

# More than 640 Ontario schools and daycares failed lead tests in the past two years <sup>[1]</sup>

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## AVAILABILITY

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## EXCERPTS

Even though Ontario is recognized as a North American leader for ensuring kids have safe water to drink, according to newly obtained government data, more than 640 schools and daycares found lead levels in drinking water that failed to meet the provincial standard over the past two years.

Some schools, including Clemens Mill Public School in Cambridge and Robert Baldwin Public School in Milton found lead concentrations in water from individual faucets or taps between 100 and 300 times higher than the province's threshold of 10 parts per billion. Several others exceeded the standard by more than 10 times, including St. Vincent Catholic Elementary School in Thunder Bay, which failed tests both years.

These statistics - which were obtained by the Star and have never been released before - tell a mixed story, experts say. Ontario has the most stringent program in Canada for monitoring lead in drinking water at schools and daycares. Only 5 per cent of all facilities that submitted water lead tests between April 2016 and March 2017 failed to meet the provincial standard, and the province says that "flushing" taps by regularly letting the water run has in many cases effectively reduced concentrations.

This all suggests the province has made strides in addressing the problem over the last decade. "Every child in a child-care centre or school in Ontario is drinking clean, safe water," Ontario's Education Minister Mitzie Hunter said in a statement to the Star.

Some experts, though, say flushing is only a short-term solution. Of the roughly 350 schools and daycares that failed lead tests in 2016, about 100 failed the test after flushing. The rest were samples from "standing" water.

There is also no such thing as a safe level of lead exposure, health bodies like the World Health Organization and American Academy of Pediatrics agree.

Young children can absorb four to five times more ingested lead than adults, according to the World Health Organization, which also notes that at lower levels of lead exposure, which were previously considered safe, lead can affect children's brain development and result in lower IQ scores - effects that are thought to be irreversible.

After the Star spent a year trying to obtain data from the environment ministry that would show which schools failed lead tests, the province recently decided it would proactively publish the information online starting Friday.

While Ontario is doing better than most jurisdictions (it is the only province that requires schools and child-care centres to test for lead), its current standard for acceptable levels remains too high, said Bruce Lanphear, a Simon Fraser University health sciences professor and expert in the effects of toxins in children.

A federal-provincial-territorial committee is currently considering whether to lower the drinking water standard for lead to 5 parts per billion, which is half the existing standard and, according to Lanphear, more in line with the latest scientific evidence.

At that threshold, more than 800 schools and daycares would have failed to meet the standard in the 2016-17 fiscal year alone, government data shows.

The long-term goal, however, should be to reduce the threshold even further, to one part per billion, Lanphear said. In Ontario, this is currently a voluntary target.

It's likely that excess lead in a facility's drinking water got there by leaching out of the pipes, fixtures and/or service line, the ministry says.

As of 2007 provincial legislation required schools and daycares to test their water annually for lead. While schools were previously only required to test one tap a year, new regulations brought into force this summer require daycares and schools with a primary division to ensure every tap used for drinking and food preparation is tested by 2020. Other schools have until 2022 to do the same.

For each tap, schools are required to test two samples. The first, a "standing" sample, must be taken at a time when the plumbing hasn't been used for at least six hours and the second, a "flushed" sample, must be taken immediately after the first sample once the tap has been flushed for at least five minutes and then left unused for about half an hour.

"The vast majority of schools and child-care centres have found no problems with lead in their drinking water. Where there have been lead exceedances, facilities must take immediate corrective action to protect children as directed by the local Medical Officer of Health," said Ontario's Chief Drinking Water Inspector Orna Salamon in a statement.

Schools and daycares are particularly vulnerable to heightened lead levels because the metal can accumulate to very high concentrations while the water sits in pipes during vacations, said Marc Edwards, a professor of environmental and water resources engineering at Virginia Tech, adding, "It's unfortunate because you have the worst lead in water problems and the most at-risk population: young children."

Edwards said the results from Ontario are what he would expect to see. He added that he is more concerned with jurisdictions who do no testing at all.

School boards contacted by the Star said they took immediate steps to address high lead levels. Clemens Mill Public School in Cambridge, which found lead levels of 3,120 parts per billion in a flushed sample from one tap (the highest result in the 2016-17 fiscal year), retested the failing tap and passed. The school will now flush its taps daily for the next two years.

