Water Infrastructure and the Law in Canada

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A reliable supply of clean water and the proper treatment and disposal of wastewater are essential for community health. Water is also used in nearly all sectors of the Canadian economy, for which it provides irrigation, transportation and recreation; water is also a component of many products.[1]

Yet across the country, and especially in Ontario, the infrastructure for water treatment and delivery is aging. According to one estimate, in the next 10 years, Ontario's water infrastructure will require $30-$40 billion for capital renewal, deferred maintenance and future growth.[2] More broadly, a now-dated (1997) prediction estimates $88.5 billion would be required to upgrade existing water and sewer system infrastructure across Canada by the end of 2012.[3] The government of Ontario has become increasingly aware of this challenge since the Walkerton tragedy focused its attention on water treatment issues generally. The government has passed new framework legislation that could help pave the way for water infrastructure renewal. Similar developments across the country are creating new opportunities in water infrastructure projects.[4]

Canada's Aging Water Infrastructure

As in many industrialized countries, water infrastructure in Canada has not been a priority since the 1970s. Most water and wastewater infrastructure in Canada was built between the 1950s and 1970s.[5] A lack of routine maintenance has contributed to its deterioration,[6] and much of this infrastructure is now nearing the end of its useful life.

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[1] See Infrastructure Canada, *Water Infrastructure: Research of Policy & Program Development* (January 2004) [*Water Infrastructure*].

[2] Ministry of Public Infrastructure Renewal, Report of the Water Strategy Expert Panel, *Watertight: The Case for Change in Ontario's Water and Wastewater Sector* (Toronto: Publications Ontario, 2005) [*Swain Report*] at 7.

[3] The Conference Board of Canada, *Improving Infrastructure Management: Municipal Investments in Water and Wastewater Infrastructure* (2009) [Conference Board of Canada] at 4, citing Saeed Mirza, *Danger Ahead: The Coming Collapse of Canada's Municipal Infrastructure (Ottawa: Federation of Canadian Municipalities*, 2007) at 12.

[4] In this paper, the term "water infrastructure" is intended to encompass water and wastewater systems and includes water treatment facilities, water mains, distribution pipes, pressure reducing stations, water meters, pumping stations, sanitary and storm sewers, sewage pipes and interceptors, storm water pipes and interceptors, manholes, retention basins, septic tanks and lift stations.

[5] Conference Board of Canada, *supra* note 3 at 4.

[6] Deferring maintenance can cause deterioration of water and wastewater systems to the point that they are unsafe. At a certain stage, deferring maintenance also makes existing systems impossible to refurbish and necessitates their replacement with new systems. For example, the U.S. Environmental Protection Agency estimates that the United States will need to spend about one trillion dollars on capital, maintenance and operations of water and wastewater systems between 2010 and 2020, much of it to replace current systems that were not maintained: Bob Walker,

Inadequate or poorly maintained water infrastructure can cause health risks, economic harm and damage to the environment. In 2008, about 1,700 drinking water advisories were in effect across Canada.[7] Environment Canada estimates that unsafe drinking water causes 90,000 instances of illness and 90 deaths in Canada every year.[8] In addition, Canada has experienced an increase in flooding, damage to roads, sewage diversion to rivers and lakes during storms, and boil-water advisories.[9]

Significant investments will be required to upgrade water infrastructure in the near future. Approximately $10 billion is required for necessary water infrastructure expenditures in Canada every year.[10] The Federation of Canadian Municipalities has estimated that Canada will require $88.5 billion to upgrade existing water and sewer system infrastructure between 1997 and 2012.[11] Various studies have predicted that Ontario's water infrastructure will require up to $40 billion by 2020 for capital renewal and deferred maintenance projects to accommodate provincial growth estimates.[12] This investment would be greater than half the estimated total value of Ontario's existing water and wastewater assets.[13]

Water Infrastructure Management

Most water and wastewater infrastructure in Canada is owned and maintained by municipal governments.[14] However, there is little coordination or standardization of water infrastructure management among municipalities.

