

INTRODUCTION

The health of our water supply affects us today and tomorrow. That's why EPCOR goes above and beyond to protect the environment while ensuring future generations have access to clean, safe water.

EnviroVista Champion status is awarded to organizations that promote environmental leadership and recognizes environmental excellence. This is a voluntary provincial program sponsored by Alberta Environment and Parks (AEP) Partners in Excellence initiative. EnviroVista provides unique regulatory status for participating Alberta industrial and manufacturing facilities, including municipal water operations.

EPCOR's Waterworks system was granted EnviroVista Champion Status on June 1, 2011. In our stewardship agreement with the province, EPCOR committed to a set of environmental initiatives that go above and beyond the typical approval-to-operate requirements for municipal water operations.

Many of these commitments are programs and activities EPCOR has had in place for a long time. They are simply how we operate. The Stewardship Agreement recognizes continuous improvements and commits EPCOR to maintaining certain programs, initiatives and performance levels going forward.

Why did we make these commitments? Because we know that continuing these programs is the right thing to do to continue to improve and protect the environment and public health.

HIGHLIGHTS OF 2016 ENVIROVISTA INITIATIVES AND CHALLENGES:

- EPCOR's Drinking Water Treatment Plants completed a second year of **ISO14001** Environmental Management System **registration**. The Distribution and Transmission System completed their registration requirements in early 2017 and will be fully registered to ISO14001 by mid-2017.
- EPCOR received approval to move forward with a comprehensive multi-year water quality monitoring program on the North Saskatchewan River that will provide a better assessment of source water quality and river health. This first-of-its-kind monitoring program will begin in 2018.
- EPCOR initiated a Green Energy initiative that will use green energy sources to supply up to 10% of the energy used to supply drinking water to Edmonton customers. EPCOR has begun to evaluate solar panels as an option to produce this power.
- Energy efficiency was lower than in previous years. Cool and rainy summer weather resulted in a decrease in water demand and lower pumping efficiency, which impacted our ability to meet the system energy index target of 665 kWh/ML.
- EPCOR's energy efficiency initiatives expanded to include the use of energy within the buildings we operate in addition to energy used to pump water at the water treatment plants, the field reservoirs and the booster stations.
- The **Drinking Water Safety Plan was once again reviewed and expanded**. We identified new action plans to better mitigate 14 risks. Action plans were also completed for six risks that were already in the plan.
- EPCOR developed a Water Emergency Exercise Plan for the regional water system with AEP and Alberta Health Services. As part of this plan we co-led a "Troubled Water" desktop emergency exercise involving multiple agencies.
- Our team replaced 292 old lead service lines in Edmonton making 2016 our most successful year since the program began in 2008. We have now replaced 1512 old lead service lines since 2008.
- As part of the Random Day Time (RDT) sampling program, we collected and tested 316 water samples from across the City for lead at the tap. This annual testing program helps us to better assess lead levels in all types of homes and the need for better corrosion control that will reduce lead release from lead service line pipes and plumbing components within homes (like old lead-tin solder and high-lead brass).
- Completed a drain audit at the water treatment plants and reservoirs to identify any piping cross connections that might result in environmental releases to the river or creeks;
- **Edmontonians, on average, used 304 litres of water per person per day (L/p/d)**. This is well below the Alberta Urban Municipality Association (AUMA) water use target of 341 L/p/d by 2020; To support water conservation across the City we initiated an information program aimed at addressing high water consumption in schools and subsidized housing.
- EPCOR achieved the lowest level of water loss in the distribution system with an **infrastructure leakage index (ILI) of 1.06**. The industry bench mark is less than 3.0;
- We expanded monitoring of the environmental impacts of releases of treatment solids to the river from the water treatment plants to include an assessment of the impact on the benthic organisms that live in and on the river bed.

River conditions in 2016 were very challenging and we were not able to convert the water treatment plants (WTPs) to direct filtration operations until much later than planned. As a result, we did not meet our goals to continuously reduce the amount of the solids released to the river.