

TOWN OF AJAX REPORT



Report To: General Government Committee

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Subject: **Bottled Water**

Ward(s): All

Date of Meeting: January 22, 2008

Reference: September 23, 2008 General Government Committee Report to Council

Recommendation:

WHEREAS Durham Region supplies safe, high quality drinking water to the Town of Ajax and its residents; and,

WHEREAS, plastic beverage containers are often found to be littered when not collected and recycled as part of the curbside Blue Box Recycling Program; and,

WHEREAS the Deposit Return System in Ontario with respect to the collection of beer, wine and spirit bottles has been successful; and,

WHEREAS Provincial Deposit Return Programs have shown to consistently increase redemption rates by providing incentives for consumers to return single-use beverage containers and a disincentive to litter them;

BE IT RESOLVED THAT the Town of Ajax will not provide bottled water at council, committee and public meetings; and,

THAT staff will continue to develop anti-littering strategies and relevant educational programming initiatives, work with stakeholders and user groups to promote the use of reusable containers as well as consider the creation of "bottled water free zones" in Town facilities where determined practical; and,

THAT reusable, eco-friendly, non-toxic beverage containers be sold at the Ajax Community Center, McLean Community Center, Town Hall and other areas determined appropriate by staff and that the Town provide unlimited "free refills" of tap water for those using reusable containers; and,

THAT the Town of Ajax request that the Ministry of the Environment consider creating a Deposit Return Program in Ontario to complement the Blue Box Recycling Program in order to increase the redemption rate of single-use beverage containers; and,

THAT this resolution be forwarded to the Ministry of the Environment, Ministry of Municipal Affairs and Housing, the Association of Municipalities of Ontario, the Toronto and Region Conservation Authority, the Central Lake Ontario Conservation Authority, M.P. Mark Holland, M.P.P. Joe Dickson, the Region of Durham and all municipalities in Durham Region.

Background:

On September 23, 2008 staff presented information to the General Government Committee regarding potential regulations for bottled water. Recently, some local municipal jurisdictions and school boards have either imposed a ban on the sale of bottled water at their facilities or regulated its use. Staff highlighted general arguments central to the debate and provided information with respect to regulatory models employed by other jurisdictions. Staff were directed to report back with further information and make recommendations relative to the feasibility of imposing restrictions on bottled water at Town facilities.

Discussion:

In general, bottled water has grown in popularity since its inception. Recent studies have shown, however, that it may be experiencing a relative decrease in popularity in non developing markets when compared to the past several years. According to *Beverage Digest*, a publication covering the non-alcoholic beverage industry, bottled water sales grew less than 1% in the first half of 2008. This is following a double and triple-digit annual growth rate over the past decade. This “slowdown” may be attributed to a number of factors, including the economy, market maturity as well as environmental concerns that have been raised with respect to the production, consumption and disposal of the product. According to a review by Statistics Canada in 2006, one in every three households in Canada use bottled water as their main source of drinking water. Consumption outside of the home continues to be popular as many feel that single-use beverage containers provide for a convenient method with which to remain hydrated. In 2007, 569 cases of bottled water were sold at Town operated concessions and vending machines, netting \$8,237 in revenue. Despite being introduced to the market as a healthy beverage option, some have expressed concerns about bottled water relative to public safety, energy consumption, littering, waste and recycling.

Water Quality Control Standards

Due to infrequent occurrences where water supply systems have either been contaminated or compromised, jurisdictions responsible for the provision of drinking water have created highly detailed processes to ensure that water quality is regularly monitored and treated accordingly. The Region of Durham's water system is maintained in accordance with the provincial *Drinking-Water Systems Regulation 170/03* which requires continuous online monitoring as well as frequent sampling analysis. Durham's municipal water system is the first in Ontario to be accredited to all three relevant ISO standards and water quality reports are made available to the public on an annual basis.

