

WHITE PAPER



Creating Water Infrastructure Sustainability Through a Provincial Rate Setting Authority

Executive Summary

There are significant costs associated with providing clean drinking water and making our rivers and lakes swimmable, fishable, and drinkable. For decades, municipalities have been deferring the costs of water infrastructure renewal across the province in order to maintain artificially low rates. Even with provincial and federal subsidization, Ontario has, historically, underinvested in its water infrastructure assets. While these practices are changing, a more sustainable and accountable approach is required.

The Walkerton water crisis in 2000 and subsequent expert panel reviews of municipal water system management uncovered common problems across the province that will have negative long-term public health effects if they are not properly remedied. Full-cost accounting and recovery for water was identified as *the* primary fix for these problems by three separate government commissions. In response to these recommendations, successive provincial governments have attempted to mandate the use of full-cost accounting and recovery in two pieces of legislation and in the Ministry of Environment's (MOE) financial plan guidance document, however each attempt has failed.

While it is often agreed that a sustainable financial model for municipal water systems is necessary, past failures demonstrate that an agreement on how to achieve this is elusive. Nevertheless, a sustainable solution is necessary. OSWCA recommends revisiting existing recommendations and best practices around the creation of a provincial rate setting authority with a limited mandate of implementing province-wide full-cost accounting and recovery. This approach will ensure the long-term financial sustainability of local water systems, source water protection, and encourage water conservation, while largely avoiding intrusion on municipal water system management.

Introduction

We have to get past the idea that providing safe drinking water should be cheap.

While Ontario has an abundance of freshwater in the natural environment, this does not translate into a low-cost supply of water. Extraction, treatment, transmission, sewage collection, and treatment for discharge is a costly, yet critical, cycle that is vital to the health and safety of communities across the province.

For decades, we have taken clean water for granted. We have underinvested in infrastructure maintenance, reconstruction, and expansion, and have undercharged for service delivery. The result is a municipal water infrastructure deficit in the tens of billions of dollars¹ and a continuing capital under-investment of around \$1 billion a year.² Rethinking how we manage these core infrastructure assets is necessary in order to ensure long-term system sustainability and the public's health.

¹ Association of Municipalities of Ontario, *Towards a new Federal Long-Term Infrastructure Plan: AMO's Submission to Infrastructure Canada*, August 2012, p. 2.

² Commission on the Reform of Ontario's Public Services, *Public Services for Ontarians: A Path to Sustainability and Excellence*, (Toronto: Queen's Printer for Ontario, 2012), 29.

Successive governments in Ontario have recognized that the way we manage water infrastructure is a serious problem. Since 2000, when an e-coli outbreak in the Walkerton water system led to seven deaths and nearly 2,400 people falling ill, there has been broad agreement that municipal water systems must be carefully managed and fully-funded. However, we have been at an impasse for the last sixteen years on how to properly accomplish this. Numerous attempts have been made – expert reports, legislation, and regulation – to move Ontario’s municipalities to full-cost accounting and recovery, but each time the proposed reforms have failed.

There have been many reasons for this failure, but the common links are cost and political will. Requiring municipalities to increase water rates to achieve full-cost recovery has long-been a politically sensitive issue. But these increases are essential to maintaining safe drinking water and ensuring our rivers and lakes are swimmable, fishable, and drinkable. A simple way to ensure these necessary rate increases are levied is to remove local rate setting authority and place it with a provincial rate setting authority, known as the Ontario Water Board (OWB).³ Creating the OWB with the simplified mandate of bringing all municipally-managed water systems on to a full-cost accounting and recovery program will ensure the long-term safety of the province’s drinking water.

Adopting this approach will help to create transparent, accountable, and financially self-sufficient water systems across the province, and will ultimately minimize the need for provincial subsidies.⁴ With water meters now in the vast majority of Ontario homes⁵ and the province moving towards stricter requirements for municipal participation in long-term asset management planning, we have reached a stage where a full-cost accounting and recovery requirement for local water systems is the logical next step.



Section of old trunk watermain in Toronto, replaced in 2015.

[Why this Issue is Important](#)

The Walkerton Water Crisis, 2000

The consequence of decades of underinvestment in Ontario’s water and waste-water infrastructure was laid to bare in May of 2000 in Walkerton, when its drinking water became contaminated with e-coli bacteria. This resulted in almost half of the town’s

³ The Water Strategy Expert Panel recommended the creation of a OWB in its report *Watertight: The case for change in Ontario’s water and wastewater sector*, though with a much more complex and intricate mandate.

