment to Participate*
- Complete online survey using iPad
- Participant takes:
 - FoodCycler
 - *User Guide*
 - *Resident Guide*



Pilot Project Weekly Logs

- Emailed all participants each Saturday of the 12-week pilot project with a weblink to complete a SurveyMonkey
 - 4 questions

Dysart's FoodCycler pilot project - weekly log 4 due

 John Watson
To John Watson
Sat 2022-05-07 7:36 PM



Four weeks complete – time to fill in your weekly log

We've almost finished the fourth week of our FoodCycler pilot project (May 1 to 7).

Here's a link to complete the third weekly online log <https://www.surveymonkey.com/r/7K2X8GT>. Please complete this log even if you weren't able to use the FoodCycler this week. And if you're running a cycle this evening (Saturday), be sure to count that in this week's log.

On Tuesday, May 10, 2022, a [report on the FoodCycler pilot project](#) will be presented to Dysart's Committee of the Whole. This report summarizes some of the pilot results so far.

Now that we're having nicer weather, have you started to use the soil amendment created by the FoodCycler in your garden? Feel free to send me any pictures of your compost in use.

Cheers!

John Watson
Environmental Manager
 Municipality of
Dysart et al
705-457-1740 x 659
jwatson@dysartetel.ca
www.dysartetel.ca


Download the **Haliburton County Waste Wizard** mobile app!
 Download on the
App Store  GET IT ON
Google Play

FoodCycler pilot project - Weekly Log 4

Complete the weekly log

May 1 to 7, 2022 was the fourth official week of Dysart's FoodCycler pilot project. Tell us how you used the FoodCycler. Each time you use the FoodCycler is referred to as a "cycle."

* 1. How many cycles of the FoodCycler did you run during the fourth week (May 1 to 7) of the pilot?

- | | |
|-------------------------|--|
| <input type="radio"/> 1 | <input type="radio"/> 7 |
| <input type="radio"/> 2 | <input type="radio"/> 0 - I didn't have enough food waste to warrant running a cycle |
| <input type="radio"/> 3 | <input type="radio"/> 0 - I forgot to run a cycle |
| <input type="radio"/> 4 | <input type="radio"/> 0 - I was away |
| <input type="radio"/> 5 | <input type="radio"/> 0 - I couldn't because a mechanical or electrical issue prevented me |
| <input type="radio"/> 6 | |

* 2. During this week of using the FoodCycler, did you experience any issues?

- No issues
- Noise issues

Pilot Project Surveys

- Conducted three surveys
 - Initial pickup (done in-person using an iPad)
 - 18 questions
 - Week 6 (half-way)
 - 16 questions
 - Week 12 (pilot completion)
 - 20 questions

* 5. After six weeks, where in your home are you storing your FoodCycler bucket?

- Kitchen - on the counter
- Kitchen - in a drawer or cabinet
- Inside the FoodCycler machine
- Other (please specify)

* 6. Is the FoodCycler large enough for the quantity of daily food waste you generate?


- Yes - right size
- No - would want 1.5 times larger (3 L capacity)
- No - would want 2 times larger (4 L capacity)
- No - would want 2.5 times larger (5 L capacity)

* 7. After six weeks, are you running your FoodCycler more or less than you anticipated each week?

- Running it more than I thought I would
- Running it less than I thought I would
- Running it exactly as I thought I would

Staff Reports

April 12, May 10, June 14, August 9, 2022



Municipality of Dysart et al
Committee of the Whole
STAFF REPORT

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To: Members of the Committee of the Whole
From: John Watson, Environmental Manager
Date: 12 Apr 2022
Re: FoodCycler Pilot Project - Update 1

Recommendation:
 Be it resolved that Committee of the Whole receive this report for information about the FoodCycler pilot project.

Background Information:
 At the October 26, 2021 meeting of Dysart Council, representatives from FoodCycle Science presented a delegation regarding their FoodCycler composting device and a potential pilot project.

