

**The Establishment and Implementation of the  
*Safe Drinking Water Act* in Ontario:  
Some Helpful Lessons from the United States**

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***SPEAKING NOTES***

“Meeting Your Obligations Under Ontario’s New  
*Safe Drinking Water Act*”

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## TABLE OF CONTENTS

1. Introduction.....	2
2. A Brief Overview of the U.S. and the Ontario <i>Safe Drinking Water Acts</i> .....	2
3. Lessons from the U.S. Experience .....	4
(a) Standard-Setting.....	4
(b) Advisory Councils .....	5
(c) Right to Know Reports.....	6
(d) Public Notification Requirements.....	8
(e) Source Protection .....	10
(f) Drinking Water Funding.....	12
4. Conclusion .....	13

## 1. Introduction

The Minister of the Environment, Chris Stockwell, called the new provincial *Safe Drinking Water Act*<sup>1</sup> “the toughest legislation in the world - not Canada and not North America. It’s the toughest legislation in the world.”<sup>2</sup> Certainly, the statute is a move forward in protecting Ontario drinking water. However, it must be recalled that it is only part of the emerging regime of drinking water protection that also includes the *Nutrient Management Act*, the *Sustainable Water and Sewage Systems Act 2002* and the commitments to source protection measures. Nevertheless, there is a long road ahead in terms of both completing this legislative framework and then implementing it. The question put is this: Are there aspects of the U.S. drinking water regime that are instructive as we further develop in Ontario drinking water protection framework?

This paper will briefly examine six aspects of drinking water protection measures where the U.S. experience is instructive. They are: standard-setting; advisory councils; right-to-know reports; source water assessments; public notification requirements; and drinking water funding.

## 2. A Brief Overview of the U.S. and the Ontario *Safe Drinking Water Acts*

The U.S. *Safe Drinking Water Act* (SDWA) has long been the legislative frontrunner. It came into being in 1974<sup>3</sup> and has been significantly amended at least twice, most recently in 1996. The current U.S. Act is the product of almost 30 years of hands-on experience, critical scrutiny and hard-fought negotiation between stakeholders, the government, Congress and environmental groups.

By acting early in the 1970s, the U.S. anticipated the importance of protecting drinking water over the last quarter century. The major features of the US Act, among others, are:

- the setting of contaminant standards;
- monitoring and testing of these chemicals;
- public confidence reports

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<sup>1</sup> S.O. 2002, c. 32.

<sup>2</sup> Second Reading Debate on Bill 195, October 31, 2002.

<sup>3</sup> P.L. 93-523.

- public notification
- funding
- source protection (wellhead protection)
- the proper operation of water treatment systems.

While the Act is federal legislation, generally the states are charged with implementing the Act. States are also free to improve on the legislation. In some states, such as California and New Jersey, they have made stronger safe drinking water legislation. In effect, the U.S. *Safe Drinking Water Act* sets out the most basic conditions that must be met.

The Ontario *Safe Drinking Water Act*<sup>4</sup> sets up a supervised drinking water delivery system from the point of collection to the tap. Its focus is on the protection of drinking water as it relates to distribution and treatment. The Ontario Act aims to create an administrative system that provides oversight and accountability. It oversees and licences almost everyone involved in the delivery of drinking water. It sets up accreditation bodies to oversee testing labs and operating authorities for drinking water systems. It requires licencing for laboratories testing the water, and licencing for municipalities operating water treatment plants. It requires operators to be trained and to be certified. It requires that adverse test results are reported, and it imposes a standard of care on municipalities to “exercise the level of care, diligence and skill...that a reasonably prudent person would be expected to exercise....and act honestly, competently and with integrity”.

In many respects, the technical provisions of the Ontario Act resemble the requirements of the U.S. *Act*. However, there are some differences.

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<sup>4</sup> For a more indepth review, see: R. Lindgren, “An Overview of the *Safe Drinking Water Act*: What’s In, What’s Out?” and R. Lindgren, “In the Wake of the Walkerton Tragedy: The Top 10 Questions. Both papers are posted at: [www.cela.ca](http://www.cela.ca).

### 3. Lessons from the U.S. Experience

#### (a) *Standard-Setting*

The Ontario Act sets standards for drinking water. This is an important development in the province. After years of government resistance, these standards were first introduced in a regulation in the months following the Walkerton tragedy.<sup>5</sup> They are now rolled over into the recently proposed regulation.<sup>6</sup> The Act requires that all owners and operators of municipal water systems must ensure that “potable” drinking water meets water quality standards.

