

Canada's Water Leaders Working Together to Find Solutions to Climate Change

Too little water, too much water, or both — climate change can lead to extreme weather swings.

Last year, farmers near Windsor, ON experienced an acute drought in early spring. In July the rain returned along with sweltering heat waves. Two tornadoes touched down a month later, damaging homes and businesses in their path. Fall brought yet another surprise, when a torrential rainstorm deluged the region, causing nearly \$108 million in flood-related damages.

Like Windsor, many communities across the country are experiencing extreme weather swings. Regions like B.C.'s rainforests and the Atlantic coast, which have not typically been prone to drought, will need to plan for a 'new normal' that includes both flooding and water scarcity. Other regions will need to plan for temperature extremes, like the prolonged cold spell that caused pipes to freeze across Manitoba and Ontario, and the hot, dry conditions that fuelled a catastrophic wildfire in Fort McMurray, AB.

The cost of water crises can be profound. In 2013, flooding in Southern Alberta caused \$1.72 billion in insured damages and stranded more than 100,000 people. That same summer, an extreme rainstorm in Toronto cost \$943 million. The Fort McMurray wildfire is the most expensive dis-



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aster in Canada's history, with current estimates exceeding \$3.58 billion. Developing resilient systems will be essential to controlling costs, protecting public health, and minimizing disruption. Our drinking water, wastewater, and storm water systems are vitally important investments.

Finding solutions to climate change will require collaboration and leadership

Canada's water professionals have long recognized that it's not a matter of if climate change's impacts will be felt, but when and how. Close to a decade ago, Canadian Water Network created the Canadian Municipal Water Consortium, to bring Canada's water leaders together to address these challenges. Lou Di Gironimo, the General Manager of Toronto Water and one of the Consortium members, explains: "Like many municipalities, Toronto has experienced widespread surface and basement flooding from more fre-

quent extreme storms. Building resiliency into the existing storm drainage and sewer systems is a high priority and forms a cornerstone of Toronto's climate change adaptation strategy. The consortium is strategically positioned to engage municipalities in the dissemination and sharing of best practices, lessons learned and new technologies, as we work collaboratively to build resiliency into municipal infrastructure."

In May, water leaders from the Canadian Municipal Water Consortium will convene at Blue Cities 2017 to discuss proactive strategies for water management. They've also invited scientists, industry innovators, and utility leaders from the United States to share their knowledge and experience.

The future is going to hold some surprises, but I'm confident we can be ready. Canada's cities are tapping into their collective experience, and leveraging science and innovation to inform the difficult decisions that need to be made. Given the uncertainty that lies ahead, we'll need a clear picture of what we know (and don't know) in order to make the best choices, including how we will pay for them. Armed with this information, our elected officials must lead with confidence — for the sake of our environment, our economy, and public health. **■**

Bernadette Conant



TIPS



Steve Gombos
Manager, Water Efficiency,
Region of Waterloo

WATER CONSERVATION TIPS

Whether you're a homeowner or business owner, it's important to remember that water conservation also means energy conservation.

Beyond the obvious things, like using 4.8-litre toilets, low-flow showerheads, and buying efficient front-loading washing machines, water consumption all through the system can be reduced to save energy.

The treatment and distribution of drinking water is energy-intensive, and a hidden contributor to greenhouse gas emissions. If you're buying plumbing fixtures, look for WaterSense-labelled products, which are proven to be 20 percent more water efficient without sacrificing performance. Metrics like gallons per minute (GPM) are important to note as well, and one should look to use fixtures in the 1-2 GPM range. Seek EnerGuide and Energy Star-labelled products to further maximize water and energy savings.

If you have a water meter, look closely at water bills. If your consumption suddenly or gradually goes up, you probably have a leak. Leaks can be costly, especially if you're not aware of them. A common culprit in both businesses and homes is leaking toilet flappers. An unnoticed toilet leak can cost as much as \$40 per day in wasted water. A simple way to check for leaking toilets is to put a few drops of food colouring in the tank and to wait and see if it leaks down into the bowl. To find out how much water you're losing to leaks, take meter readings (measured in cubic meters [m³], which is 1,000 litres) before and after bed, when there should be no consumption.

Beyond fixing leaks and using efficient appliances and fixtures, the best way to conserve water is to cut back on irrigation and other waste. A lawn only needs water once per month to survive, despite turning brown during dry spells. And if you take shorter showers, you will save lots of water and energy at the same time. **■**

Steve Gombos

Canadians Can Make a Difference By Buying an Electric Vehicle Now



The Minister of Transport, Marc Garneau, at the EVS29 Trade Show.

Climate change is an important issue that Canadians need to address now more than ever. We have all heard the long-term objectives and various methods discussed, and in the fight against climate change, there are few concrete actions that everyday citizens can take to make a difference. Personal transportation is one area where our actions have direct consequences. Accelerating the shift to low- and zero-emission vehicles could be a crucial step in achieving our climate change goal of reducing greenhouse gas (GHG) emissions.

More and more electric vehicle (EV) models are now available, with improved range and increasingly affordable prices. In Canada, there are currently approximately 30,000 EVs on the road, which is a good start. At Electric Mobility Canada, we work with various stakeholders to accelerate EV adoption in all modes of transportation: individual vehicles, car sharing, fleets, and public transit. We are planning for a strong growth over the expected transition period of the next three to five years.

More awareness and communication are needed to reach Canadians and to show



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them the benefits of EVs, guiding them with credible information and facilitating test drives. New cars are bought on a daily basis, and EVs should be prominently promoted to gain a greater share of the market. Trying out an EV is often the first key step toward adoption. Once people know more about an EV's technology, the pleasure of driving it, the savings ahead, and the environmental benefits, they're much more likely to consider buying one. As for questions on range, people should take into account their driving patterns, know that most of the charging is done at home, and determine if workplace charging is a possibility. You can always count on public charging if needed as well, as there are now more than 4,000 public charging ports available in Canada.

At the provincial level, Quebec, British Columbia, and Ontario are leading the way in offering programs for EV buyers. These programs help consumers adopt EVs by offsetting some of their costs, for example by offering rebates to buy an EV and install home charging stations. Although EVs still carry a price premium compared to conventional gas-powered vehicles, they offer the potential for real economies. Fuel savings, low-cost maintenance, and even insurance rebates make buying an EV a smart option for all Canadians. Government-funded rebate programs and incentives, together with the development of new public infrastructure including a network of public fast-charging stations between and within cities, are making EVs more accessible and cutting down barriers for many shoppers.

At the federal level, public infrastructure has received an initial \$62.5 million investment which started in 2016 with the beginning of the implementation of fast-charging infrastructure on strategic complementary sites.

To achieve our nation's objectives in GHG reductions, government and industry are working together to increase availability and awareness of EVs. Through a partnership, the Ontario government is innovating by bringing together diverse strengths of many stakeholders to work toward innovative solutions.

More concrete actions are needed to support all initiatives. Cities, consumers, and public fleets can all play an active role in the adoption of EVs by leading by example and helping to showcase the benefits of this new technology. EV-ready new and existing homes, multi-unit residential buildings, and workplaces, including some government agencies, are all on the agenda.

Electric vehicles come with so many benefits. They're an innovative and efficient technology that provides smart energy management, cleaner air, and cost savings. It's time to take action and get results, and to lead the way to a sustainable future. **■**

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