



## **Case Study:**

### **Long-term Integrated Water Conservation in the Town of Okotoks, Alberta<sup>1</sup>**

**By Jennifer Wong**

The Town of Okotoks is a Canadian leader in integrated resource management and is one of the first communities in the world to make a conscious decision to limit growth based on an established environmental carrying capacity (Okotoks 2006a). Okotoks is located in the Sheep River Valley in the Alberta Foothills. The Town is home to 19,996 residents<sup>2</sup> and is the second fastest growing community in Canada with a 46 percent growth rate since 2001. Okotoks has set a specific responsible water use target of 315 lpcd (2008) and based on this target, estimates that the Sheep River has the capacity to supply water and accept treated effluent from a community of approximately 30,000. The community development plan caps Okotoks' population at this size. Okotoks is facilitating sustainability on the watershed scale with the Tri Community Watershed Initiative, which coordinates water conservation efforts with neighboring communities Turner Valley and Black Diamond (Okotoks 2006c). Presently individual living in Okotoks consume 373 lpcd for residential and non-residential uses, which represents a 30 percent reduction from 2000 levels (Okotoks 2008). By comparison, the average Calgarian living 50 km north of Okotoks consumes 510 lpcd (Okotoks 2006e).

Okotoks operates a self-funded utility system that is 100 percent metered and moving towards a 100 percent consumption based rate structure (2006b). Okotoks conservation initiatives target residential use, which accounts for approximately 87 percent of municipal water use (Okotoks 2007). In 1999, Okotoks began an award winning water and waste conservation initiative called *For Future's Sake*, based on community-based social marketing principles. In 2001 the Town introduced an outdoor watering bylaw restricting garden watering practices, creating four restriction levels based on rainfall and river flow conditions. The town introduced a water fixture bylaw in 2002 requiring low-flow water fixtures in all new home and renovation construction. Okotoks has also incorporated Xeriscape plantings in municipal landscaping projects and has an ongoing program to find and fix leaking municipal water pipes (Okotoks 2006b).

Okotoks' Drake Landing one of the first large-scale subdivision to adopt mandatory water conservation measures through a legally-binding Restrictive Covenant. This agreement permits the developer to increase density to from 700 to 836 units. Drake Landing will exceed the community's 315 lpcd conservation target by 20 percent and will use 20 percent less water than the Canadian average (Okotoks 2006b).

<sup>1</sup> BEACON to SBP: we should include budget, staffing information and a brief explanation of Okotoks relationship with EPCOR if the info is handy.

<sup>2</sup> (note in website text: 2008 Municipal Census)



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Okotoks is a leader in whole system management demonstrated by the conversion of its wastewater system into an Integrated Waste Water Treatment Plant (WWTP) that processes sewage into compost. This innovative initiative was \$13 million cheaper than initial estimates of conventional methods and has resulted in an annual 30 percent energy use reduction, 28 percent greenhouse gas reduction and 4200 tones of productive compost (Okotoks 2006f; EPCOR).

### Sources:

EPCOR Web Site. Available at: <http://www.epcor.ca/en-ca/about-epcor/operations/operations-alberta/water-wastewater/Okotoks/Pages/default.aspx>

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Town of Okotoks. (2006a). *2004-2006 Municipal Development Plan Review*. Available at: [http://www.okotoks.ca/pdf/devserv/planning/G3\\_MDP\\_Rev04-06.pdf](http://www.okotoks.ca/pdf/devserv/planning/G3_MDP_Rev04-06.pdf)

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Town of Okotoks. (2006d) Available at: <http://www.okotoks.ca/sustainable/Water/wastematters.asp>

Town of Okotoks. (2006e) Available at: <http://www.okotoks.ca/sustainable/Water/perspective.asp>

Town of Okotoks. (2006f) Available at: <http://www.okotoks.ca/sustainable/Water/wastematters.asp>