

9

WATER FOR TOMORROW – STATUS REPORT

The Transportation and Works Committee recommends the adoption of the recommendation contained in the following report, March 23, 2006, from the Commissioner of Transportation and Works:

1. RECOMMENDATION

It is recommended that:

1. Staff be authorized to make presentations to the Councils of the Local Municipalities providing an update on the progress of Water for Tomorrow, the Summer Water Use Reduction Program and York Children's Water Festival.

2. PURPOSE

The purpose of this report is to provide Council with an update on the Water for Tomorrow Program, York Region's water efficiency program. Authorization is also requested for staff to make update presentations to the Local Municipal Councils pertaining to Water for Tomorrow and the upcoming Summer Water Use Reduction Program and the York Children's Water Festival.

3. BACKGROUND

York Region initially embraced water use efficiency as part of the water supply solution outlined in the Water Supply Master Plan in 1996. The study, subsequently updated in March 2004, provides an objective to develop and implement a comprehensive long-term strategy, which includes water efficiency, to serve the Region's water supply needs to 2036. Water for Tomorrow, York Region's water use efficiency program was a major outcome of the original Water Supply Master Plan.

The program's Scope of Work, which has served as a Water Efficiency Master Plan was approved by Council in April 1998 and includes six distinctive activities. The original target of the plan was to achieve 19 million litres of water per day in savings. Now in its eighth and final year, Water for Tomorrow is saving 22.5 million litres of water per day, enough water to serve a community of 85,000 residents.

The six year capital program which included the installation of low-flow shower heads and early-closing toilet flappers, industrial and institutional water audits and distribution system leakage reduction was concluded on June 30, 2004. The program is now in an extensive leak survey and analysis maintenance and continuing education phase.

With the original eight-year water efficiency master plan near completion, on January 16, 2006, Council authorized staff to undertake an update of the master plan thus providing a potential roadmap for water efficiency in York Region for the next ten years.

4. ANALYSIS

The award winning, highly successful Water for Tomorrow program has been adopted as a model by municipalities across Canada and around the world. Many elements of the Water for Tomorrow program can be found within water efficiency programs with municipalities located in the Greater Toronto Area. Some have commented about the positive benefits to their communities due to the Water for Tomorrow message going beyond the Regional border.

Water for Tomorrow is well known to residents and businesses of York Region. Program technicians have visited over 118,000 homes, 10,400 apartments, 180 schools and 14,200 businesses. During these visits, over 245,000 water-saving toilet flappers and 106,000 low-flow showerheads were installed. Approximately 1,800 km of watermain have been tested in all of the local municipalities. Sixty industrial/institutional water usage audits have been completed, in some cases resulting in major capital projects, resulting in significant water savings.

Technology can achieve major water savings but education is necessary to meet the long term objectives. Annually, Water for Tomorrow has been represented at fairs, home shows, environment days and community events across the Region. The twice per year bulletins, distributed through the water bills and community newspaper, and television advertising have contributed to the success of the water efficiency education program.

Youth education has been a major focus of Water for Tomorrow. The award winning Grade 7 curriculum module developed and implemented by the Water for Tomorrow project team has been delivered to over 50,000 students in York Region and continues to be extremely popular with teachers and students alike.

Unique to York Region, the project team views water efficiency in the same manner as constructing and operating a new water treatment plant. Maintenance is a necessity if you wish to sustain the water savings in the long term. Ongoing maintenance assistance is provided on the water efficiency products that have been installed during the course of the program.

Water for Tomorrow has been recognized for excellence by numerous organizations including the Ontario Water Works Association, Water Environmental Federation, FCM's Sustainable Communities Awards and the World Water Forum in Kyoto, Japan.

Water for Tomorrow has demonstrated that water efficiency is an effective component of York Region's long term water supply strategy. Overall, the program is saving

approximately 22.5 million litres of water per day, enough water to supply a community of 85,000 people. The program has also contributed positively to the Region's objective to reduce greenhouse gases. Over 3,809 tonnes per year of carbon particulates and 13,947 tonnes per year of carbon dioxide is reduced as the result of Water for Tomorrow.

The scope of the Water for Tomorrow program has been enhanced over the last few years with the addition of the effective Summer Water Use Reduction Program and the very popular annual York Children's Water Festival.