In Ontario, the Provincial Water Resources Commission owned and operated most water infrastructure between 1956 and 1972, at which point responsibility began to shift to municipalities. Water infrastructure in the province is now split among numerous municipalities, and these jurisdictions generally do not coordinate their water management. In 2002, a study recorded 51 different types of organizational models for water infrastructure in use by 448 municipalities in the province.[15]

"Sustainable Infrastructure: It's Our Responsibility," PVC News (Dallas: Uni-Bell PVC Pipe Association, 2001), as cited in *Water Infrastructure*, *supra* note 1.

[7] L. Eggertson, "Investigative report: 1766 boil-water advisories now in place across Canada" (2008) 178 (10) *Canadian Medical Association Journal* at 1261-63.

[8] Ecojustice, *Seeking Water Justice: Strengthening Legal Protection for Canada's Drinking Water* (May 2010) [*Water Justice*], citing T. Edge, J.M. Byrne, R. Johnson et al., "Waterborne Pathogens," in Environment Canada, *Threats to Sources of Drinking Water and Aquatic Ecosystem Health in Canada* (Burlington, ON: National Water Research Institute, 2001).

[9] See *Swain Report, supra* note 2.

[10] *Water Infrastructure, supra* note 1 at 9.

[11] *Supra* note 3.

[12] *Supra* note 2. See also Ontario Ministry of Public Infrastructure Renewal, *Ontario Water and Wastewater Infrastructure Modeling Methodology*, 2005 at 5. *(*An additional $34 billion will be required between 2005 and 2020 to meet the province's needs for capital renewal and growth accommodation. Of this, $25 billion is needed for capital renewal, including $11 billion for deferred maintenance, $9 billion is needed to accommodate provincial growth estimates.)

[13] The estimated value of all water and wastewater assets in Ontario is $72 billion, of which water treatment plants account for $20 billion and the remainder represents collection and distribution systems: *Swain Report*, *supra* note 2 at 7.

[14] Conference Board of Canada, *supra* note 3 at 4.

[15] PricewaterhouseCoopers and Ontario Superbuild Corporation, *Organization of Municipal Water and Wastewater Systems in Ontario* (5 June 2002), available online at www.moi.gov.on.ca/pdf/en/water/Organization_of_MunicipalWater_and_WastewaterSystems_in_Ontario.pdf.

Coordination among municipalities could help reduce overall operating costs, provide greater capacity and help to attract and retain qualified water contract operators.[16]

Problems in Ontario

Ontario's aging water infrastructure and fragmented water-management systems have seen several serious water-related crises over the years.

Walkerton

In May 2000, the town of Walkerton's drinking water system became contaminated with E. coli bacteria. As a result, seven people died and more than 2,300 people (nearly half of the town's population) became ill.[17] Many of those who survived suffered permanent damage to their health.[18]

The provincial government called a public inquiry to identify issues regarding the safety of Ontario's drinking water and to make recommendations for improvement. Led by Mr. Justice Dennis O'Connor of the Ontario Court of Appeal, the Walkerton Inquiry took place from July 2000 to January 2002.[19]

Justice O'Connor concluded that the causes of the contamination were both structural and operational. First, the town's primary water source, Well 5, was not installed with continuous chlorine residual and turbidity monitors. Had continuous monitors been in place, they would have automatically sounded an alarm so that the appropriate corrective action could have been taken to prevent contamination of the distribution system. Second, the Walkerton Public Utilities Commission engaged in improper chlorination and monitoring practices, and its operators lacked the training and expertise necessary to identify either the vulnerability of Well 5 to surface contamination or the resulting need for continuous chlorine residual and turbidity monitors.[20]

Kashechewan First Nation

Many First Nations communities in Canada experience substandard water.[21] In 2001, an assessment carried out by the Department of Indian Affairs and Northern Development and Health Canada found that almost three-quarters of on-reserve drinking water systems posed significant health and safety problems for the affected communities.[22] As of February 28, 2011, there were 116 First Nations communities across Canada under drinking water advisories.[23] The average duration of boil-water

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[16] *Swain Report, supra* note 2 at 26.