Refreshments Canada, an organization that serves the bottled beverage industry, acknowledges that many beverage manufacturers use municipal water as a raw material to produce their end product. Some bottled water manufacturers use underground-sourced water while others use municipal water which is filtered to lower the mineral content and remove chemicals such as chlorine. Bottled water is regulated and controlled as a food product by Health Canada and monitored by the Canadian Food Inspection Agency. The Canadian Bottled Water Association (CBWA) sponsors a quality assurance program establishing regulatory measures for its members beyond those legislated by government. Unannounced plant inspections occur annually as a component of the “Model Code” which investigates water sourcing through to the packaged product. To date, Health Canada claims that “illnesses caused by bottled water are very rare in Canada because it is treated, disinfected and monitored to ensure the absence of harmful organisms.” Health Canada also suggests that no waterborne disease outbreaks in Canada can be associated with the consumption of bottled water. As a result, bottled water is often used by emergency services personnel and in disaster-relief planning.

Energy and Water Consumption

Various forms of energy are used to produce, package and distribute bottled water. In effect, any commercial product requires various forms of energy to manufacture and transport, bottled water just happens to be one of them. Some argue that the energy used to create and distribute bottled water is superfluous as municipal water is readily accessible and less costly. Energy is used to manufacture the bottles, fill them, move them to retail outlets, refrigerate them at the stores or in homes and recycle them if they are captured through a recycling program. It has also been suggested that scarce watershed resources may be further depleted by those who produce bottled water. The Pacific Institute, an independent research organization, estimates that in 2006, three liters of water were used to produce every one liter of bottled water in the United States. Similar statistics have also been suggested for other beverages on the market. Some claim that there are too few governmental regulations in place to restrict beverage producers from taxing both groundwater and municipal water delivery systems.

Beverage manufacturers generally work through water conservation management programs in an attempt to safeguard the resource for which they are dependant. Water extraction in Canada is regulated by the Ministry of the Environment through the *Ontario Water Resources Act* and the *Water Taking and Transfer Regulation*. The CBWA estimates that the bottled water industry in Canada uses less than 1% of all annual water withdrawals in Canada. Industry representatives claim that more water is used in the bottling of other consumer beverages such as juice and pop than in the production of bottled water. According to the Ontario Ministry of the Environment, commercial bottled water production in Ontario accounts for less than 0.0014% of all water used by other permitted users including commercial, agricultural, industrial and recreational.

Public Safety

Notwithstanding the energy debate, the beverage industry agrees that municipal water systems provide the public with an ideal source of drinking water. Manufacturers suggest that bottled water is not “competing” with tap water and that it should be viewed merely as one beverage option available to consumers at point-of-sale. In many cases, consumers prefer the option of bottled water over juice, pop, coffee or sports drinks because it is calorie-free. Due to growing concerns regarding obesity and adverse health effects attributed to unhealthy food choices, water remains an option which can be viewed to compliment a healthy, active lifestyle.

Reusable beverage containers refilled with tap water can provide an efficient and cost effective way of ensuring easy access to drinking water. The trend towards use of reusable beverage containers is growing in schools, gyms and in the workplace. Such portable products are marketed as cost effective, convenient and safe for the environment. Habitual use of reusable containers avoids the unnecessary consumption of single-use PET (polyethylene terephthalate) bottles. Certain studies have suggested that as PET bottles break down over time, toxins can be leached into the contained beverage, especially when stored in environments prone to extreme fluctuations in temperature. This process is applicable to any PET bottle regardless of the beverage contained therein. Health Canada suggests that there is “no scientific basis” to support the theory that a harmful amount of chemicals are released by PET bottles when subject to extreme temperatures. Even though the Environment and Plastics Industry Council (EPIC) suggests that PET beverage containers are safe for reuse if washed and dried properly, most manufacturers recommend they be used only once and recycled.

Concerns have also been raised over the use of bisphenol-A (BPA), an organic compound used in many polycarbonate (hard plastic) containers. This chemical is not found in single-use beverage bottles. Some suggest that prolonged use could have negative health effects, specifically for infants and young children. Although the plastics industry has defended the use of BPA, Canada has imposed a ban on the import and sale of baby bottles containing the chemical. Many manufacturers, including Nalgene Outdoor Products, have ceased production of reusable containers manufactured using BPA.

Litter, Waste and Recycling

In most cases PET beverage containers are 100% recyclable, however, some are found to be littered and others end up in landfill sites. According to a study by the Region of Durham in 2003, beverage packaging (ie. soft drinks and other beverage containers) comprised 13% of all litter in the Region. This rate has likely grown as both population density and the global production of single-use beverage packaging as been steadily increasing. The Town of Ajax responds to litter in a number of ways. Town staff run dedicated litter patrols and monitor problem areas on a daily basis. Garbage bins in sports fields are maintained weekly and the appropriate resources are allocated in order to respond to special events. The Town runs a variety of anti-litter events including the Earth Day Spring Clean-up Challenge, Adopt-a-Park, Trail or Green Space, the Mayor's 20 Minute Makeover and other initiatives held in conjunction with Ajax Green Living Days or otherwise run as stand alone initiatives.

