

WATER EFFICIENCY IN HALTON REGION

WAYNE GALLIHER, WATER/WASTEWATER OUTREACH COORDINATOR, HALTON REGION

With the increased temperatures experienced during summer periods, water utilities across Ontario face an increase of peak in water servicing demands attributed to recreational tasks such as car washing and filling of swimming pools, seasonal irrigation of lawns and gardens, and increased personal water consumption. Should periods of peak consumption persist and recovery of water distribution system reservoirs be unachievable or overall system pumping capacities thresholds be threatened, many water service utilities are required to put in place watering bans and/or restrictions to ensure adequate levels of water are reserved for residential and business based consumption requirements and fire protection purposes.

Residential water consumption can as much as double in summer periods. It is in the best interest of water service utilities to limit the operational impacts of unnecessary treatment when looking to the added costs of additional treatment chemicals needs, energy used in treatment and

distribution, and the secondary treatment of added wastewater volumes experienced under increased water peak consumption periods. As such, the introduction of numerous municipal based water efficiency programs and policies have fast become the most cost effective and environmentally friendly means in achieving reductions, and creating additional capacity, to limit the operational impacts experienced during peak summer periods.

In working to reduce the impacts of peak seasonal water servicing demands and to demonstrate environmental stewardship of the region's water resources, Halton Region has employed a combination of demand side management, public education and bylaw based water conservation measures.

