



# Only **Tap Water** Delivers



2007 **Canmore** Utility Performance Report

**EPCOR**



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## INTRODUCTION

*Only Tap Water Delivers public health, fire protection, support for the economy and quality of life. Your tap water - it's safe, reliable and when compared to other water options, very affordable. Your water bills pay for the stewardship of local water resources and the processes required to deliver safe and sustainable water to the community.*

### **EPCOR'S LONG TERM VISION**

We are committed to protecting the public health through the production and delivery of excellent drinking water quality to all our customers.

A sustainable water utility is not only financially sound and operationally excellent, it also assumes responsibility for the environment in which it operates and is accountable to its customers and the larger community. Financial, social and environmental responsibility is the foundation for all we do.

We put this philosophy into action by following these principles set out below:

<b>FINANCIAL AND OR/ OPERATIONAL EXCELLENCE</b>	<b>SOCIAL</b>	<b>ENVIRONMENTAL</b>
<p><i>We conduct all our operations in a fiscally responsible manner to maintain sustainable water systems.</i></p> <p><i>We proactively manage all infrastructure through regular maintenance, evaluations and improvements.</i></p> <p><i>We continually enhance our leadership position in the drinking water industry through the development of best practices, support of research and building our staff expertise.</i></p> <p><i>We regularly assess and report the performance of our operations to identify opportunities for improvements and efficiencies.</i></p>	<p><i>We provide timely, ongoing communication with our customers and we regularly identify and engage stakeholders in many aspects of program planning.</i></p> <p><i>We ensure our operations have emergency response plans and capabilities to deal with situations in a timely and safe manner. This is done in cooperation with health authorities, regulators and other stakeholders.</i></p>	<p><i>We conduct our business guided by the commitments of EPCOR's Environmental Policy .</i></p> <p><i>We provide water and wastewater services that consistently meet all provincial regulatory requirements.</i></p> <p><i>We strive to meet recommended guideline such as the Canadian Drinking Water Guidelines and the draft CCME Municipal Wastewater Effluent Guidelines.</i></p> <p><i>We will provide source-to-tap management for the water system using a multiple-barrier approach, with an appropriate level of treatment based on the source water quality.</i></p> <p><i>We work in cooperation with local, provincial and federal health and environment agencies to advance Industry initiatives and research to ensure long term safety and supply of drinking water.</i></p>

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The 2007 Town of Canmore Utility Performance Report provides an overview of the successes and improvement opportunities within the Town of Canmore utility system. Our key measures include a full range of activities, summarized under the headings of Quality and Efficiency, Customer Care and Community, Regulatory and Environment, Safety and Capital and Rehabilitation Programs.

EPCOR has had a successful year of operations in Canmore and would like to extend our appreciation to the Town Administration for their continued support and assistance. We look forward to the challenges and successes of our partnership in 2008.

## **BACKGROUND**

The contract with EPCOR Water Services is one of the most comprehensive in Canada, including water and wastewater treatment, water distribution, wastewater collection, storm drainage, biosolids composting, meter reading, billing and account management. The ten-year fixed-price, performance-based utility management Agreement was signed in May 2000, with a five-year renewal in January 2005. The Town is supplied with water from two sources: the Spray Lake's reservoir system and a groundwater aquifer. The former is treated by filtration and ultraviolet UV filters (the second municipality to do so in Alberta), and the latter by chlorination. Total capacity of the wastewater treatment plant is 20 megalitres per day. The Town continues to own all of the assets (plant and distribution).

EPCOR is required to meet detailed performance levels in environmental compliance, safety, quality and efficiency and customer service that are all set by the Town and corresponding provincial regulations. A capital program and operations budget is approved yearly by Town Council, along with detailed reporting of several performance indicators. As capital works are identified, EPCOR also acts as project manager and receives a project-specific management fee. Responsibility for aggressive leak detection and repair as well as risks for life-cycle costs and emergency repairs has been transferred to EPCOR in the past two years and funded through annual contributions to the Rehabilitation Reserve. Operation and Maintenance activities are provided at a fixed price, but with annual changes due to inflation, labour agreements and utility costs. Thus, all operational risk was transferred to EPCOR.



