

Sustainability Success Story

Saving Water, Saving Energy in Washroom Sinks

The Challenge

While water for hand washing is extremely important, when we consider the number of times people wash their hands over the course of a day, it is also important we use the minimum amount required. With less water used there is also less natural gas or electricity to heat it. We were also aware that typical problems that may result from reducing the flow are insufficient water to actually remove soap, and potential scale buildup blocking the typically smaller diameter holes in low-flow faucets.

Our Solution



We found some faucet aerators for retrofitting to existing faucets addressed both problems. An earlier project indicated there were at least 600 daily users of one of our busy central washrooms, or 200 uses per day for each aerator.

In this analysis we considered 140 uses per day as an average of the 260 washrooms. The savings also consider natural gas savings from heating an estimated 25% of the water to a comfortable hand washing temperature.



These aerators increase the velocity of the water (which means improved flow impact or flushing ability) and reduced scaling. The savings would provide enough drinking and cooking water for 2,000 families each year and also reduces municipal infrastructure costs in piping, pumping, delivery, purification and filtering.

Project Cost, Annual Savings and Other Benefits

<i>Cost</i>	\$6,000
<i>Savings – Dollars</i>	\$8,800
<i>Savings – Electric and Gas</i>	125,000 eKwh (<i>equivalent</i> kWh or electrical energy, about 2/3 is actually natural gas). This is about ½ % of our total (gas) consumption plus some electrical consumption.
<i>Savings – Water</i>	7,300 Cu. M. (enough to provide 1 year of drinking water for drinking and cooking for 2,000 families of four.
<i>Simple Payback (years) / Return on Investment (ROI)</i>	0.7 years / A Return on Investment of almost 150%
<i>Environmental Improvement - Greenhouse Gas Reduction</i>	30 Tonnes (total from both fuels)
<i>Other Benefits</i>	Demonstrates Responsibility to the Community & Leadership.