

## Report calls for province to fix wasteful water systems

by Don Wall Jun 8, 2017

Construction sector stakeholders with a keen interest in water and wastewater policy are praising new water infrastructure, conservation and energy recommendations presented by Ontario's environmental commissioner in a recent report.



The Ontario Sewer and Watermain Construction Association (OSWCA) and the **Residential and Civil Construction Alliance of Ontario (RCCAO)** both had direct input as commissioner Dianne Saxe and her team prepared *Every Drop Counts: Reducing the Energy and Climate Footprint of Ontario's Water Use*, released at a Queen's Park media conference May 30.

Saxe said Ontario's municipal water and wastewater systems have unnecessarily high energy use and greenhouse gas (GHG) emissions and demand too much fresh water. The systems were called energy-efficiency laggards and municipalities could save significant water, energy and money just by reducing leaks, which register as high as 40 per cent of water flows in some municipalities, the report said.

Saxe blamed "inadequate funding, data, incentives and attention" for the problems and criticized "a focus on short-term capital cost instead of lifecycle cost including operating costs."

Water and sewage treatment facilities and pumping facilities in Ontario used about 1,800 gigawatt-hours of electricity in 2011, equal to about 38 per cent of municipal energy consumption, the report noted.

Saxe also called on municipalities to move aggressively to transform waste plants into renewable energy centres, using sewage waste and other organics such as food waste and agricultural residues to create biogases.

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**Giovanni Cautillo**

Ontario Sewer and Watermain Construction Association

With provincial and federal governments pledging to spend billions on water and wastewater infrastructure, it is a "once-in-a-lifetime" opportunity to cut the energy footprints of municipal systems and help Ontario's water infrastructure run more cheaply and efficiently, she said.

"The International Energy Agency in its report this year did make a major focus on water and wastewater in the energy sector because they see it as having enormous implications around the world," she said. "The energy footprint of water is rising and the water footprint in energy is rising and both of those are going to be problematic as the population grows."

"It sounds like the planets are aligning, and people are starting to take notice of an asset that for decades they have not taken notice of unless it was broken," said Giovanni Cautillo, OSWCA executive director.

"Maybe there is an appetite to change direction."

The RCCAO and OSWCA commissioned comprehensive studies on water policy in 2009 and 2016 respectively. In December, Cautillo, the RCCAO's Andy Manahan and the authors of the 2016 report, Mike Fenn and Harry Kitchen, met with a trio of advisors from the environmental commissioner's office to discuss such issues as full-cost water and sewage pricing, service in remote communities, storm and sewer pipe separation, asset management and system leakage, Manahan noted.

"Overall they have done a really good job of making the connection between leaky water systems and energy usage, but with the added bonus, we certainly didn't have this prominently focused on in our report of 2009, there are a number of solutions with respect to the circular economy," Manahan said. "That biogas from sewage I thought was really helpful."

"I think they carefully read previous reports and have done their research. From my perspective, conservation is such an important issue I think the municipalities are going to have to start addressing how water and sewer infrastructure is integrated with energy planning, this is going to be a whole new area."

The commissioner said municipalities could meet some non-potable water needs using treated wastewater effluent, saving energy and money and cutting GHG emissions.

"We see it as part of the cycle," said Cautillo. "If they are able to divert a portion of the water, instead of being treated, to water a golf course, or used to cool down an industrial plant, and it is not being consumed and doesn't affect food products, why wouldn't we look at these alternatives?"

Sewage plants in Denmark and California are leading the way in converting sewage to biogas and a project in Saint-Hyacinthe, Que. is setting the standard in Canada, Saxe noted.

"There are hundreds of sewage plants in Ontario, there are a lot of opportunities," she said.

Energy in sewage is "really easy to get at and it does not require fancy new technology."

The commissioner said proper asset management in municipalities across Ontario would help ensure infrastructure investments are made on the right projects.

"We are at the point of a generational one-time injection of billions of dollars into water and wastewater," said Saxe. "It would be terrible to waste that opportunity and not think of energy costs when we are choosing how to spend that money. So we have been recommending the provincial government shouldn't give money for capital projects without requiring municipalities to think first about energy and water conservation."