⁴ Provincial investment in sewer, watermain, pumping stations, and treatment facilities could be significantly scaled back and focus on only those small and rural communities where the representative tax base is too small to address the system needs.

⁵ Michael Fenn and Harry Kitchen, *Bringing Sustainability to Ontario’s water systems: A quarter century of progress, with much left to do*, (Mississauga: Ontario Sewer and Watermain Construction Association, 2016), 15.

5,800 residents falling ill, including seven deaths. In response to this tragedy, the provincial government launched an inquiry to review the circumstances and develop recommendations for how to avoid this type of situation repeating itself.

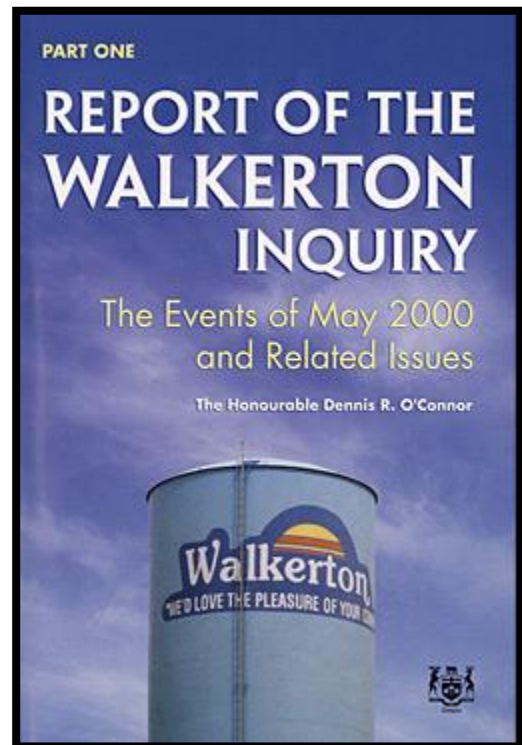
Walkerton Commission of Inquiry

The Inquiry, chaired by Justice Dennis O'Connor, delivered its final report to government in 2002. The Report made 121 recommendations for reform to how municipal water systems were being managed. Foundational reforms included enhancing provincial oversight and mandating full-cost accounting and recovery for municipal water systems.⁶

On provincial oversight, O'Connor noted that "it is essential for the Province to strictly enforce drinking water regulations and to commit sufficient resources, financial and otherwise, to enable the [MOE] to play this role effectively."⁷

On full-cost accounting and full-cost recovery, O'Connor recommended that the Province require municipalities to maintain sustainable and full funding:

*Recommendation 47: The provincial government should require municipalities to submit a financial plan for their water system, in accordance with provincial standards, as a condition of licence for their water systems...Without adequate resources, corners will inevitably be cut, whether in day-to-day operation of the facility, or in its long-term capital infrastructure. Ultimately safety will be jeopardized. Municipalities should therefore be required to submit a financial plan that lays out the resources required to run and sustain the water system, and how those resources will be raised...The plan would depend on two components: full-cost accounting and full-cost recovery. The former is a prerequisite for the latter.*⁸



O'Connor further suggested that "as a general principle, municipalities should plan to raise adequate resources for their water systems from local revenue sources, barring exceptional circumstances."⁹

While the province has been successful in enforcing enhanced drinking water quality regulations through the Chief Drinking Water Inspector, the process does not consider a longer-term outlook for system sustainability. Some municipalities have moved forward on full-cost accounting and recovery voluntarily, though many have not. This has created

⁶ Justice O'Connor noted explicitly that full-cost recovery included more than just the cost of ongoing operation and repairs. It extended to all aspects of waterworks system sustainability, including depreciation, replacement, upgrading, expansion and technological improvements.

⁷ The Honourable Dennis R. O'Connor, *Part Two – Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water*, (Ontario: Ministry of the Attorney General, 2002), 4.

⁸ *Ibid*, 300.