Staff to return to the November 9, 2021 Committee of the Whole with a report on the cost and resources to participate in this initiative. Subsequently, Council approved:

"To allocate and approve \$10,000 net to the 2022 Environmental Management operating budget for a FoodCycler pilot project to take place in spring 2022, subject to funding from Impact Canada."

While background planning was ongoing, after the passing of Dysart's 2022 budget on February 22, 2022, Dysart staff began the public aspects of the pilot project.

As a reminder, the cost per unit of the FoodCycler pilot project is:

Retail cost	\$500.00
Impact Canada subsidy	-\$250.00
Dysart et al subsidy	-\$100.00
Cost to Dysart participant	\$150.00 plus HST


Registrations

The registration process opened on February 23, 2022. It closed March 31, 2022.

272 registrations were received.

28 were from households outside of Dysart, and so were excluded from the registration process (they were notified to this affect).

Following is some information about the 244 Dysart registrants:



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To: Members of the Committee of the Whole
From: John Watson, Environmental Manager
Date: 10 May 2022
Re: FoodCycler Pilot Project - Update 2

Recommendation:
 Be it resolved that Committee of the Whole receive this report for information about the FoodCycler pilot project;

And further that Committee of the Whole recommends Council direct staff to proceed with purchasing and re-selling 36 FoodCyclers to the original 144 pilot project registrants at a cost of \$250 plus \$15.49 administrative fee plus HST.


Background Information:
Pilot Project

Dysart's FoodCycler twelve-week pilot project started on April 10, 2022, and ends on July 2, 2022.

Survey 1 of Participants

One hundred Dysart households are participating in the pilot project. An initial online survey of the 100 participants highlighted the following information:

Household Type



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To: Members of the Committee of the Whole
From: John Watson, Environmental Manager
Date: 14 Jun 2022
Re: FoodCycler Pilot Project - Update 3

Recommendation:
 Be it resolved that Committee of the Whole receive this report for information about the FoodCycler pilot project.


Background Information:
Pilot Project

Dysart's FoodCycler twelve-week pilot project started on April 10, 2022, and ends on July 2, 2022.

Online Weekly Logs

Each week of the pilot, the 100 participants are emailed an online weekly log to complete. The fourth to eighth online weekly logs revealed the following information:

	Week 4 ending May 7	Week 5 ending May 14	Week 6 ending May 21	Week 7 ending May 28	Week 8 ending June 4
How many cycles of the FoodCycler did you run during the week?	21.85% three times	32.32% three times	23.81% four times	25% three times	20.99% three times
	24.74% two times	22.22% two times	11.9% three times	27.08% two times	19.75% two times
			23.81% two times		



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STAFF REPORT

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To: Members of the Committee of the Whole
From: John Watson, Environmental Manager
Date: 09 Aug 2022
Re: FoodCycler Pilot Project - Update 4

Recommendation:
 Be it resolved that Committee of the Whole receive this report for information about the FoodCycler pilot project.

Background Information:
Pilot Project

Dysart's FoodCycler twelve-week pilot project started on April 10, 2022, and ended on July 2, 2022.

Online Weekly Logs

Each week of the pilot, the 100 participants are emailed an online weekly log to complete. The ninth to twelfth online weekly logs revealed the following information:

	Week 9 ending June 11, 2022	Week 10 ending June 18, 2022	Week 11 ending June 25, 2022	Week 12 ending July 2, 2022
How many cycles of the FoodCycler did you run during the week?	21.88% two times	23.96% two times	31.0% three times	24.21% three times
	18.75% three times	15.83% four times	17.0% two times	18.95% two times
What did you do with the composted material (soil amendment) created by the FoodCycler?	47.92% added to garden	44.79% added to garden	47% added to garden	50.53% added to garden
	30.21% nothing yet	31.25% nothing yet	33% nothing yet	27.37% nothing yet