[17] Ontario Ministry of the Attorney General, *Report of the Walkerton Inquiry* (Toronto: Queen's Printer for Ontario, 2002) at 2.

[18] *Swain Report, supra* note 2 at 4.

[19] *Ibid.* at 3. One hundred and fourteen witnesses testified, including Walkerton residents, local officials, senior civil servants, two former ministers of the environment and the incumbent premier, Mike Harris.

[20] In addition, the general manager and foreman of the Walkerton Public Utilities Commission actively misled local health authorities as to the safety of the water supply during the crisis and were later charged with breach of trust, falsifying records and common nuisance.

[21] The drinking water and sewage systems of Aboriginal reserves fall under federal jurisdiction.

[22] *Water Justice, supra* note 8 at 10, referring to Indian and Northern Affairs Canada and Health Canada, *Safe Drinking Water on First Nations Reserves: Roles and Responsibilities* (Ottawa: Indian and Northern Affairs Canada, 2001).

[23] Health Canada, *First Nations, Inuit and Aboriginal Health*, "Drinking Water and Wastewater" (8 March 2011), available online at www.hc-sc.gc.ca/fniah-spnia/promotion/public-publique/water-eau-eng.php.

advisories and "do not drink" advisories in First Nations communities is 343 days,[24] although they range from less than a day to more than 11 years.[25]

The Kashechewan water crisis recently highlighted the water infrastructure problems of First Nations communities in Northern Ontario. Kashechewan is a Cree community of approximately 1,900 people near James Bay. In 2003, ongoing water concerns in the community led the Ontario Clean Water Agency to call Kashechewan a "Walkerton-in-waiting."[26]

On October 18, 2005, high E. coli levels were found in the reserve's drinking water. Chlorine levels were increased, which led to a worsening of skin problems such as scabies and impetigo in the community Eleven days later, a state of emergency was declared and 946 people requiring medical attention were airlifted to larger centres. The estimated evacuation cost was $16 million.[27]

The roots of the Kashechewan crisis were poor water infrastructure and training. The intake pipe for the community's water treatment plant was located downstream from the community's sewage lagoon, and tides from James Bay pushed the sewage water back and forth across the intake.[28] The cause of the E. coli crisis was ultimately found to be a plugged chlorine injector, which went undiscovered by the inadequately trained local plant operators.[29]

Toronto's Water Main Breaks

Approximately 1,500 water mains and pipes break in Toronto every year.[30] The city's pipes average 55 years old, but some parts of the municipal water system are more than a century old. Fluctuating temperatures take their toll on the aging water infrastructure, and the older pipes sometimes cannot withstand the pressure placed on them when the surrounding soil freezes.[31] Toronto spends about $12

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[24] Health Canada, *Drinking Water Advisories in First Nations Communities in Canada: A National Overview 1995-2007* (2009), available online at www.hc-sc.gc.ca/fniah-spnia/alt_formats/pdf/pubs/promotion/environ/2009_water-qualit-eau-canada/2009_water-qualit-eau-canada-eng.pdf.

[25] The Kwicksutaineuk First Nation, on an island off the coast of British Columbia, experienced a "do not drink" advisory for over 11 years: see "Boil water advisory tops 9 years for B.C. native community" *CBC News* (31 October 2005), available online at www.cbc.ca/news/canada/story/2005/10/31/kwicksutaineuk051031.html; and "Health Canada Rescinds "Do Not Consume Order" for drinking water for Kwicksutaineuk Ah-kwa-mish First Nation" *Marketwire* (13 February 2008), available online at www.marketwire.com/press-release/Health-Canada-Rescinds-Do-Not-Consume-Order-Water-Advisory-820777.htm.

[26] "Concerns over water on reserve ignored for years" *CTV.ca* (27 October 2005), available online at www.ctv.ca/CTVNews/Specials/20051027/aboriginal_water_feature_051027/.