⁹ *Ibid*, 312.

a wide variance in water rates being charged across the province, as well as a disparity in terms of system upkeep and renewal. As former Environmental Commissioner of Ontario (ECO) Gord Miller noted in his 2013/14 Annual Report, only “fifty-nine per cent of... municipalities stated that their drinking water system is operating at full-cost recovery.” However, even amongst those operating on full-cost recovery models, there remains “...differing understandings... of what it means to have achieved full-cost recovery...”¹⁰

Sustainable Water and Sewage Systems Act, 2002

The *Sustainable Water and Sewage Systems Act* (SWSSA) was developed as a government Bill in response to the O’Connor Report, focussed on its financial sustainability recommendations. The Act sought to require municipalities to create and publish a full-cost accounting and recovery plan for their water systems. Once fully implemented, the Act would have required municipal systems to be financially self-sustaining, with adequate funds to finance necessary system upgrades as they were required. Although receiving Royal Assent, regulations for this Bill were never enacted and, ultimately, it was repealed in 2012.

Watertight: The Case for Change in Ontario’s Water and Wastewater Sector

In 2004, as a follow-up to the O’Connor Report, the Minister of Public Infrastructure Renewal appointed the Water Strategy Expert Panel¹¹ to make recommendations on how to reorganize the management and financing of municipal water systems to create the conditions for sustainable funding. The Panel approached its review with a clear frame of reference:

*...the quality of Ontario’s water is among the highest in the world, and the price of its water and wastewater services among the lowest. Yet there is a serious and growing problem: an unpaid bill of \$11 billion for upkeep and repairs. Today its impact is felt through water main breaks, unreliable service, power failures, shattered road surfaces and backed-up sewers – annoyances that often bring with them further costs. Far more worrisome, however, is that tomorrow it may create a threat to public health and safety, if needs continue to go unmet.*¹²

According to the Panel, the solution was simple: remove rate setting authority for municipal water systems from local councils and hand it over to a provincial rate setting authority, or create a framework that requires municipalities to demonstrate how they are moving to full-cost recovery, based on a strict definition.¹³

The Panel recognized that municipal councils represented both owners *and* customers of municipal water, and were therefore disinclined to increase rates. By creating a provincially-based rate-setting authority or framework, where price is determined based

¹⁰ Environmental Commissioner of Ontario, *2013/14 Annual Report: Managing New Challenges* (Ontario: Environmental Commissioner of Ontario, 2014), 163.

¹¹ Panel members included: Harry Swain (Chair), Jim Pine, and Fred Lazar.

¹² Harry Swain, Fred Lazar, and Jim Pine, *Watertight: The case for change in Ontario’s water and wastewater sector – Report of the Water Strategy Expert Panel*, (Ontario: Ministry of Public Infrastructure Renewal, 2005), 7.

¹³ The Panel recommended that the definition of full-cost recovery be based on Justice O’Connor’s recommendation that pricing be set to collect a sustainable amount of funding to cover the costs of not only ongoing operations and repairs, but all aspects of waterworks system sustainability, including depreciation, replacement, upgrading, expansion and technological improvements.

on system need, it would relieve political pressure for instituting rate hikes at the municipal-level. An independent rate setting authority would be more inclined to increase rates to meet essential system needs. Despite being well reasoned though, these recommendations were met with strong opposition and ultimately abandoned.

The Financial Plans Regulation (O.Reg 453/07)

With a number of reports and pieces of legislation having failed to establish water system financial sustainability, the MOE took a different approach in 2007. Regulations were established through the *Safe Water Drinking Act* requiring municipalities to publish detailed plans of the financial position, operations, and cash receipts and payments for their local water systems for the previous six years on a rolling annual basis. While the process nominally improved transparency, the plans are not required to be based on a full-cost accounting and recovery model, and are not required to include an asset management plan. As a result, they do not provide clear detail on system sustainability.

Water Opportunities Act, 2010

In November 2010, the government passed the *Water Opportunities Act*, in an attempt to enable Cabinet to make regulations requiring municipalities to prepare and submit sustainability plans for their water, sewage, and storm-water systems. The Act provided little implementation detail, instead relying on regulations to set out performance targets on financing, operation, and maintenance, along with regular reporting requirements. Unfortunately, regulations for this Bill have never been developed.



Sewage buildup at the mouth of the Humber River as a result of treatment facility bypass, 2013. Photo by Lake Ontario Waterkeeper.

