

Phasing out Single-Use Water Bottles in Municipal Facilities

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Report Summary

This report provides a recommendation regarding a policy to discontinue the sale and distribution of single-use plastic water bottles in all municipal facilities and that drinking water fountains be replaced with water refill stations.

Resolution

THAT the City of Greater Sudbury approves a policy to discontinue the sale and distribution of single-use plastic water bottles in all municipal facilities, that existing drinking water fountains be replaced with water refill stations by December 31, 2027 and that all new installations of public drinking water access be in the form of water refill stations, as outlined in the report entitled “Phasing Out Single-Use Water Bottles in Municipal Facilities”, from the General Manager of Growth and Infrastructure, as presented at the Operations Committee meeting on August 8, 2022.

Relationship to the Strategic Plan, Health Impact Assessment and Community Energy & Emissions Plan (CEEP)

This report refers to Climate Change and Quality of Life and Place goals as outlined in the 2019-2027 Strategic Plan adopted by City Council and goal # 6 “Achieve 90% solid waste diversion by 2050” in the Community Energy & Emissions Plan.

Financial Implications

The cost to replace existing drinking water fountains will be phased in over 5 years and funded from the tax-supported operating budget. In total, the purchase and installation of 132 refilling stations at an estimated cost of \$8,000 per unit will result in a cost of approximately \$1,056,000 from operating budgets over the next 5 years.

Background

As part of the Community Energy and Emissions Plan (CEEP) implementation and phase one municipal actions, Staff committed to developing a strategy that reduces the use of single-use water bottles in municipal facilities.

Adopting a policy that discontinues the sale and distribution of plastic water bottles in municipal facilities will provide several benefits including:

- reducing the amount of waste requiring handling and processing;
- supporting federal government efforts to take steps towards reducing single use plastic products and achieving zero plastic goals;
- reducing litter in the environment;
- supporting accessibility to water for the homeless and vulnerable populations;
- supporting the use of municipal tap water and;
- displaying leadership in sustainable action.

Single-Use Plastics

Since the 1950's, worldwide plastic manufacturing has been increasing to the point where it is no longer a sustainable option. Plastics have been widely used over the last 75 years due to their reputation as a low-cost, durable alternative to other materials, such as glass, textiles and metals, yet have been found to be challenging to manage once they reach the end of their life cycle. This is in part due to the increased distribution of single-use plastics, which are created specifically to be used once before disposal. Examples of these items include straws, food and beverage containers, plastic cutlery, and plastic bags. While some of these items can be recycled in the Blue Box program, recycling should only be relied upon as the last diversion management option while reducing the amount of single-use plastic waste generated should be the primary objective.

The "3R's" is a term that is widely understood to express options for managing waste responsibly. The 3R's are defined as:

- **REDUCE:** Reduce the amount of waste generated by purchasing items with less packaging, or items that are meant to be used more than once before disposal.
- **REUSE:** Reuse items that can be before throwing them away, such as donating old clothes and toys, fixing broken items instead of buying new.
- **RECYCLE:** Recycle waste in such a way that it can be remanufactured into other products.

The 3R's are always expressed in this order to represent the hierarchy of importance. Reduction of waste must always come first and foremost, followed by the reuse of materials, and, as a final resort, recycling of waste into new products.

Plastic Water Bottle Recycling in Greater Sudbury


Single-use plastic water bottles are made with Polyethylene Terephthalate or PET plastics with a  recycling symbol. The City of Greater Sudbury marketed on average 490 tonnes per year of PET plastic waste at the Recycling Centre over the last 3 years (Table 1). According to a study conducted by the Container Recycling Institute, over 60% of recycled PET plastics are single-use water bottles. This would suggest that the City of Greater Sudbury has managed and recycled approximately 882 tonnes of plastic water bottles through the Blue Box program from 2019 to 2021. This would not include any plastic water bottles that are disposed in the garbage or collected as litter.

Table 1 PET plastics received and marketed at the Frobisher St Recycling Centre since 2019

Year	PET plastics received and marketed at the City of Greater Sudbury Recycling Centre (tonnes)	Approximate amount of plastic water bottles received and marketed at the City of Greater Sudbury Recycling Centre (tonnes)
2019	489.73	293.84
2020	495.85	297.51
2021	485.07	291.04
TOTAL	1,470.66	882.40
AVERAGE	490.22	294.13

The City of Greater Sudbury has an excellent alternative to bottled water; it's own, municipally managed drinking water. Residents should be encouraged to use municipal tap water as a viable and inexpensive source of drinking water that also has the benefit of reducing waste.

