



Leaky city plumbing raises Ontario water bills by up to a third on average, new study shows

56-page RCCAO report says hundreds of millions of litres of drinking water wasted daily

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This watermain break along a stretch of Eglinton Avenue in Toronto closed a 100-metre stretch of busy thoroughfare in 2018. A new study says the city has 1,400 watermain breaks a year, almost four a day. (Tony Smyth/CBC)

Aging, leaky and crumbling pipes cost the average household in Ontario up to a third more on its monthly water utility bills, according to a new report by a think-tank created by a consortium of provincial construction unions and contractors.

50 and not so fabulous:

The report said nearly half of all water mains in Ontario are at least half a century old, which is the average age for failure.

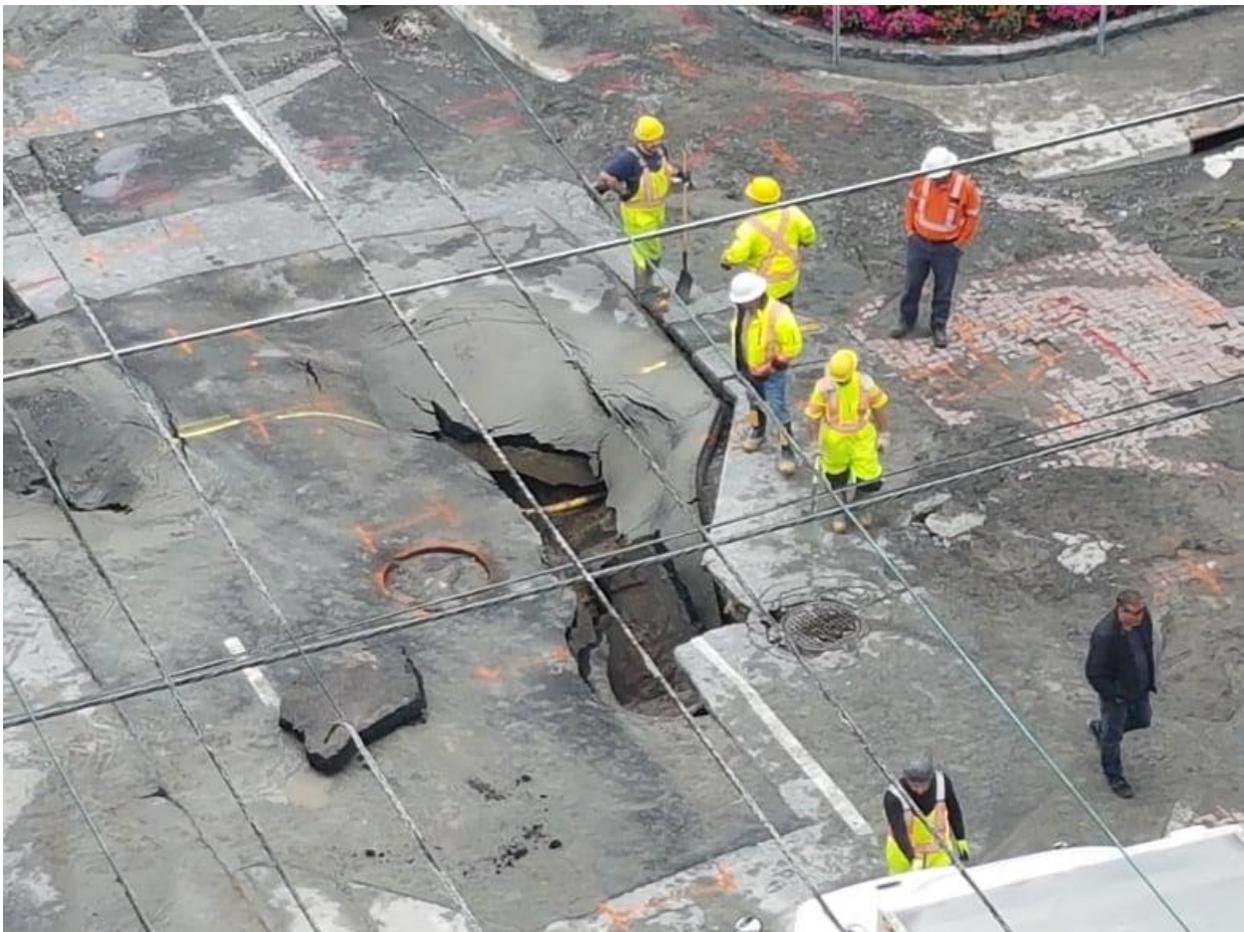
The study, on the state of the province's water infrastructure, looked at problems within Ontario's 444 municipalities and doesn't include Indigenous communities, which have [struggled with access to clean, reliable drinking water](#) for decades.

