



Region of Waterloo



Case Study: Babcock & Wilcox

Background:

Babcock & Wilcox Canada Ltd. designs, engineers, manufactures and constructs steam generation equipment in Cambridge, Ontario.

These products convert water into steam through a variety of heat sources and that steam is used by utilities to drive generators that produce electricity.

The Cambridge location is home to over 800 employees and uses around 10,000 m³ of water per annum. Despite being such a large plant with high water demands, management did not have any water balance data and did not know the proportion of water used in the various plant areas (hydro testing, metal washing, machine coolant water and the cement plant) as well as in the domestic washrooms & kitchens.

The Babcock and Wilcox team launched a project to gain water balance data and learn what the largest water consuming activities in the plant were in order to reduce use long-term.



Water Savings Solution:

In order to understand its own water usage patterns, Babcock and Wilcox committed to sub-metering the plant and monitoring flows to each area. A surprising finding from the project was that the majority of water usage is in their domestic washrooms due to the large number of employees.

The sub-metering project was critical in determining that Babcock & Wilcox will now focus on inefficient flush-valve toilet replacements to reduce water usage at the 581 Coronation Blvd location. A total of 40 flush-valve toilets will be replaced, with funding assistance through the Region of Waterloo. The expected annual water savings are 580 m³.

There are other water saving projects under consideration: such as reuse of hydro testing water and collecting RO & DI waste water for the concrete making process. Further potential water savings of 1000 m³ could be achieved if these projects are implemented.