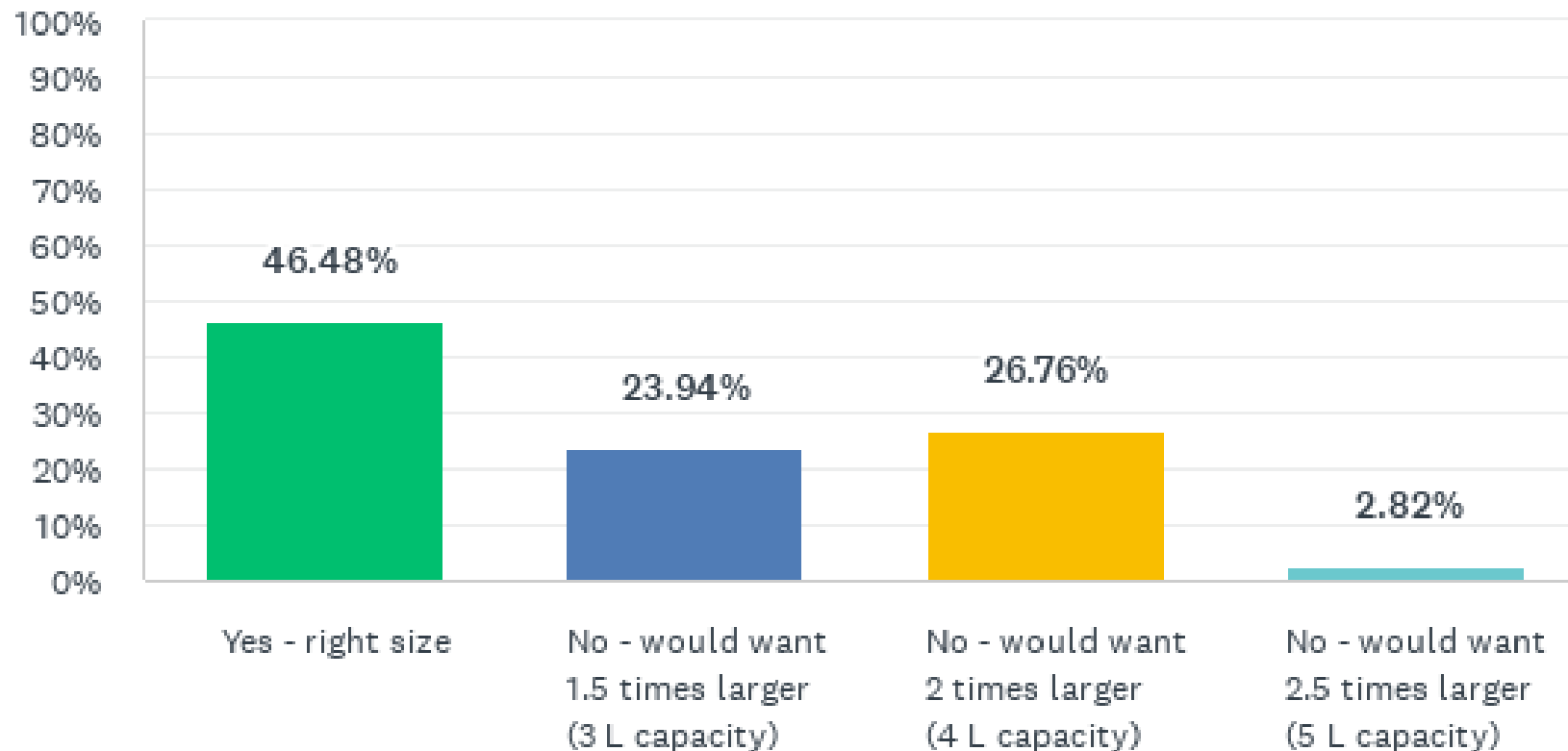
Survey 3

Pilot Project Weekly Log Results

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6 ending May 21	Week 7	Week 8	Week 9	Week 10 ending June 18	Week 11	Week 12
4 times						23.81%				15.63%		
3 times	27.55%	24%	21.35%	21.65%	32.32%		25%	25%	18.75%		31.0%	24.21%
2 times	16.33%	19%	21.35%	24.74%	22.22%	23.81%	27.08%	27.08%	21.88%	23.96%	17.0%	18.95%

