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PROMOTING THE USE OF TAP WATER AT REGIONAL FACILITIES

The Solid Waste Management Committee recommends the adoption of the recommendation contained in the following report dated December 16, 2008, from the Commissioner of Environmental Services and the following additional recommendation:

- 2. Bottled water shall not be used in the Committee Rooms and Council Chamber in the York Region Administrative Building during public meetings in keeping with the spirit of promoting the use of tap water and reducing waste.**

1. RECOMMENDATION

It is recommended that:

1. The Regional Municipality of York continue to promote the use of tap water at all Regional facilities and functions.

2. PURPOSE

At the September 10, 2008 meeting of the Solid Waste Management Committee, a request was made to address the issue of bottled water at Regional facilities. In response to this request and to further Council's commitment to the environment and the Region's Sustainability Strategy, this report recommends the continued promotion of the use of tap water at Regional facilities and functions.

3. BACKGROUND

York Region is a producer of clean, safe potable water. Education and outreach material will be developed to promote the use of tap water at Regional facilities and functions.

Tap water will be provided at locations and situations where reasonably possible.

4. ANALYSIS AND OPTIONS

Promoting the Region's safe drinking water

York Region protects, operates, treats and supplies clean, safe drinking water for over 800,000 residents in nine local municipalities at an annual cost of \$326 per Megalitre of

water (2007 actual cost). Our municipal water supply, both from surface and groundwater sources is protected through a multi-barrier approach which includes continuous monitoring and compliance with Ministry of the Environment regulations. In 2007, more than 1,800 tests were performed on the Region's 36 wells, water treatment facilities and distribution systems. The Ontario Chief Drinking Water Inspector's Annual Report 2006-2007 has documented York Region's tap water quality standards at an almost perfect score of 99.9 per cent. Results of these tests are made public and are available on York Region's website.

Bottled water is marketed as a convenient, healthy beverage. Consumption of this product has increased in the past decade. Bottled water in Canada is considered a food product under the Food and Drugs Act and Regulations. According to the Polaris Institute, it is estimated that Canadian bottling plants receive government inspections once, on average every three to five years.

Public Health issues related to bottled water

Bottled water is frequently stored in polyethylene terephthalate (PET) containers. Some studies have shown that PET bottles can release phthalates into the water. There is a scarcity of data and research on phthalate levels in bottled water primarily due to difficulties in analysing low phthalate concentrations. Studies have looked at the levels of leaching of PET, lead, and antimony, and while all have been found to leach into bottled water to some degree; the levels are within current safety guidelines.

There have been concerns about the potential degradation of plastic water bottles which have been left in cars exposed to summer heat. Currently, there is no scientific evidence to support such a concern. Studies conducted on water in plastic bottles exposed to extreme temperature conditions have failed to generate chemical concentrations that could pose a health risk. Health Canada recommends that any beverage, including bottled water that has been subject to long periods of time in hot vehicles should be discarded.

Many studies have shown that the levels of bacteria in bottled water increase quickly to maximum levels after six weeks of unrefrigerated shelf life. However, this natural growth of harmless flora is not considered to be a health hazard. Refrigeration is recommended after the water container is opened in case harmful bacteria are reintroduced at this time.

Water should always be stored in well-sealed containers. Large quantities of bottled water may be stored in a cool, dark storage area such as a basement or warehouse. As with other foods, if bottled water is being stockpiled in long term storage, care should be taken to rotate the inventory so that no product in storage will exceed its shelf life. Most bottled water manufacturers indicate that their product has a two-year shelf-life.

Bottled water remains a good alternative during emergency situations

The use of bottled water can continue to be used as an alternate to tap water by the Region's employees where potable water is not available or under emergency situations including when boil water advisory is in effect in Regional facilities. Emergency responders can continue to use bottled water when necessary and when time is of the essence. Proper storage of bottled water is recommended according to the manufacturer's requirements.