Consideration will be given to develop further educational opportunities, including the creation of "bottled water free zones" within Town facilities. Staff will also continue to work with user groups in order to promote the use of non-toxic reusable containers. A public space recycling pilot program is currently being considered for implementation in 2009. The pilot, fully funded through a site plan approval condition, would result in the placement of four outdoor recycling stations at strategic locations across the waterfront. The receptacles would be serviced twice per week during the summer and once per week during the winter. Further information on the program will be presented to a forthcoming meeting of the General Government Committee.

Curbside Collection

According to Waste Diversion Ontario (WDO), the overall curbside collection rate for recyclable materials in 2006 was 63.5%, however, only 22.1% of plastic packaging generated in Ontario was collected through the Blue Box Program. There is no data to determine redemption rates for water bottles as they are not tracked apart from other PET beverage containers. It has been suggested that 50-55% of all PET bottles consumed in the GTA in 2006 were recovered through the Blue Box Program. Beverage containers, in particular, have always been a challenge for curbside programs as consumption often occurs outside of the house in areas where recyclables may not be collected. This is also a challenge for multi-residential complexes as only 60% of its residents have access to a recycling system. Where there is no access to recycling, beverage containers and other recyclable materials are typically collected through the waste stream and end up in landfills. EPIC estimates that in 2002, only 31% of all plastic beverage bottles generated in Ontario were recovered.

Although PET bottles only account for 4% of recyclable materials collected in the Blue Box, they consume a great deal of space within the boxes and collection vehicles. Durham Region no longer collects oversized PET containers (6 liter containers and above) due to the additional transportation and processing costs required to handle them. Paper products, which account for the majority of recyclable materials collected through the Blue Box Program, take up less space and require less energy to transport. Regional recycling centers are equipped to sort and process average size PET containers, however, there is a substantial municipal cost in doing so. The Blue Box Program is operated as a 50/50 cost sharing program with municipalities and the printed paper-packaging industry splitting the bill. WDO data calls for 2007 indicate that the overall cost of Durham Region's Blue Box Program was nearly \$13.5 million dollars, with \$7.6 million dollars in revenue generated from the sale of recovered materials. The cost of recycling programs will only increase as the industry continues to utilize plastic containers, which are not nearly as marketable as aluminum cans and more costly to process.

In response to a recent request for comments by the Ministry of the Environment concerning a review of the Blue Box Program, the Association of Municipalities in Ontario (AMO) in conjunction with the

Municipal Waste Association (MWA) submitted several recommendations. They called for a comprehensive, province-wide recycling program to be fully funded by the Industry Funding Organization on behalf of the post consumer packaging and printed paper stewards. The submission suggested the implementation of a curbside collection program that provides, at minimum, the same level of service as the current Blue Box Program. A multi-layered approach including the creation of a deposit return system, a multi-residential collection strategy and a public space recycling program was also recommended. Advocates of a full extended producer responsibility model suggest that if the industry was responsible for all costs associated with the disposal of consumer products, the environmental sustainability of product packaging would be greatly increased. It has been suggested that by establishing targets and offering incentives for the production of goods that can be re-used or easily recycled, all materials, including product packaging, would assume an inherent value rather than labeled simply as "waste".

Bottle Deposit Return Programs

Over the past two decades, there have been numerous lobby efforts calling on the Province of Ontario to establish a deposit return program for beverage containers. Several jurisdictions in the United States, Europe and Canada have established "bottle bills" which impose refundable deposits on most beverage containers ranging anywhere from 5 to 25 cents. In fact, every province in Canada has some form of deposit return program for non-alcoholic beverage containers except Ontario and Manitoba (which both rely strictly on curbside recycling programs). Recycling depots, redemption centers or reverse vending machines situated in designated retail locations provide refunds for used containers returned by consumers. The retailers and redemption centers are then refunded by the bottlers. Unredeemed deposits for containers recycled through a deposit program can be shared by the bottler to offset costs associated with managing the program, and the government, which can use them to fund other environmental initiatives. According to a study by EPIC, the average recovery rate for beverage bottles in Canada where deposit return programs exist is nearly double that of non-deposit model jurisdictions. The deposit program in Ontario with respect to beer, wine and spirit bottles has proven to be very successful. The beer bottle return rate in 2007 was 93% and the wine and spirit bottle return program, launched in February of 2007, has already achieved a 61% return rate.