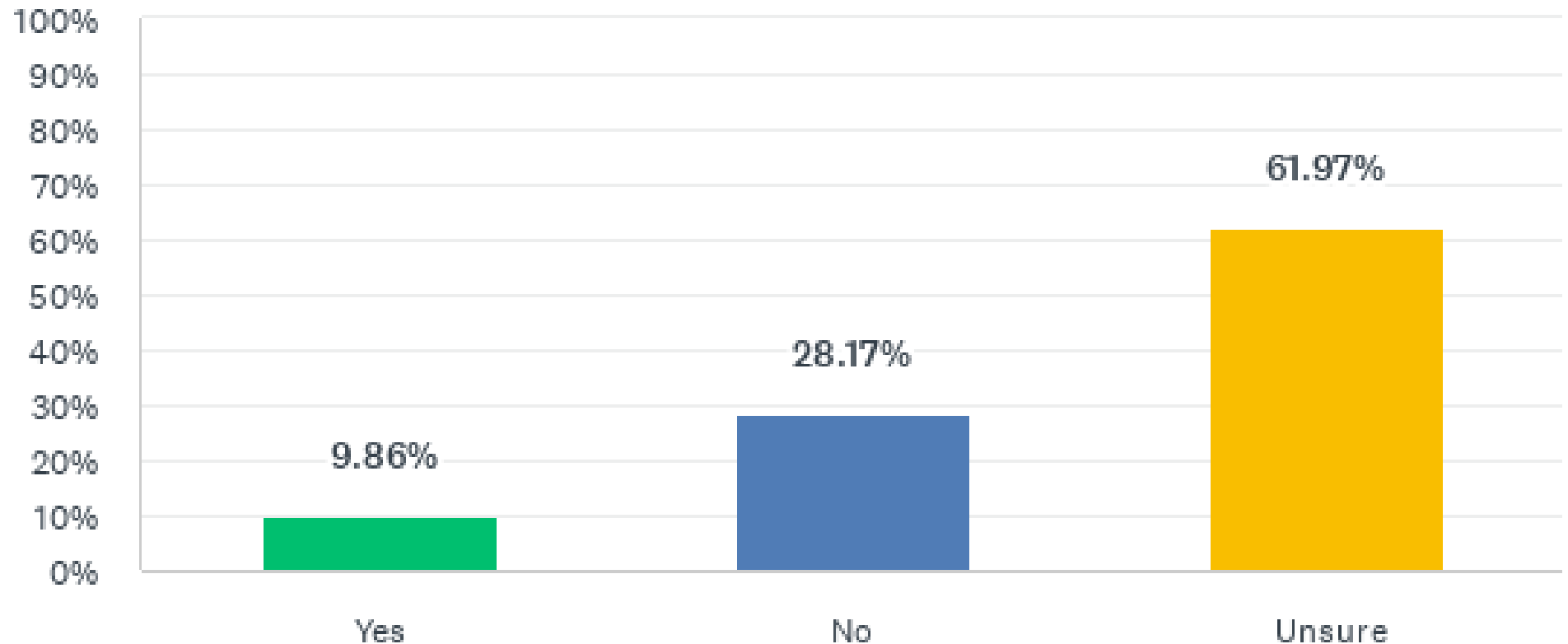
Pilot Project Survey 3 Results

Is the FoodCycler large enough for the quantity of daily food waste you generate?