The Growing Problem

A decade-and-a-half's worth of government-commissioned reports, legislation, and regulation have failed to compel municipalities to operate their water systems on a full-cost accounting and recovery model. Nevertheless, the need for this pricing model is clearly evident. Former ECO Gord Miller noted in his 2013/14 Annual Report that

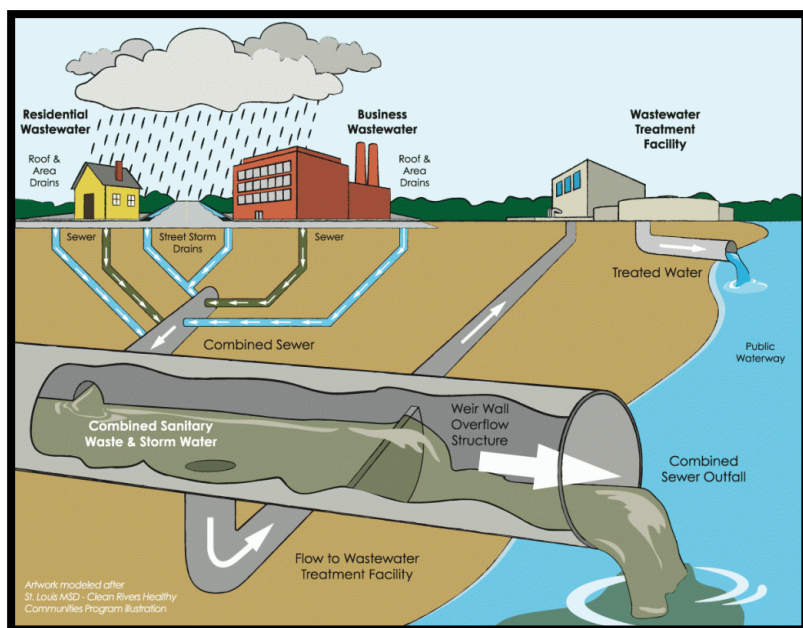
*the government is clearly aware of the necessity of full-cost recovery for drinking water systems; [since] it was recommended by three separate government commissions and panels, encouraged in the MOE's financial plan guidance document and other provincial plans, and was promised as a requirement of the SWSSA.*¹⁴

Miller goes on to state that the longer this situation is allowed to persist without being mandated, "...the more likely existing infrastructure deficits will grow – potentially threatening the safety of Ontario's drinking water."¹⁵

¹⁴ Environmental Commissioner of Ontario, *2013/14 Annual Report: Managing New Challenges*, 165.

¹⁵ Environmental Commissioner of Ontario, *2013/14 Annual Report: Managing New Challenges*, 165.

While opposition endures, it makes sense to place Ontario's water rates in proper context. Amongst the 34 Organization for Economic Cooperation and Development (OECD) member countries, Ontario maintains amongst the lowest average water rate per cubic-meter of any region,¹⁶ meaning users pay less than those in comparable countries around the world. Even within Ontario there is a significant variance in rates between municipalities. As an example, the City of London's average household charges for water are almost *double* the annual cost of those in Toronto, Markham, or Vaughan.¹⁷ Despite these examples of where higher water rates have been adopted, mandating water system financial sustainability remains mired in political concerns about the impact on taxpayers. Some argue that affordability is the concern, but it must be understood that subsidizing the end user is much less costly (and less risky) than subsidizing end use.



With climate change impacting drinking water supply, urban intensification overtaxing local sewage systems, and the increasing intensity of rain straining existing stormwater systems, the need for financial sustainability to accommodate infrastructure renewal is becoming increasingly important. Removing political reticence, “sticker shock,” and interest group advocacy from this issue is, therefore, required.

Example of an antiquated combined-sewer overflow system that dumps raw sewage directly into a public watercourse during a rainstorm. All combined systems need to be replaced.

The Solution

A number of the foundational recommendations coming out of the Walkerton Inquiry Report and the Water Strategy Expert Panel Report remain unaddressed, especially those related to financing and operational capacity.¹⁸ Given the significant public health issues related to contaminated water, there is an inherent risk in continuing to avoid implementing many of these recommendations.

At the provincial level, enhancing oversight is critical to resolving this problem. By revisiting recommendations made around creating a provincial rate setting authority (OWB), the government can enhance its oversight role, while still allowing municipalities to self-manage operations, maintenance, and construction. By establishing the OWB with

¹⁶ Michael Fenn and Harry Kitchen, 54-58.

¹⁷ For example, London and Waterloo maintain substantially higher annual water service fees than Toronto, Vaughan, and Markham, including “stormwater” charges. Michael Fenn and Harry Kitchen, 55.

¹⁸ Julie Abouchar and Joanna Vince, “Ten Years After Walkerton – Ontario’s Drinking Water Protection Framework Update,” (Ottawa: Canadian Bar Association, 2010), <http://www.cba.org/cba/cle/PDF/ENV11_Abouchar_paper.pdf>, 12-14.

a mandate focussed exclusively on brining all municipalities onto a full-cost accounting and recovery system, the government would make tremendous strides towards eliminating the water infrastructure deficit in the province.