There are several benefits that can be attributed to deposit programs. Bottle Bill legislation typically mandates an affiliated board, agency or commission to oversee an industry-led program which, in turn, creates employment and stimulates capital manufacturing. Deposit models provide incentives for recycling from both the public and private sectors as well as a disincentive to litter and waste. In Alberta, over 200 Bottle Depots located across the province processed over 1.6 billion beverage containers in 2007, diverting nearly 50 million kilograms of recyclable material away from landfills. The return rate for all beverage containers, including plastics and PET bottles in Alberta in 2007, was greater than 70%. There is no government funding provided to the Bottle Depot program, depot operators and beverage manufacturers fund the full cost of the program. Manufacturers pick up the containers from the depots and reimburse the amount of deposits paid out to consumers as well as a handling fee for each container collected. Saskatchewan, relying strictly on a deposit program, achieved an 85% return rate in 2007. Other mature deposit model jurisdictions such as the Northwest Territories and Nova Scotia achieved return rates upwards of 80%. A return-to-retail system is another model prevalent in Europe as well as in Quebec. This model is based on the use of "reverse vending machines" in various retail locations. These machines process used beverage containers, return a deposit to the consumer and store the bottles until collected by the manufacturer. Retailers have historically resisted this model citing challenges with respect to maintenance and operating costs as well as spatial limitations.

Blue Box recycling initiatives and deposit return programs should not be viewed as mutually exclusive. Deposit programs target beverage containers, the one recyclable item that is often consumed outside of the home. By providing an incentive for returning beverage containers to a recycling drop off facility,

studies have shown that litter is reduced and diversion rates are increased. Such programs can also be assumed to free up resources with respect to municipally funded collection and processing costs. Although support for the Blue Box Program is proportionally funded by the industry, a deposit return program can be completely funded by those who produce and consume the product. In areas where there is access to both curbside recycling and deposit return programs, recovery rates for plastic beverage bottles is substantially greater.

Update on Other Jurisdictions

Some municipalities and school boards have decided to impose regulations on bottled water in response to many of the concerns noted above. The Region of Waterloo, Toronto and London have established a ban on the sale of bottled water at all municipal facilities. The Council resolutions imposing the prohibition also provide for direction to allocate resources towards improving water delivery infrastructure. It is important to note that these bans relate only to the sale of bottled water. Staff and the public are still permitted to use any single-use water bottle within a municipal facility as long as it was purchased at their own expense. A schedule with which to phase in the bans was also incorporated as part of the resolution which was structured around honoring existing supplier contracts. Recently, the Province of Ontario as well as cities across the country including Cambridge, Windsor, Montreal, Vancouver, Calgary and Winnipeg voted against a ban on the sale of bottled water.

Several jurisdictions including, St. Catharines, Vaughan, Owen Sound and Windsor have regulated the use of bottled water at council, public and committee meetings, and in some cases, at events held in locations where there is easy access to potable water. Other municipalities (including Ajax) typically provide chilled tap water at council, public and committee meetings but do not necessarily have a corporate policy or resolution of Council mandating the practice. The provision of tap water becomes more challenging for events held in outdoor locations. In the absence of water fountains and/or other adequate refilling stations, bottled water becomes an optimal method of ensuring that attendees are properly hydrated. The preferred alternative is the use of reusable containers. Education and awareness is the primary method with which to promote the use of reusable beverage containers. In order to further promote this best practice, staff are prepared to investigate the opportunity to make non-toxic, eco-friendly, reusable beverage containers available for purchase at Town Hall and other Town facilities as well as provide unlimited free refills of tap water for those using them. Appropriate messaging can be printed on the containers as well as the Town's logo.

