



Federation of Canadian Municipalities

Fédération canadienne des municipalités



CH2MHILL

2006 FCM-CH2M HILL Sustainable Community Awards Winners – Project Summaries

The Federation of Canadian Municipalities (FCM) and CH2M HILL Canada established the FCM-CH2M HILL Sustainable Community Awards in 2000 to recognize and celebrate municipal leadership in championing sustainable community development and promoting best practices in addressing environmental issues in municipal operations. Along with environmental benefits, winning projects demonstrate the economic and social advantages of sustainable community development.

FCM's Green Municipal Fund (GMF) and CH2M HILL Canada Ltd. are the primary sponsors of the Awards. Transport Canada sponsors the Sustainable Transportation category. The Affordability and Choice Today (ACT) program is sponsoring the new Residential Development category.

FCM has been the national voice of municipal governments since 1901. The Federation is dedicated to improving the quality of life in all communities by promoting strong, effective and accountable municipal government. FCM supports sustainable community development by providing a wide-range of resources including capacity building, networking tools and financial services.

CH2M HILL is a global full-service infrastructure and environmental firm providing services in water, transportation, energy and industrial systems to public and private clients in numerous industries. CH2M HILL is committed to developing innovative, practical and sustainable solutions to serve the needs of communities worldwide.

The winners of the 2006 Sustainable Community Awards demonstrate best practices in the following categories: Buildings, Solid Waste, Sustainable Community Planning, Water, Wastewater, Residential Development, Sustainable Transportation, and Energy.

Buildings

REGIONAL MUNICIPALITY OF WATERLOO, ON (pop. 438,515)

Emergency Medical Services (EMS) Headquarters and Fleet Centre

Waterloo is home to Ontario's first Leadership in Energy and Environmental Design (LEED) Gold building. Waterloo's EMS building is a model of energy efficiency, cutting energy use by more than 60 per cent with an array of best practices including a super-efficient building envelope, improved ventilation systems, and water and lighting conservation measures. Oriented to take advantage of the sun, the building uses a brand new photovoltaic system, manufactured by an Ontario company, which provides half of the building's peak electrical demand. In addition, it houses a new deployment centre for ambulances. The success of the project has convinced regional council to require a minimum LEED Silver standard for all new municipal buildings.

Solid Waste

CITY OF TORONTO, ON (pop. 2,481,494)

Integrated Waste Diversion Plan

Before 2000, Toronto's residential waste diversion rate was 28 per cent, with only limited curbside collection programs. In only five years, the City's integrated waste reduction plan has doubled waste diversion rates to 56 per cent. Its collection bylaw was amended to make recycling mandatory throughout the City and bylaw officers were hired to help educate residents about the need to recycle. Toronto also boasts the largest organics program in North America with over 500,000 households participating, including 30 multi-unit buildings. Toronto's composting facility receives 25,000 tonnes of organic material annually and the City is now studying how it could use the methane from the composting process as a source of heat and power. The City's goal is to divert 60 per cent of waste from landfill in 2006 and 100 per cent by 2012.

Sustainable Community Planning

CITY OF MONTREAL, QC (pop. 1,812,723)

Montreal's First Strategic Plan for Sustainable Development

Stemming from an impressive community engagement process, which brought together more than 70 organizations to work in partnership with the City, Montreal has identified two dozen projects to tackle in the first year of its five-year sustainability plan. Air quality is a top priority for the City so several of the plan's initiatives focus on sustainable transportation, including an anti-idling bylaw, improvements to cycling infrastructure and purchasing energy-efficient vehicles for the municipal fleet. The plan also includes programs to reduce waste and water use, increase energy efficiency, and implement an environmental management system. Twenty environmental indicators have been identified that will help Montreal monitor its progress and the City will publish the results in an annual environmental status report.

Sustainable Community Planning

DISTRICT OF UCLUELET, BC (pop. 1,559)

Walk the Talk, Ucluelet's Official Community Plan

Declining forestry and fishing industries prompted Ucluelet to turn to tourism for its primary economy. But that decision came with development pressures, which could impact the area's natural beauty, the very reason why tourists visit. With only limited resources and a one-person planning department, the community devised an official plan that requires developers to include social and staff housing, to allow for public waterfront access and to use alternative development standards, such as permeable surfaces to reduce runoff, and Leadership in Energy and Environmental Design (LEED) for buildings. Ucluelet provides developers with density bonuses in exchange for more parkland, amenities or cash. Ucluelet has already received \$9 million in combined parkland, cash and amenities, such as a new skateboard park and basketball court, because of this arrangement.