[27] *Water Justice, supra* note 8, citing The Standing Senate Committee on Aboriginal Peoples – Final Report (2007) and M. Wyndham-West, "Phenomenologically Productive 'Creation' Stories: Aboriginal Health Discourse and Mass Media Coverage of the Kashechewan 'Crisis,'" (2009) 9(1) *Explorations in Anthropology* at 143-157.

[28] "Kashechewan: Water crisis in Northern Ontario" *CBC News* (9 November 2006), available online at www.cbc.ca/news/background/aboriginals/kashechewan.html.

[29] Kevin Libin, "Problems of governance" *National Post* (20 February 2008), available online at www.nationalpost.com/news/canada/rethinkingthereserve/story.html?id=280526.

[30] "Swimming against the current with a bill to improve water services" *Environment Probe* (19 February 2010), citing Ontario MPP David Caplan.

[31] Alexandra Pope, "Toronto watermain breaks keep crews busy" *The Weather Network* (5 February 2011), available online at www.theweathernetwork.com/news/storm_watch_stories3&stormfile=toronto_watermain_breaks_kee_050211.

million per year repairing water main breaks and is predicted to spend an estimated $2 billion over the next 10 years to upgrade its entire water infrastructure system.[32]

On Sunday, January 10, 2010, a water main break left 19,000 residents in a large area of downtown Toronto without power for eight hours. An official report subsequently emphasized that if the break had occurred on a weekday, it "might have had a huge impact on the financial services industry, located in the same area."[33]

Recommendations for Improvement

Incidents like those described above have galvanized public concern in Ontario and highlighted the importance of a robust water and sewage infrastructure. Consequently, the government has begun to focus on outdated water and wastewater infrastructure and to seek recommendations for improvement.

Walkerton Inquiry

The Walkerton Inquiry concluded that the provincial government's cutbacks to water infrastructure had partly contributed to the tragedy in Walkerton. The Inquiry made several recommendations, including greater oversight and more investment in upgrading and running water and wastewater systems.

The Inquiry's finding of partial responsibility for the tragedy significantly influenced the Ontario Ministry of Environment's perspective on water infrastructure. The Ministry subsequently accepted and attempted to implement all of the Inquiry's suggestions.[34]

Swain Report

The Government of Ontario commissioned an expert report under the leadership of Dr. Harry Swain[35] to determine how to best implement the recommendations made in the Walkerton Inquiry's Report, particularly regarding improvements to wastewater collection and treatment. The *Swain Report* was also intended to develop recommendations to ensure that water and wastewater systems in Ontario would be safe and sustainable for the future.

The report made the following recommendations to the Ontario government:[36] increase scale and capacity by joining together smaller water systems; implement strong and effective governance;[37] reduce regulatory burdens by focusing on results;[38] implement full cost recovery from customers; innovate in

[32] "Burst water pipes here to stay: councillor" *CBC News* (11 January 2010), available online at www.cbc.ca/news/canada/toronto/story/2010/01/11/toronto-water-pipes961.html.

[33] *Swain Report*, *supra* note 2 at 47.

[34] Ontario Ministry of the Environment, *Status of Part Two Recommendations,* Report of the Walkerton Inquiry.

[35] Dr. Swain holds a doctorate in economic geography. He was previously deputy minister of Indian Affairs and Industry and served as Chair of the Research Advisory Panel for the Walkerton Inquiry.

[36] *Swain Report*, *supra* note 2 at 11.

[37] The report explains that governance must be prudent, transparent and accountable. In addition, authorities must understand the complex technical and business aspects of providing water services. It recommends implementing a corporatized utility model, in which municipalities hold the assets of their water systems in separate corporations and governance is provided by boards of objective and qualified private citizens. A successful example of this model is the water and energy provider EPCOR in Edmonton, Alberta: *Swain Report, supra* note 2 at 31-32.