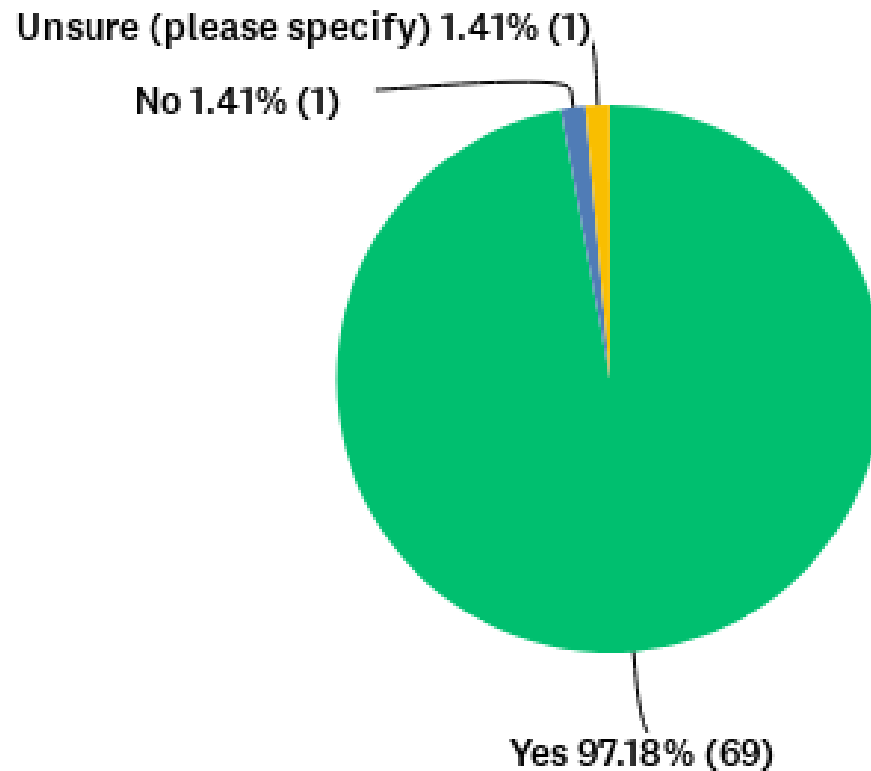
Pilot Project Survey 3 Results

After twelve weeks, did you experience increased electricity costs during the time you used the FoodCycler?



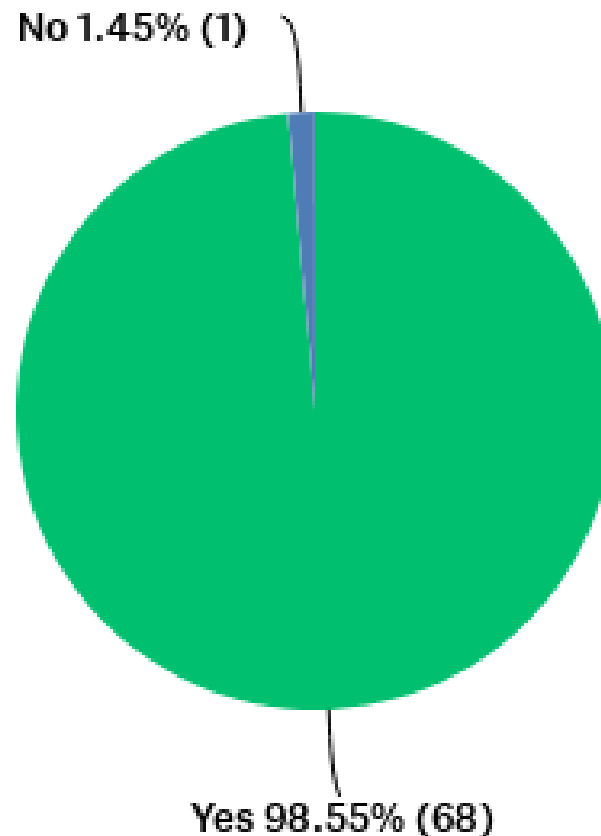
Pilot Project Survey 3 Results

The 12-week pilot project has ended. Do you anticipate you'll continue to use the FoodCycler after the pilot project is over?