## QUALITY & EFFICIENCY

EPCOR employees work to ensure that water provided to the community meets or exceeds standards and expectations for safety, reliability and quality. EPCOR completed water quality tests and wastewater tests in compliance with the approval to operate requirements. All tests are completed by Canmore operations staff with Quality Assurance support from the EPCOR Lab in Edmonton.

### HIGHLIGHTS

- Preventive maintenance activities on the water, wastewater, distribution, collection and stormwater facilities met or exceeded targets. The ongoing preventive maintenance program work and maintenance activities include, but are not limited to the following: Testing and/or servicing for emergency power generators and batteries, pumps, electrical panels, lift station wet wells and load testing, heating and ventilation systems, cranes and hoists, emergency lighting systems, fire alarm panels, fire extinguishers, pressure reducing valves, aerators, belt press, air relief valves, clarifiers, digesters, grit handling systems, water and wastewater filters, blowers, control and alarm systems, air compressors, disinfection systems, reservoirs, chemical feed systems, grounds maintenance, snow removal, vehicle maintenance, distribution system main lines and valves, collection system main lines, and manholes. As well as, stormwater drywells, catch basins, oil& grit separator sand outfalls.
- Regulatory and operational reports required on a monthly basis or on an as-needed basis were submitted on schedule
- Reports on staffing, Committee of the Whole (COW), maintenance procedures, rehabilitation budget accounting, one and five year capital budgets, quality management, insurance and WCB coverage were submitted to meet contract requirements.
- Monthly Electronic Billing Reports for the metering program were submitted on schedule.
- Scheduled cleaning and flushing of the sanitary mains was completed, which included the entire downtown flats.
- Annual inspections and adjustments to most pressure reducing valves complete, with new settings entered into the hydraulic model.
- Operational gains were made in 2007 through the concerted effort to calibrate the Synergy hydraulic model, and balance the pressure zones.

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- Increased operational efficiencies and reliability through implementation of a complex work management system (IVARA and My EPCOR- Oracle) used to schedule, log and track all preventive and corrective maintenance activities.
- A fulltime millwright compliments Canmore's maintenance department supported by additional trades from EPCOR's Edmonton based maintenance crew on monthly scheduled visits.
- A number of operators successfully challenged regulatory exams (W-III & WW-III), thereby advancing their qualifications and deepening the operation team's credentials.
- EPCOR's Edmonton Quality Assurance department conducted a proficiency lab audit at the Canmore Lab.
- Canmore OPS lab analyzed Alberta Environment's regulatory proficiency testing samples in March and April.
- Significant reduction in system water loss has been achieved as a result of ongoing leak detection and repairs as well as a meter calibration program for all large water users. System water losses have been reduced from 32% in 2002 to 12% in 2007.

## QUALITY AND EFFICIENCY INDEX

ACTIVITY	ACTUAL VALUES					TARGET VALUES
	2002/2003	2004	2005	2006	2007	
Quality Assurance & Quality Control Measures	461	1256	1268	1065	2433	300
% Completion of Preventive Maintenance (PM) Activities	85%	100%	100%	100%	100%	100%
% Completion of Contract Reporting Requirements	89%	100%	100%	100%	100%	100%



## CUSTOMER CARE AND COMMUNITY

EPCOR staff provides 24 hour emergency services, is available to answer customer questions and is committed to resolving customer concerns in a timely manner. A variety of information, including water efficiency is available through the EPCOR website. EPCOR is proud to actively support the community and we strive to build sustainable partnerships that enhance community life and promote wellness.