The [56-page report](#) was paid for and published this month by the Residential and Civil Construction Alliance of Ontario (RCCAO). It suggests communities need more money to maintain, repair and replace aging and leaking plumbing that wastes hundreds of millions of litres of clean drinking water a day, and taxpayers tens of millions of dollars a year.

In Toronto alone, the study said, it's estimated the city has been losing 103 million litres of clean water per day for the past 15 years.

'Huge amount of waste'

"It's a huge amount of waste, not only in the amount of water being spilled, but also in the energy being used to pressurize these pipes," said Tamer El-Diraby, a professor of civil engineering at the University of Toronto and the study's lead author.



This 2018 image shows a collapsed section of O'Connor Street in Ottawa, as a result of a watermain break. (CBC)

It's not just energy and water, but also repairs and time. Between Canada and the U.S., the study points out, the two countries average 700 watermain breaks a day, costing more than \$10 billion a year to repair. A British study estimated traffic delays from utility construction cost the country \$2.3 billion US each year.

Leaky pipes:

The cost of water leakage makes up to a tenth to a third of the average water bill in Ontario. In some municipalities, up to half the bill was due to leaky plumbing, the study said.

Watermain breaks however, are only part of the story when it comes to leakage. The study suggests a hole in a water pipe as small as 1.5 mm can waste up to 3,570 litres of water in 24 hours and cost \$14.54 a day.

Toronto loses anywhere from 10 to 15 per cent of total drinking water supply to leakage each year, or about 103 million litres per day. Across Ontario, system leakage is estimated at anywhere between 10 to 40 per cent, according to the study.

El-Diraby said it was too difficult to rank which Ontario municipalities were doing better or worse in terms of managing their water infrastructure with any kind of accuracy.

Bad pipes:

The study said Chatham-Kent had the highest portion of its water infrastructure in poor or worse condition, including 37 per cent that had 'expired.' In Windsor, 27 per cent of its plumbing is still operational, despite being 'beyond its useful life.'

Instead, he broke it down in terms of larger and smaller municipalities. While both are experiencing resource shortfalls in terms of managing their water systems, the problem is particularly acute in rural communities, where density is low and there are minimal resources and training to properly maintain a vast network of aging water infrastructure.

"They have this double problem," said El-Diraby. "They don't have enough money to do the most basic analysis and they also do not have the expertise to do that analysis."

While larger cities usually have the knowhow, they lack proper funding, according to El-Diraby, who points to London, Ont., as an example of a community blessed with a highly competent team that gets about half the funding it needs to do its job.

Municipalities don't have funds to replace old pipes

"They have 50 per cent or less than the money they need to keep the assets in good shape. So while we made great gains in the last 20 years since the days of Walkerton, with the current funding levels, it is expected the average quality of water and waste water assets in London is going to decline."

El-Diraby was referring to the [Walkerton water crisis](#) over two decades ago that caused Canada's worst e-coli outbreak.



Toronto loses 103 million litres of drinking water a day to system leakage, enough for the daily needs of 250,000 people or to fill 15,000 Olympic-sized swimming pools. (John Badcock/CBC)

According to the RCCAO report, a lack of money is the most chronic problem when it comes to the state of the province's water infrastructure.

One of the solutions would be to raise the price of water, which many municipalities are already doing. But El-Diraby points out that many municipal councils lack the will to raise prices lest they raise the ire of voters.

"We need to relook the funding scheme. This is not a call for privatization, but a call to rethink and innovate with new ideas."

Holey moley:

A hole as small as 1.5 mm in a water pipe wastes 3,570 L a day and costs \$14.54, the study said. A nearly 5-mm hole wastes 32,130 L in 24 hours and costs \$130.88.

He suggests municipalities start making water infrastructure [part of smart city systems](#), where city crews don't have to wait until a watermain break happens to fix aging pipes, or the pressure in the water system could be used to generate energy used in electric vehicles.

If that doesn't get people's attention, El-Diraby suggests ratepayers can avoid paying the one-tenth to one-third extra on their water bills if municipalities paid for repairs and replacements at the same rate.

"If the government takes the same amount of money, or even a fraction of that, and put it into fixing the pipes, we will not need to increase water pricing and we will not need to increase property taxes.

"We pay for the leakage no matter what, but it's more efficient if we direct this money not towards wasted water, but fixing the water system. The return on investment goes higher."