



Office of the Commissioner
Environmental Services Department

MEMORANDUM

To: Members of Committee of the Whole

From: Erin Mahoney, M. Eng.
Commissioner of Environmental Services

Date: May 30, 2019

Re: Improperly Disposed Products Impacting Wastewater Infrastructure

This memo is in response to a request at Committee of the Whole on March 7, 2019. Staff have examined options related to banning disposal of wipes labelled as “flushable” into our sewer system.

Residents and businesses dispose of items through their sanitary sewer system that adversely impact wastewater infrastructure. Common items that are improperly disposed of include fats, oil and grease, paper towels, cotton swabs, dental floss, feminine hygiene products, prophylactics and wipes. Wipes are uniquely problematic because manufacturers label certain wipes as “flushable”, contradicting messaging from wastewater authorities. Improperly disposing of these items can block pipes and bind pumps causing damage and sewer backups, resulting in increased maintenance costs along with health, safety and environmental risks.

Significant cost to remove items improperly disposed in York Region’s sewers

York Region designs sewage pumping stations and water resource recovery facilities with screens and choppers to remove improperly disposed items in an effort to protect downstream conveyance and treatment equipment. Total costs to remove improperly disposed of items from the sewers in York Region is estimated to be over \$1 million per year.

Over the last several years, York Region staff have noticed an increasing number of issues in wastewater infrastructure caused by masses of improperly disposed wipes. In the last five years, staff increased preventative maintenance programs and the frequency of screen cleanings, while responding to over 110 blockages caused by improperly disposed products. Local municipal sewer pipes are typically smaller in diameter and reportedly local municipalities deal with more blockages. This is a growing problem experienced by municipalities across

Canada. For example, the City of Toronto published 311 data indicating a 10 per cent increase in blocked sewer service line calls (all causes) from 2015 to 2018. This increasing trend highlights a need to look upstream at the source and focus on preventing these materials from entering the sewer system.

The Canadian Water and Wastewater Association estimates that Canada-wide costs related to improper disposal of wipes are at least \$250 million each year

Undissolved wipes are one of the most commonly found foreign items in sewer infrastructure. Wipes wind around each other and combine with fats, oils and grease and other foreign items to create large blockages. Manufacturers have been marketing many types of wipes as flushable, despite evidence from wastewater experts that wipes labelled as flushable may require several flushes and do not break down fast enough resulting in issues in wastewater infrastructure.

National and international partnerships attempt to develop standard for “flushable”

In 2017, York Region contributed \$10,000 to a partnership fund set up by the Municipal Enforcement Sewer Use Group and the Canadian Water and Wastewater Association to support research on an international standard for flushability. The Municipal Enforcement Sewer Use Group and Canadian Water and Wastewater Association worked with international water and wastewater groups and wipe manufacturers to develop an International Standards Organization standard for designating products as flushable. However, manufacturers and wastewater groups were unable to agree on appropriate testing methods for the standard.

Subsequently, national wastewater groups from various countries, including the Canadian Water and Wastewater Association, established the International Water Services Flushability Group, which developed its own flushable specifications and testing methods. The International Water Services Flushability Group’s Flushability Specifications were finalized in June 2018. Wipe manufacturers continue to use their own less rigorous flushability standards. A recent [study](#) by Ryerson University tested 23 products from southern Ontario stores labelled as flushable by their manufacturer. All of the products failed to meet International Water Services Flushability Group specifications as flushable, confirming that many wipes marketed as “flushable” can cause issues in wastewater infrastructure.

The Canadian Water and Wastewater Association is currently exploring ways to have International Water Services Flushability Group specifications incorporated into a Canadian Standards Association standard, which would require manufacturers to meet this standard before using the term flushable on package labels. Providing consumers with clear labelling will increase their understanding of flushable and unflushable products and will assist with the issue of improper disposal.