The Water Strategy Expert Panel's recommendations for the OWB were comprehensive and complex. This may ultimately have been the reason for its failure to be created. In revisiting these recommendations, the mandate of the OWB should be scaled-back and limited to:

1. analyzing municipal water service financial plans and asset management plans; and,
2. determining the necessary water rate increases that each municipality must apply in order to achieve full-cost recovery.¹⁹

Additionally, this approach should be phased-in over time so urban municipalities, or slightly higher growth municipalities, that would have a better chance of meeting the reporting and pricing requirements would be focussed on first, while the small, rural, and remote communities would have more time and assistance in moving towards this model.

Institutional Considerations

Creating the proper institutional home for the OWB deserves some careful thought. There is an existing bureaucratic infrastructure around asset management evaluation²⁰ and drinking water assessment²¹ that can be utilized to provide analysis and recommendations around water system sustainability, so as to limit the need for a new bureaucracy to administer the OWB.

Given a detailed framework with which to operate in, the Chief Drinking Water Inspector (CDWI) at the MOECC may be the logical placement for the actual rate setting authority, though further consideration should be given to whether this authority should fit into an existing bureaucracy or whether it should be officially administered through a non-departmental public body.

Examples in Other Jurisdictions

A water rate setting authority is not a unique concept, as there are a number of other jurisdictions with independent rate setting bodies (often at the national level) that oversee municipal water and sewage system management. Examples include:

- *Commission for Energy Regulation (CER) – Irish Water* is an independent economic regulator for public water and wastewater services in Ireland, which ensures water is

¹⁹ These recommendations are identified in Chapter 6 – Regulation of the Watertight Report. Rather than seeking to fully implement all of the regulatory obligations set out in these recommendations, we are of the opinion that focussing on system sustainability is critical from a provincial standpoint, while allowing the municipalities to continue to fully manage their own water systems. Harry Swain, Fred Lazar, and Jim Pine, 37-41.

²⁰ The Infrastructure Policy Division (through either the Infrastructure Analytics team or the Infrastructure Finance Policy team) at the Ministry of Economic Development, Employment, and Infrastructure would be an appropriate starting point for review.

²¹ Through the Chief Drinking Water Inspector and the Drinking Water Management Division at the Ministry of Environment and Climate Change.

delivered in a safe, secure, and sustainable manner, and systems are appropriately funded. The CER reviews Irish Water's costs and approves its charges. It is the role of the CER to regulate tariffs, including business tariffs.

- *Water Industry Commission for Scotland* is a non-departmental public body with statutory responsibilities, including the setting of water prices for water and sewage services. It is also responsible for monitoring and reporting on performance indicators around customer service, investment, costs, and leakage.
- *Water Services Regulation Authority (OFWAT)* is responsible for rate setting limits on the prices charged for private water and sewage services in England and Wales. Part of this process includes ensuring that water companies are able to finance their functions and to meet the need for water supply and wastewater services over the long-term by requiring full-cost recovery rates.
- *Essential Services Commission of South Australia* is responsible for regulating water and sewage services, including licensing, consumer protection, and rate setting. This terms of reference includes a responsibility to ensure that the water systems are fully-funded.

The Benefits

There are numerous benefits to the creation of a provincial rate setting authority:

1. It provides greater oversight and assurances that Ontario's municipal water systems are being appropriately managed. Having a provincial body overseeing business and asset management plans, as well as rate setting, would ensure that issues similar to those currently playing out in Flint, Michigan would be "caught" much earlier on in the process.
2. It would minimize the need for provincial subsidies for municipal water systems. Overseeing the rate setting process and requiring municipalities to move to full-cost accounting and recovery would ensure financial autonomy for local water systems, as water infrastructure would be managed like other utilities. For small, rural, and remote municipalities that do not have appropriately sized tax-bases to self-fund system sustainability, this approach would allow for more targeted federal/provincial investment based on the areas with the greatest need.
3. It would remove political responsibility from the rate-setting process, meaning less sensitivity around necessary rate increases and movement to full-cost recovery.²²
4. It would allow for a much more transparent, consistent, and independent review of Ontario's municipal water systems on a regular basis. Having a standardized

