



# Only **Tap Water** Delivers



2008 **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 high quality 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:

FINANCIAL AND OR/ OPERATIONAL EXCELLENCE	SOCIAL	ENVIRONMENTAL
<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.</i></p> <p><i>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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## **BACKGROUND**

The 2008 Town of Canmore Utility Performance Report provides an overview of the achievements and looks ahead at plans for 2009. Our key measures of success include a full range of activities, summarized under the headings of Quality and Efficiency; Regulatory and Environment; Customer Care and Community; Safety; and Capital and Rehabilitation Programs.

The contract between the Town of Canmore and EPCOR Water Services Inc. 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 plant and distribution assets.

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 have been transferred to EPCOR and are now 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

Water quality is measured by analyzing the physical, chemical and microbial properties of the water. Health Canada has established science-based guidelines for drinking water known as The Canadian Drinking Water Guidelines (CDWG). These guidelines set the maximum acceptable concentrations (MAC) of chemical, microbial and radiological contaminants found in water. They also address aesthetic water quality issues such as colour, taste and odour.

Canmore Water Treatment Plant continues to produce excellent water relating to microbiological parameters and meeting all regulatory requirements.

Protecting public health is the priority for EPCOR and water quality is monitored and continually enhanced through diligent operations and high quality standards. 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 Laboratory 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 and grit separator sand outfalls.
- Regulatory and operational reports required on a monthly basis or on an as-needed basis were submitted on schedule.
- Submitted to Alberta Environment applications for both the Water and Wastewater approval renewals.
- 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.

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- Scheduled cleaning and flushing of the sanitary mains was completed, which included the entire valley floor.
- Annual inspections and adjustments to most pressure reducing valves complete, with new settings entered into the hydraulic model.
- Operational gains were made in 2008 through the concerted effort to calibrate the Synergy hydraulic model, and balance the pressure zones.
- 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, thereby advancing their qualifications and deepening the operation team's credentials.
- EPCOR's Edmonton Quality Assurance department conducted a proficiency laboratory audit at the Canmore Lab.
- Canmore OPS lab analyzed Alberta Environment's regulatory proficiency testing samples in March and April.

## QUALITY AND EFFICIENCY INDEX

ACTIVITY	ACTUAL VALUES						TARGET VALUES
	2002/ 2003	2004	2005	2006	2007	2008	
Quality Assurance & Quality Control Measures	461	1256	1268	1065	2433	2320	300
% Completion of Preventive Maintenance (PM) Activities	85%	100%	100%	100%	100%	100%	100%
% Completion of Contract Reporting Requirements	89%	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 or 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.
- EPCOR conducted a comprehensive Internal Site Assurance Team audit at the Canmore facilities reviewing O&M, Safety and Security and received the highest rating of "adequately managed".
- Watershed Protection signage was erected along the Rundle forebay.

### REGULATORY AND ENVIRONMENTAL INDEX

ACTIVITY	ACTUAL VALUES						TARGET VALUES
	2002/ 2003	2004	2005	2006	2007	2008	
Violation to the Approval to Operate License	1	13	5	4	3	3	6
Environmental Releases	4	7	2	0	8	3	9
Proactive Activities	8	32	15	6	10	16	9
Completion of Required Regulatory Reporting	100%	100%	100%	100%	100%	100%	100%

#### Summary of Violations

- Failure to complete 1 total phosphorus test.
- Failure to meet reporting requirements and approval of BOD's and CBOD's.
- Failure to meet reporting requirements, failed to record effluent on WW flow form.

#### Summary of Releases

- Sanitary collection system leak.
- Wet well overflow due to power loss.
- Influent wet well overflow.



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## 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 relating to water services, 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.
- Sponsorship of the Waterlutions Workshops and Youth Conference.
- EPCOR Essential Volunteers Program – Helping Hands Grant.
- Distribution of conservation DVD’s “Places of Green” and “Every Drop Counts”, project highlights the importance of preserving our precious water resources and demonstrates EPCOR’s commitment to water conservation initiatives.
- 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 Illusions Gymnastic Club.
  - through the Youth Excellence Award, EPCOR provided funding a youth attending the Royal Winnipeg Ballet summer school during the summer to further her dancing pursuits.
- Supporter of the United Way with employee donations being directed to organizations of their choice.
- Encourage participation in the Corporate Challenge events.