Federal Actions and Legislation

In 2018, the Canadian Council of Ministers of the Environment approved the Canada-wide Strategy on Zero Plastic Waste with the goal of achieving zero plastic waste by 2030. In December 2021, the Government of Canada proposed to prohibit the manufacture, import and sale of certain single-use plastics and on June 20, 2022, the final regulation to prohibit them was published. The legislation will come into effect December 2022 and includes:

1. Checkout bags;
2. Cutlery;
3. Foodservice ware made from or containing problematic plastics;
4. Ring carriers;
5. Stir Sticks; and
6. Straws

The City of Greater Sudbury can further support the federal government's efforts to reduce single-use plastics by adopting additional policies that discourage their use.

Litter Reduction

The Province of Ontario has embarked on an initiative to reduce waste and litter in our communities. According to their campaign, litter and plastic pollution is becoming a worldwide pressing issue and it is estimated that almost 10,000 tonnes of plastic debris enter the Great Lakes each year. Notably, more than 80% of litter collected during volunteer clean ups along the shorelines of the Great Lakes is plastic.

On average, City staff and volunteer groups collect over 31 tonnes of litter every year along City roads and on City properties. A significant proportion of this litter is single-use plastics. Reducing the consumption of water in single-use plastic bottles will contribute to less litter in our community.

Water accessibility for the homeless and vulnerable populations

Water refill stations are an important resource for the homeless and vulnerable population who require easy access to drinking water throughout the various seasons. It is crucial for this population to have access to water stations both outdoors during the summer season and indoors for continued access during the winter months when all the outdoor stations have been turned off. Social Services has recently distributed over 300 refillable water bottles to the City's homeless and vulnerable population but have found that they are not yet able to overcome challenges of accessibility to filling stations. Increasing access to water refill stations will be a benefit to the quality of life and health of the City's residents.

Municipal Leadership in Sustainable Action

In addition to waste reduction, eliminating the sale and distribution of bottled water in municipal facilities encourages the economically viable use of municipal tap water. In fact, a case of 24 bottles of water can be purchased at Walmart for \$1.97 however, over 1,992 bottles can be filled with municipal tap water for the same price.

A policy that eliminates bottled water at municipal facilities positions the City as a leader in sustainable action and sets the stage for other organizations to follow suit. Residents who visit or access municipal facilities will come to expect that they can take part in sustainable action because it will become the norm to know that reusable water bottles can be refilled at any indoor or outdoor municipal facility and park.

Other Municipalities and Organizations

Other municipalities throughout Ontario, and Canada are beginning to take on the challenge of reducing single-use plastics. Most recently, the City of Ottawa has discontinued the sale and distribution of plastic water bottles in municipal facilities.

Many post-secondary educational facilities have also made changes on their campuses to discontinue sales of single-use plastic water bottles to students and faculty. Mohawk College, McMaster University, and Queen's University are some of the campuses that have committed to banning the sale and distribution of single use water bottles.

Potential Disadvantages

The decision to discontinue the sale and distribution of single-use plastic water bottles in municipal facilities, while a great step forward for the environment and health of the community, could result in potential disadvantages. It is important to consider these and plan for mitigation tactics.

Removing bottled water from vending machines and other sales locations will free up space that could potentially be occupied by other beverages in plastic packaging and/or less healthy, sugary beverages, an issue that has been at the forefront of public health education for the last several years.

The installation of water refill stations may mitigate this by continuing to provide a healthy and economical option to unhealthy sugary drinks. It may also be possible to allocate some spaces in vending machines to the sale of empty, reusable water bottles. Concession vendors may also choose to sell reusable bottles.

Residents who are unaware of the change may become upset when they find they have no option to purchase bottled water. Education will be key to migrating this change. Promotional and educational materials will be developed and distributed/posted collaboratively between Environmental Services, Environmental Initiatives and Communications to ensure residents are informed of the change and encouraged to drink water and reduce waste by using refilling stations when visiting municipal facilities.

Next Steps

Contracts and Infrastructure Upgrades

This report recommends that the City discontinue the sale and distribution of single-use plastic water bottles in municipal facilities over a phased in period of 5 years (December 2027). To implement the policy, the following three actions must be taken;

1. Vending and concession contracts will need to be updated to exclude the sale of single-use plastic water bottles.
2. Water bottle refilling stations will need to be purchased and installed to replace existing water drinking fountains.
3. Development of an education campaign to inform staff and the public.