Environmental and economic impacts of bottled water

The increasing consumption of bottled water raises concerns about the economic and environmental costs of the product. The most significant concerns are related to energy consumption and the associated affects on climate change. A number of websites discuss the environmental impacts of bottled water, such as www.insidethebottle.org and www.thinkoutsidethebottle.org (Polaris Institute). However, the majority of the information provided on these sites is not peer-reviewed scientific research, and should only be considered as the viewpoint of the specific citizen's group promoting it. The following points have been presented by the Polaris Institute in support of promoting tap water on the website www.insidethebottle.org

- It takes large amounts of energy to produce plastic bottles, approximately 3.4 megajoules to manufacture the packaging, bottle and cap of a one-litre bottle (Source: Pacific Institute). The 31.2 billion litres of bottled water consumed annually in the Unites States uses more than 17 million barrels of oil to produce (Source: Pacific Institute).
- Twice as much water is used in production than what is being sold in the bottle (Pacific Institute estimate).
- The bottled water industry relies on container ships, trucks and cars to transport raw materials to the plants and finished products where they are sold. Oil based transportation contributes to global warming in the production of greenhouse gases compared to the use of tap water which remains within a watershed making the delivery system significantly more energy efficient.
- When considering the lifecycle of a bottle of water, the energy costs are the equivalent, on average, to filling up a quarter of each bottle with oil (Source: Pacific Institute).
- Approximately 30% of plastic PET beverage bottles are recovered and recycled in Ontario. This includes all uses of PET beverage bottles including water bottles (Source: Canadian Plastics Industry Report).

The following additional points are based on results from waste audits conducted in York Region and industry estimates.

- Approximately 77% of plastic PET beverage bottles are recovered and recycled in York Region. Based on waste audits conducted in 2006 for Richmond Hill and Markham approximately 3% of the Blue Box material is composed of PET beverage bottles with approximately 0.5% of the Blue Box material collected consisting of non-alcoholic PET beverage bottles.
- Approximately 63% of all plastic PET beverage bottles are used away from home (i.e. at work, at school, while traveling).

In Canada, approximately 25% of bottled water sold is reprocessed tap water (Source: Polaris Institute). People are basically being sold the clean, safe tap water produced by their Municipality.

Education and Awareness about Tap Water in York Region

Public education and awareness is a key component of Water for Tomorrow, the Region's water efficiency and conservation program. Enhanced education and awareness will be made available to the staff of York Region through Water for Tomorrow, the Region's Wellness program, and through other programs and initiatives.

A strategy to promote municipal tap water is being developed to engage York Region staff to change their habits by:

- Increasing the awareness of the high quality and reliability of municipal tap water.
- Addressing any misconceptions about tap water.
- Increasing the awareness of the cost effectiveness of tap water.
- Increasing awareness of the potential environmental impacts related to production of bottled water.
- Ensuring tap water is more accessible to Regional staff by providing safe and reliable drinking water options like fountains and refillable water bottles or cups.
- Encouraging the use of water jugs and reusable cups for use at meetings, workshops and training sessions.

An assessment of drinking water availability at all Regional facilities, whether owned or leased will be conducted to ensure that the needs of all staff are met. The assessment will review the need for drinking fountain retrofits and other suitable measures.

Educational material will also be made available to the local municipalities and the public through York Region's website, Water for Tomorrow website, regular publications like York Works and other avenues.

Relationship to Vision 2026

Promoting the Region's municipal tap water to staff and residents aligns with our Vision 2026 Goals of Ensuring Water for Our Future and Ensuring Clean Water and Air by enhancing awareness of the safety and high quality of our drinking water.

5. FINANCIAL IMPLICATIONS

Regional staff will work together to determine the cost of any modifications required at Regional facilities to ensure tap water is made available in the most efficient way possible.

6. LOCAL MUNICIPAL IMPACT

Promoting the use of tap water at Regional facilities is consistent with the goals and objectives of many of our local municipalities. Markham, Vaughan and King for example have already embarked on similar initiatives.

7. CONCLUSION

Promoting the use of tap water at Regional facilities will promote employee well-being by providing clean and healthy alternatives to bottled water, reducing the amount of polyethylene terephthalate (PET) plastic bottles entering our waste stream, and making use of the Region's highest quality water resources.

Promoting the use of tap water at Regional facilities makes good business sense for municipal governments in that it prevents the use of tax dollars to purchase pre-packaged water and promotes the use of Municipal tap water.

For more information on this report, please contact Laura McDowell, Director of Environmental Promotion and Protection at Ext. 5077.

The Senior Management Group has reviewed this report.