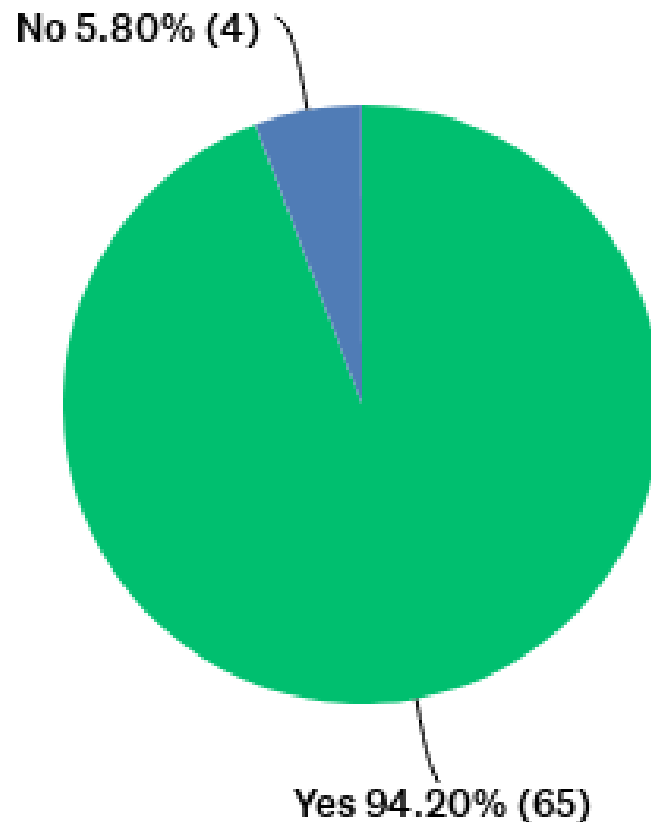
Pilot Project Survey 3 Results

Should Dysart continue to offer the FoodCycler as a way to manage household food waste?