Proposed Provincial legislative changes may reduce improper disposal

Given that municipal governments have limited tools at their disposal to influence changes in product design, staff support coordinated action at Provincial and Federal levels such as bans or standardization of label claims. In May 2019, York Region responded to the Province's Reducing Litter and Waste in Our Communities Discussion Paper. This Paper included consideration of a potential ban of items that result in microplastics entering the Great Lakes. Region staff advocated that the Province consider enacting a ban on marketing products other than toilet paper as flushable due to their impact on wastewater infrastructure and their ability to release microplastics into the environment.

Staff also recommended the Province consider designating flushable wipes for an extended producer responsibility program, which would require manufacturers to take responsibility for full lifecycle of these products. Municipalities currently have no regulatory tools at their disposal to manage marketing of these materials nor any ability to recoup costs associated with the impacts that these materials have on our sewer system.

Updating York Region Sewer Use Bylaw to prohibit disposal of garbage into the sewage system

The only legislative tool currently available to York Region is our Regional Sewer Use Bylaw 2011-56, which regulates discharges into sanitary and storm sewer systems. Regulating discharges keeps sewers from becoming overloaded or damaged, which protects the health and safety of our employees and residents and protects the environment. The Regional Sewer Use Bylaw specifically prohibits the discharge of substances that might result in "damage to a sewer works" or might result in "an obstruction or restriction to the flow in the sanitary sewer". Enforcement staff have recently been putting a special emphasis on these sections. However, for clearer enforcement, the Regional Sewer Use Bylaw could be amended to prohibit the discharge of garbage into our sewer system. No Canadian municipality specifically bans wipes, but many have sewer use bylaws that prohibit the discharge of garbage or foreign materials into sewers. Staff will examine such a prohibition as part of consultations and updates to the Sewer Use Bylaw in 2020. In any case, enforcing the Sewer Use Bylaw in private homes is intrusive and not practical so other solutions need to be employed. For these reasons, it's vital that we continue to work with other levels of government and agencies such as Canadian Water and Wastewater Association to strongly advocate municipal positions and legislative tools that clarify product labelling or design so that residents get clear and consistent messaging on best disposal practices.

Informing residents of proper disposal choices protects wastewater infrastructure

Residents that improperly dispose of items into the sanitary sewer system risk damage to municipal infrastructure as well as blocking and damaging their own sewer plumbing or property. It is important that residents are made aware of the damage that they can cause both to the environment and infrastructure from improper disposal of these items.

In an effort to educate residents that only toilet paper and human waste should be flushed down the toilet, York Region partners with the Ontario Clean Water Agency to develop and promote educational resources designed to empower residents to make informed flushing decisions. The “I Don’t Flush” campaign educates residents on proper disposal of common items (Table 1).

Table 1
Common Items and Proper Disposal Program

Common Household Item	Proper Disposal Program
Pharmaceuticals	Pharmacy Return-to-Retail
Wipes and other items such as dental floss and cotton swabs	Household Garbage
Personal Hygiene Products including tissues, diapers, toothpicks, hair, nail clippings and sanitary products	Green Bin
Fats, Oils and Grease	Green Bin

The campaign has used social media, cinema ads, road signs, websites, videos and other tools to advocate and reach a broad audience in York Region. Education initiatives are important to inform residents, but may need to be combined with formal policy initiatives to effectively address this issue.

York Region addressing improper disposal of items with multi-pronged approach

York Region has chosen to take a multi-pronged approach to address the issue of residents and businesses improperly disposing of items into our sanitary sewer system. The four prongs of the approach include:

- Advocating for Provincial and Federal governments to take action to improve product design and labeling
- Working with the Canadian Water and Wastewater Association and Municipal Enforcement Sewer Use Group to advocate for a Canadian standard for “flushable”
- Strengthening the Sewer Use Bylaw to further protect wastewater infrastructure
- Educating residents that the only flushable product is toilet paper

This approach to the problem of flushability addresses the issue from many directions and staff are encouraged that progress will be made to curb improper disposal of items into sewers.

Erin Mahoney, M. Eng.
Commissioner of Environmental Services

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