### CUSTOMER SERVICE INDEX

ACTIVITY	ACTUAL VALUES						TARGET VALUES
	2002/2003	2004	2005	2006	2007	2008	
% of Service Outages Restored in Less than 24 hrs	94%	100%	100%	100%	100%	100%	90%
External Customers Satisfaction Survey	92%	95%	N/A	N/A	94%	N/A	80%
Community Events	12	11	9	13	10	10	4
Internal Customer Satisfaction	100%	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 including chlorine handling, transportation of dangerous goods, WHIMIS, etc.
- 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.
- 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	2008	
Safety related Training (hrs/employee)	12.3	24.3	37.8	13	37.8	55.2	8
Preventive Activities	58	59	199	193	132	115	55
Safety Meeting	12	11	12	12	12	12	12
Lost Time Incidents	0	0	1	0	0	0	0



## CAPITAL AND REHABILITATION PROGRAM

### HIGHLIGHTS

- Wastewater Treatment Plant Expansion included the construction of an emergency storage tank (~375M<sup>3</sup>) which will provide storage for influent flows during power outages and flow balancing if required. This project was substantially completed by the end of 2008. The expansion also included the construction of 2 new Biofor filters (C&N), a recirculation system and a new process water line (W3) to increase capacity of the Wastewater Treatment Plant.
- 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.
- Continued the construction of a multiphase upgrade of Three Sisters Drive / MacDonald Place. This is 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 may 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 installing a security fence around Pump House #4.
- Continued the Watershed Protection project by installing a number of Watershed Protection signs around the Rundle Forebay to raise the public's awareness of the surrounding watershed.
- Cross Connection Control program continued with a comprehensive mail out to all buildings that use a backflow preventer in order to educate the owners of the purpose of the units and the requirement for annual inspections and testing.
- The LS#5 catchment area (Larch), Rundle Drive, 900 block of 14th Street and all areas considered by the Town for repaving were flushed and cameraed. A number of large sanitary leaks (inflow) were identified and scheduled for repair.
- Lift Station #8 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.





- PRV #15 was rebuilt.
- 2 hydrants were replaced.
- 3 valves were replaced.
- Elk Run Blvd sanitary forcemain was repaired.
- Lift Station #1, two pumps were rebuilt.
- Lift Station #2 pump was rebuilt and level control upgraded.
- Lift Station #7 pump was rebuilt.
- Pumphouses #1 and 2, Lift Stations #4, 5, 6 & 7 were painted.
- Lift Station #8 pump was rebuilt.
- Rummel Place and Olympic Drive storm systems were cameraed.
- Pumphouse #2 NIAD system was upgraded, UV system was overhauled and the chlorine system valves were replaced.
- WWTP belt filter press was overhauled.
- WWTP backwash waste pit pump 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.



## WHAT'S AHEAD

### QUALITY AND EFFICIENCY

- Increased focus on reducing system water loss. EPCOR and the Town are working towards a regional solution for biosolids management.
- The Town was given direction by Council to enter into contract renegotiations with EPCOR for continued utility operations services.
- 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.

### CUSTOMER CARE

- Community activities will include EPCOR's Road to Excellence, School Education Program, Comedy Cares, Canmore Children's Festival, and Employee volunteerism through EPCOR's Helping Hands Grant.
- Customer Satisfaction Research – 2007 found ninety-four percent (94%) of Canmore residents are satisfied with their water service supplier overall. Follow-up research is scheduled for 2009.
- Continued customer communication with additional priority placed on water efficiency education.
- A number of key staff will be attending specialized training in Vancouver in the repair and maintenance of Pressure Reducing Valves.

### 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.
- A joint rescue exercise will be conducted with EPCOR, the Fire Department and EMS to further training in confined space rescue.
- EPCOR is hosting a safety presentation in the fall of 2009 featuring real-life stories involving fatal or near fatal on-the-job accidents. Town of Canmore staff will be invited.
- 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.

## **CAPITAL**

- BVT relief sanitary main will be installed and in service by the end of 2009 to increase the sanitary capacity along BVT. The intent is to reuse an abandoned water main from 17th Street north to Ray McBride, by lining it with an Insituform process.
- Phase IV of the WWTP expansion will continue which will involve solids characterization and evaluation in an effort to select an appropriate technology to remove solids from the BAF waste stream.
- Based on the sanitary camera work done in 2008 repairs to the sanitary system outside of lift station #5 will be conducted.
- Security system upgrades will include bolstered security of the Grassi Reservoir.



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