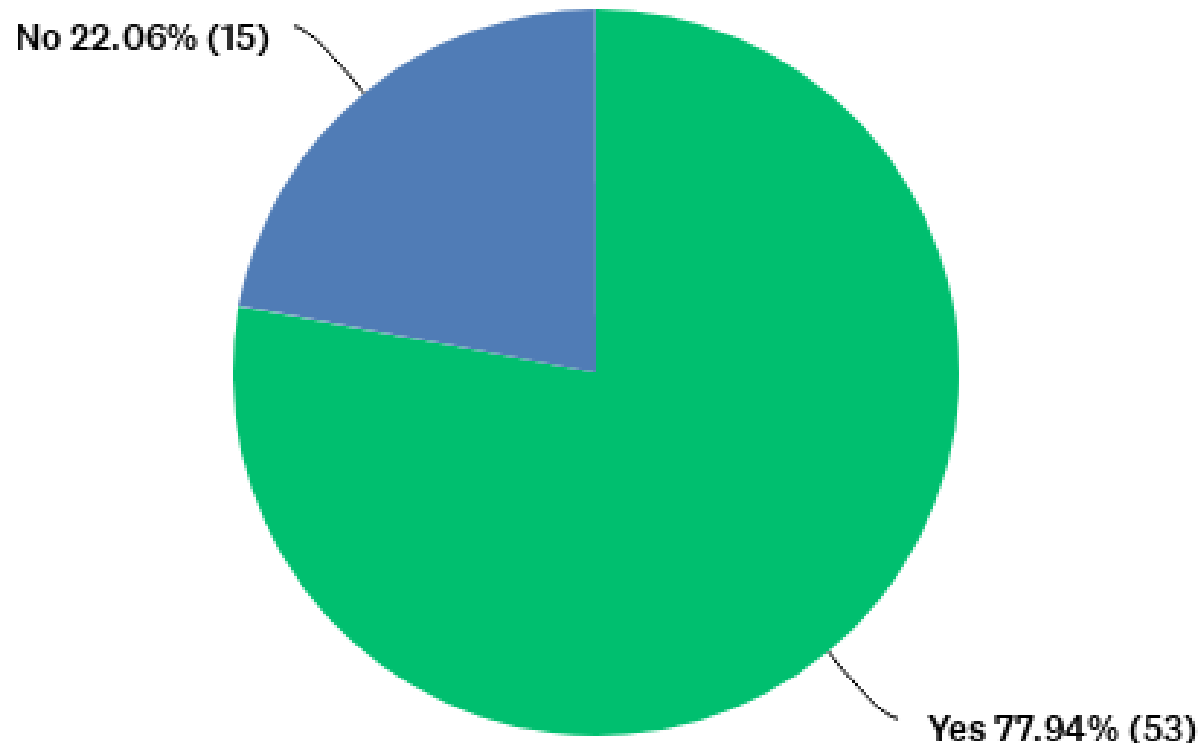
Pilot Project Survey 3 Results

Should Dysart financially subsidize the purchase price of the FoodCycler for any additional Dysart household that wants to purchase one?



Pilot Project Survey 3 Results

If federal/provincial funding was available, would you support Dysart providing a FoodCycler to every Dysart household at no cost?



County-wide Project



Committee of the Whole Staff Report

To: Chair and Members of the Committee of the Whole
Prepared By: Korey McKay, Climate Change Coordinator
Date: January 11, 2023
Report Number: PLN-02-2023
Subject: County-Wide FoodCycler Program Options

Recommendation:

BE IT RESOLVED that Haliburton County Committee of the Whole receive the January 11, 2023 report entitled County-Wide FoodCycler Program Options;
And that it be recommended to Haliburton County Council that \$120,000 be allocated to the 2023 climate change budget and be approved prior to the passage of the 2023 budget for an expanded FoodCycler program;
And that it be recommended that Haliburton County Council authorize the Warden and Clerk to sign an agreement between the County of Haliburton and Food Cycle Science for option "_____".

Background:

In 2020, Haliburton County Council and each local council approved a Corporate Climate Change Mitigation Plan. 12,230tCO₂e (tonnes of carbon dioxide equivalent) or 77% of our collective annual corporate greenhouse gas emissions are a result of decomposing waste in our landfill sites. This is equivalent to the greenhouse gas emissions from 3,747 passenger vehicles. A strategy within the plan includes exploring potential options for organics diversion for food waste, which would have the largest possible impact on reducing greenhouse gas emissions from our municipal operations.

Many landfill sites in the County are at or nearing capacity. In one municipality, waste is transported hundreds of kilometers to be disposed of. Managing waste results in substantial costs for our local municipalities. According to Dysart's recent waste composition study, 48% of local garbage is organics (18% unavoidable food waste, 13% leftover food, 11% tissue/paper towel, 6% untouched food). Diverting organic waste can reduce the weight and volume of garbage by nearly half and significantly reduce odours associated with garbage, therefore reducing trips by residents to landfill sites and the associated GHG emissions from transportation.

Food Cycle Science (FCS) is a Canadian company that produces devices about the size of a breadmaking machine that use electricity to quickly compost food waste into a dry and odourless compost product. The FoodCycler FC-30 and Maestro devices can process 2.5L and 5L (respectively) of food waste per cycle and convert it into a nutrient-rich soil amendment that is significantly reduced in weight and volume (up to 90%) from its unprocessed state. This by-product can be added to plants and gardens. Power consumption is approximately 0.8kWh for the FC-50 and 1.3kWh for the Maestro and the cycle takes less than 8 hours to complete (overnight). The devices are easy to clean and easy to operate, with quiet and odourless operation.

A FoodCycler offers >95% reduction in CO₂e compared to sending food waste to landfill. Organic waste that decomposes in an oxygen-free environment such as a landfill releases methane. Methane is a greenhouse gas that is up to 34 times more powerful than carbon dioxide over a



Regular Council - 2nd Meeting of the Month Staff Report

To: Warden and Members of Haliburton County Council
Prepared By: Korey McKay, Climate Change Coordinator
Date: October 25, 2023
Report Number: PLN-58-2023
Subject: FoodCycler Pilot Program Expansion

Recommendation:

BE IT RESOLVED that Haliburton County Council receive staff report PLN-58-2023 entitled FoodCycler Pilot Program Expansion;
And that \$83,000 be allocated to the 2024 climate change budget and be approved prior to the passage of the 2024 budget for an expanded FoodCycler program.