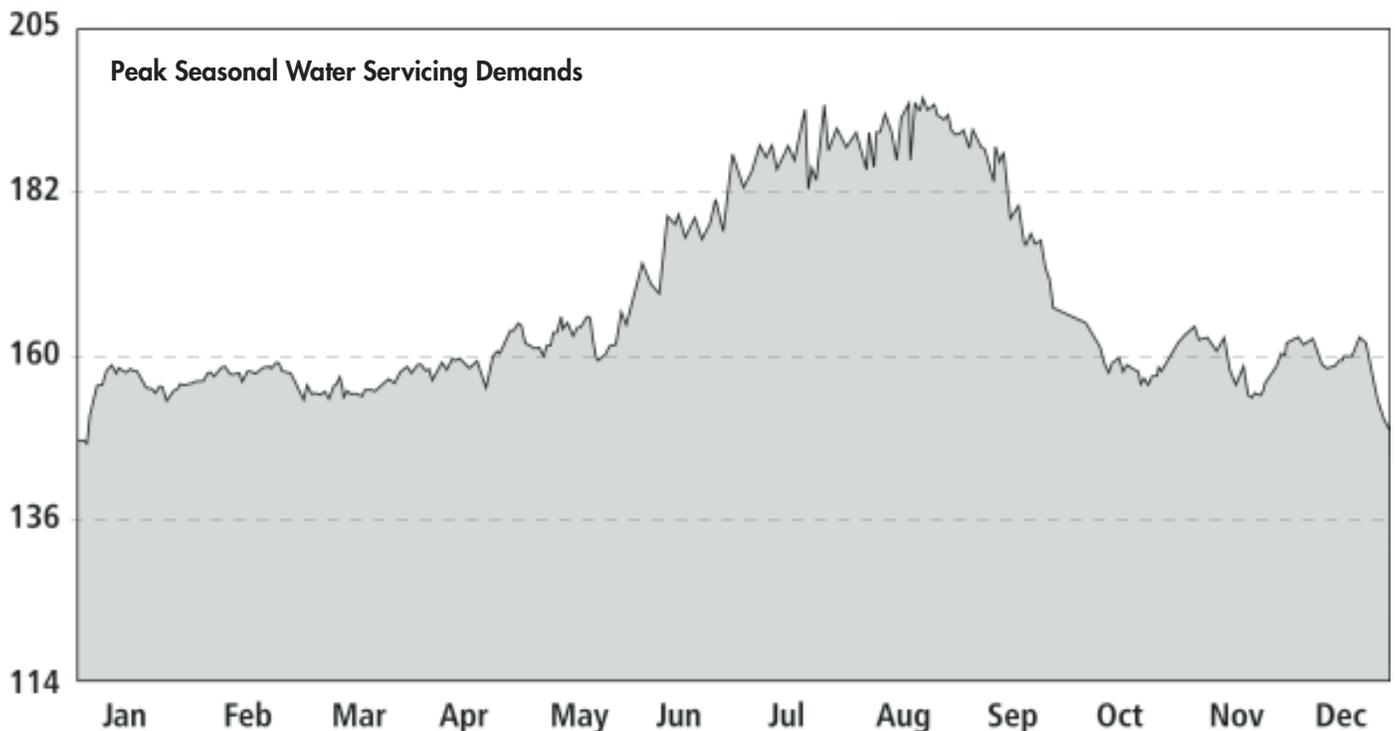
Water Balance Audits

As part of Halton's demand side management initiatives, an annual *Water Balance Audit* is completed to assess the overall efficiency of each of the region's water distribution systems through a comparison of water production, billed water

consumption and the calculation of water volumes attributed to non-metered tasks. In response to levels of lost water identified through the audit, Halton has employed an ongoing leak detection program to assess daily water flows into areas of suspected loss and to pinpoint water leakage in each water distribution system. Further to leak detection studies, demand side management initiatives have also transcended to include the region offering voluntary water use audits to large Industrial, Commercial and Institutional (ICI) water users within the Halton Hills groundwater based communities of Acton and Georgetown. Through this initiative, representatives of the Halton water conservation program assess how water is utilized at each site, and following a flow monitoring period at the site, provide a detailed report of possible measures which could be undertaken to limit the use of excess volumes of water observed.

Educating the Public

To promote public knowledge of water conservation practices and programs



within the community, Halton staff has continually been involved with community based outreach events throughout Halton Region. In continuing with water conservation based public education, Halton Region and Conservation Halton partnered to provide the inaugural Halton Children's Water Festival in September of 2006 at Kelso Conservation Area in Milton, Ontario. Throughout the three-day event, over 3,000 grades 3, 4 and 5 students from across Halton Region participated in 56 interactive Ontario curriculum based activity centres focused on the main festival themes of water conservation, water health and safety, water protection, water science and technology and water stewardship. With the high success of the inaugural event, planning of the second Halton Children's Water Festival is currently underway. The 2007 event planned for September 25, 26, and 27, 2007, will again be held at Kelso Conservation Area and feature over 50 interactive activity centres for grades 2, 3, 4 and 5 Halton Catholic District School

Board and Halton District School Board students.

Implementing Bylaws

The third measure used for water efficiency is the *Halton Water Use Bylaw* (Bylaw 42-04). This bylaw distinguishes permitted usages of water, provides specification as to qualified personnel who may operate water system infrastructure, specification regarding the components of water system infrastructure, and outlines water usage violations and penalties under violation of the bylaw. In addition to the terms listed above, the *Halton Water Usage Bylaw* also provides the ability to implement water usage bans, restrictions and watering policies. With reference to this, Halton Region introduces the odd and even day watering policy each spring to limit excessive levels of irrigation as an industry best practice in water resource management and stewardship.

Further Initiatives

In continuing to employ water effi-

ciency measures, Halton Region is currently working towards the introduction of numerous programs including a residential toilet rebate pilot program, an ICI pre-rinse spray valve replacement program, school based water and wastewater Ontario curriculum based outreach program, and a landscape assessment program to promote outdoor water efficiency through the use of drought tolerant and native plants in home landscaping.

Furthermore, Halton Region has currently started development of the *Halton Water Efficiency Master Plan* to provide a measurable, sustainable and achievable water efficiency strategy. The plan, upon endorsement by Halton Regional Council, will see the introduction of an enhanced water conservation based program strategy and the introduction of an overall water efficiency reduction goal to be achieved over the next decade.

For more information on the *Halton Water Conservation Program*, please visit www.halton.ca/waterconservation. ♦

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