

# CMHC Research Report – Provision of Municipal Infrastructure through Demand Management: Guidebook and Case Studies

Reviewed by Erin Boutang, AMM Policy Analyst

Although Canada Mortgage and Housing Corporation (CMHC) offers a wide range of housing-related information, it also publishes research reports on a variety of other subjects including municipal infrastructure planning. One such report, which is applicable to Manitoba's municipalities, focusses on water and wastewater system planning. CMHC's *Provision of Municipal Infrastructure through Demand Management: Guidebook and Case Studies* deviates from traditional water system planning by examining ways to reduce demand for water, thereby prolonging the life of water and wastewater infrastructure.

As the report states, many infrastructure reports discuss the overwhelming need to invest in infrastructure renewal without recognizing that the management of water as an irreplaceable, valuable resource will help meet the infrastructure needs of a municipality. **Demand management (DM)** is the idea of shaping the demand for water rather than focussing solely on expanding supplies. DM may consist of reducing overall water consumption, minimizing peaking of water demand and sewage flow, reducing the loss or waste of water, and increasing recycling of water so supply is conserved or made available for future or alternate uses. As you will recall from the last edition of

*The Municipal Leader*, the City of Barrie, Ontario was able to delay financing a new water and sewer capital works project by working with its ratepayers to reduce water consumption by 62 litres per person per day. This is exactly the approach the type of approach that makes up the focus of this report.

This report outlines the following four DM practices that provide the greatest municipal control: 1) system efficiency programs such as water metering, leak detection and repair, and pressure reduction; 2) regulation through by-laws and the plumbing code; 3) use planning mechanisms; and 4) water/sewage pricing. The report also outlines consumer-based DM practices, including audits; plumbing retrofits; landscaping measures and educational programs- measures that require some degree of public support.

The guide proceeds to outline several of these DM approaches, giving municipal governments a variety of tools to reduce demand for water. For example, instead of using flat-rate billing, system efficiency programs such as water metering and charging water rates based on volume provide consumers with pricing signals that help to encourage water

conservation.

Metering also helps to measure how much total water demand is unaccounted for, which may gauge the amount of water being lost to leakage. The report also outlines customer-based efficiency measures that can lead to significant water savings.

Most importantly, this report outlines how to develop a DM strategy for one's own community. Every community will have different goals or problems that cause local governments to examine DM options. What works in one community may not work in another, and this report provides several examples of DM measures that satisfy different community goals. Analyzing daily, monthly and yearly water and wastewater data, along with specific information on customers large and small, will help each municipality get a good sense of water usage and ways to reduce it. The end result will allow municipalities to defer capital expenditures, while spending little to implement DM measures. This report is an extremely useful guide for Manitoba's municipalities, and the AMM would encourage each of its members to consider it carefully. As with all CMHC publications, it is **FREE** to residents of Canada. To order *Provision of Municipal Infrastructure through Demand Management*, call 1-800-668-2642 and request report number 61616. ●

Erin Boutang is now with Manitoba Intergovernmental Affairs and Trade (IAT).



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