### HIGHLIGHTS

- Sponsorship of the Canmore Children’s Festival.
- Commitment towards fundraising event for the Canmore and Area Health Care Foundation.
- Sponsorship of public swim and public skate during the holiday season.
- Sponsorship of Comedy Cares – International Street Performers visit to the Canmore General Hospital.
- Offering of EPCOR’s School Education program.
- EPCOR Essential Volunteers Program – Helping Hands Grant.
- Member of the Bow River Basin Council and promotion of watershed management
- Member of BOWDA (formerly UDI)
- Sponsor of the Road to Champions Local Community Program.
  - through the Sports Excellence Fund, EPCOR provided funding to the Canmore Rip Tides Swim Club
  - through the Youth Excellence Award, EPCOR provided funding to two of Canmore’s young people for their music and artistic pursuit
- Supporter of the United Way with employee donations being directed to organizations of their choice.
- Encourage participation in the Corporate Challenge events.
- Completed a Customer Satisfaction Survey; Overall satisfaction with the Water and Wastewater Service supplier = 94%; Overall Satisfaction with quality of tap water = 94%
- 2007 saw a high ground water situation in which the Town declared a state of local emergency (SOLE). EPCOR played an integral role and had a prominent place at the EOC table during this crisis.

### CUSTOMER SERVICE INDEX

ACTIVITY	ACTUAL VALUES					TARGET VALUES
	2002/2003	2004	2005	2006	2007	
% of Service Outages Restored in Less than 24 hrs	94%	100%	100%	100%	100%	90%
External Customers Satisfaction Survey	92%	95%	N/A	N/A	94%	80%
Community Events	12	11	9	13	10	4
Internal Customer Satisfaction	100%	100%	100%	100%	100%	100%



## REGULATORY AND ENVIRONMENT

All regulatory and environmental requirements have been met or exceeded.

### HIGHLIGHTS

- Continuous improvement through a reduced number of environmental releases and contraventions to the Approval to Operate below prior year's levels.
- Met and exceeded regulatory and environmental requirements better than 99.9% of the time.
- Reporting of Water Quality data and all regulatory reporting was met as required.
- Implementation of process changes at all facilities to prevent violations and environmental releases.
- Extensive training and development has been completed to ensure that operators are proficient in performing government required testing. Quarterly audits from Edmonton Quality assurance staff assures the highest standard is maintained.
- Scrutinized the new Alberta Environment Standards and Guidelines and provided the Town with a comprehensive gap analysis with recommended upgrades and budgets to meet these new regulations.
- Entered into a long term agreement with Corrections Canada (Bowden Institute) for biosolids composting.
- Cross Connection Control certification was received by one staff member.
- Best lab practices training was attended by staff.
- Submitted the application for renewal for the Water and Waste Water License to Operate to Alberta Environment.
- Performed a downstream user study in conjunction with the WWTP BAF expansion.

### REGULATORY AND ENVIRONMENTAL INDEX

ACTIVITY	ACTUAL VALUES					TARGET VALUES
	2002/2003	2004	2005	2006	2007	
Violation to the Approval to Operate License	1	13	5	4	3	6
Environmental Releases	4	7	2	0	8	9
Proactive Activities	8	32	15	6	10	9
Completion of Required Regulatory Reporting	100%	100%	100%	100%	100%	100%



## SAFETY

EPCOR is committed to the ongoing safety of our employees with the promotion of safe work practices incorporated into regular work activities with regular inspections conducted in all work areas. Lost time incidents are reported monthly and a target of zero is set annually.

### HIGHLIGHTS

- No lost time incidents for any employees.
- Continued focus on safety training for all employees. Implementation of a Behavior Based Training Program.
- First Aid and ‘Confined Space Entry’ training completed by all new staff, with refresher training completed by several existing staff members.
- All relevant staff received Backhoe Operator training and chlorine safety training.
- Successful OH&S surprise inspection.
- OH&S officer was a guest speaker at a safety meeting.
- Continued use of a safety orientation program for new employees and contractors.
- Safe work plans, confined space entry permits and preventive talks were tools that continued to be used in the Canmore Operations.

SAFETY INDEX						
ACTIVITY	ACTUAL VALUES					TARGET VALUES
	2002/2003	2004	2005	2006	2007	
Safety related Training (hrs/employee)	12.3	24.3	37.8	13	37.8	8
Preventive Activities	58	59	199	193	132	55
Safety Meeting	12	11	12	12	12	11
Lost Time Incidents	0	0	1	0	0	0