Background:

In 2020, Haliburton County Council and each local council approved a Corporate Climate Change Mitigation Plan. 12,230 tCO₂e (tonnes of carbon dioxide equivalent) or 77% of our collective annual corporate greenhouse gas (GHG) emissions are a result of decomposing waste in our landfill sites. This is equivalent to the greenhouse gas emissions from 3,747 passenger vehicles. A strategy within the plan includes exploring potential options for organics diversion for food waste, which would have the largest possible impact on reducing GHG emissions from our municipal operations.

Many landfill sites in the County are at or nearing capacity. Managing waste results in substantial costs for our local municipalities. According to Dysart's 2023 three season waste composition study, 45.5% of local garbage is organics, including 20% unavoidable food waste, 10% leftover food, 9% tissue paper/paper towel, and 2% untouched food. Diverting organic waste can reduce the weight and volume of garbage by nearly half and significantly reduce odours associated with garbage, therefore reducing trips by residents to landfill sites and the associated GHG emissions from transportation.

The Township of Algonquin Highlands, the Municipality of Dysart et al, and the Township of Minden Hills each completed 100-unit pilot programs with the FC-30 units in 2021/2022. Each pilot program saw more than 100 households interested in participating and final program results indicated that the programs were very successful. Due to this success and high resident demand, earlier this year County Council approved a County-wide FoodCycler program involving 500 units with a \$150 per unit County subsidy.

Analysis:

The 500 units have been purchased by residents and distributed in the County. As word spreads locally between friends and neighbours about the program, the waitlist for residents interested in FoodCycler units is growing.

With approximately 830 total households in Haliburton County using FoodCycler units, as a community we currently have the third largest quantity of units distributed in all of Canada. The program is viewed as a success both locally and beyond our borders. The Township of Algonquin Highlands was the fourth ever community to trial a decentralized food waste management system by



I Taste Zero Waste

Food Waste Reduction Strategy



Municipality of
Dysart et al



FLEMING

Waste Resource Management -
Environmental



Municipality of
Dysart et al

U-Links and Municipality of Dysart et al Collaborative Research Project

Arsalan Asadpoori, Kanishk Chetan Amin, Katie Crosgrey, Manpreet Kaur, Arshjot Singh, Ullas Unnikrishnan Rugmini, and Nicole Zablocki

Sustainable Waste Management, Fleming College

Food Waste Reduction Strategy



CHECK - PLAN - PURCHASE

- Check your cupboards, fridge, freezer, and pantry before shopping
- Make a menu plan for the days that follow shopping
- Write a list of the food items that need to be purchased
- Stick to your list when shopping



Municipality of
Dysart et al



AVOID THROWING FOOD IN THE GARBAGE

- Regrow vegetables from leftovers (for example, regrow celery)
- Donate your surplus food items to a food bank or community kitchen
- Use a backyard composter or digester to compost unavoidable food waste



Municipality of
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USE YOUR LEFTOVERS

- Cook using food you already have at home
- Store leftovers in optimal conditions
- Revive leftovers into new recipes with a fresh ingredient-upgrade
- Pack leftovers for school and work lunches



Municipality of
Dysart et al



KNOW YOUR EXPIRY LABELS

- Almost all "expiry dates" on food are created by the producer and have nothing to do with actual food spoilage
- Most packaged food items can be consumed after their label date*
- Use your senses (smell, taste, sight) to determine if food is still edible

*Check public health guidelines to determine when food actually expires



Municipality of
Dysart et al



Municipality of
Dysart et al

Contact

Contact

John Watson

Environmental Manager

Municipality of Dysart et al

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www.dysartetal.ca



Dysart Waste



@dysartetal



@dysartetal