The City of Greater Sudbury operates approximately 400 municipal facilities across many departments and divisions, some of which, currently sell bottled water in vending machines, food courts and concession stands or provide it as part of their operation (e.g. provided to the homeless and vulnerable population).

Should the City adopt the policy to discontinue the sale and distribution of single-use plastic water bottles, vending and concession contracts would need to be updated as they expire to exclude the sale of bottled water. At the same time, the sale of reusable water bottles can be explored.

The majority of the City's current vending contracts have expired over the last two years, and purchasing is working with individual departments to prepare new contracts now that City facilities can reopen to the public. New contracts will need to consider that until water bottle refill stations are installed, bottled water should still be made available for residents and staff.

The City of Greater Sudbury understands the importance of access to water as a human right, and therefore, if this policy is approved, upgrades to current municipal infrastructure will need to occur to supplement access to water. Traditional drinking water fountains (Figure 1) are already installed throughout City facilities and would need to be replaced with water refill stations (Figure 2). Several of these stations have already been installed throughout the City, including at arenas, Tom Davies Square, transit stations, parks, beaches and libraries.

Figure 1. Traditional drinking water fountain



Figure 2. Water refill station



The average cost to purchase and install a water refill station is approximately \$8,000. This cost can vary (~\$4,000 to \$12,000) depending on access to water, plumbing and electrical utilities.

If this policy is approved, departments with facilities that have existing drinking water fountains that have not already been converted to refill stations would be responsible for purchasing and installing them within their current operating budgets over the next five (5) years (December 31, 2027).

Table 2 represents known inventory requirements where existing drinking water fountains require replacement with water refill stations. It is important to note that this data is not necessarily complete. This data is provided by various departments based on information available at the time of writing this report.

Table 2 Water Refill Station Requirements by Area

Area	Number of Water Refill Stations Replacements Required	Total Approximate Cost to Department Over Next 5 Years
Arenas	1	\$8,000
Citizen service centers and libraries	10	\$80,000
Pools	5	\$40,000
Fitness centers	5	\$40,000
Beaches	4	\$32,000
Other recreational facilities	3	\$24,000
Outdoor park facilities	13	\$104,000
Indoor park facilities	91	\$728,000
Transit station – Downtown/Lorne Street	Replacements completed	-
Tom Davis Square	Replacements completed	-
Lionel E. Lalonde	Replacements completed	-
Airport	Replacements completed	-
Sudbury YMCA - Indoor	Replacements completed	-
TOTAL	132	\$1,056,000

Conclusion

Over the last several years, the City of Greater Sudbury has demonstrated its commitment to operating in such a way that has as little impact on the environment as possible and that it develops policies and actions that result in a healthier community.

A policy that eliminates single-use water bottles in municipal facilities will reduce waste and support the CEEP goals of 90% solid waste diversion by 2050. It will also support federal and provincial efforts to reduce plastic packaging and reduce litter. Providing greater access to water refill stations will support Council's strategic goal of improving quality of life and place and fall in line with population health priorities by providing more viable options for the homeless and vulnerable population.

Approving a policy to phase out the sale and distribution of bottled water in municipal facilities will continue the forward momentum in achieving these goals and lead our community by example.

Resources Cited

Greater Sudbury Community Energy and Emissions Plan (CEEP):
<https://www.greatersudbury.ca/live/environment-and-sustainability1/net-zero-2050/community-energy-and-emissions-plan-ceep-march-2021-pdf/>

Greater Sudbury Community Energy & Emissions Plan (CEEP) Implementation: Municipal Actions (2021-2025): <https://pub-greatersudbury.escribemeetings.com/filestream.ashx?documentid=37962>

Canada-wide Strategy on Zero Plastic Waste and Action Plan: <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/reduce-plastic-waste/canada-action.html>

Single Use Plastics Prohibition Regulations Overview: [Single-use Plastics Prohibition Regulations: Overview - Canada.ca](#)

Government of Canada delivers on commitment to ban harmful single use plastics: <https://www.canada.ca/en/environment-climate-change/news/2022/06/government-of-canada-delivers-on-commitment-to-ban-harmful-single-use-plastics.html>

Container Recycling Institute – Market share by beverage and package: [Market share by beverage and package \(container-recycling.org\)](#)

Ministry of the Environment, Conservation and Parks – Reducing Litter and Waste in Our Communities: Discussion Paper: [Reducing Litter and Waste in Our Communities Discussion Paper Delivering on the Made-in-Ontario Environment Plan \(prod-environmental-registry.s3.amazonaws.com\)](#)