In the United States, there is an expectation that new regulations will be developed and discussed on an on-going basis. Both through Congress and rule-making processes, standards are periodically reviewed and new standards made.

The Ontario standards sit like a *fait accompli*, a static set of regulations with little guidance in the Act as to how these values will change over time or how new challenges will be met. The lesson from the U.S. is simply that there must be a more clear and formal process to review and update these standards.

The Walkerton Inquiry Report acknowledges that some of these limits are less stringent than those set in other jurisdictions. For example, the standard for arsenic in the United States is 10 parts per billion, while Ontario has set 25 parts per billion as an interim standard. For some parameters, like viruses and cryptosporidium, standards of any kind have yet to be set.

Again, if we compare the Ontario Act to the U.S., Ontario has fewer standards and no formula process, legislative mandate or mechanism for adding more. There are only 54

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<sup>5</sup> Regulation 459/00.

<sup>6</sup> The existing standards themselves are the result of the joint Federal-Provincial Subcommittee on Drinking Water that recommends standards to the province. For comments on the proposed regulations, see CELA’s submission at [www.cela.ca](http://www.cela.ca) under “publications.”

standards (not including radionuclides), and 23 interim standards in Ontario, compared to approximately 90 in the United States.

***(b) Advisory Councils***

The original 1974 U.S. Act created the National Drinking Water Advisory Council. The Council offered another opportunity for including stakeholder and public input into the *Safe Drinking Water Act* and its regulations.

The Council is made up of 15 people: 5 drawn from the general public, 5 from state and local agencies concerned with the water supply and 5 members with an active interest in the field of water hygiene and public water supply. The appointments are for three years and members can be reappointed.

The Council is independent and advises the EPA Administrator on all issues related to drinking water. They also develop their advice and recommendations through the use of subcommittees; and all meetings are open to the public.<sup>7</sup>

The Council has become an important vehicle providing fresh information and ideas into the EPA. It was instrumental in shaping Consumer Confidence Reports and Source Water Protection Plans. The Council advises on regulations and guidance documents required by the *Safe Drinking Water Act*, identifies emerging health issues, and works on problems facing small drinking water systems in their efforts to guarantee drinking water safety.

Ontario has a legislated counterpart to this U.S. Advisory Council in the new Act — the Advisory Council on Drinking Water Quality and Testing Standards. This new advisory body will give the Minister a vehicle by which to draw upon expertise outside of the Ministry of Environment, and to avail himself or herself, of what we hope will be good

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<sup>7</sup> Current working groups include the Contaminant Candidate List Classification Process Work Group, Small Systems Affordability Work Group, Research and Stage 2 Microbial/Disinfection Byproducts Federal Advisory Committee.

advice. Under the Act, the Minister has to consider the advice provided by the advisory body although not necessarily adopt it.

Since the Advisory Council has not yet been appointed, it is impossible to accurately assess its role in the drinking water regime. At this point in time, the hope is that the Minister will create an effective body with a balanced membership from environmental groups, water quality professionals and scientists.

The lesson that can be distilled from the U.S. experience, and indeed from previous experiences within the province, is that arms- length advisory bodies, properly constituted can make significant contributions to regulatory regimes. Again, it is too early to assess the advisory structure under the province's new act.

### ***(c) Right to Know Reports***

In the U.S., the 1996 amendments to the *Safe Drinking Water Act* included a number of important right to know provisions. One of the key tools are the "Consumer Confidence Reports. These reports are delivered annually through general postal mailings, with water bills, or in some cases, door to door. For communities with populations less than 10,000, the report may be published in a local newspaper rather than released through direct mail.

The kind of information that everyone is now entitled to in the U.S. includes:

- the source of drinking water: a lake, river, aquifer or other source;
- a summary of how susceptible the drinking water is to contamination, based on source water assessments currently underway;
- how to get a copy of source water assessments that each state must complete;
- the level (or range of levels) of any contaminant found in the drinking water as well as EPA's health based standard for comparison;
- the likely source of that contaminant;
- the potential health effects of any contaminants that violate the standards, and an accounting of the actions taken to restore safe drinking water;

- a status report on how the water system is complying with drinking water rules;
- an educational statement for vulnerable populations about avoiding cryptosporidium and other information on nitrate, arsenic or lead in areas where these contaminants are detected above 50 per cent of EPA's standard; and
- phone numbers for more information about drinking water, including the water system and EPA's Safe Drinking Water Hotline (EPA has a hotline specifically for information on drinking water which is mandated by the Act)

The EPA's website provides links to all available Consumer Confidence Reports. This makes it possible for citizens to check their own drinking water quality, and overall, to compare their reports and the quality of their drinking water with other communities in the United States.<sup>8</sup>

The Ontario Act has also given us some limited rights to know about our drinking water. The annual reports in Ontario will be much less ambitious than those in the U.S., despite the fact that the Walkerton Inquiry Report endorsed the idea of Consumer Confidence Reports and stressed the importance of transparency and public access to drinking water information.

