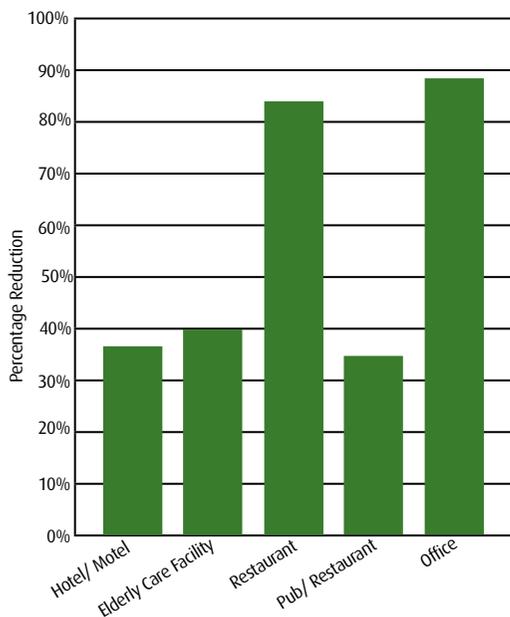


Making the Business Case

Today, businesses practicing environmental stewardship are working hard to ensure natural resources are used efficiently while developing a reputation within the community as a responsible corporate citizen. These companies realize that using our naturally resources efficiently is the best economic and environmental choice.

Improving water efficiency makes good economic sense. A water efficient organization will experience a reduction in water consumption, and since water is often heated, reduced energy costs are a likely benefit. Replacing old, inefficient fixtures and equipment can provide quick payback periods due to reduced operating costs and in some cases, reduced maintenance costs. Reduced water consumption also means reduced sewer charges since sewer charges are based on water consumption records.

Water Bill Reduction following Implementation of Water Audit Recommendations



Case Study & Audit Effectiveness

John's Place Restaurant

A water use audit was conducted at John's Place Restaurant in February of 2006. The restaurant had three 20 L toilets, five water cooled condensers, and one water cooled ice maker. The audit recommendations included: replace the once-through water-cooled equipment with air cooled equipment; retrofit the washrooms with low flow or high efficiency toilets; and to create a sustainability awareness program for staff.

In January of 2007, John's Place Restaurant took advantage of the Cooling Equipment Rebate program offered by CRD Water Services. All of the water-cooled equipment, (estimated to use over 10,000 m³ per year), was replaced with air cooled models. This resulted in water use reductions from 35 m³ per day during the billing period ending March 2006, to 18 m³ per day during the March 2007 water billing period. Roughly a 50% decrease in water use was realized, which is approximately what the cooling equipment was estimated to use by the water audit. By replacing the cooling equipment, the restaurant owner saves about \$10,000 per year based on current water rates.

Retrofit or Action: Replaced cooling equipment
Retrofit Cost: \$15,000 (\$20,000 minus \$5,000 grant)
Estimated Annual Savings: \$10,000
Payback Period: 1.5 years

Saving water.
It's everybody's business.



Capital Regional District | Water Services
479 Island Highway, Victoria, BC V9B 1H7
T: 250.474.9684 | F: 250.474.4012
www.crd.bc.ca/water

Industrial | Commercial | Institutional

Water Conservation

Water Efficiency Audits

CRD | Water Services

Water Efficiency Audits



What can we do to assist your business?

The Sooke Reservoir provides the Capital Region with some of the best quality, low cost potable water in the world. As our population grows and without improved efficiency, water supply expansion and treatment projects will be necessary; significantly increasing the cost of water. By improving our water use efficiency, we all save in the long run by deferring the expense of water supply expansion and treatment.

To assist businesses increase their water efficiency, the CRD offers water efficiency audits to business customers connected to the Greater Victoria drinking water supply. The water efficiency audit is a process that reviews historical water use, analyses current water consumption, identifies water efficiency improvements and provides recommendations.

The CRD water efficiency audit has been highly successful in assisting business reduce their water bills. The program has identified leaks that otherwise would have gone undetected, determined malfunctioning toilets and urinals as well as provided education to business owners, employees and patrons. Typically, the program can reduce water bills by 30% to 50% and in a few instances, the achieved water savings have been greater than 80%.

For further savings to businesses, incentive programs such as the CRD Cooling Equipment Rebate and Toilet Replacement Rebate complement the Water Efficiency Audit. For more information regarding CRD Rebate programs, please refer to www.crd.bc.ca/water.

Project Definition

The water audit begins with a desktop investigation that includes review of the facility historical water consumption, as well as any modifications, retrofits, or construction on the property that may have affected water consumption. Facility information including building floor area, and number of employees within the facility is collected. This information is critical for determining the water efficiency of the facility as well as comparing (benchmarking) water use to other similar facilities within the Capital Region. Following the desktop review, CRD staff will begin the onsite investigation.



Site Investigation

Onsite work includes data collection of water consumption through manual meter reading, and data logging equipment that continuously measures water flow. Leak detection tablets, toilet flush counters and water volume analyzers assist the auditor in developing water consumption estimates. Staff interviews provide information regarding frequency and duration of fixture or equipment use as well as the number of employees typically using the water consuming device.

Water Balance

In financial terms, a balance sheet accurately displays the company's assets and liabilities at a given time. The water balance sheet is similar; matching theoretical water use with actual water consumption. Data collected during the desktop review and onsite investigation determines theoretical water use for each water consuming operation. The total theoretical water use is compared to the actual water use determined from past billing records. In cases where theoretical use is significantly less than actual use, a potential water leak or unauthorized water use may be identified. Lastly, the information from the water balance is used to calculate simple payback periods for the recommended water conservation actions.



Reporting & Presentation

The reporting process is a cooperative process between CRD staff and the client. The CRD prepares the draft report and meets with the client to discuss the findings and recommendations. Based on the outcome of the draft report meeting, the final report is prepared and presented to the client.