## CAPITAL AND REHABILITATION PROGRAM

### HIGHLIGHTS

- WWTP Expansion included the construction of an emergency storage tank (~375M3 ) which will provide storage for influent flows during power outages and flow balancing if required. Detailed design was completed for the BAF expansion. This will include 2 new Biofor filters (C&N), a recirculation system and a new process water line (W3).
- Commissioned a new sanitary lift station (LS#2a), which was built using a non-conventional construction method (open cassion) to mitigate the risk of building in a high water table.
- Continuation of the Pumphouse #1 Aquifer Monitoring Project. This period saw ongoing testing and analysis of the aquifer and local surface water sources. The results of this program were submitted to Alberta Environment in support of the position that the well water is not under the influence of surface water. Continued monitoring of the aquifer is recommended to provide advance indication of a potential deterioration of the wellhead.. Should this be the case, a treatment upgrade at Pumphouse #1 may be required.
- Started construction of a multiphase upgrade of Three Sisters Drive / MacDonald Place. This is the launch of a very significant project for the Town which will replace the water and sewer mains, two pressure reducing valves, and incorporate a more natural storm water management system. This project will be a template for all future deep utility, road and storm upgrades.
- Designed and constructed a storm water swale in Larch.
- Continued the security system upgrade by changing over all lock and keys to the Multilock Interactive System.
- Continued the Watershed Protection project by partnering with a number of stakeholders in designing an interactive trail system with interpretive signage.
- A comprehensive inventory and audit was done of the Town owned backflow preventers as part of the Cross Connection Control program.
- Three hydrants received major rebuilds.
- Nine valves were replaced or rebuilt.



- Two Pressure Reducing Valves were completely rebuilt.
- Two blocks of sanitary camera work was completed.
- Lift Station #1 controller was rebuilt and variable frequency drives were installed to better balance the flows from the station to be more of a steady state. This will better regulate influent to the WWTP and virtually use the collection system as more of a balance tank.
- Lift Station #2 controller was rebuilt.
- Lift Station #6 pump was overhauled.
- Lift Station #8 had the gas detection and heating and ventilation system rebuilt.
- Pumphouse #1 controller system was rebuilt; a new well pump and motor was installed; and turbidity meters were replaced.
- Pumphouses #2 Filter controls- actuators and transmitters were rebuilt or replaced; filters were analyzed by AWI with recommendation for upgrades presented; UV flow meter was repaired.
- WWTP Belt filter press overhaul, process water pump (W3) overhauled, potable chlorine system was overhauled, influent, grit and check valve were repaired, clarifier weirs were balanced and drive train aligned, access road sealed and the standby power generator in ground fuel tank was sealed; the lab dishwasher was replaced.

EPCOR's expertise in managing utilities provides our community partner with savings by delivering infrastructure projects at or below budget. EPCOR manages the capital costs in an innovative manner that minimizes the risk of cost overruns to the Town.

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## WHAT'S AHEAD

### QUALITY

- Increased focus on reducing system water loss.

### CUSTOMER CARE

- Community activities will include EPCOR Road to Excellence, School Education Program, Comedy Cares, Canmore Children's Festival, and Employee volunteerism through EPCOR's Helping Hands Grant.
- 2007 Customer Satisfaction Survey found ninety-four percent (94%) of Canmore residents are satisfied with their water service supplier overall. Follow-up research scheduled for 2009.
- Customer Communication with additional priority placed on water efficiency education.

### REGULATORY AND ENVIRONMENT

- EPCOR and the Town are working towards a regional solution for biosolids management.
- Further monitoring of ground water quality at the production wells at Pumphouse #1 to ensure that the source is not under the influence of surface water. Should the monitoring identify groundwater under the influence of surface water (GUI), capital plans would be put in place to upgrade the treatment process to ultraviolet light treatment similar to that already in place at Pumphouse #2.
- Assist the Town in meeting the new environmental regulations related to their upcoming water license renewal.
- Watershed management program focusing on public awareness and education.

### SAFETY

- Continued commitment to EPCOR's Safety Program to ensure the safety of staff and the public at large. This is to include, but not limited to, further training in Transportation of Dangerous Goods (TDG), Construction Safety Training Software (CSTS) flagman train the trainer certification and expanded Confined Space Training for all new and existing staff members.
- EPCOR promotes and encourages all staff to attain the highest level of Alberta Environment certification available, resulting in an increase of operational knowledge, and in turn a safer and more productive work environment.

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