In Ontario, there are also requirements that information on drinking water will be publicly available. According to the regulations, owners of water systems serving more than 10,000 people must post a copy of their Annual Report on a website on the internet. The Annual Report has to include:

- a brief description of the drinking water system;
- summaries of any reports or notices submitted to the Director;
- summaries of operational checks;
- summaries of microbiological and chemical testing of water;

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<sup>8</sup> Some states have gone beyond the federal requirements in these reports. New Jersey, for example, requires a prominent warning to vulnerable populations. Some advisories are required in other languages if they are the primary language of the lesser of 1,000 or 10 per cent of the populations served. Portland even produces a report in Braille.



- descriptions of any corrective actions taken and any major expenses incurred to install, repair or replace required equipment.

Despite the advances made with the new Ontario Act, the reporting requirements of the Annual Reports do not stand up well in comparison with the kind of information that must be provided in Consumer Confidence Reports. For example, if a U.S. municipality finds any contaminant in the water in an amount above the drinking water standard, it must be clearly pointed out in the report and the standard must also be shown for comparison. The municipality must also say what this means in health terms.

Vulnerable people, in particular, must be given warnings.

In Ontario, Annual Reports are not required to be delivered directly to consumers' doors. To learn what they say, it is necessary to contact the local municipality or whoever supplies drinking water and ask to see copies of the report.

The Ontario regulations place the burden on the consumer to do the work of finding the information, not on the municipality to provide the information in a forthright and proactive way. The consumer must do the hunting and gathering to find out what is in his or her drinking water. It will mean, unfortunately, that few people in the community will find out what is in the drinking water or what the problems in their community are. This will, in turn, make it more difficult for municipalities to raise public support for improvements in the drinking water systems.

Right-to-know requirements are profoundly important and effective. Ontario should follow the example of the U.S. by enhancing its regulatory requirements and providing more information to the public on key issues.

#### ***(d) Public Notification Requirements***

Requirements for public notification of adverse test results and violations were strengthened in the 1996 amendments to the U.S. *Safe Drinking Water Act*. There are three categories of violations based on potential health effects, ranging from tier 1 (the most serious) to tier 3. Violations can be of standards, treatment techniques, testing

procedures, monitoring, or even of variances and exemptions. Essentially, the more serious the violation, the more notice that is required.

Public notices must include:

- the violation or situation including the contaminant of concern and the level;
- when the violation occurred;
- any potential adverse health effects from drinking the water and the population at risk;
- whether alternative water supplies should be used;
- what actions are being taken to correct the situation;
- when the problem will be resolved; and
- a statement encouraging people to distribute the notice to others, where applicable.

The annual U.S. Consumer Confidence Reports are not a substitute for public warnings about hazards in the drinking water supply.

The regulations under the Ontario *Safe Drinking Water Act* are broader in their requirements for reporting adverse results, although they are less explicit about how notification to the public is to take place.

The Act requires that owners, operating authorities and laboratories must report adverse water quality immediately to the Ministry of Environment and to the local medical officer of health. Adverse test results are defined in the regulations. Adverse results can be either an indicator of adverse water quality such as e.coli, or exceedances of the water quality standards. Operators must report these adverse results immediately by telephone and in writing within 24 hours.

According to the proposed regulations, there are two instances in which operators must post warning notices for the public - when they are not doing the required microbiological sampling and testing, or when an adverse test result is reportable and they did not carry out the proper corrective action. The warning notice must be posted “in a prominent location where it is likely to come to the attention of users of water from the drinking water system.” This could pose serious logistical problems such as in the

case of Toronto. Where, for example, would “a prominent location” in the city of Toronto be?

The posting of notices is unlikely to provide timely or effective warnings to drinking water consumers. The Ontario Act leaves too much to the discretion of the Ministry of the Environment and our public health officials in deciding when, and how, to sound a serious alarm about a health hazard.

*(e) Source Protection*

The protection of drinking water sources is a key emphasis in the Walkerton Inquiry report.

The United States first tackled the issue of source protection in the 1986 amendments to their drinking water legislation. At that time they were concerned with protecting groundwater and created the Wellhead Protection Program. Although this was a voluntary program, the EPA supplied technical help, and most states developed approved programs. They delineated the areas around ground water used for drinking, identified the sources of contamination and drew up plans to manage potential problems.