[38] The report recommends that the Ontario water sector be placed under an impartial economic regulator that would perform a mix of performance monitoring and economic regulation. For example, the United Kingdom Office of Water Services uses a results-based approach, which concentrates on results and performance measurement instead of detailed prescriptions. *Ibid.* at 38.

technology and training to reduce costs; and incorporate the Ontario Clean Water Agency, which was originally established as a provincial agency to operate various water and wastewater systems across the province.[39]

Overall, the report proposed a stronger private sector role in the future management of water systems in the province.[40] For comparison, at least 93 countries had partially privatized water or wastewater services in 2000.[41] One study noted that, in addition to cost savings, privatization de-politicizes environmental and health regulation and thereby facilitates regulatory enforcement.[42] An empirical study concluded that, on average, both private and public community water systems in the United States comply equally well with drinking water regulations; but the study found that competition in water service provision can improve performance.[43]

Expert Panel on Safe Drinking Water for First Nations

In response to the Kashechewan crisis, the Senate's Expert Panel on Safe Drinking Water for First Nations concluded that significant investments in both human resources and physical assets were required to ensure safe drinking water on reserves.[44] Under the First Nations Water and Wastewater Action Plan, the federal government allocated approximately $736 million from 2008–2010 to "support First Nations communities on reserve in bringing their drinking water and wastewater services to a level and quality of service comparable to those enjoyed by other Canadians living in communities of similar size and location."[45] The Assembly of First Nations has estimated that $15–25 billion would be required to ensure that the infrastructure and operation of First Nations' community water systems are brought to an acceptable and sustainable level.[46]

Ontario Government Reaction

In the wake of Walkerton, the Ontario government put in place a series of statutes and regulations intended to prevent another tragedy. The expanded legislative framework imposed significant cost requirements and reduced governmental flexibility. However, a positive by-product of the more stringent regulatory environment has been an increased focus on existing water infrastructure challenges.

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[39] *Ibid.* at 69-71.

[40] *Ibid.* at 33. The *Swain Report* identified an important gap in the Ontario government's thinking about the privatization of water and wastewater assets. The report highlighted several studies that indicated private sector ownership of these assets did not necessarily affect system performance.

[41] Elizabeth Brubaker, *The Promise of Privatization* (prepared for the Walkerton Inquiry) (Toronto: Energy Probe Research Foundation, 2001) at 1

[42] *Ibid.* at 3 ("When governments own and operate water and wastewater utilities, conflicts of interest may prevent them from enforcing compliance with laws and regulations.").

[43] Scott Wallsten and Katrina Kosec, "The effects of ownership and benchmark competition: An empirical analysis of U.S. water systems" (2008) 26 *International Journal of Industrial Organization* 186-205.

[44] Standing Senate Committee on Aboriginal Peoples, report, *Safe Drinking Water for First Nations* (May 2007), available online at www.parl.gc.ca/39/1/parlbus/commbus/senate/Com-e/abor-e/rep-e/rep08jun07-e.htm[*Safe Drinking Water for First Nations*].

[45] Treasury Board of Canada Secretariat, "First Nations Water and Wastewater Action Plan" (2008), available online at www.tbs-sct.gc.ca/hidb-bdih/initiative-eng.aspx?Hi=82.

[46] *Safe Drinking Water for First Nations, supra* note 44.

Stricter Requirements

Shortly after the Walkerton tragedy, the Ontario government enacted the *Toughest Environmental Penalties Act*,[47] which significantly increased theoretical maximum penalties for violations under the *Ontario Water Resources Act*.[48] The government subsequently enacted the *Safe Drinking Water Act, 2002*,[49] which established strict standards for municipal drinking water quality, testing, monitoring and inspections.[50] It also enacted the *Nutrient Management Act*, *2002*[51] and the *Clean Water Act*[52] to better protect sources of drinking water from both point and non-point sources.

The *Sustainable Water and Sewage Systems Act*[53] was passed in 2002 but was never proclaimed in force. This controversial Act and its associated regulations would have required municipalities to develop full cost recovery plans and to set their water and wastewater rates accordingly.