Wastewater

CITY OF EDMONTON, AB (pop. 666,104)

Gold Bar Wastewater Treatment Plan Industrial Water Re-use

Rather than draw 15 million litres of fresh water per day from the North Saskatchewan River for its refinery process, Petro Canada and the City of Edmonton developed an innovative partnership to reuse wastewater effluent. The newly constructed membrane treatment facility at the Gold Bar plant, which also uses methane gas from wastewater sludge to heat the facility, is connected to Petro Canada's refinery via a 5.5-kilometre pipeline. Once the effluent reaches the refinery, it is used to produce hydrogen and steam, which in turn is used to make low-sulphur diesel fuels. With the pipeline running through a river valley that contains three local parks, a portion of the reused wastewater is also used to stock the parks' lakes and ponds and for irrigation and snowmaking.

Residential Development

CITY OF SURREY, BC (pop. 347,825)

East Clayton Neighbourhood Concept Plan

The 250-hectare neighbourhood of East Clayton in Surrey was designated as "urban" in 1996, setting the stage for an unprecedented new neighbourhood plan to increase residential density, promote social cohesion and maximize affordability and walkability. Different housing zones were created, each with guidelines on lot configurations, including widths and setbacks, allowing developers to choose the housing mix. A "special residential" category was included that allows small-scale businesses to be combined with residential units. Sixty per cent of the lots have rear lane access for cars, which allows property owners to build secondary units at the rear. Seventy-five per cent of East Clayton is already developed or under construction, and housing density, which is expected to gradually increase over time, is already double that of other urban areas in the City.

Sustainable Transportation

CITY OF VANCOUVER, BC (pop. 545,671)

Southeast False Creek Sustainable Transportation Strategies

Once this 32-hectare site is fully developed in 2009, Southeast False Creek (SEFC) will include a multitude of sustainable transportation features for its 14,000 new residents. As the home of the 2010 Olympic Athlete's Village, SEFC road infrastructure is designed with pedestrians and cyclists first in mind, followed by transit, service vehicles and, lastly, automobiles. The surrounding neighbourhood will be designed to provide residents with all of their daily and weekly services within walking distance from all points in the community. Two nearby rapid transit lines, a new cross-town route, streetcars and ferries will facilitate easier commuting. It is also the first community in Canada to provide car-sharing spaces as part of the development process. The City estimates that, once all strategies and transportation features are implemented, at least 60 per cent of daily trips by residents will be by non-automobile modes.

Water

MUNICIPALITY OF CHELSEA, QC (pop. 6,500)

H₂O Chelsea

Chelsea sits atop the Precambrian Shield of Gatineau Park, which not only prevents the municipality from developing a water or sewage system but also means that residents must rely exclusively on groundwater for their drinking water supply. Recognizing the need to protect this precious resource, H₂O Chelsea aims to maintain the area's high quality of water by providing educational initiatives for residents. The program is delivered in partnership with a local non-government organization and the University of Ottawa. Since 2003, almost 1,000 wells have been inspected and more than 1,000 residents have been surveyed about their water use. Results from that survey prompted Chelsea Council to require that developments on all parcels of land four hectares or larger must demonstrate that groundwater supply is sufficient to supply the proposed number of residences.

Energy/Renewable Energy

CITY OF CALGARY, AB (pop. 878,866)

Green Power Initiative – Target -50 City of Calgary Climate Change Action Plan

Calgary has set its sights on a 50 per cent reduction of greenhouse gas emissions by 2012 and, judging by its track record, the City is on its way to meeting that goal. The first phase of its corporate climate change plan included the first-ever wind-powered light rail transit system, the installation of methane gas capture systems at its landfills and wastewater treatment plant, and a building retrofit program to improve energy efficiency. These measures have already cut the City's emissions by more than 80,000 tonnes. Moving into the second phase, Target -50, the City signed a 20-year agreement with its wholly owned subsidiary, ENMAX Energy Corporation, to provide 75 per cent of its electricity requirements from renewable sources, a move that will decrease emissions by more than 200,000 tonnes. The investment outlined in the agreement supports the development a 37-turbine wind farm.

Energy/Renewable Energy

TOWN OF OKOTOKS, AB (pop. 11,664)

"Harnessing the Sun", Okotoks' Solar Initiatives

The solar energy that falls on Alberta every day equals the energy from all other fossil fuels extracted each year in the province, so it's easy to see why Okotoks chose to harness the sun in so many of its projects. From a solar-powered ice resurfacing system, district solar heating systems, to a solar wall, Okotoks is Canada's leading municipal user of solar energy. Drake Landing is the town's latest project, a 52-home subdivision that will meet 90 per cent of its space and water heating needs with solar energy, reducing GHG emissions per home by five tonnes. The energy will be stored in underground boreholes during warmer months for reuse in winter. This is the first time such technology has been used in North America.