The 1996 amendments mandated Source Water Assessments that would include all sources of drinking water - both groundwater and surface water. The assessments are due by May of this year (2003) although various extensions have apparently been given. Every state is responsible for identifying and mapping the sources of drinking water for their communities. They must evaluate the sources of contamination or potential contamination and describe the vulnerability of drinking water. In addition, they must make these assessments public.

The Act encourages the states to use the Source Water assessments for the protection of drinking water sources, and it has made funding available from its drinking water fund for this. For example, through this fund, communities may purchase buffer lands around drinking water sources. States are also encouraged to involve the public in these

assessments, through the creation of citizen advisory committees. However, some non-governmental groups lament that there are no regulatory hammers to enforce source protection.<sup>9</sup>

The U.S. also has another, older, groundwater protection program in existence since the introduction of the Act. The Act allows communities, individuals or organizations to ask EPA to protect an aquifer that is the “sole” source of drinking water for a community. 70 aquifers in 25 states have been designated as “sole” sources of drinking water. This designation means that the EPA reviews federally-funded projects that might contaminate the aquifer – roads, housing, or agricultural projects – and tries to minimize the potential harm.

Another early program instituted in the 1970s is the Underground Injection Control program. It was meant to protect underground sources of drinking water from the effects of leaking waste disposal sites. Wells used for underground waste disposal, for hydrocarbon storage or mineral recovery are regulated under this program, including more than 400,000 injection wells and up to 89 per cent of all land-disposed hazardous waste.

In Ontario, the Minister decided not to make source protection a part of the *Safe Drinking Water Act*. Instead, he has promised a separate piece of legislation in the spring. The Advisory Committee on Watershed-Based Source Protection Planning has been meeting to make recommendations on the framework, but their report has not yet been released.

The Walkerton Inquiry report also recommended that the Ministry of Environment, the lead Ministry on drinking water, set up a watershed management branch to promote the important work of source protection.

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<sup>9</sup> Interview, Paul Schwartz of Clean Water Action.

*(f) Drinking Water Funding*

In the 1996 amendments the United States agreed that the new obligations of the Act must be met with additional funding. Money was also long overdue for the small systems unable to meet longstanding requirements of the Act.

In recognition of this, Congress created a multibillion dollar fund - the Drinking Water State Revolving Fund - for the upgrading of water treatment systems and for source protection.

This money comes from the federal government in the form of grants to the states. The states then set up revolving loan funds available to public water systems. The states must also contribute a certain amount of money themselves.

In 1997 \$1.3 billion was set aside for states to use that year. In 1998 and 1999 Congress appropriated \$725 million and \$775 million respectively. The EPA estimated in 1995 that \$138 billion would be needed for infrastructure through to 2014.

There are no mandatory funding requirements in the new Ontario *Safe Drinking Water Act*, as there are in the U.S. legislation. Nor is there any explicit direction to help the smaller water systems that may have trouble measuring up to the requirements of the new Act - the “little guys” of the municipal water systems.

However, when he introduced the new Act, Minister Stockwell promised to invest more than a half billion dollars in the next two years for drinking water protection. This year, he said the government is providing \$245 million including investments to help municipalities upgrade and make improvements to their water systems to meet new standards.

The biggest source of revenue for water suppliers still comes from water through the water rates. The Ontario *Sustainable Water and Sewage Systems Act 2002* requires

municipalities to assess the costs of providing these services, and to determine how they will be paid for.

The lesson from the U.S. is simply that there is a large infrastructure requirement that is expensive. Full cost pricing of water is absolutely essential although some initial infrastructure funding may also be necessary.

#### **4. Conclusion**

The U.S. *Safe Drinking Water Act* is admirable in its ambitions and its goals. It serves as a valuable yardstick. The U.S. has created health-based standards, and set out clear rules for safeguarding drinking water. The Act looks to the future, with an ability to change, or set new standards, and examine emerging problems.

In comparison, the provisions of the Ontario Act are more vague in the critical area of standard setting. The Ontario Act will establish in a disciplined approach to drinking water through its emphasis on certification, licencing, legally enforceable standards, and rights to information. However, the right to know provisions in the new provincial legislation is a scaled down version of those found in the U.S. legislation.

There are, however, provisions that are unique to the new Ontario legislation. These are: the appointment of a Chief Inspector (responsible for inspections and annual reporting), the standard of care provisions, and the requirement that inspectors, when they find a deficiency, must re-inspect within one year. These provisions may be instructive for other jurisdictions if they are found to be effective in practice.