The largest demands on a water supply system occur during the summer when outdoor uses can increase significantly; particularly during hot dry periods, when people are watering their lawns and gardens. Water for Tomorrow's goal is to get residents of York Region to reduce outdoor water use by encouraging water efficient garden and landscaping. Over 5,000 residents have received a free water efficient landscape audit and the opportunity to learn about water wise gardening techniques from the many water efficient garden demonstrations at participating garden centres, conservation areas and local colleges, workshops and newspaper advertising.

Program information and provided services help residents beautify their lawn and gardens while lowering maintenance and watering requirements. The creation of drought tolerant gardens and the implementation of low-water lawn maintenance techniques were particularly helpful during the mid-summer dry spell when many municipalities had implemented outdoor watering bans. In order to make maximum use of the program budget, the approach emphasizes the development of program ambassadors and partners who carry the message into the community.

4.1 Program Activities for 2006

This year's program launches with the kick off water efficiency gardening seminar at Seneca College, King Campus on March 25. Following the kick off seminar, there will be one evening water efficient gardening seminar in each of the local municipalities and each of the Water for Tomorrow garden centres will hold two gardening seminars during the season. Three new water efficient gardens will be constructed this year joining the existing eight demonstration gardens located throughout the Region.

A new edition to the landscape kits this year will be a DVD containing a 12 minute video, filmed in Newmarket, on "how to transfer your property to water efficient landscape" and a new water efficient plant guide with hundreds of plant pictures and descriptions.

Over 22,000 Grade 4 and 5 students have learned about water in the outdoors at the annual York Children's Water Festival. This highly successful event is due to the hundreds of volunteers, many York Region staff. Held every year at Bruce's Mill Conservation Area, 5,000 children attend the five day event where they learn by participating in over 40 curriculum based activities about water and the environment. This year's festival takes place from May 15 to 19 and registration was completed within 24 hours with just over 5,000 students registering. Due to its popularity, over 3,500

students were placed on a wait list. New activities have been added this year including a wind powered water pump and a hydro-electric generator.

4.2 Water for Tomorrow Supports other Regional Water Programs

As one of the four components identified in the Region's Water Supply Master Plan, water-use efficiency represents the lowest cost source of water. Aside from financial considerations, the Region's comprehensive program demonstrates to the public and to government regulators that it is taking a responsible approach to water supply by making the best use of existing resources.

Water use efficiency is recommended as a best management practise by the Federation of Canadian Municipalities and the American Water Works Association. In addition;

1. The cost of water use efficiency measures represents the cheapest "source" of water supply for the Region at about 25% of the cost of new surface water supplies.
2. Water use efficiency measures help to defer the need for major capital expenditures and can assist in reducing supply allocations for local municipalities.
3. Water-use efficiency can significantly help manage the summer drought periods and help alleviate outdoor water restrictions and bans.
4. Key review and approval agencies, such as the Ministry of Environment and the Ministry of Natural Resources, are reluctant to support new capital projects without a demonstrated commitment to water use efficiency by the proponent.
5. Water use efficiency is a required component of Watershed Plans required under the Oak Ridges Moraine Conservation Plan.
6. Water-use efficiency is a required component of the Ministry's recently revised Permit to Take Water Program.

5. FINANCIAL IMPLICATIONS

The present value unit cost to expand water and wastewater supply infrastructure in York Region, Peel Region, Durham Region and the City of Toronto ranges from \$1.12 to \$5.47 per litre per day. Water provided through water efficiency measures costs from \$0.44 to \$0.90 per litre per day. Continued implementation and future planning of water use efficiency activities will ensure that the Region continues to provide the most effective and cost-effective water supply options to its residents

6. LOCAL MUNICIPAL IMPACT

Continued implementation and future planning of water use efficiency activities will ensure the availability of a secured, cost effective supply of water to the local municipalities assisting in meeting future demands caused by growth. The Water for Tomorrow program has assisted residents and businesses of the local municipalities to become more efficient and use less water. The Water for Tomorrow Distribution Leakage

Reduction component has assisted in a proactive approach to local municipalities' water operations by completing an extensive leak survey and analysis to ensure the distribution systems are as leak free as possible.

7. CONCLUSION

Water for Tomorrow, York Region's water efficiency program is currently saving 22.5 ML/d. Ongoing education programs over the next three years will assist in not only sustaining the water savings but increasing them. The Water Efficiency Master Plan Update to be completed this year will provide a secured, cost-effective water supply into the future. An update to each of the municipalities' Councils will serve to inform the Councils and the residents in the municipalities of the progress and successes of Water for Tomorrow.

The Senior Management Group has reviewed this report.