Implementation Challenges

One of the main difficulties in implementing recommendations to improve water infrastructure has been cost, most of which has fallen on municipalities. The cost of implementing the new rules imposed by the province following the Walkerton incident is said to have added over $800 million of capital costs for Ontario municipalities.[54] In addition, the federally imposed Canada-Wide Strategy for the Management of Municipal Wastewater Effluents is predicted to cost $10–13 billion over 30 years.[55]

Canada had a strong federal cost-sharing program for infrastructure among all levels of government until 1984, when the federal government terminated all direct assistance for municipal infrastructure.[56] The elimination or reduction of provincial, territorial and federal grants reduced the funds available for the maintenance, repair and replacement of water and wastewater infrastructure. In this cost-cutting environment, municipalities have had to take on more of the financial burden for water infrastructure at a time when they have had relatively less revenue to do so. For example, between 1995 and 2002, local government revenues increased only 14% compared with a 38% increase in federal revenues and a 30% increase in provincial revenues.[57]

The *Swain Report* recommended meeting these increased cost requirements by encouraging greater private sector involvement in water services and implementing full cost recovery from consumers. But there are various political challenges that must be addressed. For example, the Canadian Environmental Law Association has argued that privatization would significantly erode public accountability and transparency of water and wastewater services.[58]

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[47] S.O. 2000, c. 22.

[48] R.S.O. 1990, c. O.40.

[49] S.O. 2002, c. 32.

[50] Regulations under the *Safe Water Drinking Act* also govern smaller-scale, "non-municipal" drinking water systems across the province. *Ibid.* at ss. 52-61.

[51] S.O. 2002, c. 4.

[52] S.O. 2006, c. 22.

[53] S.O. 2002, c. 29.

[54] *Swain Report*, *supra* note 2 at 8.

[55] Conference Board of Canada, *supra* note 3 at 5, citing Canadian Council of Ministers of the Environment, Canada-Wide Strategy.

[56] *Water Infrastructure*, *supra* note 1 at 10.

[57] *Ibid.* at 6.

[58] Ramani Nadarajah and Sarah Miller, Comments of the Canadian Environmental Law Association regarding 'Watertight: The Case for change in Ontario's water and wastewater sector' (Toronto: Canadian Environmental Law

The full cost recovery model would increase water rates to a level that would cover all the direct and indirect costs of providing water and wastewater services, including capital costs, interest costs, operating and maintenance costs, source protection and ecosystem restoration, and emergency services.[59] Apart from decrying the increased burden on ratepayers generally, critics have called this model regressive in its potential to disproportionately affect low-income Canadians.

Other techniques used to control cost and reduce consumption include universal water metering,[60] usage-based (as opposed to flat-rate) pricing[61] and seasonal premiums.[62] The Ontario government will also continue to support the "Ontario Small Waterworks Assistance Program," which will provide capital-funding assistance to small communities to improve their water and wastewater systems.[63]

Investment in Infrastructure

The recent economic recession motivated Canadian governments at all levels to engage in economic stimulus, mostly via infrastructure projects.[64] Improved safety of water and wastewater services is a co-benefit of many of these investment and employment initiatives.

For example, the Ontario government introduced the *Water Opportunities and Water Conservation Act, 2010* with the goal of making Ontario a leader in clean water.[65] The *Water Opportunities Act*[66] was intended to foster the creation and exportation of innovative clean water technology, to promote water conservation, to attract economic development and to create jobs.[67] The Federation of Canadian Municipalities has estimated that investing in the maintenance and rehabilitation of Canada's water and wastewater infrastructure would create more than 30,000 jobs across Canada.[68] The *Water Opportunities Act* has also created the "Water Technology Acceleration Project," which is intended to help bring new innovative water solutions and technology developed in Ontario to market.[69]

Association, 2005) at 8. ("Protection of the health, safety and security of the province's drinking water and wastewater services requires expertise, commitment and accountability that are best placed in the public sector. Public polls repeatedly show that taxpayers are most comfortable with government control of these systems.")

[59] Conference Board of Canada, *supra* note 3 at ii. See also *Swain Report*, *supra* note 2 at 57.

