



BY DANIELLE THOM

Out of sight, out of mind: The City of Markham's F.O.G. Clogs Campaign

In 2019, the City of Markham implemented a pilot project to circumvent the problem of fats, oils and grease (F.O.G.) drain blockages before their citywide launch of the F.O.G. Clogs Campaign.

F.O.G. is one of the most persistent sanitary sewer problems in Canadian municipalities. The issue is quite straightforward: F.O.G. exists as a liquid at room temperature, but it solidifies as it hits the cold pipes of the sanitary sewer system. This state change causes blockages that accumulate, eventually leading to sewer backups and surcharging, which are harmful to the environment, human health, private property and city infrastructure.

Several municipalities have encouraged their residents to put F.O.G. in their green bins and garbage cans instead of down drains. However, the success of these educational campaigns has varied widely, as the hidden nature of residential disposal habits makes it challenging to measure behaviour changes accurately.

To gather the information needed to create the most efficient, economic campaign possible, the City of Markham compared the efficiency of four educational strategies in seven communities using a three-step evaluation method.

The first step in its unique evaluation method was pre-education monitoring. This step measured residential F.O.G. disposal habits before implementing any educational strategies, which created a baseline of both qualitative and quantitative results using four tools in each pilot community:

- 1. Resident Focus Groups** – Discuss knowledge of F.O.G. products, F.O.G. disposal habits, and barriers to proper F.O.G. disposal.
- 2. Online Resident Surveys** – Measure household knowledge of F.O.G. products and F.O.G. disposal habits.
- 3. Baseline Effluent Sampling** – Test for total oil and grease (T.O.G.) twice, using the average value as the baseline monitoring number.
- 4. Baseline Green Bin Waste Audits** – Weigh green bins and green carts in each community, and then subtract the weight of the bin or cart. Use this value as the baseline monitoring number.

After the completion of the pre-education monitoring step, each pilot community was classified as either a multi-residential (MR) community or a single-detached (SR) home neighbourhood. This distinction was made so they could give each group specific F.O.G. disposal instructions on their educational handouts.



Stu Wardle looks at baseline effluent sample.



Evan Chang conducts green bin audit.

With the MR and SD groups formed, the City moved to the second pilot evaluation step – F.O.G. disposal education administration. In this step, each community received one of four education tactics:

- **Education Administration & F.O.G. Kit Distribution (MR)** – Present tenants with an educational handout and distribute a kit containing a F.O.G. collection cup, sink strainer, and sponge to each household.
- **Education Administration & F.O.G. Collection Cup Distribution (MR and SD)** – Present residents with an educational handout and distribute a F.O.G. collection cup to each household.

- **Education Administration Only (MR and SD)** – Distribute an educational handout to each household.
- **No Education Administration or F.O.G Resource Distribution (MR and SD)** – Control group.

After the F.O.G. educational materials were distributed to the pilot communities, post-education monitoring was undertaken using a combination of residential surveys, two effluent samples, and one green bin waste audit in each pilot community. These results were compared to the pre-educational monitoring results. An educational tactic was deemed as successful if residential surveys showed an increase in general F.O.G. knowledge, effluent samples showed a decrease in T.O.G. levels, and green bin audits showed an average increase in green bin weight.

Upon the completion of the pilot project, they concluded that education alone was the most efficient method of F.O.G. public outreach for residents living in the City of Markham.

With this knowledge, the City launched a tailored educational campaign dubbed the “F.O.G. Clogs Campaign” in April 2019 using diverse avenues of communications to convey their message. The citywide promotion appeared on electronic information boards, community centre wash-

room posters, mobile signs, Cineplex VIP Markham pre-show campaign commercials and much more. A year later, some of the benefits to their diverse communities included:

- Average 55 per cent decrease in residential sewer backup calls received by the City of Markham contact centre.
- Average 15 per cent decrease of F.O.G. found in effluent samples from pilot project communities.
- Waterworks operations and maintenance section noticed a decline in F.O.G. related residential backups.
- Average two per cent increase of total organics weight in pilot project communities.

In 2020 and 2021, the City plans to execute the second wave of F.O.G. educational efforts and re-evaluate the efficiency of their three-step monitoring system approach. The City’s pilot project and campaign strategy may not be effective in every city, but they hope that the evaluation method will be a useful tool for other municipalities as they plan their F.O.G. awareness campaigns.

Danielle Thom is an intern employee with the City of Markham’s Environmental Services Department and is an environmental biology student at the University of Waterloo.

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