Getting past WDM barriers

Water demand management activities can provide economic, environmental and social benefits. But that knowledge alone is not always enough to lead to implementation of WDM initiatives in a municipality.

Barriers – both real and perceived – can obstruct municipalities from committing to and engaging in water conservation initiatives. These can include:

- Financial barriers – limited resources for capital costs or revenue insecurity if water demand decreases;
- Social barriers – public perception of "limitless" water supply, lack of public understanding of where their drinking water comes from and what is involved in getting it to their tap;
- Political barriers – lack of political support or a lack of perceived need for water conservation (due to low population growth or ample water supplies); and
- Operational barriers – limited personnel, resistance to change, and lack of connectivity between multiple systems.

Finding ways to overcome these barriers and realize the benefits of WDM will be different for each municipality and some barriers will be easier to overcome than others. This primer highlights how ingenuity and careful planning can help address three key barriers.

Sustainable program funding and reducing the risk of revenue loss

The "catch 22" of water demand management is that achieving success (i.e. reducing water demand) has the potential to reduce revenue without careful planning and forecasting.

This reduced revenue can affect operating budgets and the impacts may be especially acute in small water systems. Opportunities to reduce the risk of revenue loss and maintain sustainable funding for WDM could include:

Reducing risk of revenue loss:

- Aligning water demand management planning with water supply planning, including time horizons, to ensure most accurate water demand estimates
- Including all factors that influence water consumption in demand estimates for revenue projects, such as market change in fixtures, efficiency requirements in the building codes and loss or gain of industrial users

Sustainable funding for WDM:

- Obtaining government/industry grants for capital infrastructure (e.g. metering) or innovative WDM approaches elements (e.g. rainwater harvesting)
- Exploring partnerships and co-funding opportunities – e.g. with electricity utilities (see **Primers #6, #9**)
- Phasing in water rates and surcharges that recover operating costs and the costs of WDM programs (see **Primer #8**)
- Including conservation efforts in capital budgets
- Implementing municipal-wide development charges at time of issuing building permits

Funding opportunities

- The *Federation of Canadian Municipalities Green Municipal Fund* provides low-interest loans and grants for capital water projects with the potential to reduce per capita consumption by 20 per cent.
- The *Ontario Small Waterworks Assistance Program (OSWAP-3)* provides funding for improving water conservation and efficiency in small municipalities serving 5,000 or fewer customers.
- Additional provincial funding may be upcoming under the *Water Opportunities Act*, similar to the $30 million over three years provided for Showcasing Water Innovation, which provided funds for municipal water sustainability planning and public education and awareness about water conservation.

Working around small economies of scale

Small municipalities face particular challenges in engaging in water demand management activities, even when support for and recognition of the need for water demand management is present:

- There are few resources to absorb the large capital costs required of many WDM strategies;
- A sudden decrease in water consumption – from installing water meters, for example – can cause a significant impact on budgets from the loss of revenue;
- Operating costs can increase significantly, as there may be only one staff overseeing multiple systems;
- Ample supply and no projected population growth makes it difficult to make a financial business case for water demand management; and
- There may be a culture of high water use among residents because of ample water supplies.

Creative rate solutions

Phasing in water rates and surcharges is one way to recover operating costs and the costs of WDM programs.

The **City of Woodstock** in Oxford County (*population 37,700*) has taken this a step further to also address customer disatisfaction with paying their flat rate water bill when they are out of the country for extended periods of the year. The measure taken? Instigation of a $50 shut-off and $50 turn-on fee.

Opportunities to address barriers faced by small municipalities implementing water demand management initiatives could include:

- Focusing on strategies that *can* be done cost-effectively in small systems (e.g. leak detection, community outreach);
- Collaborating with other small municipalities to share equipment, staff and expertise;
- "Clustering" or grouping several systems together under a shared system;
- Collaborating across municipal departments to improve efficiencies and increase political support; and
- Exploring opportunities to work with larger municipalities.

Building capacity and support for WDM

A key challenge in getting started with water demand management activities is addressing the lack of political will and/or public support to implement the chosen activities. In addition to the potential solutions discussed above – specifically exploring collaboration and partnership opportunities – ways to address this challenge could include:

- Starting small and building momentum – as Council sees the benefits and growing support for water demand management initiatives, capacity will grow and municipalities can set more aggressive targets;
- Building a good business case and forecasting data which can be presented to Council;
- Communicating the value of water services to the public and community groups (see **Primer #3**);

- Joining a Water Efficiency Network (such as the OWWA or the Alliance for Water Efficiency) to glean ideas for overcoming political barriers from other practitioners; and
- Hiring dedicated personnel

Resources:

- Ontario Small Waterworks Assistance Program: http://www.moi.gov.on.ca/en/infrastructure/sectors/oswap.asp
- Federation of Canadian Municipalities Green Municipalities Fund: http://www.fcm.ca/home/programs/green-municipal-fund/resources/water-resources.htm

Small municipality customer service

To help reduce peak water demand use in **Brant County**, water utility staff sat down to have a one-on-one conversation with their largest water user – an abattoir.

Together, they were able to work out a plan where the abattoir night staff fills the water tank before dawn, instead of first thing in the morning when water demand is at its highest. This has both reduced the pressures on peak water demand, and reduced energy costs associated with water operations in the County.

Garnering political support: public opinion polling

Since 2008, **the City of Guelph** has engaged in social research for its water conservation program. This research, typically in form of telephone surveys or focus groups, has allowed Guelph to obtain feedback from its customers about their programs and to assess level of knowledge about particular water issues, level of acceptance of rates and other program modifications and changes in desired behaviours.

Wayne Galliher, Water Conservation Project Manager at the City of Guelph, notes that this research reinforces water conservation initiatives and provides the necessary support for Council to help make decisions about approving programs and providing funding.

The Water Demand Management Primer series was developed in partnership with the following municipalities and partners:

Townships of Amaranth and East Garafraxa, Brant County, City of Brantford, Bridgewater Research, Township of Centre Wellington, Dufferin Water Services, City of Guelph, Town of Grand Valley, Grand River Conservation Authority, Guelph-Eramosa Township, City of Kitchener, LURA Consulting Ltd., Township of Mapleton, Neeb Engineering Inc., Oxford County, POLIS, REEP Green Solutions, Township of Southgate, Region of Waterloo, City of Waterloo and Wellington County.

This project was undertaken with the financial support of the Government of Canada through the Federal Department of the Environment. This project has received finding support from the Government of Ontario. Such support does not indicate endorsement by the Government of Ontario of the contents of this material.