[60] Sarnia installed water meters on all homes in the late 1980s when summer demands pushed water usage over the rated capacity of the city's water treatment plant. Despite substantial growth since that time, the water treatment plant has not had to be expanded: *Swain Report*, *supra* note 2 at 56. Other studies suggest that installing sub-metering for multi-unit buildings and trailer parts could reduce consumption by 15%. *Ibid*. In addition, meter data help city officials pinpoint where losses from leakage and equipment problems are concentrated and focus their resources on fixing those problems first. *Ibid*. at 55.

[61] Kenora, in northwestern Ontario, moved from flat rates to meter-based usage fees, and its current water use is one-third of the volume before metering started. Repairs to pumping stations and an aggressive leak-detection program also helped reduce consumption. *Ibid*.

[62] Windsor adds a 100% surcharge to water fees in the summer, which has resulted in huge water savings. *Ibid*. at 62.

[63] Ontario Ministry of the Environment, "Water Opportunities Act," available online at <http://www.ene.gov.on.ca/environment/en/legislation/water_opportunities/index.htm>.

[64] Department of Finance Canada, *Budget 2009: Canada's Economic Action Plan* (27 January 2009), available online at Department of Finance Canada <www.fin.gc.ca/n08/09-011-eng.asp>.

[65] *Water Opportunities and Water Conservation Act, 2010*, S.O. 2010, c. 19.

[66] *Water Opportunities Act, 2010*, S.O. 2010, c. 19, Sched. I.

[67] Government of Ontario, "Leading the World in Water Innovation and Conservation: McGuinty Government Working to Make Ontario a Clean Water Leader" (18 May 2010), available online at <http://news.ontario.ca/ene/en/2010/05/leading-the-world-in-water-innovation-and-conservation.html>.

[68] Conference Board of Canada, *supra* note 3 at 3, citing Federation of Canadian Municipalities, Municipal Infrastructure Projects.

[69] Water Opportunities Acceleration Project, O. Reg. 40/11.

As part of its effort to combat the "Great Recession," the Ontario government enacted the *Open for Business Act, 2010* (OBA)[70] and the *Green Energy and Green Economy Act, 2009* (GEA)[71] to support provincial economic development and facilitate more efficient business operations in various sectors. The OBA makes it easier to invest in Ontario by simplifying and harmonizing various regulatory requirements. In particular, when it comes fully into force, it will introduce a streamlined, risk-based approach to environmental approvals. GEA offers premium tariffs and priority grid connection for renewable energy generation, partly to replace aging coal-fired generation with new, renewable sources in Ontario. GEA has attracted many investors into the renewable energy market in Ontario, building a viable renewable energy industry.[72] The prospect for a similar renewal for water infrastructure may be on the horizon.

Conclusion

For the past 40 years governments across Canada have struggled to commit sufficient resources to water and wastewater infrastructure. In some provinces, such as Ontario, responsibility for maintaining water systems has been delegated to municipalities at the same time that funding support for local infrastructure has been reduced. Perhaps not coincidentally, there has been an increase in water-related incidents in Ontario, such as in Walkerton and Kashechewan.

In part as a consequence, new legislation has been enacted to implement higher standards for water safety and better oversight, but at considerable cost for municipalities. To mitigate this financial burden, the *Swain Report* recommended full cost recovery pricing and the privatization of water and wastewater services in Ontario. Provincial and federal governments have also been more willing to invest in water and wastewater infrastructure, particularly in small and First Nations communities. While the *Swain Report*'s recommendations have been somewhat controversial, there will likely be a greater role for the private sector in water services in the future, particularly if increasing pressure to reduce local, provincial and federal deficits leads governments to partner more often with the private sector to deliver core water and wastewater services. T

[70] S.O. 2010, c. 16. Ontario Ministry of Economic Development and Innovation, "Ontario Is Open for Business: McGuinty Government's Proposed Act Will Deliver Results for Business" (17 May 2010), available online at <www.ontariocanada.com/ontcan/1medt/en/news_2010_05_17_ofb_en.jsp>.

[71] S.O. 2009, c. 12, Schedule A.

[72] Government of Canada, *Invest in Canada,* "Renewable Energy," available online at <http://investincanada.gc.ca/eng/industry-sectors/renewableenergy.aspx>.