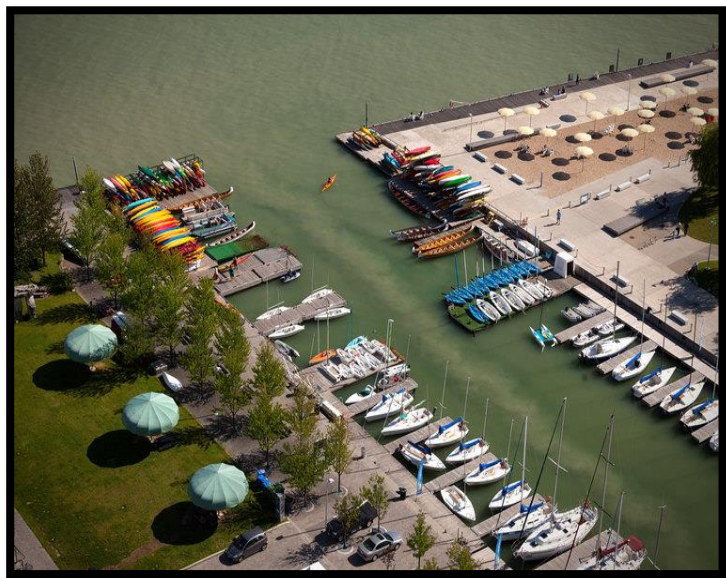
²² Any concerns around rapid and unmanageable rate increases could be resolved by capping allowable annual increases through the OWB's Terms of Reference.

evaluation process based on business and asset management plans would allow for a greater understanding of how and where investments are needed.

5. Maintaining artificially low rates for water and wastewater services encourages overuse. Full-cost accounting and recovery, on the other-hand, is one of the Six Guiding Principles for Sustainable Development set out by the Ontario Round Table on Environment and Economy: "...to prevent overuse and exploitation, all prices ideally should incorporate environmental, social, and resource depletion costs."²³ Charging appropriately for usage will ultimately encourage conservation.

From a provincial standpoint, exercising greater control over the rate setting process to ensure long-term system sustainability is critical. For decades, we have taken clean water for granted and ignored the fact that operating aging water infrastructure is becoming increasingly expensive.

Allowing the municipal water infrastructure deficit to further expand comes with significant long-term risks. While currently, it means more expensive maintenance and renovation, over the longer-term it poses a risk to public health. Establishing the OWB with a well defined mandate may make provincial oversight and the transition to full-cost accounting and recovery more palatable to municipalities, particularly smaller and rural municipalities where there are financial challenges.



Combined sewer overflow seen from above following a heavy rainfall in 2015. Photo by Jim Panou.

Conclusion

It took the Walkerton water crisis in 2000 to bring attention to a critical and yet often overlooked municipal problem: the sustainable delivery of clean drinking water. For decades in the lead-up to this crisis, under-investment in system maintenance, reconstruction, and expansion was commonplace across the province because the associated infrastructure is "out-of-sight and out-of-mind." Consistently increasing water rates and re-investing in system maintenance was seen as a political issue and a luxury, rather than a necessity. The Walkerton crisis should have turned this thinking on its head, yet a number of the key recommendations from the Walkerton Commission Report have not been implemented and old practices remain in place.

²³ Quoted in Environmental Commissioner of Ontario, *2002/03 Annual Report: Thinking beyond the near and now* (Ontario: Environmental Commissioner of Ontario, 2003), 106.

Most glaring amongst these is the failure of municipalities to institute full-cost accounting and recovery, and the failure of the province to take on a greater oversight role for how water systems are being managed. There has simply been a lack of political will to see these changes forward. Over time, urgency around establishing these recommendations into practice has ultimately diminished as memory of the Walkerton crisis has faded.

The Walkerton Commission identified full-cost accounting and recovery as crucial to ensuring the long-term health of Ontario's drinking water, and yet the recommendations have not been mandated by the province. Instead, despite numerous attempts to create greater sustainability and transparency requirements, as of 2016 a municipality's only legal requirement to address the financial sustainability of its drinking water system is the obligation set out in O.Reg 453/07, which requires the preparation and posting of municipal system financial plans online; though, *not* based on a full-cost accounting and recovery model.

Mandated full-cost accounting and recovery is the only ways to ensure safe and affordable drinking water for Ontarians. Recommendations for reform around this issue have been discussed and recommended numerous times since the Walkerton tragedy, but to-date very little action has taken place. The time has come for the government to ensure the sustainability of our municipal water systems by establishing the OWB and achieving across-the-board full cost accounting and recovery.