St. Vincent Catholic Elementary School failed more than 15 lead tests in the last two years, including one 2015 standing sample that found lead levels of 488 parts per billion and a 2016 standing sample of 348 parts per billion.

Pino Tassone, director of education for the Thunder Bay Catholic District School Board, said the high 2015 samples were taken in the summer and not indicative of water quality during the school year. The 2016 samples came after the removal of a "tap aerator" that "disturbed some debris in the piping." The school replaced the tap and copper piping leading to it.

Some schools like Duke of Connaught Jr. & Sr. Public School in Toronto, which had six failing tests including one flushed sample that came back at 460 parts per billion in the 2015-16 fiscal year, immediately provided bottled water and investigated the source of the contamination - a fixture that was subsequently replaced. A letter was also sent home to parents informing them of the lead exceedance.

"It always makes you feel bad that something like that was in a school and was unknown to a particular point," said Sheila Cary-Meagher, a Toronto school trustee who represents Ward 16 Beaches-East York.

"It's not the sort of thing that you can taste, or smell, or see, you have to do the test to know it," she said, adding the school's response to the exceedance was standard.

One element of the school's response, however, does stand out - parents were proactively informed. Some schools, including Robert Baldwin Public School in Milton, conducted lead testing in the summer of 2016 and did not notify parents that there had been five exceedances, including a flushed sample that came back at 110 parts per billion and a standing sample at 2,000 parts per billion.

While it may be difficult to notify parents during the summer months, Cary-Meagher said they should be informed come September that high lead levels were discovered and either addressed or that bottled water is being provided.

"I wish it had been communicated to us," said parent Darren Harrison, whose 9-year-old daughter is in Grade 4 at Robert Baldwin Public School. "We give her bottled water for her lunch, this makes me wonder what she's drinking the rest of the day."

Explaining the high sample taken at Robert Baldwin Public School, Halton school board superintendent of education Robert Eatough, said "a major renovation" may have contributed to high lead levels detected. Subsequent retesting found the concentrations within the provincial standard. The school is flushing its pipes daily.

Lead levels in water from any given tap can fluctuate. Extremely high lead levels can be caused by a dislodged pellet of lead, which may not happen all the time, Lanphear, the health lead expert said.

"But the point of it is if you're finding levels above five or 10, and certainly above 20 or 1,000 there are major sources of lead in that faucet or in those fountains and that should serve as an indicator that we have to fix this," he said.

Lanphear said water sources that tested above five parts per billion could be brought to below one part per billion over the next 10 to 20 years. The taps with the highest lead concentrations should be addressed urgently, he said, additional flushing - one of the most common measures used to reduce lead concentrations in Ontario, according to a plain language guide to the province's drinking water regulations for schools and daycares - may not be the answer.

The province's environment ministry requires all schools and daycares to flush their plumbing by letting the water run for at least five minutes at least once a week in an effort to reduce lead concentrations that can accumulate in water that's left standing in unused plumbing. Schools where lead levels exceed the standard may have to flush the errant tap or the whole system daily.

While the ministry says flushing has been shown to reduce lead levels, Lanphear said it isn't a long-term solution.

"Even if you flush it and it goes down it can build up within about 30 minutes back up to the pre-flushed levels and we can't expect the maintenance guys at the schools to walk around and flush these things before every class break," he said, adding that installing certified filters would be a slightly better short-term solution.

Over the long term the best approach is to find the source of the contamination and get rid of it, he said. In the next couple of decades he'd like to see a new standard of 1 part per billion enforced.

The debate over how to decrease lead levels in schools ultimately comes up against how much funds are available to do so.

This year the province invested \$1.4 billion in school repairs and upgrades to plumbing systems, roofs, flooring and more, according to the education ministry.

Edwards, the engineering expert from Virginia Tech, said he thinks Ontario's existing standard "is very aggressive and probably tests the limits of what's achievable with reasonable interventions." To virtually eliminate lead in drinking water could mean diverting funds away from another worthy priority, he said.

Lanphear said he's "fairly optimistic that once we decide to act on something we can do it."

-reprinted from Toronto Star

**Region:** Ontario <sup>[3]</sup>

**Tags:** children's rights <sup>[4]</sup>

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