Education and awareness strategies relative to litter, energy conservation, recycling and environmental sustainability are seen by some to be the most practical solutions to concerns about bottled water. Although a recommendation to ban bottled water sales was rejected by Vancouver, the city launched a campaign promoting the use of municipal water and reusable containers. Toronto, Guelph, Mississauga and numerous other jurisdictions have established communication efforts in an attempt to provide information to consumers so they can make an educated choice. In general, most of the information campaigns are focused on promoting municipal water and environmental sustainability rather than presenting any potentially negative impacts associated with the use of bottled water.

Financial Implications:

A detailed investigation regarding the cost of reusable beverage containers has not yet been initiated, however, it is estimated that they would be purchased and sold for roughly \$8 each. The Town may choose to consider partially subsidizing this cost. At first, staff would order a limited supply in order to assess the demand. Providing free refills of these containers at Town concessions will involve staff assistance, but is not intended to be a cost item. The level of service required to provide refills is estimated to have a minimal impact on staff. Additional financial impacts relative to education and awareness campaigns would be budgeted accordingly by the departments responsible.

Communication Issues:

As noted, staff will continue to develop environmental educational programming and events to coincide with Ajax Green Living Days. Staff will also investigate additional opportunities to work with the Region of Durham and other partners to promote the use of tap water, reusable containers and water conservation in general. Further investigation will occur with respect to determining the feasibility of creating “bottled water free zones” within certain areas of Town facilities. Staff will ensure that the necessary and appropriate communications are extended to staff and the public.

Conclusion:

Many environmental issues today can be found to result from unnecessary consumption. The rather recent debate over bottled water is no different. The bottled water industry and environmentalists alike will generally agree that tap water is considered to be a safe source of drinking water. Bottlers suggest that their product is simply one of many consumer beverages currently available. If the debate were simply a comparison on the cost effectiveness of tap water versus bottled water, there is no doubt that the former represents the smarter consumer choice. The practice of filling a reusable bottle with tap water rather than purchasing bottled water when outside of the home is something that may be increased through public education. The issue, however, is also relative to consumer demand. Some suggest that a prohibition on the sale of bottled water would urge consumers to use a refillable container. Others maintain that in the absence of bottled water, consumers would likely purchase an alternative product which may be less healthy for them. It is also highly likely that this alternative product would be contained within a single-use beverage container. The results of prohibitions on the sale of bottled water are difficult to determine because they are a relatively recent phenomenon.

It was not the intent of this review to conclude whether bottled water poses a threat to public safety. If it were, a review of other products packaged in PET single-use containers available for sale at Town facilities would also need to be investigated. The littering of bottled water and beverage containers is an issue affecting the Town of Ajax as well as every other municipality. A steady increase in the global production of plastic beverage containers and the growing intensification of our population presents a real challenge. The solution is one where responsibility must be shared by industry, government and the public. As with other environmental issues, education is one of the most effective ways to effect change at every level. The Town invests municipal funds in cleaning up litter and towards developing education and awareness campaigns. Although public space recycling programs can often be costly and challenging to administer, the proposed waterfront pilot program may better determine the overall feasibility of such an initiative if it were to be extended to other public areas.

The provision of tap water over bottled water at council, committee and public meetings is a logical practice. In most cases, tap water is easily accessible and can be used in place of bottled water. Staff will promote the use of reusable beverage containers when communicating information regarding public events as well as review the potential of creating “bottled water free zones” within Town facilities. Furthermore, by selling reusable containers in areas where bottled water is typically used and discarded, consumers will be presented with an environmentally and economically sound option to consider when purchasing a beverage. Staff will also continue to monitor problem areas to ensure that recycling receptacles are strategically placed in order to assist in the reduction of litter.

Above and beyond corporate practices, a provincially run deposit return system is a proven model to increase recycling and diversion rates while decreasing litter. When combined with a curbside collection program, redemption rates of all recyclable materials has been shown to increase. The deposit model is a relevant proposal as it not only focuses on bottled water but also on other beverages sold in single-use containers. Most Ontarians have access to the Blue Box Program. This mature, well-entrenched curbside collection program can only stand to benefit from the creation of a deposit return system.

The recommendations made in this report were unanimously supported by Town management staff, the Town of Ajax Recreation, Arts and Culture Advisory Committee as well as the Environmental Advisory Committee.

Blair Labelle, Manager of Legislative Services, Deputy Clerk

Martin de Rond, Director of Legislative and Information Services, Town Clerk